

**RST ENGINEERING PLLC
5416 ORCHARD ORIOLE TRAIL
WAKE FOREST NC 27587-6770**

November 30, 2015

Mr. Tony Gallagher, Branch Head
Composting and Land Application Branch
NC Division of Solid Waste
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Application for Renewal
Permit SWC-48-01
Rose Acre Farms, Hyde County

Dear Mr. Gallagher:

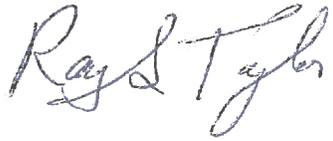
Please find enclosed a notebook which contains a copy of the Application for Renewal and Modification for a permit number SWC-48-01 that was originally submitted November 2, 2010 and a copy of my letter dated July 15, 2011 to Michael Scott that transmitted as-built drawings of the composting facility, sealed by a North Carolina registered professional engineer, and certified that buildings as constructed, meet the functions and intent spelled out the permit application, and relying upon the information provided by another registered professional engineer, will function as intended.

The application for renewal and supporting information provided included a revised operating plan reflecting the operation of the facility at that time, and photographs showing details of the construction and of the site.

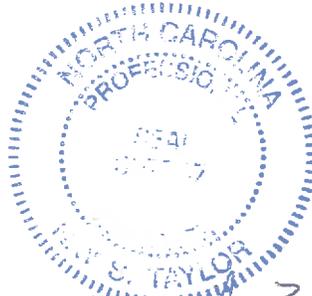
I inspected the site and met with the operator on October 15, 2015 and verified that there have been no substantive changes in the operation of the facility and thus the application and operating plan submitted in 2010 accurately reflects the current operation.

Thank you for your assistance in this process. If you have any questions, need any additional information, or would like to have additional copies, please give me a call.

Sincerely,



Ray S. (Stan) Taylor, PE
RST Engineering, PLLC, #0298



November 30, 2015

CC John Brinn, Rose Acre Farms
Wes Spray, Rose Acre Farms

919 271-4465

RST ENGINEERING PLLC
5416 ORCHARD ORIOLE TRAIL
WAKE FOREST NC 27587-6770

November 2, 2010

Mr. Michael Scott, Supervisor
Composting and Land Application Branch
NC Division of Solid Waste
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: Application for Renewal
Permit SWC-48-01
Rose Acre Farms, Hyde County

Dear Mr. Scott:

Please find enclosed an application for the renewal of the subject permit and a revised operating plan that reflect the current operating methods and facilities at the Hyde County Egg Farm. The drawings included were provided electronically and show the design details for the new composting buildings. A set of the drawings, sealed by a North Carolina Registered Professional Engineer, will be delivered to you as soon as they are received.

The detailed site drawings, geotechnical reports, and aerial photos that were provided with the original application have not been re-submitted, but are included by reference.

Thank you for your assistance in this process. If you have any questions, need any additional information, or would like to have additional copies, please give me a call.

Sincerely,



Ray S. (Stan) Taylor, PE
RST Engineering, PLLC

CC John Brinn, Rose Acre Farms
Chips Everhart, Rose Acre Farms

Application for Permit Renewal and Modification
for a
Large Type III
Solid Waste Compost Facility
Permit Number SWC-48-01

Prepared for

ROSE ACRE FARMS
HYDE COUNTY EGG FARM

By

RST Engineering PLLC

October 2010



Introduction:

Rose Acres Farms is requesting renewal and modification of Permit Number 48-01 which was issued for the composting facility to serve their Hyde County Egg Farm. The requested modification is the covering of two of the concrete pads that have been installed for layer houses, Pad #1 and Pad #14 with "hoop barns" so that they may be used for manure management. No request for increasing the flock size is being made. This modification was approved by letter dated September 23, 2010, and this application will provide drawings and documentation for the planned construction. The proposed layer farm will ultimately include fourteen poultry houses, manure composting/storage houses, grain and meal storage silos, a maintenance shop, a truck and car parking area, and an egg-processing house. A feed mill has been placed on the site. The nominal maximum capacity of the poultry houses is 4,000,000 layers. The actual number on site will be less due to United Egg Producers flock reduction policies.

The proposed pullet farm will ultimately include 3 pullet houses with a planned nominal capacity of 710,000 birds and a covered manure storage house.

Permit Application

A copy of the aerial photograph showing the required information was attached to the original application and is included by reference.

A letter from Hyde County addressing local Zoning was attached to the original application and is included by reference.

SITING/DESIGN REQUIREMENTS FOR SOLID WASTE COMPOST FACILITIES (see 15A NCAC 13B .1404)

Rose Acres Farms proposes to build a composting facility to serve the Hyde County Egg Farm. Waste to be composted will consist primarily of the manure generated at the layer farm and pullet farm that will comprise the total Egg Farm operation. Title 15A Subchapter 13B of the North Carolina Administrative Code Section .1402 (f) (3) describes the material being composted at Rose Acres, indicating that the proposed facility is a Type 3 facility.

The site is owned by Rose Acre Farms and will meet, at the time of permitting and continuously thereafter the following conditions (see section (a)):

- (1) The site is not located within a 100-year floodplain. See the site maps provided with this application.
 - (2) A 100 foot buffer will be maintained between all property lines and all compost areas as shown on the site plans. The nearest property line is approximately 400 feet.
 - (3) A minimum buffer of greater than 500 feet will be maintained between all compost areas and residences or dwellings not owned by Rose Acres Farms. See the site plans provided with this application. The nearest residence is approximately 2,500 yards from the property.
 - (4) A 100-foot minimum buffer will be maintained between all wells and compost areas. The closest existing well is over 500 feet away. If additional wells are constructed, the 100-foot minimum buffer will be maintained.
 - (5) A 50-foot minimum buffer will be maintained between perennial streams/rivers and compost areas. See the site plans provided with this application for location of the nearest perennial stream or canal.
 - (6) The compost facility will meet the requirements of 15 NCAC 2B .0200. A storm water permit has been obtained for the facility and a copy of the approval letter is attached.
 - (7) None of the facility will be located over a closed out disposal area. See the soil evaluation provided with this application.
 - (8) A 25-foot minimum distance will be maintained between compost areas and swales or berms to allow for adequate access of fire fighting equipment. See site plans.
 - (9) All composting will be done in enclosed buildings and compost or feedstock spills will be cleaned as indicated elsewhere in the application so that there will be no discharge of fill materials into the waters or wetlands of the state, no violation of the requirements of the NPDES permit for the facility, and there will be no non-point source discharges which violate any assigned water quality standard.
 - (10) Groundwater Requirements will be met by providing enclosed buildings with concrete floors upon which all composting and storage will be done. The floor elevation will be located at least 24 inches above the seasonal high water table.
- (c) The site meets the following design requirements:
- (1) Public access to the site is limited by Rose Acres in that the layer farm has limited access to insure control of poultry diseases. The compost facility itself will be in closed buildings, further limiting public access.
 - (2) A sedimentation and erosion control permit application has been filed and a Letter of Approval received, indicating compliance with the requirements of the Sedimentation Pollution Control Law (15A NCAC 4).

(3) A site meets the requirements of the Air Pollution Control Requirements (15A NCAC 2D) to minimize fugitive emissions and odors.

(4) The site layout and the operation plan that was submitted and approved specify activities to minimize odors at the property boundary.

The following items are attached to the application in order to satisfy the requirements of paragraph (b) of Part .1405:

Waste to be composted will consist primarily of manure generated at the layer farm, manure generated at the pullet farm, and bird mortality from both farms. Small quantities of eggshells, egg packing waste, or spoiled feed may also be managed at the facility and added to the compost. Solids from the lagoon handling egg wash water will be added to the compost if it becomes necessary to remove them from the lagoon. Sawdust, wood chips, peanut hulls, wheat straw, or other suitable bulking agents approved by the Division of Waste Management will be utilized.

The site plan is attached.

The initial contact information for this composting facility is:

Tony Wesner
Rose Acre Farms
PO Box 1250
6874 North Base Road
Seymour, IN 27274
Phone 812-497-2557

Complex Manager
Name John Brinn
Address 1560 Hyde Park Canal Road
Phone 252-935-5800

The personnel required to operate the facility will have other responsibilities on the egg farm as well. We anticipate approximately 2 to 3 man-days per week being needed to operate the facility. Tasks which will be specifically done for the composting operation and which require technician level employees include the following:

- Sampling and Analysis Technician – daily temperature measurements and inspection of the composting operation, including all record keeping required by the operation plan
- Equipment operator(s) – movement of manure into the facility, movement of compost within the facility, and movement of finished composted manure from the facility

- Maintenance mechanic(s) – maintenance of the mechanical equipment and processes in the facility
- Mortalities will be collected from cages daily by the farm staff. Mortalities are identified by a person walking by each cage each day during the daily walk-through inspection that takes place at all Rose Acres facilities.

There will be no regular operating hours when the facility is open to the public. The facility will be open to receive manure or mortalities from the layer farm and pullet farm on a daily basis. Details of daily operations including facility start up and shut down are provided in the O&M manual included with the application for a permit to operate the facility.

Neither mixed waste nor household hazardous waste will be received on the site.

This facility is enclosed so adverse weather will have minimum impact on operation. All weather surfaces will be constructed around the facility to avoid problems with periods of high rain. In the event of ice, snow, a hurricane or hurricane like conditions, activity, including waste receipt, can be suspended until the weather abates. The windrows will be large enough to self insulate during periods of extreme cold.

General Operation Plan

More details are provided in the O&M manual that was submitted with the application for a permit to operate.)

Manure from the pullet houses will be stored on the pullet farm site on a concrete floor and under a roof until it is transferred to the composting facility. Initially, manure from the layer houses was allowed to accumulate under the cages in the houses for an estimated 14 months. With the additional manure handling space, the manure will be removed from the houses much more frequently. The reason for this is to reduce the amount that accumulates and to accomplish better vector control. Temperatures in the manure piles may exceed 150 degrees F during storage, but the piles will not be turned and the dried manure will not be completely composted.

The houses will be cleaned by removing the dried manure with a front-end loader and transporting it to the composting facility, where it will be placed into windrows for composting.

Dried manure from the layer houses will be composted in windrows that will be formed as described under the design capacity discussion below. Each windrow will be made up primarily of manure with finished compost and/or moisture added as required to achieve active heating. No bulking agent addition is planned for the manure composting process.

Temperature measurements in the windrows will be made in accordance with the Sampling and Analysis procedures and the results recorded. Those procedures will be outlined in the O&M Manual that is included with the application for a permit to operate. After the temperature near the center of a windrow exceeds 131 degrees F the windrow will be turned with a self-propelled compost turner.

Mortality composting will take place in bins. The design of the bins will be further discussed below. Mortalities from the layer houses and the pullet farm will be collected daily and delivered to the composting facility in closed containers. At the facility, the mortalities will be layered into the composting bins. The mortality will be layered with manure, finished compost, straw, or sawdust/wood chips. Details of the layering process will be provided in the O&M Manual.

The schedule of turning of the bins and windrows will be adjusted to meet the Process to Further Reduce Pathogens standards. All parts of the windrow must be at 131 degrees F or higher for a minimum of 15 days. In the bins, the temperature of 131 degrees F must be maintained in all parts of the bin. Ventilation pipes may be added with each layer of bulking agent in the mortality composting bins to reduce or eliminate the need for physically turning the bins. The anticipated residence time in the bins is about two to three weeks with additional time in the windrows. The compost will then be moved to the storage portion of the facility where it will continue to cure until it is sold or is used in further composting operations within the facility.

Material Transfer Management

Moving manure into the composting facility and moving finished compost out creates the potential for spills of materials onto the ground or roadways. As a standard operating procedure, any material spilled outside the walls of the composting facility shall be immediately recovered. Spill management procedures are outlined in the O&M Manual.

Finished Compost Use

Finished compost from the facility will be sold to one or more third parties for use as a soil amendment. The primary use of the material is, at this time, expected to be as a soil amendment. Most sales are anticipated to be to bulk purchasers. The name and address of each person receiving the finished compost will be recorded along with the quantity of compost delivered and the date that the delivery takes place. Each person purchasing compost will be given a copy of

the most recent waste analysis, but will not be given any guarantee of the actual nutrient content of the material they purchase.

Handling Off-Specification Material

In the event that testing shows that a batch of composted material does not meet the required quality standards, that material will be run through another composting cycle by being set aside for use as an additive in composting fresh mortalities. It is anticipated that any off-specification material that is reprocessed in this manner will meet the desired specifications upon reprocessing. Material that consistently fails to meet specs can be landfilled at a permitted municipal solid waste landfill facility.

Handling Emergency Events

In the unlikely event of a spill of a significant quantity of compost or manure, the spilled material will be immediately recovered by shoveling and sweeping the material into containers to be delivered to the composting facility for processing. To prevent rainfall from washing any spilled materials to the storm drainage system for the site, no transfers will be allowed during rainfall events.

If there is a much higher than anticipated mortality rate, the safety factor in the design of the composting facility may well allow the increased numbers of dead birds to be handled in a normal manner. Based on the experience at other Rose Acres facilities, it is anticipated that the composting facility could handle 45,000 mortalities per month on a short-term basis. If, in the event of some catastrophic event at the facility, the number of mortalities overwhelms the capacity of the compost facility, the mortalities may be shipped off site to a rendering facility or to an approved landfill for burial. Disposal will be in compliance with the requirements of NCGS 106-403.

Management of Vectors and Odors

Vector control will be achieved by maintaining the composting facility to prevent creation of conditions which attract vectors. The manure brought into the facility will be dry and reasonably stable because of the time it was retained in the layer or pullet houses. Dry, partially stabilized material will not attract flies and other insects readily. The internal temperatures in the piles will be high enough to prevent insect infestation. Mortalities will be delivered daily to the facility in closed containers, which limit access to vectors. Since all handling will be in an enclosed building, vector attraction will be minimized. The end use of the finished Class A compost will not create nuisance conditions or vector attraction problems because of the stable nature of the material.

Odor control will be accomplished by maintaining conditions which do not lead to odor formation. Daily processing of mortalities will serve to minimize odor

because well-operated composting facilities have minimal odor problems. In addition, the remote location and large size of the site will serve to minimize any impact from odors on adjacent property owners.

No mechanical ventilation is planned for the composting facility, so any emissions which do occur will be fugitive in nature and will not require any permit. There will be no point source of emissions and any air quality impacts from particulate matter emissions is expected to be negligible.

Design Capacity

The Department of Poultry Science at NCSU has published a guidance document entitled "Composting Poultry Mortality". Table 2 of this document is entitled "Estimated Primary & Secondary Bin Capacity for Mortality Composting per 1,000 Birds and Standard Size Units for Various Types of Poultry". This table recommends 2.54 cubic feet of bin space per 1000 birds in the flock for layers and 1.96 cubic feet of bin space per 1000 birds in the flock for pullets. Using these recommendations and the design population of 4,000,000 layers and 710,000 pullets, the required bin space is 11,552 cubic feet. It is important to note that the bird populations chosen for estimating the space requirement are greater than will ever be on the site, creating a built in safety factor in the system design. The same publication gives the typical weight of a typical layer at maturity of 4 pounds. The HY-Line W-36 variety used at Rose Acre Farms has a typical weight of 3.48 pounds at maturity, giving an additional safety factor of 15% in the estimated bin volume required.

The composting bins at Hyde County are located in Building 1 and Building 2. The total bin volume in Building 1 is 5,376 cubic feet and in Building 2 is 9,216 cubic feet. A spreadsheet is attached which gives the calculations discussed above.

Historical information taken from the period of July 1, 2009 through June 30, 2010 was used to estimate the total manure production, based on the original population estimates of 4 million layers and 710 thousand pullets. Note again that the assumed populations for the layer and pullet operations are greater than will ever be experienced, providing a built-in safety factor in sizing the composting facility. A spreadsheet is attached giving the calculations used to estimate the space in the composting facility that is needed to compost the manure. The amount of material composted per length of windrow was calculated from operating data, and that factor is used in showing the capability of the facility with the two new buildings in service. Note that while there is more capacity for managing the manure produced, there is no request to expand flock size. In the event that additional space is needed, an additional composting/storage building can be constructed south of the shop building. The location for this building, if it is needed, is shown by dashed lines on the attached

plans. Note that minor rerouting of the site drainage system will be required if the building is ever constructed.

The composting facility will have three buildings. The original building is Building 1, the building to be constructed on Layer Pad 14 is Building 2, and the building to be constructed on Layer Pad 1 is Building 3. This will increase the floor area of the composting facility by 131,000 square feet. The additional space will be used to store finished compost as needed to satisfy the local demand patterns, and to allow more rapid removal and composting of manure from the layer houses. The additional space will give the operator added flexibility in operation, and the portions of each building used for composting and for storage will be adjusted as necessary to optimize the operation of the facility.

The Process block flow diagram was attached to the original application and is included by reference.

Storage of Bulking Agents for Composting

A bulking agent will be required for use in composting mortalities. The bulking agent of choice will be sawdust or wood chips. If an adequate supply of sawdust is not available, wheat straw, peanut hulls, or locally available materials, approved by the Division of Waste Management, will be used. Storage space for 20 cubic yards of material is available in composting Buildings 1 & 2. This will provide a 1-month supply of bulking agent at normal use rates.

Finished compost may be used to mix with bulking agent and dead birds and will come from the storage piles in the composting building. Actual movement in and out of the facility will be based on demand for the finished compost. The historical demand patterns for the finished compost demonstrated the need for the additional storage and management space in Buildings 2 & 3. No additional facilities will need to be constructed for handling mortalities.

Operating experience has shown that shredding is not necessary. Measuring mixing and proportioning will primarily be done with a front-end loader or a bobcat.

The composting process duration may be different for processing the mortalities and processing the manure. The mortality process is anticipated to last no more than 20 days in the composting bins. Past experience at other Rose Acre facilities indicates that this time will allow complete composting of the mortalities and will allow for 15 days at temperatures greater than 131^o F, needed for compliance with the requirements for "Further Reduction of Pathogens". After removal from the bins, the mortality compost will be then be added to the manure

windrows where it will continue to compost for another approximately 30 days.

The compost will then be moved to the storage portion of the facility where it will continue to cure until it is sold or is used in further composting operations within the facility.

The composting process for manure in windrows is anticipated to last for approximately 30 days. The compost will be mixed and turned at least 5 times during this period to achieve 15 days where the temperature of the windrows exceeds 131^o F in order to attempt to meet the requirements for "Further Reduction of Pathogens". Finished compost from the storage areas of the facility will be used to insulate the windrows as necessary. When it is removed from the windrows, the compost will be moved to the storage area of the facility where it will remain until it is sold.

Any non-compostable materials found, such as drink bottles, will be managed through the farm solid waste management activities.

Each mortality bin and each windrow will be sampled at multiple locations and at a frequency of at least 3 to 5 days per week to demonstrate that the PFRP time and temperature requirements are met. Specific spatial and frequency details are included in the facility O&M manual. A three or four foot compost thermometer will be used to monitor temperatures.

Temperature monitoring and record keeping will demonstrate that the temperatures in the bins and the windrows are maintained above 131 degrees F for a period of at least 15 days and that the compost is turned at least five times while the temperatures are above 131 degrees. If time/temperature/turning requirements are not met pathogen sampling in accordance with EPA/625/R-92/013, Revised July 2003, will be used to demonstrate pathogen reduction.

Aeration for the windrows will be provided through mechanical turning using a self-propelled compost turner, a front-end loader or a bobcat. Turning frequency will be frequent enough to maintain adequate oxygen levels to sustain aerobic biologic activity to maintain temperatures at appropriate levels.

Aeration for the bins will be through use of ventilation pipes inserted in each straw layer in the bin if necessary, or through turning with a front-end loader or bobcat. The typical layering in a mortality-composting bin is to place 6 inches of sawdust or finished compost on the concrete floor. This is covered with 6 inches of straw with ventilation tubes. This is covered by a layer of mortalities (about 136 birds or about 473 pounds, about 550 pounds of finished compost or dried manure, and water, if needed to reach desired moisture levels. The bin is then filled with alternating layers of straw (with ventilation tubes if needed) and the mortality "recipe" until full. It is capped with a six-inch layer of sawdust or

finished compost. If ventilation pipes are not used, the compost must be turned regularly. Rose Acres has found at Lincoln County that turning is not necessary if the ventilation tubes are used.

The need for air emission control technologies is not anticipated. Maintaining proper carbon to nitrogen ratios and proper oxygen levels should control odors. Finished compost will be used to cover windrows if needed to control odors early in the compost process when most of the volatile compounds are released.

Since the composting areas are covered there should be no problems maintaining proper moisture levels in the compost. Maintaining proper moisture levels will, in turn, prevent leachate production. The waste storage, composting and curing areas are located on a concrete pad, which will eliminate vertical movement of liquids to the soil or groundwater under the facility. Runoff from around the buildings is controlled through a permitted storm water control system. Runoff control structures are located as shown on the site plan.

There will not be any recycling facilities specific to the compost operation.

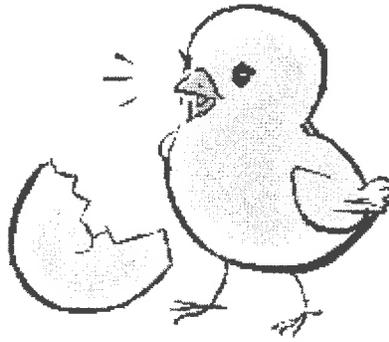
An information sheet will be used to provide information to agricultural users about the quality of the compost. The information sheet will indicate classification grade, recommended uses, adequate nutrient levels to enable users to properly use the compost as a nutrient source. Any restrictions on use will also be provided.

The original composting building, Building 1, is a "Hoop Barn" designed and built by Coverall Building Systems, Inc. of Saskatoon, SK, Canada. This is the type building being used at other Rose Acres Farms installations. The attached drawings by RST Engineering, PLLC show the basic lay out and size of the building, and the structural details are shown on the details provided by Dudek Consulting and sealed by Robert Dudek, a North Carolina Professional Engineer. Buildings 2 and 3 will be designed by Evergreen Engineering, based in Eugene, Oregon and will be constructed by Eco-Builders, LLC. The plans for these buildings are attached.

OPERATING PLAN

ROSE ACRE FARMS HYDE COUNTY EGG FARM

COMPOST / STORAGE BUILDINGS



COMPOSTING OPERATION OVERVIEW

The purpose of the Rose Acre Compost Facility in Hyde County is to manage poultry manure and mortality in a responsible manner that will minimize the possibility of any adverse effects to the environment.

Manure from the pullet houses will be stored under roof on the pullet farm site until it is transferred to the composting facility. Manure from the layer houses will be allowed to accumulate under the cages in the laying houses, protected from the weather. Typically, the manure will accumulate for approximately 3 to 6 months, but under some circumstances could accumulate for up to 12-18 months as the system was originally designed. The piles will not be turned and the dried manure will not be completely composted while in the houses.

Mortalities from the layer houses and the pullet farm will be collected daily and delivered to the composting facility in closed containers. At the facility, the mortalities will be layered into the composting bins as described in this text.

All mortalities and manure will be composted to meet the EPA Process to Further Reduce Pathogens and Vector Attraction Reduction standards to minimize the possibility of the spread of disease on or off the Hyde County Egg Farm.

RESPONSIBLE EMPLOYEES

The employees that will be responsible for and execute the handling of the manure, compost, litter, the acquiring of necessary samples, maintaining sufficient inventory of sampling materials, maintaining all sampling equipment in proper working order, finished compost, and mortalities are as follows:

Complex Manager

Environmental Services Manager

Environmental Services Employees

Any other employee designated by the complex manager to assist in the process.

It should be noted that only the complex manager, environmental services manager or environmental services employees shall be responsible for the record keeping associated with the composting process.

Complex Manager and Compost Facility Contact

Name John Brinn

Address 1560 Hyde Park Canal Road

Phone 252-935-5800

DEFINITIONS

For the purpose of this operating manual litter shall be defined as manure from the pullet or laying houses.

Bulking agent shall be defined as any material used as a carbon source for the mixture of the compost, composting process, or bulk storage of raw materials.

Finished compost shall mean material that is ready to be delivered for use as an agricultural supplement for the growing of a crop, garden, general horticultural, or other public uses suitable for Grade A compost.

COLLECTION OF MATERIAL FOR COMPOSTING

As the manure drops from the bird it accumulates in the lower portion of the house. This area, which is on a concrete floor above natural grade, is called the pit.

Periodically the manure must be removed from the pit, as it becomes full. In order to accomplish removal activities, a small front end loader or a similar device will enter the pit through a door between the pit level and the outside, and begin to scoop up manure. The manure accumulates as cone-shaped rows under each row of hens, facilitating systematic removal. The manure is removed and placed directly into the bed of a dump truck. Prior to being loaded in the truck, the manure will be visually inspected for the presence of foreign materials, i.e., materials that are not either manure or feathers. Should foreign materials be found, they will be removed prior to placing the manure in the bed of the dump truck.

Any manure that falls to the ground outside the house or the pullet farm storage building during manure removal and transfer shall be swept up either with a broom and dustpan or with a shovel by the end of each work day or prior to significant rainfall. Manure will not be transferred during periods of high rain or high wind.

The dump trucks, when full, will move the manure to one of the composting/storage buildings. During transfer activities, three trucks will be weighed to determine the average weight of manure comprising a load. This average weight will be multiplied by the number of trucks loaded in a given day, and that figure will be recorded in the appropriate column on the RAF Manure and Mortalities Transfer log.

During transport from the loading area to the composting building, the roadway will be visually inspected for manure that came out of the truck during transport. Any manure noted will be cleaned up by the end of that work day. The manure collected shall be brought to the compost building and placed with the other manure transferred that day. The manure shall be offloaded in the compost building to form windrows.

Manure transfers from the poultry houses shall be documented in the section under the heading "Manure". The date the transfer took place shall be indicated in the column marked "Date". If the manure was transferred from the layer farm, an "L" shall be placed in the column marked "Farm". If the manure comes from the pullet farm, a "P" shall be placed in the column marked "Farm". The numerical designation of the house the manure was removed from shall be identified in the column marked "House". The weight of manure in tons shall be recorded in the column marked "tons". The employee making the transfer shall write their initials in the column marked "Empl. Initials" to verify the transfer.

Mortality transfers shall be documented in the section under the heading "Mortalities". The date the transfer took place shall be indicated in the column marked "Date". If the mortalities were transferred from the pullet farm, then a "P" shall be placed in the column marked "Farm". If the mortalities were transferred from the layer farm, then an "L" shall be placed in the column marked "Farm". The numerical designation of the house the mortalities were transferred from shall be recorded in the column marked "House". The number of mortalities and combined weight of the mortalities shall be recorded in the columns marked "# Birds" and "Weight". The combined weight of the mortalities is critical in determining the proper amount of carbon to be mixed with the mortalities to facilitate composting. The employee will place their initials in the column marked "Empl. Initials" to verify the transfer.

Completion of these forms creates a record of when manure or mortality are removed from the individual houses and placed in the compost building and the quantity that is moved.

MORTALITY COMPOSTING

When daily mortalities are transferred from either the pullet farm or the layer farm the pertinent information shall be recorded on the Mortalities Transfer Log as indicated in this document.

The composting of mortalities shall follow the set of guidelines outlined below.

The mortality composting bins measure eight feet wide by twelve feet deep and are either six or seven feet high. The bins in the original composting house are seven feet high and the bins in the new composting houses are six feet high. At the entrance to each bin is a small channel where 2" thick boards can be stacked edgewise, in order to contain the amount of composted mortalities placed in the bin.

Each bin is assigned a number. Each bin is anticipated to be of more than adequate size to contain all the mortalities that would be generated each day. If space permits it is permissible to place at least a portion of one day's mortalities on top the mortalities in another bin to finish filling that bin before moving on to the next bin.

In order to achieve complete composting of mortalities, the mortalities will have to be mixed with some manure and bulking agent. Typically, bulking agent mixed with mortalities will be comprised of manure and sawdust or straw. Bulking agent may also include wood chips, yard waste, peanut hulls, cotton gin trash or other materials approved by the Solid Waste Section. Finished or partially composted manure from the manure windrows may be also be added to the bins.

The ratio of the weights of each ingredient will be adjusted to achieve complete composting of the mortalities. The ideal composition is a C:N ratio of 25:1 with a 45% moisture content. A typical recipe, by weight, is one part dead poultry, 1.5 to 2.0 parts manure from the layer or pullet houses and 1/10 part straw or sawdust. The mortalities to be composted each day will be weighed to determine the basis for the day's mix of ingredients. Alternatively, the mortalities may be counted and a known average weight used to calculate the basis for the day's mix of ingredients. Water will be added only if necessary to achieve composting.

The typical layering in a mortality-composting bin is to place 6 inches of finished compost on the concrete floor. This is covered with 6 inches of straw. Ventilation tubes are placed in the straw layers if ventilation tubes are needed. Operating experience over the past five years has shown that ventilation tubes are not normally needed. This is covered by a layer of mortalities (about 136 birds or about 473 pounds). Next, about 6(six) inches of manure is used to cover the mortalities. Water, if needed, is then added to reach desired moisture levels. The bin is then filled with alternating layers of straw and the mortality "recipe" until full. It is capped with a six-inch layer of sawdust or finished compost.

Aeration for the bins will be through the use of ventilation pipes inserted into each straw layer in the bin as necessary. Two one inch pipes with holes that are at least (1/4) inch in diameter and spaced every (1-2)inches will be placed in each straw layer in each bin. In the event additional aeration is necessary a front-end loader or bobcat will be used to turn the bins.

Composted mortality will normally be transferred to manure windrows after they have been in the bins at least long enough to achieve a minimum temperature of at least 131 degrees F for at least three consecutive days. Re-composting this material will further reduce the possibility of any pathogens in the mortality surviving.

The composted mortality material will be layered into the manure windrow most recently placed in the compost building. Finished mortality compost material may also be added to the windrows and then turned in with the turner for incorporation into the windrow. After initial heating, this windrow will be monitored and turned in keeping with normal manure windrow practices.

If composted mortalities are to be sold, rather than added to the manure windrows, the temperature and residence time in the bins will also meet the requirements of Compost Rule .1406(11). Specifically, the bin temperatures will remain above 104 degrees F for a total of at least 14 days and the average temperature for that time shall remain above 113

degrees for that 14 day period. The three days at 131 degrees F is included in the 14 day average. Temperature monitoring and record keeping will be continued during this period to demonstrate that this standard has been met.

During the three day period when compost bin temperatures are to be above 131 degrees F temperatures will be monitored in at least three locations and at two depths, in each bin. Each temperature will be recorded. Temperatures may be monitored after three days above 131 degrees to be sure the compost process is proceeding. If the mortality compost is to be distributed directly to the public the bin temperatures will continue to be monitored as noted above to demonstrate that the vector attraction reduction time and elevated temperature requirements are met. The RAF Hen Mortalities Composting Log shall be completed.

The finished mortality compost product will be sampled and analyzed as required in 15 NCAC 13B.1408(a) before the compost is removed from the bin for distribution to the public. Sampling will be done for pathogens, regulated metals, foreign matter and nutrient levels. Samples collected from the bin in question will be assigned a specific sample number in order to accurately track the analytical information pertinent to the compost contained therein. The sample number will be recorded in the column marked "Sample #". The date the sample was collected and sent to the lab will be recorded in the column marked "Date Sent to Lab". Samples are to be sent to the lab on the date they are collected.

MORTALITY COMPOSTING LOG

Composting of mortalities shall be verified by completion of the Mortality Composting Log.

The date that mortalities are placed in the bin shall be recorded in the column marked "Date". In the column marked "Farm/House", the farm the mortalities were transferred from shall be designated by placing an "L" for mortalities transferred from the layer farm, or a "P" for mortalities transferred from the pullet farm. Additionally, the numerical designation of the house the mortalities were removed from shall be placed in the same column.

The number of birds brought to the composting area shall be recorded in the column marked "# of Birds". The numerical designation of the bin the mortalities are placed in shall be recorded in the column marked "Bin #". The depth, in inches, to which the bin is filled shall be recorded in the column marked "Depth in Bin". The date the temperature of the compost in that specific bin initially rises to 131 degrees F shall be recorded in the "131 Deg. Date" column. After reaching this temperature, the compost shall be monitored for the following 3 days, and the temperature on each date shall be recorded in the "24 Hour Temp.", "48 Hour Temp.", and "72 Hour Temp" columns. Should the temperature fall below 131 degrees F, then the 3-day recording period will

start over after the bin temperature once again reaches 131 degrees F. The date the composted mortalities are removed shall be recorded in the column marked "Date Removed"

Manure composting

The manure shall be offloaded in the compost building to form windrows. Each windrow begins just beyond the mortality compost bins. Each windrow will be a maximum of 535 feet long in the original composting building (Building 1), 526 feet long in Building 2, and 676 feet long in Building 3. The interior walls will have markings painted on them delineating the starting and ending point for the windrows, and shall also have markings at various distances to enable the individual in control of manure placement to determine the length of the windrow. As the composting process is completed, the finished compost will be stored in one or more of the composting houses. In any given building, as the area occupied by finished compost increases, the available area for constructing windrows decreases. A minimum separation of 30 feet will be maintained between any finished compost storage and the active windrows to avoid potential cross-contamination with pathogens. This will not create any operating or capacity problem as the area available for composting and storage has increased by a factor of three, and there is no projected increase in the number of chickens on site, so there will be no increase in overall throughput of the composting facilities.

Generally, windrows will be formed by positioning the dump trucks where the windrow is to begin or be continued, opening the tailgate, lifting the bed, and driving down the length of the building, dispensing manure as it proceeds. The individual in control of manure placement shall indicate to the driver of the truck whether to speed up or slow down in order to evenly dispense the manure along the windrow being formed.

Windrows will be formed that are approximately fourteen (14) feet wide at the base and 9 feet high measured from the floor to the top of the windrow. Operating experience has shown that each foot of windrow will contain about 1.21 tons of compost.

As the windrow portion of the building fills up it may be necessary to drop the manure in the open area and use a front end loader to place the manure in the windrow. A small pile of manure will be maintained in the vicinity of the compost bins for daily use in composting mortality.

After reaching a temperature of 131 degrees F and maintaining it for 3 days, the windrow will be turned. Each windrow will be maintained at temperatures at or above 131 degrees F for at least 15 days and during the period the windrows are above 131 degrees each windrow will be turned five times. Each time the windrow is turned the date and time will be recorded in the manure compost log. After the fifth turning, the compost will be sampled and samples will be sent to the lab for analysis. If the analysis shows the compost meets the requirements for a Grade A compost, the compost will be considered ready for further distribution.

Compost temperatures will be monitored at least every three days during the 14 day period the temperatures are at or above 131 degrees F for pathogen reduction. Prior to turning the compost, the person in charge of that duty will check the internal pile temperature to determine whether it is at or above 131 degrees F. Temperature testing will be performed at approximately 25 foot intervals along the length of the windrow. Sample points should be approximately one third of the height of the pile from the top. The temperature will be measured 6-12 inches into the pile, and again 3-4 feet into the pile. Each temperature and the depth to which the thermometer was inserted will be recorded in the appropriate location in the manure compost log.

Aeration for the windrows will normally be provided through mechanical turning using a self-propelled compost turner. A front-end loader or a bobcat will also be available for turning if necessary.

If areas are noted that are not at the minimum temperature of 131 degrees F, that windrow will not be turned. Staff will then try to determine the reason the temperature is low. If lack of oxygen is determined to be the problem the windrow may be turned more often to keep oxygen levels up. If it is determined that a lack of moisture is the problem, water may be added as necessary to maintain optimum moisture content in the compost in order to sustain appropriate levels of aerobic biological activity. If water is needed it is added through a pipe attached to the compost turning machine and is blended in as the compost is turned.

If at any time during the turning process the temperature drops below the 131 degrees F required the composting process shall begin again. After a windrow has met the required 131 degrees F for 15 days turning frequency will be only what is necessary to maintain adequate oxygen levels, sustaining aerobic biological activity to maintain temperatures at appropriate levels.

MANURE COMPOSTING RECORD

The date each load is received shall be recorded on the line provided. The numerical designation of the row the manure is placed in is to be recorded in the space provided. The person responsible shall record the numbers, in the space provided, to the nearest foot marker, from the beginning and the end of the row created during that day's manure placement activities.

Manure from the pullet farm will follow the same process as above except manure will be delivered via a large dumpster. The pullet manure will generally be placed into the next available open row for composting. Pullet manure may have a higher moisture content than the layer manure. If higher moisture content is needed in the layer manure windrow to sustain appropriate levels of aerobic biological activity, the pullet manure may be incorporated into the layer manure.

Composting Other Materials

Any solids that must be removed from the lagoon handling egg wash water may be composted at this facility. These solids will be added to new layer manure windrows when they are created.

Broken eggs, egg shells, or eggs which do not meet company standards may also be managed at this compost facility. These materials would also be added to new layer manure windrows when they are created. This material may also be added to the mortality bins for composting with the mortalities.

SAMPLING PLAN

The purpose is to establish procedures for the collection of representative samples of composted manure in a manner that will not result in the contamination of the sample and will allow accurate analysis of the sample for, pathogens, regulated metals, foreign matter, and nutrient content. Foreign matter would be materials made of plastic metal, or glass.

Compost sampling and analysis will be performed according to the guidelines outlined in 15 NCAC 13B.1408(a)(1), NCAC 13B.1408(a)(2), and NCAC 13B.1408(a)(5). Samples shall be collected for pathogens, regulated metals and foreign matter, at approximately every 6,000 tons of compost produced, or each 6 month period, whichever comes first.

The equipment utilized for this shall be a 48 inch or a 40 inch dial head, probe type thermometer, pre-sterilized plastic bags, a stainless steel sampler (a hand auger or tube type sampler) that is a minimum of five feet in length, a stainless steel bowl, a stainless steel trowel, and disposable rubber or latex gloves.

Disposable rubber or latex gloves will be worn while sampling or handling manure or compost for analysis. The manure/compost pile will be sampled on a regular basis to document the conditions of the compost and verify that the pathogen levels for the composted material meet 15 NCAC 13B.1408(a) requirements. Material from the bins shall only be tested if the compost is to be distributed and not re-composted with the manure.

Prior to pathogen sample collection, all sampling tools will be cleaned with water and a detergent by scrubbing with a brush and rinsing with clean fresh water. The sampling tools will be cleaned between each sample and new disposable gloves will be used to collect each sample.

Pathogen samples should be grab samples or a composite sample taken from no more than 1 bin or windrow. This will make it easier to locate the source of contamination in the event of a bad sample.

Samples will be collected using a clean stainless steel auger. The sample will be collected from a point 6 inches into the pile to the depth of the auger. The entire sample shall be placed into the clean stainless steel bowl and mixed thoroughly with the stainless steel trowel. A representative quantity of the mixed sample will be transferred to a plastic bag provided by the analytical laboratory. The bag will be immediately sealed and marked with a sample identification number, the date and time of the sample, and the sampler's name. Pathogen samples will be cooled to approximately 40 degrees F until delivered to the lab. All samples collected will be transferred using standard chain-of-custody procedures to the analytical laboratory for analysis.

The detection limit for the fecal coliform analysis should be less than one thousand mpn per gram and the detection limit for salmonella must be less than 3 mpn per 4 grams.

Composite samples will be taken to be analyzed for regulated metals and foreign matter. At least 1 sample will be taken from each manure windrow. The samples will be maintained at approximately 40 degrees F until the 6 month or approximately 6,000 ton period has been reached. At that time the samples will be mixed together and a representative sample taken and sent for analysis.

Copper, cadmium, lead, nickel and zinc are the regulated metals to be tested for. The total metal level (mg/kg) of each metal is to be determined by a Waste Analysis from the NCDA Plant Waste Solution Section Lab or other approved lab.

The foreign matter is determined by passing a dried weighed quantity through a 1/4 inch screen. Any foreign matter remaining on the screen shall be removed and weighed to determine the percent by weight.

A composite sample shall be taken from each batch of compost to determine the nutrient content. A batch is considered to be approximately 6,000 tons. *Upon the designation of a batch the required number of samples will be taken, a composite sample formed and this composite sample delivered to a laboratory for analysis.* The size of each nutrient sample should be the same.

Nutrients to be sampled for include at least nitrogen, phosphorus, potassium, calcium, iron, magnesium, and sulfur. The nutrient levels will be determined by a Waste Analysis from the NCDA Plant Waste Solution Section Lab or other approved lab.

All composite samples shall be combined in the stainless steel bowl and thoroughly mixed with the stainless steel trowel. A sample of at least 1 kg shall be transferred to a container provided by the analytical laboratory for analysis using standard chain-of-custody procedures. The container will be sealed and marked with a sample identification number, the date and time of sample, and the sampler's name. The

analytical laboratory shall test the sample using methods accepted by the North Carolina State University Extension Service.

Prior to release of any composted mortalities for distribution other than to be re-composted with the manure composting, a series of samples shall be collected from each bin to determine that the compost meets the pathogen levels defined for Class A compost. Samples will be collected to reflect the total volume of the pile being sampled. A sample shall be collected and analyzed for fecal coliform or salmonella organisms as required to demonstrate compliance with the pathogen reduction standards outlined in 15 NCAC 13B.1408. Additionally, these samples will be analyzed to determine the amount of metallic contaminants (cadmium, copper, lead, nickel, and zinc) and foreign matter present per 15 NCAC 13B. 1408.

MARKETING AND DISTRIBUTION PLAN

Rose Acre Farms will create a Grade A compost. According to North Carolina Solid Waste rule 15 NCAC 13B.1497(d)(1), "Grade A compost shall have unlimited, unrestricted distribution. This product may be distributed directly to the public".

It is the intent of Rose Acre Farms to work with the farmers and other users in the region to properly use and distribute the compost that is generated from the farm in Hyde County North Carolina. The sale and distribution to local users shall take place only after the compost has completed its processing in the compost and storage facility at the Rose Acre Farms site.

In order to assure that the best information is made available to those using the compost for the many and varied uses of this Grade A compost each "batch" shall have an NCDA Waste Analysis, or an analysis from a private vendor providing similar information, performed on it within 90 days of its use.

Rose Acre Farms will request a nutrient management plan from any individual which receives more than ten (10) tons per visit of finished compost.

It is also permitted to work with any local, county, state or federal government agencies that may need a nutrient base for any projects they may be required to perform. For any agency that would use the product, nutrient planning would be performed before delivery or application.

CONTINGENCY PLANS

EQUIPMENT BREAKDOWN

Preventive maintenance will be performed on all equipment on a regular basis to lessen the opportunity for an equipment breakdown. If however the equipment does break down the required parts would be immediately ordered after determining the proper parts required to make the necessary repairs. If a technician would need to be brought in then that would be arranged.

If the turner is unable to be used due to equipment failure, and manure is scheduled to be turned, then a small bobcat type loader or other suitable piece of equipment would be used. Turning of mortalities composted in a bin may be accomplished by hand, should no suitable piece of equipment be available to turn it mechanically.

ODOR

Odor control will be accomplished by maintaining aerobic conditions and proper carbon nitrogen ratios in the compost bins and windrows. Mortalities and manure will be processed daily. This will avoid putrefication of mortality. If odor does become a problem C:N can be adjusted with bulking agent, of finished compost can be placed over bins and windrows when formed to adsorb odors. In addition, the remote location and large size of the site will serve to minimize any impact from odors on adjacent property owners.

HIGH WINDS/TORRENTIAL RAIN

In the event of high winds or torrential rains the main doors to the compost building would be closed. Any transfer of manure would be halted with the exception of manure transferred from the pullet farm, which is transported in a closed container. Compost will not be shipped off site if weather conditions would lead to the loss of material from trucks.

VECTORS

Vector control will be achieved by maintaining the composting facility to prevent creation of conditions which attract vectors. The manure brought into the facility will be dry and reasonably stable because of the time it was retained in the layer or pullet houses. Dry, partially stabilized material will not readily attract flies and other insects. Internal temperatures in the piles will be high enough to prevent insect infestation. Mortalities will be delivered daily to the facility in closed containers and promptly placed in bins, which limits access to vectors. Since all handling will be in an enclosed

building, vector attraction will be minimized. The end use of the finished Class A compost will not create nuisance conditions or vector attraction problems because of the stable nature of the material. Surface water will not be allowed to stand in or immediately around the compost building to reduce breeding areas.

If vectors become a problem standard, commercially available, control methods will be used.

FIRE

In the unlikely event of a fire the Environmental Services Manager, Environmental Services Employees, or other employee of Rose Acre Farms shall immediately attempt to contact the complex manager. Every attempt will be made to extinguish the fire before it spreads into the rest of the building or damages the building. This would be accomplished by using a water hose to extinguish any open flames. For small fires, a fire extinguisher will be on hand.

After any open flames are controlled, smoldering areas or other "hot spots" will be controlled by using a small front-end loader to open up the storage area, wind row or composting bin so that the hot area can be further controlled. A decision will be made early in the response to a fire of whether the local fire department should respond. A placard at the entrance to the building shall have local emergency phone numbers on it.

After firefighting efforts are finished, finished product will be returned to its storage area. If the fire was in a wind row or composting bin, the material which had been disturbed would be replaced, and the composting process for the disturbed material re-started from the beginning. A notation of this product would be made on any associated or required forms.

UNUSUAL MORTALITY

If due to unforeseen circumstances a higher than normal death rate would occur that could not be handled by the compost facility, several options would be pursued. One would be to deliver the mortalities to a rendering operation. A second option would be to deliver the mortalities to an approved landfill. Any option pursued, for unexplainable or disease related increased mortality, would first be approved by the North Carolina State Veterinarian or his/her appropriate staff.

COMPOST TEMPERATURES

If at any time the temperature of any compost is not meeting the required level as established by the North Carolina Solid Waste Rules governing Class A compost then

one of two courses of action will be pursued. One action would be to insert pipes into the compost stacks which will increase aerobic activity, resulting in increased compost temperatures. Another option would be to add some water to the compost, which would also increase the temperature.

Particulates

Dust should not be an issue since most of the operation is inside. On site road ways will be sprayed with water if dust becomes an off site problem.

Noise and Traffic

Due to the rural nature of this site, the fact that the operation is inside, and the minimal amount of equipment use noise is not anticipated to be a problem.

Off site traffic will only be an issue when compost is distributed to the public. The rural nature of the area and the fact that most of the compost will be transported in large trucks should avoid traffic problems.

Record Keeping and Reporting

Daily operational records will include compost temperature and turning data, the quantity, type and source of waste received and processed into compost, and the analytical results from the testing done on the compost. The quantity and classification of compost removed from the facility and the market or disposal facility the compost was distributed to will also be maintained. The following logs will be used to record and maintain this information.

MANURE AND MORTALITIES TRANSFER LOG

Manure and mortality maintained separately

HEN MORTALITIES COMPOSTING LOG

MANURE COMPOSTING RECORD

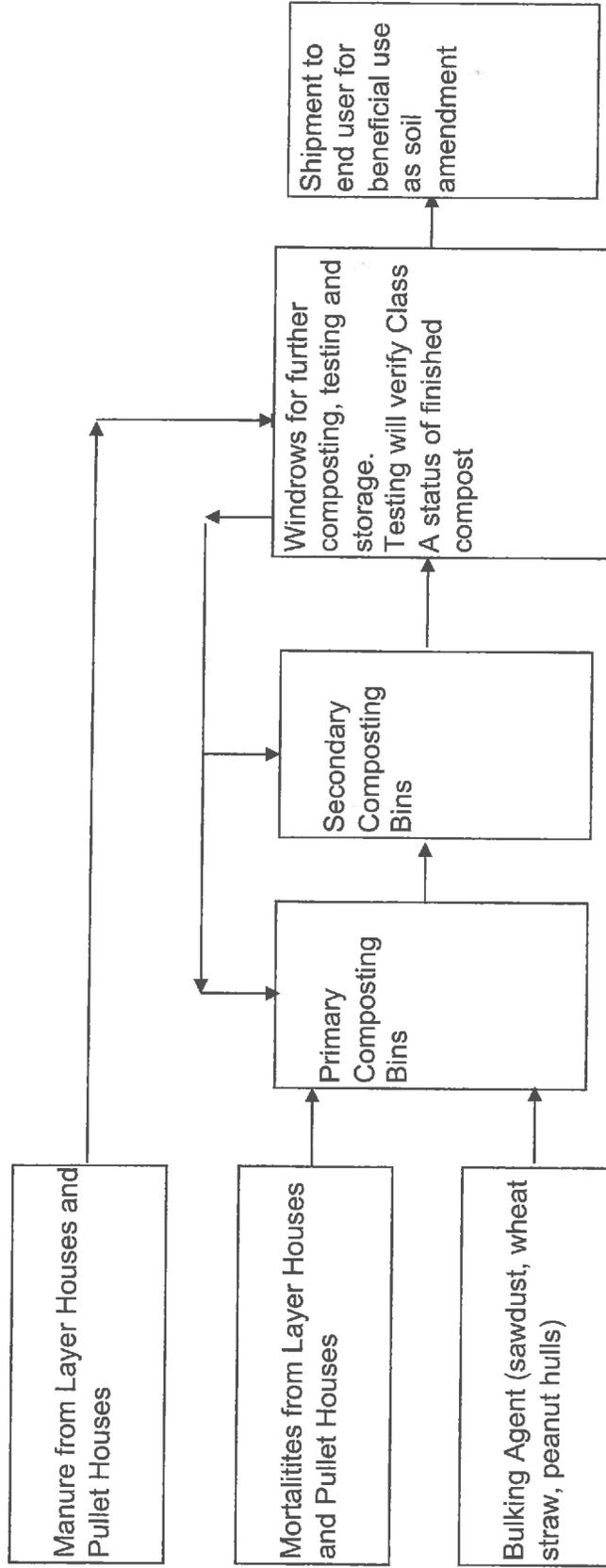
Records shall be kept for a period of at least five years and will be made available for inspection by personnel from the Division of Solid Waste Management for the North Carolina Department of Environment and Natural Resources or will be sent to them upon their request.

An annual report covering the time frame from July 1 through June 30 will be sent to the Division of Solid Waste Management for the North Carolina Department of Environment and Natural Resources by August 1 of that same year containing the information required in 15 NCAC 13.B1408(c). The annual report will follow the following outline:

- (1) The facility name, address, and permit number;
- (2) The total quantity in tons and type of waste received at the facility during the year covered by the report, including tons of waste received from local governments of origin;
- (3) The total quantity in tons and type of waste processed into compost during the year covered by the report;
- (4) The total quantity in tons and type of compost produced at the facility, by product classification, during the year covered by the report;
- (5) The total quantity in tons and type of compost removed for use or disposal from the facility, by product classification, along with a general description of the market if for use during the year covered by the report;
- (6) Monthly temperature monitoring to support Rule .1406 of this Section; and
- (7) Results of analysis for pathogens, regulated metals, foreign matter, and nutrients.

The Rose Acre Farms Safety and Personnel Training is Attached hereto and made a part of this Operating permit.

BLOCK FLOW DIAGRAM FOR HYDE COUNTY EGG FARM COMPOSTING FACILITY



Calculation of Requirements for Mortality Composting at Hyde County Egg Farm

Given Information The Department of Poultry Science at NCSU has published a guidance document entitled "Composting Poultry Mortality". From: Table 2 - "Estimated Primary & Secondary Bin Capacity for Mortality Composting per 1,000 Birds and Standard Size Units for Various Types of Poultry" Use 2.54 cubic feet of bin space per 1000 birds in the flock for layers and 1.96 cubic feet of bin space per 1000 birds in the flock for pullets.

Design number of Layers on Site 4,000,000
 Design number of Pullets on Site 710,000

Bin Space Required Layers 10,160 cubic feet
 Bin Space Required Pullets 1,392 cubic feet
 Total Bin Space Required 11,552 cubic feet

	Building 1		Buildings 2	
height of bin =	7	ft	6	ft
depth of bin =	12	ft	12	ft
width (front) of bin =	8	ft	8	ft
Total area of one bin =	672	cubic feet	576	cubic feet

Number of bins provided 8 16
 Volume of bins provided 5376 cubic feet 9216 cubic feet
 Safety Factor 1.3

Number of Bins Proposed = 24
 With 24 bins provided, the total area available is 14,592 cu ft

Amendment Storage Requirements:

The storage space for amendments (sawdust, straw, peanut hulls, or other approved materials) is based on using 0.1 pound per pound of mortality composted. The average daily mortality for the Hy-Line W-36 variety layer used by Rose Acre Farms is calculated below. Data for the calculations is taken from the "Hy-Line W-36 Commercial Management Guide, 2003-2005"

Layer Flock Size 4,000,000
 Pullet Flock Size 710,000
 Layer Flock cycle length 441 days
 Pullet Flock cycle length 119 days
 Average layer mortality rate/cycle 0.04
 Average pullet mortality rate/cycle 0.03
 Layer weight at cycle end 3.48 lb
 Pullet weight at cycle end 2.8 lb
 Calculation: average daily wt of mortality = (bird wt) x (flock size x mortality rate)/cycle length
 Average daily layer mortality in lb 1263 lb
 Average daily pullet mortality in lb 501 lb
 Total daily average mortality in lb 1764 lb

Amendment required = 176 pounds per day(0.1 lb per lb mortality)
 Storage required (30 days)= 5,291 pounds or 19 cubic yards
 (Sawdust wt. ls 170 kg/m³ or 10.59 lb/cuft)

Calculation of Manure Production and Composting Required at Hyde County Egg Farm

Historical Record (7/1/09 to 6/30/10)
 Average Flock 2,800,000 birds
 Manure Composted (includes Pullet Farm) 45,413,600 pounds
 Average density of manure in layer houses is 31.81 lb/cuft (from Rose Acres)
 Average density of manure in pullet houses is 25.00 lb/cuft (from Rose Acres)
 Average density of combined manure is 31.41 lb/cuft--Use this in calculations

Total manure produced @ 4 MM birds= 64,876,571 lb/year 2,065,475 cubic feet cu ft@31.41 lb/cuft
 Cycles per year to assume 8 composting cycles in windrow area per year

Data from Current tons are
 Operation Shows that 2,500 composted in 4 windrows@ 550 feet each
 Windrow width at base = 14 feet
 Windrow height to top = 9 feet
 Weight per foot of length 1.136 tons or 2,273 pounds
 Required Length of rows = 28,546 row-feet/yr or 3,568 row-feet/cycle

Example Operating Scenario 1--Composting 12 windrows--4 in each house
 Assume all windrows are same length which 297 feet
 Building Conditions (example Windrow length Storage Length Storage lbs % of annual Production

Length of building	600 ft	Manure Density
Width of Building	100 ft	31.41 lb/cuft
Area of Floor	60,000 ft	
Bins and turning	40 ft	
Separation	50 ft	
Building Cross Section	2,700 sqft estimated	
Storage vol/foot	2,160 estimated at 80% of maximum available	

	Individual Windrow Length (ft)	Total Windrow Length (ft)	Storage- length in feet	Storage vol in cuft	Storage Weight in pounds
Available Length	510	2,040	0	0	0
Assumed Lengths	450	1,800	60	129,600	4,071,255
	400	1,600	110	237,600	7,463,968
	350	1,400	160	345,600	10,856,680
	300	1,200	210	453,600	14,249,393
	100	400	410	885,600	27,820,243
	0	0	510	1,101,600	34,605,668

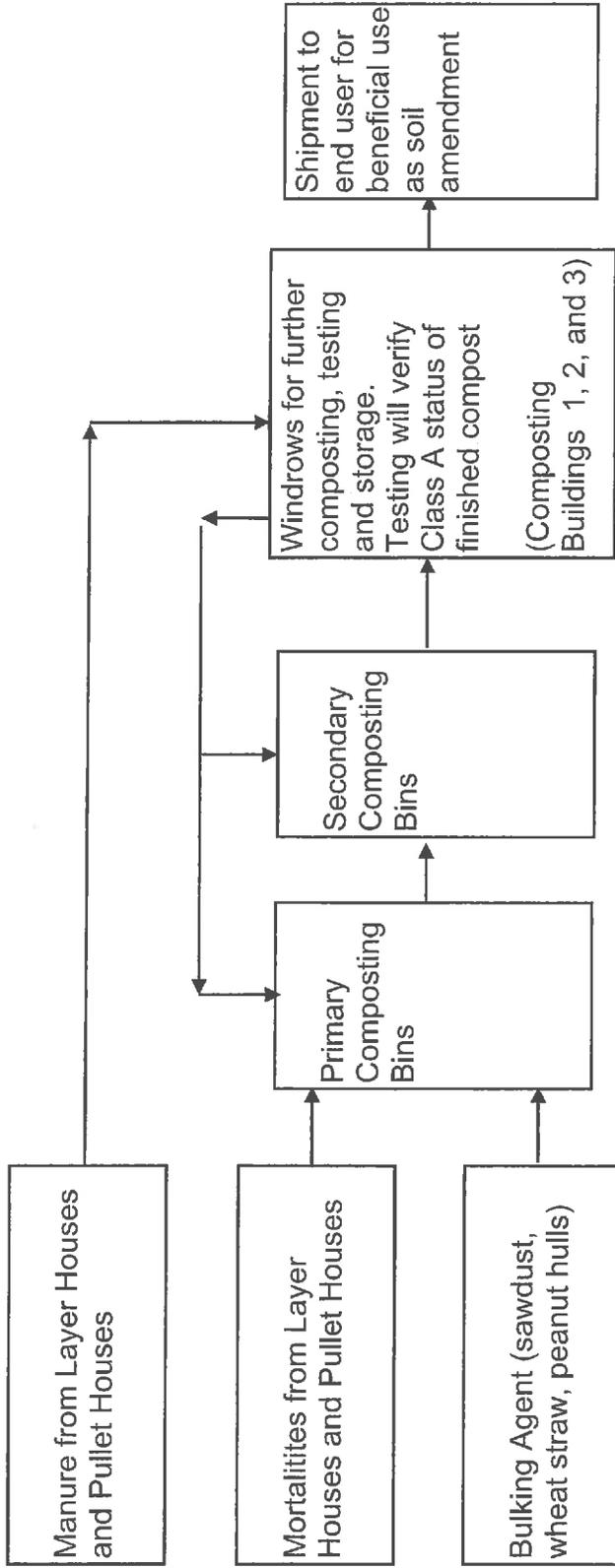
Length of building	676 ft	Manure Density	
Width of Building	97 ft		31.41 lb/cuft
Area of Floor	65,572 ft		
Bins and turning	80 ft		
Separation	50 ft		
Building Cross Sectic	1,958 sqft estimated		
Storage vol/foot	1,370 estimated at 70% of maximum available		

	Individual Windrow Length (ft)	Total Windrow Length (ft)	Storage- length in feet	Storage vol in cuft	Storage Weight in pounds
Available Length	546	2,184	0	0	0
Assumed Lengths	450	1,800	96	131,544	4,132,324
	400	1,600	146	200,057	6,284,576
	350	1,400	196	268,569	8,436,828
	300	1,200	246	337,082	10,589,080
	100	400	446	611,132	19,198,088
	0	0	546	748,157	23,502,592
Operating Scenario 1	297	1,189	249	340,711	10,703,108
Operating Scenario 2	446	1,784	100	136,989	4,303,366

Length of building	676 ft	Manure Density	
Width of Building	97 ft	31.41 lb/cuft	
Area of Floor	65,572 ft		
Bins and turning	40 ft		
Separation	0 ft		
Building Cross Section	1,958 sqft estimated		
Storage vol/foot	1,370 estimated at 70% of maximum available		

	Individual Windrow Length (ft)	Total Windrow Length (ft)	Storage- length in feet	Storage vol in cuft
Available Length	636	2,544	0	0
Assumed Lengths	450	1,800	186	254,867
	400	1,600	236	323,379
	350	1,400	286	391,892
	300	1,200	336	460,404
	100	400	536	734,454
	0	0	636	871,479
Operating Scenario 1	297	1,189	339	464,034
Operating Scenario 2	0	0	636	871,479

BLOCK FLOW DIAGRAM FOR HYDE COUNTY EGG FARM COMPOSTING FACILITY



ROSE ACRE FARMS®

THE GOOD EGG PEOPLE®



RAF SAFETY MANUAL

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Rose Acre Farms Safety Policy

The safety and health of each employee is a primary consideration of the operation of Rose Acre Farms. Safety must be a part of every operation, and without question, will be the responsibility of each employee; regardless of his/her title, position, or seniority.

The intent of the Rose Acre Farms safety program is to comply with all laws and relating standards as set by the "Occupational Safety and Health Act (OSHA) of 1970." Rose Acre Farms will provide employees with employment free from recognized hazards that cause or are likely to cause death or serious physical injury to employees. Employees are required by law to comply with all standards of OSHA and guidelines of Rose Acre Farms as applicable to the employees own actions and conduct.

Rose Acre Farms will maintain a safety and health program conforming to the best practices of organizations of this type. To be successful, the program must include the proper attitude toward injury and illness prevention on the part of managers and employees. Only through such cooperative efforts can a safety program be established to reduce accidental injuries and property damage. Ultimately, everybody benefits!

Inclusions of the Rose Acre safety program will be:

- Periodic inspections to identify unsafe conditions or practices at each facility.
- Periodic discussions (safety meetings), by employees and management, at each facility to discuss areas that are unsafe and methods to correct the situation.
- Periodic audits to examine the accuracy and completeness of safety programs and training
- Safety training to employees encompassing safety programs that are specific to each employees work area.
- Provide mechanical and physical safeguards to the maximum extent as possible, even if not provided by the manufacturer.

Lockout/Tagout Program

I. Purpose

This policy establishes the minimum requirements for safely isolating potentially hazardous energy sources. It shall be followed to ensure machines and/or equipment is isolated from all potentially hazardous energy before employees perform service or maintenance activities where there may be an unexpected energization, start-up, or release of stored energy.

II. Scope

The provisions set forth in this policy apply to all equipment and machinery where potentially hazardous energy exists. All employees who maintain or service such equipment and machinery are subject to the procedures outlined in the policy without exception. Failure to follow these procedures will result in disciplinary actions.

III. General Requirements

All equipment shall be locked out and tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Authorized employees will be issued locks/tags and equipment necessary to perform lockout/tagout procedures. Each authorized employee will be held accountable for the equipment and its appropriate usage.

Lockout is always the preferred method of isolating machines or equipment from energy sources. However, when the equipment is not capable of being locked out, tags must be used.

IV. Responsibilities

A. Safety Department/HR Department:

1. Conduct training for new hires
2. Offer departments consultation on safe procedures and policy requirements.
3. Develop, maintain, and review the Lockout/Tagout Policy and provide facilities with updated copies.
4. Review specific lockout/tagout procedures for equipment and machinery that have been developed and submitted by each facility.

B. Supervisors

1. Contact Safety Department when consultation is needed
2. Appoint the authorized employees who are allowed to perform service or maintenance on equipment or machinery
3. Ensure that their authorized employees follow lockout/tagout procedures
4. Identify employees who need additional training
5. Develop and maintain safe shutdown procedures on each piece of equipment or machine that their employees are expected to service or maintain
6. Conduct annual reviews of their department's compliance with this policy.
7. Take disciplinary action on employees who are observed in non – compliance activities
8. Hold authorized employees accountable for lockout devices

C. Authorized Employees

1. Attend training which is designed to instruct them on safe lockout/tagout procedures
2. Comply with this policy and the specific shut down procedures which are outlined by the employee's supervisor
3. Notify their supervisor's when they have any questions about isolating energy sources safely
4. Notify supervisor at any point in time when new or additional lockout devices are needed

C. Contractors

1. Comply with Rose Acre Farms Lockout/tagout Policy. Copies of this policy will be provided to them upon request.
2. Ensure that his/her employees are appropriately trained and authorized.
3. Comply with lockout/tagout procedures that have been developed by the facility for each machine or piece of equipment that the contractor must service or maintain.

V. General Guidelines

Energy control procedures shall be established by each department who has employees that perform lockout/tagout duties. The procedures shall be written for all applicable machines and/or pieces of equipment. The procedures shall be consistent with the following criteria:

Proper Sequence of Lockout:

To protect personnel during equipment maintenance, the following procedures must be performed in the order presented:

1. Notify "affected employees" that a lockout will be performed on the equipment.
2. Shut equipment down.
4. Isolates the equipments energy sources
5. Apply lock(s) and tag to energy isolation devices.
6. Release any residual (stored) energy that may be present (ex. springs, coils, jammed augers, feed chains, rotating flywheels, hydraulic systems, steam lines, and capacitors.
7. Verify the lockout (**attempt to start**). This will confirm that all residual energy has been removed and that it will not start while you are working on it.
8. Perform servicing and/or maintenance.
9. After performing work, verify that all tools have been removed from the area, all guards have been replaced and all employees are clear of equipment.
10. Release equipment from the lockout.
11. Advise all "affected employees" that the lockout has been completed.
12. The equipment can now be re-energized

D. Periodic Inspection:

A periodic inspection of the company's Energy Control Program will take place at least annually (See Appendix A). The inspection will be used to:

1. Identify any inadequacies and review those with the "authorized" employees in the facility.
2. Review "authorized" personnel responsibilities in this program.
3. Document the following information:
 - a. Equipment serviced during the lockout.
 - b. Date of inspection.
 - c. Employees included in this inspection.
 - d. Inspector name.
 - e. Inadequacies identified and shared with "authorized personnel".

E. Hardware Identification:

1. Lockout devices must indicate the identity of the employee who attaches the device.
2. The safety locks used must be standardized in a least one of the following criteria:
 - a. color
 - b. size
 - c. shape

SAFETY LOCKS MAY NOT BE USED FOR OTHER PURPOSES.

F. Training and Communication:

1. Training will be provided to ensure that the purpose and function of the energy control program is understood by employees and that the knowledge and the skills required for the safe application, usage, and removal of energy control are acquired by employees. The training shall include the following:

a. Each authorized employee will receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.

b. All other employees whose work operations are or may be in an area where energy control procedures may be utilized, will be instructed about the procedure, and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out.

2. Retraining shall be provided for all authorized and affected employees annually, whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.

3. Additional retraining shall also be conducted whenever a periodic inspection reveals that there is deviation from or inadequacies in the employee's knowledge or use of the energy control procedures.

G. Special Conditions:

Lock Removal - If the employee who placed a lock on the equipment is absent from the site, the lock may be removed provided:

- a. A supervisor attempts to contact the individual, determine the status of the work, and the reason the lock was left at the job site.
- b. If the equipment can be returned to service, the employee needing the lock removed will remove the lock only in the presence of a supervisor. All of the above will sign the "Lock Removal Authority". (See appendix B)
- c. The supervisor ensures that the employee is notified that his/her lock has been removed before he/she resumes work.
- d. Group Lockouts -Group lockouts can be accomplished through a lockout box or hasp

Appendix A

**Energy Control/Lockout Program
Periodic Inspection Form**

Facility: _____ Date: _____

Inspector: _____

Equipment Serviced: _____

Employees Observed:

_____	_____
_____	_____
_____	_____
_____	_____

Inadequacies Identified: _____

Other Observations: _____

Signed:

Hazard Communication Program

Purpose and Scope

The Rose Acre Farms, Inc. Hazard Communication Program is designed to ensure employees are informed about hazardous chemicals in their workplace and how to properly use them to avoid potential accidents and injuries. The program complies with the Federal OSHA Standard (29CFR 1910.1200). The Occupational Safety and Health Administration's (OSHA) Hazard Communication standard (29 CFR 1910.1200) is based on the simple concept that employees have both a need and a "right to know" the identities and hazards of any chemicals they work with during the course of their employment.

Objectives

1. Container Labeling
 - a) Complex Managers or an employee designated by the Complex Manager will verify that all product containers kept onsite will clearly list the following on the label:
 - Product Name
 - Appropriate Hazard warnings; and
 - Manufacturer's name and address.
 - b) It is the policy of Rose Acre Farms, Inc. that no container will be released for use unless it has a complete label. Complex Managers or an employee designated by the Complex Manager will ensure that secondary containers, such as spray bottles, have complete labels by one of the following methods:
 - i. A copy of the original manufacturer's label will be made and placed on the secondary container, or
 - ii. The minimal information bulleted above will be placed on the container in permanent ink/marker or a laminated tag.
2. Material Safety Data Sheets (MSDS's)
 - a) Copies of MSDS's for all hazardous chemicals to which employees of RAF, Inc. may be exposed will be kept on-site at each complex in a 3-ring binder. Employees are encouraged to consult the MSDS for the chemical being used. MSDS's will be available to all employees during all shifts. If an MSDS is missing, or if a new product arrives without an MSDS, the safety department should be notified immediately to request an MSDS from the chemical supplier.
- 3.) Hazardous Chemicals List
 - a) The Complex Manager or an employee designated by the Complex Manager will compile a list of all the chemicals and products used at each facility. This list will be kept in the front of the MSDS book and serve as a Table of Contents. Each chemical entry on the inventory list has a corresponding MSDS available for providing specific hazard information and personal protective measures. This list will be updated every six (6) months to remove chemicals that are no longer in use and to add new products.

4.) Personal Protective Equipment (PPE)

- a) Supervisors will be responsible for supplying, maintaining, inspecting and replacing all proper personal protective equipment used in the handling of hazardous chemicals.

Training

1.) Responsibilities

a) Safety Department

- i. Prior to beginning work, each new employee will attend a health and safety orientation and will receive training and information to accomplish the following:
- Educate employees on how to read and obtain information from chemical labels.
 - Educate employees on how to read and obtain information from Material Safety Data Sheets.
 - Educate employees on the types of health and physical hazards they may face in the workplace caused by hazardous chemicals.
 - Educate the employee on the types of personal protective equipment used to prevent accidents or injuries from hazardous chemicals.
 - Educate the employee on proper procedures should there be a chemical spill.
 - Educate the employee on the proper first aid requirements in the case of a chemical exposure
- ii. The employee will be required to sign a form to verify that he or she attended the training and understands Rose Acre Farms, Inc.'s policies on hazard communication.

b) Supervisors

- i. Responsible for the job specific hazard training on chemicals used by their employees and should include the following:
- Identify the location of the complex's MSDS 3-ring binder.
 - Identify the location where personal protective equipment used for handling hazardous chemicals is stored.
 - Educate the employee on the proper use of personal protective equipment.
 - Instruct employee on procedures to inspect, fit and maintain personal protective equipment.
- ii. Notes on training:
- Training shall be provided at the time of initial assignment to tasks where occupational exposure to a hazardous chemical may take place.
 - Training shall be repeated whenever a new chemical or a new hazard is introduced in the work area.
 - Refresher training shall be annually
- iii. Hazardous Non-Routine Tasks
- Occasionally, Rose Acre Farm employees may be asked to perform a task that is not part of their normal job. Before taking on a new task,

the affected employee will be given information by their supervisor about any hazardous chemicals that might be used during the activity.

- This information will include:
 - i. Specific chemical hazards;
 - ii. Protective measures employees can take; and
 - iii. The use of proper personal protective equipment.

Informing Contractors

It is the responsibility of the Complex Manager or their designated employee to provide contractors with the following information:

- Hazardous chemicals to which they may be exposed while working at Rose Acre Farms, Inc. and the procedure for obtaining MSDS's; and
- Precautions contracted employees may take to reduce the possibility of exposure by using appropriate protective measures; and
- Provide an explanation of the chemical labeling system.

It is also The Complex Manager's responsibility to identify and obtain MSDS's for chemicals the contractor brings to RAF facilities.

Conclusion

Rose Acre Farms, Inc. is committed to the prevention of hazardous material and chemical incidents that could result in injury and/or illness to any employee. We will spare no effort in providing a safe and healthful work environment for employees and all levels of supervision will be accountable for the safety of those employees under their direction.

Emergency Action Plan

I. PURPOSE

- a. The purpose of this program is to provide guidelines for personnel in the event of an emergency response. This program applies to all Rose Acre Farms personnel, contractors, and visitors. This program complies with OSHA 29 CFR 1910.38.

II. SCOPE

- a. This program applies to Rose Acre Farms facilities. It will be implemented in the event of fire, chemical release such as ammonia, severe weather, serious injury, and any other emergency situations.

III. EMERGENCY ESCAPE PROCEDURES AND ROUTE ASSIGNMENTS

- a. All areas will have emergency escape procedures and emergency escape route assignments.
- b. The evacuation routes for each area will be posted in a conspicuous area. The evacuation routes will be reviewed with each employee upon initial assignment to an area. Each employee will be retrained on the emergency escape procedures and route assignments annually.
- c. All persons shall shut down the equipment they are using at the time
- d. All persons shall follow exit routes to their designated meeting site for a head count.
- e. Complex Manager and supervisors shall make a sweep of their areas (provided this can be done safely) to ensure that all personnel are out of the work area.

IV. Evacuation

- a. The types of evacuation to be used in an emergency include:
 - i. Partial Evacuation- the affected area of concern is evacuated (ex.chemical spill/leak).
 - ii. Plant wide evacuation- the entire facility is evacuated. This would include the entire facility and outlying areas (ex. Fire, Ammonia Leak).
 - iii. Hazardous Weather Evacuation- all personnel are to report to the nearest weather shelter (See Appendix A).

V. PROCEDURES FOR CRITICAL PLANT OPERATIONS

- a. All critical equipment will have an emergency shutdown procedure. Personnel in each area will receive appropriate training on the equipment identified in their area to follow for emergency shutdown procedures. This type of equipment may include, but not limited to, the boiler, ammonia system, generator, pumps, etc.
- b. The Critical Operations Shutdown procedure to be followed by those employees who have been assigned to care for essential building operations include:

Operation	Responsibility
1. _____	_____
2. _____	_____

3. _____
4. _____
5. _____

- c. Persons involved in the Critical Operations Shutdown listed above shall be notified by management of this responsibility in advance.
- d. Once safe shutdown is accomplished, the designated operators will evacuate.

VI. EVACUATION HEAD COUNT PROCEDURES

- a. When the employees reach the designated meeting area, the supervisor will be responsible to ensure that all of his/her personnel are accounted for. The supervisor shall report their findings to the Complex Manager immediately.
- b. Contractors will be responsible to ensure that all of their personnel are accounted for. They must report their findings to the Complex Manager immediately.
- c. When a head count shows that a person is missing it shall be reported to the local response authorities (i.e. Fire Chief). The Complex Manager shall coordinate a search and rescue with the emergency response team members.

VII. RESCUE AND MEDICAL DUTIES

- a. The local volunteer fire department will respond to site medical emergencies. They will respond to medical emergencies and administer appropriate first aid care until further medical help arrives.

VIII. MEANS OF REPORTING EMERGENCIES

- a. **Phone-** The complex manager or immediate supervisor will be contacted for reporting fires, chemical leaks, serious injuries, or other emergencies.
- b. **PA System-** The complex manager will call the appropriate local emergency authorities and then report the emergency announcement and instructions.
- c. **Two-way Radios-** Another method of reporting plant emergencies are through hand held radios.

IX. RESPONSIBILITY OF PROGRAM IMPLEMENTATION

- a. It is the responsibility of the Complex manager to ensure the program is implemented and updated appropriately.
- b. It is the responsibility of each manager to ensure that each new hire in their area is trained on the appropriate exit routes and meeting locations for his/her location.

X. **TRAINING**

- a. Training will be given to personnel to assist in the safe and orderly emergency evacuation of employees.
- b. Training shall be conducted with each employee:
 - i. Initially when the plan is developed
 - ii. Initially when hired
 - iii. Whenever the employee's responsibilities under the plan change.
 - iv. Annual refresher training
- c. The type of training shall include:
 - i. Emergency procedures
 - ii. Primary and Secondary means of egress
 - iii. Designated meeting points after evacuation
 - iv. Written Emergency Action Plan
 - v. Evacuation drills

Appendix A

TORNADO/ SEVERE WEATHER PROCEDURES

I. General Guidelines:

- A. NOTIFICATION- Should a tornado or severe wind storm become imminent, an announcement will be made over the P.A. system for all employees to leave their stations and take cover.
- B. TORNADO/SEVERE SHELTER AREAS- The following areas have been designated as tornado shelter areas in the plant. Employees should seek shelter in the area that is nearest their work location. (Areas are to be listed in facilities evacuation program)
- C. If time permits, operators designated to remain for the safe shutdown of any operating unit should shutdown the specified equipment and immediately seek shelter
- D. In case a tornado occurs of an intensity to cause structural damage and creates an imminent hazard, the Complex Manager shall direct the employees to secondary shelter.
- E. During a “weather emergency” it may only be necessary for personnel to get against an interior wall and assume a protective position (scrunch down, tuck head between knees and cover head with hands).
- F. After the tornado/severe weather has passed, the Complex Manager will assess the immediate needs and appoint persons to assist them. The first priority is to check for personal injury. Request medical assistance if necessary. The person in charge of each area must make a head count of employees assigned to that area. Once this priority has been achieved, efforts shall be directed to minimize damage to facilities and equipment, and restore operations.

Appendix B

Catastrophic Ammonia Release Critical Shut-Down Guidelines

In the event of a major chemical release of anhydrous ammonia, operators will follow the guidelines provided:

1. When ammonia is detected in the plant area, notify the complex manager. All non-essential personnel must evacuate the plant area immediately and follow the Evacuation Plan. The NH3 response team will assess the situation.
2. Appropriate authorities will be contacted. (Local Fire Department)

AMMONIA RELEASE PROCEDURES

Minor Release- If a minor release occurs on the ammonia system, all persons must evacuate the immediate area. All other locations shall remain in place until the release is controlled. All minor releases shall be reported and announcements made for persons to stay clear of area.

Major/Catastrophic Release- If a major/catastrophic release occurs on the ammonia system, all persons must evacuate the immediate area and proceed to the primary evacuation designated area or the secondary staging area. **Caution must be taken to observe the wind direction via the local windsocks or other observations. Never pass through a cloud of ammonia.**

Appendix C

Fire Response Guidelines

Purpose:

The purpose of this guideline is to establish a uniform method for reporting a fire and coordinating our response efforts.

Guideline:

In the event of a fire, the following guidelines should be followed:

1. REPORTING- Upon discovery of a fire, the person detecting the fire will report the emergency to the complex manager or his/her supervisor.
2. NOTIFICATION- The emergency will be announced over the PA system.
3. EVACUATION- In the event of an evacuation all personnel not assigned to a specific duty will report to their primary staging area. An evacuation may range from partial for the affected area up to a plant wide evacuation.
4. RESPONSE- The local fire departments shall be contacted (911).
5. RESPONSIBILITIES- A person will be sent to the main gate to direct the local fire fighting units and responders to the scene.

Powered Industrial Trucks Program

Policy

All powered industrial trucks shall be operated and maintained in accordance with this policy.

Scope

This policy applies to all powered industrial trucks and provides guidance to employees on the safe operation of propane, gasoline and electric battery powered forklifts and power lifts.

Authority and Responsibility

Safety Department

- Reviewing the Powered Industrial Truck policy to assure compliance;
- Coordinating and providing training of affected employees;
- Providing initial audio-visual training and written tests.

Supervisors

- Ensuring employees attend training and operate powered industrial trucks in a safe manner;
- Assuring operators perform appropriate pre-operation safety inspections prior to operating equipment.
- Ensuring all equipment is in proper working condition;
- Inspecting forklift checklist
- Scheduling maintenance
- Maintaining required documentation.
- Maintaining training records of all operators.
- Schedule and perform refresher training

Employees

- Comply with this policy.
- Attend all training

General Requirements

- The Occupational Safety and Health Administration (OSHA) per 29 CFR 1910.178 states in part, only trained and authorized operators shall be permitted to operate a powered industrial truck;
- The employee is responsible for ensuring the safe operation of the powered industrial truck;
- Modifications and additions that affect capacity and the safe operation of the powered industrial truck shall not be performed by the Rose Acre Farms, Inc. without the manufacturer's prior written approval. Capacity, operation, and maintenance instruction plates, tags, or decals shall be modified accordingly;

- If the powered industrial truck is equipped with front-end attachments other than factory installed attachments, the powered industrial truck shall be marked to identify the attachments and show the approximate weight of the truck and attachment combination at maximum elevation with load laterally centered;
- Nameplates and markings shall be in place and maintained in a legible condition.

Pre-Operation Safety Inspection

- Prior to operating a powered industrial truck, the employee shall perform a pre-operation safety inspection using the appropriate Inspection Checklist;
- When powered industrial trucks are used on a round-the-clock basis, they shall be examined after each shift;
- The inspection shall identify any conditions that could affect the safe operation of the powered industrial truck;
- If any condition(s) exist, the powered industrial truck shall be removed from service and tagged "Out of Service" until the proper repairs or concerns are addressed;
- Upon an operator discovering any concerns, immediately notify your supervisor so he or she can notify the person responsible for the repairs

Fuel Handling and Storage

The handling and storage of liquid fuels such as gasoline shall be in accordance with the National Fire Protection Association (NFPA) Flammable and Combustible Liquids Code (NFPA 30).

The handling and storage of liquefied petroleum gas fuel shall be in accordance with the Storage and Handling of Liquefied Petroleum Gases Code (NFPA 58).

The following procedures shall be followed:

- When refueling or recharging the batteries of a powered industrial truck, the operator shall ensure that the powered industrial truck is shut-off and the parking brake is engaged;
- Refueling and recharging shall be completed in areas that are designated and well ventilated;
- Personal protective equipment (approved face shield, goggles, gloves) shall be worn during all refueling and battery recharging operations;
- Emergency eyewash/shower station shall be present in the area;
- Smoking shall be prohibited in refueling and recharging areas. Fuel vapors and gases, which can escape from the battery and fuel vents, are extremely flammable;
- Tools and other metallic objects shall be kept away from the top of uncovered batteries; and
- An ABC rated fire extinguisher shall be present in all refueling or recharging areas.

Workplace Hazards

Hazards may exist in the workplace and are easily detectable if a quick survey of the area is conducted. These hazards include, but are not limited to, the following:

- Overhead obstructions such as fire protection sprinkler piping, ventilation ducts, lighting fixtures, power lines. If the load you are moving is carried too high or the powered industrial truck mast is raised too high, damage can occur to the overhead obstruction and possibly cause injury to the operator or people in the immediate area;
- Co-workers or pedestrians traveling to and from certain areas within the facility;
- Poor housekeeping such as debris left on the floor and wet floors;
- Poor condition of the floor surface such as uneven concrete, potholes and cracks;

- Poor visibility around corners. The operator's view from a powered industrial truck can be blocked or obstructed by the load. If there is not a clear view, drive in reverse or have a co-worker, "spotter", direct you;
- Operating a powered industrial truck in a confined area with poor ventilation can allow the powered industrial truck exhaust gases to accumulate. This creates a hazard not only for the forklift operator, but also for others within the area or building. The Safety Department shall be contacted if air quality concerns should arise;
- For those individuals who wear eyeglasses, this could be a hazard when entering a warm atmosphere from a cold atmosphere (processing to cooler) and having your eyeglasses steam up; and
- Driving too fast for the conditions of the area. When operating a powered industrial truck, always remain alert and cautious.

Note the existing and potential hazards and conditions that do or could exist in your work environment. Whenever a hazard is discovered which requires action such as housekeeping, poor floor condition or poor ventilation, immediately notify your supervisor to ensure the proper procedures are followed to address the hazards.

Operating Procedures

When operating a powered industrial truck, always travel with the forks approximately 2-4 inches from the ground so they clear any uneven surfaces. Always survey the area ahead and to the sides as you travel. Always travel in reverse or use a "spotter" when the load you are carrying obstructs your view.

Some factors that could cause the powered industrial truck to tip over:

- Overloads;
- Unstable loads;
- Load not centered on forks;
- Traveling with the load raised;
- Sudden stops and starts;
- Making sharp turns; and
- Traveling across a ramp or incline.

Safety Practices

The following safety practices shall be adhered to at all times:

- Wear seatbelts whenever the powered industrial truck is equipped with them;
- Keep all body parts inside the driver's compartment;
- Drive at appropriate speeds;
- Do not carry passengers on the powered industrial truck;
- No person shall be permitted to stand or pass under elevated portions of any powered industrial truck, whether loaded or empty;
- All powered industrial truck operators working on platforms that are four feet above a lower level shall have adequate fall protection devices such as guardrails etc.
- When traveling behind other powered industrial truck or vehicles, always maintain at least three forklift lengths from the vehicle or powered industrial truck ahead, and maintain control of the powered industrial truck at all times;
- Slowly approach ramps and inclines straight, not at an angle;
- Never turn the powered industrial truck while on a ramp or incline;

- When parking a powered industrial truck and prior to dismounting or leaving the unit, shut-off the power and engage the parking brake. The operator shall never leave a running powered industrial truck unattended;
- When the powered industrial truck is left unattended, the load shall be fully lowered, controls shall be neutralized, power shut off, brakes set and wheels blocked if powered industrial truck is parked on an incline;
- Never park a powered industrial truck in front of any fire protection equipment, emergency exits, or in a manner that would obstruct a person from exiting the area;
- If at any time during operation a powered industrial truck is found to be in need of repair, defective, or in any way unsafe, it shall be immediately removed from service. The department supervisor shall be notified so he or she can notify the person responsible for the repairs; and
- Refueling and recharging areas equipped with emergency eyewash stations shall be inspected on a monthly basis.

Training

Rose Acre Farms, Inc. employees designated to operate a powered industrial truck shall be required to participate in and successfully complete a powered industrial truck training program offered through the Safety Department to ensure the operator is competent to operate a powered industrial truck safely before assuming their responsibilities.

Training consists of a combination of formal instruction and practical training. Formal instruction includes lecture, interactive discussion, video, and written material handouts. Practical training includes demonstrations performed by the trainer, practical exercises performed by the trainee, and evaluation of the operator's performance in the workplace.

Trainees may operate a powered industrial truck only:

- Under the direct supervision of persons who have the knowledge, training, and experience to train operators and evaluate their competence; and
- Where such operation does not endanger the trainee or other employees.

Curriculum

The curriculum of the training program shall, at a minimum, address the following topics:

- Pre-Operation Safety Inspection;
- Workplace Hazards;
- Safe Driving and Operating Procedures;
- Loading-Carrying-Unloading of Materials; and
- Operation and Safety Driving Practical.

Retraining

Employees shall be required to participate in refresher training at least once every three years. Retraining may also be deemed necessary when it has been documented that the operator has been observed to operate the powered industrial truck in an unsafe and/or inappropriate manner, involved in an accident or near miss incident, is assigned to drive a different type of powered industrial truck, or a condition in the workplace changes in a manner that could affect safe operation of the powered industrial truck as directed by this policy and according to OSHA regulations.

Confined Space Entry Program

A. PURPOSE

Injuries and fatalities may occur if certain essential precautionary measures are not taken when entering confined spaces. This instruction is provided to help **Rose Acre Farm, Inc** management and employees to be aware of Confined Space Entry Requirements.

These detailed requirements will be met by all personnel involved with confined space entry. This procedure covers most Confined Space Entry situations. Those, which present unique conditions, will be addressed by management and safety professionals, as required by this procedure.

1. Definitions (General):

-Confined Space

A Confined Space is an enclosure or compartment with limited means of exit or entry, ventilation of the space is lacking or inadequate, allowing for potential accumulation of toxic air contaminants, flammable or explosive agents, and/or depletion of oxygen. They include, but are not limited to:

Bag Houses	Excavations; narrow/deep
Feed Bins	Boilers
Pits	Dryer
Tunnels	Silos
Wood Burner	Bag dust collectors
Tanks/Tankers	Manholes

-Non-Permit Required Confined Space

A confined space that does not contain or with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

-Permit Required Confined Space

A confined space with one or more of the following hazards:

1. Contains or has the potential to contain a hazardous atmosphere.
2. Contains a material that has the potential for engulfing an entrant.
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or
4. Contains any other recognized serious safety or health hazard

Note: Permit Required Confined Spaces require completion of a Confined Space Permit

-Attendant

An individual, stationed outside the permit space, who monitors the authorized entrant and performs duties as described in this index.

-Authorized Entrant

A trained and authorized employee, who enters permit required confined spaces.

-Entry Supervisor

The trained individual, who determines if acceptable entry conditions are present at a permit required space, where entry into confined spaces is planned and oversees, authorizes or terminates entry permits.

B. Potential Hazards:

Hazards which are commonly encountered by personnel working in confined spaces are;

1. Toxic vapors
2. Flammable gases
3. Oxygen deficiency
4. Electric shock from installed and portable electric equipment
5. Injury from mechanical equipment inside of the confined space
6. Physical hazards such as falling and slipping
7. Hazards resulting from the steam, water, chemical, etc, input lines being opened into the confined space.
8. Engulfment hazards

C. IDENTIFICATION/WARNING:

Each confined space will be labeled with a confined space sign. The following warning applies to confined spaces

DANGER- Permit required confined space. DO NOT ENTER.

1. Employees shall not enter any confined space until all steps have been completed. If problems are encountered, notify Complex Manager or the Entry Supervisor.
2. Occasionally, work may be required in an area which seems to fit the definition of a confined space but is unidentified. The manager/coordinator responsible for the project should contact Safety Director or the Entry Supervisor for a determination. A permanent sign and/or tag/number will then be posted if required.

D. DUTIES AND RESPONSIBILITIES

1. The **Complex Manager** must instruct personnel entering a confined space to:
 - a. Obtain a Confined Space Entry Permit (See Attachment "A").
 - b. Completely fill out the permit. Sign the permit verifying all precautions have been met. Call the Entry Supervisor for review and sign-off.

- c. Post permit in a conspicuous place near point of entry.
- d. Be certain that all personnel understand the hazards of a confined space and are instructed about the necessary precautions to be taken. Confined Space training will be conducted annually and records of the most recent training program shall be maintained including the date of the program, the names of the instructor(s) and the employee(s) to whom the training was given. Employee signatures are required for attendees. These records will be kept by the Confined Space Entry Supervisor or his/her designated record keeper. Only trained and authorized employees shall enter confined spaces and monitor employee entry.
- e. Ensure that all personnel entering the confined space are physically/mentally capable of working in a confined space. An observer must be present before any entry into permit confined spaces.
- f. Ensure that the number of people inside the confined space is kept to a minimum.

2. Entry Supervisor

- a. **Know the hazards that may be faced during entry including the signs, symptoms and consequences of exposures.**
- b. Verify that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before signing the permit and allowing entry. On joint entry involving contractor personnel, the coordinator will serve entry supervisor and complete requirements of the permit using confined space form. The coordinator is responsible to make sure following conditions are met:
 - 1) Notify the contractor of hazards that the confined space could present
 - 2) Contractor understands that he is to follow all applicable state and federal laws and regulations, such as OSHA and regulations issued thereunder. Contractors shall also meet all requirements by writing and implementing their own Permit Required Confined Space Program
 - 3) Permit is posted in a conspicuous place near point of entry.
 - 4) The Contractor is fully responsible for providing all required equipment, such as air testing/monitoring equipment or confined space rescue kit and personal protective equipment.
 - 5) Ensuring that all instrumentation is serviced, calibrated and accurate. A log shall be kept of calibration and service. The log shall indicate the nature of the service, repairs made, the date and individual providing the service.
- c. Terminate entry and cancel the permit upon completion of the entry, or, when a condition that is not allowed under the permit exists.
- d. Verify rescue services are available & means of summoning them are operational.
- e. Remove unauthorized individuals who enter or attempt to enter permit spaces during entry operations.
- f. Whenever permit responsibility is transferred to another supervisor ensure that entry operations consistent with terms of the permit.

3. Authorized Entrant

- a. Know the hazards that you may face during entry including the signs, symptoms and consequences of exposures.
- b. Know how to properly use the equipment required by this permit
- c. Communicates with attendant, regularly.
- d. Alert the attendant and exit the space whenever you recognize any warning sign or symptom of exposure to a hazard, detect a prohibited condition, or an evacuation alarm goes off.
- e. Exit the space if so directed by the attendant

4. Attendants Routine Duties

- a. Ensure direct communication (phone, radio, or voice) before entry is made
- b. Understand the procedure for use of two-way radios, if verbal communications are unavailable.
- c. Understand the hazards present in the confined space.
- d. Understand the symptoms associated with exposure to toxic agents or oxygen deficiency.
- e. Never leave the post for any reason while personnel are inside the confined space. If the observer must leave the post, another trained observer must replace him/her; otherwise, the personnel inside the confined space must come out.
- f. Pass tools into the personnel working in the confined space.
- g. Maintain verbal communication and have continuous awareness of the activities of the personnel in the confined space.
- h. Have the lifelines anchored and ready for use to ensure they are ready in the event of an emergency.

5. Observer Emergency Duties

In the event of an emergency, the observer shall summon aid immediately by:

- a. Dialing 911

6. Safety Department

The safety department is responsible for:

- a. Training managers, observers, attendants, and employees who will enter confined spaces.
- b. Conducting a review on the overall confined space program at least annually and revise it as necessary.

E. PREPARATION OF A CONFINED SPACE

1. Air Quality Testing

- a. All confined spaces must be tested for air quality prior to entry. Testing shall be made using instrumentation of sufficient sensitivity to identify and evaluate any hazardous atmosphere that may exist.
- b. The Complex Manager will initially test the atmosphere for Rose Acre Farms employees using approved and properly calibrated instruments. Entrants are permitted to observe test procedures.

- c. If the Complex Manager suspects that toxic vapors, fume or mist are present then the Safety Director will be consulted to ensure that the atmosphere does not exceed OSHA specified limits for airborne contamination.
 - d. Testing of confined spaces for contractor entry will be performed by that contractor or their designated Entry Supervisor. Contractor employees shall not enter confined spaces without meeting all requirements found in this procedure.
 - e. If entry is authorized, continuous monitoring is required for the duration of the entry, unless determined otherwise by the Entry Supervisor. The instruments used for continuous monitoring shall be provided with audible and visual alarms to warn when the permissible amounts of flammable toxic vapors or oxygen deficiency are exceeded.
 - f. If ventilation is required for the area it must be thoroughly ventilated. Special care should be taken to ensure that circulated air will reach isolated pockets and prevent recirculating contaminated air. Provisions shall be made to provide for adequate fresh air during the entire time personnel are inside a confined space. A system of blowing and exhausting air shall be used under such conditions as a tunnel or large diameter tank are entered.
 - g. If the integrity of the atmosphere in the confined space cannot be guaranteed and a primary breathing air supply is required "Do Not Enter".
 - h. Monitoring shall be performed in the following order;
 - 1. oxygen
 - 2. combustible vapors and gases
 - 3. toxic gases and vapors
 - i. Entry shall be denied under the following conditions;
 - 1. Oxygen concentration equal to or less than 19.5% by volume
 - 2. Presence of toxic gases
 - 3. The presence of explosive or flammable gases
2. Purging And Removal of Contents
- The confined space must be clean, free of hazardous material and chemicals. Where necessary, remove vapor by purging with water, air or other equivalent means.
3. Isolation
- All input lines which discharge into or out of the confined space shall be physically disconnected, blocked, blanked, capped or otherwise isolated. The use of in-line shut off valve as the sole means of isolating the confined space from any input/output line is prohibited. Double block and bleed procedures are acceptable.
4. Lockout
- a. The electrical equipment, excluding lighting, shall be locked out and tagged out in accordance with CFR 1910.147.

- b. The lock key is to be kept by the person performing the job, and only this person is authorized to unlock the apparatus and remove the lock upon completion of the job. If more than one person is working in the confined space, each must place a lock on the device and retain his/her own key.

5. Security Of Covers

All manhole and clean out covers shall be openings maintained clear of any obstructions. All access openings must be immediately barricaded by approved railings. When hinged doors or covers are provided, they shall be secured so they cannot be closed while someone is inside the confined space. All unsecured lids shall be secured or laid flat on ground level.

6. Welding

- a. An hot work permit must be obtained before any welding operation begins.
- b. Personnel welding in a confined space shall be provided with and required to use the proper welding equipment and other required personal protective equipment. Welding and cutting torches must not be taken into confined space until ready to be used and must be removed from the area immediately after use. Cylinders of oxygen or other gases shall not be taken into confined space. They must be turned off at the cylinder valve when not use.

F. WHILE WORK IS IN PROGRESS

1. Tools:

- a. Where a possibility of flammable vapors or gases exists, hand tools are to be an approved spark-proof type. Electrical power tools and equipment must be explosion proof rated.
- b. All portable electrical power tools must be grounded or double insulated. Extension cords are to be grounded and in good repair. Ground-fault circuit protection must be provided in wet areas or outside of the buildings.
- c. In lieu of ground-fault circuit interrupter protection, battery or transformer equipment operated at 12 volts or less may be used.
- d. A ladder may be used as a means of entering and exiting provided it does not obstruct the opening.
- e. A hoist or other suitable means may be used with the approval of Entry Supervisor.

G. PROTECTIVE EQUIPMENT AND DEVICES:

Any Rose Acre Farms employee entering a confined space shall use the following protective equipment as prescribed by OSHA and The Entry Supervisor.

1. Full body harness, unless proven it will create a hazard
2. An approval lifeline shall be attached to the harness. The other end of the lifeline is to be securely anchored outside the confined space. It is required to have a block and tackle positioned on a tripod or fastened by other suitable means above the confined space.
3. All Rose Acre Farms personnel entering a confined space will be required to wear approved footwear and eye protection. Some entries may require hard hats and other protective equipment. If a contaminant in the confined space can cause dermatitis or can be absorbed through the skin, those

entering must wear appropriate protective clothing. (Such as: chemical resistant gloves, special clothing, etc.).

4. All of the major areas previously mentioned are covered on the entry permit. If all applicable requirements have been met, The Entry Supervisor will validate the permit for the job, location, personnel and time specified by signing the permit. A change in personnel or conditions will require revalidation of the permit by the Entry Supervisor, initialing all changes.

H. TRAINING/CERTIFICATION

1. The following employees shall receive formal training in confined space entry procedures, safe entry and emergency procedures and shall have refresher training annually:
 - a. Those who work in confined spaces
 - b. Those who coordinate confined space entries by other employees
 - c. Those who observe or attend entry of confined spaces
 - d. Other affected employees
2. Training shall certify an employee as qualified to work and complete all duties associated with confined space entry and rescue. Certification shall include testing for proficiency, record keeping and signatures of those attending training classes as well as the instructor's signatures.
3. Training shall include the following:
 - a. Duties of the "authorized entrants"
 - b. Duties of the "attendants"
 - c. Duties of the "Entry Supervisor"
 - d. Duties of the rescue and emergency personnel (local fire department)

PART 1: Confined Space Evaluation

Permit No. _____

Entry Date: _____ Entry Time: _____ Person Completing Evaluation: _____

Confined Space Location/Description: _____

Purpose of Entry and Assigned Work: _____

Potential Physical Hazards

- Corrosive Materials
- Machinery
- Other
- Steam
- Water
- Entrapment
- Engulfment
- Heat or Cold
- Slip, Trip, Falls
- Flammable Materials
- Hot Work

Are all valves, switches, operating mechanisms and energy sources locked and tagged out?..... Yes No N/A
 Has Hot Work Permit been issued?..... Yes No N/A

Potential Atmospheric Hazards

- Lack of Oxygen
- Other
- Inert Gases
- Combustible, Flammable, or Toxic Gases, Vapors or Dusts

Pre-Entry Atmospheric Testing Data

Date/Time Tested	% Oxygen (19.5%-23.5%)	Lower Explosive Limit (<10% LEL)	Carbon Monoxide (Under 35 ppm)	Hydrogen Sulfide (Under 10ppm)
_____	_____	_____	_____	_____

Periodic Atmospheric Testing Data

Date/Time Tested	% Oxygen (19.5%-23.5%)	Lower Explosive Limit (<10% LEL)	Carbon Monoxide (Under 35 ppm)	Hydrogen Sulfide (Under 10ppm)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Atmosphere to be tested: Continuously

Forced Ventilation to be used: Continuously Prior to entry Other: _____

Personal Protective Equipment/Safety Equipment Needed

- Coveralls
- Hard Hat
- Barricades
- Gloves
- N95 Dust Mask
- Hearing Protection
- Lighting
- Lifting Equipment
- Eye Protection
- Fall Protection
- Ventilation Equipment
- Fire Extinguishers
- Safe Footwear
- Special Rescue Gear
- Communication Equipment
- Safety Harness/Lifeline
- Monitoring Equipment
- Other: _____

PART 2: Entry Briefing (To be completed prior to entry for all confined spaces)

Has an attendant been designated? Yes No N/A
 Have all employees been adequately trained? Yes No N/A
 Has means of emergency response/rescue been established?..... Yes No N/A

Describe: _____
 Name: _____ Phone: _____

Have the hazards of the work been explained? Yes No N/A
 Has means of communication been established? Yes No N/A

Describe: _____

PART 3: Confined Space Entry Permit (To be completed prior to entering PRCS)

This space has been designated a permit required confined space (PRCS). This space may only be entered by personnel who have been specially trained to work in PRCS. A specially trained Attendant shall remain outside of the PRCS for the duration of the entry operation and will be designated in the appropriate space below. Each Entrant must sign in and out each time the PRCS is entered and exited in the appropriate space below. This confined space entry permit must be posted at or near the confined space point of entry for the entire duration of the entry operation.

Authorized Entrant(s)

<u>Name (Print)</u>	<u>Time In</u>	<u>/</u>	<u>Time Out</u>	<u>Name (Print)</u>	<u>Time In</u>	<u>/</u>	<u>Time Out</u>
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____
_____	_____	/	_____	_____	_____	/	_____

Attendant(s)

Name (Print) Name (Print) Name (Print)

<u>Permit Authorization</u>	<u>Permit Cancellation</u>
Duration of Permit: _____	Date: _____ Time: _____
Date of Permit: _____	Complex Manager (Print): _____
Complex Manager (Print): _____	Signature: _____
Signature: _____	Reason for Cancellation: <input type="radio"/> Entry Operation Completed <input type="radio"/> Occurrence of Prohibited Condition

Respiratory Program

General

- A. Administrative and/or engineering controls shall be used to prevent exposing employees to contaminated air.
- B. If neither administrative or engineering controls are feasible, then appropriate respirators shall be used as a means of protecting employees from overexposure to contaminated air.

Hazard Evaluation

A hazard evaluation of each facility shall be conducted by facility management to determine if airborne hazards are present. Hazardous airborne conditions include, but are not limited to, the following:

- 1. An oxygen level below 19.5%.
- 2. Atmospheres contaminated with the toxic gases, vapors, mists, and/or particles.
- 3. Work areas specifically identified for respirator use.

- C. Respirators shall be selected on the basis of hazards that are found to be present during the hazard evaluation.

2 Types of Respirators:

- 1. Air-purifying: These respirators are designed to remove certain gaseous and particulate contaminants from the atmosphere. The purifying elements can be attached to a full or half facepiece and some of the respirators can be disposable. The 3 types of air-purifying respirators are:
 - a. Particulate respirators
 - b. Gas and vapor (chemical cartridge) respirators
 - c. Gas masks
- 2. Air-supplying: These respirators provide a supply of breathable air different from the work place air. The two types of air-supplying respirators are:
 - a. Supplied air respirators (not to be used in IDLH atmospheres)
 - b. Self-contained breathing apparatus (SCBA)

Note: IDLH means Immediately Dangerous to Life or Health

- D. Training:

- 1. Employees and the supervisor of the employees who are or may be required to use respirators shall be trained on the following information and procedures:
 - a. The reason for respirators and why other methods of control cannot be used.

- b. The respirator selection process including the identification and evaluation of the hazards.
- c. Demonstration of proper fitting, wearing, and removing the respirator.
- d. The limitations, capabilities, and operation of the respirator.
- e. The proper maintenance and storage procedures.
- f. Allow the employee to wear the respirator in a safe atmosphere to permit them to become familiar with its characteristics.
- g. Correctly fit the respirator using a qualitative fit test.
- h. How to recognize and cope with emergency situations.
- i. Special uses of the respirator.
- j. Regulations regarding the use of respirators.
- k. How to perform positive and negative fit tests before respirator use to ensure a good fit.

E. Cleaning and Disinfecting

- 1. All single use and disposable respirators shall be discarded at the end of their useful life. These respirators shall not be cleaned and reused under any circumstances.
- 2. Respiratory protection that is not disposable shall be washed and disinfected by the employee after each day of use.
- 3. Respirators shall be assigned to individual workers for their exclusive use.
- 4. Cleaning of routinely-worn respirators (except for non-washable parts of supplied respirator) shall include:
 - a. Removal of any filters or cartridges.
 - b. Wash facepiece by using a cleaning/sanitizing solution that can be purchased from the manufacturer.
 - c. Rinse completely in clean, warm water.
 - d. Air dry in a clean area.

F. Respirators shall be stored in a convenient, clean, and sanitary location, and in such a manner that the rubber pieces are not mis-shaped.

G. Maintenance and Inspection

- 1. The inspection shall include as a minimum for all respirators:

- a. The tightness of all connections.
- b. The condition of the facepiece, headbands, valves, connecting tubes, and canisters.
- c. The close visual inspection of the rubber and fabric for deterioration.

2. The parts used to replace defective respirator components shall be acquired from the same manufacturer as the respirator. This also applies to replacement cartridges and filters.

H. An evaluation of this program shall be conducted on an annual basis or as needed.

I. Fit Testing

1. Each employees who wears a respirator shall be fit tested by a qualified trainer before being allowed to wear a respirator. A fit test record must be maintained (Appendix A).
2. Fit testing shall be repeated each time the user receives a different type of respirator, face piece, or if the wearer undergoes significant changes in facial features, dental configuration, or body weight.

J. Respirators shall be selected from those approved by both the Mine Safety and Health Administration (MSHA) and National Institute for Occupational Safety and Health (NIOSH):

K. Special Considerations

1. When the respirator user must wear corrective spectacles and wear a full face respirator, the lenses shall be compatible with the assigned facepiece. The adapter shall be provided by the facepiece manufacturer.
2. Contact lenses shall not be used inside full facepiece respirators.
3. Such conditions as a beard, sideburns, a skull cap, temple pieces on glasses, and the absence of one or both dentures can seriously effect the fit of a facepiece.

L. Recordkeeping

1. Respirator Fit-Test records shall be maintained by facility management for the duration of employment. (Appendix A)
2. A record of employee training shall be maintained by facility management for a minimum of three years (Appendix B).

Resources

1. 29cfr1910.134 “Respiratory Protection”

Fall Protection Program

Purpose

Rose Acre Farms facility or operation shall have a fall protection program with the intent of minimizing the risk of injury as a result of falls from elevated work locations. The practices and procedures to be included in the fall protection program are outlined as follows:

- A. Identify areas that present fall hazards.
- B. Establish guidelines for selection, use and care of fall protection equipment and systems.
- C. Provide education and training on all aspects of fall protection systems.
- D. Incorporate fall prevention when ever possible into project planning and design.

Scope

This program applies to all Rose Acre Farms facilities and operations. It covers any elevated work location where the feet of an individual are four (4) feet or more above the floor or grade level.

General

- A. Rose Acre Farms shall provide some type of fall prevention for any free fall hazard which may be present within a facility.
- B. Any employee whose feet are more than four (4) feet above the floor or grade level shall wear fall protection if other means of fall prevention cannot be applied. These work areas may include, but are not limited to unprotected sides and edges of floors, roofs, and other structures.
- C. Fall prevention measures can be guardrails, scaffolds with proper guardrails, and platform ladders (if performing activities that are not physically demanding).
- D. Fall protection equipment consists of the proper anchorage, full body harnesses, shock absorbing lanyards, self-retracting lifelines, etc.
- E. All jobs shall be evaluated to determine the need for fall prevention or a fall protection system.
 1. The supervisor of the job being evaluated and the employee performing the job shall be responsible for performing the evaluation. Some key points to consider when evaluating the job are:
 - a. Height of the job.
 - b. Fall protection/prevention that is needed.
 - c. Other hazards that may be present.
 2. If work must be performed where fall hazards are present then either the proper fall prevention measures shall be implemented or a fall protection system shall be selected and installed.
- F. All employees, who are required to work at elevated heights, shall thoroughly inspect all components of a fall protection system before it is used.
- G. Equipment
 1. Fall protection equipment shall be worn by any employee who may be exposed to free fall hazard. Fall protection equipment at Rose Acre Farms includes:
 - a. Full body harnesses
 - b. Shock absorbing lanyards
 - c. Self-retracting lifelines

- d. Anchoring devices
 - e. Platforms with railings or cages
2. Body belts are not considered adequate fall protection, and shall not be used.
 3. When ascending or descending, ladders are considered fall protection only when two hands of the person are free and on the ladder.
 4. Fall protection equipment shall not be modified without written approval from the manufacturer.
 5. Damaged/Defective equipment shall be tagged out of service until a sufficient replacement is installed.

H. Equipment Storage and Inspection

1. Fall protection equipment shall be stored in a clean and dry area.
2. Never store fall protective equipment near any solvents, chemicals, oil, grease, etc.
3. Equipment shall be inspected regularly and before each use. Any frayed or damaged equipment shall be removed from service and replaced.

J. Training

1. All employees required to use fall protection equipment shall be trained in the following:
 - a. The identification of free fall hazards in a work area.
 - b. The proper use and operation of fall protection equipment.
 - c. The proper inspection techniques of fall protection equipment.
 - d. The proper storage and care of fall protection equipment.
2. All employees must receive refresher training annually

Fire Extinguisher Program

I. Classification of Hazards

- A. Most of RAF facilities are classified as an Ordinary (moderate) Hazard.

II. General Requirements

- A. Portable extinguishers shall be maintained in a fully charged and operable condition. When they are not in use, they should be kept in their designated places at all times.
- B. Extinguishers shall be conspicuously located where they will be readily accessible in the event of a fire. Preferably, the extinguishers shall be located along the normal paths of travel, including exits.
- C. Extinguishers shall not be obstructed or obscured from view.
- D. Extinguishers shall be installed on the hangers or in the brackets supplied
- E. Extinguishers weighing less than 40 lbs. shall be mounted so that the top of the extinguisher is NOT more than 5 feet above the floor. Extinguishers weighing more than 40 lbs. shall be mounted so that the top of the extinguisher is NOT more than 3.5 feet above the floor. In no case shall the clearance between the bottom of the extinguisher and the floor be less than 4 inches.
- F. The operating instructions of a fire extinguisher shall face out.

III. Selection of Extinguisher

- A. Extinguisher for protecting class A, B, and C fires shall be used.

IV. Inspection

- A. Frequency- extinguishers shall be inspected monthly and documented on service tag. Annual maintenance shall be performed by trained persons with suitable testing equipment and facilities.
- B. Procedure for inspection:
 - 1. Located in designated place.
 - 2. No obstruction to access or visibility.
 - 3. Operating instructions on nameplate legible and facing outward.
 - 4. Seals and tamper indicators not broken or missing.
 - 5. Determine fullness by weighing or "hefting".
 - 6. Examine for obvious physical damage, corrosion, leakage, or clogged nozzle
 - 7. Pressure gauge reading or indicator in the operable range or position.

Corrective Action- when an inspection of any extinguisher reveals a deficiency in any of the conditions listed in the above procedure, immediate corrective action shall be taken.

- A. Rechargeable Extinguisher- When an inspection reveals a deficiency in any of the conditions listed in (3), (4), (5), (6) of the above procedure, the servicing provider must be called to perform maintenance.
- B. Non-rechargeable- when an inspection of any non-refillable disposable extinguisher reveals a deficiency in any of the conditions listed in (3), (4), (5), (6) of the above procedure, it shall be removed from service.
- C. Hydrostatic Testing must be performed by trained persons with suitable testing equipment and facilities.

V. Record keeping

- A. Each extinguisher shall have a tag or label securely attached that indicates the month, year, and person performing the maintenance. The same record, tag or label shall indicate whether or not recharging was also performed.

Training

- A. An educational program will be provided to authorized employees to familiarize them with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.
- B. Training will be conducted upon initial assignment to the designated group and annually thereafter.

Hot Work Permit Program

Introduction

This program establishes written procedures to prevent fires resulting from temporary operations involving an open flame or spark. This includes, but is not limited to brazing, cutting, grinding, soldering, welding, and other forms of torch operations. This written program requires the issuance of a Hot Work Permit before beginning any hot work.

Scope

This program applies to Rose Acre Farms employees and contractors who perform or supervise hot work activities in existing buildings, new construction in existing buildings, and new construction attached to existing buildings. This program does not apply to areas that are specifically designed and equipped for such operations, e.g., designated welding areas.

Responsibilities

Health and Safety Department

- Distribute and update Hot Work Permit forms
- Provide assistance with program implementation and administration
- Provide assistance in training supervisors, employees, and project managers
- Update Hot Work Program as needed

Supervisor

- Establish designated areas for cutting and welding
- Ensure hot work procedures are being implemented and followed in other than designated areas
- Ensure that all employees and contractors are following hot work procedures
- Ensure that a hot work permit is issued prior to the start of work
- Ensure that all cutting and welding equipment is in satisfactory condition
- Ensure that employees are suitably trained in the operation of the equipment and safe use of the process

Employee

- Follow and use hot work procedures;
- Obtain a hot work permit prior to starting work;
- Attend and actively participate in training sessions
- Protect nearby personnel against heat, sparks, etc. when working in occupied buildings.

Procedures

Hot work should not be performed if the work can be avoided or performed in a safe manner. When practical, objects to be welded, cut, or heated must be moved to a designated safe location, e.g., a designated welding area. If hot work cannot be moved to a safe working area, then cutting and welding may be performed, but only after the following conditions are met:

- 1) A Hot Work Permit must be acquired before the hot work begins (Appendix A).
- 2) The Hot Work Permit will be completed by the person in charge of the work site who is able to ensure that all the requirements of the permit will be met. The permit is valid only for the date(s) and time specified on the permit. A copy of the permit must be delivered to the complex manager. Original permit must be kept at the site where the hot work is taking place.

Personnel (employees, contractors, building occupants) must be suitably protected against hazards generated by the work, e.g., heat, sparks, fumes, welding rays, etc. This may include, but is not limited to, the use of personal protective equipment (safety glasses, eye and face shields, gloves with gauntlets, leathers, and footwear), screens, or local exhaust ventilation.

Special Precautions

Special precautions shall be taken for buildings, equipment, and processes within 35 ft. horizontal radius of the work (welding) area:

1. Move all combustibles to a location outside the 35 ft. radius. If material cannot be removed, it shall be protected with fire retardant tarps, metal shields, or other noncombustible material. Edges of covers and cover overlaps shall be tight to the floor.
2. Floors shall be cleaned of all combustibles.
3. Combustible floors, walls, and ceilings shall be wet down, covered with damp sand, or protected
4. Wall floor openings, and other openings shall be protected. Where necessary, fire retardant tarps shall be suspended beneath work to collect sparks.
5. When cutting and welding in structures with open grating or expanded metal floors, care should be taken to control and contain fire/sparks at that level.
6. If cutting and welding is done on metal walls, partitions, roof, etc., precautions shall be taken to prevent the ignition of combustibles on the opposite side from conduction, direct flame from the torch, or other means.
7. If cutting and welding is done on elevated metal decks, grating, or platforms, the area below the work shall be cleared of all combustible and flammable materials. This area should be blocked off to prevent use until after cutting and welding is completed and verified

Prohibited Conditions

A Hot Work Permit will not be issued if ANY of the following conditions exist:

- Combustible or flammable materials are within 35 feet and cannot be moved or protected
- Floor and wall openings cannot be covered;
- Cutting or welding on pipes or other metals can conduct enough heat to ignite nearby combustible materials or
- Any condition that could result in undue hazards by performing the work.
- In the presence of explosive atmospheres or flammable gases, vapors, liquids, or dusts with air or explosive atmospheres that may develop inside uncleaned or improperly prepared tanks or equipment which have previously contained such materials, or that may develop in areas with an accumulation of combustibles dusts.
- Any condition that could result in undue hazards by performing the work.

Fire Watch

- Ensure proper fire fighting equipment is readily available (i.e. appropriate extinguisher for type of operation and material)
- Extinguish a fire ONLY when it is safe to do so and within trained capabilities.
- A fire watch must be maintained at the work site for at least 1 hour after the work is completed
- A method to summon the fire department or other emergency services must be established

Contractors

Contractors doing work for Rose Acre Farms must follow the written Cutting and Welding Policy.

ROSE ACRE FARMS, INC.

WORK PERMIT

T: _____ DEPT.: _____

Good From Date: _____ Time: _____ (am/pm)

To Date: _____ Time: _____ (am/pm)

Building/Location _____

Time Started ____:____ am pm Time Completed ____:____ am pm

Describe Work To Be Done: _____

NOTE: Answer each question YES or NO. If Question does not apply, check off indicating that it has been given consideration.

1. Can the equipment be removed from the building? _____
2. Can the work be done other than by the use of flame? _____
3. Have all process materials (solids, liquids, gases) been removed from the equipment? _____
4. Have connections been blinded off? _____
5. Have valves been tagged and/or locked close? _____
6. Have switches and electric disconnects been tagged and/or locked open? (Safety locks on push buttons are not sufficient)? _____
7. Has equipment and all attached piping been cleaned? _____
Has equipment been ventilated? _____
8. Is ventilation to be continued during shutdown or repair procedures? _____
10. Have trenches and sewer openings been covered and steamed to eliminate explosive vapors? _____
11. Have gas tests been made? _____
12. Can sparks ignite material in vicinity or on lower floor or levels? _____
13. Is adjacent equipment safe? _____

Are there any special precautions to be observed?

Supervisor in Charge: _____

Complex Manager: _____

Hearing Conservation Program

I. PURPOSE

This purpose of this hearing conservation program is to prevent occupational hearing loss and comply with the OSHA Standard 29 CFR 1910.95 - Occupational Noise Exposure.

II. APPLICATION

The Occupational Safety and Health Administration (OSHA) Occupational Noise Exposure standard 29 CFR 1910.95 establishes a permissible exposure limit(PEL) for occupational noise exposure, and requirements for audiometric testing, hearing protection, and employee training if those sound levels are exceeded. This regulation defines an "action level" (AL) as a "dose" of 50%, which is equivalent to an eight-hour time weighted average of 85 dBA. When noise levels exceed this amount, an effective hearing conservation program is required, which includes as a minimum:

<u>Requirement</u>	<u>Section</u>
1. Noise monitoring	29 CFR 1910.95(d)(e)(f)
2. Audiometric testing	29 CFR 1910.95(g)(h)
3. Hearing protectors	29 CFR 1910.95(i)(j)
4. Education and training	29 CFR 1910.95(k)(1)
5. Recordkeeping	29 CFR 1910.95(m)

Note: The OSHA regulation only indicates a minimum level of hearing protection and focuses on permanent hearing loss. Short durations of noise, especially sharp bursts of noise at these levels can not only induce hearing loss but can also affect an employee's health and safety in other ways (See Table # 1 on page 15).

III. BACKGROUND

Occupational noise can cause hearing loss, and increase the worker's susceptibility to other workplace problems including physical and psychological disorders, interference with speech and communication, and disruption of job performance associated with excessive noise intensities. This exposure to noise produces hearing loss of a neural type involving injury to the inner ear hair cells. The loss of hearing may be temporary or permanent. Brief exposure causes a temporary loss. Repeated exposure to high noise levels will cause a permanent loss.

Permanent hearing loss is preventable with the continued use of proper hearing protection and reduction of workplace noise levels to below 85 decibels. This will benefit not only employees who can listen and communicate well throughout their lifetimes, but also helps the employer in terms of reduced exposure to hearing loss compensation claims and a potential for increased general safety and job performance.

IV. RESPONSIBILITY FOR COMPLIANCE

The administration of this program will be the responsibility of the complex manager. Administrative responsibilities include:

1. Coordination and supervision of noise exposure monitoring.
2. Identification of employees to be included in the Hearing Conservation Program.
3. Coordination and supervision of audiometric testing program.
4. Supervision of hearing protector selection.
5. Development of policies relating to the use of hearing protectors.

6. Supervision of employee training programs.
7. Coordination and supervision of required recordkeeping.
8. Periodic evaluation of overall program.
9. Coordination of required changes/improvements in the program.

V. NOISE MONITORING

1. When information indicates that any employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels, the employer shall develop and implement a monitoring program.
2. Employers shall identify employees for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.
3. All continuous, intermittent and impulsive sound levels from 80 decibels to 130 decibels shall be integrated into the noise measurements.
4. Instruments used to measure employee noise exposure shall be calibrated to ensure measurement accuracy.
5. Monitoring shall be repeated whenever a change in production, process, equipment or controls increases noise exposures to the extent that:
 - i. Additional employees may be exposed at or above the action level; or
 - ii. The attenuation provided by hearing protectors being used by employees may be rendered inadequate to meet the requirements (explained in section IX).
6. The employer shall notify each employee exposed at or above an 8-hour time-weighted average of 85 decibels of the results of the monitoring.
7. The employer shall provide affected employees or their representatives with an opportunity to observe any noise measurements conducted.
8. Monitoring will be coordinated by complex manager with assistance from Safety Department.
9. The results of the noise exposure measurements will be recorded on Form # 1.

VII. AUDIOMETRIC TESTING

The employer shall establish and maintain an audiometric testing by making audiometric testing available to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels.

The program shall be provided at no cost to employees.

Audiometric tests shall be performed by a licensed or certified audiologist, otolaryngologist, or other physician, or by a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or who has satisfactorily demonstrated competence in administering audiometric examinations, obtaining valid audiograms, and properly using, maintaining and checking calibration and proper functioning of the audiometers being used. A technician who operates microprocessor audiometers does not need to be certified. A technician who performs audiometric tests must be responsible to an audiologist, otolaryngologist or physician.

Baseline audiogram

Within 6 months of an employee's first exposure at or above the action level, the employer shall establish a valid baseline audiogram against which subsequent audiograms can be compared.

Mobile test van exception

Where mobile test vans are used to meet the audiometric testing obligation, the employer shall obtain a valid baseline audiogram within 1 year of an employee's first exposure at or above the action level. Where baseline audiograms are obtained more than 6 months after the employee's first exposure at or above the action level, employees shall wear hearing protectors for any period exceeding six months after first exposure until the baseline audiogram is obtained.

Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protectors may be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise.

The complex manager shall notify employees of the need to avoid high levels of non-occupational noise exposure during the 14-hour period immediately preceding the audiometric examination.

Annual audiogram

Audiograms will be conducted at least annually after obtaining the baseline audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels.

The complex manager will maintain a record of all employee audiometric test records. This record will include:

1. Name and job classification of the employee.
2. Date of the audiogram.
3. The examiner's name.
4. Date of the last acoustic or exhaustive calibration of the audiometer.
5. Employee's most recent noise exposure assessment.

AUDIOMETRIC EVALUATION

1. Each employee's annual audiogram will be compared to his/her baseline audiogram by qualified evaluator to determine if a Standard Threshold Shift (STS) has occurred. This comparison may be done by a technician.
2. A Standard Threshold Shift is defined by OSHA as a change in hearing threshold relative to the baseline of an average of 10dB or more at 2000, 3000, and 4000 Hz either ear.
3. In determining if a Standard Threshold Shift has occurred, an allowance can be made for the contribution of aging (presbycusis). The age correction values to be used are found in Appendix F of 1910.95.
4. The audiologist, otolaryngologist, or physician shall review problem audiograms and shall determine whether there is a need for further evaluation. The employer shall provide to the person performing this evaluation the following information:
 - a. A copy of the requirements for hearing conservation as set forth in the standard.
 - b. The baseline audiogram and most recent audiogram of the employee to be evaluated.
 - c. Measurements of background sound pressure levels in the audiometric test room as required in Appendix D: Audiometric Test Rooms.
 - d. Records of audiometer calibrations
5. If the annual audiogram shows that an employee has suffered a standard threshold shift, the employer may obtain a retest within 30 days and consider the results of the retest as the annual audiogram.

6. Unless a physician determines that the standard threshold shift is not work related or aggravated by occupational noise exposure, the employer shall ensure that the following steps are taken when a standard threshold shift occurs:
 - a. Employees not using hearing protectors will be trained, fitted, and required to use hearing protectors if they are exposed to an 8 hour TWA average sound level of 85 decibels or greater.
 - b. Employees already using hearing protectors shall be retrained, refitted, and required to use hearing protectors and provided with hearing protectors offering greater attenuation if necessary.
 - c. The complex manager will inform the employee, in writing, within 21 days of this determination, of the existence of a permanent Standard Threshold Shift. (See Form # 2) A copy of the STS letter will also be sent to the employee's supervisor.
 - d. The complex manager will counsel the employee on the importance of using hearing protectors and refer the employee for further clinical evaluation if necessary.
7. Persistent significant threshold shifts must be entered on the OSHA 300 Log if determined to be work related.
8. If subsequent audiometric testing of an employee whose exposure to noise is less than an 8-hour TWA of 90 decibels indicates that a Standard Threshold Shift is not persistent, the complex manager:
 - a. Shall inform the employee of the new audiometric interpretation.
 - b. May discontinue the required use of hearing protectors for that employee.

VIII. PROTECTION EQUIPMENT

- A. The complex manager shall ensure that hearing protectors are worn:
 1. By any employee who is subjected to sound levels equal to or exceeding an 8-hour TWA of 90 decibels.
 2. By any employee who has experienced a persistent Standard Threshold Shift and who is exposed to 8-hour TWA of 85 decibels or greater.
 3. By any employee who has not had a initial baseline audiogram and who is exposed to 8-hour TWA of 85 decibels or greater.
- B. Employees will be given the opportunity to select their hearing protectors from a variety of suitable hearing protectors at no cost to them.
- C. The complex manager will provide training in the use and care of all hearing protectors.
- D. The complex manager will ensure proper initial fitting and supervise the correct use of all hearing protectors.
- E. Employees will be held accountable for not properly using and maintaining the equipment furnished.
- F. The complex manager will evaluate the attenuation characteristics of the hearing protectors to ensure that a given protector will reduce the individual's exposure to the required decibels. (See Form # 3)
 1. If the 8-hour TWA is over 90 decibels, then the protector must attenuate the exposure to at least an 8-hour TWA of 90 decibels or below.
 2. If the protector is being worn because the employee experienced a Standard Threshold Shift, then the protector must attenuate the exposure to a 8-hour TWA of 85 decibels or below.
 3. If employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation, the employee will be provided more effective hearing protectors.

- G. It is the responsibility of the supervisor to ensure that hearing protectors are worn by all employees who are exposed to noise levels at or above an eight hour TWA of 90 decibels or if the employee experienced a permanent STS or has not yet had a baseline audiogram.

EMPLOYEE EDUCATIONAL TRAINING

An annual training program for each employee included in the hearing conservation program will be conducted by Examinetics and will include information on:

1. The effects of noise on hearing.
2. The purpose and use of hearing protectors.
3. The advantages, disadvantages, and attenuation of various types of protection.
4. Instruction in the selection, fitting, use and care of protectors.
5. The purpose of audiometric testing and an explanation of the test procedures.

Form #4 will be used to record the training dates and the employees in attendance.

Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes.

X. RECORDKEEPING

Noise exposure measurement records will be retained for two years.

Audiometric test records will be retained for the duration of the affected workers employment plus thirty years.

Access to records. All records required by this section shall be provided upon request to employees, former employees, representatives designated by the individual employee, and the Assistant Secretary.

XI. PROGRAM EVALUATION

At least annually, the Hearing Protection Program will be evaluated by the Safety Department. After the evaluation, the changes/revisions to the program deemed necessary will be made as soon as possible.

Sample Standard Threshold Shift (STS) Letter

Dear _____,

Your most recent audiometric test result was compared to your baseline audiogram. This comparison indicates that your hearing has deteriorated to the point where your hearing impairment constitutes a "standard threshold shift." This is defined by the Occupational Safety and Health Administration (OSHA) as a relative hearing loss of an average of 10 decibels in either ear at the frequencies of 2000, 3000 and 4,000Hz.

An audiogram cannot define why you have a hearing loss, but there are many possible reasons such as infection, wax buildup in your ear and noise.

By taking the necessary action now, we can try to stop hearing loss from getting worse.

Consequently, we want to fit you with hearing protectors. Please call _____ to arrange an appointment with _____.

Whenever you are in a work environment that would result in noise exposure that equals or exceeds an 8 hour Time Weighted Average (TWA) of 85 decibels, hearing protection **must** be used.

Loss of hearing will affect you life. Preserve your hearing while you still have a chance.

Our _____ Department will attempt to answer any questions you may have.

Sincerely,

Table # 1

Permissible Noise Exposures

29 CFR 1910.95 Table G-16(a)

Duration (Hours)		Sound Level Slow Response
32.0		80
27.9		81
24.3		82
21.1		83
18.4		84
16.0		as
13.9		86
12.1		87
10.6		88
9.2		89
8.0		90
7.0		91
6.2		92
5.3		93
4.6		94
4.0		95
3.5		96
3.0		97
2.6		98
2.3		99
2.0		100
1.7		101
1.5		102
1.4		103
1.3		104
1.0		105
0.87		106
0.76		107
0.66		108
0.57		109
0.5		110
0.44		111
0.38		112
0.33		113
0.29		114
0.25		115
0.22		116
0.19		117
0.16		118
0.14		119
0.125		120
0.11		121
0.095		122
0.082		123
0.072		124
0.063		125
0.054		126
0.047		127
0.041		128
0.036		129
0.031		130

Personal Protective Equipment Program

I. Purpose and Scope

The Rose Acre Farms Personal Protective Equipment Program addresses eye, face, ear, head, hand and foot protection.

Employees will be provided personal protective equipment (PPE) to reduce the likelihood of an injury and/or illness. PPE is not a substitute for engineering or administrative controls, or good work practices, but should be used in conjunction with these controls.

II. Responsibilities

A. Supervisors

Supervisors have the primary responsibility for implementation of the PPE Program in their work area. This involves:

- Providing appropriate PPE and making it available to employees.
- Ensuring employees are trained on the proper use, care, and cleaning of PPE.
- Supervising staff to ensure that the PPE Program elements are followed and that employees properly use and care for PPE.
- Seeking assistance from Safety Department to evaluate hazards.
- Notifying Safety Department when new hazards are introduced or when processes are added or changed.
- Ensuring defective or damaged equipment is replaced immediately.

B. Employees

The PPE user is responsible for following the requirements of the PPE Program.

- Wearing PPE as required.
- Attending required training sessions.
- Cleaning, and maintaining PPE as required.
- Informing the supervisor of the need to repair or replace PPE

C. Safety Department

The Safety Department is responsible for the development, implementation, and administration of the PPE Program. This involves:

- Conducting workplace hazard assessments to determine the presence of hazards which necessitate the use of PPE.
- Conducting periodic workplace reassessments as requested by supervisors.
- Providing training and technical assistance to supervisors on the proper use, care, and cleaning of approved PPE.
- Providing guidance to the supervisor for the selection and purchase of approved PPE.
- Reviewing, updating, and evaluating the overall effectiveness of the PPE Program.

III. Training

A. Employees who wear PPE shall be trained in the following:

- Which PPE is necessary
- When PPE is necessary
- How to properly adjust and wear their PPE
- The limitations of the PPE

- The proper care, decontamination and maintenance of PPE
 - The proper disposal of the PPE
- B. Training will be provided prior to the employee working in an area requiring the use of PPE. Additional training is needed when:
- Changes in the employee's job duties require different PPE.
 - Changes in the style or type of PPE used, renders the previous training obsolete.
 - An event has occurred which indicates the affected employee has not retained the training on the proper use of the PPE.
 - The employee is observed incorrectly using the assigned PPE.
- C. A training certificate will be kept for each employee. The certificate will contain the name of the employee trained, date of training and identify the PPE covered in the training. These certificates should be kept in the employee's training file. See Appendix "A".

IV. Protective Devices

- A. All PPE will be appropriate for the work to be performed and maintained in a clean condition. Equipment must meet American National Standards Institute (ANSI) standards. Gloves must be selected based on style, size and performance characteristics of the glove in relation to the hazards encountered. (Note: currently there is no ANSI standard for hand protection).

1) Eye and Face Protection

Employees must use appropriate eye or face protection when exposed to hazards from flying particles, liquid chemicals, acids or caustics, chemical gases or vapors, or injurious light radiation. Eyewear shall comply with ANSI Z87.1 as indicated by labels on the PPE. When there is a hazard from flying objects, side protectors meeting ANSI standards must be used. Examples of jobs/tasks at RAF where this protection is needed includes:

- | | | |
|---------------------|----------------------|------------------|
| • electrician | • Breaker operators | • groundskeepers |
| • chemical handling | • grinders | • bird movers |
| • construction | • welders | • house managers |
| • night cleanup | • shop | • packers |
| • sanitizers | • laboratory workers | |

** This list is not meant to be all-inclusive as other jobs/tasks may require PPE @ times**

Those employees wearing prescription glasses need to wear approved safety glasses that incorporate the prescription into the glasses or wear goggles over the prescription glasses.

Visitors, contractors, or others passing through an identified eye hazard area need to wear appropriate eyewear also. An ample supply of visitor safety glasses should be available for use

2) Emergency Eyewash Stations

Emergency eyewash facilities will be provided in all areas where the eyes of any employee may be exposed to corrosive materials. All such emergency facilities will be located where they are easily accessible in an emergency.

3) Foot Protection

Employees working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole shall wear protective footwear. It is mandatory for employees working in or near breaking facilities to wear anti-slip footwear.

Open shoes such as sandals and “flip-flops” are not considered as substantial footwear by the Safety Department.

4) Head Protection

All employees must wear a hard hat when there is a danger from impact and/or penetration from falling objects, or the possibility of striking protruding objects with their head in any work location.

5) Hand Protection

Employees must use appropriate hand protection when exposed to hazards from skin absorption of harmful substances, severe cuts or lacerations, abrasions, punctures, chemical burns, or temperature extremes. Glove selection will be based on performance characteristics of the gloves, conditions, duration of use, and hazards present. One type of glove will not work in all situations.

When selecting gloves for use against chemicals, the exact chemicals encountered need to be determined. Labels and MSDSs can provide this information. Recommended glove types are often listed in the section for PPE on the MSDS. All glove materials are eventually permeated by chemicals. They can be used safely for a limited time. A manufacturer’s glove selection guide is the best reference when selecting gloves. The Safety Department can assist in determining the specific type of glove material that should be worn for particular chemicals.

6) Hearing Protection

The controlling of existing noise levels by engineering controls is the most preferable course of action. Therefore, the feasibility of such controls should be carefully considered. Due to the complexity of some machinery, and in view of economic limitations, some noise levels cannot be reduced to below acceptable limits. In these cases, the manufacturers of machinery that produces noise levels exceeding the accepted guidelines should be notified of the high noise levels. The suppliers should be requested to redesign machinery where possible to meet the defined regulations. As interim solutions, consideration should be given to the design and construction of partial or total enclosures, and other engineering noise control procedures for reducing the existing noise levels, where such procedures are deemed technologically and economically feasible.

Until engineering controls reduce the amount of noise exposure to or below the accepted limits, RAF will make available appropriate personal hearing protection to noise-exposed employees. RAF will also ensure that the hearing protection is worn effectively. It is recognized that the use of these devices is considered a temporary solution to the problem of over-exposure until feasible controls are provided.

As with all safety equipment, the wearing of hearing protection in required areas is mandatory. All supervisors must enforce hearing protection requirements.

Individuals responsible for issuing and fitting hearing protection must be appropriately trained. Fitting and issuing of hearing protective devices begins when employees are hired.

The criteria for the selection of hearing protection should include: the level of daily worker exposure, the workers' hearing and communication requirements, use of other personal protective equipment, temperature and climate, and physical constraints of the worker or work activity.

Where noise levels cannot be reduce to or below the exposure limits by engineered noise controls, warning signs will be posted stating that a noise hazard exists and that all workers entering the area must wear hearing protection. All workers required to enter these areas must be supplied hearing protection and the supervisor must ensure that any worker in these areas wears hearing protection.

V. Cleaning and Maintenance

- A. It is the employee's responsibility to ensure their PPE is clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. PPE should be inspected, cleaned and maintained at regular intervals.
- B. It is also important to ensure that contaminated PPE, which cannot be decontaminated, is disposed of in a manner that protects employees from exposure to hazards.

Bloodborne Pathogen Program

I. PURPOSE

The purpose of this exposure control plan (ECP) is to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR 1910.1030. The ECP is a key document to assist in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:

- Determination of employee exposure
- Implementation of various methods of exposure control, including:
 - Universal precautions
 - Engineering and work practice controls
 - Personal protective equipment
 - Housekeeping
 - Hepatitis B vaccination
 - Post-exposure evaluation and follow-up
 - Communication of hazards to employees and training
 - Record keeping
 - Procedures for evaluating circumstances surrounding an exposure incident

J. PROGRAM ADMINISTRATION

The Safety Department is responsible for the implementation of the ECP. The Safety Department will maintain, review, and update the ECP to include new or modified tasks and procedures, new safety devices, or when an exposure incident indicates the need for a revision in the plan. Those employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

K. EMPLOYEE EXPOSURE DETERMINATION

There are certain job classifications @ Rose Acres that may be considered "at risk" for occupational exposure to blood or other potentially infectious materials. This exposure determination has been made without regard for the use of personal protective equipment or the frequency of the exposure.

Employees who have not had bloodborne pathogen training are not allowed to clean up or handle blood or body fluids. Employees who voluntarily render first aid are not covered under this exposure control plan; they do so as a "Good Samaritan."

L. METHODS OF IMPLEMENTATION AND CONTROL

Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens.

Engineering controls

- New procedures and new products will be evaluated on a regular basis. Both front line workers and management officials will be involved in choosing safer products and procedures.

Work practice controls

- Universal Precautions (Appendix A) - all employees will treat blood and body fluids containing blood as if they are infected and use universal precautions.
- Personal Protective Equipment (PPE) is required – it is not optional. Selection and availability of PPE will be discussed in the employee's initial training session. All employees using PPE must observe the following precautions:
 - Wash hands immediately or as soon as feasible after removing gloves/PPE.
 - Remove PPE after it becomes contaminated, and before leaving the work area.
 - Contaminated PPE may be disposed of in a properly marked biohazard container.

- Wear appropriate gloves when it can be reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured, contaminated, or if their ability to function as a barrier is compromised.
- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Never wash or decontaminate disposable gloves for reuse.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eyes, nose, or mouth.
- Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.
- All procedures will be conducted in a manner that will minimize splashing, spraying, splattering, and generation of droplets of blood or other potentially infectious materials.
- No eating, drinking, smoking, or application of cosmetics is allowed in work areas where there is potential for contamination with infectious materials.

Housekeeping

- Areas that are contaminated with blood or other potentially infectious materials will be cleaned with a fresh solution of sodium hypochlorite (household bleach) or an EPA registered germicide. The Centers for Disease Control (CDC) recommends a solution of 5.25 percent bleach diluted with water - 1 part bleach to 10 parts water up to 1 part bleach to 100 parts water (from ¼ cup to 1 ½ cups bleach per gallon of water). This is an effective solution for disinfecting environmental surfaces and for decontamination of sites following *initial cleanup* (wiping up) of spills of blood or other potentially infectious materials. It can also be used to decontaminate reusable gloves and cleaning equipment. All contaminated work surfaces and equipment will be decontaminated as soon as feasible.
- Any sharp object contaminated with blood such as broken glassware or sharp metal should not be picked up by hand. Employees must use tongs, a brush and dustpan, cardboard, or other available material to remove the contaminated glassware.
- All regulated waste must be clearly marked with the universal biohazard label. Bio-hazardous materials for disposal should be placed in leak-proof red bags that bear the biohazard label and are securely sealed
- Regulated biohazard waste disposal will be performed in accordance with all Federal, State, and local regulations.

M. EXPOSURE INCIDENTS

An exposure incident is defined by OSHA as "a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties." Should an exposure incident occur, ***wash the affected area with non-abrasive soap and warm water immediately***. Following the initial first aid (clean the wound, flush eyes or other mucous membrane, etc.) contact your supervisor immediately!

VI. PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

The Safety Department and the employee's supervisor will review the circumstances of all exposure incidents to determine:

- engineering controls in use at the time
- work practices followed
- protective equipment or clothing that was used at the time of the exposure incident
- location of the incident
- procedure being performed when the incident occurred
- employee's training

The Safety Department will record all injuries from contaminated sharps in the Sharps Injury Log, recording the incident but maintaining the employee's confidentiality.

VII. EMPLOYEE TRAINING

All employees who are considered to be at risk for occupational exposure to bloodborne pathogens receive training conducted by a qualified trainer. Training will be given prior to initial assignment to tasks where exposure may occur and a refresher course will be given annually. The training will cover the epidemiology, symptoms, and transmission of bloodborne diseases. In addition, the training program covers, at a minimum, the following elements:

- a copy and explanation of the standard
- an explanation of our Exposure Control Program and how to obtain a copy
- an explanation of methods to recognize tasks and other activities that may involve exposure to blood and other potentially infectious material, including what constitutes an exposure incident
- an explanation of the use and limitations of engineering controls, work practices, and PPE
- an explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE
- an explanation of the basis for PPE selection
- information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge
- information on the appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- an explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available
- information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident

SAFETY COMMITTEES

Objective

To assist management in generating employee involvement and recommendations in establishing, communicating and maintaining a safe, healthy and efficient workplace environment, as well as assist in meeting or exceeding government rules and regulations.

Membership

Members will be chosen in view of the duties and responsibilities of the committee. Committee members shall be selected according to their position, knowledge, abilities, and interest in promoting safety. Each department should be represented and are to include management representation (grader, houses, cooler, breaker plant, etc.). **The complex manager or assigned representative is responsible for coordinating all committee activities and for facilitating committee meetings.**

Scope

A well-run Safety Committee is an important part of the loss control program. It can help reduce the cost of operation and produce many other effects, such as:

- Reducing the occurrence, frequency and/or severity of accidents
- Increase productivity (quality and quantity)
- Improve the use of equipment
- Reduce material waste
- Enhance employee satisfaction
- Facilitate employee cooperation and contributions
- Provide analysis and evaluation of injury and incident data and program performance to management
- Develop and recommend adoption of appropriate safety programs to supplement a general program (a specific housekeeping program, protective clothing program, confined space, etc.)

Goals

The Safety Committee shall be responsible for recommending goals concerning hazard control and accident prevention. Once the goals are set and specific objectives formulated, they are to be forwarded to the Safety Director and complex manager. **(Goals are to be site specific)**

Activities and Duties

The Safety Committee shall meet no less than a minimum of 1 time per month. The frequency shall be determined by the Safety Director or by assigned representative at each location to accomplish its goals and objectives.

The Safety Committee shall also discuss accidents, near misses, new training requirements, and employee suggestions. Other actions include:

- Review of accident investigation reports
- Review actions taken to prevent accident recurrences
- Establish a system for handling employee safety suggestions
- Review results of safety inspection/audit made by Safety Department
- Review OSHA 300 Log
- Provide input toward enhancing safety rules and procedures when applicable

Activity and Duties (cont.)

- Review and help implement specific accident prevention activities
- Review loss control issues and problems

Effective Committee Meetings

Good safety meetings require thorough planning and effort. Notices of meetings should be sent to each member of the committee. The meeting place should be comfortable, well lighted, with no distractions.

- Call to Order- The meetings should be called to order promptly at the appointed time.
- Roll Call by the Facilitator- Names of members and others present should be recorded. Absences should be noted.
- Minutes- Of the previous meeting should be briefly reviewed.
- Unfinished Business- A status review of issues or assignments made during the last meeting should take place.
- Review of Accidents- Serious accidents or incidents since the last meeting should be reviewed with an aim towards preventing recurrences. Plant loss statistics may be reviewed and discussed. Also, employees with restrictions should be discussed.
- Other Activities- Inspections, ergonomic studies, training programs, safety suggestions, and other activities from the past month should be reviewed, e.g., reports received from insurance company service representatives or Safety Director.
- New Business- Any new issues, programs, problems, etc., should be brought up. Appropriate action items should be given
- General Discussion-Any relevant comments or suggestions for the good of the company should be discussed.
- Adjournment- Set time, date, and location of the next meeting. Adjourn on time.

Minutes should be taken, prepared, and circulated by the facilitator. The minutes should accurately record all decisions made and actions taken since they serve as a means of keeping management informed of the group's work and as a follow-up. **The Safety Department should receive a copy of the minutes. Copies should be maintained for 1 year.**

RAF Safety Compliance Checklist

Date: _____

Yes	No
-----	----

	Yes	No
I. Administrative		
A. OSHA poster placed by time clock or within break room		
B. 5-year history of OSHA 300 & 300A logs		
C. Up-to-date RAF Safety Manual		
D. All authorized & unauthorized training has been completed		
E. Safety committee meeting notes & minutes		
F. Emergency contact list posted in conspicuous area		
II. Hazard Communication Standard 1910.1200		
A. Chemical provider has conducted chemical-specific training		
B. Material safety data sheets for all chemicals placed within MSDS binder		
C. Chemical containers are labeled		
D. PPE assessments performed for all areas		
E. PPE readily available		
F. PPE requirements are being enforced		
G. Emergency eye wash stations located in areas with caustic/acid material		
III. Lockout / Tagout Standard 1910.41		
A. LOTO procedures written and available for all machinery/equipment		
B. Annual training conducted for authorized employees		
C. LOTO accessories provided for all authorized employees		
D. LOTO requirements are being enforced		
IV. Respiratory Protection 1910.134		
A. Testing conducted to verify ammonia levels in houses		
B. Are employees using half or full-face respirators? If so:		
D. Medical evaluations conducted and results on hand		
E. Fit testing conducted for affected employees		
F. Cleaning & storage procedures in place		
G. Signed Appendix D Forms.		
V. Bloodborne Pathogens (29 CFR 1910.1030)		
A. BBP clean up kit available		
B. HEP B declination forms		
C. First aid and CPR training up-to-date		
D. First aid kits available		
VI. Powered Industrial Trucks (29 CFR 1910.95)		
A. Initial training conducted for employees operating powered industrial trucks		
B. Daily forklift/pallet jack inspections documented and on file		
C. An out-of-service tagging/notification system is in place		
D. Refresher training conducted every 3 years and documented		
E. Operators wearing seatbelts		
F. Horns are being used		
G. Forklifts have functional back up warning equipment		
VII. Confined Spaces (29 CFR 1910.146)		
A. Confined spaces labeled and identified properly		
B. Atmospheric testing data documented prior to and during entry		
C. Ventilation and/or rescue methods for confined space entries utilized		

- D. Harness and lanyard readily available
- E. Attendant in place during entry
- F. Contractor notification program of our confined space entry program.
- G. 4 gas monitor calibrated and in proper working condition
- H. Canceled permits retained for 1 year.

VIII. Personal Protection Equipment (29 CFR 1910.132)

- A. Anti-slip shoe policy enforced
- B. Hearing protection requirements enforced
- C. Chemical resistant PPE available and used correctly
- D. OSHA approved compressed air nozzles being used

IX. Egress and Evacuation (29 CFR 1910.33)

- A. Written emergency action plan updated
- B. Effective emergency notification system in place
- C. Employees trained on emergency evacuation procedures
- D. Exits identified with visible signs and lighting
- E. Monthly testing of emergency lighting conducted and documented
- F. Exits free of obstructions
- G. Emergency evacuation maps posted for all areas
- H. Written ammonia emergency response procedures at applicable farms
- I. Windsock located in highly visible area
- J. Annual meeting with fire department conducted

X. Hearing Conservation Program (29 CFR 1910.95)

- A. Noise recordings have been conducted and posted in conspicuous area
- B. Areas exposed to greater than 85 dB for an 8hr TWA but less than 90 dB: hearing conservation program developed
- C. Earplugs available
- D. Earplugs being worn in areas above 85 dB
- E. Training conducted for employees within Hearing Conservation program
- F. Multiple types of hearing protection made available
- G. Audiometric testing conducted for all employees in the Hearing Conservation Program

XI. Electrical Safety (29 CFR 1910.301)

- A. All disconnects and circuit breakers identified and labeled
- B. All exposed live electrical equipment covered/guarded
- C. All electrical circuits greater than 600 volts are marked as "High Voltage."
- D. All wiring is permanent. Temporary wiring is not acceptable

XII. Fire Protection (29 CFR 1019.155)

- A. Portable fire extinguishers are adequately placed throughout facility
- B. All fire extinguishers are mounted and identified properly.
- C. Authorized employees trained annually
- D. Monthly inspections of the fire extinguishers conducted and documented
- E. Extinguishers are in working order and free of obstruction, rust, and/or dust/debris

XIII. Walking and Working Surfaces and Fall Protection (29 CFR 1910.21 and 1926.50)

- A. Walking and working surfaces greater than 4 ft. above ground level have fall protection provided
- B. Stair railings have the required railing
- C. Platform surfaces above the working floor level have a toe rail
- D. Employees working on surfaces and/or ladder systems greater than 6 ft. in height are using fall protection systems
- E. Employees working above 6 ft. in height are trained on fall protection requirements.
- F. Employees working in mobile aerial lifts are provided with full body fall protection systems
- G. Adequate lighting provided in all areas

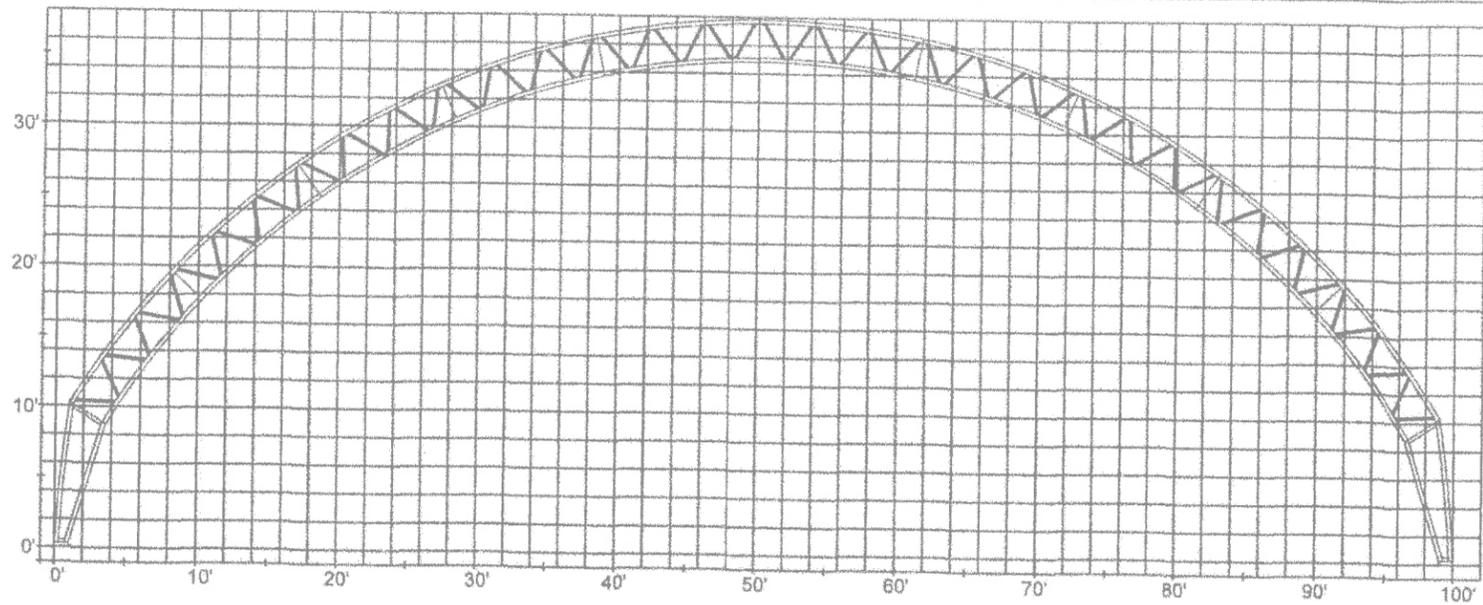
XIV. Hazardous Materials (29 CFR 1910.101)



First Report of Accident/Illness Procedure

1. Employee must report injury/illness to Supervisor by the end of the work shift in which incident occurred.
2. Supervisor, along with the employee, are to fill out a "First Report of Injury" form. In the event of the Supervisor not being available, the Complex Manager or Safety Department must be contacted to complete the accident form with the injured employee.
3. The Supervisor must then complete the "Accident Investigation" form immediately.
4. If another employee witnesses the accident, the witness must complete the "Witnesses Accident Investigation" form
5. Once all forms are completed, reviewed, and then signed by the Complex Manager all accident reports must be scanned and emailed to the Safety Department, which includes:
 - Derick Stuckwisch – dstuckwisch@goodegg.com
 - Travis Otte—totte@goodegg.com
 - Matt Rotert—mrotert@goodegg.com
6. If medical attention is needed, the HR Manager or Safety Department will make an appointment with a Physician.
7. Upon return from doctor visit, employee's must provide their Supervisor and Complex Manager with the "Attending Physicians Report," listing all findings and restrictions.
8. This status report will be faxed to the Safety Department immediately.
9. Supervisor should do all possible to accommodate any restriction(s). If unable to do so, the Safety Department must be contacted.

100LP Building Documents



GENERAL NOTES

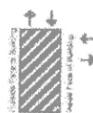
INDEX

- B1.0 Title Page and General Information
- B1.1 Truss Components
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- B1.4 Truss Assemblies and Canvas Installation
- E2.1 End Wall Components
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- E2.3 End Wall Elevation 2
- E2.4 End Wall Cabling
- E2.5 End Wall Assemblies

DESIGN CRITERIA

- Design loads in accordance to International Building Code 2006 (IBC 2006)
- Roof Snow Load: 12 PSF
- Ground Snow Load: 20 PSF
- Dead Load: 2 PSF
- Wind Load: 120 MPH
- Conveyor Load: N/A
- Occupancy Category: Category 1
- Exposure Category: C
- Enclosure Category: Partially Enclosed
- Span-Tech Building Series: 12120
- Design Criteria Set By: Eco-Builders, LLC.

- Vertical Load (KIPS) — 19.6
- Vertical Load (KIPS) — 6.7
- Horizontal Load (KIPS) — 4.9
- Horizontal Load (KIPS) — 14.8



Enclosed Building - A building in which all sides and endwalls are covered with a maximum of one door opening (18' x 18') in any given wall.

Partially Enclosed Building - A building in which any wall is partially or fully uncovered or full of large openings.

Frames are designed for both cases. The reactions to the foundations vary as shown.

COMMENT ON BUILDING LOADS

If the above section has been completed, the responsible party for determining the building series and the related environmental and collateral loads has been indicated in "Design Criteria Set By:" line. If it hasn't, loading has been determined by others. Unless Span-Tech is explicitly indicated on the "Design Criteria Set By:" line, then Span-Tech has no knowledge of the environmental and collateral loads for the building location and the building use. Ultimately, it is the sole responsibility of the owner to make sure the building's loads meet the environmental and collateral loads for the area in which the building is being erected. Failure to do so can result in injury or damage to the building and will void all warranties.

STEEL TUBE MEMBER

All carbon steel tube has trace elements controlled to ASTM A385 specification to mitigate formation of reactive steel during the hot dip galvanization process.

All tube unless otherwise noted meets ASTM A513 Specification with the following yields:

- 1,000" O.D. Round Tube Fy = 50 KSI
- 1,500" O.D. Round Tube Fy = 50 KSI
- 1,900" O.D. Round Tube Fy = 50 KSI
- 2,375" O.D. Round Tube Fy = 50 KSI
- 3,000" O.D. Round Tube Fy = 50 KSI
- 3,500" O.D. Round Tube Fy = 50 KSI
- 2"x3" O.D. Rect. Tube (Galv.) Fy = 50 KSI
- All other square and rectangular tube Fy = 36 KSI

STEEL TUBE WALL GAUGE (Nominal)

- Minimum Gauge thickness is 14 Ga. (.084")
- 14 Ga. = .084"
- 13 Ga. = .095"
- 12 Ga. = .109"
- 11 Ga. = .120"
- 10 Ga. = .134"
- 09 Ga. = .148"
- 08 Ga. = .165"

OTHER STRUCTURAL STEEL

Structural Steel Fy = 50 KSI

MEMBRANE FABRIC

Material: RU88X-6 Nova Shield II Im Membrane Structure Fabrics
 Weave: Woven clear HDPE scrim with 1600 denier tapes
 Weight: 12.0 oz/yd² (407 g/m²) +/- 5%
 Thickness: 23 mils (0.59 mm) ASTM D5199
 Fire Rating: N/A

Performance			
	Warp	Web	Testing Method
Grab Tensile, lbs. (N)	350 (1557)	335 (1491)	ASTM D5634
Simp Tensile, lbs./inch (N/cm)	265 (323)	240 (2100)	ASTM D5035
Trapezoidal Tear, lbs. (N)	95 (422)	90 (400)	ASTM D4533
Tongue Tear, lbs. (N)	115 (512)	115 (512)	ASTM D2281
Mullen Burst	870 psi (4623 kPa)		ASTM D3786
Cold Resistance	-50 degrees C		ASTM D2136
Accelerated UV Weathering	> 60% strength after 2000 hrs		

WELDED ASSEMBLIES - STEEL FINISH

Hot Dipped Galvanized - If applicable
 All welded assemblies are Hot Dipped Galvanized after fabrication to ASTM A123 standards, with min. 3.9 mil thickness

Gatorshield or Equivalent - If applicable

All welded assemblies using Gatorshield or Equivalent finish, are zinc coated after fabrication.

NON-WELDED ASSEMBLIES - STEEL FINISH

All non-welded building components are fabricated using Gatorshield or equivalent materials unless otherwise noted.

COMMENTS ON SITE SUITABILITY, SITE PREPARATION, SIDE WALL DESIGN AND MATERIAL SUITABILITY

Please note that site suitability, site preparation, sidewall design and sidewall material suitability are the sole responsibility of the owner. Span-Tech is a manufacturer of pre-engineered fabric buildings and is not a civil, soil, and/or structural engineering firm or the like. Any foundation recommendation that Span-Tech gives the owner/dealer/contractor/erector is only a representation of what might work as the foundation. The final design of the foundation needs to be based on a site specific soil capacity and environmental conditions study, as well as other collateral load requirements that increase the reactions of the building and/or foundation. These load requirements include but are not limited to conveyor, bulk storage of materials, sprinkler systems and the like. If the owner does not have knowledge of these requirements, a professional engineer needs to be consulted. Failure to do so can result in more movement of the building, possible failure of the building and/or will reduce or void the warranty coverage of the building.

COMMENT ON PRE-CAST CONCRETE BLOCKS (Jersey Barriers, K-Rails, Traffic Dividers, Lock Blocks, Silage panels and the like)

Most pre-cast concrete blocks were designed for road construction, bulk storage containment and other uses. Most were never designed for use as a structural foundation. Often little is known about the compressive strength of the concrete and/or the amount and type of rebar embedded in them. Extra precaution should be used by the foundation engineer and owner to ensure that:
 1. The concrete blocks are properly secured to handle both the building and collateral loads.
 2. The concrete blocks will be installed in a way to prevent blow out of the building's anchor bolts through the concrete when the building is under a load.

PROCEDURES FOR CHECKING TIGHTNESS OF MAIN FABRIC CANVAS

The tightness of the main fabric canvas should be checked twice the first year and at least once a year thereafter. Pick a moderately warm day with a good stiff breeze (15 to 30 mph). The range of temperature for checking the canvas should be approximately 60 to 70 degrees F. On a very warm day (in excess of 90 degrees F), you may see the canvas loose but it will tighten upon cooling.

With all doors and other enclosures open, walk through the building to see if the canvas is lifting off the trusses. If the canvas is lifting off the trusses, tighten each winch no more than 3 clicks. Wait about a week and check your canvas again. Follow the same procedure until the canvas no longer lifts off the trusses in the conditions noted above.

PROCEDURES FOR CHECKING CABLING

Cables should be taut at all times. Tighten cables at turnbuckles. If the turnbuckles have no more threads for tightening, then the cable needs to be adjusted. This is done by loosening the turnbuckle as far as it will extend, loosening cable clamps, and then taking up cable slack. Re-tighten cable clamps and tighten turnbuckle back to taut.

MISCELLANEOUS INFORMATION

All existing conditions shall be verified.

Owner, dealer, contractor and/or erector shall verify all dimensions prior to start of construction.

Details designated as "Typical Details" (Typ.) apply generally to the drawings in all areas where conditions are similar.

All drawings are not to scale, unless otherwise noted.

Span-Tech Fabric Buildings do not comply with life safety requirements and are not to be used for public assembly.

Span-Tech Fabric Buildings are classified as a membrane-covered frame structure in the special construction section of IBC 2006 unless otherwise noted.

These plans and canvas dimension tags located on the canvas exterior cover should be given to the owner upon completion of the building. They should be retained for future replacement parts ordering.

Before erection begins verify that all components have been delivered by checking pick list shipped with hardware with the components on the ground.

Annotation is as follows:

Ex. 1/B1.1

WARRANTY

From the date of original purchase by the end user, all main building components, when properly installed, on a Span-Tech approved foundation, are covered by a two (2) year unconditional warranty for defects in material and workmanship. In addition, after the two (2) year warranty period, the following components are covered by an additional fourteen (14) year pro-rated warranty: main fabric and main steel components including single tube roof arches, double tube trusses, connectors, purlins and stringers. During this fourteen (14) year period, the end user/original owner shall pay the suggested retail price of the warrantable component at the date of the claim less one hundred sixty-eighth (1/168) of the price for each full month remaining in the warranty period. Rope, webbing, solid end fabric and fabric door components (including door fabric, cable, cable clamps, door tubing, winches and pulleys) are covered by a six (6) month only warranty. Warranty is limited to the repair or replacement of warrantable components and does not include component removal or reinstallation or the cost to transport and retrieve warrantable components for repair. Note: It is the responsibility of the end user/original owner to establish that the foundation design and construction is in compliance with the foundation design supplied by and/or approved by Span-Tech.

For buildings erected on non-approved foundations, walls, pads, etc., the warranty is as in paragraph one except that the unconditional warranty period is two (2) years and the pro-rated warranty period is eight (8) years, a total of 10 years. Span-Tech repair parts including fabric components are covered by a one (1) year warranty if those repairs are installed on a Span-Tech building. Span-Tech repair parts including fabric components are covered by a ninety (90) day warranty if those repairs are installed on a non-Span-Tech building.

The warranty does not cover component damage due to the quality of foundation, wall or pad construction; nor damage caused to the building site or surrounding areas by the construction of the building. Dealers and end users are advised to obtain qualified engineering advice on the suitability of the soil at the building site. Dealers and end users are advised that unusual or abnormal soil conditions including but not limited to sandy soils, springs, sinks, underground streams and so forth will affect the foundation requirements. Unless specifically doing so in writing, Hawkeye Steel Products, Inc. Pride of the Farm, Span-Tech and all related entities do not express an opinion about the suitability of building sites, foundations, wall, pads and the like for the construction of a Span-Tech building.

There is no warranty for buildings that have been disassembled and moved from their original locations. The end user/original owner may be asked to supply documentation verifying that the building has not been moved from its original location. There is no warranty for component loss or damage during transport. The warranty does not cover damage caused by natural and environmental conditions (acts of God); puncture or tear damage to the tarpaulin components caused by penetration of mechanical or other foreign objects; rodent damage; costs associated with the loss of time and/or inconvenience or any other consequential damages; injury; loss of profit, life, contents inside the building; malfunction resulting from misuse; unauthorized alteration or negligence; damage or corrosion resulting from salt, chemicals or other corrosive materials piled against the fabric, steel or other components; damage caused by earth movement including but not limited to landslides, mud flows, earth sinking or earth rising; damage caused by lack of maintenance (such as not periodically re-tightening the main fabric, solid ends or doors or re-tightening the cables) or damage caused from any cause beyond the control of Span-Tech.

In accepting this warranty, dealer and end user acknowledge that they are in receipt of "Procedure for Checking the Tightness of Main Fabric Canvas on Span-Tech Buildings" & "Procedures for Checking Cabling in Your Span-Tech Building".

The standard fabric in a Span-Tech Building is not fire retardant. There is no warranty for any damage, loss or other problems caused either by fire or anders or for costs associated with fire regulation zoning compliance.

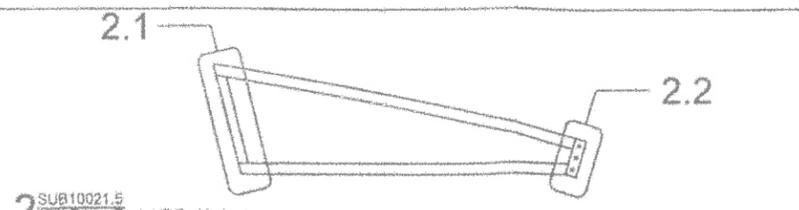
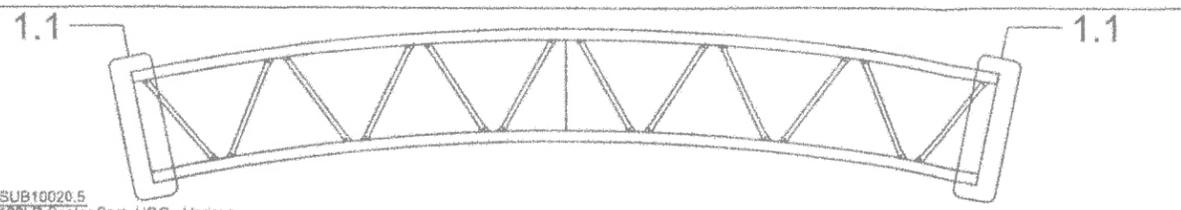


Dealer:	Eco-Builders, LLC.	This drawing is property of Hawkeye Steel Products, Inc. Any reproduction of this drawing without consent of Hawkeye Steel Products, Inc. is strictly prohibited.	
Customer:	Rose Acres Farms	Design By:	J.R.B.W.
	100LP x 672, Manure Storage	Checked By:	
	Pantego, NC	Date:	11/1/10
		Project Number:	91582
		Sheet Number:	B1.0 Title Page and General Information

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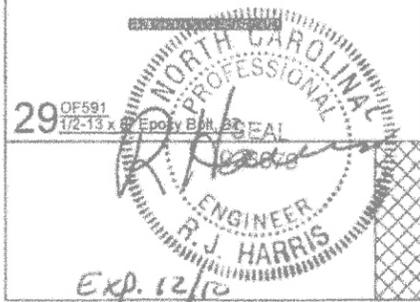
Span-Tech Fabric Buildings

Building Characteristics			
Arch Characteristics		Std.	Metric
Width at Base			
Outside to Outside		100'-0"	30.48 m
Inside to Inside		98'-0"	29.87 m
Height at Center			
Outer Height		37'-10"	11.53 m
Inner Height		34'-10"	10.62 m
Chord Depth - Out to Out			
@ Flat		3'-0"	91.44 cm
@ Slope		1'-0"	30.48 cm
Circ. along top chord		138'-0"	42.06 m
Section Characteristics		Qty.	Std.
Number of Sections/Arch		7	
Section Length Along Top			
	5	23'-0"	7.15 m
	2	10'-4"	3.15 m
Section Height			
23'-6"		4'-2"	126.10 cm
10'-4"		3'-0"	91.44 cm
Weights		Std.	Metric
Trusses (each)			
Purlins (per bay)			
Misc. (per ft. of building)			



1 SUB10020.5 100LP Center Sect. HDG - Various		2 SUB10021.5 100LP Leg Sect. HDG - Various			
3 SUB10080.5 100LP Main Canvas - Various		4 SUB1720 Series 1.900" Purlin - Various		5 OF650 1/2-13 Ny Nut, Zn-GR5	
6 OF551 1/2-13 x 1-3/4" Hx Blt, Zn-GR5		7 OF575 3/4-10 Ny Nut, Zn-GR5		8 OF574 3/4-10 5-1/2" Hx Blt, Zn-GR5	
9 OF499 #14-34 Self Tapping Screw		10 152600-9351 5 Ton Lashing Winch			
11 SUB0901 2" Polyester Webbing, UVP		12 SUB0902 1" x 50 YD Polyester Webbing, UVP		13 DTSTS Duct Tape	
14 AR1610 3/75 Galv. Cable (7x19)		15 OF546 1/2" x 10" EE Turnbuckle, HDG		16 OF547 3/8" Cable Clamp, Zn	
17 OF548 1/2-13 RH Hx Nut, Zn		18 OF549 1/2-13 LH Hx Nut, Zn		19 SUB0940 Cable Tie Plate	
20 SUB0750 2" x 3" Rect. Tube, 12 Ga., 300"		21 SUB0906 2" x 3" Swage Joint		22 SUB0322 1.000" Galv. Tube, 14 Ga., 300"	
23 SUB0908 1.000" Joint - 13/16" O.D.		24 FST-VC-985-16 1" Vinyl Caplug		25 SUB0921.1 12" Left Heavy Base Angle, 3.5" Vert.	
26 SUB0921.2 12" Right Heavy Base Angle, 3.5" Vert.		27 SUB0921 12" Standard Base Angle, 3.5" Vert.		28 SUB0910 8" x 12" End Plate	
29 OF591 1/2-13 x 6" Epoxy Bolt, 35 EAL		30 OF586 1/2" Flat Washer			

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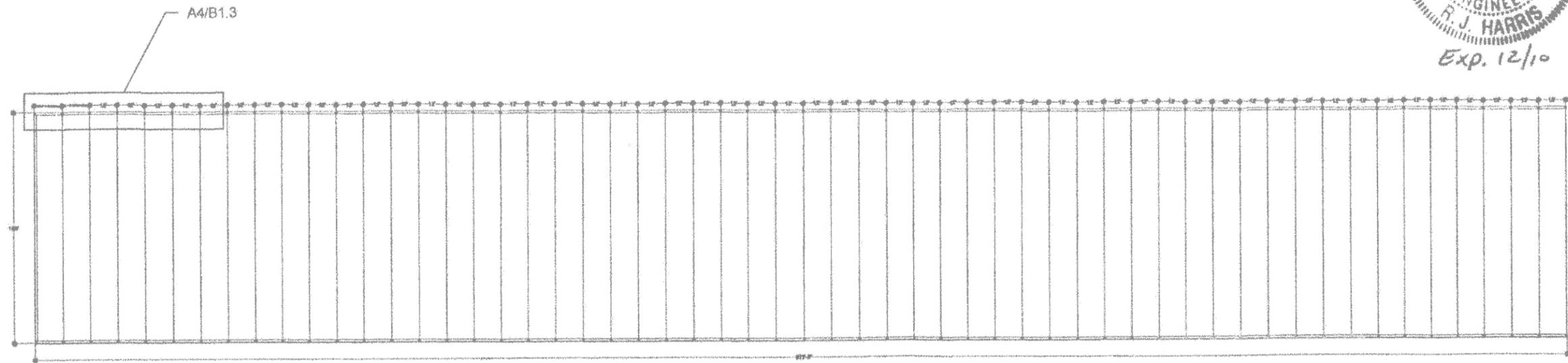
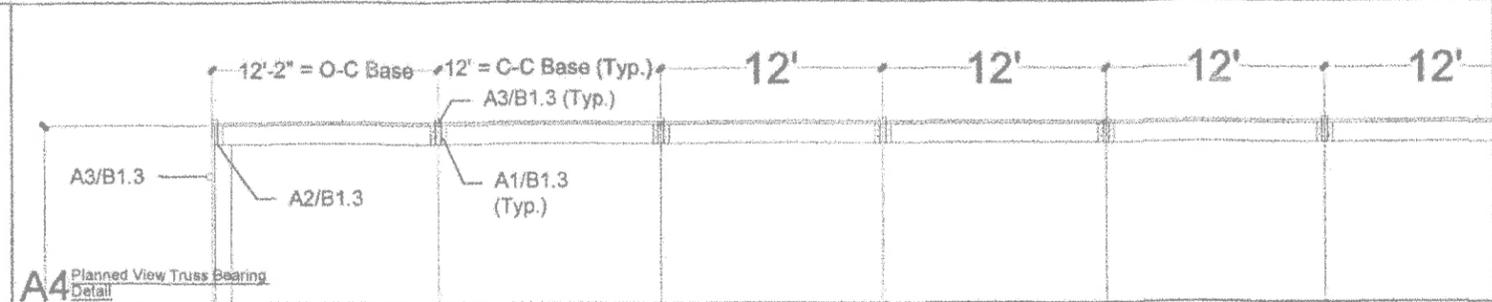
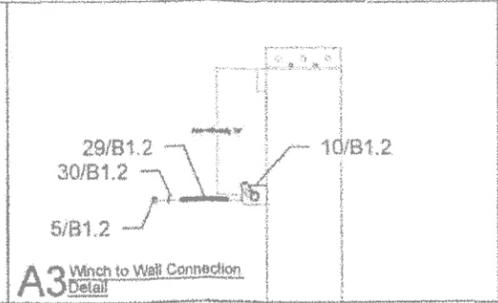
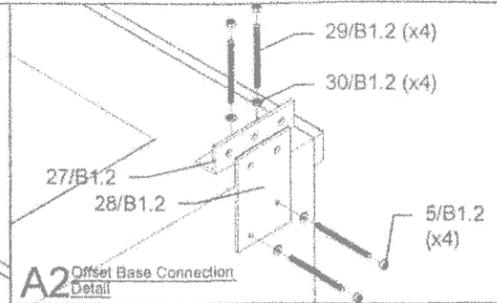
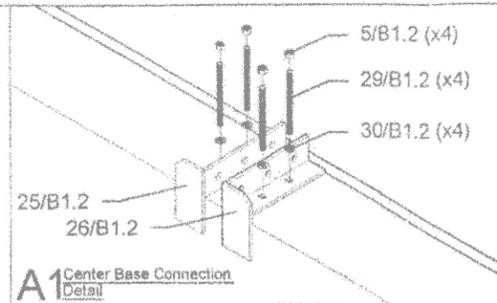


Dealer:	Eco-Builders, LLC.		
Customer:	Rose Acres Farms 100LP x 672, Manure Storage Pantego, NC		
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		J.R.B.W.	
		Project Number:	Date:
		91582	11/1/10
		Sheet Number:	
		B1.1 Truss Components	

TRUSS BEARING NOTES

- A. Follow all instructions set by the foundation engineer.
- B. Foundation to be done by others.
- C. Foundation diagonal measurement $\pm 1"$ tolerance. Use the Pythagorean theorem to verify foundation correct diagonal measurement.
 $Z = \sqrt{X^2 + Y^2}$
 Where:
 X = Actual Building Width
 Y = Building Length + 4"
 Z = Diagonal
 Tolerances greater than 1" will cause erection issues and potentially cause damage to trusses.
- D. O-C Base = Outside Base Tube to Center of Base Tube

- E. C-C Base = Center of Base Tube to Center of Base Tube (Typical)
- F. All hardware supplied is for a concrete foundation. For other foundations types, hardware to be provided by others.
- G. All concrete anchors are to be epoxied using Propoxy 300 or equivalent (provided by others). For cold weather use Propoxy 400 or equivalent (provided by others).
- H. 5/4 decking board (rub board) to be attached to perimeter of building where canvas is being installed (provided by others).
- I. For connection A3/B1.3, winches should be installed directly below each truss at height shown. Connection for the chuckwagon should be placed 34" (if possible) from side of the building at height shown.



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Span-Tech Fabric Buildings

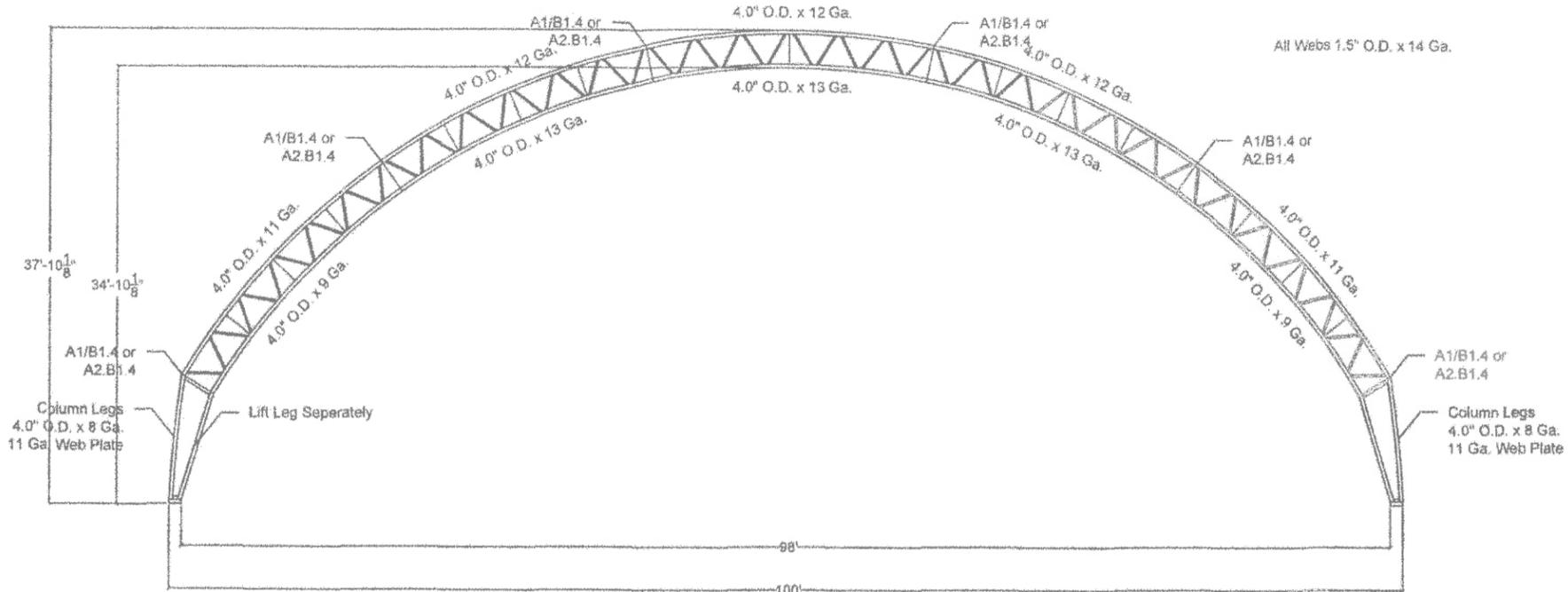
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 100LP x 672, Manure Storage
 Pantego, NC

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 Drawn By: **J.R.B.W.** Date: **11/1/10**
 Checked By: _____
 Project Number: **91582** Sheet Number: **B1.2 Truss Bearing and Assemblies**

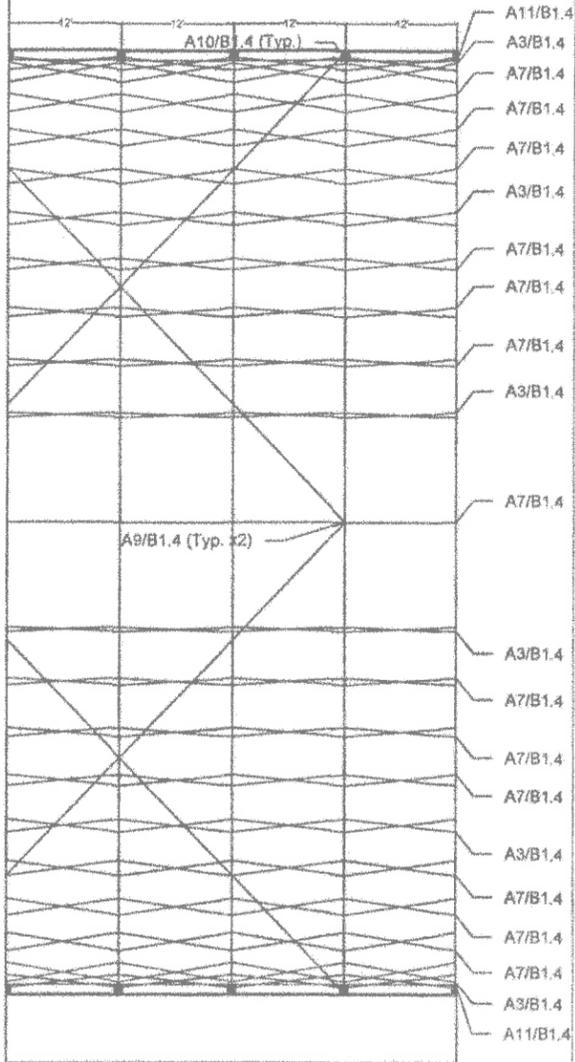


ASSEMBLY AND ERECTION NOTES

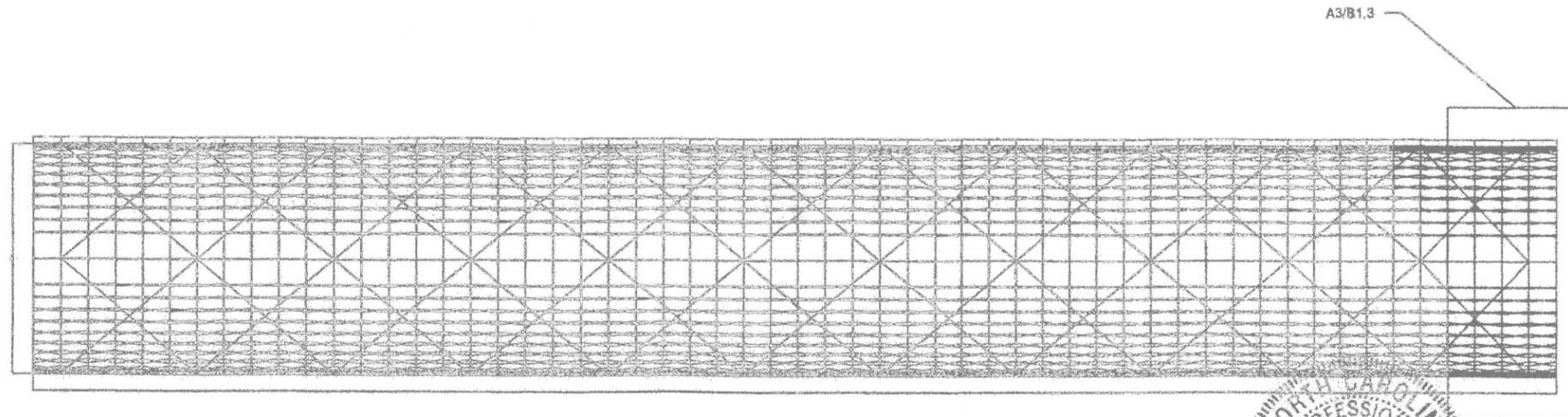
- A. Review all connections on sheet B1.4 before erection.
- B. Due to the Hot Dip Galvanization process rough spots can appear on the top chord of the truss. Run a hand along the top part of the truss to locate these spots. Grind any that are found. Grind till smooth or until the area sparks.
- C. When erecting trusses, each connector plate connection should be supported by a min. 4"x4"x6' board, secured to the top chord of the joining trusses. Use 1" ratchet straps (provided by others) to secure board.
- D. Lift arch section separately from leg section.
- D. Complete all connections before moving to next truss.
- E. At connections A1/B1.4 and A2/B1.4, use 17/B1.1 DTSTS - Duct Tape at the top of each connection. Minimum of 3 plys.
- F. All connections should be below the top of the rafter to ensure smooth installation of canvas.



A1 Building Elevation View Detail



A3 Building Planned Detail View Detail



A2 Building Planned View Detail

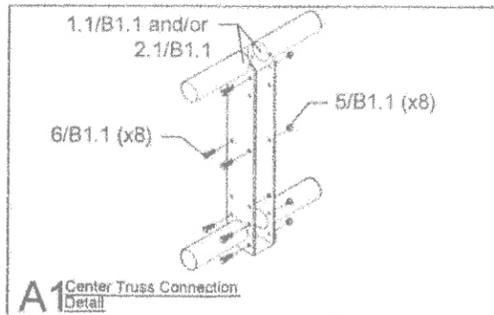


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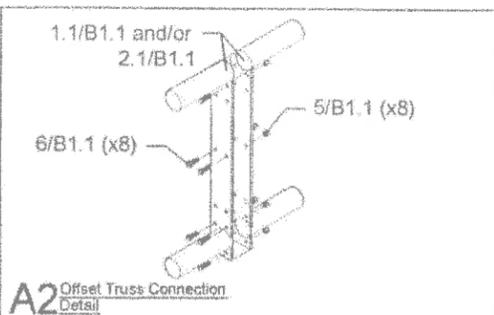
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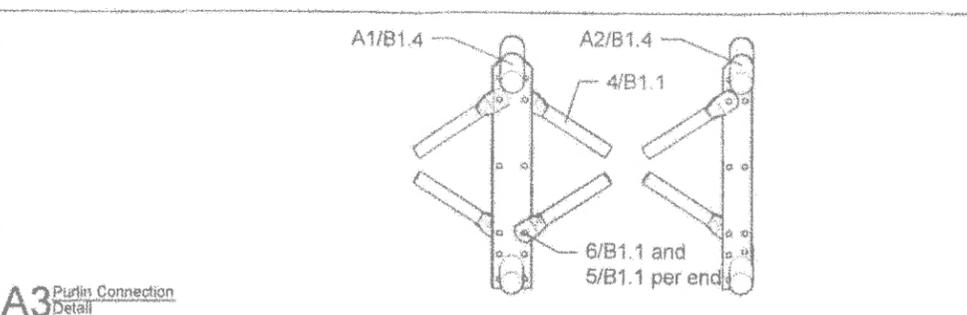
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 Drawn By: **J.R.B.W.**
 Project Number: **91582**
 Checked By: _____
 Date: **11/1/10**
 Sheet Number: **B1.3 Building Elevation and Planned View**



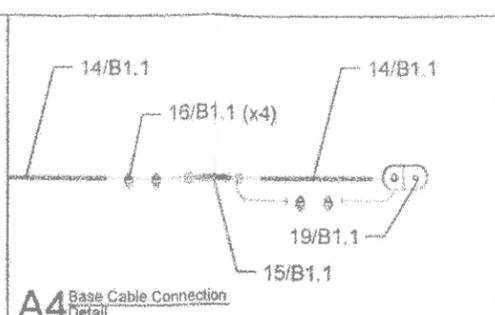
A1 Center Truss Connection Detail



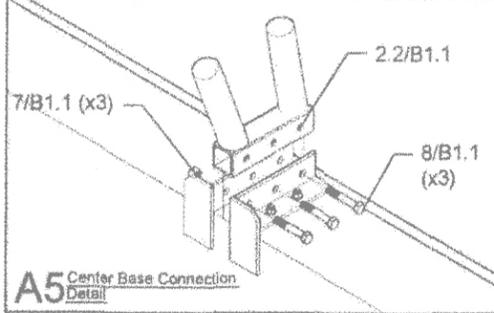
A2 Offset Truss Connection Detail



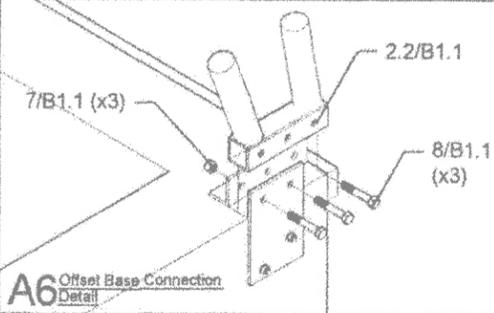
A3 Purlin Connection Detail



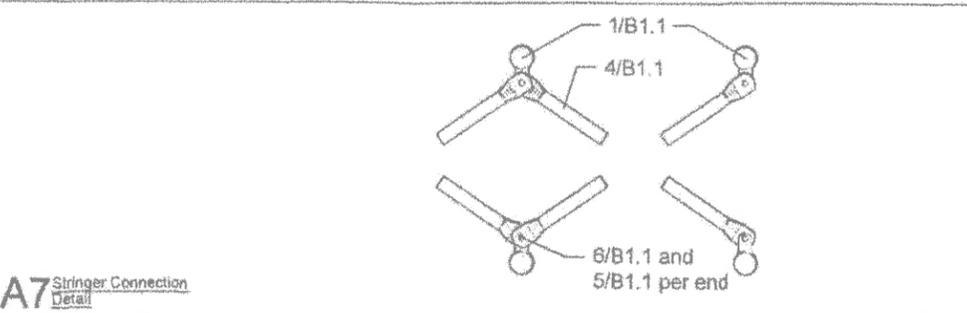
A4 Base Cable Connection Detail



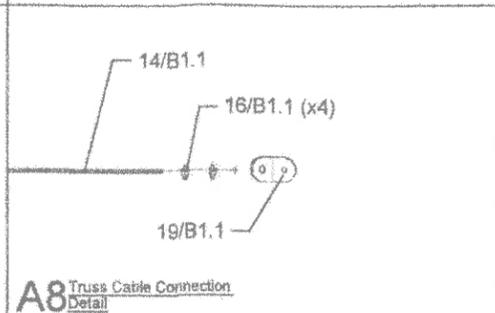
A5 Center Base Connection Detail



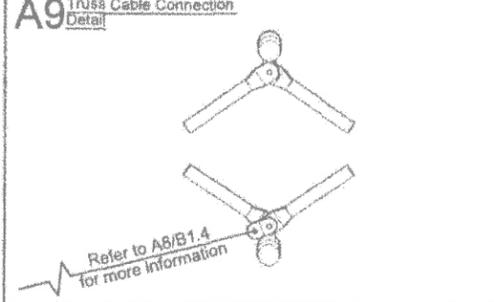
A6 Offset Base Connection Detail



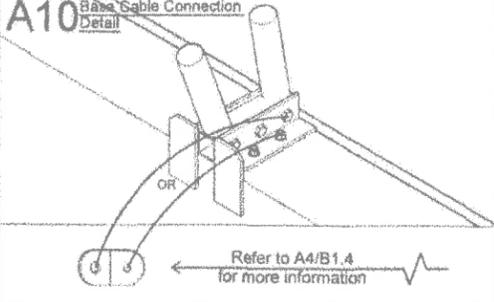
A7 Stringer Connection Detail



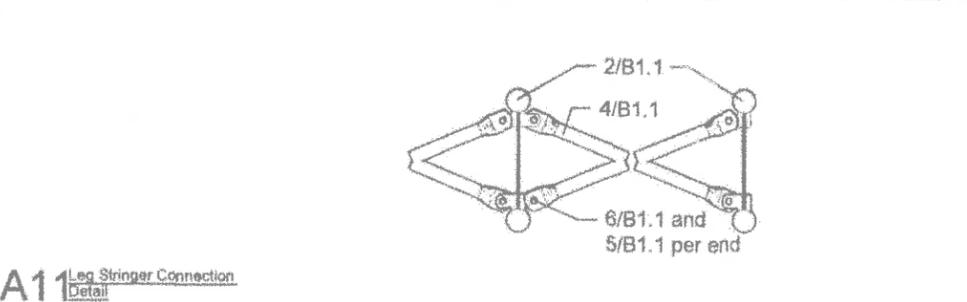
A8 Truss Cable Connection Detail



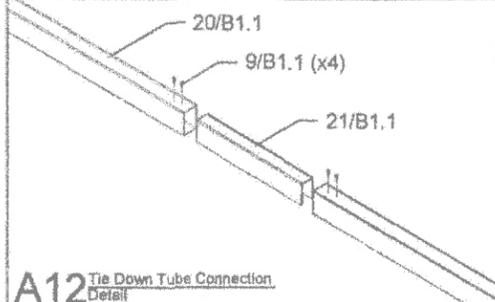
A9 Truss Cable Connection Detail



A10 Base Cable Connection Detail

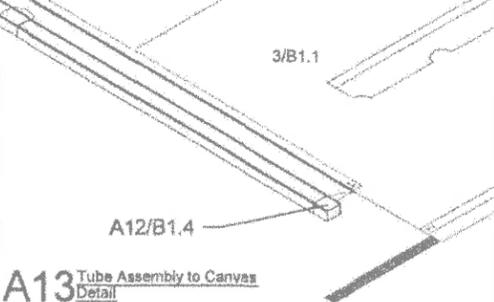


A11 Leg Stringer Connection Detail

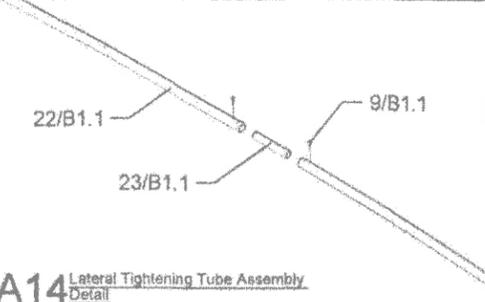


A12 Tie Down Tube Connection Detail

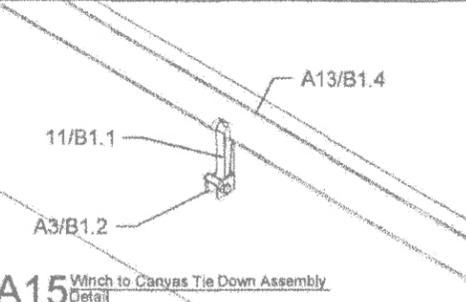
Canvas Installation Notes:
 A. 13/D1.2 SUB5580 - Canvas tie down pocket is notched every 10'.
 B. When pulling canvas, rope should be at every 20' of the length of the tube assembly in the canvas. Throw over building and use to pull canvas over building.
 C. Canvas should be rolled out the length of the building. Before rolling out the canvas entirely, ensure that the canvas will be facing down when pulling over the building. This is done by locating the canvas logo.
 D. Do not install canvas during a day in which gusts are above 10 Mph.
 E. Installing the canvas into the wind will help pulling the canvas.
 F. Canvas is vulnerable to wind until all connections have been tightened.
 G. Do not install canvas if ice has formed on the top of the trusses.
 H. Canvas should be installed by hand if at all possible.
 I. At connections A15/B1.6 and A16/B1.6 standard tighten should be done to 40-60 ft./lbs.



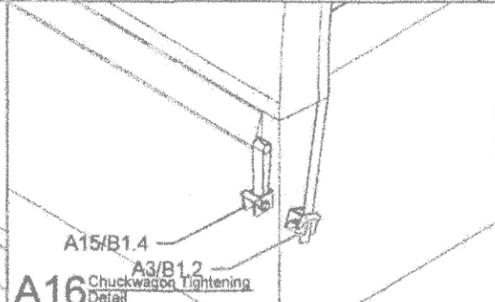
A13 Tube Assembly to Canvas Detail



A14 Lateral Tightening Tube Assembly Detail



A15 Winch to Canvas Tie Down Assembly Detail



A16 Chuckwagon Tightening Detail

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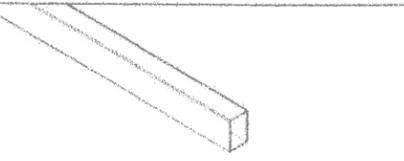
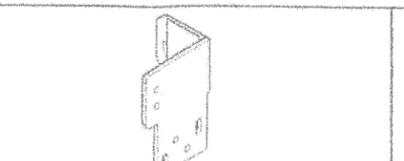
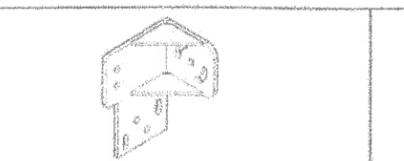
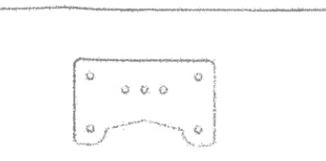
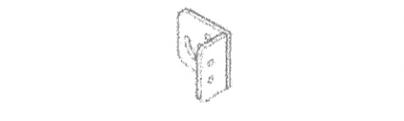
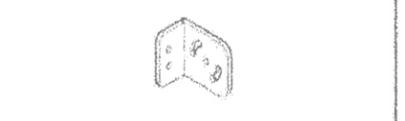
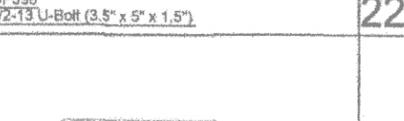
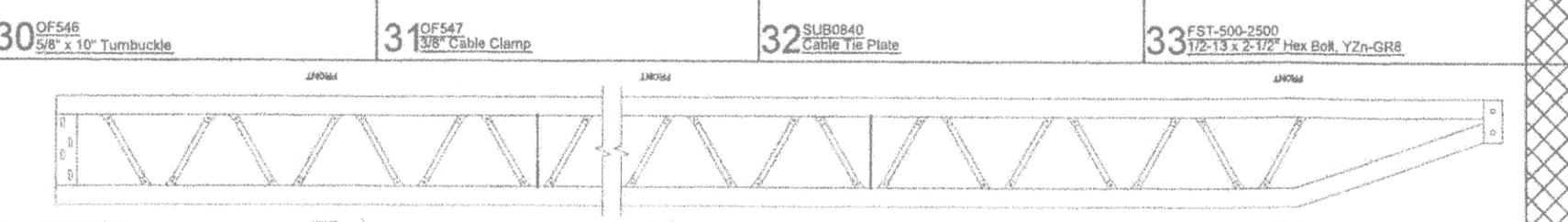
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1.	
2.	
3.	

Dealer:
Eco-Builders, LLC.
 Customer:
 Rose Acres Farms
 100LP x 672, Manure Storage
 Pantego, NC

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 Drawn By: **J.R.B.W.**
 Checked By: _____
 Date: **11/1/10**
 Project Number: **91582**
 Sheet Number: **B1.4 Truss and Canvas Assemblies**

				
1 SUB10080 100LP Canvas	2 SUB0750 2' x 3' Galv. Rect. Tube 12 Ga., 288"	3 SUB0664.1 Left Heavy Upright Mount Bracket	4 SUB0664.2 Right Heavy Upright Mount Bracket	5 SUB0663 3.5' Header Mount Plate
				
6 SUB0665.1 Left Upright Support Bracket	7 SUB0665.2 Right Upright Support Bracket	8 SUB0645.1 Left X-Member Connector	9 SUB0645.2 Right X-Member Connector	10 152600-9361 5 Ton Lashing Winch
				
12 SUB0802 1' x 50' YD Polyester Webbing, UVP	13 SUB0630 Girt Angle Support	14 SUB0808 2' x 3' Rect. Tube Connector	15 OF499 #14-34 Self Tapping Screw	16 OF576 3/4-10 x 5-1/2" Hex Bolt, YZn-GR8
				
18 FST-500-4000 1/2-13x4" Hex Bolt, YZn-GR8	19 FST-500-3000 1/2-13x3" Hex Bolt, YZn-GR8	20 OF551 1/2-13 x 1-3/4" Hex Bolt, YZn-GR8	21 OF598 1/2-13 U-Bolt (3.5" x 5" x 1.5")	22 OF550 1/2-13 Nylock Nut, YZn-GR8
				
24 SUB0808 1" Galv. Tube Connector	25 SUB0920 8" Standard Base Angle, 3.5" Vert.	26 SUB0910 8" x 12" End Plate	27 OF591 1/2-13x6" Epoxy Anchor, B7	28 OF586 1/2" Flat Washer
				
30 OF546 5/8" x 10" Tumbuckle	31 OF547 3/8" Cable Clamp	32 SUB0840 Cable Tie Plate	33 FST-500-2500 1/2-13 x 2-1/2" Hex Bolt, YZn-GR8	
				
34 SUB0635-0695 3.5' x 20.25' Upright - Various Note: Refer to End Wall Elevation Drawings for approximate upright height!				

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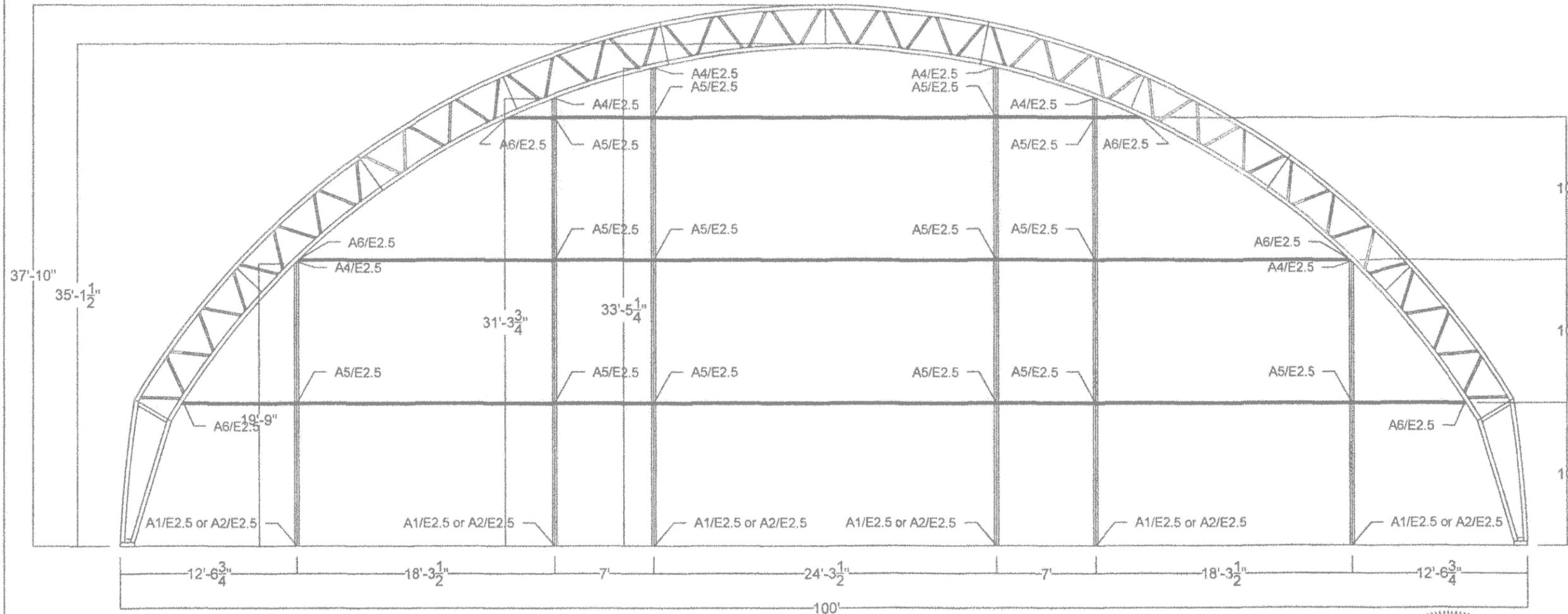
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Drawn By: **J.R.B.W.**
 Checked By: _____
 Date: **11/1/10**

Project Number: **91582**
 Sheet Number: **E2.1 End Wall Components**



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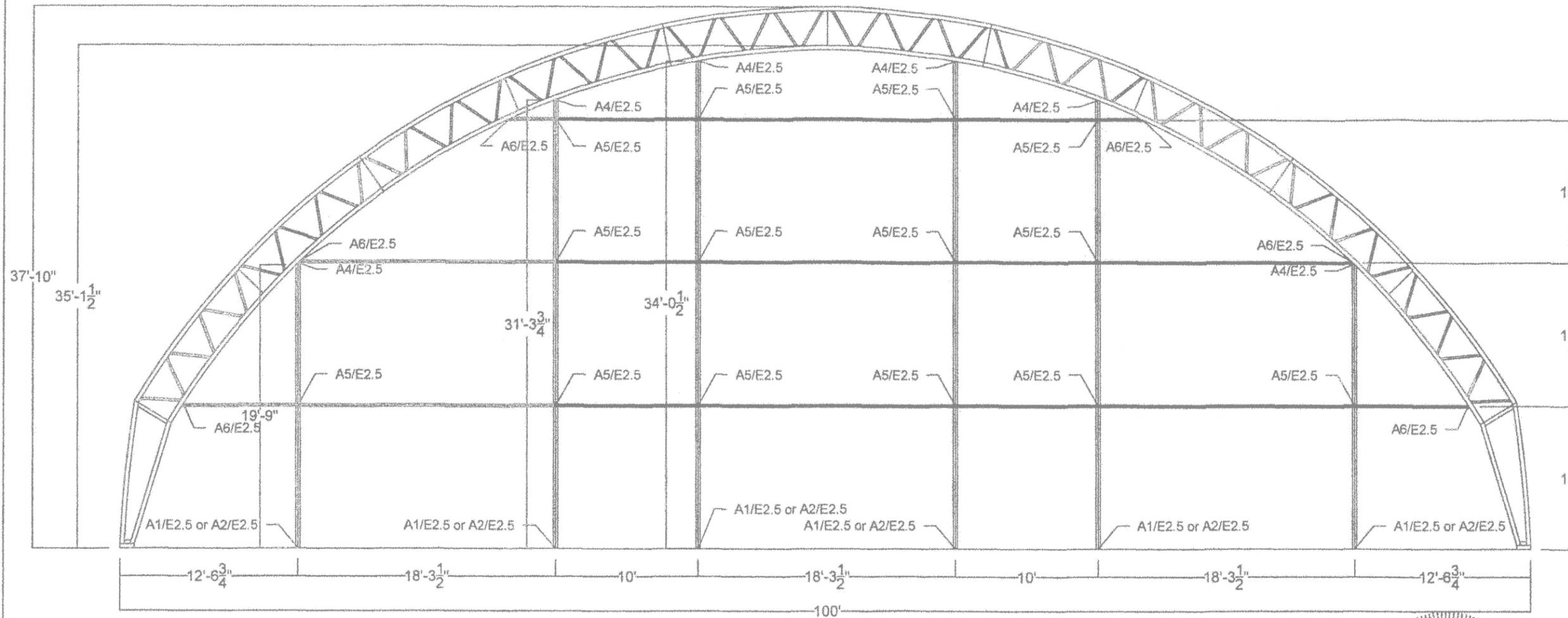
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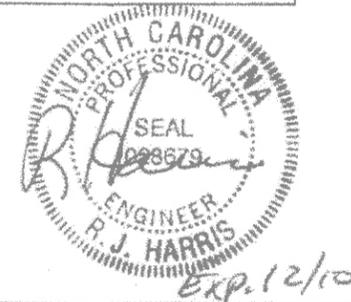
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Drawn By: J.R.B.W.	Checked By:	Date: 11/1/10
Project Number: 91582	Sheet Number: E2.2 End Wall Elevation 1	



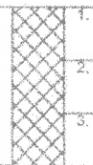
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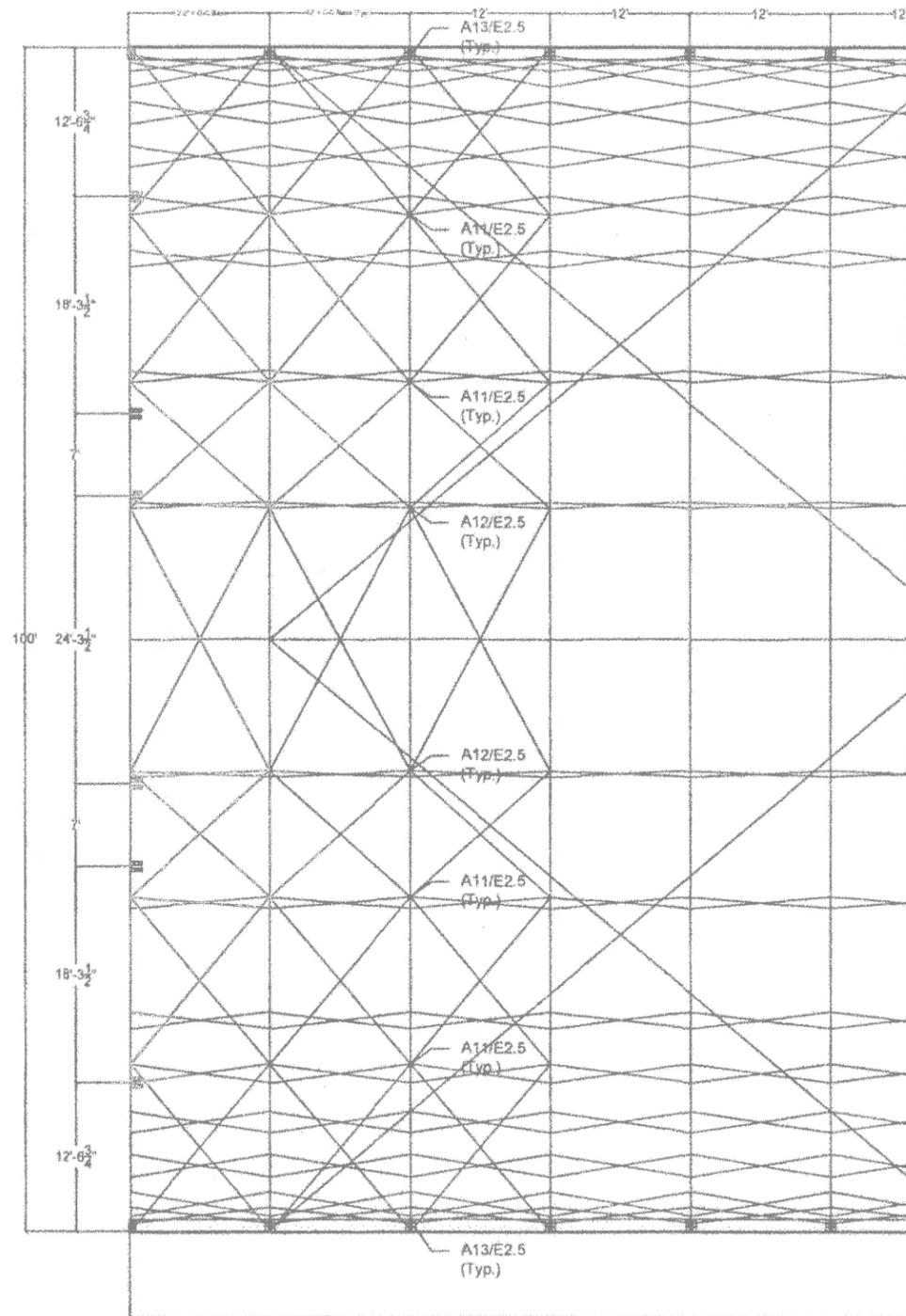


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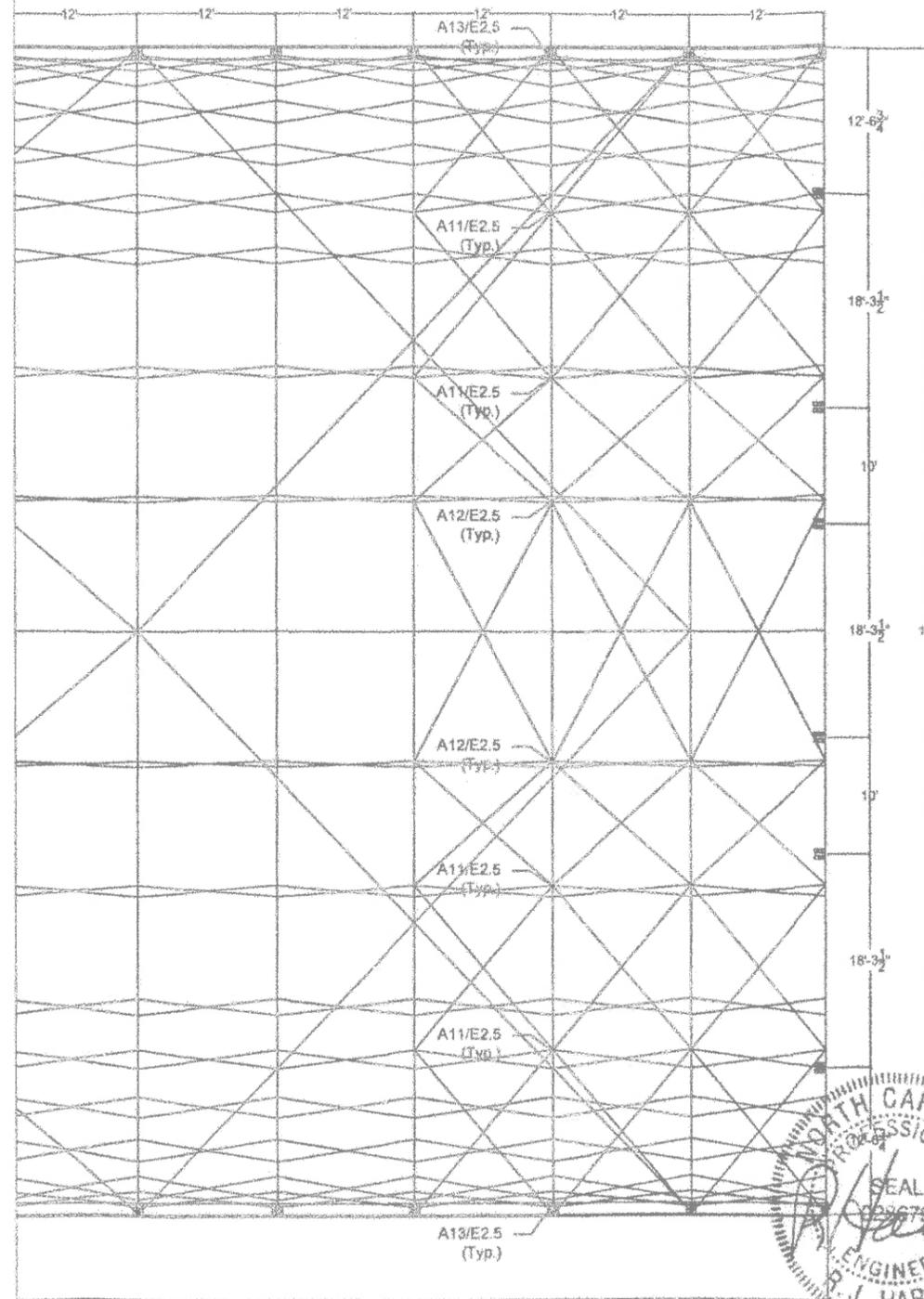
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 Drawn By: **J.R.B.W.**
 Project Number: **91582**
 Checked By: _____
 Date: **11/1/10**
 Sheet Number: **E2.3 End Wall Elevation 2**



A1 End Wall Cabling 1
Detail

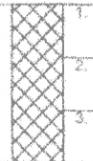


A2 End Wall Cabling 2
Detail



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Drawn By: J.R.B.W.	Checked By:	Date: 11/1/10
Project Number: 91582	Sheet Number: E2.3 End Wall Cabling	

**RST ENGINEERING PLLC
5416 ORCHARD ORIOLE TRAIL
WAKE FOREST NC 27587-6770**

July 15, 2011

Mr. Michael Scott, Supervisor
Composting and Land Application Branch
NC Division of Solid Waste
1646 Mail Service Center
Raleigh, NC 27699-1646

Subject: As Built Drawings
Permit SWC-48-01
Rose Acre Farms, Hyde County

Dear Mr. Scott:

By letter dated November 2, 2010 I transmitted an application for the renewal and modification of the subject permit by Rose Acre Farms. At that time a revised application and operating plan were submitted along with drawings, sealed by a North Carolina Registered Professional Engineer, to show the details of the construction of the new composting and storage buildings that were being erected on existing concrete foundations at the site. The detailed site drawings, geotechnical reports, and aerial photos that were provided with the original application and were not re-submitted, but were included by reference.

The construction of the new covers for conversion of the existing building foundations to compost service has now been completed. The buildings as finally constructed differ in some of the structural details from the drawings originally submitted with the application. These changes were made to simplify and reduce the cost of the construction. The structural revisions were designed by a North Carolina Registered Professional Engineer, and a complete set of sealed engineering drawings for the revised structure is attached for your files.

The capacity and use of the building modifications did not change with the structural detail changes, and the operation plan submitted with the application has not changed with the structural detail changes. I visited the facility on April 26, 2011 to inspect and photograph the new composting buildings. While structural analysis is outside my area of practice, I observed that the buildings and covers followed the plans provided.

Based on my inspection and review of the previously submitted application documents, I can certify that the modifications to the facilities, as constructed, meet the functions and intent spelled out the permit application, and relying upon the information provided by another registered professional engineer, will function as intended. I am providing my photographs of the site for your records.

Thank you for your assistance in this process. If you have any questions, need any additional information, or would like to have additional copies, please give me a call.

Sincerely,



Ray S. (Stan) Taylor, PE
RST Engineering, PLLC



July 15, 2011

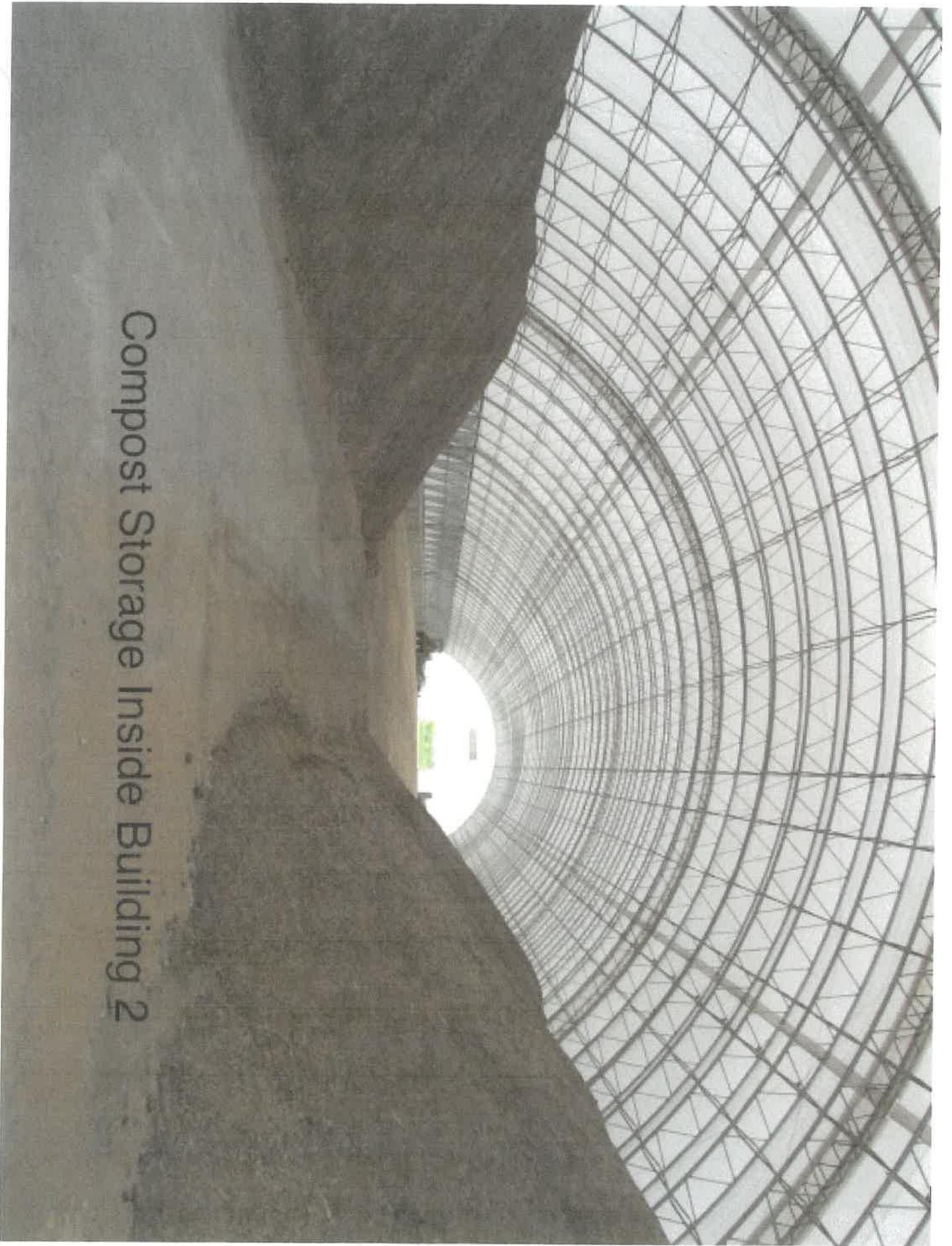
Attachment:
Site Photographs

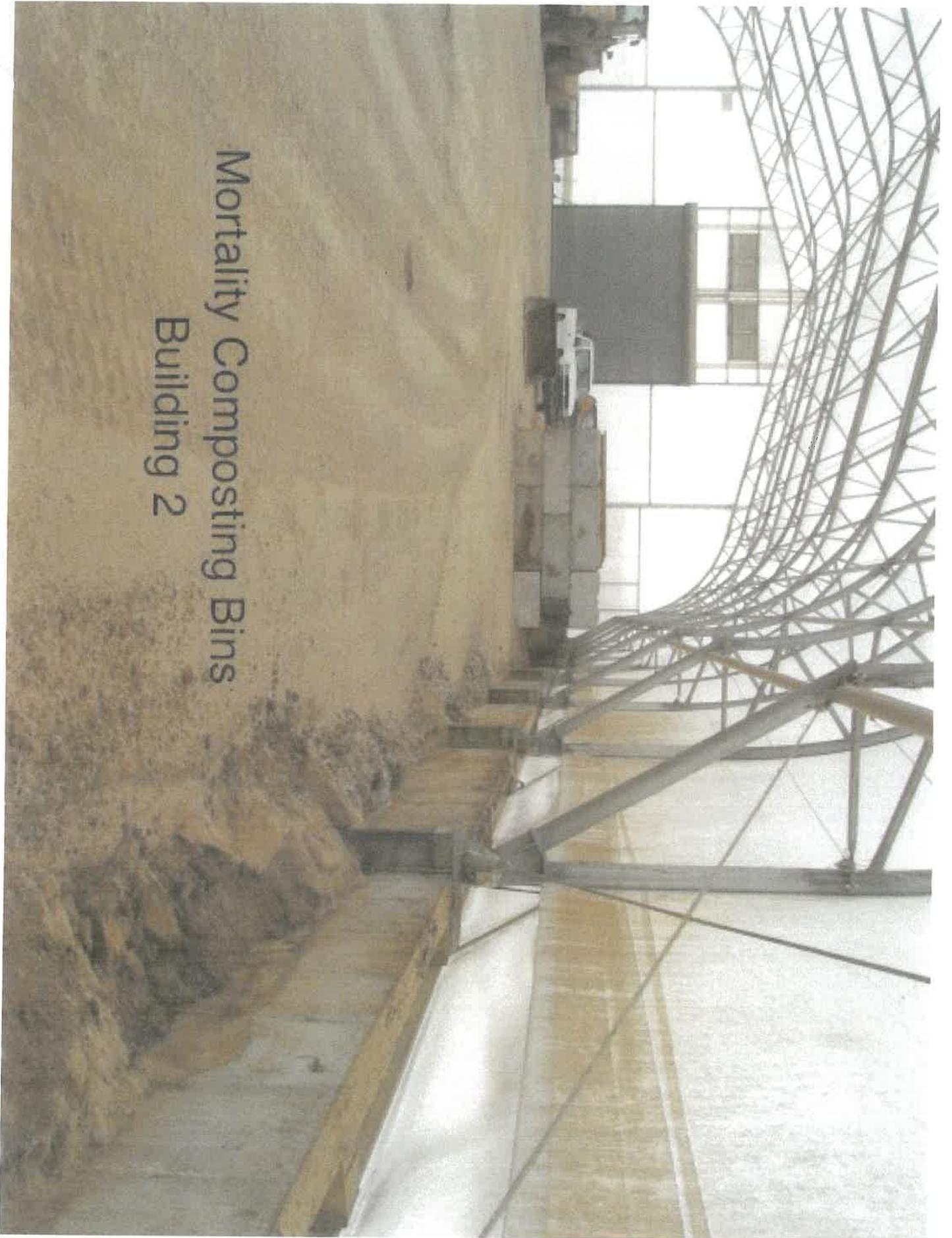
CC: John Brinn, Rose Acre Farms
Chips Everhart, Rose Acre Farms
Joe Miller, Rose Acre Farms

Compost Storage Row
Building 2

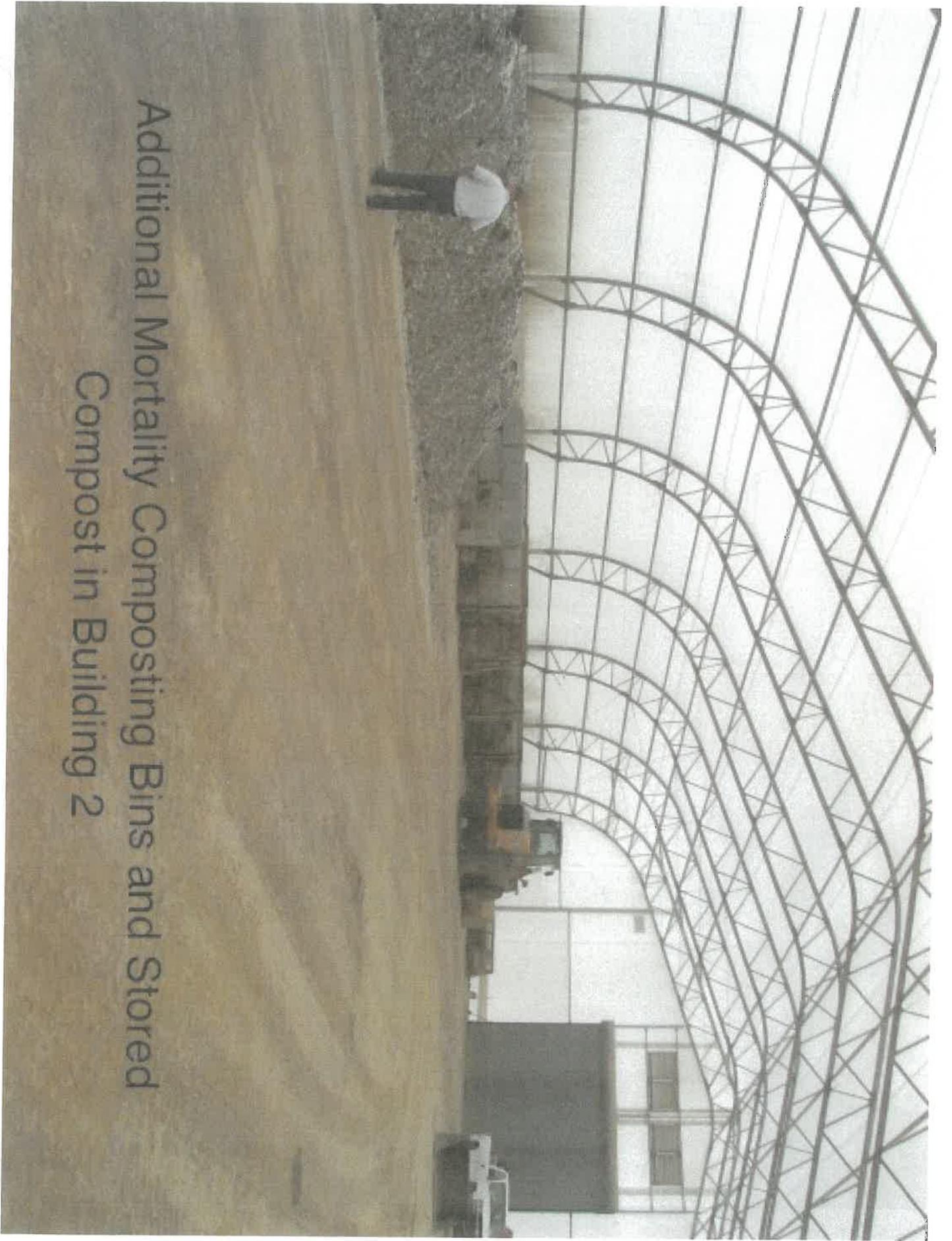


Compost Storage Inside Building 2



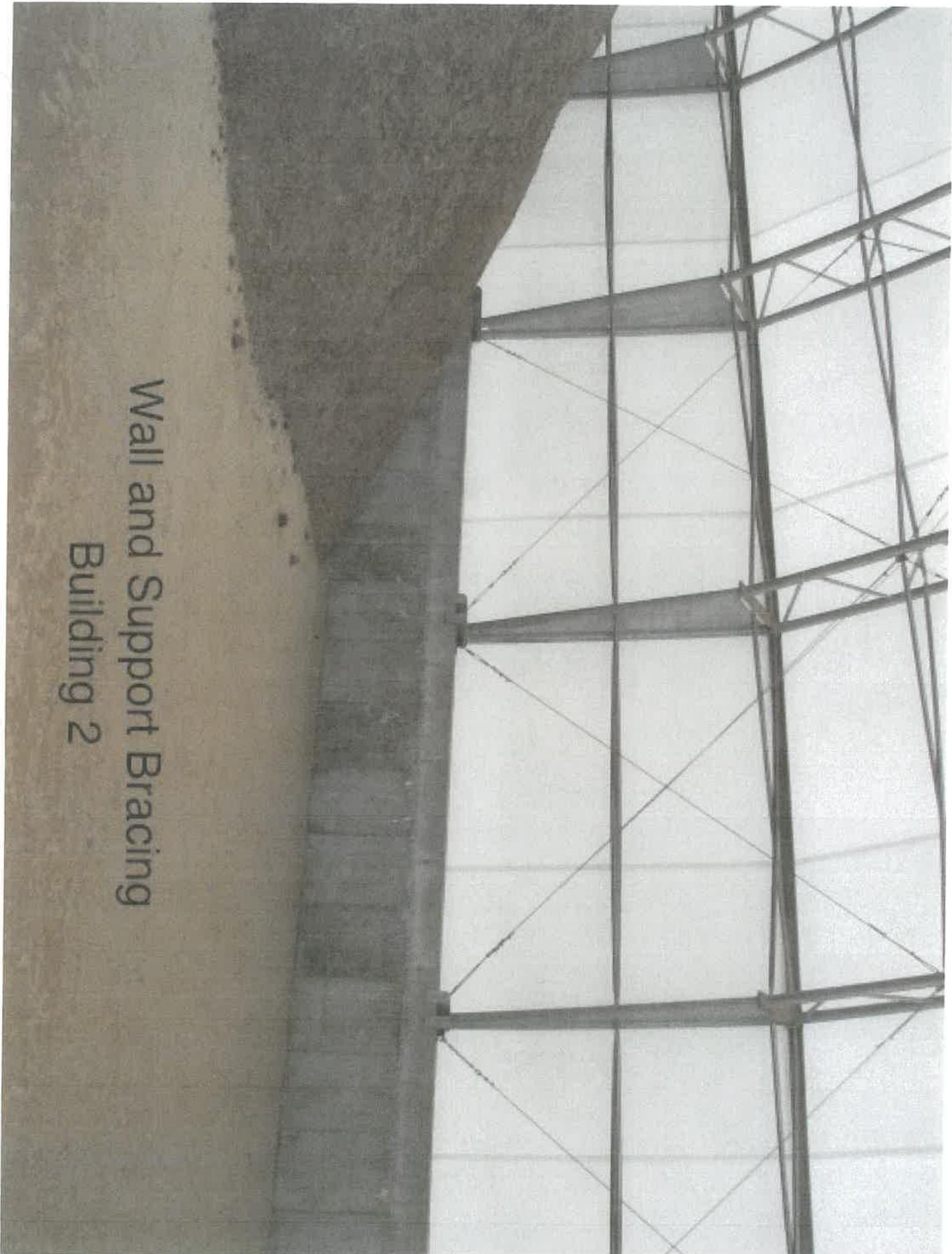


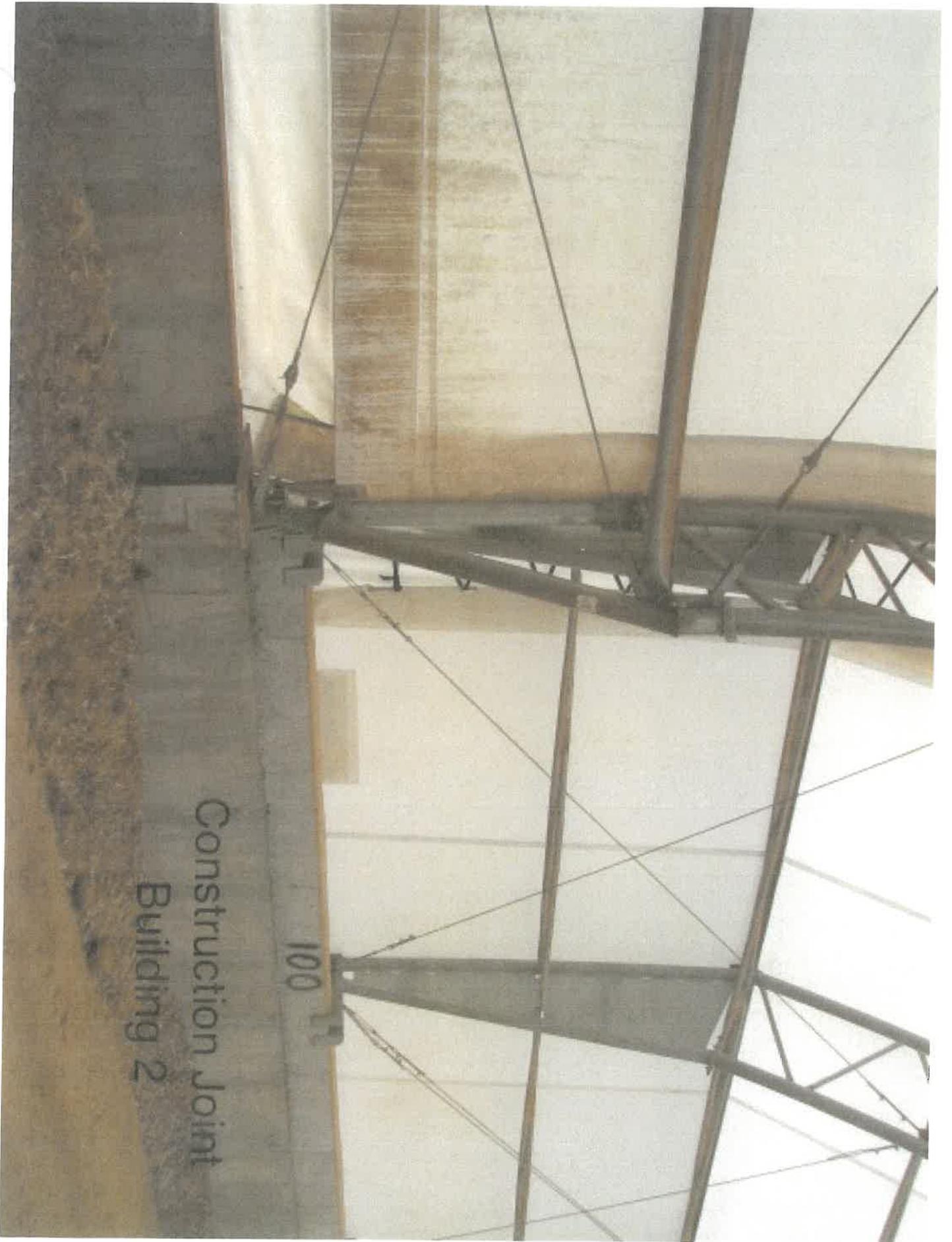
Mortality Composting Bins
Building 2



Additional Mortality Composting Bins and Stored
Compost in Building 2

Wall and Support Bracing
Building 2

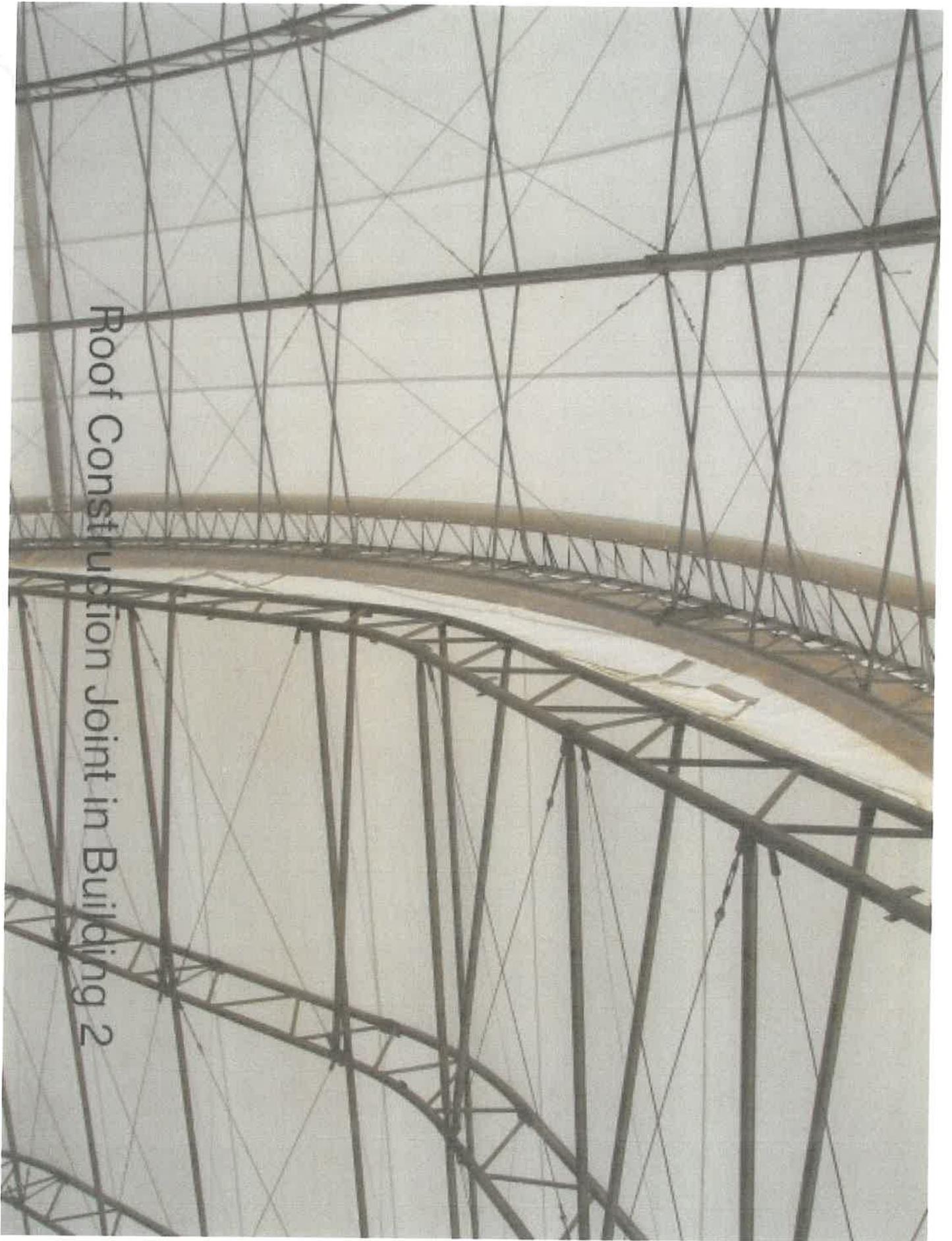




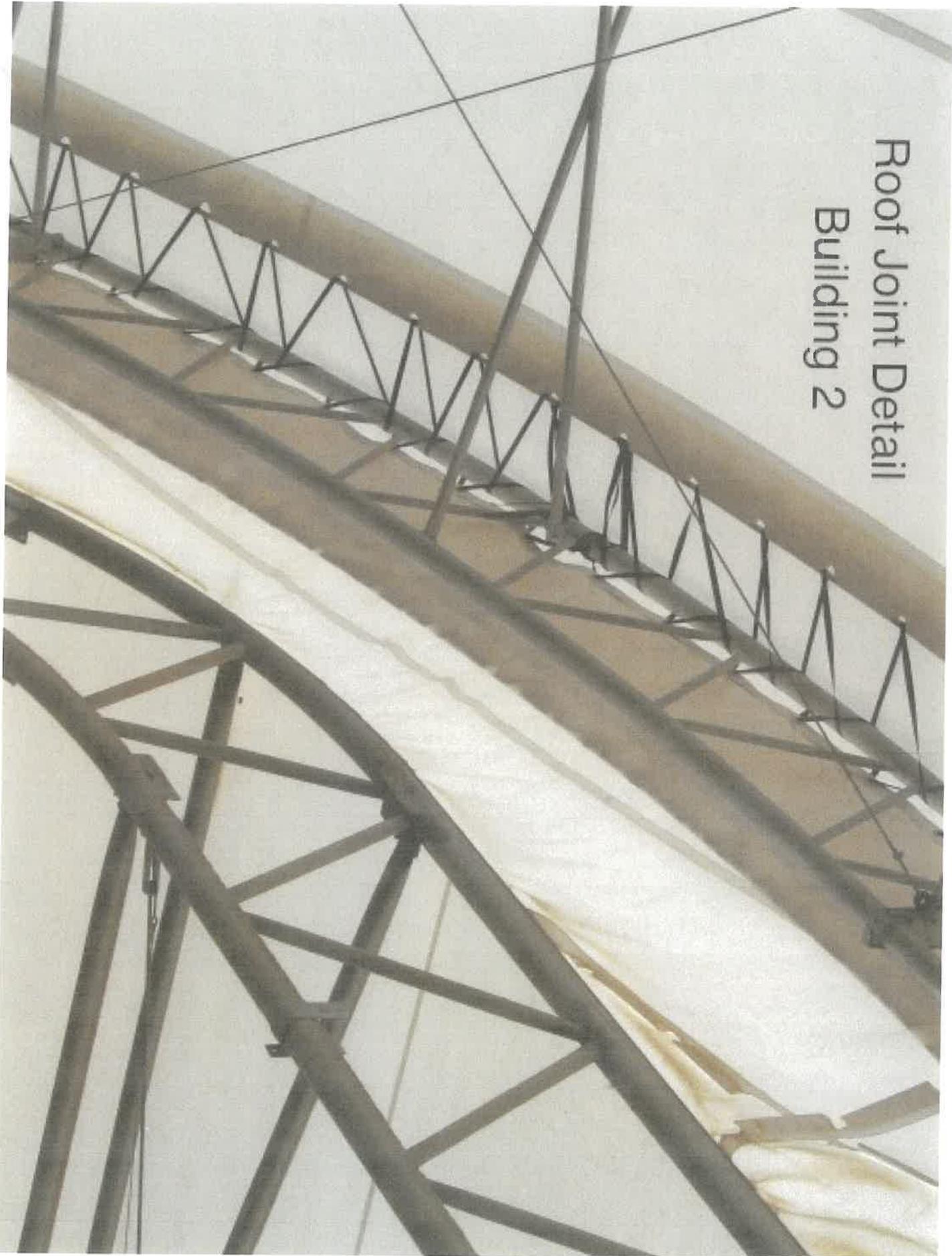
Construction Joint
Building 2

100

Roof Construction Joint in Building 2



Roof Joint Detail
Building 2

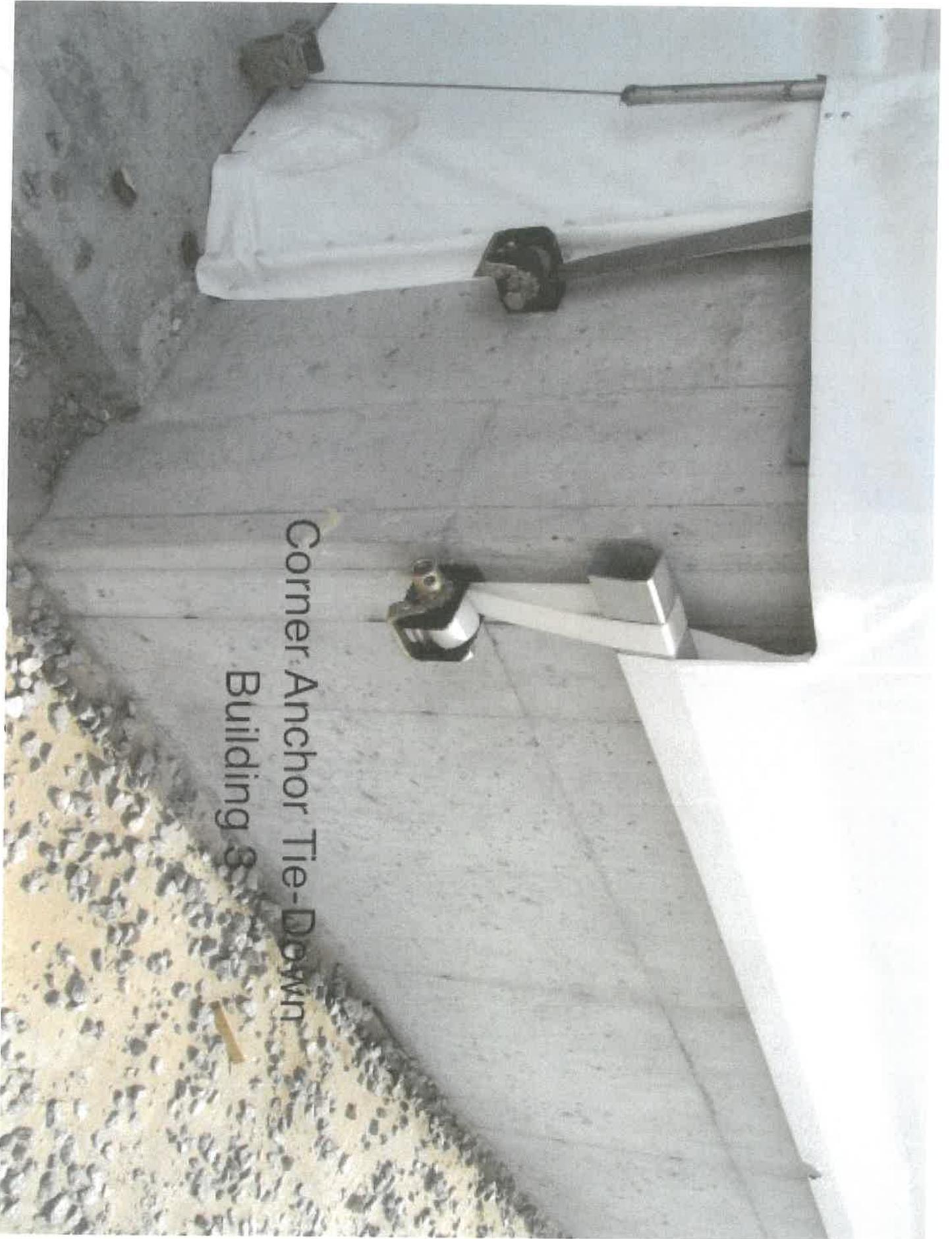




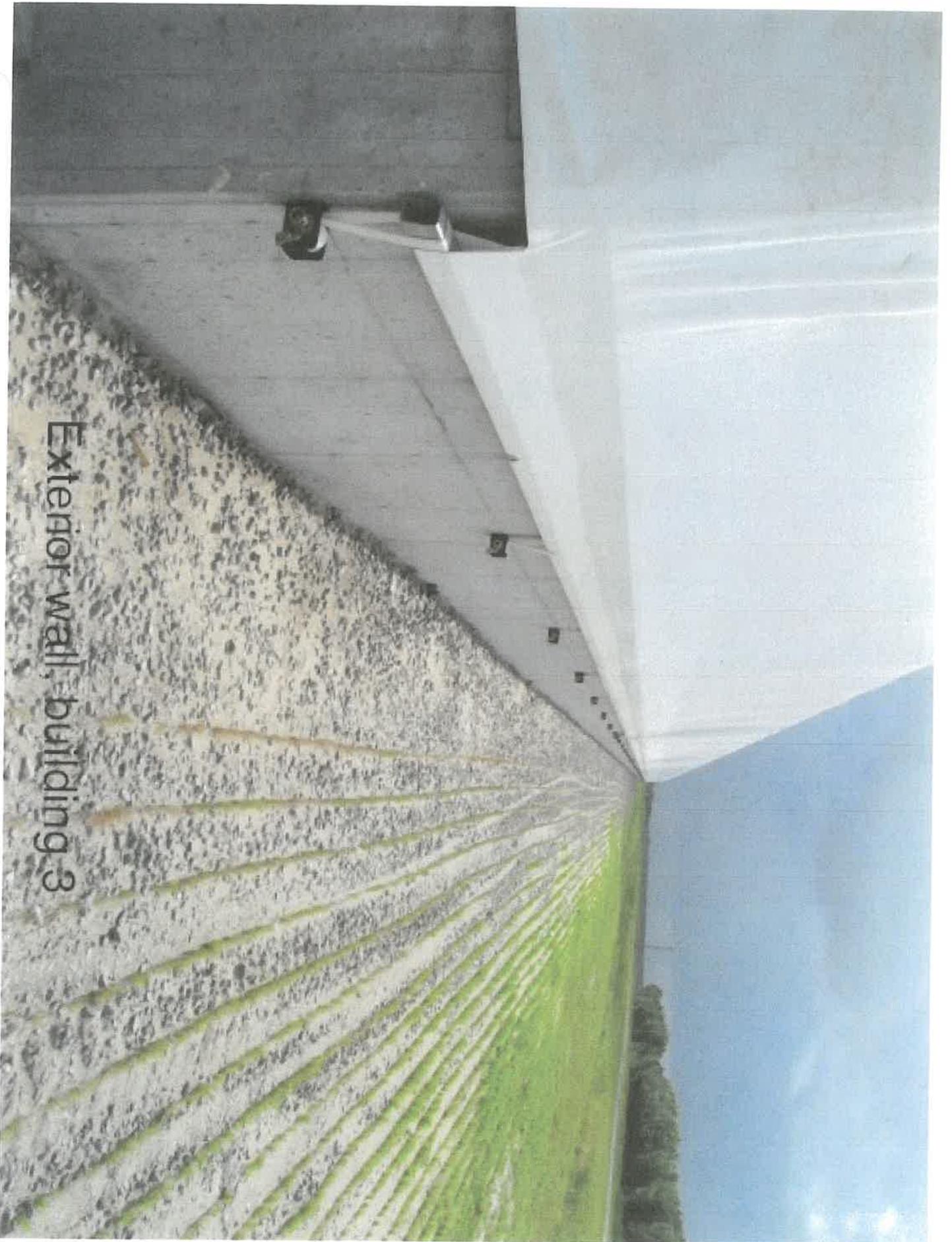
Roof Truss Support for Building 2



Roof Truss Support Detail
Building 2

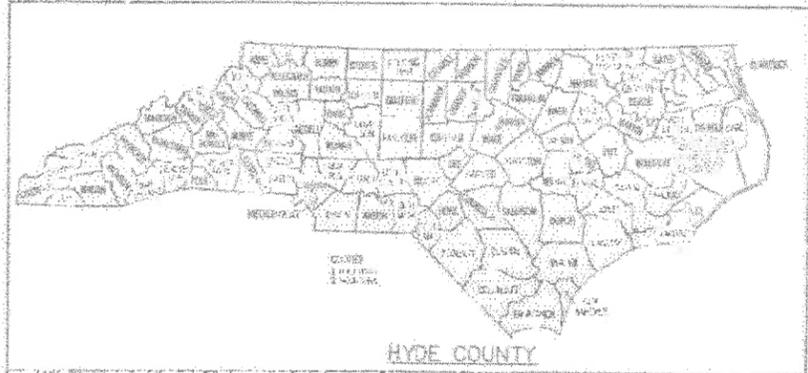


Corner Anchor Tie-Down
Building 3

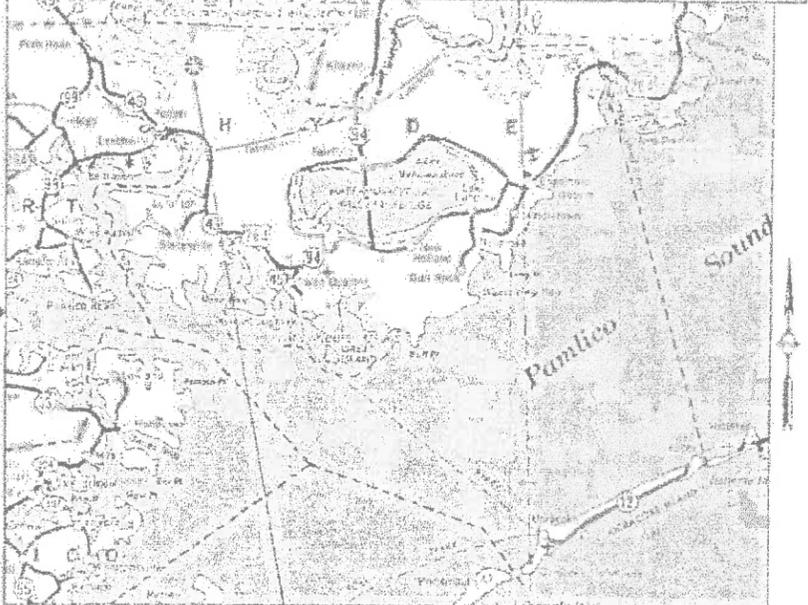


Exterior wall, building 3

COPY



HYDE COUNTY



GENERAL SITE LOCATION
 PANTEGO, NORTH CAROLINA
 UTM 18 349592E 3938634N
 (NAD83/WGS84) USGS PANTEGO QUAD

ROSE ACRE FARMS
 WASTE STORAGE BUILDING
 1560 HYDE PARK CANAL ROAD
 PANTEGO, NORTH CAROLINA 27860
 HYDE COUNTY

PROJECT NUMBER: SPT.10.012
 FOUNDATION DRAWINGS FOR
 100'x480' SPAN-TECH LP BUILDING
 DECEMBER 6, 2010

PREPARED FOR:
 HAWKEYE STEEL PRODUCTS, INC.
 HOUGHTON, IOWA

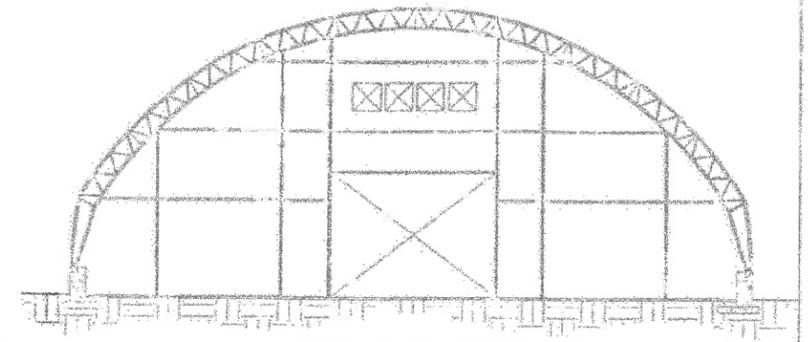
ISSUED FOR CONSTRUCTION

INDEX OF DRAWINGS

- COVER SHEET
- S-1 FULL FOUNDATION PLAN
- S-2 FOUNDATION PLAN FRAME LINE 1 TO 21
- S-3 FOUNDATION PLAN FRAME LINE 21 TO 41
- S-4 WEST ENDWALL ELEVATION FRAME LINE 1
- S-5 EAST ENDWALL ELEVATION FRAME LINE 41
- S-6 CONCRETE WALL ADDITION DETAILS
- S-7 NEW CONCRETE WALL DETAILS
- S-8 ANCHOR BOLT & BASE PLATE LAYOUT
- S-9 SPAN-TECH TO EXISTING COVER-ALL DETAILS
- S-10 SPECIFICATIONS



KEY PLAN



KEY ELEVATION

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 ONE-CALL CENTER
 800-632-4949
(TOLL FREE)



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SERVINSKY ENGINEERING PLLC
 Consulting Structural Engineers
 mark@servinsky.com

280 Douglas Ave
 Holland, MI 49424-6915
 (616) 738-1281
 Fax (616) 738-6281

Span-Tech Fabric Buildings
 HAWKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

COVER SHEET			
ROSE ACRE FARMS		PANTEGO, NC	
SHEET SIZE B	NO SCALE	DWG NO. SPT.10.012	SHEET NO. COVER SHEET

SPT.10.012

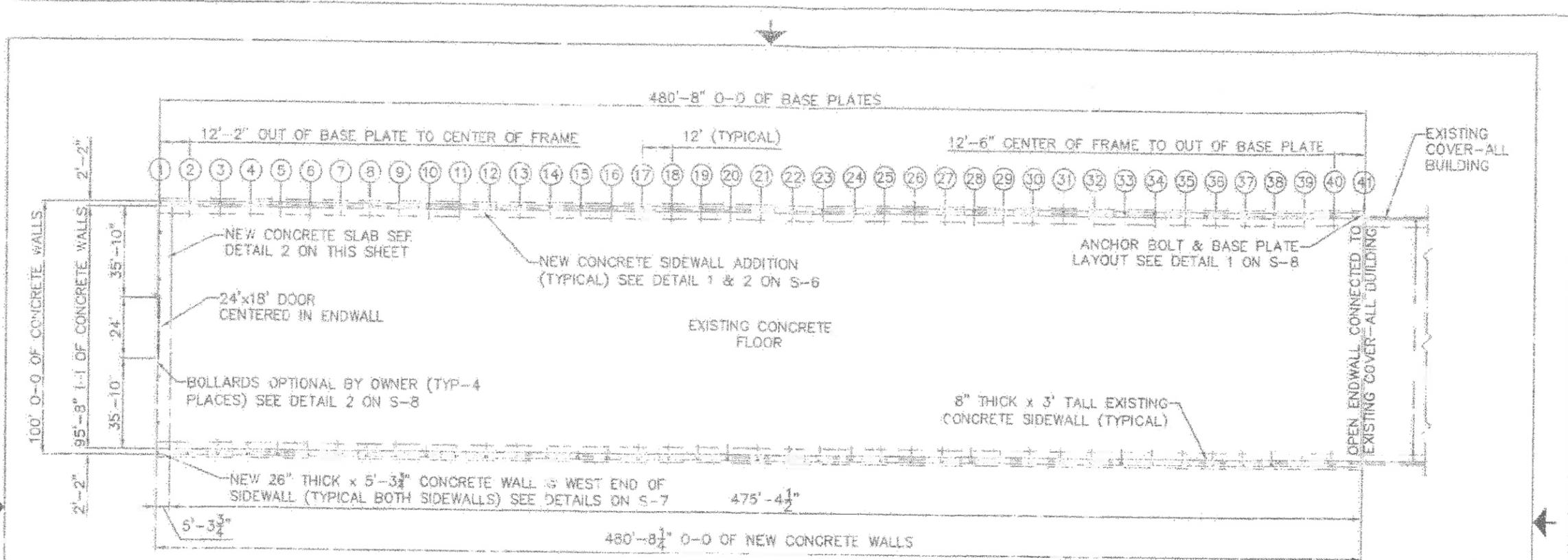
12-06-10

PCB

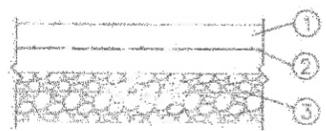
SPT.10.012

12-06-10

CCB

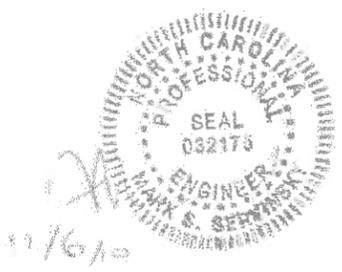


S-1 FULL FOUNDATION PLAN
SCALE 1" = 40'



- ① 7" MIN. CONCRETE SLAB
- ② #4 @ 18" E.W. @ MID-DEPTH (MIN. REQ'D)
- ③ 6" CRUSHED STONE BASE COURSE

S-1 NEW CONCRETE SECTION
SCALE 1/2" = 1'



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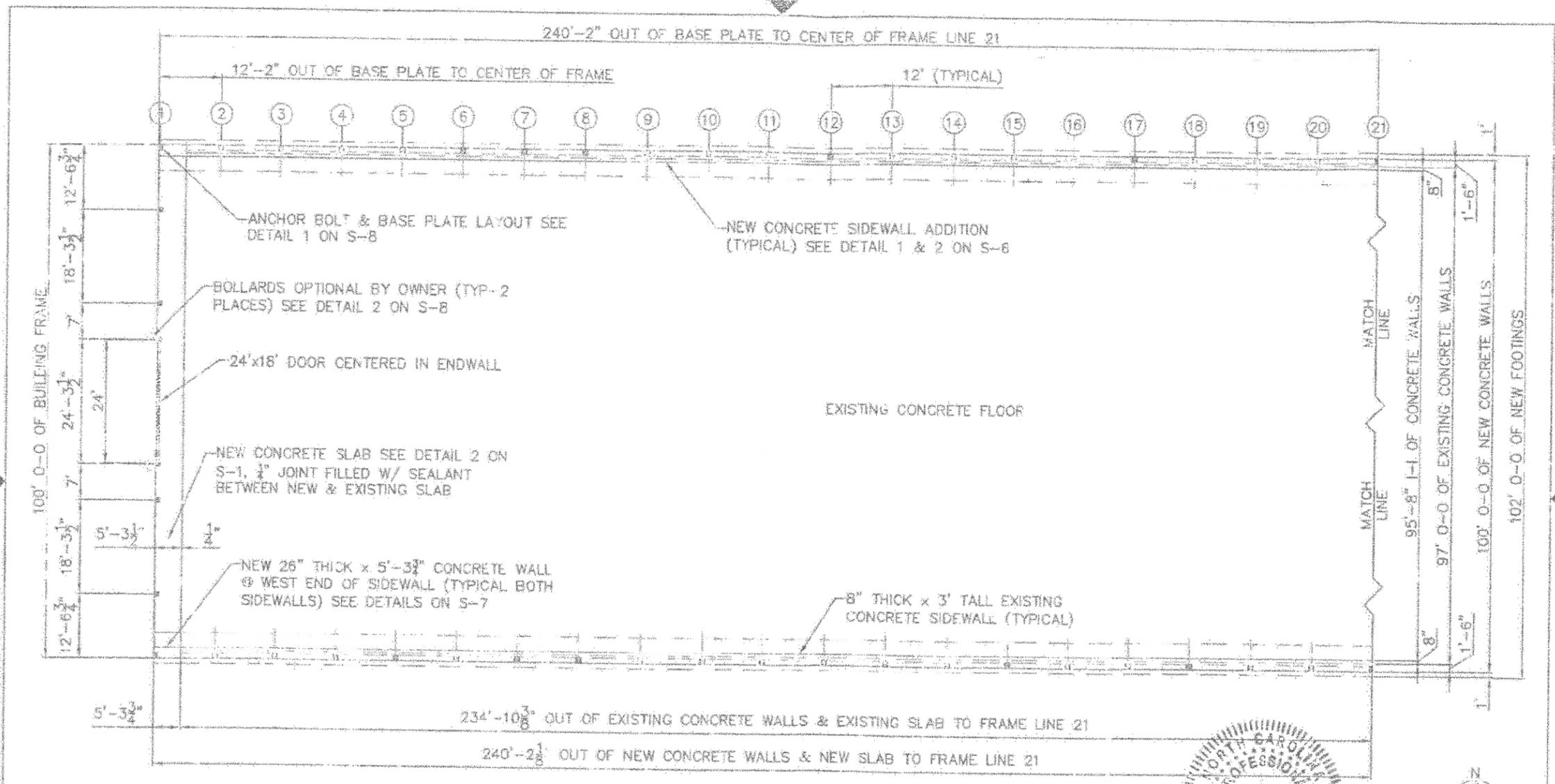

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 HANKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

FULL FOUNDATION PLAN	
ROSE ACRE FARMS	PANTEGO, NC
SHEET SIZE B	SCALE AS NOTED
DWG NO. SPT.10.012	SHEET NO. S-1

SPT.10.012

12-06-10

PGB



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FOUNDATION PLAN FRAME LINE 1 TO 21

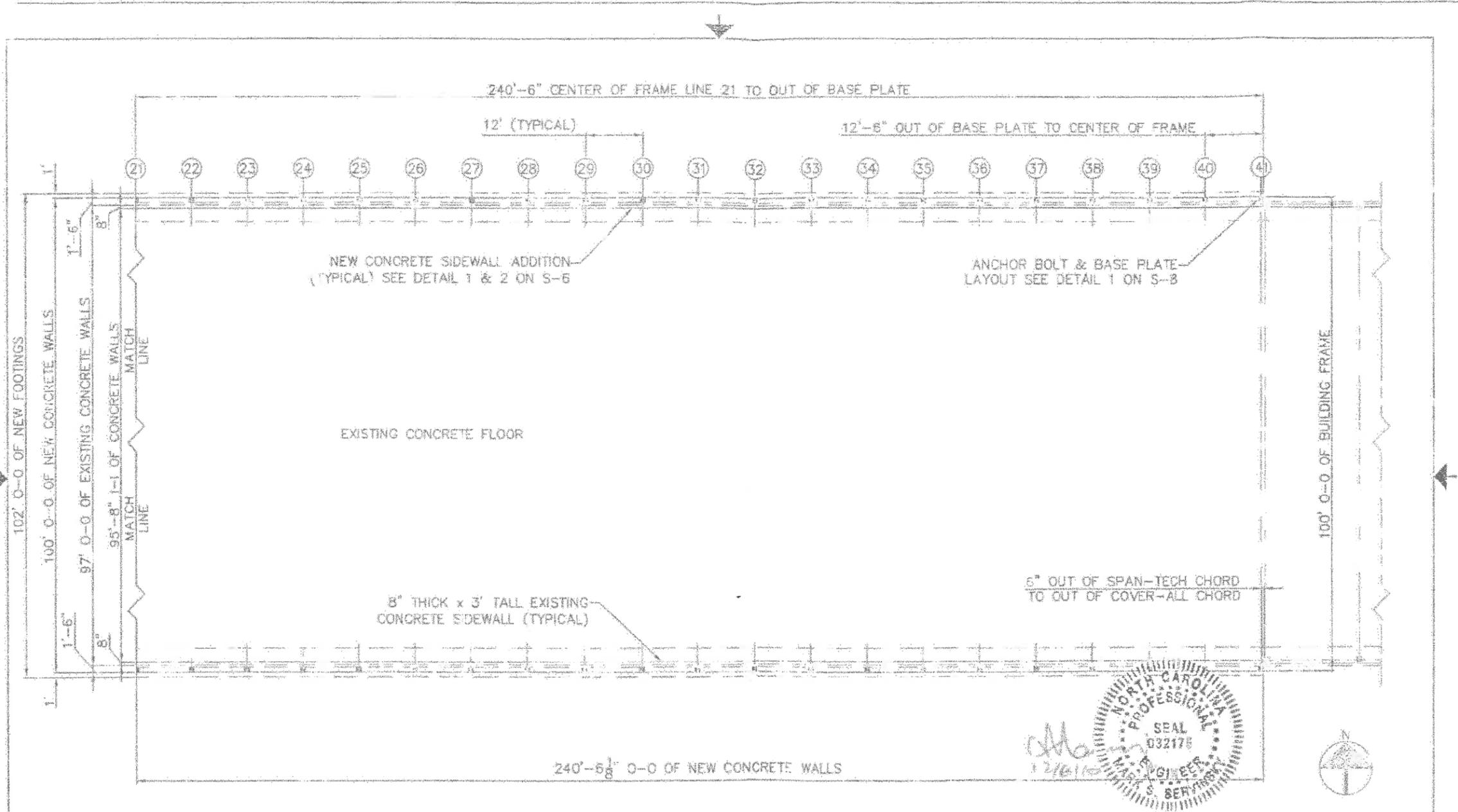
ROSE ACRE FARMS **PANTEGO, NC**

SHEET SIZE B SCALE 1" = 20' DWG NO. SPT.10.012 SHEET NO. S-2

SPT 10.012

12-06-10

-CB



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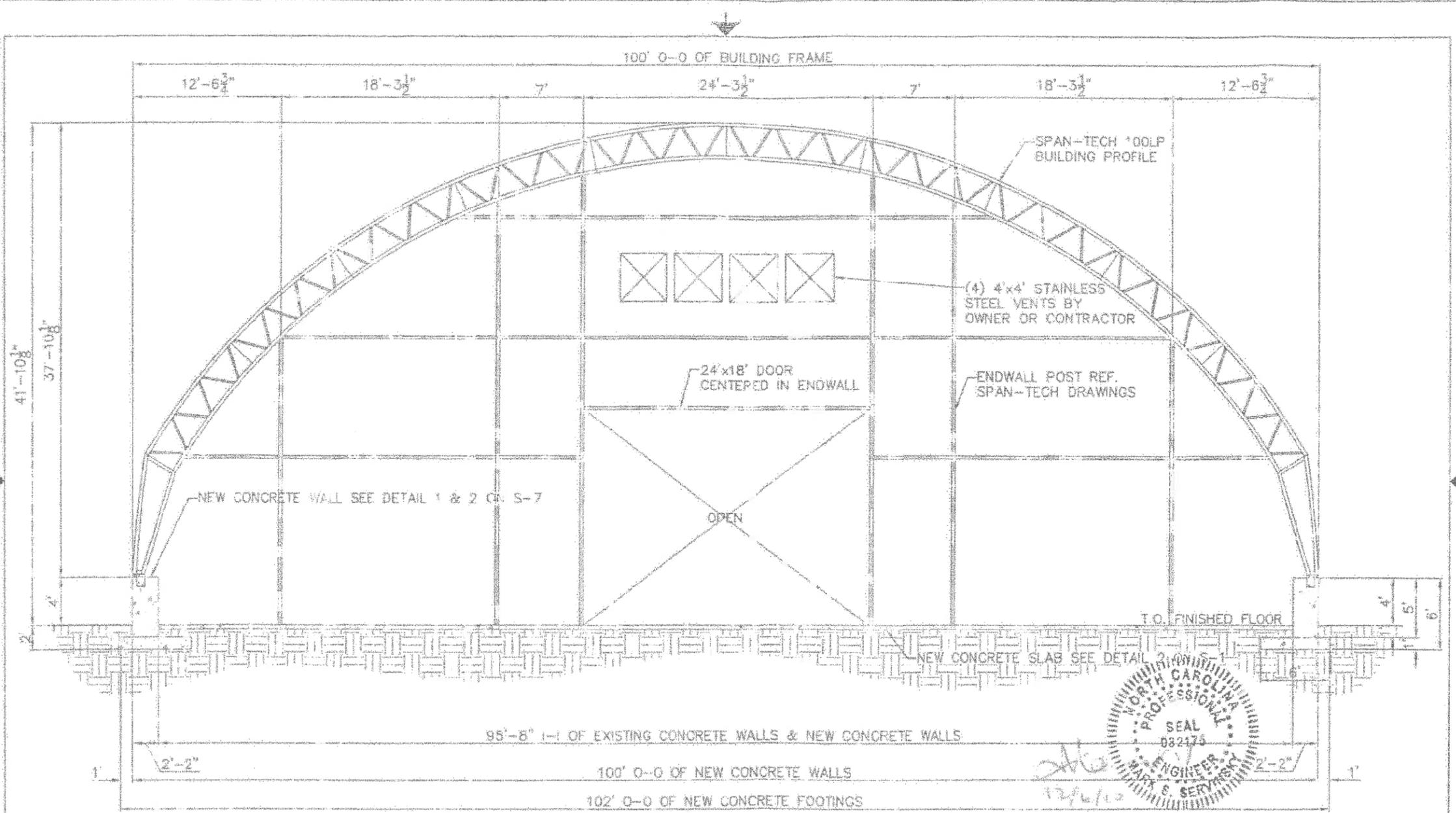
FOUNDATION PLAN FRAME LINE 21 TO 41
 ROSE ACRE FARMS | PANTEGO, NC

SHEET SIZE B | SCALE 1" = 20' | DWG NO. SPT.10.012 | SHEET NO. S-3

SPT.10.012

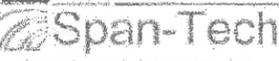
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PCB



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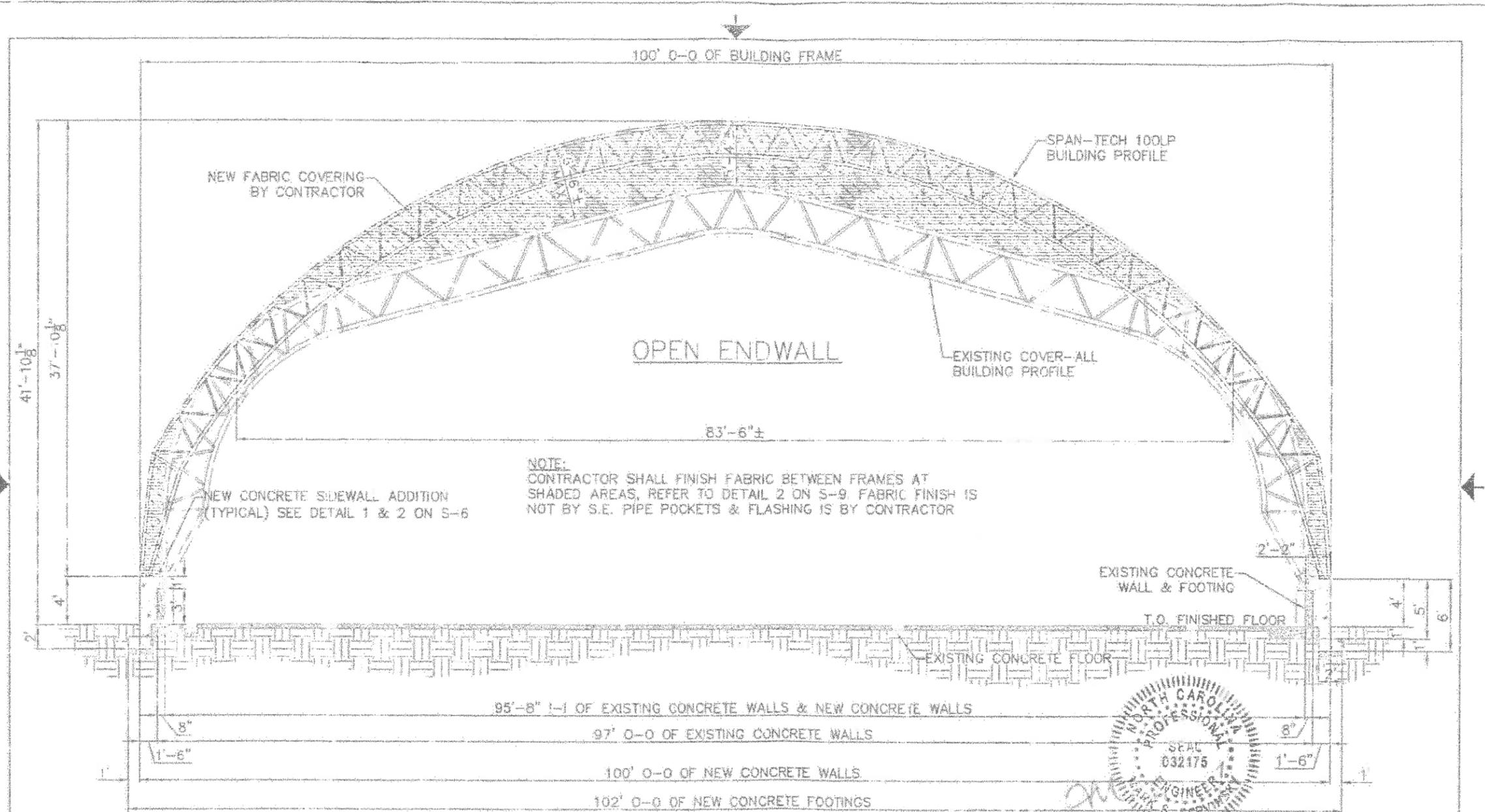
WEST ENDWALL ELEVATION FRAME LINE 1
ROSE ACRE FARMS | **PANTEGO, NC**

SHEET SIZE B | SCALE 1/8" = 1' | DWG NO. SPT.10.012 | SHEET No. S-4

SPT.10.012

12-06-10

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SERVINSKY ENGINEERING PLLC
Consulting Structural Engineers
mark@servinskyeng.com

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Wolfeboro, NH 03424-6516
(616) 738-1281
Fax (616) 738-8281

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HAWKEYE STEEL PRODUCTS, INC. PO BOX 2600, HOUGHTON, IA 52831

EAST ENDWALL ELEVATION FRAME LINE 41

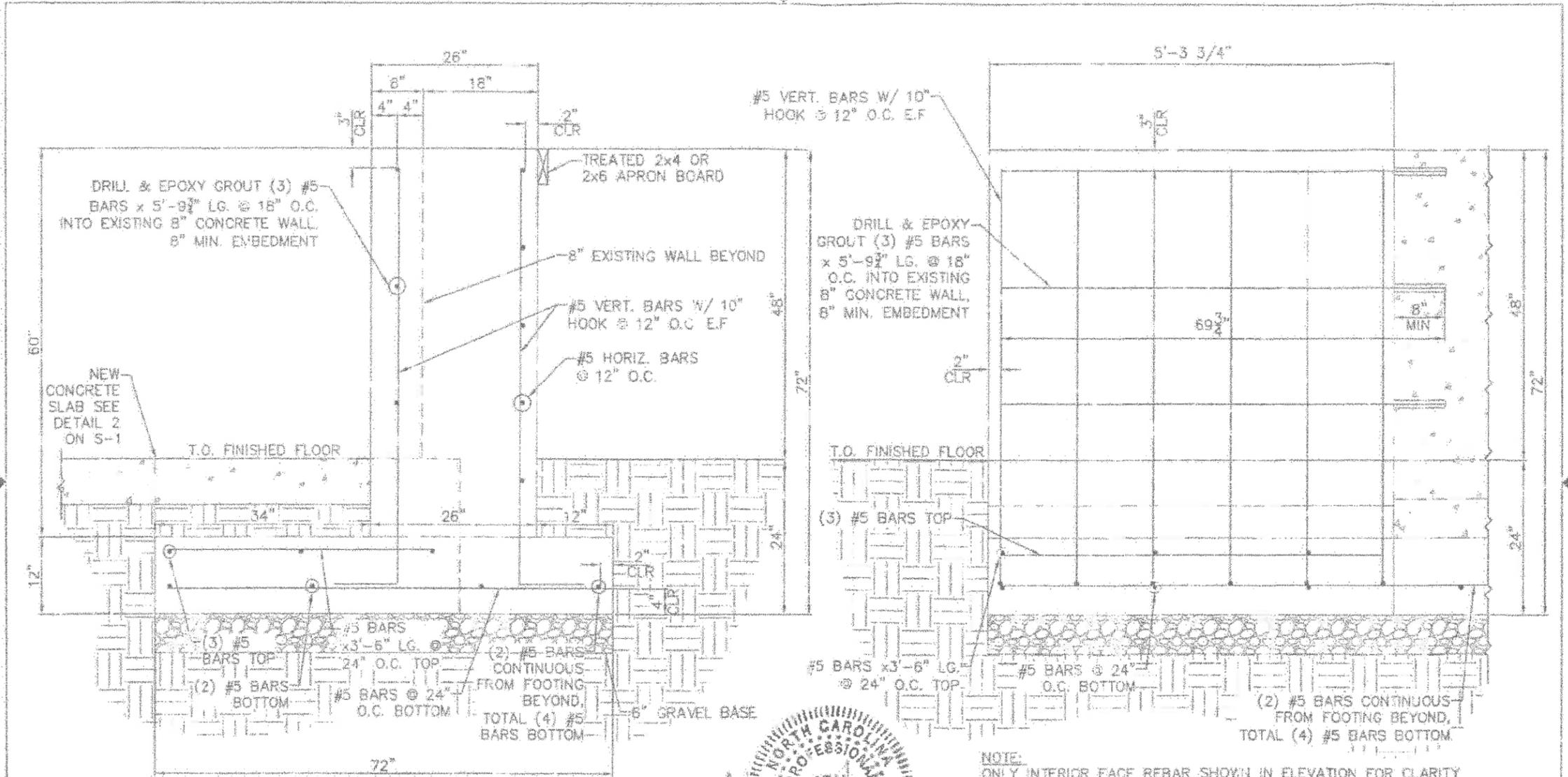
ROSE ACRE FARMS PANTEGO, NC

SHEET SIZE B SCALE 1/8" = 1' DWG NO. SPT.10.012 SHEET NO. S-5

SPT.10.012

12-06-10

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S-7
1
NEW CONCRETE SIDEWALL SECTION
SCALE 3/4" = 1'

S-7
2
NEW CONCRETE SIDEWALL INTERIOR ELEVATION
SCALE 3/4" = 1'

NOTE:
ONLY INTERIOR FACE REBAR SHOWN IN ELEVATION FOR CLARITY



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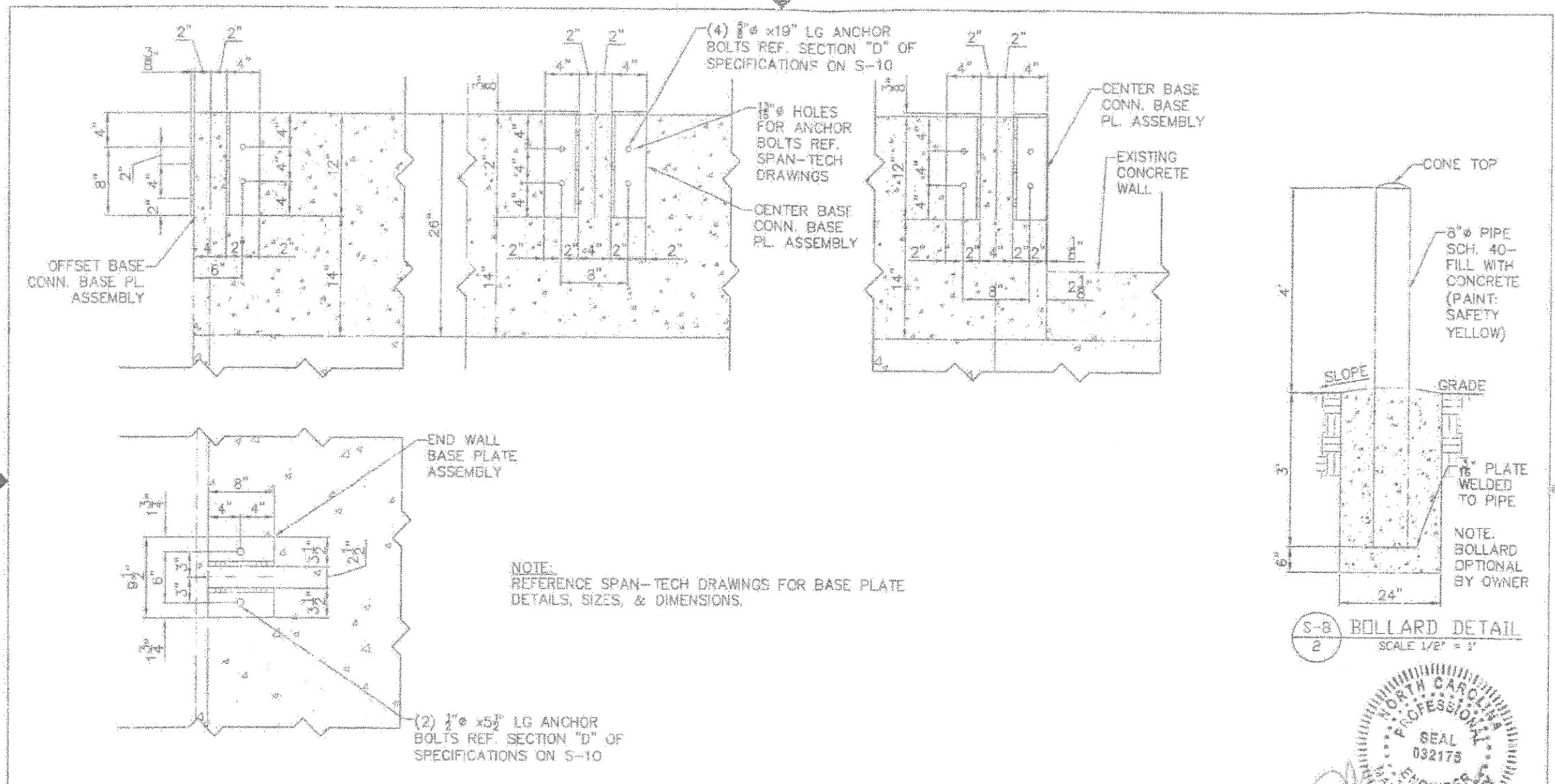
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 mark@servinskyeng.com
 280 Dutton Ave
 Holland, MI 48421-6515
 (616) 736-1281
 Fax (616) 736-6281

NEW CONCRETE WALL DETAILS
 ROSE ACRE FARMS PANTEGO, NC
 SHEET NO. B SCALE 3/4" = 1' DWG NO. SPT.10.012 SHEET NO. S-7

SPT.10.012

12-06-10

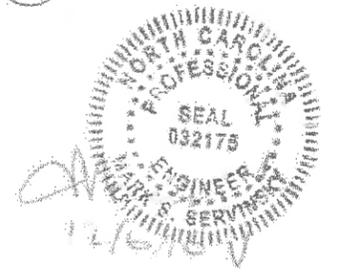
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NOTE:
REFERENCE SPAN-TECH DRAWINGS FOR BASE PLATE
DETAILS, SIZES, & DIMENSIONS.

S-8 ANCHOR BOLT & BASE PLATE LAYOUT
SCALE 1" = 1'

S-8 BOLLARD DETAIL
SCALE 1/2" = 1'



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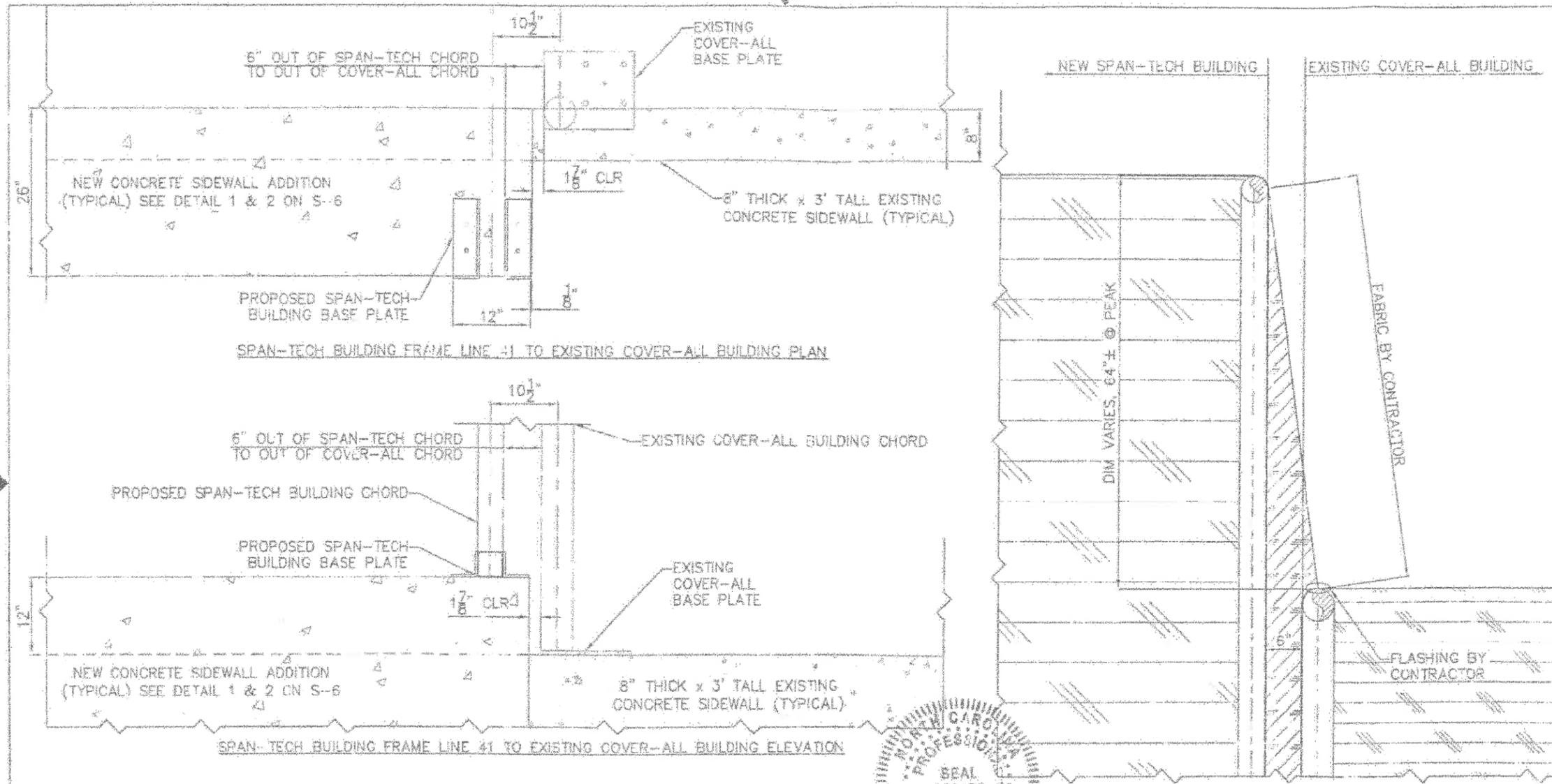

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 HAYMEYE STEEL PRODUCTS, INC. PO BOX 2000 HOUGHTON, IA 52631

ANCHOR BOLT & BASE PLATE LAYOUT
ROSE ACRE FARMS | **PANTEGO, NC**
 SHEET NO. S-8 | SCALE AS NOTED | DWG NO. SPT.10.012 | SHEET NO. S-8

SPT.10.012

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S-9
1 SPAN-TECH TO COVER-ALL BUILDING @ BASE PLATES
SCALE 3/4" = 1'

S-9
2 TOP FABRIC DETAIL BETWEEN BLDGS.
SCALE 3/4" = 1'



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Span-Tech Fabric Buildings
 HANKEYE STEEL PRODUCTS, INC. PO. BOX 2009, HOUGHTON, IA 52531

SPAN-TECH TO EXISTING COVER-ALL DETAILS
 ROSE ACRE FARMS | PANTEGO, NC

SHEET SIZE B | SCALE 3/4" = 1' | DWD NO. SPT.10.012 | SHEET NO. S-9

SPT.10.012

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SITE LOCATION, BUILDING SIZE, AND OCCUPANCY

Project Name: Rose Acre Farms
Project Location: 1560 Hyde Park Canal Road,
Pantego, North Carolina 27860
Building Size: 100' x 480', 48000 Square Feet
Use Group U-Agriculture
Construction Type VB
Non FR Fabric
End User: Waste Storage Building

STRUCTURAL DESIGN LOADS

North Carolina Building Code/IBC 2006

Roof Structure and Fabric Covering is per Span-Tech Buildings.
Partially Enclosed
Wind Speed = 120 mph, Exposure C
Roof Snow Load = 20 psf
Snow Importance Factor Is = 0.80
Wind Importance Factor Is = 0.87
Thermal Factor Ct = 1.2
Dead load = 2 psf
Seismic Class B, Use Group II
Short Period Spectral Response Ss=0.12g (12%g)
One Second Spectral Response S1=0.05g (5%g)
Frame Loading-per reactions provided herein.

A. GENERAL REQUIREMENTS

- All work shall be done per OSHA standards and regulations.
- Obtain prior approval from Owner when substituting materials or equipment.
- Work shall conform to all governing codes.
- Establish locations of underground utilities (provided by others) prior to work.
- Refer to survey information for site work (provided by others)
- Provide final grading, topsoil, gravel, compaction and seeding as necessary within affected area of building

B. EARTH WORK & DRAINAGE

- Place 6" min. gravel, Crushed Stone or Gravel 1" size No. 2 Gradation. (AASHTO No. 4)
- Compact sub-base and gravel per ASTM D-1557
- Provide Final grades for slope away from buildings.
- Owner is Responsible for all site drainage.

C. CONCRETE

- 28 day minimum compressive strength: Concrete for walls & footings 3000 psi.
- Concrete mix shall have a water-cement ratio of 0.46 maximum.

3. Reinforcing Steel- Grade 60 bars

4. Minimum concrete cover for reinforcing bars shall be as follows: Concrete cast against grade- 3 inches minimum. All other areas- 2 inches

5. Type C or F fly ash may be used in concrete mix. Maximum fly ash content shall be 20 percent by weight of cement.

6. Submit mix design to Engineer for approval.

7. Footings or Slabs shall be placed on a level-prepared compacted sub-base, free of organic material and frost.

8. Air entraining admixture: ASTM C-250.

9. Superplasticizers ASTM C494 type F or G.

10. Water Reducers/Retainers C-494, type A/D.

11. Production and placement per ACI 301.

12. Cold Weather Concreting: Heat shall be applied for cold weather concrete. Other methods to prevent freezing shall be used per ACI 308R.

13. Walls shall be formed and poured continuous without cold joints. Provide a keyed joint and 6" PVC waterstop if a cold joint is used. Lap Horizontal bars through joint.

14. Remove and patch form ties. Buff exposed surfaces smooth.

D. ANCHOR BOLTS

1. Cast-in-place Anchors: 3/4" # F1554 or A36 19" Long rods 1/2" embedment, 2 1/2" projection, with bottom 3/4" plate washer and nut.

2. Endwall post to be anchored to existing concrete slab, (2) 1/2" # HRB Kwik Bolt 3, 3 1/2" min. emb.

3. Provide anchors at location shown on drawings. Other anchor types to be submitted for approval by Engineer.

E. FOUNDATION REACTIONS AT TOP OF WALL

(MAX. VALUES PER SPAN-TECH BUILDING CO.)
(Refer to Cover-All Bldg Drawings-for Loads)
The following loads were provided by the Span-Tech Building Contractor.

From Lines 1 to 41

14.8 kips Out Horizontal
4.9 kips In Horizontal
6.7 kips Up
19.6 kips Down

Endwall Wind Columns (posts)

Wind-1.5 kips Horizontal

F. WOOD AND FINISH CARPENTRY

Wood for this Structure is only used for finish attachment at the Fabric Termination.

1. Span-Tech Building erector to provide a continuous 2x4 or 2x6 apron board on the exterior building perimeter. Other methods may be used based on the experience of the Span-Tech Buildings Contractor.

2. All lumber shall be pressure treated with a preservative per AWPA Standard M5. Minimum 0.40 percent ACD.

3. Lumber shall be #2 Southern Pine or Fir.

4. Use mushroom head 1/2" x 3" anchors, 16" o.c. pre-drill in lumber & concrete. Drill anchor into prepared hole.

G. FDN. DESIGN BEARING CAPACITY

Design Bearing Capacity = 2000 psf

H. SPAN-TECH BUILDING

1. Building specifications are per Span-Tech Building Company, under separate submittal.

I. CONCRETE SLAB

1. Owner is responsible for slabs. Design of slabs is not by Servinsky Engineering PLLC.

These specifications are for foundation and earthwork only. The Contractor(s) are responsible for proper venting, mechanical, plumbing, site drainage and electrical requirements of the building.

LAP SPLICE SCHEDULE-TENSION BARS	
BAR SIZE	BASIC CLASS B
#3	14 INCHES
#4	20 INCHES
#5	24 INCHES
#6	28 INCHES

4000 PSI COMPRESSIVE STRENGTH.



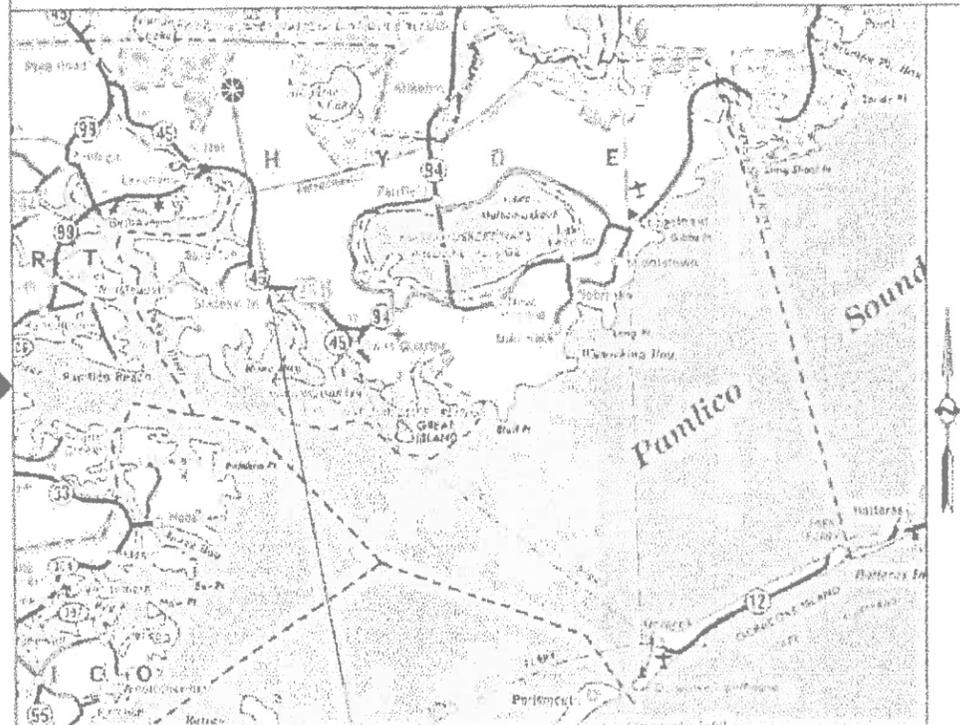
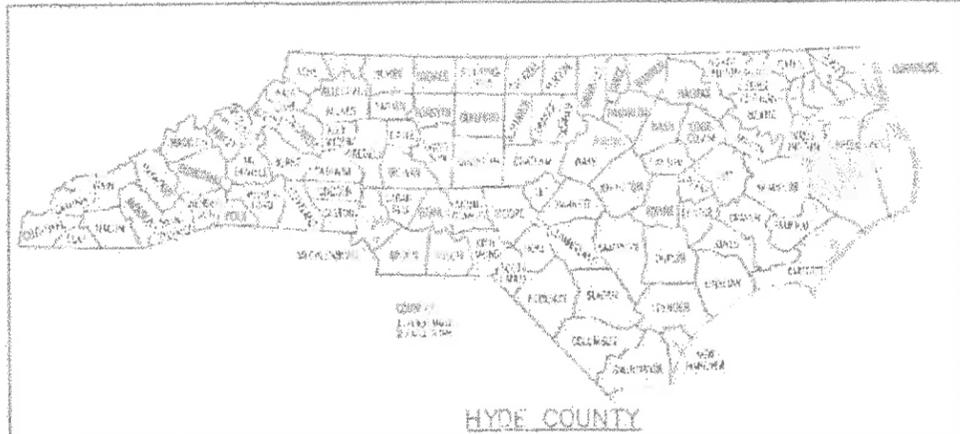
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Span-Tech Fabric Buildings
HAWKEYE STEEL PRODUCTS, INC. PG BOX 2000, HOUGHTON, IA 52631

SPECIFICATIONS	
ROSE ACRE FARMS	PANTEGO, NC
SHEET SIZE B	NO SCALE
DWG. NO. SPT.10.012	SHEET NO. S-10



ROSE ACRE FARMS
EGG FARM-LAYER BUILDING
1560 HYDE PARK CANAL ROAD
PANTEGO, NORTH CAROLINA 27860
HYDE COUNTY

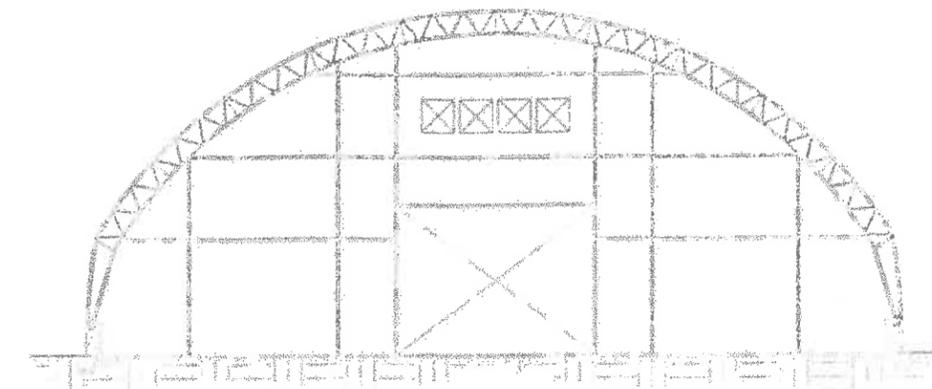
PROJECT NUMBER: SPT.10.011
FOUNDATION DRAWINGS FOR
100'x672' SPAN-TECH LP BUILDING
DECEMBER 6, 2010

PREPARED FOR:
HAWKEYE STEEL PRODUCTS, INC.
HOUGHTON, IOWA

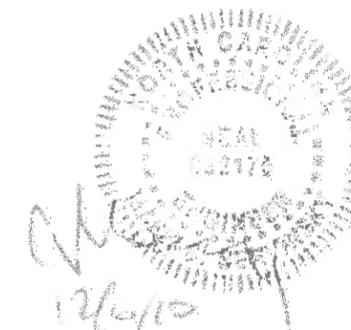
ISSUED FOR CONSTRUCTION

INDEX OF DRAWINGS

- △ COVER SHEET
- S-1 FULL FOUNDATION PLAN
- S-2 FOUNDATION PLAN FRAME LINE 1 TO 29
- S-3 FOUNDATION PLAN FRAME LINE 29 TO 57
- S-4 ENDWALL ELEVATION FRAME LINE 1 & 57
- S-5 CONCRETE WALL DETAILS
- △ S-6 ANCHOR BOLT & BASE PLATE LAYOUT
- S-7 SPECIFICATIONS



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Span-Tech Fabric Buildings
 HAWKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

COVER SHEET		ROSE ACRE FARMS		PANTEGO, NC	
SHEET SIZE B	NO SCALE	DWG NO. SPT.10.011	SHEET NO. COVER SHEET		

SPT.10.011

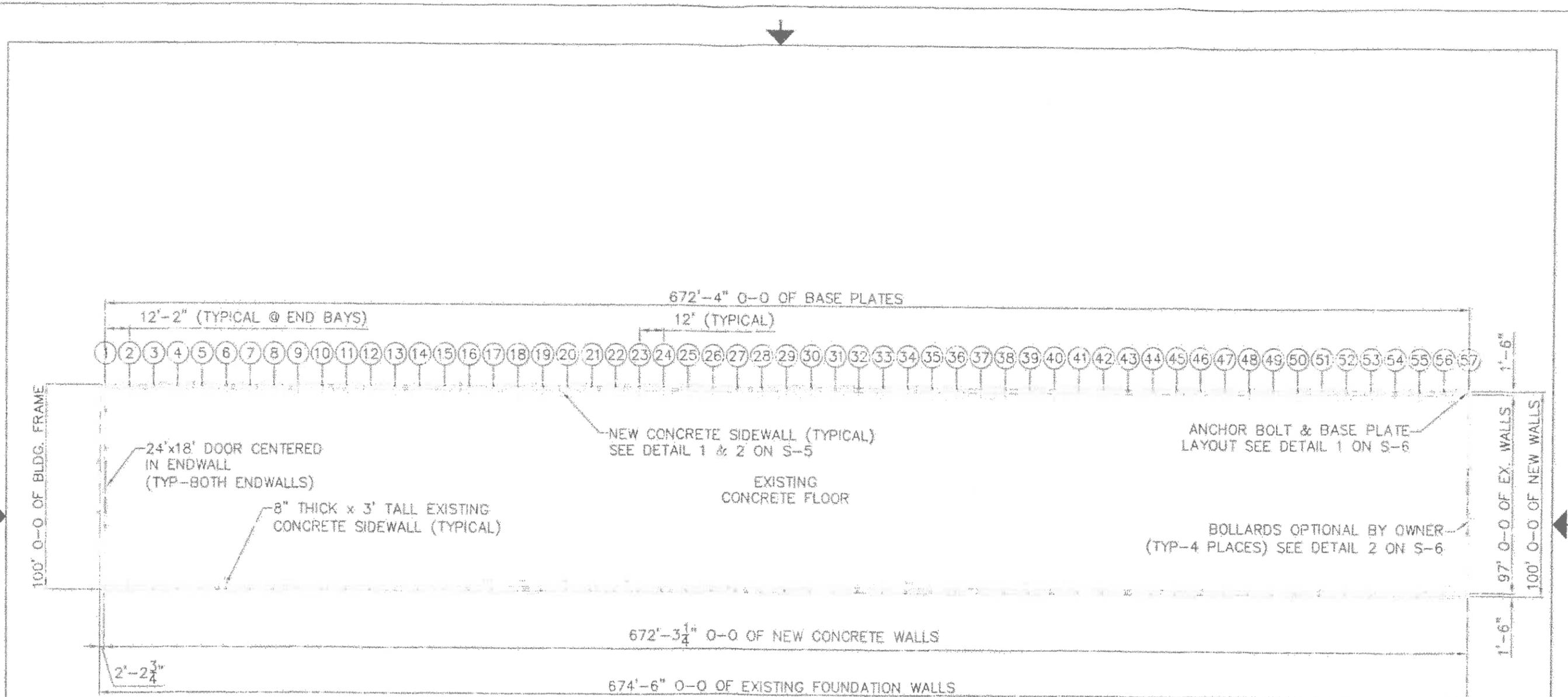
12-06-10

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11-17-10

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SK-1 FULL FOUNDATION PLAN
 1 SCALE 1" = 50'

Professional Engineer Seal
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 032173
 MARK S. SERVINSKY
 11.17.10

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Span-Tech Fabric Buildings
 HAWKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

FULL FOUNDATION PLAN

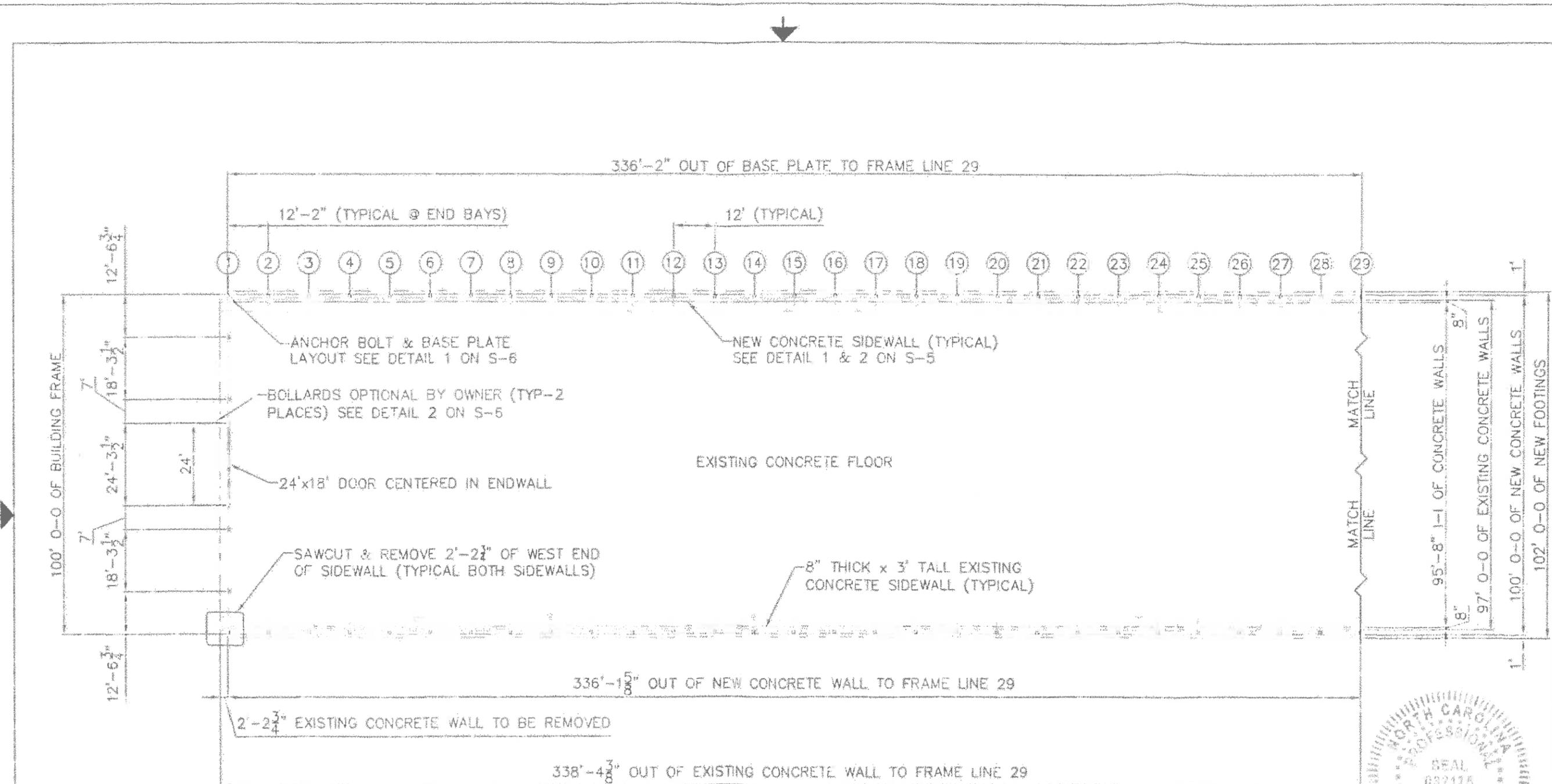
ROSE ACRE FARMS PANTEGO, NC

SHEET SIZE B SCALE 1" = 50' DWG NO. SPT.10.011 SHEET NO. S-1

SPT.10.011

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SK-2 FOUNDATION PLAN FRAME LINE 1 TO 29
 1 SCALE 1" = 30'



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 Consulting Structural Engineers
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 Fax (616) 738-6281

Span-Tech Fabric Buildings
 HAWKEYE STEEL PRODUCTS, INC. P.O. BOX 2000, HOUGHTON, IA 52631

FOUNDATION PLAN FRAME LINE 1 TO 29

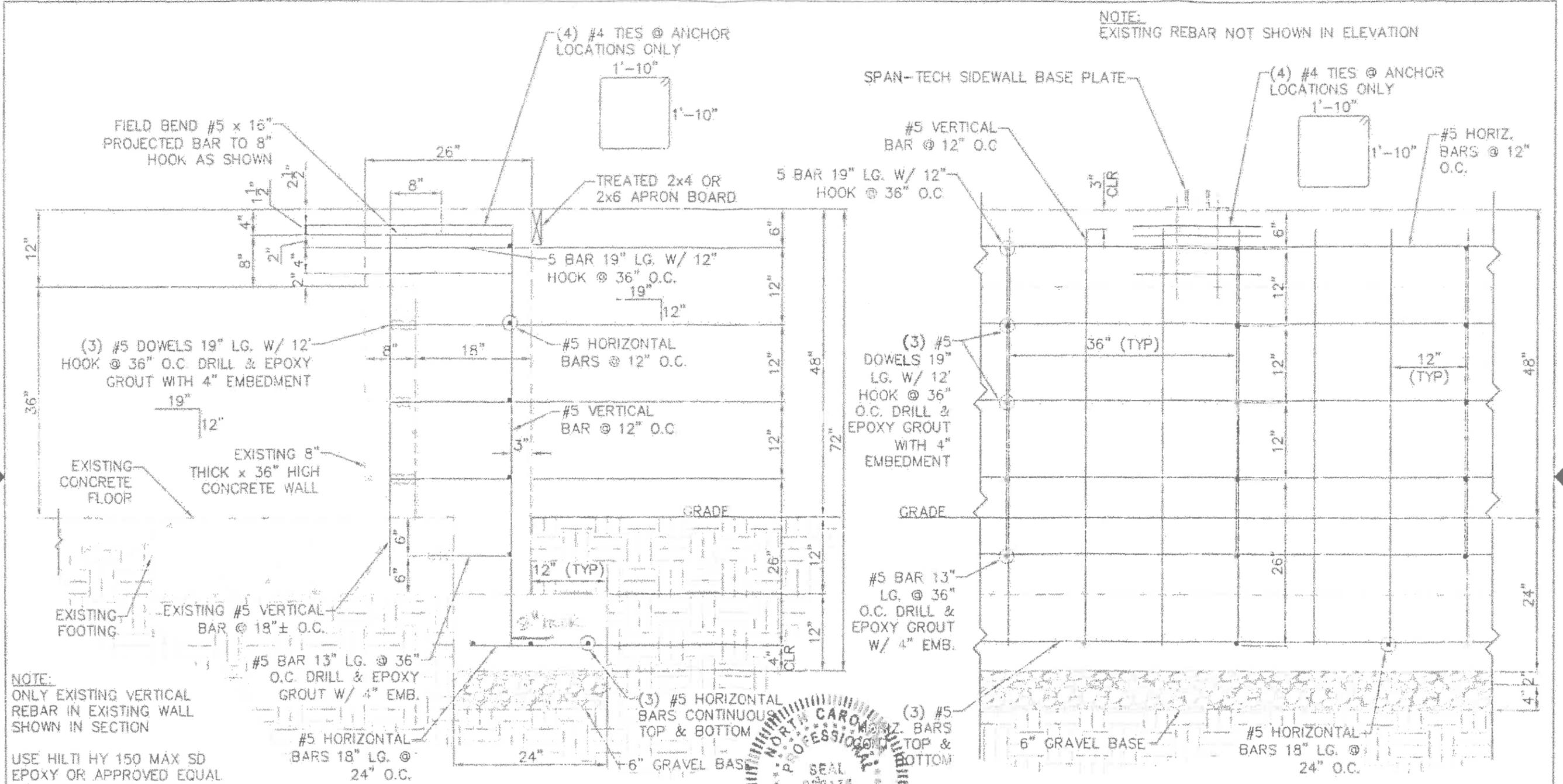
ROSE ACRE FARMS PANTEGO, NC

SHEET SIZE B SCALE 1" = 30' DWG NO. SPT.10.011 SHEET NO. S-2

SPT.10.011

11-17-10

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NOTE:
EXISTING REBAR NOT SHOWN IN ELEVATION

NOTE:
ONLY EXISTING VERTICAL REBAR IN EXISTING WALL SHOWN IN SECTION

USE HILTI HY 150 MAX SD EPOXY OR APPROVED EQUAL FOR EMBEDDED DOWELS

S-5
1
CONCRETE SIDEWALL SECTION
SCALE 3/4" = 1'

S-5
2
CONCRETE SIDEWALL EXTERIOR ELEVATION
SCALE 3/4" = 1'

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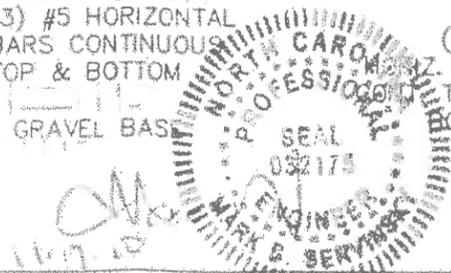

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 (616) 738-1281
 Fax (616) 738-6281


Span-Tech Fabric Buildings
 HAWKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

CONCRETE WALL DETAILS

ROSE ACRE FARMS PANTEGO, NC

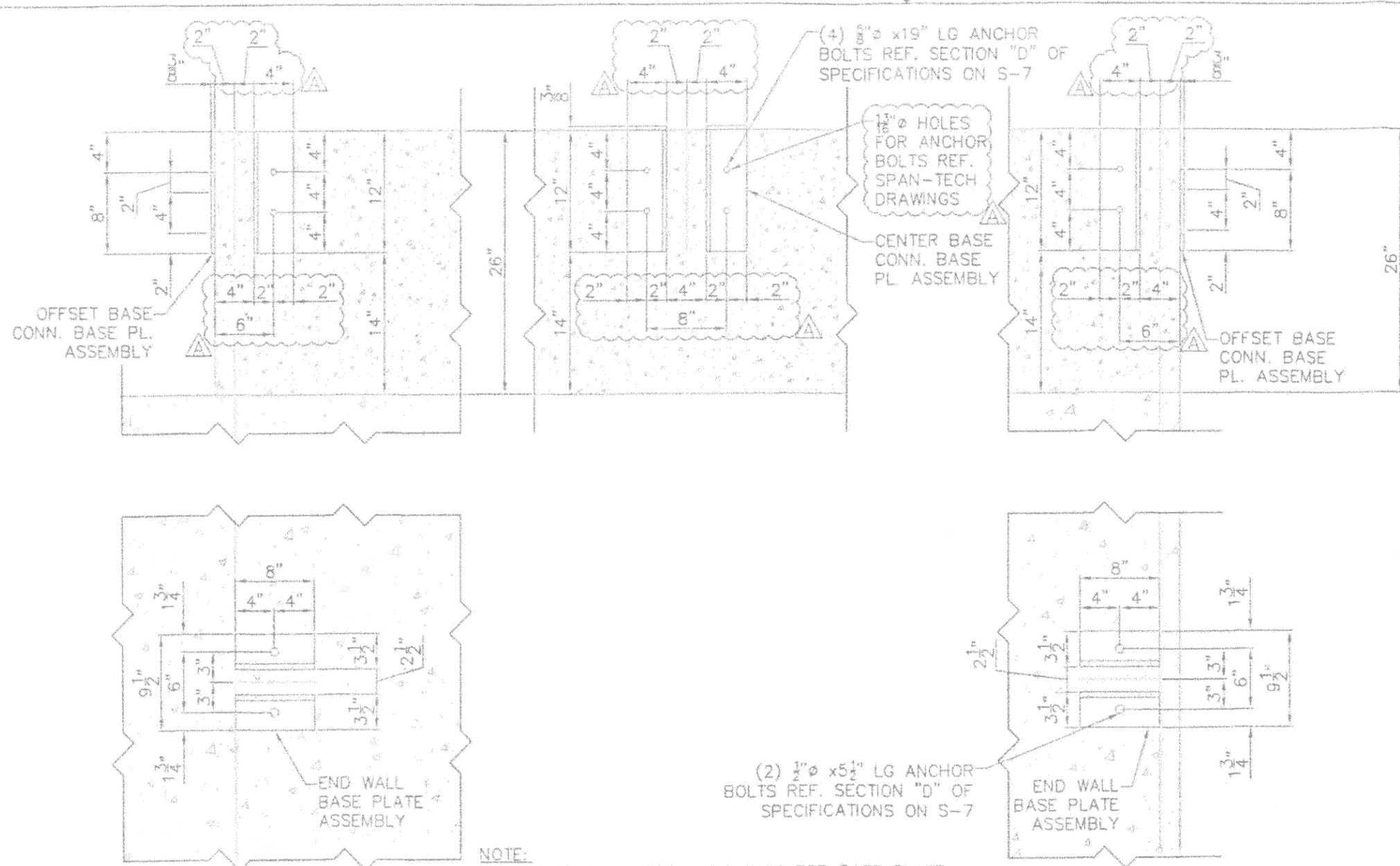
SHEET SIZE B SCALE 3/4" = 1' DWG NO. SPT.10.011 SHEET NO. S-5



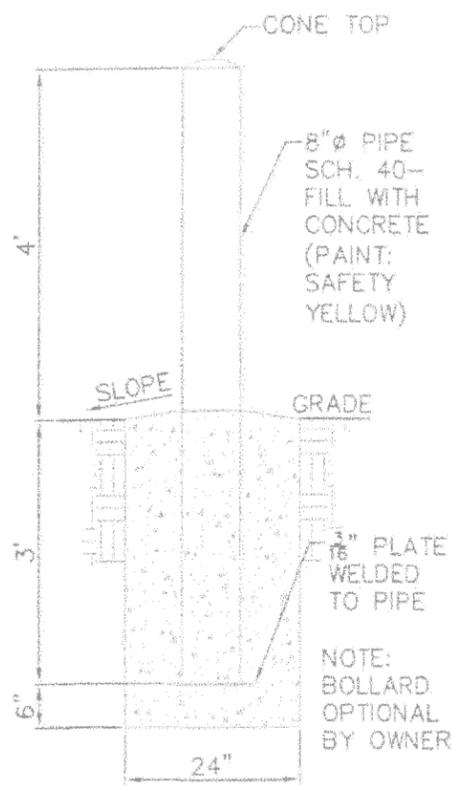
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NOTE:
REFERENCE SPAN-TECH DRAWINGS FOR BASE PLATE DETAILS, SIZES, & DIMENSIONS



S-6 BOLLARD DETAIL
2 SCALE 1/8" = 1"

S-6 ANCHOR BOLT & BASE PLATE LAYOUT
1 SCALE 1" = 1'

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Span-Tech Fabric Buildings
 HAWKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

ANCHOR BOLT & BASE PLATE LAYOUT
 ROSE ACRE FARMS
 PANTEGO, NC
 SHEET SIZE B SCALE AS NOTED
 DWG NO. SPT.10.011
 SHEET NO. S-6



SITE LOCATION, BUILDING SIZE, AND OCCUPANCY

Project Name: Rose Acre Farms
 Project Location: 1560 Hyde Park Canal Road,
 Pantego, North Carolina 27860
 Building Size: 100' x 672', 67200 Square feet
 Use Group U-Agriculture
 Construction Type VB
 Non FR Fabric
 End Use: Egg Farm-Layer Building

STRUCTURAL DESIGN LOADS

North Carolina Building Code/IBC 2006

Roof Structure and Fabric Covering is per Span-Tech Buildings.
 Partially Enclosed
 Wind Speed = 120 mph, Exposure C
 Roof Snow Load = 20 psf
 Snow Importance Factor Is = 0.80
 Wind Importance Factor Ia = 0.87
 Thermal Factor Ct = 1.2
 Dead load = 2 psf
 Seismic Class B, Use Group II
 Short Period Spectral Response Sa=0.12g (12%g)
 One Second Spectral Response S1=0.06g (6%g)
 Frame Loading-per reactions provided herein.

A. GENERAL REQUIREMENTS

- All work shall be done per OSHA standards and regulations.
- Obtain prior approval from Owner when substituting materials or equipment.
- Work shall conform to all governing codes.
- Establish locations of underground utilities (provided by others) prior to Work.
- Refer to survey information for site work (provided by Others)
- Provide final grading, topsoil, gravel, compaction and seeding as necessary within affected area of building

B. EARTH WORK & DRAINAGE

- Place 6" min. gravel, Crushed Stone or Gravel 1" size No. 2 Gradation. (AASHTO No. 4)
- Compact sub-base and gravel per ASTM D-1557
- Provide Final grades for slope away from buildings.
- Owner is Responsible for all site drainage.

C. CONCRETE

- 28 day minimum compressive strength; Concrete for walls & footings 3000 psi.
- Concrete mix shall have a water-cement ratio of 0.45 maximum.

- Reinforcing Steel- Grade 60 bars
- Minimum concrete cover for reinforcing bars shall be as follows: Concrete cast against grade- 3 inches minimum. All other areas- 2 inches
- Type C or F fly ash may be used in concrete mix. Maximum fly ash content shall be 20 percent by weight of cement.
- Submit mix design to Engineer for approval.
- Footings or Slabs shall be placed on a level-prepared compacted sub-base, free of organic material and frost.
- Air entraining admixture: ASTM C-260.
- Superplasticizers ASTM C494 type F or G.
- Water Reducers/Retainers C-494, type A/D.
- Production and placement per ACI 301
- Cold Weather Concreting: Heat shall be applied for cold weather concrete. Other methods to prevent freezing shall be used per ACI 306R.
- Walls shall be formed and poured continuous without cold joints. Provide a keyed joint and 6" PVC waterstop if a cold joint is used. Lap Horizontal bars through joint.
- Remove and patch form ties. Buff exposed surfaces smooth.

D. ANCHOR BOLTS

- Cast-in-place Anchors: #3 F1554 or A36 19" Long rods (16" embedment, 2 1/2" projection, with bottom 1/2" plate washer and nut.
- Endwall post to be anchored to existing concrete slab, (2) #3 Hilti Kwik Bolt 3, 3 1/2" min. emb.
- Provide anchors at location shown on drawings. Other anchor types to be submitted for approval by Engineer.

E. FOUNDATION REACTIONS AT TOP OF WALL

(MAX. VALUES PER SPAN-TECH BUILDING CO.)
 (Refer to Cover-All Bldg Drawings-for Loads)

The following loads were provided by the Span-Tech Building Contractor:

Frame Lines 1 to 57

- 14.8 kips Out Horizontal
- 4.9 kips In Horizontal
- 6.7 kips Up
- 19.6 kips Down

Endwall Wind Columns (posts)

Wind-1.5 kips Horizontal

F. WOOD AND FINISH CARPENTRY

Wood for this Structure is only used for finish attachment at the Fabric Termination.

- Span-Tech Building erector to provide a continuous 2x4 or 2x6 apron board on the exterior building perimeter. Other methods may be used based on the experience of the Span-Tech Buildings Contractor.
- All lumber shall be pressure treated with a preservative per AWPA Standard M6. Minimum 0.40 percent ACQ.
- Lumber shall be #2 Southern Pine or Fir.
- Use mushroom head 1/2" x 3" anchors, 16" o.c. pre-drill in lumber & concrete. Drill anchor into prepared hole.

G. FDN. DESIGN BEARING CAPACITY

Design Bearing Capacity = 2000 psf

H. SPAN-TECH BUILDING

- Building specifications are per Span-Tech Building Company, under separate submittal.

J. CONCRETE SLAB

- Owner is responsible for slabs. Design of slabs is not by Servinsky Engineering PLLC.

These specifications are for foundation and earthwork only. The Contractor(s) are responsible for proper venting, mechanical, plumbing, site drainage and electrical requirements of the building.

LAP SPLICE SCHEDULE--TENSION BARS	
BAR SIZE	BASIC CLASS B
#3	14 INCHES
#4	20 INCHES
#5	24 INCHES
#6	28 INCHES
4000 PSI COMPRESSIVE STRENGTH.	

SPT.10.011

12-06-10

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Span-Tech Fabric Buildings

HAWKEYE STEEL PRODUCTS, INC. PO BOX 2000, HOUGHTON, IA 52631

SPECIFICATIONS

ROSE ACRE FARMS

PANTEGO, NC

SHEET SIZE B	SCALE AS NOTED	DWG NO. SPT.10.011	SHEET NO. S-7
--------------	----------------	--------------------	---------------

Gallagher, Tony

Doc 10

From: Timothy Waters [timothy_waters@goodegg.com]
Sent: Thursday, May 02, 2013 2:57 PM
To: Gallagher, Tony
Subject: Re: Hyde permit

18896

Hopefully this is what you are needing. I'm not sure why the other items showed up on the attachment I sent you earlier, but I crossed referenced, and these book and page numbers were the only ones that pulled up on the Hyde County GIS.

- Pullet farm (20 acres; book: 209 Page: 287) -- Parcel # E4 50A
- Main complex including composting (770.9 acres; book: 196 page: 646) -- Parcel # D3 7
- Total acres of facility and pullet farm = 790.9 acres

Thanks,

Timothy Waters
Rose Acres Farms

Whatever you are, be a good one. - Abraham Lincoln

From: "Tony Gallagher" <tony.gallagher@ncdenr.gov>
To: "Timothy Waters" <timothy_waters@goodegg.com>
Sent: Thursday, May 2, 2013 8:13:33 AM
Subject: RE: Hyde permit

Timothy,

Thanks for getting this information so quickly to me, so that I can complete your permit renewal. My apologies, but as it turns out I will need the total acres you provided me to be broken-down by per parcel of land based on the attached document you sent listing each book and page ID.

Thanks

M.A. (Tony) Gallagher, Supervisor
Composting & Land Application Branch
Solid Waste Section
phone/fax (919)707-8280

E-mail address - tony.gallagher@ncdenr.gov

<http://portal.ncdenr.org/web/wm/sw/septage>

E-mail correspondence to and from this address may be subject to North Carolina public records law and may be disclosed to third parties.

From: Timothy Waters [mailto:timothy_waters@goodegg.com]

Sent: Wednesday, May 01, 2013 12:49 PM

To: Gallagher, Tony

Subject: Re: Hyde permit

I believe I've got the rest of what you need in the numbers below. As you saw when you visited, our plan is to compost in 2 buildings and use the 3rd for finished storage. Obviously, as we store more compost, then our available space to use for composting is reduced. Please let me know if you need anything else on top of this data.

Facility Acres

- facility minus composting buildings acres = 20 acres
- compost buildings acres = 4.388 acres
- total facility including composting = 24.388 acres

Composting Information

- max height of windrows = 9 ft
- max width of windrows = 14 ft
- max height of finished compost storage = 36 ft
- max width of finished compost storage = 100 ft
- total capacity of in process and finished compost = 1,101,785 cu ft

Thanks,

Timothy Waters
Rose Acres Farms

Whatever you are, be a good one. - Abraham Lincoln

From: "Tony Gallagher" <tony.gallagher@ncdenr.gov>

To: "Timothy Waters" <timothy_waters@goodegg.com>

Sent: Tuesday, April 30, 2013 9:00:54 AM

Subject: RE: Hyde permit

Timothy,

Thanks for the information you sent. Do all those different parcels in your attachment represent Rose Acres property at one location? If so are all of these different parcels under one ownership now?

I still need the total acres of your facility and the numbers of acres that you include your composting area (the three barns).

Thanks

M.A. (Tony) Gallagher, Supervisor
Composting & Land Application Branch

Solid Waste Section
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<http://portal.ncdenr.org/web/wm/sw/septage>

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From: Timothy Waters [mailto:timothy_waters@goodegg.com]
Sent: Monday, April 29, 2013 5:54 PM
To: Gallagher, Tony
Subject: Hyde permit

Tony,

I have attached some of the information you need for the permit to this email, and I hope to have the rest for you soon. The attached should answer the questions about who and when land was purchase along with how much land. It has the book and page numbers, too. I'm working on the capacity numbers as I want to be sure I get these correct. Please verify you need the following:

- max height and width of windrows
- max height and width of finished compost storage
- total capacity

I'd like to ask you to clarify with me again exactly what needs to be included in the total capacity number. Is that for finished compost storage only? Finished compost plus in process compost? Just trying to get a clear understanding of what you need so I can work it up and get it to you.

Thanks,

Timothy Waters
Rose Acres Farms

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