Cultural Resources Survey

Indeck Wharton Energy Center Project

Wharton County, Texas

Submitted to:

U.S. Environmental Protection Agency – Region 6
Multimedia Planning and Permitting Division
Fountain Place 12th Floor, Suite 1200
1445 Ross Avenue
Dallas, Texas 75202-2733

Prepared for:

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Prepared by:

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March 2014 (*Final Report*)

FOR PUBLIC DISTRIBUTION

Sensitive Archeological Information Redacted

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REDACTED VERSION FOR PUBLIC DISTRIBUTION: *Pursuant to Section 304 of the National Historic Preservation Act of 1966, as amended (16 USC 470w-3), and Section 191.004 of the Antiquities Code of Texas, references to the specific locations of archeological sites have been blacked out or removed from this version of the report.*

EXECUTIVE SUMMARY

Indeck Wharton, LLC (Indeck) proposes to construct and operate a nominal, net 650 megawatt (MW) natural gas-fired, simple-cycle power generating facility at a new site located in the vicinity of the unincorporated community of Danevang, Wharton County, Texas. The facility will be known as the Indeck Wharton Energy Center (Project or Facility), and it will be located approximately 0.25 mile northwest of the intersection of State Route (SR) 71 and Farm-to-Market Road (FM) 441/County Route (CR) 426, less than 1 mile south of Danevang. The proposed Project requires a Prevention of Significant Deterioration (PSD) permit for potential greenhouse gas (GHG) emissions from the U.S. Environmental Protection Agency (EPA). Consequently the Project is subject to review under Section 106 of the National Historic Preservation Act and its enabling regulations, 36 CFR 800.

On behalf of the GHG-PSD applicant, Indeck, Tetra Tech Inc., conducted a cultural resources survey of the area of potential effects (APE) for the Project in December 2013. The APE was defined with the November 2013 concurrence of the Texas Historical Commission (THC), which functions as the State Historic Preservation Office (SHPO). The APE for archeology includes areas where ground disturbance could potentially occur as a result of Project construction. These areas include the quarter-section property on which the Project will be constructed, plus a 100-foot corridor for a lateral connection to provide fuel from an existing 30-inch natural gas pipeline situated approximately 0.5 mile to the west. The quarter-section APE includes a high-voltage transmission line into which the Project will be tied for delivery of electricity. In all, the APE for archeology covers approximately 164 acres. The APE for historic architecture is the area within which direct or visual effects to architectural resources could occur. The maximum stack height of the Project is 140 feet, and no substantial, continuous or semi-continuous visible exhaust plume will be generated. On this basis, the APE for architecture is defined as a 0.5-mile-radius circle measured from the center of the proposed plant footprint covering approximately 503 acres. The Project will involve construction of no linear facilities outside the APE as described above.

Fieldwork for the cultural resources survey was conducted on December 2 to 5, 2013. Field conditions were good to excellent. The archeological investigation involved systematic surface survey of the APE for archeology as it was then defined. Survey transects were spaced at 100-foot intervals; ground surface visibility averaged 98 percent. The survey covered the approximately 155 acres of the quarter section available for Project construction, plus a proposed pipeline corridor north of FM 441. Two archeological sites were identified. Locus 1 (41WH130) is the site of an early to mid-twentieth century farmer or tenant dwelling. Locus 2 (41WH131) is an early to mid-twentieth century farmstead [redacted]. Both archeological sites have diminished integrity and lack sufficient archeological significance to warrant eligibility for the National Register of Historic Places (NRHP).

The reconnaissance-level architectural survey inventoried a total of eight properties, including five properties wholly or partially within the APE for architecture and three in a 0.3-mile corridor extending east along CR 426 outside the APE. The inventoried architectural resources included four rural dwellings, one agricultural outyard, one commercial property, a museum complex, and a church with associated buildings and elements. Of the eight properties, only the one comprising Danevang Lutheran Church and associated properties (located outside the Project APE) was judged to be potentially eligible for the NRHP. Even though outside of the APE for architecture, a visual effects study (included as an appendix

to this report) assessed the potential effects of the Project on the church and associated properties as negligible.

Property-specific findings are provided in the following table:

Field Survey No.	Property Name	NRHP Eligibility Recommendation	Potential Project Effects (36 CFR 800.4[d] and 800.5)
Archeol. Locus 1	41WH130	Not Eligible	No Effect
Archeol. Locus 2	41WH131	Not Eligible	No Effect
Archit-1	Dawson-Salinas Commercial Property	Not Eligible	No Effect
Archit-2	Tresos Property	Not Eligible	No Effect
Archit-3	Martinez Property	Not Eligible	No Effect
Archit-4	Bram Property	Not Eligible	No Effect
Archit-5	Sanchez Property	Not Eligible	No Effect
Archit-6	Vacek Property	Not Eligible	No Effect
Archit-7	Danevang Lutheran Church and Associated Elements	Potentially Eligible	No Adverse Effect
Archit-8A	Pioneer House and Associated Settler Farmstead Outdoor Exhibit, Danish Heritage Museum	Not Eligible	No Effect
Archit-8B	Danish Heritage Museum Main Building	Not Eligible	No Effect

Pursuant to 36 CFR 800.4(d) and 800.5, Tetra Tech therefore concludes that the Project will have No Adverse Effect on properties listed on or eligible for listing on the NRHP. If the consulting agencies accept the foregoing recommendations concerning the NRHP eligibility of the inventoried properties and the evaluations of potential Project effects, then Tetra Tech recommends that the Project should be permitted to proceed as planned. Assuming acceptance of these recommendations and evaluation, then no further cultural resources studies are necessary for the Project as currently planned. If the Project design is substantively altered in the future, then additional consultation with THC and further cultural resources studies may be required.

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ACCRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
APE	area of potential effects
CAA	Clean Air Act
CR	County Route
EPA	U.S. Environmental Protection Agency
ERCOT	Electric Reliability Council of Texas
FM	Farm-to-Market Road
GHG	greenhouse gas
GPS	global positioning system
GTGs	gas turbine generators
HSSs	historic standing structures
HTO	*Handbook of Texas Online:* http://www.tshaonline.org/handbook/online
Indeck	Indeck Wharton, LLC
kV	kilovolt
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
Project or Facility	Indeck Wharton Energy Center Project
PSD	Prevention of Significant Deterioration
SHPO	State Historic Preservation Office
SILs	Significant Impact Levels
SR	State Route
TCEQ	Texas Commission of Environmental Quality
Tetra Tech	Tetra Tech, Inc.
THC	Texas Historical Commission
THPO	Tribal Historic Preservation Officer
USGS	U.S. Geological Survey

1. INTRODUCTION

1.1 Proposed Project

Indeck Wharton, LLC (Indeck) proposes to construct and operate a nominal net 650-megawatt (MW) natural gas-fired, simple-cycle generating facility at a new site located in the vicinity of the unincorporated community of Danevang, Wharton County, Texas (Figure 1). The proposed Project will include three natural gas turbine generators (GTGs); a natural gas pipeline heater, an emergency diesel generator, and a fire pump diesel engine. The completed generating facility will occupy approximately 20 acres in an agricultural field approximately 0.75 mile south of the Danevang Post Office. It will be connected to nearby existing utility infrastructure, including a 30-inch underground natural gas pipeline situated about 0.5 mile to the southwest of the proposed generating facility and an overhead high-voltage electrical transmission line 0.1 mile to the southeast of the proposed facility. The interconnections with these existing utilities are part of the area of potential effects (APE) considered here. The Project will entail no new linear facilities outside the APE described in Section 3, below.

Construction of the proposed Indeck Wharton Energy Center (Project or Facility) is scheduled to begin in mid-2014 and continue for a period of approximately 24 months. The Facility is expected to commence commercial operations in mid-2016.

1.2 Requirement for Section 106 Review

Indeck has applied for a Prevention of Significant Deterioration (PSD) permit from both the Texas Commission of Environmental Quality (TCEQ) for criteria pollutant emissions, and from the U.S. Environmental Protection Agency (EPA) Region 6 for greenhouse gas (GHG) emissions. From January 2, 2011, EPA began permitting greenhouse gases (GHGs) through the Prevention of Significant Deterioration (PSD) program of the Clean Air Act (CAA). Most states directly issue GHG PSD permits, but EPA currently retains authority to issue GHG permits in Texas.

Because EPA retains authority to issue PSD permits, the requirements of the National Historic Preservation Act (NHPA) is part of the PSD permitting process. Section 106 of the NHPA requires that federal agencies assess the potential effects of their undertakings, including the issuance of permits and licenses, on properties listed in or eligible for listing in the National Register of Historic Places (NRHP) prior to carrying out those undertakings. Such historic properties are also called “cultural resources.”

Title 36 of the Code of Federal Regulations, Part 800 (36 CFR 800) provides the procedural details by which reviews of undertakings are conducted pursuant to Section 106. These regulations require consultation between the lead federal agency involved in the proposed undertaking and the State Historic Preservation Office (SHPO) or Tribal Historic Preservation Officer (THPO) who has jurisdiction over the undertaking’s location. The proposed Facility is within the jurisdiction of the Texas Historical Commission (THC), which serves as the SHPO in Texas.

1.3 Preparation of this Study

Although the Section 106 review process involves consultation between EPA and THC, the project proponent, Indeck, plays a role by collecting appropriate information on historic properties within the Project APE and providing it to the consulting parties for their review and use. The study presented here

reports the results of a review of background data, including information on previously-inventoried archeological and historical resources in the Project vicinity, and results of a reconnaissance-level cultural resources field survey that sought to document both archeological and architectural resources in the APE. The study was prepared by Tetra Tech, Inc. (Tetra Tech), under contract to Indeck.

Tetra Tech completed initial background research on the Danevang location in April 2013. Background research entailed a desktop review of information on cultural resources available from THC, the National Park Service (NPS), and other agencies and an assessment of the potential for the presence of additional resources that had not yet been identified and inventoried (see Section 4). The review and assessment of available cultural resources information, along with an analysis of the Project's potential to affect archeological and architectural resources, provided the basis for a field survey work plan (Appendix A). This work plan provided for an identification survey for archeological resources in areas where construction of the Facility may entail direct ground disturbances and a reconnaissance-level architectural survey for a 0.5-mile radius around the Facility for potential visual impacts.

The work plan was presented to THC in a letter of October 15, 2013, and the agency provided its concurrence to the plan on November 14, 2013 (Appendix A). Fieldwork was conducted on December 2 to 5, 2013. Results of the fieldwork appear in Section 5 of this report, with conclusions and recommendations in Section 6. A draft version of the report was submitted to USEPA for comment in mid-January 2014.

1.4 Conformance to Regulations and Guidance

The cultural resources survey of the APE of the proposed Facility and this report conform to applicable regulations and guidelines, including: Advisory Council on Historic Preservation's "Protection of Historic Properties" (36 CFR 800), THC's "Archeological Survey Standards for Texas" (2002) and "Guidelines for Completing the Texas Historic Resources Survey Form" (2011) and the Council of Texas Archeologists' "Guidelines for Cultural Resource Management Reports" (2013). As noted, THC formally concurred with Tetra Tech's proposed work plan for the survey on November 14, 2013. Informal discussions via email and telephone concerning technical issues occurred in November-December 2013 between Tetra Tech and THC staff members Bill Martin, Quana Childs, and Sarah Birtchet. USEPA Region 6 historic preservation coordinator A.C. Dumaual provided oral comments on the draft report on February 24, 2014, and these have been incorporated into the present version.

1.5 Study Personnel

Tetra Tech's cultural resources staff for this study comprised:

- Christopher L. Borstel, Ph.D., RPA, Principal Investigator—responsible for background research, client and agency coordination, fieldwork, archeological analysis, and report writing;
- James C. Sexton, Ph.D., Architectural Historian—responsible for preparation of architectural survey forms and assessment of potential NRHP eligibility; and
- Sydne B. Marshall, Ph.D., RPA, National Cultural Resources Lead—internal reviewer.

All three Tetra Tech staff members are qualified professionals in accordance with "The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" (48 FR 44716ff, 1983).

2. AGENCY REGULATIONS

2.1 Clean Air Act (CAA)

The purpose of the CAA, enacted in 1970, is to protect public health and welfare by regulating air emissions from stationary and mobile sources. The CAA authorized the EPA to establish National Ambient Air Quality Standards (NAAQS) to regulate emissions of hazardous air pollutants. NAAQS are set at two categories: primary and secondary standards. Primary standards are established to protect public health, whereas secondary standards are set to prevent environmental and property damage. The EPA maintains NAAQS for six principal air pollutants including nitrogen dioxide, ozone, sulfur dioxide, particulate matter, carbon monoxide, and lead. A geographic area with air quality that is better than the primary standard is deemed an attainment area; areas that do not meet the primary standard are deemed nonattainment areas (EPA 2007).

Under the CAA, the EPA established Significant Impact Levels (SILs) as a threshold that could be applied to individual facilities that applied for a permit to emit a regulated pollutant in an area that receives NAAQS attainment status. The EPA and the applicable state agency must determine if emissions from that facility will result in a worsening of air quality. If the modeled concentration for a given pollutant is less than the SIL, the project is determined to have no significant impact on ambient air quality, and no further analysis is required for that pollutant. If the modeled concentration for a given pollutant is greater than the SIL, further analysis is required to estimate total ambient concentrations when the facility's emissions are combined with existing concentrations in the area. The SIL analysis must prove that the total concentration does not exceed the applicable NAAQS (EPA 2011).

2.2 National Historic Preservation Act (NHPA)

The purpose of the NHPA, originally enacted in 1966 and subsequently amended, is to enhance the federal government's role in the preservation of properties that are significant to our nation's history. The act reorganized existing federal historic preservation responsibilities and created new mechanisms for achieving the goal of fostering "conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony" (NHPA Section 2(1)). The act

> …marked a fundamental shift in how Americans—and the federal government—regarded the role of historic preservation in modern life. Before 1966, historic preservation was mainly understood in one-dimensional terms: the proverbial historic shrine or Indian burial mound secured by lock and key—usually in a national park—set aside from modern life as an icon for study and appreciation. NHPA largely changed that approach, signaling a much broader sweep that has led to the breadth and scope of the vastly more complex historic preservation mosaic we know today (ACHP 2013).

The NHPA also established the Advisory Council on Historic Preservation (ACHP) to coordinate historic preservation efforts among federal, state, local, and tribal governments, non-governmental groups, and international initiatives; created a national program of SHPOs funded by federal grants to states; created a historic preservation grant program to support local survey, planning, and preservation efforts; expanded existing federal efforts to identify and inventory historically-significant properties by establishing the NRHP; explicitly made all federal agencies responsible for the sound management of historic properties under their jurisdiction; and directed federal agencies to "consider the effects" of their activities on

historic properties before undertaking actions involving the expenditure of funds or the issuance of approvals, permits, or licenses.

Administration of the provisions of the NHPA is divided between the ACHP and the National Park Service (NPS). Responsibility for ensuring compliance of federal agencies with Section 106 lies with the ACHP, but the thrust of Section 106 lies less in adversarial relationships than in federal-state/tribal consultation (see 36 CFR 800 for regulatory map of consultation process). Indeed, while Section 106 is enforceable through civil action under administrative law, the ACHP's leading mechanism for ensuring that federal agencies comply is its capacity to publicize deficiencies in an annual report to Congress (ACHP 2013; McManamon 2000; NPS 2006).

EPA's issuance of a GHG emissions permit under the PSD Program of the CAA constitutes a federal undertaking pursuant to NHPA Section 106 (36 CFR 800.16(y)) and is thus subject to requirements of that section of the law. This cultural resources survey facilitates Section 106 consultations in accordance with 36 CFR 800 by:

- Describing the Project's APE with respect to archeological sites and historic architectural properties (including buildings, structures, objects, districts, and places);
- Identifying and documenting archeological and architectural resources in the APE;
- Making recommendations regarding the potential eligibility of archeological and architectural resources for listing in the NRHP in accordance with the pertinent criteria (36 CFR 60); and
- Making recommendations concerning potential Project effects on archeological sites and/or historic architectural properties recommended as potentially NRHP-eligible.

The evaluations provided here are advisory and subject to comment and concurrence, by the EPA and THC. It should also be noted here that information on possible Native American traditional cultural places and other possible tribal concerns was not assembled as part of this study, because EPA has taken on this responsibility directly.

2.3 Guidance from the Texas Historical Commission

The Texas Historical Commission (THC) provides an overview of the Section 106 process and guidelines for collection and presentation of pertinent information on its website (THC 2013a). It also provides guidance for surveys of archeological and historic architectural properties (THC 2013b, 2013c, 2013d). Specific guidelines applicable to the present study included THC (2002, 2011) and Council of Texas Archeologists (2013). As indicated in Section 1, this report was prepared in conformance to these guidelines.

3. AREA OF POTENTIAL EFFECTS (APE)

Federal rule defines the APE as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." (36 CFR 800.16[d]). The APE is defined based upon the Project's potential to affect both archeological sites and historic architectural properties. Potential effects are identified through an analysis of the Project design, including layout and construction, operation, and maintenance processes, in conjunction with consideration of the terrain, potential cultural resources, and other possible factors in the project vicinity. The APE defined here is the one described in Tetra Tech's work plan of October 15, 2013, with which THC concurred on November 14, 2013 (Appendix A).

3.1 Project Description

3.1.1 Project Purpose

The Indeck Wharton Energy Center is conceived as a nominal, net 650 MW peaking power project. The Project is based on three F-class combustion turbines in simple cycle mode. It will be classified as a wholesale electric generator selling power into the power-supply region managed by the Electric Reliability Council of Texas (ERCOT). In terms of size and demand, ERCOT has a peak load of approximately 68.3 gigawatts (actual 2011). This is slightly larger than the peak load of California and twice the peak load of either New York or New England.

Supply shortages are expected in the next five years within ERCOT region. In particular, the Houston area has been identified as the most likely to experience peak-demand shortages. The Project is designed to respond to this potential situation. As electric shortages are forecast to occur soon, a peaking power project such as the Project is an ideal response. Its shorter construction schedule and favorable operational characteristics would enable the Project to be in operation prior to other power production options and to respond effectively to the anticipated need. Other power options, such as combined cycle gas turbines or base load steam plants, are hampered by longer lead times for construction and less flexible operating parameters. Intermittent renewable projects such as wind and solar electrical generation are unable to meet the reliability requirements of a peaking project. Alternatives to the F-class turbines, such as internal combustion engines or differing combustion turbines, lack the environmental and/or operational advantages of the selected turbine class.

3.1.2 Facility Description

The Facility will be constructed on approximately 20 acres within the quarter-section property situated at the northwestern corner of State Route (SR) 71 and Farm-to-Market Road (FM) 441. It will be configured as three operating units. Each unit will be able to operate independently to respond to varying electric load dispatch requirements.

The generators will be powered by natural gas, which will be supplied to the Facility via a 12-inch lateral pipeline originating at a planned tap and meter that will be installed on an existing 30-inch Kinder Morgan pipeline. The planned connection for the lateral will be situated approximately 0.5 mile west and 0.3 mile south of the Facility. The lateral pipeline will be located underground in a trench approximately 4 feet wide and deep.

The heart of the Facility will be three F-class stationary natural GTGs, either Siemens 5000F or GE Frame 7FA, designed to produce in excess of 200 MW of electrical power apiece. In addition to the GTGs, the Facility will comprise air inlet structures (including silencers) and exhaust stacks for each unit; electrical equipment including generator step-up transformers; lubricating oil systems; evaporative inlet air cooling systems, water tanks (raw and treated); an emergency diesel generator; a natural gas heater; and a fire pump diesel engine. The three exhaust stacks have a maximum height of 140 feet. In addition, the Facility will include buildings for operation, maintenance, and administrative tasks, including a control room, offices, maintenance shop, and water treatment facility. Gravel access roads totaling approximately 5,000 feet in length will connect the Facility to SR 71 and FM 441.

The electricity generated by the Facility will be connected to a step-up transformer where the electricity will be converted to 345 kV. The current design envisions that a transmission line will connect directly from the transformer to the 345 kV CenterPoint transmission line that runs northeast to southwest approximately 500 feet to the southeast of the Facility.

The alignments of the interconnections with the aforementioned existing utility lines are included within the present APE. The Project involves no new linear facilities outside the APE.

3.1.3 Construction

Construction of the Project will occur within the 20 acres identified as the Facility footprint. Another area of approximately 20 acres to the north of the existing transmission lines and adjacent to the new Facility will be used as a laydown and staging area. The natural gas lateral pipeline will be constructed by Kinder Morgan, but is considered as part of this Project.

The following general construction activities will include:

- Site “dirt work” (site preparation, including soil stripping and stockpiling, grading, excavation, etc.);
- Access road construction;
- Installation of drilled foundations and spread footings;
- Installation of pipes and infrastructure;
- Construction of main plant;
- Installation of instruments and associated wiring;
- Controls testing; and
- Plant start-up and commissioning.

Construction of the Facility is anticipated to take approximately 24 months.

3.1.4 Operation and Maintenance

Except for periods of scheduled or emergency maintenance, the Facility will be available to supply power during periods of peak demand year-round. However, each GTG will be limited to 2,500 hours of operation per year. The visual effects of turbine operation are expected to be minimal, as the generators will burn natural gas fuel efficiently, with no steam plume and, except perhaps for brief intervals, no visible exhaust.

3.2 Definition of APE

3.2.1 Setting

The Project is situated in southern Wharton County in the vicinity of Danevang, an unincorporated community established by Danish farmers just before the turn of the twentieth century. Land in the Project vicinity is divided into 640-acre sections by a grid of county roads. The local terrain is flat and agricultural. Fields are planted annually, and houses, businesses, and other built properties are distributed along the county roads and state highways at irregular intervals.

3.2.2 APE for Archeological Resources

The APE for archeology for the proposed Project is defined as the area within which construction-related ground disturbances may occur. For purposes of this study, the APE for archeology includes not just the footprint of the proposed Facility, access roads, and pipeline alignment, but also the entire quarter section within which the Facility will be constructed. Inclusion of the entire quarter section in the APE results from three considerations: (a) adjustments to the Facility design may be necessary prior to commissioning of the Project; (b) construction staging will extend outside the designed footprint of the completed facility; and (c) locations of elements such as the gas supply pipeline and the outgoing electrical transmission lines remain to be fully defined. At the time of the field survey, the proposed route for the gas pipeline was situated immediately north of FM 441. Subsequently, Kinder Morgan determined that a more northerly route would be preferable. Both the surveyed route and current preferred (more northerly) routes are depicted in Figure 2. The APE for archeology covers approximately 164 acres, including nearly all of the quarter section within which the Facility will be located, except for the roughly 6-acre Bram house lot (identified below as Archit-4), which is not on the Project property. The APE for archeology also includes a 100-foot by 3,900-foot corridor for the gas pipeline lateral.

3.2.3 APE for Architectural Resources

Because the maximum exhaust stack height is 140 feet and no steam or substantial and continuously visible exhaust plume will be generated by the Facility, the APE for historic architecture is defined as a 0.5-mile radius circle around the Project center. The size of this circle represents a rule-of-thumb estimate of the extent over which construction of a Facility of this size and height could have substantial visual effects. The APE for architecture has an area of approximately 503 acres.

3.2.4 No New Linear Facilities

The alignments of the interconnections with the existing gas pipeline and high-voltage overhead electrical transmission line are included within the present APE. The Project involves no new linear facilities outside the APE as defined here.

4. PROJECT SETTING

4.1 Natural Environment

The proposed Facility is situated approximately 2,100 to 3,400 feet northwest of the intersection of SR 71 and FM 443, which continues east of SR 71 as County Road (CR) 426. The Facility is also 3,400 to 4,700 feet southwest of the intersection of SR 71 and CR 424, the section line road 1 mile to the north of FM 443/CR 426. The latter intersection is the historical center of the community of Danevang, which was established in the 1890s by Danish farmers from the Plains and Upper Midwest under the auspices of the Danish People's Society. Danevang is not a chartered Texas city. The nearest such city is El Campo 10 miles to the north. The nearest major metropolitan area, Houston, is some 70 miles to the northeast.

The Project is situated in the Coastal Prairies section of the Gulf Coastal Plains physiographic province of Texas (Wermund 1996). Its surficial geology comprises Quaternary-age deposits (ca. 2.6 million years ago to present) of low elevation and relief and an almost imperceptible slope to the southeast, which are comprised of alluvial, fluvio-deltaic, aeolian, and shallow marine sediments. Surficial deposits in the APE and vicinity belong to the clay or mud facies of the middle to late Pleistocene Beaumont formation (Qbc) (Barnes 1992). This facies consists of intermixed and interbedded "light- to dark-gray and bluish- to greenish-gray clay and silt," containing "beds and lenses of fine sand, decayed organic matter, and many buried organic-rich, oxidized soil(?) [sic] zones that contain calcareous and ferruginous nodules…. Includes plastic and compressible clay and mud deposited in flood basins, coastal lakes, and former stream channels on a deltaic plain" (Stoeser et al. 2007). Moore and Wermund (1993) interpret these sediments as interdistributory facies of the Texas Gulf Coastal Plains Tertiary deltaic complex.

The Project area is drained by low-order, low gradient streams, most of which have been channelized to improve agricultural productivity. The nearest stream, situated approximately 0.5 mile west of the proposed Facility is part of the Juanita Creek drainage. A plat map in the Wharton County Tax Assessor's Office identifies this drainage as Little Tres Palacios Creek. The creek is bordered by spoil banks and receives water from networks of roadside and field-edge ditches, among other sources.

Climatically, the region is humid subtropical, with hot summers and mild winters. Proximity to the Gulf of Mexico tends somewhat to moderate temperature extremes and provides relatively even precipitation over the course of the year. Rainfall averages around 40 inches per year. Frosts, generally occurring between December and February, are uncommon (McEwen and Crout 1974:38-40).

Soils in the APE for archeology are categorized as belonging to the Lake Charles association, which consists of black to dark gray clayey soils. Specifically, the soils throughout the APE are classified as Lake Charles clays, 0 to 1 percent slope. This soils series is varyingly described as somewhat poorly or moderately well drained. Clay content averages 50 percent throughout the profile (McEwen and Crout 1974:3-4, 13-14, general soil map; Web Soil Survey 2013).

Ecologically, the Project area is situated in the Northern Humid Gulf Coastal Prairies subregion. Griffith et al. (2004) state that the original vegetation of this subregion "was mostly grasslands with a few clusters of oaks, known as oak mottes or maritime woodlands. Little bluestem, yellow Indiangrass, brownseed paspalum, gulf muhly, and switchgrass were the dominant grassland species…. Almost all of the coastal prairies have been converted to cropland, rangeland, pasture, or urban land uses."

During a field inspection for a biological assessment study of the Project area conducted by Tetra Tech during November 2013, it was observed that most of the land in the Project vicinity comprised

agricultural fields that had most recently been planted in either cotton (*Gossypium hirsutum*) or corn (*Zea mays*). Most recently, the quarter-section field where the Facility will be constructed was planted in cotton. Other likely vegetation might include Johnson grass (*Sorghum halepense*) and other grasses (*Gramminea* spp.). The creek located west of the Project area had riparian vegetation. Characteristic vegetation included common cattail (*Typha latifolia*), sedges (*Carex* spp.), goldenrod (*Solidago* sp.), and poison oak (*Toxicodendron diversilobum*) in the herbaceous layer and black willow (*Salix nigra*), locust (*Gleditsia triacanthos*), hackberry (*Celtis occidentalis*), palo verde (*Cercidium microphyllum*), Texas prickly pear (*Opuntia lindheimeiri*), Chinaberry (*Melia azedarach*) and white prairie rose (*Rosa fuliolosa*) in the shrub layer. There were no mature tree species in a canopy layer (Tetra Tech 2014).

Land use in the Project area and vicinity is dominated by row-crop agriculture. Fields are left deeply furrowed between crop cycles presumably to encourage drying. At the time of the fieldwork, all crops had been harvested, and little stubble was left behind. Houses and business are situated along the state and county highways at intervals that vary from adjoining house lots in Danevang proper to quarter-mile or more intervals. Currently, the most prominent group of buildings is the United Agricultural Cooperative (formerly the Danevang Farmer's Cooperative), which includes a cotton gin, seed storage, fueling facilities and shop and other buildings and is situated a short distance west of the intersection of SR 71 and CR 424, the geographic center of the Danevang community, approximately 0.5 mile north of the proposed Facility. Near the cotton gin complex are a post office, country store, and several residences. A string of buildings and other features occupies CR 426 east of SR 71, beginning with the Danish Heritage Museum and extending to the Danevang Community Hall located about a quarter mile to the east of the intersection.

4.2 Prehistoric Background

Archeologists and historians divide the dozen or so millennia of human occupation of the Central Coast region into four major periods (Ellis et al. 2009; Ricklis 2004), which reflect major shifts in technology, style of subsistence, and social complexity, among other traits:

- Paleoindian (ca. 9,000 to 5500 BC)
- Archaic (ca. 5500 BC to 1000 AD)
- Late Prehistoric (ca. 1000 to 1700 AD)
- Historic (ca. 1700 AD to present).

The Project area occupies a transitional zone between different archeological "regions," which are defined on the basis of recognizable internal continuities in archeological assemblages and developmental trends and based as well on terrain characteristics and biogeographic factors. One axis of regional prehistoric culture areas is the distinction between the Central Coast archeological region, to the southwest, and the Upper Coast region, to the east. Among other differences, the Upper Coast region shows greater cultural affinities over time with the lower Mississippi drainage to the east as compared to the somewhat more autochthonous patterns of cultural traits and trends characteristic of the Central Coast region (Ellis et al. 2009). Following Ellis et al. (2009), Wharton County can be productively regarded as belonging to the Central Coast region, albeit on its periphery.

The Paleoindian period in North America can be broadly characterized as one of initial occupation of a continent in which people had previously been absent. The general pattern seems to have been one of relatively mobile and wide-ranging groups of hunter-gatherers who particularly favored pursuit of herbivores including buffalo, caribou, and elk, as well as now-extinct Pleistocene species. Evidence of

Paleoindian occupation in Wharton County is scanty and is limited largely to surface finds of diagnostic tools such as spearpoints (Patterson and Hudgins 1985).

During the long, succeeding Archaic period Native American populations in the Wharton County region appear to have expanded significantly in numbers and to have expanded the variety of animals and plants on which they subsisted and increased the intensity of use. Although evidence remains fragmentary, it appears that in interior regions, such as Wharton County, the trend in population growth was relatively constant, judging by the increase over time in the number of sites and the intensity of occupation, while in shoreline regions, there seem to have been fluctuations related to the varying rate of sea level rise and the concomitant development of littoral habitats. Most archeological sites of the middle to late Archaic period in interior areas consist of open camps situated on low terraces and natural levees along streams. By around 1000 BC, numerous sites with formal cemeteries in interior areas provide strong evidence for a significant increase of population and the possible establishment of territorial identification. Bioarcheological studies of diet suggest that by this time coastal and interior populations occupied distinct and relatively non-overlapping territories, but the artifact assemblages from some interior sites also indicate close ties between these two populations in the form of abundant ornaments and tools made from marine shells. Limited mortuary evidence, notably an apparent increase in death attributable to traumatic injury, may indicate increasing conflict between various territorially-based groups by the late Archaic period (Ellis et al. 2009).

Two technological innovations mark the arrival of the Late Prehistoric period in the Central Coast region. These are the introduction of pottery from the Mississippi-Louisiana region and the adoption of the bow and arrow, which replaced darts and spears as the principal hunting armaments. The timing and sequence of these two developments remains uncertain, but both were well established in the region before 1000 AD. Each innovation enhanced the efficiency of native subsistence practices: pottery provided new tools for food storage and preparation, while the bow and arrow increased the range and accuracy of hunting. By Late Prehistoric times, settlement patterns known from early historical sources were well established. Interior groups exploited bison, antelope, and deer, as well as smaller game and a broad variety of plant foods. Presumably these groups cycled through an annual round of coalescence and dispersion that depended upon the abundance of game and other foods. For coastal bands, the picture of the seasonal round is clearer, as large groups typically coalesced at coastal settlements during the fall through early spring, supported by the vast schools of fish present in the bays during those seasons and, on the central and upper coasts, extensive shellfish beds. The large communities then dispersed during the warmer months into family bands of 50 or fewer, many of which moved off the coast to take advantage of riverine and prairie resources, including herds of buffalo that had expanded onto the Texas coastal prairies after around AD 1250. Archeological evidence also strongly suggests that Late Prehistoric coastal groups were linguistically and culturally distinct from their neighbors living two dozen miles or so to the interior, as they were during the early historic period (Ricklis 1997, 2007). Nonetheless, as during the Archaic period, coastal and interior groups appear to have had regular trade interactions. Early Spanish accounts noted this cultural and linguistic divide between the coastal Karankawa and inland Coahuiltecan groups (Handbook of Texas Online [HTO] 2013; Lipscomb 2013).

4.3 Historic Background

4.3.1 Wharton County

The Late Prehistoric period came to a gradual close as Spain asserted its colonial interests in the Texas coast between the early 1500s and the late 1700s. During the early part of this era, native groups rarely

came into contact with Europeans, as Texas was at the fringe of the Spanish colonial empire. From 1519 onwards, several Spanish expeditions visited the Central Coast, but no permanent European settlements resulted until Robert La Salle's ill-fated colony of 1685 to 1688 on Garcitas Creek near the head of Lavaca Bay. This settlement, often called Fort St. Louis, was situated in Victoria County, roughly 34 miles southwest of the present Project area. Destroyed by hostile natives in 1688/89, the French settlement subsequently (1721/22) became the first site of an important Spanish fort and adjacent mission, Presidio La Bahia and Espíritu Santo Mission; by 1726, however, the mission had been relocated some 30 miles further west to the opposite side of present-day Victoria County (Roelle 2013; Texas Beyond History [TBH] Web Team 2006, 2009; Weddle 2013). Spanish sources from this period identify the natives of the central Texas coast as members of the Karankawa, a people linguistically and ethnically distinct from the Coahuiltecans, who inhabited the interior valleys, prairies, and hills back from the coast. Even after Spain sought to establish a permanent presence in southeastern Texas, native life probably changed relatively little until well into the eighteenth century. During these early decades of nascent European settlement, precolonial indigenous groups and Mexican settlers came into repeated conflict. Mutual accommodation to resolve the most severe of these conflicts did not occur until the end of the eighteenth century (Dickerson 2013; HTO 2013; Lipscomb 2013).

Settlement of the region that became Wharton County began only after Mexican independence in 1822. Early settlers came primarily from Alabama, bringing the plantation system based on enslaved laborers of color with them and mostly establishing farms along Peach and Caney creeks in the northeastern part of the county. Census data from the Republic of Texas and the U.S. government records that in the antebellum era 70 percent or more of the county's population was enslaved. At this time, farms were dispersed, with intervening areas of virtual wilderness. The principal crops were corn, cotton, and sugarcane. Although not the site of military action during the Civil War, Wharton County suffered an economic decline during the war and Reconstruction as a result of disruptions in markets, transportation, and labor. In the postbellum era, cattle ranching replaced the plantation system as Wharton County's major economic activity and drew significant numbers of Mexicans into the area to serve as herdsmen. Presumably it was during this era that development of the southern portion of the county, including the Project area and vicinity, began. Improvements to transportation and changes in the cattle industry meant that by the end of the nineteenth century agriculture was shifting from cattle raising to a variety of field crops, including sugar, cotton, corn, hay, potatoes, spinach, broom corn, cabbage, figs, honey, and rice. From the 1880s, rangelands were increasingly subdivided and sold off as farmsteads, a situation that allowed the founding of Danevang, where the Project is located, in the mid-1890s. In the twentieth century, cotton, sorghum, cattle, corn, rice, peaches, and watermelons were all important agricultural products. The county had limited industrial development, but oil, gas, and sulfur production became important early in the century and remained so throughout (Hudgins 2013).

4.3.2 Danevang

The community of Danevang ("don-EH-vong," : "Danish Meadow") was established in southern Wharton County in 1894 as an ethnic and religious colony intended to encourage the retention of Danish Lutheran agricultural lifeways in the United States. Settlement of the community was sponsored by the Danish People's Society (Dansk Folkesamfund), organized in Clinton County, Iowa, in 1887. The goal of the People's Society was to perpetuate and develop the social life (*folkelig*) of Danish immigrants in harmony with their duties as American citizens (Christenson 1928; Davis 1983, 2013).

Danevang was the society's first effort to establish a distinct community founded on their principles. A committee from the society selected the Wharton County site as suitable for planting this community after

looking over several places in Texas. The committee obtained an option from the Texas Land and Cattle Company on 25,000 acres that restricted sale to Danish settlers over a three-year period in the mid-1890s. Eventually, not all of this land was sold to Danes, but practically none but Danes initially settled in the town of Danevang. Some settlers came directly from Denmark, but most already had farms in the prairies and plains of the central United States, including Illinois, Wisconsin, Minnesota, South Dakota, Iowa, Nebraska, and Kansas. Initially, the settlers attempted with little success to grow the northern crops with which they were familiar. Some farmers failed and left the settlement, but others persevered and by 1900, the settlement began to prosper, as they adopted cotton as their principal crop, with dairy farming an important addition later (Christenson 1928; Davis 1983, 2013).

In the early decades, the Danevang settlers undertook many cooperative ventures, beginning perhaps with the construction of an assembly or community hall (Forsamlingshus) in 1895 (still extant), which also served as the community's first church building. The community hall was relieved of this function when the neighboring Ansgar Lutheran Church was completed in 1909 (demolished 1945). The community hall and church helped the community maintain its ethnic identity by providing social activities of Danish character and by offering Danish language classes and similar services. Other cooperative ventures included a school, lending library, fire insurance company, telephone system, and farmers' cooperative (the latter recently merged with the El Campo cooperative to form the United Agricultural Cooperative). Although the community remained prosperous, its Danish character has gradually dissipated from the 1930s. The 1950s to 1970s seem to have been the tipping point in acculturation, with the community's Danish heritage having definitively slipped into the historical realm by the 1990s, when the Danish Heritage Preservation Society (proprietor of Danevang's Danish Heritage Museum) was established (Christenson 1928; Danish Heritage Museum 2013; Davis 1983, 2013; Grombacher 1974).

4.4 Previously-Inventoried Resources

Tetra Tech conducted a desktop review of the Project area and vicinity for cultural resources in July 2013 (Table 4-1) using the online records of the Texas Archeological Atlas (TXAA), the Texas Historic Sites Atlas (TXHSA), and the NPS NRHP FOCUS database (NPS 2013; THC 2013e, 2013f). Details of this review were included as Attachment A to the request for comment letter sent to THC on October 15, 2013, and included in Appendix A of this report. The review determined there were no recorded sites within the archeological APE (see Section 3.2.2, above) and no formally-inventoried resources within the architectural APE (see Section 3.2.3, above). Subsequent review of a recent cultural resources survey in a corridor adjacent to the transmission lines that cross the Project area field found that one building on SR 71 had been documented in a project report (Office of Fossil Energy 2012:3.10-1 to 3.10-12; Poche et al. 2012). Three Texas state historical markers were located within 1 mile of the Project center. These commemorate the history of Danevang, the Lutheran church and cemetery, and the community hall, and relate to places of local historical interest. There were no NRHP-listed properties closer than 12 miles (to the south), and the only Texas State Antiquities Landmarks in Wharton County are situated in the City of Wharton, over 19 miles to the northeast.

Table 4-1
Documented Cultural Resources within 1 Mile of the Indeck Wharton Energy Center Project

Resource Name	Location	Description	NRHP Status
Archeological Site 41WH105	[redacted]	2.6-acre plowzone scatter of late 19th- to mid-20th-century glass, ceramics, brick, and metal artifacts representing a farmstead site. No above-ground or surface features. No evidence of sub-plowzone archeological deposits.	Not eligible
Archeological Site 41WH106	[redacted]	Isolated find. Archaic period (ca. 4000 to 2200 BP) chert projectile point blade and tip fragment. No additional artifacts recovered during systematic inspection of the ground around the find or during shovel testing. No evidence of subplowzone archeological deposits.	Not eligible
URS (2012) Cultural Resources Survey Historic Standing Structure (HSS)-WH-4	E side of SR 71, 0.46 mi NE of Project center	One-story wood-frame house, judged to have been originally constructed 1940-1950 and subsequently altered extensively.	Not eligible
Texas Historical Marker No. 172	Danevang Lutheran Cemetery, N side of CR 426, E of SR 71, 0.68 mi SE of Project center	"Ansgar Evangelical Lutheran Church and Cemetery," 1994: Text describes the history of the church and cemetery.	N/A
Texas Historical Marker No. 1163	E side of SR 71, N of intersection of CR 426, 0.50 mi SE of Project center	"Danevang ('Danish Meadow')," 1970: Text describes history of the settlement of Danevang.	N/A
Texas Historical Marker No. 12805	Church-Community Hall cluster, N side of CR 426, E of SR 71, 0.73 mi SE of Project center	"Danevang Community Hall (Danevang Forsamlingshus)," 2002: Text describes history of the community hall building, a "cultural landmark" for the Danevang community.	N/A

Sources: NPS (2013), Office of Fossil Energy (2012), Poche et al. (2012), THC (2013e, 2013f). See also Appendix A.

5. CULTURAL RESOURCES SURVEY

5.1 Introduction

A Tetra Tech cultural resources specialist conducted a cultural resource survey of the Project between December 2 and 5, 2013. The purpose of the survey was to ascertain whether the APE contains any historic properties including archeological sites and historic architectural resources (also called historic standing structures [HSSs]) that appear to be potentially eligible for the NRHP.

The survey was conducted in accordance with a work plan provided to THC in October 2013 and for which THC concurrence was provided on November 14, 2013 (Appendix A). Details of the survey methods employed are provided below under the discussions of the two resource categories. Because the APE is limited in size and it was anticipated that relatively few resources would require inventory, Tetra Tech determined that the survey could be conducted by a single fieldworker. The cultural resource specialist who performed the field survey was a trained archeologist with sufficient background to collect field data for review by the project architectural historian.

Field conditions during the survey were routine (Photos 1-6). The weather was varied. December 2 and 3 were sunny and humid with high temperatures around 80°F. December 4 was similarly warm, with light fog giving way to partly cloudy conditions. December 5 saw mild, foggy weather in the morning give way to falling temperatures and a brisk wind in the afternoon. The fields had been harvested and were relatively dry, though there was evidence of the effects of episodes of recent rainfall (on November 16 to 19 and 23 to 27). Vegetation was thin due to winter dormancy.

A field-grade Trimble Geo-XH GPS unit with submeter accuracy was used for field navigation and to record positions for field mapping.

5.2 Archeological Survey

5.2.1 Methods

Tetra Tech conducted a Phase I archeological survey in the APE for archeology as it was defined in October 2013 (Appendix A). Archeological field methods were consistent with THC's "Archeological Survey Standards for Texas" (2002). Specifically, THC standards allow the use of systematic surface survey with transects of 100 feet (30 meters) or less wherever ground visibility is at least 30 percent, a threshold easily met by the present APE at the time of the survey.

The surveyed area comprised the quarter section northwest of the intersection of SR 71 and FM 441 (the "Project area quarter-section field") less an approximately 4.7-acre house lot on the east-central edge of the quarter section, which is not on the Project property (architectural survey property Archit-4). The surveyed area also included an approximately 200-foot-wide corridor on the north side of FM 441 to the west of the Project area quarter-section field (Figure 2).

The principal method employed was systematic surface survey, involving transects at nominal 100-foot (30-meter) intervals. Systematic surface survey was a suitable method for site identification in this area because local terrain and soils indicated that the depositional environment prevailing during the Holocene was one of minimal sediment accumulation. Consequently, there was a high potential that if archeological sites were present, traces would be detectable on the ground surface, given adequate visibility. Excavation

of five soil probes during the survey (discussed below) supported the interpretation of the local depositional environment and the use of systematic surface survey as a site identification technique.

The surface of the Project area quarter-section field retained deep, regular, well-defined rows and furrows. The rows and furrows were oriented north-south, and an initial measurement using the GPS receiver showed that their spacing was such that 30 furrows (or rows) approximated 100 feet, a finding that was applied in the implementation of the survey. (Subsequent GPS measurements confirmed that the 30-furrow interval was very nearly 100 feet exactly: at the northern end of the field the distance separating the first from the last of 26 transects was 2,508 feet, while at the southern end, the distance was 2,503 feet, representing an average transect interval of approximately 100.2 feet.) The field technique was to follow the thirtieth furrow for its full length (0.5 mile, except at the east end by the house lot), visually inspecting the ground along the furrow and to either side for objects of potential archeological interest, such as prehistoric lithics and historic ceramic sherds and glass fragments. To ensure that attention did not flag, the fieldworker numbered transects from east to west and maintained a set of running observations about them in his field notebook. Transects were alternately walked south to north and north to south.

The survey of the 200-foot corridor on the north side of FM 441 was completed as an out-and-back walkover. The southern transect was approximately 50 to 75 feet north of FM 441 pavement and the northern transect was approximately 180 to 210 feet north of the pavement. Transects were oriented roughly perpendicular to the furrows in the surveyed field and were offset in the vicinity of a commercial property (architectural survey property Archit-1) midway along their length.

Ground surface visibility averaged 98 percent or better throughout the surveyed area, far above the 30 percent threshold for systematic surface survey specified by THC (2002) guidelines. With the exception of a few patches of weed seedlings, the fields were bare of vegetation, and they contained little chaff left from the harvested crops. Although several months had passed since the ground was last cultivated, the surface had been recently washed by rainfall, and scattered gravel was visible, indicating the likelihood that, if present, cultural materials would also be visible.

5.2.2 Results

The systematic surface survey of Project area quarter-section field and the 200-foot corridor to the west involved a total of 32 transects. Twenty-four of these were full length transects of 2,550 feet each. The remaining eight transects were located at the eastern edge of the field and were truncated by the houselot; these ranged in length from approximately 570 to 1,160 feet apiece. In all, the archeological survey covered approximately 160 acres, including the western corridor and deducting for the two building lots not surveyed.

To confirm that systematic surface survey was a sufficient technique for archeological site identification for this study, five soil shovel probes approximately 30 centimeters in diameter were hand-excavated within the footprint of the planned Facility (Figure 2) to depths of 45 to 50 centimeters below surface. Soils were consistently dark gray clays with no visible horizonation. There was no evidence of recent sediment accumulation from small-scale water courses or from wind transport. These observations supported the terrain-based evaluation of the surveyed area as not requiring subsurface archeological testing, given adequate surface visibility.

No prehistoric Native American archeological sites were identified in the surveyed area. A light field scatter of twentieth-century artifacts occurred near the eastern edge of the Project area quarter-section field in the vicinity of the occupied houselot. This scatter included occasional small sherds of ironstone,

vessel glass, and window glass indicative of casual trash disposal and/or secondary artifact dispersal as a result of manure spreading for field fertilization. These materials were judged to be not archeologically significant and are not identified as evidence of a site or sites.

In addition to the field scatter, two archeological loci were identified (Table 5-1). Trinomial inventory numbers have been assigned to these sites by the University of Texas at Austin Archeological Research Laboratory (TARL) (Appendix C). Neither site is recommended as potentially eligible for the NRHP.

Table 5-1
Archeological Sites Identified by Cultural Resources Survey for Indeck Wharton Project

Field Survey No. / Resource Name	Location	Description	NRHP Recommendation
Archeological Locus 1 / 41WH130	[redacted]	Historic farmstead site. Approx. 0.18-acre rectangle of uncultivated ground containing one dead and two live small ornamental trees. Surface features include an open concrete-lined well or cistern; concrete building footer or sliding door track; two utility poles (one upright; one fallen);displaced concrete post footer; deteriorated PVC pipe; light scatter of oyster shells, ironstone ceramics, and glass fragments on uncultivated ground and extending south into cultivated field by up to 50 feet.	Not Eligible
Archeological Locus 2 / 41WH131	[redacted]	Historic farmstead site. Approx. 2-acre artifact cluster covering in cultivated field consisting of ceramic sherds, bottle and vessel glass fragments, brick fragments, occasional pieces of metal and other small items. Core of cluster is an area of approx. 0.4 acre of medium to high artifact density surrounded by an outer zone of low to medium artifact density. Aside from a remnant box culvert from a driveway, no archeological features observed at surface.	Not Eligible

5.2.2.1 Locus 1 (41WH130)

Locus 1 [redacted] consists of an approximately 60 x 125-foot area that appears to be the core building area of a small farmstead. [redacted]. Aside from an open 4-foot-diameter concrete-lined cistern or well and a possible concrete building footing or sliding door track, there is no evidence of subsurface features. Rather, archeological traces consist of modern and historic objects and debris (Table 5-1), much of which appears to be in secondary contexts.

A review of aerial imagery and maps shows that one or two structures were present on the property from the early 1940s until sometime between 1989 and 2005 (Google Earth 1942, 2005; USGS 1951, 1989). According to the abstracts of title in the records of Wharton County Tax Assessor-Collector, a 1-acre parcel within which Locus 1 is located was acquired by Benedict D. [David] Krag (1922-2005) on February 2, 1948 (Census 1940a; Wharton Assessor Abstract [redacted] Tract [redacted] Wharton Journal-Spectator

2005).[1] This parcel was one of [redacted] acquired by Krag in February and September 1948 that together comprised the Project area quarter section. Following Krag's death in 2005, the three parcels were transferred to Silver Star Ranch, L.P., in 2006. The parcels again changed hands to their present owners, members of the Lauritsen family, in 2011 (Wharton Assessor Abstract [redacted] Tracts [redacted]). Further documentary research would be required to assemble additional details of these transfers, but the treatment of the Locus 1 parcel as a minor independent entity within the quarter section may indicate that even as early as 1948 it was subsidiary to the principal farmstead on the quarter section and was possibly occupied by a junior family member, hired hand, or tenant. The principal farmstead was apparently located [redacted] at architectural Property 4 (also extant by 1942), which was acquired in 1976 by its present owners, Clifford and Barbara Bram, through subdivision of the majority quarter-section lot (Wharton Assessor Abstract [redacted] Tract [redacted]).

Locus 1 appears to have a low potential for providing information important to local, state, or national history. There is little indication that the site contains substantial subsurface deposits, and the artifact assemblage visible on the surface consists of mass-marketed objects of comparatively recent vintage, often in secondary depositional contexts. The site is not recommended as potentially eligible for the NRHP.

5.2.2.2 Locus 2 (41WH131)

Locus 2 is a cluster of twentieth-century artifacts covering an area of approximately 285 by 310 feet with a core area of moderate to high artifact density of 130 by 150 feet. In the artifact scatter, ceramic sherds are common and include a variety of wares, such as ironstone and whiteware, stoneware, and possibly some semi-porcelain. Bottle and vessel glass includes clear, brown, and green body sherds and mouth fragments; one piece of solarized glass was observed. There are numerous small fragments of bricks, occasional fragments of concrete, and occasional metal machine parts. No nails were observed. The interior of cluster core contains a patch of weed seedlings covering an area of roughly 50 by 90 feet.

A review of aerial imagery and maps shows that two to four structures were present on the property from the early 1940s until sometime before 1979. Excellent aerial imagery from 1964 appears to show a house, barn, and two small outbuildings, all of which had been removed by 1979 (Google Earth 1942, 1956; NASA Ames 1979; USGS 1951, 1964, 1981). The property is located in Wharton Assessor Abstract [redacted] Tract [redacted] This parcel originally covered 80 acres and was later subdivided into two 40 acre parcels, designated Tracts [redacted] and [redacted]. Tract [redacted] in its original and subdivided forms contained Locus 2. The 80-acre Tract 6 was acquired by R.P. (Robert P.) Hansen (1882-1961), a commercial cotton farm operator, in 1936. Hansen, his wife Minnie (1881-1955), and son Edgar (1919-1993) may not have lived on the property, as the 1940 U.S. Census enumeration records the family as living in a rented house on SR 71 apparently close to the Danevang post office and indicates they had been at this location for at least the previous five years. Following Robert Hansen's death in 1961, the parcel was apparently divided into two 40-acre units, with his son, Edgar, receiving Tract [redacted], including the Locus 2 farmstead, and his daughter, Astrid Hansen Hickey (1914-2000), wife of Claud Charles (or Charles Claud) Hickey (1913-1989),

[1] The abstracts-of-title volumes at the Wharton County Tax Assessor-Collector (various) appear to have been initiated ca. 1950 and transcribed into their present volumes in the mid-1980s. The abstracts begin with the latest property transfer as of the start of the record series and then include subsequent entries up to the present. They do not include a complete sequence of land transfers and subdivisions from the original platting. Information on prior ownership of properties was collected only incidentally to the main purpose of the review of the Wharton Assessor's records, which was to determine the current owner of each inventoried architectural property. Deed research in the primary records was not undertaken in this study.

receiving the unimproved Tract [redacted]. Tract [redacted] was acquired by its present owners, Michael and Donna Miles, in 1993, some months before Edgar Hansen's death, by which time the dwelling, barn, and outbuildings had long been removed (Census 1930, 1940a, 1940b; Findagrave 2014a, 2014b; Wharton Assessor Abstract [redacted] Tracts [redacted] and [redacted]).

Locus 2 appears to have a low potential for providing information important to local, state, or national history. Although no subsurface testing has been performed, there is no indication that the site contains substantial subplowzone deposits. Examination of aerial images post-dating removal of the buildings on the property identified no soil marks suggestive of filled-in cellars or foundations, and no evidence suggestive of the presence of such features was observed during the surface reconnaissance of the site area. The ownership history of the property outlined above suggests that it may have been a rental or tenanted property raising the possibility of repeated changes in occupancy and thus reducing the potential to associate an artifact assemblage recovered from the site to a specific social group. The observed artifact assemblage consisted of mass-marketed objects of comparatively recent vintage, clearly in secondary depositional context. The site is not recommended as potentially eligible for the NRHP.

5.3 Architectural Survey

5.3.1 Methods

Tetra Tech conducted a reconnaissance-level architectural survey in the 0.5-mile-radius APE for historic architecture as it was defined in the work plan that received THC concurrence on November 14, 2013 (Appendix A). In addition, as provided in the work plan, the survey was extended outside the southeastern perimeter of the APE for approximately 0.3 mile along CR 426 to collect information on several properties of potential historical interest situated adjacent to, but outside, the defined APE (Figure 2). In all, the architectural survey area covered approximately 530 acres, including the 503 acres of the 0.5-mile APE for architecture and the approximately 27 acres comprising the additional survey corridor along CR 426.

The field survey consisted of visiting each property and making observations on their function, construction, style, materials, and other attributes. Observations were recorded primarily through photographs made from the adjoining public right-of-way, or on the property if it was open to the public (i.e., museum and church properties).

In addition, limited documentary research was undertaken to support the field reconnaissance. This research included a review of records at the Wharton County Tax Assessor-Collector at the County Courthouse Annex in Wharton to obtain addresses, owner information, and partial abstracts of title; examination of aerial photographs from online sources, including Google Earth (1942-2013) and the USGS's Earth Resources Observation and Science (EROS) Center historical aerial imagery files (available through its EarthExplorer application, http://earthexplorer.usgs.gov/); and assembly of key historic contextual information from the Danish Heritage Museum and its website (http://www.danevangtx.org/Danish_Heritage_Museum/Home.html), the Portal to Texas History website (http://texashistory.unt.edu/), and the TXHSA (THC 2013f).

Architectural and historical information on each property or building group were assembled onto the THC's (ca. 2007) Historic Resources Survey Form. The forms were prepared by Tetra Tech's architectural historian in collaboration with the cultural resources specialist who conducted the field survey (Appendix D). Each property was assigned a report-specific identification number (Archit-1 to

Archit-8), with the numbering running generally in sequential order from west to east and south to north. Two forms were completed for the Danish Heritage Museum (Archit-8) to differentiate the buildings comprising an outdoor historical and interpretative group (including at least one relocated historical structure) (Archit-8A) from the recent, purpose-built museum building (Archit-8B). The buildings and other elements related to the Danevang Lutheran Church were grouped as a single property (Archit-7) because they are historically associated with one another, though they are diverse in date, construction, and function.

5.3.2 Results

The built environment of the APE for architecture and vicinity is agricultural and rural in character. (Photos 1-6). The area consists primarily of fields planted annually in cotton, corn, or other crops, with building groups spaced apart at irregular intervals along the paved state and county highways. Each inventoried building group consists of two or more buildings, usually surrounded by lawn and typically landscaped with low trees and shrubs for shade and beauty. Two parallel high-voltage transmission lines carried on tall steel structures cross the southeastern quadrant of the 0.5-mile APE for architecture from northeast to southwest. Local utility service is via local distribution lines carried on wood tee-poles. Road signage is common, particularly along SR 71. Outside the survey area, the settlement of Danevang is marked by a cluster of low buildings and trees 0.5 to 1 mile distant. The most prominent building group in Danevang is comprised of the metal buildings and cylindrical bins of the United Agricultural Cooperative cotton gin and service center, situated on CR 424 a short distance west of SR 71. Overall, the nearly flat terrain and active agricultural use of the area gives the impression of an open landscape where farmers have embraced modernity and technological advance, adapting to changing opportunities and circumstances and continuing to prosper.

Table 5-2 summarizes the architectural inventory. Inventory forms and photographs of the surveyed properties are found in Appendix D.

Table 5-2
Architectural Properties (Historic Standing Structures)
Inventoried by Cultural Resources Survey for Indeck Wharton Project

Field Survey No. / Current Name	Address	Description	NRHP Recommendation
Archit-1 / Dawson-Salinas Commercial Property *(Equipment and Cable Service, Inc. and G. Auto Sales Corp.)*	14543 S. FM 441	Multi-tenant, mixed function commercial property comprising a metal-clad, side-gabled pole building; a one-story slab-on-grade brick commercial office; and a telecomm tower with a small prefabricated equipment shed, ca. 1978-2009.	Not Eligible
Archit-2 / Tresos Property	FM 441, 0.27 mi W of SR 71	Agricultural outyard comprising a two-section double-gabled, metal-clad pole barn/machine shed and a portable, metal-clad skid-mounted office, break room, or bunkhouse, ca. 1960-2012.	Not Eligible

Table 5-2
Architectural Properties (Historic Standing Structures)
Inventoried by Cultural Resources Survey for Indeck Wharton Project

Field Survey No. / Current Name	Address	Description	NRHP Recommendation
Archit-3 / Martinez Property	12177 SR 71	House lot comprising a two-story, frame gambrel-roof house with additions and a separate one-story, frame garage, shop, or dwelling, ca. 1920-1980.	Not Eligible
Archit-4 / Bram Property	12074 SR 71	House lot comprising a one-story, frame ranch-style house and a Quonset shed outbuilding, ca. 1950.	Not Eligible
Archit-5 / Sanchez Property *(Same as URS [2012] HSS-WH-4 in Table 4-1, above)*	11795 SR 71	House lot comprising a recently-renovated and expanded one-story, frame house with an elaborate cross-gabled roof plan and a double-wide mobile home, currently on temporary blocking and evidently in storage, ca. 1920-2012.	Not Eligible
Archit-6 / Vacek Property	144/182 CR 426	House lot comprising a one-story brick ranch-style house, a portable, metal-clad skid-mounted office or "cabana," and two minor frame buildings, ca. 1975-2006.	Not Eligible
Archit-7 / Danevang Lutheran Church and Associated Elements	CR 426, 0.12 to 0.30 mile east of SR 71	Architectural group comprising Danevang Lutheran Church (ca. 1941/ relocated to present site 1947); Danevang Community Hall (Forsamlingshus) (1895); Lutheran Sunday School Building (ca. 1950); Danevang Lutheran Cemetery (est. 1895; in use 2013); and a ranch-style house, possibly the parsonage (ca. 1950). Also minor objects and other elements. Exterior characters of buildings have been altered by, e.g., installation of aluminum siding to church and hall or polyurethane roof to church house, but, overall, group retains integrity of feeling, association, location, and setting.	Potentially Eligible
Archit-8A / Pioneer House and Associated Settler Farmstead Outdoor Exhibit, Danish Heritage Museum	153 CR 426	Architectural group prominently featuring the ca. 1898 Jensen House, a relocated, partially-reconstructed 1½ -story side-gabled vernacular Victorian house with one-story kitchen ell and porch; Hansen shed (date unknown); windmill (date unknown; reconstructed, scaled-down frame); and outhouse (ca. 2000).	Not Eligible
Archit-8B / Danish Heritage Museum	153 CR 426	Large, one-story, wood-frame slab-on-grade museum building designed in the form of a traditional gambrel-roofed Danish barn (2001).	Not Eligible

5.3.2.1 Archit-1 to -6

Of the eight inventoried properties, six, Archit-1 to -6, are former farmsteads or are at the approximate location of a former farmstead (Table 5-2).[2] Only one, the Tresos Property (Archit-2), appears to be actively used in an agricultural operation today. However, while historic aerial imagery and other information indicates the Tresos Property originally functioned as a farmstead, today the property appears to serve as an outyard for a large, probably multi-tract, operation. Equipment is stored and maintained on the property, but the farmhouse once located on the property has been removed and replaced by a factory-built portable building that is outfitted to serve as an office, break room, or seasonal bunkhouse. Only the western half of the metal-clad pole building used at the Tresos Property for storage and maintenance (built ca. 1960) dates to the period when the property was an active farmstead.

Four of the six properties (Archit-3 to -6) are former farmsteads that now appear to be used solely as residences and can best be described as rural house lots. The dwellings on the Martinez and Sanchez properties (Archit-3 and -5, respectively) are estimated to have been constructed in the 1920s (but have since been altered) and could be the original farmstead houses at these locations. The dwellings on the Bram and Vacek properties (Archit-4 and -6, respectively) were constructed ca. 1950 and 1975, respectively, and were likely built as second- or possibly third-generation dwellings. The Bram house seems to have been built when the property still functioned as a farmstead. The Vacek house was either constructed toward the end of a similar period of use or after the focus of farming operations was shifted elsewhere. Nearly all of the outbuildings formerly associated with agricultural operations at these properties have been removed. Indeed, among these four properties the only extant outbuilding that probably originally functioned as part of a farming operation is the Quonset shed (ca. 1950-1955) located on the Bram Property (Archit-4).

The lot occupied by the Dawson-Salinas Commercial Property partially overlaps the area occupied by a farmstead known from aerial imagery to have been extant by 1942. The present metal-clad pole building is believed to date to just after a change of ownership in the 1970s and may have been constructed originally as a storage building or machine shed on what was being used as an outyard for a large, multi-tract agricultural operation. After several changes in ownership, it appears likely that by the mid-1990s the property was being used for commercial, non-agricultural purposes (Wharton Assessor Abstract 532 Tract 5A). Historic aerial imagery indicates that more intensive commercial development has occurred there since 2005, beginning roughly coincident with its acquisition by its present owners.

None of these properties is recommended as eligible for the NRHP or the state historic property registers. The buildings at two of the properties, Dawson-Salinas and Vacek (Archit-1 and -6, respectively), appear to post-date entirely the usual 50-year minimum for historic register eligibility. Three properties, Tresos, Martinez, and Sanchez (Archit-2, -3, and -5) include one or more buildings over 50 years old. However, these buildings have been extensively altered within the past 10 to 30 years and no longer possess sufficient integrity of design, materials, workmanship, etc., to retain eligibility; in addition, all the buildings at these properties lack sufficient historical or architectural significance to warrant listing on the NRHP or state registers. Finally, although the Bram Property (Archit-4) retains a high level of integrity it lacks historical or architectural significance and has not been identified with a potentially-significant contiguous or discontiguous historic district.

[2] As used here, the term "farmstead" refers to a dwelling and one or more outbuildings and appurtenant facilities that functioned as the logistical and residential center of an agricultural operation. The available historical information does not allow the residents of these locations to be categorized as owners, tenants, hired hands, or sharecroppers.

5.3.2.2 Archit-7 (Danevang Lutheran Church and Associated Elements)

Archit-7 comprises Danevang Lutheran Church, four additional buildings, a cemetery, and various minor objects and landscaping. This group of historically- and functionally-associated elements occupies approximately 7.4 acres of Wharton Assessor Abstract 105 Tract 7A. The area is situated on the northern side of CR 426, 0.12 to 0.30 mile east of SR 71. These structures lie outside of the 0.5-mile APE for architecture.

Description

Key elements of the Archit-7 property comprise:

- Danevang Lutheran Church (consecrated at this site 1947): Originally a ca.-1941 U.S. Army chapel, the present church building was relocated to Danevang in 1946-47 to replace the original church building, Ansgar Lutheran Church, which was destroyed in a storm in 1945. The present building is a modest gable-front church with a bell tower whose forward-projecting base encloses the front entrance to the church. The main and bell tower roofs are both clad in composition shingles. The church has aluminum siding and has replacement windows (respective dates of installation are unknown). It is built on a concrete slab foundation. Certain elements of the original church, including the tower bell, were salvaged from the original church and used in its replacement. According to photographs on the Portal to Texas History website, the church interior was extensively renovated in 1968. (Photographs of the church exterior and other elements are included with the inventory form in Appendix D.)

- Danevang Community Hall (Forsamlingshuset) (1895, with additions and alterations): This two-story wood framed building was one of the first structures erected in Danevang. The building rests on a pier and beam foundation. The core of the building is a boxy, gambrel roof structure, which faces south. The main (south) façade is notably plain and flat, with a central sliding pair of double doors flanked by pairs of 4/4 double-hung windows with small separate rectangular windows (now fixed, but perhaps originally awning type) above. Short one-and-a-half-story wings project off the east and west sides, and a one-story shed-roof room is attached to the rear of the eastern wing. A one-story hipped roof addition spans the rear of the building. The wings and rear addition each have their own door. Windows on the sides are comparatively few in number, but are numerous and paired on the rear addition. Most windows are double-hung and appear to be a mix of original and replacement installations. Present roofing is composition shingles, and nearly all the exterior walls are clad in aluminum siding, except for the rear wall of the main block and rear addition, which have transite shingles. The sequence of construction of the various sections of the building is unknown and cannot be easily deduced from the building's present exterior, and the Texas State Historical Marker outside the entrance records that "over the years, additions and modifications were made" to the building.

- Lutheran Sunday School Building (ca. 1950): This one-story, L-plan frame building forms a sort of detached hyphen between the northwestern corner of the community hall and the northeastern corner of the church. The effect is to create a courtyard open to the south between the three buildings. The building has a cross-gabled roof clad in composition shingles, with the short leg of the L projecting off the north side at the east end. On the south side of the building, the exterior wall is inset relative to the symmetrical gabled roof, forming a narrow porch supported by simple square posts, with a deck formed by the continuation of the concrete slab foundation. Three irregularly-spaced doors are set between a total of six double-hung windows. Numerous

1/1 double-hung windows also pierce the sides and rear of the building. The exterior walls are clad in transite shingles.

- Danevang Lutheran Cemetery (consecrated 1895): The cemetery is situated immediately west of the church, but the original Ansgar Lutheran Church was situated within the cemetery. According to Hobizal (2007), the cemetery is platted as 25 by 32 rods, or 412 by 528 feet, for a total area of 5 acres. Approximately 3 acres of this area contains graves, while at the rear about 1 acre is lawn and 1 acre is incorporated into the adjoining agricultural field. A drive and a sidewalk divide the cemetery into four quadrants. A U-plan driveway forms the central axis, northern boundary, and western edge of the cemetery, while it is bisected east to west by a concrete sidewalk. A welded steel arch on steel pipe posts marks the cemetery's central, main entrance off CR 426. Landscaping is open lawn uninterrupted by fences or masses of shrubbery; lines of trees flank the cemetery's east, south, and west edges and parallel the central east-west walk. Most graves are marked with headstones that are modest in size and decoration, restrained examples of mass-market twentieth-century gravestone production. A few graves are marked by ground-level concrete slabs.

- Lutheran Church House or Parsonage (ca. 1950): The western end of the church property beyond the cemetery is occupied by a ranch-style house that may serve or have served in the past as the parsonage. The house is a one-story frame structure with a roughly rectangular plan. An attached one-car garage on the east end projects past the main (south) façade and is matched by a projecting room bay on the west end; a large bay also angles off the rear at the building's west end. The low-pitch roof is clad in closed-cell polyurethane spray foam, the use of which was not observed elsewhere in the Danevang vicinity. Judging by the bright signature that marks this building in aerial images from at least the late 1980s onwards, this cladding was applied to the roof more than two decades ago.[3] The exterior walls are clad with transite shingles, and the building stands on a concrete slab.

In addition to these principal elements, the church property includes several minor elements, such as the aforementioned cemetery entrance gate, an M-shaped driveway serving the church and community hall, and four historical markers. Two of these were erected under the auspices of the state of Texas (marker nos. 172 and 12805—see Table 4-1). The other two are private. One is a pink granite marker in the church-community hall-Sunday school courtyard. Erected in 1976, presumably as an American Bicentennial project, the marker outlines the history of Danevang and lists 76 male heads-of-household who settled in the area before 1900. The other private marker (undated) is a cast metal sign that stands in front of the present church building, recounting its history and ending with the proclamation that the church is "a full-fledged member of the Danevang community and continues to provide the glue which has held the community together since 1894."

Potential NRHP Eligibility: Statement of Significance

Tetra Tech believes the architectural property comprising the Danevang Lutheran Church and associated elements is potentially eligible for the NRHP. Although the buildings and other elements comprising the property are, for the most part, lacking in qualities of design, materials, and workmanship that would make them individually eligible and although these elements have been altered over time by repair,

[3] According to firms providing spray-on closed-cell foam roofing, this material is highly effective as a moisture barrier and insulator and is durable if properly maintained.

renovation, and expansion, the property retains sufficient integrity to convey its historical associations, in particular its role as focal point for Danevang's Danish immigrant community and descendant generations during the period 1894 to 1963.

The property comprises a group of historically- and functionally-associated elements on Wharton Assessor Abstract 105 Tract 7A. The tract was deeded to the predecessor of the present Lutheran church, formally described in the assessor abstract as "St. Ansgar Danish Evangelical Lutheran Congregation of Danevang" on July 18, 1908, as a 45-acre parcel intended to serve as the site of the church, parsonage, and church farm (Praestegaard); it was transferred to present Danevang Lutheran Church 45 years later (Christenson 1928:71; Wharton Assessor Abstract 105 Tract 7A).

The community of Danevang ("Danish meadow," in English) was begun when the Danish Folk Society secured options on 25,000 acres in Southern Wharton County from the Texas Land and Cattle Company (Grombacher 1974; Texas Historical Marker No. 1163). The Danish Folk Society was established to preserve the Danish culture and folk ways of immigrants in America. Danevang was created as a place where the goals of the Danish Folk Society could be pursued through the creation of a Danish community; it was the first settlement of the Danish Folk Society (Christenson 1928). At the heart of this community was the church complex. The church complex grew over time, ultimately reaching its current form in roughly 1950. By that time it included a community hall, Sunday school building, and church all arranged around a grassy courtyard with a cemetery off to the side and the parsonage beyond it.

The first building in the complex was the Danevang Community Hall (Forsamlingshus). This building, constructed in 1895, had multiple functions. It was originally the church, minister's home, school, and community center. Danish language church services, Danish language classes, and a "young people's society" (Ungdomsforeningen) were conducted in the space in order to preserve and promote the Danish heritage of the settlers. A cemetery was established near the community hall in 1895 as well, receiving its first interments in August and September of that year (Hobizal 2007; Kennedy 1990).

While the community hall was the first building on the property, it was followed by a parsonage and the creation of a church farm. By the first decade of the twentieth century, the community had raised enough money to build a church, which was dedicated in 1909 (Christensen, 1928).

The community thrived during the first half of the twentieth century, relying on income from the raising of cotton. In August 1945, a hurricane hit the Texas coast, causing high winds and extensive damage in Danevang. One of the casualties of the storm was the church building. The destruction of the church roughly coincided with the closing of military bases throughout the country as the armed forces demobilized after World War II. The deactivation of these buildings led to a surplus of buildings. Roughly 25 miles from Danevang, the US Army training base at Palacios, Texas (Camp Hulen) was being shut down. The congregation purchased the camp's chapel and arranged for it to be moved to church complex in Danevang. It was re-erected at its new home by 1947.

In the subsequent years a few minor changes were made to the site. Aerial photos show that the parsonage was replaced in ca. 1950 by the building that currently sits on the site. A fourth building was added to the site at roughly this time, the Lutheran Sunday School.

The complex of buildings is recommended as potentially eligible to the NRHP under Criterion A as a tangible illustration of the Danish community that established Danevang in 1894. While the buildings have been modified and lost some of their integrity, they still retain strong associations with the Danish settlers of the community, and are additionally significant as part of the first settlement funded by the

Danish Folk Society. Further, the current chapel building may be significant as an example of a temporary World War II US Army Chapel building that has been preserved (Criterion C). The buildings are significant on at least a statewide level, as representing the first successful Danish community in Texas.

5.3.2.3 Archit-8A and 8B (Danish Heritage Museum Pioneer House Group and Main Building)

Archit-8 comprises the Danish Heritage Museum. Separate inventory forms have been prepared for the two distinct components of this property, the Pioneer House building group (Archit-8A) and the museum building (Archit-8B), as they differ in history and design and have been brought together in a single assemblage only relatively recently.

The Pioneer House group, Archit-8A, is a historical display intended to convey the character of an early farmstead built by Danevang's Danish settlers. Prominent in the group is Mr. and Mrs. H.P. Jensen House, a historic building that was relocated to its present site in 1993 and partially reconstructed. The house is a one-and-a-half story side entry gabled dwelling with kitchen ell. The museum's website (Danish Heritage Museum 2013) describes the building's original location as "one-half mile west," but the exact position has not been ascertained. A likely candidate is an abandoned historic farmstead south of FM 441 opposite Archit-1, as the timing of building removal documented by aerial imagery is broadly consistent with the reported history of the Pioneer House. (The abandoned farmstead is actually 0.75 mile west, but that is a minor discrepancy from the website description of the Pioneer House's original location.) If correctly identified, this location was a short distance outside the southwestern perimeter of the Project APE for architecture, while the building's present location is similarly distant from the APE's southeastern perimeter. According to the museum website, the house "was restored to near-original configuration, with most of the labor provided by volunteers from the community. This task included building a new kitchen wing to replace the original kitchen which had deteriorated beyond repair" (Danish Heritage Museum 2013). Among other differences, historical photographs of the Jensen House from the 1920s and 1930s on the Portal to Texas History website show an enclosed porch on the kitchen ell, rather than the present open porch.

Three other structures comprise the balance of the Pioneer House group—a shed, windmill, and outhouse. The shed is named in some online sources as the "Hansen shed," which may indicate that it is another historic building relocated from a different farmstead to the museum grounds. The windmill is non-functioning and consists of historic metal elements mounted on a modern frame (which appeared to be compressed in height). The outhouse appears to be a modern replica.

Individually and collectively, the buildings of Archit-8A do not appear to meet the NRHP eligibility criteria. As a group, the buildings comprise a recent assemblage of farmstead structures from apparently different locations and of different periods that have been collected together to represent a single historic farmstead using an essentially static architectural approach, rather than situating them in a recreated historic farm landscape. Individually, the historic building or buildings have been relocated and altered through reconstruction, compromising aspects of their integrity.

The main building of the Danish Heritage Museum (Archit-8B) is a recent construction (1999-2001). (Photographs of the building under construction are available on the Portal to Texas History website.) Its design was inspired by gambreled Danish barns. Available information does not indicate that it is intended as a replica of a specific building, and although no systematic search was undertaken, Tetra Tech noted no similar historic barns in the area. The building is not eligible for the NRHP because of its recent date.

6. POTENTIAL PROJECT EFFECTS AND RECOMMENDATIONS

A cultural resources survey of the APE for archeology and architecture associated with the proposed Indeck Wharton Energy Center Project in December 2013 was conducted in accordance with a THC-accepted work plan (Appendix A). The survey identified two archeological sites and eight historic architectural properties. Both archeological sites and five of the architectural properties were located within the APE for their respective resource categories. The three remaining inventoried architectural properties are located just southeast of the APE as defined in the work plan and Section 3. Table 6-1 summarizes the properties inventoried by the survey, consultant recommendations regarding NRHP eligibility, and consultant evaluations of potential Project effects on the properties pursuant to 36 CFR 800.4(d) and 800.5. Properties are described and evaluated in Section 5, with inventory forms included in Appendices C and D. Potential Project effects and discussed in Section 6.1 and 6.2, below.

Table 6-1
Summary of Identified Archeological and Architectural Properties,
NRHP Eligibility Recommendations, and Evaluation of Potential Project Effects per 36 CFR 800

Field Survey No.	Property Name	NRHP Eligibility Recommendation	Potential Project Effects (36 CFR 800.4[d] and 800.5)
Archeological Sites			
Locus 1	41WH130	Not Eligible	No Effect
Locus 2	41WH131	Not Eligible	No Effect
Buildings and Structures			
Archit-1	Dawson-Salinas Commercial Property	Not Eligible	No Effect
Archit-2	Tresos Property	Not Eligible	No Effect
Archit-3	Martinez Property	Not Eligible	No Effect
Archit-4	Bram Property	Not Eligible	No Effect
Archit-5*	Sanchez Property	Not Eligible	No Effect
Archit-6	Vacek Property	Not Eligible	No Effect
Archit-7	Danevang Lutheran Church and Associated Elements	Potentially Eligible	No Adverse Effect
Archit-8A	Pioneer House and Associated Settler Farmstead Outdoor Exhibit, Danish Heritage Museum	Not Eligible	No Effect
Archit-8B	Danish Heritage Museum Main Building	Not Eligible	No Effect

*Previously inventoried and evaluated for NRHP eligibility in URS (2012) as HSS-WH-4.

6.1 Findings Regarding Archeological Resources

The two archeological sites (41WH130 and 41WH3131) represent early to mid-twentieth century farmsteads or rural dwellings. Both are characterized by no or limited structural remnants and artifact scatters that have been dispersed by site abandonment process and post-occupation use of the locations for agriculture. Neither site is recommended as eligible for the NRHP (Table 6.1).

The December 2013 survey included an approximately 200-foot corridor on the north side of FM 441, comprising the originally proposed alignment for lateral gas pipeline that will supply the Facility with fuel. Consultations with the gas supplier, Kinder Morgan, around the time of the fieldwork resulted in a revision to the alignment, which now begins with a northerly dogleg from the interconnect with the supply pipeline, before turning east approximately 1,300 feet north of FM 441. Although this alignment was not included in the survey area, its potential to contain significant archeological resources appears low. The new alignment is similar in setting to the areas already surveyed. Survey of the quarter section Project field and the original proposed alignment produced no archeological evidence of prehistoric Native American occupation. Examination of maps and aerial imagery sources shows that during the historic period farmsteads and other areas of intensive human activity were located in the vicinity of the highways of the section line road network. The new alignment is situated well outside the zone where buildings were generally constructed in the Danevang area, and, moreover, there is no indication in the historical sources review of any historical development along the new alignment proposed by Kinder Morgan. It is therefore unlikely that any significant archeological resources are present in the new lateral pipeline alignment, and further survey is not recommended.

Based on the foregoing, Tetra Tech concludes that the Project as currently planned, including Kinder Morgan's new proposed alignment for the natural gas lateral, will have no effect on any archeological sites that are listed in or eligible for the NRHP.

6.2 Findings Regarding Architectural Resources

The Project is not anticipated to result in physical effects to any of the eight inventoried architectural properties. None of the either properties is situated within the construction zone of the proposed Facility, and its operation is not expected to generate physical phenomena such as vibration or substantial particulate matter that will substantively affect the properties. Possible Project effects on buildings and other constructed elements are therefore limited to potential alterations to the visual settings of the properties.

Of the inventoried architectural properties, five are located wholly or partially within the formal 0.5-mile-radius APE for architecture (Archit-1 to Archit-5) (see Section 3). The remaining three are located in a corridor extending east of the APE along CR 426. None of the five properties within the APE are recommended as eligible for the NRHP (Table 6.1). As discussed above, the rationale for these recommendations varies from property to property and includes recent age, lack of integrity, and lack of historical or architectural significance. Two of the three properties in the CR 426 corridor outside the formal, 0.5-mile-radius APE are also recommended as not eligible for the NRHP (Table 6.1). Archit-6 is not sufficiently old, while the components of Archit-8 are either relocated and have otherwise diminished integrity or are too recent.

Evaluation of Archit-7, the Danevang Lutheran Church and Associated Elements, suggests that it may be eligible for the NRHP (Table 6.1). This recommendation balances the areas of significance and nature of the historical associations of the architectural group against the alterations of various elements that have to some degree diminished their integrity. It is important to note, however, that the church and its associated properties lie approximately 0.1 to 0.25 mile outside the APE for architecture for this Project. However, even if the church and associated properties were considered to be situated within the APE for architecture, a visual effects study (Appendix E) indicates that construction and operation of the Facility

will not substantively intrude on occupied properties in the surrounding area, including the area which contains the Danevang Lutheran Church and Associated Elements (Appendix E). In particular, a visual simulation looking west from CR 426 toward the community hall, church, and cemetery shows that the proposed Facility will occupy a small area near the visual horizon and, indeed, will be largely hidden by existing landscaping in the cemetery (Figure 11 of Appendix E).

Based on the foregoing, Tetra Tech concludes that the Project as currently proposed will have no effect on architectural properties within the APE that are listed in or eligible for the NRHP and have no adverse effect on the one property recommended as NRHP eligible that is outside, but nearby, the formally-defined Project APE.

6.3 Recommendation

The proposed Indeck Wharton Energy Center, a nominal net 650-megawatt (MW) natural gas-fired, simple-cycle generating facility, will occupy an approximately 20 acres of an agricultural field in the 160-acre quarter-section northwest of the intersection SR 71 and FM 441 south of Danevang, Texas. The Facility will have a maximum stack height of 140 feet and will not generate a continuous, substantial visible exhaust plume of steam or other particulate matter.

The Project will tie into an existing underground gas pipeline to receive fuel and will also tie into an existing overhead high-voltage transmission line to deliver electricity. The planned natural gas lateral and the local electrical connections are included within the APE for the proposed Project. No new linear facilities outside the Project APE are involved.

Of the 11 archeological and architectural properties identified and inventoried during the field survey of the Project APE and vicinity, 10 are recommended as not eligible for the NRHP. The remaining property, the Danevang Lutheran Church and Associated Elements, is recommended as potentially eligible for the NRHP. This property complex is located 0.6 to 0.75 mile from the center of the proposed Facility. A visual effects study shows that the proposed plant will have an insignificant visual effect on the property.

Pursuant to 36 CFR 800.4(d) and 800.5, it is therefore concluded that overall, the Project will have No Adverse Effect on properties listed on or eligible for listing on the NRHP (Table 6.1). If the foregoing recommendations concerning the NRHP eligibility of the inventoried properties and the evaluations of potential Project effects pursuant to Section 106 and 36 CFR 800 are accepted, then the Project should be permitted to proceed as planned. In addition, assuming acceptance of these recommendations and evaluation, then no further cultural resources studies are necessary for the Project as currently. If the Project design is substantively altered in the future, then additional consultation with THC and further cultural resources studies may be required to address such modifications.

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FIGURES

Legend

- Project Site
- Proposed Danevang Power Plant
- Proposed_Pipeline
- Proposed Right of Way
- Existing Transmission Line
- Existing Gas Pipeline

N

1 inch = 1,250 feet

0 500 1,000

Feet

Source: 2013 ESRI Imagery, Ventyx

Figure 1
Aerial Overview of Project Site

Indeck Wharton Energy Center
Wharton County, Texas

TETRA TECH

December 2013

Figure 2 [Redacted]
Indeck Wharton Energy Center – Cultural Resources Survey Field Map

PHOTOGRAPHS

Photo 1: View east along FM 441 toward Archit-1 (at left). *(C. Borstel, Tetra Tech, 12/04/2013)*

Photo 2: View north along SR 71 toward Archit-3 (at right). *(C. Borstel, Tetra Tech, 12/04/2013)*

Photo 3: View northwest from CR 426 toward Danevang Lutheran Church at eastern end of surveyed area. *(C. Borstel, Tetra Tech, 12/02/2013*)

Photo 4: Northern end of Project quarter-section field (marked by cylindrical bales of cotton looking north toward the cotton gin in Danevang. *(C. Borstel, Tetra Tech, 12/04/2013)*

Photo 5: Project area quarter-section field. View southwest from northeastern corner. *(C. Borstel, Tetra Tech, 12/05/2013)*

Photo 6: Typical ground visibility in Project area quarter-section field. View south from northern end of Transect 11. *(C. Borstel, Tetra Tech, 12/05/2013)*

Appendix A

PROJECT CORRESPONDENCE

(Redacted)

TETRA TECH

Rec'd Tetra Tech CES Morris Pl.
11/22/2013 C Burstyl

October 15, 2013

Mr. Bill Martin
Archeologist, Texas Historical Commission
1511 Colorado St.
Austin, TX 78701

Subject: Cultural Resources Studies for Proposed Indeck Wharton Energy Center Project, Danevang Vicinity, Wharton County, Texas, Subject to US EPA GHG Permit under the PSD Program

Dear Mr. Martin:

Indeck Wharton, LLC. (Indeck) proposes to construct the Indeck Wharton Energy Center Project, a natural gas-fired combustion turbine peaker plant (Project) in Wharton County, Texas. The Project will be constructed on approximately 20 acres of agricultural land 0.75 mile southwest of the town of Danevang near the southern end of the county (Map 1). The Project is located northwest of the intersection of SR 71 and FM 441. It will be set back from existing state and county roads by 0.25 mile or more, and approximately 5,000 feet of new gravel road will be constructed to provide access to the facility (Map 2). An underground natural gas lateral will be installed from an existing 30-inch pipeline approximately 0.67 mile southwest of the proposed plant; the lateral will extend approximately 0.5 mile east from the tee and then turn north for roughly 0.25 mile before entering the plant.

The proposed plant will consist of three gas-fired turbines with a combined nameplate capacity of approximately 650 megawatts (MW). The height of the exhaust stacks for each turbine will be 140 feet. The turbines will be operated on a peak-demand basis, with estimated annual operation not to exceed 2,500 hours. Adjoining the turbines will be an electrical interconnection switchyard and overhead power lines leading to existing high-voltage transmission lines that pass about 500 feet southeast of the planned facility.

Operation of the facility will require an air emissions permit (Greenhouse Gas [GHG] Permit) from the US Environmental Protection Agency (EPA) under its Prevention of Significant Deterioration (PSD) Program. While issuance of the PSD permit is not subject to review under the National Environmental Protection Act (NEPA), the agency is required to evaluate it under Section 106 of the National Historic Preservation Act (NHPA), among other concurrently applicable statutes and regulations.

Indeck has retained Tetra Tech Inc. (Tetra Tech), to support permitting and related planning activities for the proposed Project. Tetra Tech has performed a desktop review of the Project using the Texas Archeological Atlas (TXAA) and the Texas Historic Sites Atlas (TXHSA). This review shows that there are no inventoried archeological sites within [redacted] of the Project and also that there are no inventoried historic buildings or structures closer than approximately 11 miles. There is, however, a documented historic cemetery located 0.68 miles southeast of the Project, as well as three inventoried historical

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markers 0.5 to 0.71 mile to the southeast (Attachment A). Several historic farmsteads and other buildings are located within 0.5 to 0.7 mile of the Project.

The results of the desktop review indicate that a field survey is necessary to evaluate whether any properties eligible for the National Register of Historic Places (NRHP) might be affected by the proposed Project. The following two paragraphs describe the proposed research design, which will be conducted by cultural resources professionals who meet or exceed the Secretary of the Interior's qualifications for archeologists and architectural historians.

Archeology. The Area of Potential Effects (APE) for archeology for the proposed Project is defined as the area within which construction-related ground disturbances may occur. The archeological survey area will include not only the footprint of the proposed peaker plant, access roads, and pipeline alignment, but also the entire approximate quarter-section within which peaker plant will be constructed. (A portion of this area, parallel to and immediately west of the existing transmission lines, was surveyed in 2012 for a proposed pipeline—see Attachment A.) Survey of this entire area will allow maximum flexibility to use any needed area for staging and laydown during plant and pipeline construction. The survey area will comprise an approximately quarter section (~2600 x 2600 feet), less an area along SR 71 not included in the Indeck lease where a farmstead is situated, plus a 100-foot pipeline right-of-way extending approximately 2,600 feet west of the main survey area to the tap point for the 30-inch natural gas pipeline (Map 2). According to the latest available information, a cotton crop was recently harvested from this area. We therefore anticipate that it will be possible to conduct systematic surface survey across the entire archeology APE in accordance with THC's "Archeological Survey Standards for Texas" (2002)—i.e., a systematic walkover of the study area at transect intervals of no more than 100 feet (30 meters).

Historic Architecture. Because the maximum exhaust stack height is 140 feet and no steam or substantial and continuous exhaust plume will be generated by the plant, the APE for historic architecture is defined as a 0.5-mile radius circle around the Project center. Tetra Tech will document the five farmsteads located within this circle by photographing them from public rights-of-way and preparing THC's Texas Historic Resource Survey Forms for each. These forms include a section to provide recommendations concerning NRHP eligibility. In addition, although beyond the 0.5-mile circle, Tetra Tech plans to conduct a rapid reconnaissance of the north side of FM 426 immediately west of SR 71 to ascertain whether any of the buildings between the Danish Heritage Museum and the Danevang Community Hall (Danevang Forsamlingshus), approximately 0.25 mile to the east appear to be potentially eligible for the NRHP.

Following the field investigation, a technical report will be prepared and submitted for THC review and comment.

Native American Consultation. In addition to the foregoing, EPA has requested that Tetra Tech assist in Native American consultation for Section 106 by writing to Tribes with potential interests in the project area and requesting their comments. As noted in Attachment A, we believe two Tribes potentially have such interests, the Comanche Nation of Oklahoma and the Tonkawa Tribe of Oklahoma, and Tetra Tech will contact appropriate officials in each to invite comment. We welcome your suggestions about any additional tribes to contact, given the Project location.

We look forward to your comments on our work plan at your earliest opportunity. We plan to conduct the field research for this project shortly. Should you require additional information, please feel free to contact me at 973-630-8358 or by e-mail at chris.borstel@tetratech.com.

Sincerely yours,

Christopher L. Borstel, Ph.D., RPA

cc (via e-mail):
S. Marshall, Tt
T. Guertin, Tt
J. Schneider, Indeck
A.C. Dumaual, EPA Region 6

Attachment A
Encl. (2)

CONCUR
by
for Mark Wolfe
State Historic Preservation Officer
Date 11/14/13
Track#

Map 1: Portion of Danevang, Texas, 7.5-minute quadrangle map, with project location indicated.

Map 2: One-Half-Mile Radius Circle around Center of the Proposed Danevang Peaker Plant, with Historical Features Documented in Texas Archeological Atlas

Sources: Base Map – Google Earth, Imagery of 1/26/2011; Historical Features—THC 2012

REDACTED

ATTACHMENT A

Desktop Review of Online Texas Archeological Atlas and Historic Sites Atlas
For Proposed Wharton Energy Center Project, Wharton County, Texas
C.L. Borstel, Ph.D., RPA, Tetra Tech Inc., Morris Plains, NJ, July 2013

Archeological Sites

Review of the Texas Archeological Atlas (TXAA) found that no archeological sites have been recorded in the project's ground-disturbance footprint. Two sites have been inventoried within [redacted] of the project (Map 2):

Resource Name	Location	Description	NRHP Status
41WH105	[redacted]	2.6-acre plowzone scatter of late 19th- to mid-20th-century glass, ceramics, brick, and metal artifacts representing a farmstead site. No above-ground or surface features. No evidence of sub-plowzone deposits.	Not eligible
41WH106	[redacted]	Isolated find. Archaic period (ca. 4000 to 2200 BP) chert projectile point blade and tip fragment. No additional artifacts recovered during systematic inspection of the ground around the find or during shovel testing. No subplowzone archeological deposits.	Not eligible

These sites were identified in 2012 during an archeological survey for a proposed pipeline project that will pass approximately 350 feet southeast of the southeastern corner of the proposed peaker plant. After reviewing these and other findings of the survey, THC concluded that the proposed pipeline would have no effect on any archeological or historic architectural resources (National Energy Technology Laboratory 2012; Poche et al. 2012).

Inventoried Historic Buildings

Review of the Texas Historic Sites Atlas (TXHSA) found that the THC has not inventoried any historic buildings closer than 11 miles from the Project. This nearest group of inventoried buildings, comprising 20 properties, is situated in the town of El Campo, north-northwest of the Project. Small numbers of historic buildings have also been inventoried in five other towns in various directions 12 to 18 miles. The most extensive inventory was completed in the town of Wharton, 19.5 miles north-northeast of the project. Over 1,000 properties have been inventoried in Wharton alone.

It appears that architectural survey work was conducted in the Danevang area in the early 1970s as a student historical architecture project (Grombacher 1974), but no details are available online. However, no buildings that were possibly examined during this project were added to TXHSA architectural inventory.

Review of various online sources and photographs suggests that many of the buildings in the 0.25 mile section of FM 426 west of SR 71 have been altered by installation of aluminum or other non-historical cladding and replacement windows. This impression needs to verified by field reconnaissance.

National Register of Historic Places

The nearest NRHP-listed property is located in Blessing, Matagorda County, approximately 12 miles south of the project:

- Hotel Blessing, Ave. B, Blessing, Texas (NRHP 79002993). Listed February 1, 1979.

Cemeteries

The Danevang Lutheran Cemetery (Map 2) is located approximately 0.68 mile southeast of the proposed project. The cemetery was established in 1895 and apparently remains in use today. A historical marker at the cemetery and a transcription of the burial register made in 1990 indicate that the cemetery contains around 500 graves; a 2009 transcript of markers has 640 entries (Gifford 2009; Kennedy ca. 1990).

Historical Markers

According to TXAA and TXHSA, there are three historical markers in the vicinity of the project. As plotted in the TXAA/TXHSA, none appear to have correct geographic coordinates. These coordinates could not be found in other online sources, but they have been estimated from indirect online information, such as photographs of the markers, and these estimated positions are the ones shown on Map 2. The three markers are:

- **THC Marker Inventory No. 172: Ansgar Evangelical Lutheran Church and Cemetery**. Located in the center of the Danevang Lutheran Cemetery, 0.68 mile southeast of the project center. Erected 1994; describes the history of the cemetery (established 1895) and church (erected 1908; destroyed in a hurricane 1945; replaced 1947 with a surplus U.S. Army chapel from Camp Hulen, Palacios, Texas).
- **THC Marker Inventory No. 1163: Danevang ("Danish Meadow").** Located on the eastern shoulder of State Highway 71 north of the intersection of FM 441, 0.50 mile southeast of the project center. Erected 1970; describes Danevang as the "first successful Danish community in Texas," settled in 1894.
- **THC Marker Inventory No. 12805: Danevang Community Hall (Danevang Forsamlingshus).** Located between the community hall and the neighboring Danevang Lutheran Church, 0.71 mile southeast of the project center. Erected 2002; describes the role of the hall (erected 1895) in the early life of the Danevang Danish community.

Review of photographs of the church posted online on Flickr and elsewhere show there are at least two additional historical markers situated between Markers 172 and 12805, which are not included in the TXAA/TXHSA inventory. These are a small red granite obelisk erected in 1976 and inscribed with a

history of Danevang, and a possibly more recent metal marker inscribed with a history of the Danevang Lutheran Church.

Museum

The Danish Heritage Museum is near the northeast corner of Highway 71 and FM 441/CR 426 (Map 2). It is operated by the Danish Heritage Preservation Society, which was founded in 1993 to preserve the heritage of the Danish immigrants who settled the community of Danevang. Occupying three acres of land purchased from the nearby Danevang Lutheran Church, the museum includes the Pioneer House, a farmhouse moved to the museum property in 1993 and opened as a museum in 1998. The main museum building, situated 0.55 mile southeast of the Project center, has the form of a "typical Danish barn with a red roof." It was constructed in 2000-2001 and dedicated on June 1, 2001 (Danish Heritage Museum 2013).

The Danish Heritage Museum's Pioneer House (Jensen House) is located roughly 100 feet west of the main museum building and approximately 0.52 mile southeast of the Project center. According to the museum's website, the building was relocated in 1993 from its original site, "a farm approximately one-half mile west of the current site." In "a serious state of disrepair" when relocated, it "was restored to near original configuration with most of the labor provided by volunteers from the community. This task included building a new kitchen wing to replace the original kitchen which had deteriorated beyond repair" (Danish Heritage Museum 2013).

Native American Interests

A check of NPS's Native American Consultation Database found that no federally-recognized Native American tribes have identified Wharton County as lying within their areas of concern (NPS 2012). However, maps compiled by the Texas Department of Transportation and published online by THC (2012) show that two tribes, the Comanche Nation of Oklahoma, based in Lawton, OK, and the Tonkawa Tribe of Oklahoma, based in Tonkawa, OK, have identified the county as within their area of interest for tribal consultations.

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Appendix B

PRINCIPAL INVESTIGATOR RESUME

Experience Summary

Dr. Borstel has over 30 years of professional experience as an archeologist in academic, government, and corporate settings. He has worked throughout the northeastern United States, from Maine to Virginia, as well as on the U.S. High Plains and in Peru and China. Skilled in both prehistoric and historical archeology, Dr. Borstel's technical specializations include field archeology (survey and excavation), geoarcheology, lithic technology, and documentary research. He also has research experience in industrial archeology, architectural history, ethnography, and the socio-politics of heritage conservation. His responsibilities have included the development of archeological sensitivity assessments; design, supervision, and management of Phase I, II, and III cultural resource studies; preparation of technical documentation for National Historic Preservation Act (NHPA) Section 106 evaluations, National Register of Historic Places (NRHP) nominations, and environmental impact studies; and preparation of general-interest materials in archeology and history.

Education

Ph.D., Anthropology, Indiana University, 1993
M.S., Quaternary Studies, University of Maine at Orono, 1980
B.A., Anthropology, American University, 1976

Registrations/Certifications

Registered Professional Archaeologist (RPA), Earned January 1, 1997

Training

30-Hour OSHA Construction Safety Outreach Training; 2007
40-Hour OSHA Hazardous Waste Health and Safety (HAZWOPER) Training; 1995
8-Hour Annual Refresher for OSHA HAZWOPER Training; 2013
GPS Mapping with Trimble Asset Surveyor (update training seminar for Geo XT, 2006); 2001
Section 106 Regulations Workshop; 1999

Employment History

Tetra Tech, Inc., Morris Plains, NJ, Cultural Resources Specialist, 2005-present
Louis Berger Group, Inc., East Orange, NJ, Senior Archeologist, 1993-2005
Indiana University, Bloomington, IN, Doctoral Research (Anthropology), 1988-1993
Indiana University, Bloomington, IN, Associate Instructor (Anthropology), 1986-1988, 1989-1990
National Park Service, Boston, MA, Supervisory Archeologist, 1980-1985, 1986
American Indian Archeological Institute, Washington, CT, Assistant Crew Chief, 1979
University of Maine at Orono, Graduate Research (Quaternary Studies/Archeology), 1977-1980
University of Maine at Orono, Crew Chief, 1976-1977

Selected Recent Project Experience

Cultural Resources Team Lead, September 2013-present

New Jersey Department of Environmental Protection: Tier 2 Environmental Reviews for HUD Community Block Development Grants, Various Counties, NJ

Coordinate and conduct NHPA Section 106 historic preservation reviews of properties whose owners have applied for federal funding to repair damage from Superstorm Sandy (October-November 2012). Multiple task orders involving 15 to 65 properties apiece, with fast turnarounds. Desktop reviews involving application of evaluation criteria from a FEMA/NJ SHPO Programmatic Agreement and, as necessary, consultation with the SHPO on potential architectural and/or archeological issues identified at the property. To date have participated in reviews of over 250 properties.

Archeologist, June 2013-January 2014
Excelerate Liquefaction Solutions I, LLC, and Lavaca Bay Pipeline System, LLC: Phase I Terrestrial Archeological Survey, Lavaca Bay LNG Project (Project) in Calhoun and Jackson Counties, TX
Project archeologist for Section 106 review by the Federal Energy Regulatory Administration (FERC) of a proposed 29-mile natural gas pipeline on the Central Gulf Coast of Texas. Conducted desktop analysis of previous work and archeological sensitivity to develop archeological survey work plan. One round of fieldwork has been completed, including reporting, and one or more additional rounds may follow.

Cultural Resources Specialist, October 2013
Apex Clean Energy: Phase IA/ Cultural Resources Inventory (CRI), Cameron Wind Project, Cameron County, TX
Desktop study for a due-diligence/fatal-flaws analysis of a 43,000-acre study area for a proposed 165-MW wind energy development on the South Gulf Coast of Texas. Assembled and analyzed existing information about historic architectural and archeological properties, assessed sensitivity of study area for cultural resources, identified potential regulatory issues, and developed recommendations.

Cultural Resources Specialist, November 2010-June 2013
Confidential Client: Critical Issues Analysis (CIA) of Proposed Wind Energy Project, Ford and Clark Counties, KS
Conducted desktop study for a due-diligence/fatal-flaws analysis of a 25,000-acre study area for a proposed wind energy development in southwestern Kansas. Supported client with initial consultations with Kansas SHPO. Subsequently completed field reconnaissance for archeological and architectural resources and prepared technical report on this investigation.

Cultural Resources Specialist, October-November 2012
Indeck Energy: Texas Energy Project (Single-Cycle 600 MW Gas-Fired Power Plant), Brazoria, Grimes, Harris, Liberty, and Wharton Counties, TX
Conducted desktop study for a due-diligence/fatal-flaws analysis of five potential sites for a natural gas-fired power plant, each involving a 1.5-mile-radius (4,500-acre) study area in the Gulf Coastal Plain of Texas. Assembled and analyzed existing information about historic architectural and archeological properties, assessed sensitivity of each study area for cultural resources, identified potential regulatory issues, and developed recommendations. Prepared cultural resources sections of overall CIA reports.

Project Archeologist, May-September 2012
Corpus Christi Liquefaction, LLC, and Cheniere Corpus Christi Pipeline, L.P. (Cheniere Energy, Inc.): Supplementary Phase I Archeological Survey of Revised Project Segments for the Corpus Christi Liquefaction Project, San Patricio County, Texas
Conducted a Phase I field survey of 11 project segments along a 23-mile project alignment for a proposed FERC-licensed natural gas pipeline, liquefaction plant, and marine terminal, using systematic surface survey and shovel testing. Prepared study report for review by the Texas Historical Commission under Section 106 and handled distribution of accepted report to various repositories.

Cultural Resources Specialist, August 2012
Confidential Client: Critical Issues Analysis (CIA) of Potential Wind Project, Oklahoma-Texas Panhandle
Conducted desktop study for a due-diligence/fatal-flaws analysis of an approximately 165,000-acre study area in the Great Plains region of two adjoining states to assess potential issues for a wind energy project. Assembled and analyzed existing information about historic architectural and archeological properties using the online databases of the Oklahoma Historical Society, the Texas Historical Commission, the National Park Service, and other agencies, as well as the results of a paper-based data search at the Oklahoma Historical Society. Identified potential regulatory issues, and developed recommendations.

Cultural Resources Specialist, June 2010-June 2011
CPV Ashley Renewable Energy Company, LLC: Ashley Wind Energy Project, McIntosh County, ND
Worked as archeologist, client's representative, and GPS operator for various cultural resources studies connected with the development of a proposed 200-MW wind project in southeastern North Dakota. Studies sought to address applicable federal and state regulations, including NHPA Section 106. Team member and field leader for several rounds of Class III archeological survey. Also provided field support to a traditional cultural properties survey conducted by a group of Native American stakeholders.

Cultural Resources Specialist, December 2010-January 2011
San Antonio Water System: Proposed Demolition of Historic Water Tanks, Former Kelly Air Force Base, Bexar County, TX
Combining online research, previous cultural resources studies, and client-supplied information, developed historic contexts for two large elevated water tanks constructed at former Kelly Air Force Base in 1943 and 1951 and evaluated potential regulatory issues connected with their proposed demolition by their present owner, the local water authority.

Cultural Resources Specialist, December 2010
Infinity Wind Power: Critical Issues Analysis (CIA), Live Oak Wind Project, Schleicher and Tom Green Counties, TX
Completed a desktop study for a due-diligence/fatal-flaws analysis of a 77,000-acre study area for a proposed wind energy development on the Edwards Plateau in central Texas.

Cultural Resources Specialist, November 2010
Infinity Wind Power: Critical Issues Analysis (CIA), River Birch Wind Project, Oldham County, TX
Completed a desktop study for a due-diligence/fatal-flaws analysis of a 47,000-acre study area for a proposed wind energy development in the Texas Panhandle.

Archeology Field Director /Cultural Resource Specialist, August 2005-October 2010
U.S. Army Corps of Engineers—New York District: Investigation, Remedial Action, Demolition, and Restoration Project at Former Fort Slocum, Davids Island, New Rochelle, Westchester County, NY
Multiple assignments assisting client in meeting stipulations of a Memorandum of Understanding prepared under Section 106 of the NHPA to address effects of demolition of a 78-acre National Register-eligible historic district. Assignments included: (a) technical representative to periodic stakeholder meetings; (b) Phase I archeological survey of prehistoric and historic resources involving over 830 shovel tests, 34 machine trenches, and 18 test units and assessment of potential project effects, including analysis of stratigraphic patterns to develop a general geoarcheological model of historic landform alteration; (c) research and preparation of historic context of former US Army post; (d) preparation of individual HABS/HAER documentation for fortifications, monuments, and utilitarian structures and systems; (e) preparation of research design for historic landscape survey; (f) researcher/complier/editor for six-volume final HABS/HAER documentation of 90 historic buildings and structures; (g) principal author and content designer for 80-page website on history and architecture of Davids Island/Fort Slocum ("The Army's Century on Davids Island," http://davidsisland.westchesterarchives.com); and (h) designer and supervising compiler of final digital archive for project's cultural resources records, including over 6,000 project photographs, historical maps, photographs, and records, and other materials.

Publications & Presentations

Reeve, S.A., S.B. Marshall, J.C. Sexton, M.A. Carper, and C.L. Borstel. 2009. Assessing the Past to Secure the Future: Cultural Resources and Wind Energy. Poster presented at WINDPOWER 2009 Conference & Exhibition, sponsored by the American Wind Energy Association (AWEA), Chicago, IL, May 2009.

Borstel, C.L., V.R. Rolando, and B.M. DuPlantis. 2004. Initial Investigation of the East Middlebury Iron Works Site, Vermont. Paper presented to the Annual Meeting of the Middle Atlantic Archeological Conference, 2004.

Borstel, C.L., and R.M. Jacoby. 2001. Recent Excavations at the Fort Vengeance Monument. Talk presented at the Spring Meeting of the Vermont Archeological Society.

Borstel, C.L. 1999. From the Iron Age to the Electric Age: the Industrial Development of Rockydale, Bristol, Vermont. Paper presented to the Spring Meeting of the Vermont Archeological Society.

Borstel, C.L. 1998. The Hinman-Kelly Sawmill Site: Exploring Vermont's Industrial Heritage. Poster presented at the Fall Meeting of the Vermont Archeological Society.

Borstel, C.L. 1996. A Gasoline Lighting System in Erie, Pennsylvania: A Rural Technology in an Urban Setting? Paper presented to the Annual Meeting of the Middle Atlantic Archeological Conference.

Borstel, C.L., M. Janowitz, and M. Gordon. 1995-1996. Archeology and History at the Erie Federal Courthouse Site. Exhibit presented at the Erie History Center, Erie County Historical Society.

Borstel, C.L. 1993. Powerful Landscapes: The Modern State and the Archeology of Complexity in China. Paper presented to the Annual Meeting of the American Anthropological Society, Washington, D.C.

Borstel, C.L. 1993. *Constructing Prehistory in the People's Republic of China: An Ethnography of State, Society, and Archeology*. Ph.D. dissertation, Indiana University. University Microfilms, Ann Arbor, Michigan.

Conrad, G.W., C.K. Borstel, and K.P. Jacobi. 1989 Analysis of Exposed Architecture at San Antonio: Foundation for an Excavation Strategy. In D. Rice and C. Stanish (eds.), pp. 371-394. *Ecology, Settlement, and History in the Osmore Drainage, Peru*. British Archeological Reports, International Series, vol. 545.

Conrad, G.W., C.L. Borstel, and K.P. Jacobi. 1987. San Antonio: Analysis of the Exposed Architecture at an Estaquina Phase Site, Moquegua. Paper presented to the Annual Meeting of the Society for American Archeology.

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Borstel, C.L. 1986. Review of Simmons and Simmons (eds.)—Old Light on Separate Ways: The Narragansett Diary of Joseph Fish, 1765-1776. *North American Archeologist* 7:89-92.

Borstel, C.L. 1986. Current Directions: An Introduction. In C.L. Borstel and L.A. Towle (eds.), pp. 1-5. *Current Directions in the Archeology of Cape Cod and the Islands*, a thematic issue of the *Bulletin of the Massachusetts Archeological Society* 47(1).

Borstel, C.L. 1986. Site Deposits and Contexts, Outer Cape Cod, Massachusetts. Poster presented to the Annual Meeting of the Society for American Archeology.

Borstel, C.L. 1985. *The 1983 Excavations at 19BN281 (Chapters in the Archeology of Cape Cod, II).* Cultural Resources Management Study Number 12. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Borstel, C.L. 1985. Booknote Review of Spiess and Hedden—Kidder Point and Sears Island in Prehistory. *American Antiquity* 50:933.

Borstel, C.L. 1985. Determining Shell Densities Using a Visual Estimation Technique. Paper presented to the Annual Meeting of the Society for American Archeology.

Borstel, C.L. (organizer and symposium chair) 1985. Current Research in Cape and Islands Prehistory. Presented to the Annual Meeting of the Northeastern Anthropological Association.

Borstel, C.L. 1985. Background to Cape and Islands Prehistory. Paper presented to the Annual Meeting of the Northeastern Anthropological Association.

Borstel, C.L., F.P. McManamon, J. Fitzgerald, A. Dwyer, A.E. Spiess, and M.E. Hancock. 1985. Changing Environments and Changing Subsistence at Nauset Marsh, Eastham, Massachusetts. Paper presented to the Annual Meeting of the Northeastern Anthropological Association.

Borstel, C.L. 1984. Stratigraphy and Archeological Context of Prehistoric Sites at Cape Cod National Seashore. In F.P. McManamon (ed.), vol. I, pp. 181-229. *Chapters in the Archeology of Cape Cod, I: Results of the Cape Cod National Seashore Archeological Survey, 1979-1981.* Cultural Resources Management Study Number 8. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Borstel, C.L. 1984. Prehistoric Site Chronology: A Preliminary Report. In F.P. McManamon (ed.), vol. I, pp. 231-313. *Chapters in the Archeology of Cape Cod, I: Results of the Cape Cod National Seashore Archeological Survey, 1979-1981.* Cultural Resources Management Study Number 8. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Borstel, C.L. 1984. Stones for Tool-Making: Local Resources and Archeological Observations. In F.P. McManamon (ed.), vol. II, pp. 277-337. *Chapters in the Archeology of Cape Cod, I: Results of the Cape Cod National Seashore Archeological Survey, 1979-1981.* Cultural Resources Management Study Number 8. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

McManamon, F.P. and C.L. Borstel. 1984. The Natural Environment and Natural Resources. In F.P. McManamon (ed.), vol. I, pp. 95-115. *Chapters in the Archeology of Cape Cod, I: Results of the Cape Cod National Seashore Archeological Survey, 1979-1981.* Cultural Resources Management Study Number 8. Division of Cultural Resources, North Atlantic Regional Office, National Park Service, Boston.

Borstel, C.L. 1984. The Eastern Archeological Field Laboratory: What It Is. Talk presented to the Semiannual (Spring) Meeting of the Massachusetts Archeological Society.

Borstel, C.L., J. Fitzgerald, and S.A. Chase. 1983. Big Surf and Killer Poison Ivy: Archeology at Coast Guard Beach, Cape Cod National Seashore. Paper presented to the Annual Meeting of the Eastern States Archeological Federation.

Borstel, C.L. 1982. *Archeological Investigations at the Young Site, Alton, Maine.* Occasional Publications in Maine Archeology Number 2. Maine Historic Preservation Commission, Augusta.

Borstel, C.L., and F.P. McManamon. 1981. Horizontal and Vertical Structures in Plow Disturbed Sites, Cape Cod National Seashore. Paper presented to the Annual Meeting of the Northeastern Anthropological Association.

McManamon, F.P., and C.L. Borstel. 1981. Preliminary Analysis of Several Sites from Cape Cod National Seashore. Paper presented to the Annual Meeting of the Northeastern Anthropological Association.

Borstel, C.L. 1981. Column Sampling in Shell Middens: A Methods Study from Cape Cod. Paper presented to the Annual Meeting of the Northeastern Anthropological Association.

Borstel, C.L. 1978. Excavations at the Young Site. Talk presented to the Annual Meeting of the Maine Archeological Society.

Handsman, R.G., and C.L. Borstel. 1975. Archeological Cooperatives: The Need for Centralization? Paper presented Annual Meeting of the Society for Pennsylvania Archeology.

Recent Awards

Commander's Certificate of Appreciation, US Army Corps of Engineers, New York District, in recognition of outstanding dedication and lasting contribution to the Davids Island/Fort Slocum Restoration project, December 2008.

Tetra Tech EC, Inc., CSQ Star of the Month Award for contributions to development of Davids Island virtual exhibit website ("The Army's Century on Davids Island"), September 2009

Tetra Tech EC, Inc., Spot Bonus for outstanding performance in support of the Davids Island virtual exhibit website ("The Army's Century on Davids Island"), October 2009

Certificate of Appreciation, Fort Slocum Alumni & Friends, for contributions to the dissemination of the history of Fort Slocum, November 2009

Tetra Tech EC, Inc., Spot Bonus for outstanding performance during preparation of the fast-tracked Iron Star Wind Project (Ford County, KS) Critical Issues Analyses, September 2010

Greater Hudson Heritage Network, 2010 Award towards Excellence (co-recipient) in recognition of the collaborative effort to preserve, document, and make accessible the history of Davids Island through an innovative website, "The Army's Century on Davids Island," October 2010

Tetra Tech EC, Inc., Spot Bonus for outstanding performance for finishing a field reconnaissance and monitoring effort for the Osage Wind Project (Osage County, OK) well ahead of schedule, July 2011

Appendix C

ARCHEOLOGICAL SITE FORMS

(Redacted)

41WH130

State Of Texas

Archeological Site Form

Field ID Locus 1

Form Date 1/13/2014

General Site Information

Site Name Krag Farm Building ☐ Revisit

Site Type farmstead

Explanation of Type

Twentieth-century building site depicted on mid-century aerial imagery. Apparently a subsidiary house or building separated from main farmstead [redacted]

Project and Permit

Project Nam Indeck Wharton Energy Center

Project Number N/A **Project Funding** Indeck Wharton, LLC, a subsidiary of Indeck Ener

Permit Number N/A **Permit Source** N/A

Recorder Information

Name Christopher L. Borstel **Address** 1000 The American Road

Phone 973-630-8358 **Fax** 973-630-8025 Morris Plains

Email chris.borstel@tetratech.com NJ 07950

Affiliation Tetra Tech, Inc. ☑ **Recorder Visited Site**

Sources of Information

Owner

[redacted]

Informant

None

Additional Sources

Abstracts of title, Wharton County Tax Assessor-Collector (Abstract [redacted] Tract [redacted] part of AD No. [redacted]; historic aerial imagery available from Google Earth, 1942-2013; historic aerial imagery available from USGS Earth Resources Observation and Science (EROS) Center, 1950s-1990s; and historic USGS 7.5-minute quadrangle map (1951).

Work Performed

Observation/Recording Date 12/03/2013

Surface Inspection/Collection Date 12/03/2013

Method Site identified during systematic surface survey of project APE using 100-foot transect intervals. Site evident as [redacted] of APE.

Mapping Dates 12/03/2013

Method Surface features within non-cultivated rectangle mapped using Trimble Geo XH GPS receiver with submeter accuracy.

Testing Dates

Method None.

Excavation Dates

Method None.

Records and Materials

Records
daily journal; shapefile; digital photos; photo logs

Materials Collected
None

Special Samples
None

Temporary Housing N/A

Permanent Housing N/A

Location

Primary County Wharton **Location in County** Danevang -- El Campo vicinity

Other Counties

USGS Map and Quad Danevang (2996-112)

UTM Zone 14 **Easting** 77[redacted] **Northing** 3,21[redacted] **Datum** WGS 1984

Elevation [redacted] **Elevation Range** [redacted]

Description of Location
Site is situated[redacted]adjacent to[redacted]and immediatly [redacted]of intersection of[redacted])

Environment

Nearest Natural Water Seasonally-filled[redacted]

Major Drainage Colorado-Lavaca River

Creek Drainage Unnamed, channelized tributary of Willow Creek, 580 meters to E

Soil Description and Reference
Lake Charles clay. SSURGO data from NRCS Web Soil Survey; McEwen, Harry F., and Jack Crout. 1974. Soil Survey of Wharton County, Texas., plate 83.

Percentage Surface Visible <5% to 100%

Surface Texture Clay

Soil Derivation ☐ Alluvial ☐ Colluvial ☐ Eolian ☐ In Situ ☑ Marine

Other Soils

Environmental/Topographical Setting
Located on a broad interflueve between the Tres Palacios River (to east) and Carancahua Creek (to west), the local terrain has little relief. Site is located on edge of agricultural field usually planted in cotton.

Site Conditions

Circumstances Affecting Observation
Weather: mild, early winter. Approximately half the site is covered with grass in dormant state. Ag field clear of crops and chaff; plowed previous spring.

Site Condition Approximately half the site is incorporated into adjoining agricultural field.

Current Land Use
Agricultural.

Natural Impacts
None evident.

Artificial Impacts
Conversion to agricultural field.

Future Impacts
Conversion to agricultural field; development of nearby natural-gas-fired peak-demand generating station.

Cultural Manifestations

Time Period of Occupation
Modern (1901-present)

Basis for Time Period
Artifact assemblage; secondary local histories; historic aerial imagery.

☑ **Single Component** ☐ **Multiple Component** ☐ **Component Unknown**

Basis for Component
Artifact assemblage; secondary local histories; historic documentation; historic aerial imagery.

Cultural Features
Site is a roughly rectangular area of unculvated ground [redacted]
Site has a light scatter of occupational debris with scattered small clusters. The debris scatter extends approximately 10 meters into the neighboring field at very low densities. One (1) open, concrete-lined well or cistern (ca. 1.3 m across) is situated approximately 5 meters south [redacted] of shade trees and [redacted] One (1) poured concrete door footing or guide (ca. 3 m long) is situated toward SW corner of uncultivated area. No other footings or foundations were observed.

Approximate Site Size Overall, approx. 1,300 sq m (30x45 m), including approx 700 sq m (19x37 m) w/in area of

Basis for Determination Surface reconnaissance

Top of Deposit Below Surface 0 cm

Basis for Determination Surface reconnaissance

Bottom of Deposit Unknown; probably minimal

Basis for Determination Surface reconnaissance

Artifactual Materials Observed

Surface scatter of oyster shells; displaced concrete post base; displaced unidentified concrete fragments; deteiorated PVC pipe; creosoted utility poles (displaced and in-ground); truck-size tires; occasional sherds of ironstone; architectural and vessel glass fragments; brick fragment.

Discussion of Site

Site is an early to mid-twentieth century location of a secondary dwelling (occupied by junior family member, hired hand, or tenant) or outbuilding associated with a farmstead situated approximately [redacted] Historic aerial imagery and mapping indicates site occupied by 1942; aerial imagery appears to show a building on the property until at least mid-1990s. Recent imagery indicates the site is gradually being incorporated into the neighboring agricultural field. Artifact assemblage consists of mass-marketed objects of comparatively recent vintage, often in secondary depositional contexts.

Registration and Recommendations

Registration Status

State Arch Landmark	Not Eligible	**Conservation Easement**	
Registered TX Landmark	Not Eligible	**National Register**	Not Eligible

Registration Comments

Site appears to have little research potential.

Research Value

Site appears to have little research potential: artifact assemblage unremarkable and appears to be largely in secondary context; no substantial structural remains evident. Site is probably being gradually cleared/cleaned up as it incorporated into neighboring field.

Further Investigations

No further work.

Attachments

Site photo and sketch map.

Redacted from public version of form for Site 41WH130:

- Site location map on portion of USGS 7.5-minute series quadrangle map
- Field sketch map of archeological site
- Site photo (IMGP1521.JPG)

41WH 131

State Of Texas

Archeological Site Form

Field ID Locus 2

Form Date 1/14/2014

General Site Information

Site Name Hansen Property Farmstead ☐ Revisit

Site Type farmstead

Explanation of Type

Mid-twentieth century farmstead documented by aerial imagery and other historical evidence. Aerial imagery from 1964 shows a house, barn, and two small outbuildings.

Project and Permit

Project Name Indeck Wharton Energy Center

Project Number N/A **Project Funding** Indeck Wharton, LLC, a subsidiary of Indeck Ener

Permit Number N/A **Permit Source** N/A

Recorder Information

Name Christopher L. Borstel **Address** 1000 The American Road

Phone 973-630-8358 **Fax** 973-630-8025 Morris Plains

Email chris.borstel@tetratech.com NJ 07950

Affiliation Tetra Tech, Inc. ☑ **Recorder Visited Site**

Sources of Information

Owner

[redacted]

Informant

None

Additional Sources

Abstracts of title, Wharton County Tax Assessor-Collector (Abstract [redacted] Trac [redacted] AD No. [redacted]; historic aerial imagery available from Google Earth, 1942-2013; historic aerial imagery available from USGS Earth Resources Observation and Science (EROS) Center, 1950s-1990s (USGS aerial image AR1VAVO00050029, flown 2/15/1964 is particularly good); and historic USGS 7.5-minute quadrangle map (1951).

Work Performed

Observation/Recording Date 12/5/2013

Surface Inspection/Collection Date 12/5/2013

Method Site identified by systematic surface survey [redacted] Additional walkover conducted to delineate site boundaries.

Mapping Dates 12/5/2013

Method Mapped using Trimble Geo XH GPS receiver with submeter accuracy.

Testing Dates

Method None.

Excavation Dates
Method None.

Records and Materials

Records
daily journal; shapefile; digital photos; photo logs

Materials Collected
None

Special Samples
None

Temporary Housing N/A

Permanent Housing N/A

Location

Primary County Wharton **Location in County** Danevang -- El Campo vicinity

Other Counties

USGS Map and Quad Danevang (2996-112)

UTM Zone 14 **Easting** 77[redacted] **Northing** 32[redacted] **Datum** WGS 1984

Elevation [redacted] **Elevation Range** [redacted]

Description of Location
Site is situated in a cultivated field[redacted] approximately[redacted] and approximately[redacted] of Danevang. A moderate to high density surface scatter of artifacts, which marks the center of the site is[redacted]

Environment

Nearest Natural Water Channelized stream[redacted]

Major Drainage Colorado-Lavaca River

Creek Drainage Low-order tributary of Juanita Creek (Little Tres Palacios Creek)

Soil Description and Reference
Lake Charles clay. SSURGO data from NRCS Web Soil Survey; McEwen, Harry F., and Jack Crout. 1974. Soil Survey of Wharton County, Texas., plate 83.

Percentage Surface Visible 100

Surface Texture Clay

Soil Derivation ☐ Alluvial ☐ Colluvial ☐ Eolian ☐ In Situ ☑ Marine

Other Soils

Environmental/Topographical Setting
Located on a broad interflueve between the Tres Palacios River (to east) and Carancahua Creek (to west), the local terrain has little relief. Site is located on edge of agricultural field usually planted in cotton or corn.

Site Conditions

Circumstances Affecting Observation
Field conditions, including ground surface visibility, at time of recordation were excellent.

Site Condition Site has been incorporated into cultivated field. Local practice is create deep semi-permanent furro

Current Land Use
Cultivated field (cotton, corn).

Natural Impacts
None evident.

Artificial Impacts
Cultivation.

Future Impacts
Not believed to be under current threat of additional impacts.

Cultural Manifestations

Time Period of Occupation
Modern (1901-present)

Basis for Time Period
Artifact assemblage; secondary local histories; historic aerial imagery.

☑ **Single Component** ☐ **Multiple Component** ☐ **Component Unknown**

Basis for Component
Artifact assemblage; secondary local histories; historic documentation; historic aerial imagery.

Cultural Features
Site roughly ovoid area primarily located in a cultivated field. The remnants of a driveway [redacted] are extant [redacted] The principal feature of this remnant is a concrete box culvert through which drainage passes, with an [redacted] and [redacted] preserved around it. The main part of the site consists of an artifact scatter that covers approximately 87x94 m. Artifact densities are low to moderate in the outer part of this cluster and moderate to high in a central area measuring 40x45 m. At the time of recordation, it was observed that within the high density area was a patch of weed seedlings, notable because the field as a whole was relatively weed-free.

Approximate Site Size 10,000 sq m. Of this area, approximately 8,000 sq m comprise the low to high density artif

Basis for Determination Surface reconnaissance

Top of Deposit Below Surface 0

Basis for Determination Surface reconnaissance

Bottom of Deposit Unknown; probably minimal

Basis for Determination Surface reconnaissance

Artifactual Materials Observed

Ceramic sherds of various wares, including ironstone, whiteware, and stoneware; bottle and vessel glass of clear, brown, and green; 1 pc solarized glass; numerous small brick fragments and occasional concrete fragments; occasional pieces of metal and machine parts.

Discussion of Site

Site is the remains of a twentieth-century farmstead, which was extant by 1942 and from which all buildings had been removed sometime between 1964 and 1979. Preliminary analysis of census data suggests the farmstead may have been occupied by a tenant rather the owner. Site appears to be heavily plowed, and other than a concrete box culvert near the driveway entrance, there are no visible surface features.

Registration and Recommendations

Registration Status

State Arch Landmark	Not Eligible	**Conservation Easement**	
Registered TX Landmark	Not Eligible	**National Register**	Not Eligible

Registration Comments

Site appears to have little research potential.

Research Value

Site appears to have little research potential: artifact assemblage unremarkable and appears to be largely in the plowzone; little reason to anticipate extensive sub-plowzone deposits or features.

Further Investigations

No further work.

Attachments

Site photo and sketch map.

Redacted from public version of form for Site 41WH131:

- Site location map on portion of USGS 7.5-minute series quadrangle map
- Field sketch map of archeological site
- Site photo (IMGP2040.JPG)

Appendix D

HISTORIC PROPERTY (ARCHITECTURAL) SURVEY FORMS

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-1

1. Identification

County Wharton City El Campo vic.

Current name Equipment and Cable Service Inc./G. Auto Sales Corp. Historic name O-Farms, Inc., shed

Address 14543 S. FM 441, Danevang, TX

Owner/address Vance Dawson III and Encarnation Salinas, Jr., 615 Houston, Portland, TX 78374

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/04/2013

General architectural description The property includes three buildings and a structure: a main, side-gabled, metal-clad pole barn (ca. 1980); a brick commercial building with a deeply overhanging gable (ca. 2009); and a telecomm tower with a prefabricated equipment shed (ca. 2005).

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed _____ Other brick commercial building

☐ Archeological evidence of outbuildings, specify _____

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ■ Other telecommunications tower and equipment

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	■ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ☐ Composition shingles
- ■ Metal corrugated
- ☐ Other _____

Construction:
- ■ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 2 Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ■ Metal
- ☐ Siding, type _____
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ☐ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ■ Other Tranlucent roof panels

Doors:
- ■ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ■ Other sliding barn doors

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
☐ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
☐ Box columns	

Plan:

☐ L-plan	☐ 2-room
☐ T-plan	☐ Open
☐ Modified L-plan	
☐ Center passage	
☐ Bungalow	
☐ Shotgun	
☐ Irregular	
☐ Four Square	
■ Rectangular	
☐ Other _____	

Foundation:

☐ Slab	☐ Pier and beam
☐ Perimeter wall	
☐ Other _____	

Stories: 1 **Basement:** ■ None ☐ Partial ☐ Full **Dimensions:** L 60 x W 120 = Square feet 7200

3. Integrity

■ Location ■ Design ■ Materials ☐ Workmanship ■ Setting ■ Feeling ☐ Association

4. Function

Historic Use: ■ Agriculture ■ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare
☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ■ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare
☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: Unknown Builder: James O. and Katherine Anne Olson (?)

Construction date: ca.1978 ☐ Actual ■ Estimated Source: Aerial photos: 1964--absent; 1977--poss. absent; 1979--extant

■ Additions/modifications, specify dates: cell tower complex (2005) and brick commercial building (2008-9)

☐ Relocated, specify former location and reason: _____

Other associated contexts and information of interest: No information.

6. Archeology Ground

☐ Original state ■ Disturbed Explain Vicinity of A. Lykke Farmstead est. on property before 1942; all homestead bldgs gone by 1977/79.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ■ No ☐ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: _____

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect
☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 770631 m Northing: 3215935 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 532/Tract 5A

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: None.

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ■ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain While the main building retains a high level of integrity, it lacks sufficient historical or architectural significance to be listed in the National Register of Historic Places.

IMGP1682: Looking northwest at Archit-1 (14543 S. FM 441). *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP1615: Looking southwest at Archit-1 (14543 S. FM 441). *(C. Borstel, Tetra Tech, December 4, 2013)*

Continuation p. 1

IMGP1608: Looking south-southeast at Archit-1 (14543 S. FM 441). *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP1683: Looking north at Archit-1 (14543 S. FM 441). *(C. Borstel, Tetra Tech, December 4, 2013)*

Continuation p. 2

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-2

1. Identification

County Wharton City El Campo vic.

Current name Tresos Property Historic name Christian Madsen Property

Address -- [no number] S. FM 441 (south side of road, 0.27 mile west of SR 71), Danevang, TX

Owner/address Tresos Ltd., PO Box 253, Danevang, TX 77432

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.A. Sexton Date recorded: 12/4/2013

General architectural description The property is an agricultural outyard with two buildings: a double-gabled, metal clad pole barn and attached partially open equipment shed, and a smaller, gable-front, one-story, factory-built, metal-clad office/bunkhouse with a wide and shallow footprint.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed _____ Other Skid-mounted factory-built metal office/bunkhouse

☐ Archeological evidence of outbuildings, specify Originally the location of a farmstead with house (now gone) & outbuildings (some replaced).

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ☐ Other _____

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	■ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ☐ Composition shingles
- ■ Metal Corrugated
- ☐ Other _____

Construction:
- ☐ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ■ Other Pole

Wall Facade:
- 4 Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ■ Metal
- ☐ Siding, type _____
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ☐ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ■ Other None

Doors:
- ■ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ■ Other sliding barn doors

Plan:
- ☐ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ■ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ☐ Pier and beam
- ☐ Perimeter wall
- ☐ Other _____

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
☐ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	■ Other none
☐ Box columns	

Stories: 1 **Basement:** ■ None ☐ Partial ☐ Full **Dimensions:** L 60 x W 140 = Square feet 8400

3. Integrity

☐ Location ☐ Design ☐ Materials ☐ Workmanship ☐ Setting ☐ Feeling ☐ Association

4. Function

Historic Use: ■ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare
☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ■ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare
☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: _____ Builder: _____

Construction date: ca. 1960 ☐ Actual ■ Estimated Source: Aerial photos: 1964, pole barn present; older photos unreadable

■ Additions/modifications, specify dates: Pole barn extended to the east 1995-2005; office/bunkhouse set in place 2011-2013

☐ Relocated, specify former location and reason: _____

Other associated contexts and information of interest: No information.

6. Archeology Ground

☐ Original state ☐ Disturbed Explain Farmstead apparently extant on property by early 1940s; most assoc. buildings removed by 1995-2005

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ■ No ☐ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: _____

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect
☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24,000

UTM zone: 14R Easting: 771442 m Northing: 3215897 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 402/Tracts 2,3

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: None.

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ■ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain The buildings on the property in their present form are less than 50 years old and lack the historical or architectural significance to be listed in the National Register of Historic Places.

IMGP1685: Looking southeast at Archit-2 ([no number] S. FM 441). *(C. Borstel, December 4, 2013)*

IMGP1686: Looking southeast at Archit-2 ([no number] S. FM 441). Ca. 1960 section of metal-clad pole barn is at right *(C. Borstel, Tetra Tech, December 4, 2013)*

Continuation p. 1

IMGP1709: Looking southwest at Archit-2 ([no number] S. FM 441). Open-bay machine shed at left constructed 1995 to 2005. *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP2039: Looking northwest at at Archit-2 ([no number] S. FM 441)—portable, metal-clad, skid-mounted jobsite office possibly used as field operations building, break room, or seasonal bunkhouse. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 2

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-3

1. Identification

County Wharton City El Campo vic.

Current name Martinez Property Historic name _____

Address 12177 SR 71, Danevang, TX

Owner/address Julian and Maria Y Martinez, 534 Hoffman St., Houston, TX

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/04/13

General architectural description The property has two buildings and a U-shaped drive. The house inside the drive has a gambrel roof main block and a gable roofed wing at right angles to it. A more recent, 1-story, side-gabled garage, shop, or dwelling is across the drive from main house.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed _____ Other A second, more recent, garage, shop, or dwelling is located on the property.

☐ Archeological evidence of outbuildings, specify None observed.

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ☐ Other _____

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	■ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	☐ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ☐ Gable
- ☐ Hipped
- ■ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ■ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ■ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ■ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- ____ Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ☐ Siding, type _____
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 1 Specify number(s)
- ☐ Interior
- ■ Exterior
- ■ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ■ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ☐ Other _____

Doors:
- ☐ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ☐ Other _____

Plan:
- ■ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ☐ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ☐ Pier and beam
- ☐ Perimeter wall
- ☐ Other _____

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
☐ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
☐ Box columns	

Stories: 1.5 **Basement:** ☐ None ☐ Partial ☐ Full **Dimensions:** L 42 x W 52 = Square feet 2184

3. Integrity

■ Location ■ Design ■ Materials ☐ Workmanship ■ Setting ■ Feeling ☐ Association

4. Function

Historic Use: ■ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare
☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare
☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: _____ Builder: _____

Construction date: ca.1920 ☐ Actual ■ Estimated Source: Professional judgement; aerial photos show house extant by 1943.

☐ Additions/modifications, specify dates: Aerial photos show smaller building extant by 1989 (inconclusive earlier); circular drive extant by 1957.

☐ Relocated, specify former location and reason: _____

Other associated contexts and information of interest: No information.

6. Archeology Ground

☐ Original state ☐ Disturbed Explain Farmstead since at least 1920s.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ■ No ☐ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: _____

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ☐ None ☐ Damage (i.e. natural disaster) ☐ Neglect
☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 771924 m Northing: 3216151 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 105/Tracts 7A1, 7B

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: None.

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ■ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain While the buildings on the property are likely 50 years old or older, they lack the historical or architectural significance to be listed in the National Register of Historic Places.

Questions?
Contact survey coordinator
History Programs Division, Texas Historical Commission
at 512/463-5853 or history@thc.state.tx.us.

TEXAS HISTORICAL COMMISSION
The State Agency for Historic Preservation
www.thc.state.tx.us

IMGP1900: Looking southeast at Archit-3 (12177 SR 71). *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1728: Looking northeast at main house, Archit-3 (12177 SR 71). *(C. Borstel, Tetra Tech, December 4, 2013)*

Continuation p. 1

IMGP1903: Looking southeast at main house, Archit-3 (12177 SR 71). *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1904: Looking east at secondary building (dwelling, shop, or garage), Archit-3 (12177 SR 71). *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 2

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-4

1. Identification

County Wharton City El Campo vic.

Current name Bram Property Historic name Krag Farmstead

Address 12074 SR 71, Danevang, TX

Owner/address Clifton O. Bram and Wife, Box 358, Danevang, TX 77432

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/4/2013

General architectural description The property has a ranch-style house with a Quonset shed. The house has an L-shaped plan, transite shingle siding, double-hung windows, and a composite shingle covered (cross) gable roof. Quonset bldg is 34x48 ft & is probably post-WWII civilian product.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed 1 Other _____

☐ Archeological evidence of outbuildings, specify Nothing specific--field scatter around lot; aerial photos show farmstead shifted S before 1956.

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ☐ Other _____

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	■ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	☐ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ■ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ■ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 4 Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ■ Siding, type transite
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ■ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ☐ Other _____

Doors:
- ■ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ■ With sidelights
- ☐ Other _____

Plan:
- ■ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ☐ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ☐ Pier and beam
- ■ Perimeter wall
- ☐ Other _____

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
■ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
☐ Box columns	

Stories: 1 **Basement:** ☐ None ☐ Partial ☐ Full **Dimensions:** L 74 x W 62 = Square feet 4588

3. Integrity

■ Location ■ Design ■ Materials ■ Workmanship ■ Setting ■ Feeling ■ Association

4. Function

Historic Use: ■ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: _____ Builder: _____

Construction date: 1950 ☐ Actual ■ Estimated Source: House not on 1943 aerial photo but does appear in 1957

☐ Additions/modifications, specify dates: Quonset building is approximately contemporaneous with house, based on aerial imagery.

☐ Relocated, specify former location and reason: _____

Other associated contexts and information of interest: No information.

6. Archeology Ground

☐ Original state ☐ Disturbed Explain Farmstead appears to have been shifted south to present location ca. 1950; earlier farm now cultivated.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ■ No ☐ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: _____

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect ☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 771831 m Northing: 3216332 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 532/Tract 7A-7D

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: None.

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ■ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain While this property retains a high level of integrity, it lacks historical or architectural significance.

IMGP1748: Looking southwest at Archit-4 (12074 SR 71). *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP1753: Looking southwest at main house, Archit-4 (12074 SR 71). *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP1756: Looking west at main house, Archit-4 (12074 SR 71). *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP1749: Looking southwest at Quonset shed, Archit-4 (12074 SR 71). *(C. Borstel, Tetra Tech, December 4, 2013)*

Continuation p. 2

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-5

1. Identification

County Wharton City El Campo vic.

Current name Sanchez Property Historic name Andrew Jensen Property

Address 11795(?)* SR 71, Danevang, TX [*Wharton tax roll gives house number as "0001795," but this is clearly incorrect.]

Owner/address Rosario H. Sanchez, PO Box 475, Danevang, TX 77432

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/4-5/2013

General architectural description The property includes an early house, two sheds, and mobile home on temporary blocking. A ca. 2006 expansion nearly doubled the house's footprint and gave it an irregular plan. The house sits on concrete piers and has an elaborate cross-gabled roof.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed 2 Other Double-wide mobile home (used; not set on permanent foundation; presumed in storage).

☐ Archeological evidence of outbuildings, specify Nothing specific; airphotos show that farmstead of mid-1950s was reduced in area by 1990s.

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ☐ Other _____

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	■ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	☐ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ■ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ■ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 3 Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ■ Siding, type Novelty
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ■ Double hung
- ☐ Casement
- ■ Aluminum sash
- ☐ Decorative screenwork
- ☐ Other _____

Doors:
- ■ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ☐ Other _____

Plan:
- ☐ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ■ Irregular
- ☐ Four Square
- ☐ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ■ Pier and beam
- ☐ Perimeter wall
- ☐ Other _____

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
■ Gable roof	☐ Fabricated metal
■ Inset	☐ Spindlework
■ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
☐ Box columns	

Stories: 1.5 **Basement:** ☐ None ☐ Partial ☐ Full **Dimensions:** L 70 x W 70 = Square feet 4900

3. Integrity

☐ Location ☐ Design ☐ Materials ☐ Workmanship ■ Setting ☐ Feeling ☐ Association

4. Function

Historic Use: ■ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: _____ Builder: _____

Construction date: ca. 1920 ☐ Actual ■ Estimated Source: Professional judgement; aerial photos show house extant by 1943.

■ Additions/modifications, specify dates: Extensive renovation and expansion ca. 2006, based on aerial imagery and tax records.

■ Relocated, specify former location and reason: Mobile home relocated to property 2011-2013; previous location and reason unknown.

Other associated contexts and information of interest: No information.

6. Archeology Ground

☐ Original state ☐ Disturbed Explain Extent of previous farmstead (1950s) has been reduced and converted to ag field.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ■ Yes ☐ No ☐ Not known **Type:** ☐ HABS ■ Survey ☐ Other_____

Details: The property was documented as part of the survey work done for the W.A. Parish Post-Combustion CO2 Capture and Sequestration Project.

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect ☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14r Easting: 771909 m Northing: 3216798 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 105/Tract 5A-1

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: None.

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ■ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain The building lacks the integrity and historical or architectural significance to be listed in the National Register of Historic Places.

IMGP1775: Looking northeast at Archit-5 (11795 SR 71). *(C. Borstel, Tetra Tech, December 4, 2013)*

IMGP1861: Looking east at house at Archit-5 (11795 SR 71). *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 1

IMGP1852: Looking southeast at house at Archit-5 (11795 SR 71). *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1865: Looking east at dismounted double-wide mobile home in storage south of house at Archit-5 (11795 SR 71). *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 2

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-6

1. Identification

County Wharton City El Campo vic.

Current name Vacek Property Historic name Adolph Andersen Property

Address 144/182 CR 426, Danevang, TX (144 CR 426 is address of main house; 182 CR 426 refers to "cabana" on east side of property.)

Owner/address Eddie & Betty Vacek Irrevocable Family Trust, PO Box 442, Danevang, TX 77432

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/4-5/2013

General architectural description The property includes four buildings: a main house, a portable metal building, a garage, and a framed shed.

The house is a 1-story, ranch house with brick walls, horizontal slider windows, an composite shingle-clad gable roof, and a roughly rectangular plan.

Outbuildings (Specify number and type):

Garage 1 Barn _____ Shed 1 Other "Cabana" or office by small pond, east side of property.

☐ Archeological evidence of outbuildings, specify None noted.

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ■ Other Pond

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	■ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	☐ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ■ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ☐ Frame
- ☐ Adobe
- ■ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 6 Number of bays
- ☐ Stucco
- ☐ Stone
- ■ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ☐ Siding, type _____
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 1 Specify number(s)
- ■ Interior
- ☐ Exterior
- ■ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ☐ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ■ Other Horizontal sliders

Doors:
- ■ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ☐ Other _____

Plan:
- ☐ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ■ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ☐ Pier and beam
- ☐ Perimeter wall
- ☐ Other _____

Porches:
- ■ Shed roof
- ☐ Hipped roof
- ☐ Gable roof
- ■ Inset
- ■ Wood posts
- ☐ Brick piers
- ☐ Box columns
- ☐ Classical columns
- ☐ Tapered box supports
- ☐ Fabricated metal
- ☐ Spindlework
- ☐ Jig-sawn trim
- ■ Other plain

Stories: 1 **Basement:** ☐ None ☐ Partial ☐ Full **Dimensions:** L 110 x W 55 = Square feet 6050

3. Integrity

■ Location ■ Design ■ Materials ■ Workmanship ■ Setting ■ Feeling ■ Association

4. Function

Historic Use: ■ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: _____ Builder: _____

Construction date: ca. 1975 ☐ Actual ■ Estimated Source: Not in 1956 aerial photo; is there in 1995

■ Additions/modifications, specify dates: Portable, metal-clad, skid-mounted building moved to property between 1995 and 2006 (per airphotos)

☐ Relocated, specify former location and reason: _____

Other associated contexts and information of interest: _____

6. Archeology Ground

☐ Original state ☐ Disturbed Explain No information.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ■ No ☐ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: _____

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect ☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 771964 m Northing: 3215904 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 459/Tract 2B-1

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: _____

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ☐ No **Is property contributing?** ☐ Yes ■ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain While the property retains a high level of integrity it lacks the architectural or historical significance to qualify for the National Register of Historic Places.

Questions?
Contact survey coordinator
History Programs Division, Texas Historical Commission
at 512/463-5853 or history@thc.state.tx.us.

TEXAS HISTORICAL COMMISSION
The State Agency for Historic Preservation
www.thc.state.tx.us

IMGP1905: Looking southeast at Archit-6, house at 144 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1944: Looking southwest at Archit-6, 144/182 CR 426 (right and left, respectively). *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 1

IMGP1912: Looking south at Archit-6, house at 144 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1916: Looking southeast at Archit-6—portable, metal-clad, skid-mounted building used as "cabana" or office, with street address of 182 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 2

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-7

1. Identification

County Wharton City El Campo vic.

Current name Danevang Lutheran Church Properties (Architectural Group) Historic name Ansgar Evangelical Lutheran Church

Address North side of CR 426, 0.12 to 0.30 mile east of SR 71, Danevang, TX

Owner/address C/O Darlene Miksik, 11663 CR 403 RD, El Campo, TX 77437

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/2/2013

General architectural description The property is related to the Danevang Lutheran Church and comprises, in addition to the church, three bldgs and a cemetery. The gable-front church (ca. 1941/47) has a bell tower. Church and Community Hall have aluminum siding and replacement windows.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed _____ Other Community Hall (1894), Sunday School Building (ca. 1950); House (ca. 1950)

☐ Archeological evidence of outbuildings, specify None noted.

Landscape/site features:

▣ Sidewalks ☐ Terracing ▣ Drives ☐ Well/cistern ☐ Gardens ☐ Other Cemetery (1895); monument (1976); historical markers (1990s+)

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	▣ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	☐ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ▣ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ▣ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ▣ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 3 Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ▣ Siding, type aluminum
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ▣ Fixed
- ☐ Wood sash
- ☐ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ☐ Other _____

Doors:
- ☐ Single-door primary entrance
- ▣ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ☐ Other _____

Plan:
- ☐ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ▣ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ☐ Pier and beam
- ☐ Perimeter wall
- ☐ Other _____

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
☐ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
☐ Box columns	

Stories: 1 **Basement:** ☐ None ☐ Partial ☐ Full **Dimensions:** L 80 x W 38 = Square feet 3040

3. Integrity

▣ Location ▣ Design ☐ Materials ▣ Workmanship ▣ Setting ▣ Feeling ▣ Association

4. Function

Historic Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ■ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ■ Religious ☐ Social ☐ Vacant ☐ Other _____

5. Architectural History

Architect: Church: US Army Quartermaster Corps or Corps Engineers Builder: _____

Construction date: ca. 1941 ☐ Actual ■ Estimated Source: Plaque in front of church; Danish Heritage Mus.; Portal TX History

■ Additions/modifications, specify dates: Sunday School Building (ca. 1950); House /parsonage(?) (ca. 1950); Monument of pink granite (1976)

■ Relocated, specify former location and reason: Moved from Camp Hulen (Palacios,TX) after original building destroyed by 1945 hurricane.

Other associated contexts and information of interest: Community Hall (1895) served as first church; Ansgar Luth Ch. (1909-45) loc in cemetery

6. Archeology Ground

☐ Original state ☐ Disturbed Explain No information

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ■ No ☐ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: _____

Accessible to the public: ☐ Yes ■ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect ☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 772295 m Northing: 3216046 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 105, Tract 7A

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

■ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: Ethnic Heritage (European); Exploration/Settlement; Social History

Period(s) of significance: 1894-1963

Level of significance: ☐ National ■ State ☐ Local

Possible NR district: ☐ Yes ☐ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ■ Medium ☐ Low

Explain The complex is a tangible reminder of the Danish community that founded Danevang; it served as the center of the community for many years.

Complex has experienced alterations in design and materials, but although these obscure certain archit. details, sense of historical association remains.

Google Earth aerial image of 3/25/2013

Indeck Wharton Proj. Archit-7
CR 426, Danevang Luth. Ch. (Archit. Grp.), Danevang, TX

Key Elements of Inventoried Property

1. Danevang Lutheran Church (ca. 1941/relocated to Danevang 1947)
2. Danevang Community Hall (Forsamlingshus) (1895)
3. Lutheran Church Sunday School Building (ca. 1950)
4. Danevang Lutheran Cemetery (1895)
5. Lutheran Church house or parsonage (ca. 1950)
6. Welded steel cemetery entrance gate (date unknown)
7. Approximate footprint Ansgar Lutheran Church (1909-1945)
8. Texas State Historical Marker No. 172 for Ansgar Church and cemetery (1994)
9. Texas State Historical Marker No. 12805 for community hall (2002)
10. Pink granite historical marker (private) for history of Danevang (1976)
11. Metal historical marker (private) for Danevang Lutheran Church (date unknown)

IMGP1450: Looking northwest at Danevang Lutheran Church and Community Hall, elements of Archit-7, from CR 426. *(C. Borstel, Tetra Tech, December 2, 2013)*

IMGP1332: Looking northwest at Danevang Lutheran Church. Pink granite historical marker is at center; portion of the Sunday School Building is at right. All are elements of Archit-7. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 2

IMGP1381: Looking northeast at Danevang Lutheran Church. *(C. Borstel, Tetra Tech, December 2, 2013)*

IMGP1371: Looking north-northwest at front (south) entrance to Danevang Lutheran Church. Marker recounting history of Lutheran Church in Danevang is to right of door. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 3

IMGP1963: Looking northwest at front and east side of Danevang Lutheran Church, showing aluminum siding and replacement windows. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1389: Looking northeast at bell tower of Danevang Lutheran Church. Church building was relocated to this site in 1947, but tower houses bell of 1909 predecessor church. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 4

IMGP1956: Looking north from CR 426 at Danevang Lutheran Church (left), Sunday School Building (center), and Danevang Community Hall (right), all elements of Archit-7. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1954: Looking north at Danevang Community Hall (Forsamlingshus), an element of Archit-7. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 5

IMGP2001: Looking northwest at Danevang Community Hall (Forsamlingshus) showing front (south) and east side. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1994: Looking north at front entrance of Danevang Community Hall (Forsamlingshus). Exterior is clad with aluminum siding and some windows appear to be altered. Historical marker is to left of door. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 6

IMGP1965: Looking southwest at rear and east side of Danevang Community Hall (Forsamlingshus). *(C. Borstel, Tetra Tech, December 5, 2013)*

IMG1334: Looking north at the courtyard between the Danvang Lutheran Church (left) and the Community Hall (right). Sunday School Building is in rear, and pink granite historical marker is in foreground. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 7

IMGP1964: Looking northwest at Danevang Lutheran Sunday School Building, an element of Archit-7. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1934: Looking east at Danevang Lutheran Cemetery, an element of Archit-7, from its southwestern corner at edge of CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 8

IMGP1445: Looking northwest at welded steel entrance gate for Danevang Lutheran Cemetery. *(C. Borstel, Tetra Tech, December 2, 2013)*

IMGP1410: Looking northeast at interior of Danevang Lutheran Cemetery. Ansgar Lutheran Church (1909-1945) was situated to left of flagpole. Historical marker is to right of flagpole. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 9

IMGP1434: Looking south through center of Danevang Lutheran Cemetery. Ansgar Lutheran Church (1909-1945) once occupied portion of present drive between camera and flagpole. *(C. Borstel, Tetra Tech, December 2, 2013)*

IMGP1427: Looking southeast at landscape of Danevang Lutheran Cemetery. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 10

IMGP1928: Looking north-northeast at Danevang Lutheran Church house or parsonage, an element of Archit-7. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1937: Looking north-northeast at Danevang Lutheran Church house or parsonage. Roof is clad with closed cell polyurethane roofing spray foam. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 11

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-8A

1. Identification

County Wharton City El Campo vic.

Current name Pioneer House -- Danish Heritage Museum Historic name Mr. and Mrs. Hans Peter Jensen House

Address 153 CR 426, Danevang, TX

Owner/address Danish Heritage Preservation Society, PO Drawer 386, Danevang, TX

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/2/2013

General architectural description Outdoor museum display featuring relocated settler's house (1898) and other historic and replica buildings. The 1.5-story house has a pier-and-beam foundation, composite shingle roof, double-hung windows, and a kitchen ell with porch supported by box columns.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed 1 Other Outhouse

☐ Archeological evidence of outbuildings, specify None. Relocated buildings; present location not known to have been previously occupied.

Landscape/site features:

■ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ☐ Other Windmill

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	■ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	☐ Other _____

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ☐ Tile
- ■ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ■ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 3 Number of bays
- ☐ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ■ Siding, type clapboards
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ☐ Other _____

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ■ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ☐ Other _____

Doors:
- ■ Single-door primary entrance
- ☐ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ☐ Other _____

Porches:

■ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
☐ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
■ Box columns	

Plan:

☐ L-plan	☐ 2-room
■ T-plan	☐ Open

- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ☐ Rectangular
- ☐ Other _____

Foundation:

☐ Slab	■ Pier and beam
☐ Perimeter wall	

- ☐ Other _____

Stories: 1.5 **Basement:** ☐ None ☐ Partial ☐ Full **Dimensions:** L 28 x W 36 = Square feet 1008

3. Integrity

☐ Location ■ Design ☐ Materials ■ Workmanship ☐ Setting ■ Feeling ■ Association

4. Function

Historic Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ■ Domestic ☐ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Other _____

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ■ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ■ Other Museum

5. Architectural History

Architect: _____ Builder: _____

Construction date: 1898 ☐ Actual ■ Estimated Source: www.danevangtx.org/Danish_Heritage_Museum/Pioneer_House.html

■ Additions/modifications, specify dates: Kitchen wing rebuilt and house restored; outbuildings constructed/reconstructed (1993-1998)

■ Relocated, specify former location and reason: Formerly located 0.5 miles west; moved for museum

Other associated contexts and information of interest: In some sources, museum calls shed the "Hansen shed," indicating possible relocation.

6. Archeology Ground

■ Original state ☐ Disturbed Explain Location not known to have been occupied previously.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ☐ No ■ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: Historic photos and photos of reconstruction available through the Portal to Texas History (http://texashistory.unt.edu/).

Accessible to the public: ■ Yes ☐ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect ☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 771948 m Northing: 3216009 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 105/Tract 7A-2

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: _____

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ■ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain Because the building has been moved and restored and its outbuilding complex assembled from elsewhere or recently constructed, the building lacks sufficient integrity or significance to be listed in the National Register of Historic Places.

IMGP1465: Archit-8A—looking northwest at the Jensen House (Pioneer House), Hansen shed, Priesmeyer windmill, and outhouse (left to right) of the Danish settler homestead outdoor exhibit, Danish Heritage Museum, 153 CR 426. *(C. Borstel, Tetra Tech, December 2, 2013)*

IMGP1470: Looking northwest at the Jensen House (Pioneer House), an element of Archit-8A, Danish Heritage Museum, 153 CR 426. The kitchen ell at right is a reconstruction. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 1

IMGP2021: Looking southeast at the Jensen House (Pioneer House), an element of Archit-8A, Danish Heritage Museum, 153 CR 426. Main house is at left; kitchen ell is at left. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP2008: Looking southwest at the Hansen Shed, part of the Danish settler homestead outdoor exhibit (Archit-8A), Danish Heritage Museum, 153 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 2

Detail -- labels affixed to wood tower.

IMGP2009/2010: Looking north at the Priesmeyer windmill, part of the Danish settler homestead outdoor exhibit (Archit-8A), Danish Heritage Museum, 153 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

Detail of upper door hinge, showing use of modern decking screws and/or phillips head screws in door jamb and steel hinge.

IMGP2011/2012: Looking northeast at probable replica of outhouse, part of the Danish settler homestead outdoor exhibit (Archit-8A), Danish Heritage Museum, 153 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

Continuation p. 3

TEXAS HISTORICAL COMMISSION

HISTORIC RESOURCES SURVEY FORM

Indeck Wharton Proj Archit-8B

1. Identification

County Wharton City El Campo vic.

Current name Danish Heritage Museum (main building) Historic name Danish Heritage Museum

Address 153 CR 426, Danevang, TX

Owner/address Danish Heritage Preservation Society, PO Drawer 386, Danevang, TX

Photo data: Roll _____ Frame _____ to Roll _____ Frame _____ See continuation sheets for selected photos.

Current Designations: ☐ NR ☐ NR District (Is property contributing? ☐ Yes ☐ No) ☐ RTHL ☐ HTC ☐ SAL ☐ Local ☐ Other

Recorded by: C.L. Borstel and J.C. Sexton Date recorded: 12/2/2013

General architectural description This is a modern museum building modeled ona typical Danish barn with a gambrel roof, half-timber walls, and a red tile roof.

Outbuildings (Specify number and type):

Garage _____ Barn _____ Shed _____ Other See Historic Resources Survey Form for Archit-8B (Jensen / Pioneer House)

☐ Archeological evidence of outbuildings, specify None. Relocated buildings; location not known to have been occupied previously.

Landscape/site features:

☐ Sidewalks ☐ Terracing ■ Drives ☐ Well/cistern ☐ Gardens ☐ Other Outdoor exhibits of agricultural machinery.

2. Architectural Description

Stylistic Influence(s):

☐ Log Traditional	☐ Shingle	☐ Gothic Revival	☐ Pueblo Revival	☐ International
☐ Greek Revival	☐ Romanesque Revival	☐ Tudor Revival	☐ Spanish Colonial	☐ Post-war Modern
☐ Italianate	☐ Folk Victorian	☐ Neo-Classical	☐ Prairie	☐ Ranch Style
☐ Second Empire	☐ Colonial Revival	☐ Beaux Arts	☐ Craftsman	☐ Commercial Style
☐ Eastlake	☐ Renaissance Revival	☐ Mission	☐ Art Deco	☐ No Style
☐ Queen Anne	☐ Exotic Revival	☐ Monterey	☐ Moderne	■ Other Danish barn

Structural Details:

Roof Type:
- ■ Gable
- ☐ Hipped
- ☐ Gambrel
- ☐ Shed
- ☐ Flat w/parapet
- ☐ Dormers:
  - ☐ gable
  - ☐ hipped
  - ☐ shed
- ☐ Other _____

Roof Materials:
- ☐ Wood shingles
- ■ Tile
- ☐ Composition shingles
- ☐ Metal _____
- ☐ Other _____

Construction:
- ■ Frame
- ☐ Adobe
- ☐ Solid brick
- ☐ Solid stone
- ☐ Other _____

Wall Facade:
- 1 Number of bays
- ■ Stucco
- ☐ Stone
- ☐ Brick
- ☐ Wood shingle
- ☐ Log
- ☐ Terra Cotta
- ☐ Metal
- ☐ Siding, type _____
- ☐ Fieldstone veneer
- ☐ Awning(s)
- ■ Other simulated half-timbering

Chimneys:
- 0 Specify number(s)
- ☐ Interior
- ☐ Exterior
- ☐ Brick
- ☐ Stone
- ☐ With corbelled caps
- ☐ Stuccoed
- ☐ Other _____

Windows:
- ☐ Fixed
- ☐ Wood sash
- ☐ Double hung
- ☐ Casement
- ☐ Aluminum sash
- ☐ Decorative screenwork
- ■ Other none

Doors:
- ☐ Single-door primary entrance
- ■ Double-door primary entrance
- ☐ With transom
- ☐ With sidelights
- ☐ Other _____

Plan:
- ☐ L-plan ☐ 2-room
- ☐ T-plan ☐ Open
- ☐ Modified L-plan
- ☐ Center passage
- ☐ Bungalow
- ☐ Shotgun
- ☐ Irregular
- ☐ Four Square
- ■ Rectangular
- ☐ Other _____

Foundation:
- ☐ Slab ☐ Pier and beam
- ☐ Perimeter wall
- ☐ Other _____

Porches:

☐ Shed roof	☐ Classical columns
☐ Hipped roof	☐ Tapered box supports
☐ Gable roof	☐ Fabricated metal
☐ Inset	☐ Spindlework
☐ Wood posts	☐ Jig-sawn trim
☐ Brick piers	☐ Other _____
☐ Box columns	

Stories: 1.5 **Basement:** ■ None ☐ Partial ☐ Full **Dimensions:** L 50 x W 100 = Square feet 5000

3. Integrity

■ Location ■ Design ■ Materials ■ Workmanship ■ Setting ■ Feeling ■ Association

4. Function

Historic Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ■ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ■ Other Museum

Current Use: ☐ Agriculture ☐ Commerce/trade ☐ Defense ☐ Domestic ■ Educational ☐ Government ☐ Healthcare ☐ Industry/processing ☐ Recreation/culture ☐ Religious ☐ Social ☐ Vacant ■ Other Museum

5. Architectural History

Architect: Alvin Jensen Builder: _____

Construction date: 2001 ■ Actual ☐ Estimated Source: www.danevangtx.org/Danish_Heritage_Museum/Museum.html

☐ Additions/modifications, specify dates: _____

☐ Relocated, specify former location and reason: _____

Other associated contexts and information of interest: _____

6. Archeology Ground

☐ Original state ☐ Disturbed Explain Location not known to have been occupied previously.

Is a State Archeological Survey Form available for this site? ☐ Yes ■ No ☐ Not known

Details: _____

7. Other Information

Is prior documentation available for this resource? ☐ Yes ☐ No ■ Not known **Type:** ☐ HABS ☐ Survey ☐ Other_____

Details: Historic photos and photos of reconstruction available through the Portal to Texas History (http://texashistory.unt.edu/).

Accessible to the public: ■ Yes ☐ No ☐ Not known **Possible threat(s):** ■ None ☐ Damage (i.e. natural disaster) ☐ Neglect ☐ Development ☐ Major alteration ☐ Relocation ☐ Other _____ *** Note:** Also see Endangered Historic Property Identification Form

8. Geographic Information

USGS quad #: Danevang, TX Year: 2013 Map scale: 1:24000

UTM zone: 14R Easting: 771948 m Northing: 3216009 m (NAD83)

Legal description (Lot/Block): Wharton County Tax Assessor Abstract 105/Tract 7A-2

Addition: _____ Year of addition: _____

9. Significance

Applicable National Register (NR) criteria:

☐ A. Associated with events that have made a significant contribution to the broad pattern of our history;

☐ B. Associated with the lives of persons significant in our past;

☐ C. Embodies the distinctive characteristics of a type, period or method of construction or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction;

☐ D. Has yielded, or is likely to yield, information important in prehistory or history;

Areas of significance: _____

Period(s) of significance: _____

Level of significance: ☐ National ☐ State ☐ Local

Possible NR district: ☐ Yes ☐ No **Is property contributing?** ☐ Yes ☐ No

10. Priority (See manual for definitions.) ☐ High ☐ Medium ■ Low

Explain This is a modern building. While it retains a high level of significance it lacks sufficient historical or architectural significance to be listed in the National Register of Historic Places.

IMGP1927: Looking northwest at the main building of the Danish Heritage Museum (Archit-8B), 153 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1464: Looking north at the front of the main building of the Danish Heritage Museum (Archit-8B), 153 CR 426. *(C. Borstel, Tetra Tech, December 2, 2013)*

Continuation p. 1

IMGP1940-4: Panoramic view looking west, east side of the main building of the Danish Heritage Museum (Archit-8B), 153 CR 426. *(C. Borstel, Tetra Tech, December 5, 2013)*

IMGP1747: Looking southeast at the Danish Heritage Museum (Archit-8B, left) and the Pioneer House and adjoining buildings of the Danish settler homestead outdoor exhibit (Archit-8A, right), 153 CR 426. *(C. Borstel, Ph.D., RPA, Tetra Tech, December 4, 2013)*

Continuation p. 2

IMGP1477: Looking east at the Texas State Historical Marker on SR 71 commemorating "Danevang (Danish Meadow)," with the Pioneer House and Hansen Shed of the Danish settler homestead outdoor exhibit (Archit-8A) and the Danish Heritage Museum (Archit-8B), 153 CR 426. *(C. Borstel, Ph.D., RPA, Tetra Tech, December 2, 2013)*

Continuation p. 3

Appendix E

VISUAL EFFECTS STUDY REPORT

Visual Aesthetics Assessment

Indeck Wharton Energy Center

Wharton County, Texas

November 20, 2013

Prepared For:

Indeck Wharton, LLC
600 N Buffalo Grove Road
Buffalo Grove, IL 60089

Prepared By:

Modeling Specialties
30 Maple Road
Westford, MA 01886

Visual Aesthetics Assessment
Indeck Wharton Energy Center

Introduction

Indeck Wharton, LLC ("Indeck") is proposing to build and operate the Indeck Wharton Energy Center ("Project"), a simple cycle, natural gas-fired generating facility to be located in Wharton County, Texas, south of the unincorporated community of Danevang. The Project will be a nominal, net 650 MW based on the installation of three "F" class combustion turbines and associated ancillary equipment. The analyses in this report evaluate the potential aesthetics impact of the proposed Project. The study is based on an equipment configuration provided by Indeck and a potential equipment vendor, Siemens. While there are generally no quantitative regulatory criteria for visual impact evaluation, it is often of interest to the host community.

The Project will be classified as a wholesale electric generator selling power into the Electric Reliability Council of Texas ("ERCOT") region. Supply shortages are expected in the next five years within ERCOT. In particular, the Houston region has been identified as the most likely to be affected in this regard. The Project is designed to respond to this potential shortage and is ideally suited to do so because it is a peaking power project. The Project has flexible operating characteristics and a short construction timeframe allowing it to most effective respond to ERCOT's peak need.

The following analysis addresses the existing viewsheds in the community and provides simulations that show the Project's relative structural dimensions in the current views. Vendor data and technical discussions were used to develop the three-dimensional block model of the planned equipment. Rendered images of this model provide visual simulations of the proposed equipment configurations. The block model was developed using commercial image processing software.

The rendered model views were overlaid onto the community photos using image processing software and techniques. The Project is relatively small compared to structures in the images because it is a significant distance away. For that reason, no "before" images are provided, but they are available on request. Because of the agricultural character of the area, parts of the year has widespread low foliage in crops. Other parts of the year the fields are fallow (not used for agriculture). The visual context of the community during the survey was late season cleanup. The cotton fields had already been harvested and had a small amount of post harvest foliage. Prior to the fallow winter season, this residual foliage is removed, a process that was taking place during the survey. The conditions of very low foliage represents the season of maximum visibility of the distant Project. The results of the assessment indicate that because of the flat terrain and only low foliage, most of the viewpoints will have a full view of the proposed Project. Since roadways provide only a fleeting view of the site, most viewpoints represent residential uses in various directions. In order to characterize how the Project will fit into the overall community landscape, two aerial views were also analyzed and provided. The aerial views are not intended to represent any sensitive viewsheds, which were analyzed through ground level images.

Overview of Project and Site Vicinity

The Project site is located in Wharton County, Texas near the unincorporated community of Danevang. The Project site is currently used for cotton farming. While the Project footprint will be removed from agricultural use, this will only be an approximate 35 acre portion; the remaining 120 acres of the property will remain agricultural.

The surrounding area has enjoyed a long history of agriculture and includes small residence/commercial communities spread throughout. However, industrial facilities already exist in the area including transmission towers and grain silos for a farm co-op operation.

Viewshed Analysis

In order to assess the potential visual impacts associated with the Project, a viewshed analysis of the surrounding area was conducted. Only locations that have an unobstructed view of the site are relevant for this study. As shown in the series of images, any intervening tree or even a passing truck can block the view of the Project. Because of the flat characteristics of the area, the Project will be visible from more distant locations. But because of those significant distances, the angular exposure is very small. The proposed stacks are 140 feet from ground level, much lower than the nearby cell tower or transmission towers, both at about 200 feet height. Another neighboring transmission line has wooden poles approximately 100 feet tall. Local roadside power poles, in contrast are only about 40 feet tall. The grain silos at the nearby processing facility are approximately 100 feet tall, with the top of its scaffolding measuring approximately 120 feet.

Selection of Visual Receptors

The visual assessment started with a detailed review of the aerial photos obtained from the United States Geological Survey ("USGS") published by Google Earth. This was followed by a drive-through survey of the neighboring communities out to a distance of more than a mile to identify community locations that might be sensitive to views of the Project. The potential viewpoint locations identified through these analyses were visited and evaluated. The viewpoint locations were described by their compass headings and distance from the equipment. This survey process was intended to identify public locations in representative directions from the proposed Project, from which the structures of the proposed facility might be most visible. This visual analysis generally focused on viewsheds that represent community residential locations, due to their sensitivity. These five community viewpoints selected for detailed analysis are shown in Figure 1. The community receptors are described below. In addition to the ground level viewpoints, two oblique aerial views were also analyzed.

Figure 1: Overview of the Analyzed Viewpoints and Community Land Use in the Site Area

- Viewpoint A: This view is not associated with any sensitivity. It represents the nearest public location from which the Project will be viewed. The image was taken along FM Road 441.

- Viewpoint B: This view represents both the Danevang Historical Museum and a neighboring residence. The image was taken from County Road 426 overlooking a corner of the Danevang Historical Museum property and State Route 71 in the direction of the Project.

- Viewpoint C: There is one residence on the same quarter section of land as the Project site. This viewpoint is taken down one of the driveway segments toward the proposed Project. The back side of the residence will also have a view of the Project. The image was taken from the roadway of State Route 71.

- Viewpoint D: There are residences due north of the proposed Project and additional residences to the northwest of that location. Viewpoint D is in the back yard of a residence off Roadway 405. It is slightly off the map to the north of the location indicated on the map.

- Viewpoint E: Viewpoint E is near the residence due north of the proposed Project. The image is taken from the Route 424 roadway just west of the residential driveway.

Methodology of Analysis

Community references were established by the drive/walk around survey. Based on the reference locations, a computerized model of the proposed Project was constructed for developing the simulations. The 3-dimensional plant model was constructed based on a block model provided by Siemens and the facility layout provided by Indeck. The field survey included analysis of the varied visual references such as the grain silos to the northeast, the transmission towers and the cell tower. Using the analysis of those visual references in conjunction with the corresponding distances, the proposed equipment was scaled for inclusion in the field images.

The proposed Project will include three "F" class combustion turbines. For this analysis, Siemens combustion turbines, model SGT6-5000F (5ee), were used. These turbines, or equivalent, will be used for the Project. The tallest feature is the exhaust stack at 140 feet. The intake structure is 75 feet high. The initial block model includes the scope of supply from Siemens (or equivalent). Much of the equipment components are skid mounted and some elements are enclosed for weather protection. Outside that scope of supply are water and fuel storage tanks, transformers and the varied elements in the electrical switchyard. The site will also feature a retention basin and several paved access roads to support the facility. The 3D block model is provided in Figure 2 showing the visual character of the equipment. The finished site will include a security fence that is not shown on these views.

There will be space around the block of units to provide necessary access to service the equipment. The few other ancillary pieces of equipment on the site will include water and gas metering, and transformers that will process the power input and output for export to the grid. The entire Project footprint will be enclosed by a security fence, but it will not significantly affect the views analyzed here. A gray color was used in this study to represent a neutral color that will still be visually compatible with the earth tones

surrounding the site. The final color can be changed to suit other facility or regulatory interests. The site concept model of the equipment layout is shown in Figure 2.

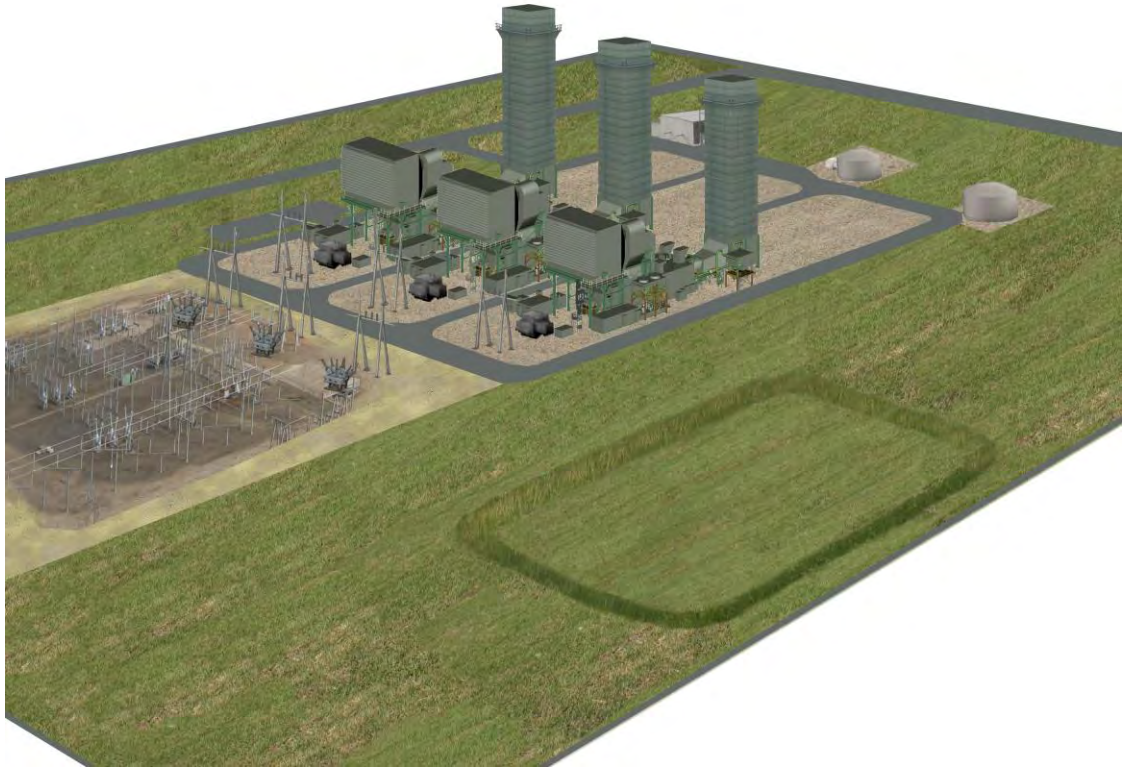

Figure 2: The Visual 3D Concept Model of the Entire Project

Once the 3-D model was developed, the model was adapted to each of the analyzed vantage points. The proposed facility model was then overlaid on actual field images to simulate the developed Project. Size and orientation was based on information that was obtained from the field survey, the equipment plan and available aerial images. The simulated plant equipment was overlaid on the photos at the approximate scale and orientation, such that the visual impact of the proposed stacks and structures may be illustrated. The photographs were used in the graphics to show the results of the visual impact analysis. The simulations show various levels of detail depending on the relative distance from the Project equipment. Two overview aerial images are provided in Figure 3 and 4. Also noted in the image are the modeled community viewshed locations.

Figure 3: Aerial Overview of the Site Area from an Aerial Location to the Southeast

Figure 4: Aerial Overview of the Site Area from an Aerial Location to the Northeast

Results of Visual Impact Analysis

Finally, the block model was overlaid onto field images from the five community locations. These represent ground level viewing locations. They are shown in Figures 5 through 9. Two additional views are provided at historic locations to the southeast of the site for the Danevang Museum and Church. The field images are shown in Figures 10 and 11.The figures represent the predicted visual effect that the facility will have at each of the viewing locations. Because of the great distances to the receptors, the project, when seen, will be clearly visible from the receptors. For that reason, no "Before" image was compared to the "With Project" image.

Lighting

The Project will be illuminated as required for worker safety and security during nighttime. No unnecessary lighting will be employed. Because of the relatively low equipment profile compared to the adjacent transmission towers, no special lighting is expected to be required for safety. Security lighting at the plant will be focused and hooded as appropriate to minimize the direct or indirect illumination of neighboring properties.

Conclusions

Based on the analysis, the Project will be visible from many locations in the area, but is expected to have little impact on the visual character of this rural agricultural community. The Project will be visible from certain locations even outside the area analyzed by this study, but those viewpoints are in the context of significant distance, existing buildings, utility poles and roadways. The equipment colors are based on gray tones that help them blend visually into the neighboring buildings. While this is the most likely selection, actual colors will be selected in cooperation with the review agencies. The results of the study demonstrate that the Project, which is designed to provide stability to the existing electrical network, will have a minor visual effect on the community.

Figure 5 (Loc. A): View of the Proposed Equipment from the Nearest Public Roadway to the South of the Site

Figure 6 (Loc. B): View of the Proposed Equipment from the Danevang Museum and Residence to the Southeast

Figure 7 (Loc. C): View of the Proposed Equipment from the Nearest Residence to the East

Figure 8 (Loc. D): View of the Proposed Equipment from a Residence to the Northwest

Figure 9 (Loc. E): View of the Proposed Equipment from the Nearest Residence to the North

Figure 10 (Loc. F): View of the Danevang Museum Looking in the Direction of the Proposed Project

Figure 11 (Loc. G): Panoramic View of the Historic Church Looking in the Direction of the Proposed Project