

- By locating the expansion along the north side of the facility the product flow through the factory would also be negatively affected causing excessive amounts of material movements and travel distances. With an expansion along the north exterior wall, product would have to travel an average of 500 feet extra per part. This extra travel distance would translate into an additional three minutes per part added. With the increase in production volume this would significantly increase personnel cost and reduce production efficiency for employees to move parts the added travel distance.
- Other constraints would be that the current onsite parking and drive aisles would be further reduced by 40 parking stalls along the north wall. Access to the delivery and shipping docks, which are located on the north side of the building, would be extremely hindered causing large trucks to have to navigate through tight turns and parking lots. This truck traffic would pose a safety risk to employees and visitors, and risk property damage in this area. Employee and visitor on-site parking would also be reduced by approximately 80 spaces or one third of our current parking. This would require an alternative such as off-site parking or the building and operation of a parking structure on-site at an initial cost of \$3 million, as well as on-going maintenance, repair and operational costs.

3. Satellite Manufacturing Location – New Purchase or Rental Property - Local

An alternative option to expanding the existing Franklin facility would be to purchase or rent an additional manufacturing space offsite in the immediate area. There are a number of challenges with this option, which include the following constraints.

- By opening a manufacturing site in another location our industry regulators (FAA) and customers (Air Bus, Boeing, etc.) would require certification, validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process is a regulatory requirement that includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts Carlisle IT's >\$400 million in revenue over the life of the project at risk.
- Moving to a new location will put us in a higher risk category with the FAA, and we will need to
 - 1) recertify our facility and operations
 - 2) will be subject to more frequent principle inspector audits with the FAA for the next several years.
- Our FAA production approval holder status is assigned to this sites address, so moving locations will result in a full recertification, similar to what we went through in May (5 days of audits with a risk of issues being found). If we open another site, and retain this location, it will be less of an impact. If we extend production operations to that site, it will need to be added to our PMA certificate through the FAA. This will involve a certification audit at that location to demonstrate compliance to processes. The scope of that audit should be limited to those operations which are located in the new building.
- The utility and structural needs for our manufacturing operations such as electrical power, foundation thickness requirements, air and water utilities, and connection to company network and management systems are unique to the type of manufacturing that we perform. This makes it difficult for Carlisle IT to find the appropriate available location already constructed.

For example, there is one existing warehouse building available within the Franklin Industrial Park, however the building does not have the 12 inch reinforced floor or the 480 volt 3 phase electrical power needed to accommodate our manufacturing equipment.

- In 2014, Carlisle did an extensive search in the Franklin area to find a location to fit their needs. An appropriate location meeting Carlisle's needs and requirements was not found. The decision was made to invest in the existing facility.
- Added manufacturing time for products would be required to allow goods to flow back and forth through two separate locations, reducing efficiencies, disrupting customer delivery schedules and shipments and risking loss of business.
- There would also be an increase in overhead cost by having to staff multiple locations with redundant personnel and equipment. By having two manufacturing locations, the company would need to duplicate the production personnel, support, and management staff as well as the infrastructure needed such as computers, phones, offices, etc. The estimated additional overhead cost increase would be approximately \$6-8 million annually.
- Additional cost to purchase or rent another manufacturing facility that would meet our building requirements would be approximately \$750,000 - 1,000,000 annually.

4. Satellite Manufacturing Location – New Purchase or Rental Property - National

An alternative option to expanding the existing Franklin facility would be to purchase or rent an additional manufacturing space offsite in a different geographic area. There are a number of challenges with this option which include the following constraints.

- Carlisle IT would be at risk of losing employees who would be unable or unwilling to relocate to a new facility located in a different region. Carlisle IT would need to identify, hire, and train a significant amount of new personnel to sustain the business at a new facility location. Specific personnel resources such as skilled production workers, industry related engineering, and related aerospace industry personnel are not readily available which could cause complete loss of market share or >\$400 million in revenue for Carlisle IT over the life of the project.
- By opening a manufacturing site in another location our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts our current and future business at risk.
- The utility and structural needs for our manufacturing operations such as electrical power, foundation thickness requirements, air and water utilities, and connection to company network and management systems are unique to the type of manufacturing that we perform. This makes it difficult for Carlisle IT to find the appropriate available location already constructed. For example, there is one existing warehouse building available within the Franklin Industrial Park, however the building does not have the 12 inch reinforced floor or the 480 volt 3 phase electrical power needed to accommodate our manufacturing equipment.
- Carlisle's existing facility has a 3000 AMP electrical service and a 5" gas main to feed the needs of our equipment. The cost of upgrading an existing facility would exceed \$800,000 to have the infrastructure needed to meet the needs of the equipment being used for our processes. The

upgrades would take approximately 5-6 months to complete and trigger significant additional utility costs. The structural foundation modifications to reconfigure a newly-purchased facility for Carlisle's purposes could cost \$2 million or more. Full design of such modification would take 2-5 months, and construction would take a similar amount of time.

- Added manufacturing time for products would be required to allow goods to flow back and forth through two separate locations, reducing efficiencies, disrupting customer delivery schedules and shipments and risking loss of business.
- There would also be an increase in overhead cost by having to staff multiple locations with redundant personnel and equipment. By having two manufacturing locations, the company would need to duplicate the production personnel, support, and management staff as well as the infrastructure needed such as computers, phones, offices, etc. The estimated additional overhead cost increase would be approximately \$6-8 million annually.
- Additional cost to purchase or rent another manufacturing facility that would meet our building requirements would be approximately \$750,000 - 1,000,000 annually.

5. Satellite Manufacturing Location – Alternative CIT Location

Another option investigated was to expand manufacturing operations at another Carlisle IT owned manufacturing facility.

- After a survey of the nine other Carlisle IT manufacturing facilities, it was found that currently no other existing locations have spare manufacturing space that would meet Franklin's expansion requirements and needs. In addition, any additional land or property owned by Carlisle IT is previously allocated to other growth expansions.
- Carlisle IT would be at risk of losing employees who would be unable or unwilling to relocate to a new facility located in a different region. Carlisle IT would need to identify, hire, and train a significant amount of new personnel to sustain the business at a new facility location. Specific personnel resources such as skilled production workers, industry related engineering, and related aerospace industry personnel are not readily available which could cause complete loss of market share or >\$400 million in revenue for Carlisle IT over the life of the project
- By opening a manufacturing site in another location, our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to six months with no guarantee of approval, which puts our current and future business at risk.
- The utility and structural needs for our manufacturing operations such as electrical power, foundation thickness requirements, air and water utilities, and connection to company network and management systems are unique to the type of manufacturing that we perform. This makes it difficult for Carlisle IT to find the appropriate available location already constructed. For example, there is one existing warehouse building available within the Franklin Industrial Park, however the building does not have the 12 inch reinforced flooring or the 480 volt 3 phase electrical power needed to accommodate our manufacturing equipment.
- In 2014, Carlisle did an extensive search in the Franklin area to find a location to fit their needs. An appropriate location meeting Carlisle's needs and requirements was not found. The decision

was made to invest in the existing facility. Based on a cursory search that could be accommodated within the tight timeline presented by Carlisle's new customer demand, we have found no sites in the area that would accommodate the needs that have been fully developed and ready for a major expansion. A thorough new search would take at least 4 additional months and the cost of purchasing a new site would be approximately \$1-4 million (counting third party professional and brokerage services and internal staff costs). In the unlikely event that an appropriate location could be located, the location would certainly need to be upgraded and suited to Carlisle's particular needs, as well as certified for its customers, costing additional unavailable time and countless additional costs. Added manufacturing time for products would be required to allow goods to flow back and forth through two separate locations, reducing efficiencies, disrupting customer delivery schedules and shipments and risking loss of business.

- There would also be an increase in overhead cost by having to staff multiple locations with redundant personnel and equipment. By having two manufacturing locations, the company would need to duplicate the production personnel, support, and management staff as well as the infrastructure needed such as computers, phones, offices, etc. The estimated additional overhead cost increase would be approximately \$6-8 million annually.
- Additional cost to purchase or rent another manufacturing facility that would meet our building requirements would be approximately \$750,000 - 1,000,000 annually.

6. Relocate Entire Facility to another Location - Local

An option would be to relocate the entire facility to another location nearby in order to obtain the manufacturing space required at one single facility. The challenges with this option are similar to the other facility relocation alternatives, however the entire facility move could put at risk current customer demand and could result in the loss of the entire business or >\$700 million in sales for Carlisle IT.

- Given its unique features, the existing facility could take up to 2 years to find an appropriate buyer. The facility is expected to sell for approximately half its replacement cost. A new facility, including site development, would cost approximately \$15,000,000 and another additional \$2,000,000 to relocate employees, equipment and facilities. This would delay Carlisle's ability to meet its customers' demands by two years or longer. Carlisle would also lose approximately 2-3 months of production to make such a move, costing another \$1-2 million in production.
- Current machinery and equipment would have to be relocated to the new manufacturing facility. Production would have to be halted to accommodate the move--forgoing business and sales. In some instances, the cost of relocating the equipment would be greater than the cost of purchasing replacements, in which case Carlisle would have to re-purchase new equipment to replace abandoned but nearly new equipment.
- By opening a manufacturing site in another location, our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts our current and future business at risk.
- Carlisle IT has made a large investment in the Franklin facility to date with the latest factory expansion and building renovation being completed just this year. The financial impact

associated with selling the current facility, purchasing a new building or site, retrofitting the new facility and the cost of moving would be a large financial loss and threat to the very existence of the business.

7. Relocate Entire Facility to another Location - National

A final option would be to relocate the entire facility to a location out of WI in order to obtain the manufacturing space required at one single facility. The challenges with this option are similar to the other facility relocation alternatives however the entire facility move could put at risk current customer demand and result in the loss of the entire business or >\$700 million in sales for Carlisle IT.

- Carlisle IT would be at risk of losing employees who would be unable or unwilling to relocate to a new facility located in a different region. Carlisle IT would need to identify, hire, and train a significant amount of new personnel to sustain the business at a new facility location. Specific personnel resources such as skilled production workers, industry related engineering, and related aerospace industry personnel are not readily available which could cause complete loss of market share.
- This option would have large financial and business impact to not only Carlisle IT but the surrounding community. Our local vendors and service providers would be adversely affected by the facility move as well. \$3.5 million a year are contributed to local vendors and service providers around the Franklin community and relocating the facility would take this expenditure elsewhere. Also, Carlisle would cease to contribute \$350,000 per year for utilities and property taxes due to the move.
- By opening a manufacturing site in another location, our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts our current and future business at risk.
- Current machinery and equipment would have to be relocated to the new manufacturing facility, causing a halt of production and forgoing business and sales. In some instances, the cost of relocating the equipment would be greater than the cost of purchasing replacements, in which case Carlisle would have to re-purchase new equipment to replace abandoned but nearly new equipment. This puts at risk current customer demand and can result in the loss of significant market share.
- Carlisle IT has made a large investment in the Franklin facility to date with the latest factory expansion and building renovation being completed just this year. The financial impact associated with selling the current facility, purchasing a new building or site, retrofitting the new site and the cost of moving would be a large financial loss and threat to the very existence of the business.

Preferred Facility Expansion Alternative

The initial Franklin facility expansion concept included a 38,400 square foot building addition and the creation of more than 400 parking stalls on the east edge of the property that would have necessitated

the filling of more than 5.7 acres of wetland. Impacts to wetlands were then evaluated and minimized through a variety of strategic redesign efforts and alternative option reviews.

Carlisle IT removed ~90,000 square feet of parking from the northeast portion of the property. This reduced wetland impacts from 5.7 acres down to 3.6 acres.

Carlisle IT has identified a nearby satellite location for warehousing activities that can be leased to perform necessary storage and shipping and receiving functions, and, by leasing this space in lieu of undertaking additional expansion, the wetlands impact was reduced from 3.6 acres to 2.10-acres.

The preferred footprint for the building expansion, after off-site warehousing, would have been 32,000 square feet; however, the interior space was again reconfigured and minimized in order to reduce the building expansion footprint to 25,500 square feet. Parking originally contemplated along the east side of the building further impacting the wetlands also was significantly reduced to a single row of 90 degree stalls. Some parking spots were relocated to an area currently used for employee recreation along the south side of the building, and the remaining stalls were completely eliminated. Overall parking was reduced relative to existing conditions. The proposed driveway along the east side of the facility was changed from a two-way driveway to a one-way driveway allowing for a single driving lane. The eastern edge of the driveway will nearly match the grade with the wetland within only a few inches, so use of a retaining wall at the interface with the wetland will not reduce wetland impacts.

Carlisle also intends to operate additional shifts so that employee parking is spread over shifts, reducing peak parking demand at any single point in time. However, the 338 parking stalls now proposed in connection with this expansion (a reduction in parking relative to existing conditions) is the minimum necessary to meet City of Franklin code requirements and Carlisle employee and visitor demand.

After these adjustments, the proposed expansion is a 25,500 square foot addition to the current manufacturing building. The expansion will consist of a 150 ft long (west-east) by 170 ft wide (north-south) building extension expanding out to the east of the current manufacturing space. The building extension will tie into the existing building structure such as the north and south exterior walls. The current truck loading dock area located on the north-east corner of the facility will remain intact, however, a new roadway and parking lot extension will be created around the east end of the expansion area. The construction will consist of excavation and backfill, Site work including the new one-way driveway on the east side of the site along with Storm water control, Concrete foundations, Structural steel frame with masonry and insulated metal wall panels. Having exhausted various alternatives, only the driveway and single row of parking on the east side of the expansion area essential for safe and efficient site circulation will impact wetlands. As a result, the area of impacted wetlands has been reduced to 0.23-acres. The driveway has been reduced to the absolute minimum of less than 30' and approximately 15' for parking from the building edge to allow for parking on the east wall and a drive lane to get vehicles around the facility. We need space for parking and a drive aisle for the truck traffic to exit at the south entrance/exit point. The pavement and sub course for the driveway on the east side of the building is the feature that will directly impact the 0.23-acres of wetland. The materials used will consist of granular fill, compacted stone base with a binder and top course of asphalt.

In addition to minimizing the direct, physical amount of impacts to wetlands, the result of the design efforts have limited impacts to wetland areas that are relatively more degraded along the edge of the wetland. The western edge of the hardwood swamp located east of the facility has experienced a negative change in plant community structure (edge effects) resulting from incompatible adjacent land use. This includes tree mortality from altered hydrology, establishment of invasive species including common buckthorn, honeysuckle, and reed canary grass. These edge effects extend at least 10 feet into

the interior of the hardwood swamp. The proposed impacts range from approximately 10 to 32 feet east from the edge of existing pavement or about 20-25 feet into the interior of the wetland meaning that much of the of proposed impacts will be to wetlands that are relatively more degraded than the wetlands more interior. The wetland impact will also result in removal of only five trees of relative maturity (DBH of 8" or greater)--which Carlisle will replace pursuant to landscaping and natural resources plans to be approved by the City of Franklin.

Indirect effects to wetlands will be managed by using sediment and erosion control BMPs in accordance with the WDNR's technical standards. Specifically, this will include silt fence and hay bales to meet the best practices requirements for erosion control. This will also include installation and maintenance of orange construction fence to clearly delineate the limits of disturbance and avoid inadvertent encroachment into wetland areas during construction. Additionally, runoff water from impervious surface will be captured and diverted to a regional storm water facility.

To the extent possible, this will help to alleviate the recent increases in wetland hydrology resulting from increases in surrounding impervious surfaces. The increase in surrounding impervious surface and discharge of runoff water to wetland from surrounding properties appears to have increased hydrology and caused tree mortality. Carlisle IT, through storm water management, is helping to minimize these types of indirect effects.

The final facility expansion activity alternative is proposing to impact just 0.23-acres of hardwood swamp. This is the least amount of impacts to wetland via means determined to be practicable without foregoing the basic purpose and need of the project.

LEGAL DESCRIPTION PER KNIGHT/BARRY TITLE INSURANCE COMPANY COMMITMENT
NO. 784882, DATED 7-01-2015

PARCEL 1:

LOT 1, BLOCK 3, IN FRANKLIN INDUSTRIAL PARK, BEING A SUBDIVISION OF LANDS IN PART OF THE SOUTHEAST 1/4 AND THE SOUTH WEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 26, TOWN 5 NORTH, RANGE 21 EAST, CITY OF FRANKLIN, COUNTY OF MILWAUKEE, STATE OF WISCONSIN. EXCEPTING THEREFROM THAT PART CONVEYED TO THE CITY OF FRANKLIN BY WARRANTY DEED RECORDED SEPTEMBER 26, 1994 AS DOCUMENT NO. 7006131.

PARCEL 2:

LOT 1 AND LOT 2, BLOCK 3, IN FRANKLIN BUSINESS PARK, BEING A REDIVISION OF CERTIFIED SURVEY MAP NO. 4875, AND PART OF THE NORTHEAST 1/4 AND SOUTHEAST 1/4 OF THE NORTHWEST 1/4 AND THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4, THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THE NORTHEAST 1/4 AND THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 26, TOWN 5 NORTH, RANGE 21 EAST, IN THE CITY OF FRANKLIN, COUNTY OF MILWAUKEE, STATE OF WISCONSIN, AS CORRECTED BY SURVEYOR'S AFFIDAVIT OF CORRECTION RECORDED MARCH 30, 1994 AS DOCUMENT NO. 6928328 AND FRANKLIN BUSINESS PARK AFFIDAVIT OF CORRECTION RECORDED SEPTEMBER 19, 1994 AS DOCUMENT NO. 7003047.

ADDRESS: 5300 WEST FRANKLIN DRIVE, FRANKLIN, WI
TAX KEY NO. 931-0017-003

Introduction

Introduction to Carlisle

Carlisle Companies Incorporated is a globally diversified company that designs and manufactures products for a wide range of markets and industries. Segments of Carlisle Companies include the Construction Materials, Fluid Technologies, Food Service Products, Brake and Friction, and Interconnect Technologies. These divisions of Carlisle operate independently with dedicated management teams overseen by a President and Board of Directors.

Introduction to Carlisle Interconnect Technologies

Carlisle Interconnect Technologies (Carlisle IT) is one of the leading designers and manufacturers of high performance electrical and structural assemblies and related products for the commercial aerospace, military and defense, industrial, test and measurement, and medical industries. The Interconnect Technologies division has manufacturing and sales facilities located across North America, Europe, and Asia.

Carlisle Interconnect Technologies – Franklin, WI

The company originally known as Electronic Cable Specialists (ECS) was founded in 1984 providing high performance cable and wire assemblies for the aviation industry. In 1992, ECS built the Franklin, WI facility at 5300 W. Franklin Drive. As ECS quickly grew and evolved, the first on-site facility expansion took place in 1998. In 2009, ECS was acquired by Carlisle IT and has since become one of the largest facilities in the division with an additional facility expansion and renovation occurring in late 2015. The Carlisle IT Franklin facility now currently employs approximately 325 Manufacturing and Office staff and has approximately 110,000 square foot area under roof.

Activities performed on-site at Franklin include Manufacturing and Production, Engineering, Sales and Purchasing, Marketing, Finance, and Human Resources. The main industry served at the Carlisle IT Franklin location is the commercial aerospace market, which includes customers such as aircraft manufacturers, international and domestic airlines, industry suppliers and third party vendors. On-site production activities include CNC machining, sheet metal fabrication, mechanical and electrical assembly, wire and cable assembly, electrical testing, and shipping and distribution. The Franklin facility also maintains ISO 9001 Quality management and ISO 14001 Environment management certifications. These ISO certifications are lengthy, in-depth pre-qualification processes that many Carlisle customers require as pre-requisites to the manufacture of products for purchase.

Carlisle IT Franklin Impact on Community

With approximately 325 employees currently working on-site and calling the surrounding towns and cities home, Carlisle and its operations create a number of positive impacts for the local Franklin community, city and state. The current annual payroll spend at the Franklin facility is \$15 million, much of which makes its way back to the local economy. The Franklin facility employees utilize local businesses such as restaurants, stores, and

service vendors on a regular basis. Carlisle IT also regularly utilizes other local manufacturing, service, and material providers equaling over \$7 million contributed to area businesses annually. Additionally, Carlisle IT's operations in Franklin generate other revenue for the community, including utilities and taxes of approximately \$350,000 annually.

As the Franklin facility continues to grow, additional jobs and employment opportunities for the surrounding community also increase. Over the past year, the number of employees has risen 15% or 45 associates and is expected to grow another 10% to 15% over the next year. These additional jobs will consist of technical and skilled labor personnel, which will generate another \$2 million in payroll, spend annually.

Project Purpose and Need

Carlisle IT Franklin Facility Expansion

Over the past 5 years, Carlisle's Interconnect Technologies division has experienced significant increases in business and sales. In 2015, overall sales were up from 12 months prior, and the future demand continues to be strong with large growth opportunities in the commercial aerospace market. Much of this business demand increase in the industry is for the satellite communications system product line, which is exclusively supported by the Franklin, WI facility and is the main driver of the need to expand the facility. The predicted growth in sales at Carlisle IT Franklin is forecasted to increase from \$70 million in 2016 to \$105 million in 2017 and reaching \$190 million by 2019.

The proposed Franklin facility expansion is an on-site addition to the existing factory within the Franklin Industrial Park to increase manufacturing floor space. The additional floor space expansion is required to increase the number of manufacturing machines, CNC & Milling equipment, and additional production space to be able to meet the increased business demand and industry needs. Key equipment identified to support the manufacturing growth are three large format CNC milling machines, three small format CNC milling machines, one sheet metal brake press, one deburring machine, one paint booth, mechanical assembly area, and material storage racking. The new CNC milling machines will make up the majority of the expansion project financial investment and footprint totaling approximately \$7 million and 15,000 square feet. Each piece of equipment has a footprint of approximately 20'x20' with an additional need for workspace around it. The building code and City of Franklin require exiting and aisle ways, which also must be accommodated. The sheet metal processing equipment is approximately another \$1 million and 4,000 square feet; the paint booth is \$350,000 and 3,000 square feet.

A replacement drive aisle on the east side of the expanded building is essential for safe and efficient site circulation and to transition grade changes. In addition, while the overall on-site parking actually decreases, a single row of parking on the east side of the building is necessary, again, to facilitate grade changes and site circulation. However, the 338 parking stalls to be provided on-site post-expansion will not accommodate all of Carlisle's anticipated nearly 400 employees, not to mention additional visitors. By adjusting shift work and the number of employees onsite, we will be able to reduce the number of parking spaces provided. Less than ideal parking and creation of additional work shifts have been implemented to obtain more timely permits in order to start construction this November. Carlisle has determined how to function with less than adequate parking.

The expanded manufacturing floor space is critical to developing the proper manufacturing layout for the machines, equipment, and necessary support staff. The single drive aisle and parking row are the minimal necessary to provide for safe circulation and grade changes.

The land allotted to the proposed expansion was part of the original lot purchase by Electronic Cable Specialists (ECS) within the Franklin Industrial Park and was purchased under the assumption that the land could be developed.

Facility Expansion Detailed Description

Proposed Carlisle IT Franklin Facility Expansion —

The preferred footprint for the building expansion, after off-site warehousing, would have been 32,000 square feet; however, the interior space was again reconfigured and minimized in order to reduce the building expansion footprint to 25,500 square feet.

Parking originally contemplated along the east side of the building further impacting the wetlands also was significantly reduced to a single row of 90 degree stalls. The proposed driveway along the east side of the facility was changed from being a two-way driveway to a one-way driveway allowing for a single drive lane.

Carlisle also intends to operate in additional shifts so that employee parking is spread over shifts, reducing peak parking demand at any single point in time. However, the 338 parking stalls now proposed in connection with this expansion (a reduction in parking relative to existing conditions) is the minimum necessary to meet City of Franklin code requirements and Carlisle employee and visitor demand.

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As a result, the area of impacted wetlands has been reduced to 9,734 square feet. The driveway has been reduced to the absolute minimum of less than 30' and approximately 15' for parking from the building edge to allow for parking on the east wall and a drive lane to get vehicles around the facility. We need space for parking and a drive aisle for the truck traffic to exit at the south entrance/exit point. The pavement and sub course for the driveway on the east side of the building is the feature that will directly impact the 9,734 square feet of wetland. The materials used will consist of granular fill, compacted stone base with a binder and top course of asphalt.

The construction will take approximately 6 months with 2 months of design and permitting with the City and the State. This does not include the permit timing with the DNR or USACE. The proposed construction schedule will include a construction start date of November 28, 2016 and an estimated completion date of April 2017. The construction sequence will be as follows:

- Start FINAL CONSTRUCTION DETAILED Design 9/15/16
- Permitting with State/City 9/30/16 – 11/28/16
- Construction 11/28/16 – 4/15/17
 - Survey/layout
 - Site Prep/Erosion Control measures
 - Cut in new road in proposed 9700sf area in wetland

- Excavation for structure
- Foundations
- Super Structure
- MEPF work
- Finishes
- Owner Equipment

Proposed Wetland Impacts

Carlisle IT has conducted a practicable alternatives analysis and has concluded that there are no practicable alternatives that either completely avoid wetland impacts or further minimize wetland impacts beyond what is being proposed for the preferred alternative while still meeting the basic purpose and need of the project. Details regarding the efforts to avoid and minimize impacts to wetlands are included in the Practicable Alternatives Analysis. There are no proposed impacts to waterways. Indirect impacts to water quality during construction and post construction are being managed by complying with s. NR 151, Wis. Adm. Code.

To expand the existing facility, Carlisle IT is proposing a wetland fill of 9,734 square feet. The wetland cover type in the area where fill is being proposed is hardwood swamp.

Introduction

City Development

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service vendors on a regular basis. Carlisle IT also regularly utilizes other local manufacturing, service, and material providers equaling over \$7 million contributed to area businesses annually. Additionally, Carlisle IT's operations in Franklin generate other revenue for the community, including utilities and taxes of approximately \$350,000 annually.

As the Franklin facility continues to grow, additional jobs and employment opportunities for the surrounding community also increase. Over the past year, the number of employees has risen 15% or 45 associates and is expected to grow another 10% to 15% over the next year. These additional jobs will consist of technical and skilled labor personnel, which will generate another \$2 million in payroll, spend annually.

Project Purpose and Need

Carlisle IT Franklin Facility Expansion

Over the past 5 years, Carlisle's Interconnect Technologies division has experienced significant increases in business and sales. In 2015, overall sales were up from 12 months prior, and the future demand continues to be strong with large growth opportunities in the commercial aerospace market. Much of this business demand increase in the industry is for the satellite communications system product line, which is exclusively supported by the Franklin, WI facility and is the main driver of the need to expand the facility. The predicted growth in sales at Carlisle IT Franklin is forecasted to increase from \$70 million in 2016 to \$105 million in 2017 and reaching \$190 million by 2019.

The proposed Franklin facility expansion is an on-site addition to the existing factory within the Franklin Industrial Park to increase manufacturing floor space. The additional floor space expansion is required to increase the number of manufacturing machines, CNC & Milling equipment, and additional production space to be able to meet the increased business demand and industry needs. Key equipment identified to support the manufacturing growth are three large format CNC milling machines, three small format CNC milling machines, one sheet metal brake press, one deburring machine, one paint booth, mechanical assembly area, and material storage racking. The new CNC milling machines will make up the majority of the expansion project financial investment and footprint totaling approximately \$7 million and 15,000 square feet. Each piece of equipment has a footprint of approximately 20'x20' with an additional need for workspace around it. The building code and City of Franklin require exiting and aisle ways, which also must be accommodated. The sheet metal processing equipment is approximately another \$1 million and 4,000 square feet; the paint booth is \$350,000 and 3,000 square feet.

A replacement drive aisle on the east side of the expanded building is essential for safe and efficient site circulation and to transition grade changes. In addition, while the overall on-site parking actually decreases, a single row of parking on the east side of the building is necessary, again, to facilitate grade changes and site circulation. However, the 338 parking stalls to be provided on-site post-expansion will not accommodate all of Carlisle's anticipated nearly 400 employees, not to mention additional visitors. By adjusting shift work and the number of employees onsite, we will be able to reduce the number of parking spaces provided. Less than ideal parking and creation of additional work shifts have been implemented to obtain more timely permits in order to start construction this November. Carlisle has determined how to function with less than adequate parking.

The expanded manufacturing floor space is critical to developing the proper manufacturing layout for the machines, equipment, and necessary support staff. The single drive aisle and parking row are the minimal necessary to provide for safe circulation and grade changes.

The land allotted to the proposed expansion was part of the original lot purchase by Electronic Cable Specialists (ECS) within the Franklin Industrial Park and was purchased under the assumption that the land could be developed. Poor management of stormwater from adjacent developed sites resulted in pooling of stormwater onto the easternmost lot purchased by ECS, changing the hydrology of the site and feeding the wetlands created since 2008 that now must be impacted by Carlisle's proposed expansion.

Facility Expansion Detailed Description

Proposed Carlisle IT Franklin Facility Expansion —

The initial Franklin facility expansion concept included a 38,400 square foot building addition and the creation of well over 400 parking stalls on the east edge of the property that would have necessitated the filling of more than 5.7 acres of wetland. Impacts to wetlands were then evaluated and minimized through a variety of strategic redesign efforts and alternative option reviews.

Carlisle IT removed ~90,000 square feet of parking from the northeast portion of the property. This reduced wetland impacts from 5.7 acres down to 3.6 acres.

Carlisle IT identified a nearby satellite location for warehousing activities that can be leased to perform necessary storage and shipping and receiving functions. By leasing this space, in lieu of undertaking additional on-site expansion at the Franklin facility, the wetlands impact was reduced by 3.6 acres to 2.10 acres.

The preferred footprint for the building expansion, after off-site warehousing, would have been 32,000 square feet; however, the interior space was again reconfigured and minimized in order to reduce the building expansion footprint to 25,500 square feet. Parking originally contemplated along the east side of the building further impacting the wetlands also was significantly reduced to a single row of 90 degree stalls. Some parking spots were relocated to an area currently used for employee recreation along the south side of the building, and the remaining stalls were completely eliminated. Overall parking was reduced relative to existing conditions. The proposed driveway along the east side of the facility was changed from a two-way driveway to a one-way driveway allowing for a single driving lane. The eastern edge of the driveway will nearly match the grade with the wetland within only a few inches, so use of a retaining wall at the interface with the wetland will not reduce wetland impacts.

Carlisle also intends to operate in additional shifts so that employee parking is spread over shifts, reducing peak parking demand at any single point in time. However, the 338 parking stalls now proposed in connection with this expansion (a reduction in parking relative to existing conditions) is the minimum necessary to meet City of Franklin code requirements and Carlisle employee and visitor demand.

After these adjustments, the proposed expansion is a 25,500 square foot addition to the current manufacturing building. The expansion will consist of a 150 ft long (west-east) by 170 ft wide (north-south) building extension expanding out to the east of the current manufacturing space. The building extension will tie into the existing building structure such as the north and south exterior walls. The current truck loading dock area located on the north-east corner of the facility will remain intact, however, a new roadway and parking lot extension will be created around the east end of the expansion area. The construction will consist of excavation and backfill, Site work including the new one-way driveway on the east side of the site along with Storm water control, Concrete foundations, Structural steel frame with masonry and insulated metal wall panels. Having exhausted various alternatives, only the driveway and single row of parking on the east side of the expansion area essential for safe and efficient site circulation will impact wetlands. As a result, the area of impacted wetlands has been reduced to 0.23-acres. The driveway has been reduced to the absolute minimum of less than 30' and approximately 15'

for parking from the building edge to allow for parking on the east wall and a drive lane to get vehicles around the facility. We need space for parking and a drive aisle for the truck traffic to exit at the south entrance/exit point. The pavement and sub course for the driveway on the east side of the building is the feature that will directly impact the 0.23-acres of wetland. The materials used will consist of granular fill, compacted stone base with a binder and top course of asphalt.

The final facility expansion activity alternative is proposing to impact just 0.23-acres of hardwood swamp. This is the least amount of impacts to wetland via means determined to be practicable without foregoing the basic purpose and need of the project.

The construction will take approximately 6 months with 2 months of design and permitting with the City and the State. This does not include the permit timing with the DNR or USACE. The proposed construction schedule will include a construction start date of November 28, 2016 and an estimated completion date of April 2017. The construction sequence will be as follows:

- Start FINAL CONSTRUCTION DETAILED Design 9/15/16
- Permitting with State/City 9/30/16 – 11/28/16
- Construction 11/28/16 – 4/15/17
 - Survey/layout
 - Site Prep/Erosion Control measures
 - Cut in new road in proposed 9700sf area in wetland
 - Excavation for structure
 - Foundations
 - Super Structure
 - MEPF work
 - Finishes
 - Owner Equipment

Expeditious permitting and construction are essential to bring the expanded facility on line in time to manufacture and deliver product to meet customer demand.

Proposed Wetland Impacts

Carlisle IT has conducted a practicable alternatives analysis and has concluded that there are no practicable alternatives that either completely avoid wetland impacts or further minimize wetland impacts beyond what is being proposed for the preferred alternative while still meeting the basic purpose and need of the project. Details regarding the efforts to avoid and minimize impacts to wetlands are included in the Practicable Alternatives Analysis. There are no proposed impacts to waterways. Indirect impacts to water quality during construction and post construction are being managed by complying with s. NR 151, Wis. Adm. Code.

To expand the existing facility, Carlisle IT is proposing a wetland fill of 0.23-acres. The wetland cover type in the area where fill in being proposed is hardwood swamp.

Practicable Alternatives Analysis (PAA)

Carlisle IT has completed an analysis in an attempt to first completely avoid all wetland impacts and second to minimize wetland impacts to the fullest extent practicable while still meeting the basic purpose and need of the proposed project. Based on this analysis, Carlisle IT has determined that there are no practicable alternatives that would result in the ability to completely avoid all wetland impacts. After making this determination, Carlisle IT has designed the proposed project in a manner that minimizes wetland impacts to the fullest extent practicable. The following sections and paragraphs provide documentation and justifiable evidence on the various alternatives analyzed, why Carlisle IT disqualified certain alternatives, and how Carlisle IT has minimized impacts to wetlands.

Alternative Options

1. No Expansion Addition

The alternative of not building an expansion would result in Carlisle IT having to utilize outside contract manufacturing services to produce product which would result in >\$15 million in lost profit due to increased manufacturing cost over the next 5 years. In addition, in order to utilize outside contractors to manufacture product, Carlisle IT would need to validate, approve, and audit a new supplier's capability and performance and provide all necessary information to our end customers for approval and acceptance. This is a rigorous and time consuming process and, if the supplier is not approved by our customers, it could put the entire Franklin business operation at risk totaling the loss of >\$400 million in revenue for Carlisle IT over the life of the project.

2. Add Expansion on North Side of Current Building

An alternative option for expanding the facility on the current Franklin property would be to build the expansion along the north side exterior wall of the facility. This option would minimize wetland impacts more than the preferred alternative; however, it would create some major constraints for the business and would not allow proper utilization of the expanded manufacturing and building space.

- Major constraints with this proposal are the current building and expansion area limitations. The manufacturing machines and equipment currently in place at the Franklin facility consist of large heavy machinery that is not movable. Certain equipment such as CNC milling machines and sheet metal forming equipment have foundation and utility requirements that would prevent the movement of equipment around in the current building space or allow utilizing options such as a multiple floor manufacturing space. One example of this is the Franklin facility has just completed the install of a large gantry CNC machine center that is located along the north wall of the new manufacturing area. The required foundation for the large gantry machine measures 48 inches thick of reinforced concrete and cost \$300,000 to design and pour.
- Certain limitations due to not being able to move existing machines or equipment would make the expansion along the north wall a safety concern for construction crews, production personnel, and support staff. Key walk ways and product travel aisles would be impeded into the proposed expansion areas and would place personnel in close proximity to working equipment which could pose a hazard.

- By locating the expansion along the north side of the facility the product flow through the factory would also be negatively affected causing excessive amounts of material movements and travel distances. With an expansion along the north exterior wall, product would have to travel an average of 500 feet extra per part. This extra travel distance would translate into an additional three minutes per part added. With the increase in production volume this would significantly increase personnel cost and reduce production efficiency for employees to move parts the added travel distance.
- Other constraints would be that the current onsite parking and drive aisles would be further reduced by 40 parking stalls along the north wall. Access to the delivery and shipping docks, which are located on the north side of the building, would be extremely hindered causing large trucks to have to navigate through tight turns and parking lots. This truck traffic would pose a safety risk to employees and visitors, and risk property damage in this area. Employee and visitor on-site parking would also be reduced by approximately 80 spaces or one third of our current parking. This would require an alternative such as off-site parking or the building and operation of a parking structure on-site at an initial cost of \$3 million, as well as on-going maintenance, repair and operational costs.

3. Satellite Manufacturing Location – New Purchase or Rental Property - Local

An alternative option to expanding the existing Franklin facility would be to purchase or rent an additional manufacturing space offsite in the immediate area. There are a number of challenges with this option, which include the following constraints.

- By opening a manufacturing site in another location our industry regulators (FAA) and customers (Air Bus, Boeing, etc.) would require certification, validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process is a regulatory requirement that includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts Carlisle IT's >\$400 million in revenue over the life of the project at risk.
- Moving to a new location will put us in a higher risk category with the FAA, and we will need to
 - 1) recertify our facility and operations
 - 2) will be subject to more frequent principle inspector audits with the FAA for the next several years.
- Our FAA production approval holder status is assigned to this sites address, so moving locations will result in a full recertification, similar to what we went through in May (5 days of audits with a risk of issues being found). If we open another site, and retain this location, it will be less of an impact. If we extend production operations to that site, it will need to be added to our PMA certificate through the FAA. This will involve a certification audit at that location to demonstrate compliance to processes. The scope of that audit should be limited to those operations which are located in the new building.
- The utility and structural needs for our manufacturing operations such as electrical power, foundation thickness requirements, air and water utilities, and connection to company network and management systems are unique to the type of manufacturing that we perform. This makes it difficult for Carlisle IT to find the appropriate available location already constructed.

For example, there is one existing warehouse building available within the Franklin Industrial Park, however the building does not have the 12 inch reinforced floor or the 480 volt 3 phase electrical power needed to accommodate our manufacturing equipment.

- In 2014, Carlisle did an extensive search in the Franklin area to find a location to fit their needs. An appropriate location meeting Carlisle's needs and requirements was not found. The decision was made to invest in the existing facility.
- Added manufacturing time for products would be required to allow goods to flow back and forth through two separate locations, reducing efficiencies, disrupting customer delivery schedules and shipments and risking loss of business.
- There would also be an increase in overhead cost by having to staff multiple locations with redundant personnel and equipment. By having two manufacturing locations, the company would need to duplicate the production personnel, support, and management staff as well as the infrastructure needed such as computers, phones, offices, etc. The estimated additional overhead cost increase would be approximately \$6-8 million annually.
- Additional cost to purchase or rent another manufacturing facility that would meet our building requirements would be approximately \$750,000 - 1,000,000 annually.

4. Satellite Manufacturing Location – New Purchase or Rental Property - National

An alternative option to expanding the existing Franklin facility would be to purchase or rent an additional manufacturing space offsite in a different geographic area. There are a number of challenges with this option which include the following constraints.

- Carlisle IT would be at risk of losing employees who would be unable or unwilling to relocate to a new facility located in a different region. Carlisle IT would need to identify, hire, and train a significant amount of new personnel to sustain the business at a new facility location. Specific personnel resources such as skilled production workers, industry related engineering, and related aerospace industry personnel are not readily available which could cause complete loss of market share or >\$400 million in revenue for Carlisle IT over the life of the project.
- By opening a manufacturing site in another location our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts our current and future business at risk.
- The utility and structural needs for our manufacturing operations such as electrical power, foundation thickness requirements, air and water utilities, and connection to company network and management systems are unique to the type of manufacturing that we perform. This makes it difficult for Carlisle IT to find the appropriate available location already constructed. For example, there is one existing warehouse building available within the Franklin Industrial Park, however the building does not have the 12 inch reinforced floor or the 480 volt 3 phase electrical power needed to accommodate our manufacturing equipment.
- Carlisle's existing facility has a 3000 AMP electrical service and a 5" gas main to feed the needs of our equipment. The cost of upgrading an existing facility would exceed \$800,000 to have the infrastructure needed to meet the needs of the equipment being used for our processes. The

upgrades would take approximately 5-6 months to complete and trigger significant additional utility costs. The structural foundation modifications to reconfigure a newly-purchased facility for Carlisle's purposes could cost \$2 million or more. Full design of such modification would take 2-5 months, and construction would take a similar amount of time.

- Added manufacturing time for products would be required to allow goods to flow back and forth through two separate locations, reducing efficiencies, disrupting customer delivery schedules and shipments and risking loss of business.
- There would also be an increase in overhead cost by having to staff multiple locations with redundant personnel and equipment. By having two manufacturing locations, the company would need to duplicate the production personnel, support, and management staff as well as the infrastructure needed such as computers, phones, offices, etc. The estimated additional overhead cost increase would be approximately \$6-8 million annually.
- Additional cost to purchase or rent another manufacturing facility that would meet our building requirements would be approximately \$750,000 - 1,000,000 annually.

5. Satellite Manufacturing Location – Alternative CIT Location

Another option investigated was to expand manufacturing operations at another Carlisle IT owned manufacturing facility.

- After a survey of the nine other Carlisle IT manufacturing facilities, it was found that currently no other existing locations have spare manufacturing space that would meet Franklin's expansion requirements and needs. In addition, any additional land or property owned by Carlisle IT is previously allocated to other growth expansions.
- Carlisle IT would be at risk of losing employees who would be unable or unwilling to relocate to a new facility located in a different region. Carlisle IT would need to identify, hire, and train a significant amount of new personnel to sustain the business at a new facility location. Specific personnel resources such as skilled production workers, industry related engineering, and related aerospace industry personnel are not readily available which could cause complete loss of market share or >\$400 million in revenue for Carlisle IT over the life of the project
- By opening a manufacturing site in another location, our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to six months with no guarantee of approval, which puts our current and future business at risk.
- The utility and structural needs for our manufacturing operations such as electrical power, foundation thickness requirements, air and water utilities, and connection to company network and management systems are unique to the type of manufacturing that we perform. This makes it difficult for Carlisle IT to find the appropriate available location already constructed. For example, there is one existing warehouse building available within the Franklin Industrial Park, however the building does not have the 12 inch reinforced flooring or the 480 volt 3 phase electrical power needed to accommodate our manufacturing equipment.
- In 2014, Carlisle did an extensive search in the Franklin area to find a location to fit their needs. An appropriate location meeting Carlisle's needs and requirements was not found. The decision

was made to invest in the existing facility. Based on a the cursory search that could be accommodated within the tight timeline presented by Carlisle's new customer demand, we have found no sites in the area that would accommodate the needs that have been fully developed and ready for a major expansion. A thorough new search would take at least 4 additional months and the cost of purchasing a new site would be approximately \$1-4 million (counting third party professional and brokerage services and internal staff costs). In the unlikely event that an appropriate location could be located, the location would certainly need to be upgrade and suited to Carlisle's particular needs, as well as certified for its customers, costing additional unavailable time and countless additional costs. Added manufacturing time for products would be required to allow goods to flow back and forth through two separate locations, reducing efficiencies, disrupting customer delivery schedules and shipments and risking loss of business.

- There would also be an increase in overhead cost by having to staff multiple locations with redundant personnel and equipment. By having two manufacturing locations, the company would need to duplicate the production personnel, support, and management staff as well as the infrastructure needed such as computers, phones, offices, etc. The estimated additional overhead cost increase would be approximately \$6-8 million annually.
- Additional cost to purchase or rent another manufacturing facility that would meet our building requirements would be approximately \$750,000 - 1,000,000 annually.

6. Relocate Entire Facility to another Location - Local

An option would be to relocate the entire facility to another location nearby in order to obtain the manufacturing space required at one single facility. The challenges with this option are similar to the other facility relocation alternatives, however the entire facility move could put at risk current customer demand and could result in the loss of the entire business or >\$700 million in sales for Carlisle IT.

- Given its unique features, the existing facility could take up to 2 years to find an appropriate buyer. The facility is expected to sell for approximately half its replacement cost. A new facility, including site development, would cost approximately \$15,000,000 and another additional \$2,000,000 to relocate employees, equipment and facilities. This would delay Carlisle's ability to meet its customers' demands by two years or longer. Carlisle would also lose approximately 2-3 months of production to make such a move, costing another \$1-2 million in production.
- Current machinery and equipment would have to be relocated to the new manufacturing facility. Production would have to be halted to accommodate the move--forgoing business and sales. In some instances, the cost of relocating the equipment would be greater than the cost of purchasing replacements, in which case Carlisle would have to re-purchase new equipment to replace abandoned but nearly new equipment.
- By opening a manufacturing site in another location, our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts our current and future business at risk.
- Carlisle IT has made a large investment in the Franklin facility to date with the latest factory expansion and building renovation being completed just this year. The financial impact

associated with selling the current facility, purchasing a new building or site, retrofitting the new facility and the cost of moving would be a large financial loss and threat to the very existence of the business.

7. Relocate Entire Facility to another Location - National

A final option would be to relocate the entire facility to a location out of WI in order to obtain the manufacturing space required at one single facility. The challenges with this option are similar to the other facility relocation alternatives however the entire facility move could put at risk current customer demand and result in the loss of the entire business or >\$700 million in sales for Carlisle IT.

- Carlisle IT would be at risk of losing employees who would be unable or unwilling to relocate to a new facility located in a different region. Carlisle IT would need to identify, hire, and train a significant amount of new personnel to sustain the business at a new facility location. Specific personnel resources such as skilled production workers, industry related engineering, and related aerospace industry personnel are not readily available which could cause complete loss of market share.
- This option would have large financial and business impact to not only Carlisle IT but the surrounding community. Our local vendors and service providers would be adversely affected by the facility move as well. \$3.5 million a year are contributed to local vendors and service providers around the Franklin community and relocating the facility would take this expenditure elsewhere. Also, Carlisle would cease to contribute \$350,000 per year for utilities and property taxes due to the move.
- By opening a manufacturing site in another location, our industry and customers would require validation, approval, and auditing of all aspects of business operations performed on the new manufacturing site. This process includes creating detailed documentation alerting customers about the move, explanation of the need to open a new facility, the risks associated with new equipment, personnel, or manufacturing locations and identification of the actions that will be put in place to mitigate risks. This is a rigorous and time consuming alternative taking up to 6 months with no guarantee of approval, which puts our current and future business at risk.
- Current machinery and equipment would have to be relocated to the new manufacturing facility, causing a halt of production and forgoing business and sales. In some instances, the cost of relocating the equipment would be greater than the cost of purchasing replacements, in which case Carlisle would have to re-purchase new equipment to replace abandoned but nearly new equipment. This puts at risk current customer demand and can result in the loss of significant market share.
- Carlisle IT has made a large investment in the Franklin facility to date with the latest factory expansion and building renovation being completed just this year. The financial impact associated with selling the current facility, purchasing a new building or site, retrofitting the new site and the cost of moving would be a large financial loss and threat to the very existence of the business.

Preferred Facility Expansion Alternative

The initial Franklin facility expansion concept included a 38,400 square foot building addition and the creation of more than 400 parking stalls on the east edge of the property that would have necessitated

the filling of more than 5.7 acres of wetland. Impacts to wetlands were then evaluated and minimized through a variety of strategic redesign efforts and alternative option reviews.

Carlisle IT removed ~90,000 square feet of parking from the northeast portion of the property. This reduced wetland impacts from 5.7 acres down to 3.6 acres.

Carlisle IT has identified a nearby satellite location for warehousing activities that can be leased to perform necessary storage and shipping and receiving functions, and, by leasing this space in lieu of undertaking additional expansion, the wetlands impact was reduced from 3.6 acres to 2.10-acres.

The preferred footprint for the building expansion, after off-site warehousing, would have been 32,000 square feet; however, the interior space was again reconfigured and minimized in order to reduce the building expansion footprint to 25,500 square feet. Parking originally contemplated along the east side of the building further impacting the wetlands also was significantly reduced to a single row of 90 degree stalls. Some parking spots were relocated to an area currently used for employee recreation along the south side of the building, and the remaining stalls were completely eliminated. Overall parking was reduced relative to existing conditions. The proposed driveway along the east side of the facility was changed from a two-way driveway to a one-way driveway allowing for a single driving lane. The eastern edge of the driveway will nearly match the grade with the wetland within only a few inches, so use of a retaining wall at the interface with the wetland will not reduce wetland impacts.

Carlisle also intends to operate additional shifts so that employee parking is spread over shifts, reducing peak parking demand at any single point in time. However, the 338 parking stalls now proposed in connection with this expansion (a reduction in parking relative to existing conditions) is the minimum necessary to meet City of Franklin code requirements and Carlisle employee and visitor demand.

After these adjustments, the proposed expansion is a 25,500 square foot addition to the current manufacturing building. The expansion will consist of a 150 ft long (west-east) by 170 ft wide (north-south) building extension expanding out to the east of the current manufacturing space. The building extension will tie into the existing building structure such as the north and south exterior walls. The current truck loading dock area located on the north-east corner of the facility will remain intact, however, a new roadway and parking lot extension will be created around the east end of the expansion area. The construction will consist of excavation and backfill, Site work including the new one-way driveway on the east side of the site along with Storm water control, Concrete foundations, Structural steel frame with masonry and insulated metal wall panels. Having exhausted various alternatives, only the driveway and single row of parking on the east side of the expansion area essential for safe and efficient site circulation will impact wetlands. As a result, the area of impacted wetlands has been reduced to 0.23-acres. The driveway has been reduced to the absolute minimum of less than 30' and approximately 15' for parking from the building edge to allow for parking on the east wall and a drive lane to get vehicles around the facility. We need space for parking and a drive aisle for the truck traffic to exit at the south entrance/exit point. The pavement and sub course for the driveway on the east side of the building is the feature that will directly impact the 0.23-acres of wetland. The materials used will consist of granular fill, compacted stone base with a binder and top course of asphalt.

In addition to minimizing the direct, physical amount of impacts to wetlands, the result of the design efforts have limited impacts to wetland areas that are relatively more degraded along the edge of the wetland. The western edge of the hardwood swamp located east of the facility has experienced a negative change in plant community structure (edge effects) resulting from incompatible adjacent land use. This includes tree mortality from altered hydrology, establishment of invasive species including common buckthorn, honeysuckle, and reed canary grass. These edge effects extend at least 10 feet into

the interior of the hardwood swamp. The proposed impacts range from approximately 10 to 32 feet east from the edge of existing pavement or about 20-25 feet into the interior of the wetland meaning that much of the of proposed impacts will be to wetlands that are relatively more degraded than the wetlands more interior. The wetland impact will also result in removal of only five trees of relative maturity (DBH of 8" or greater)--which Carlisle will replace pursuant to landscaping and natural resources plans to be approved by the City of Franklin.

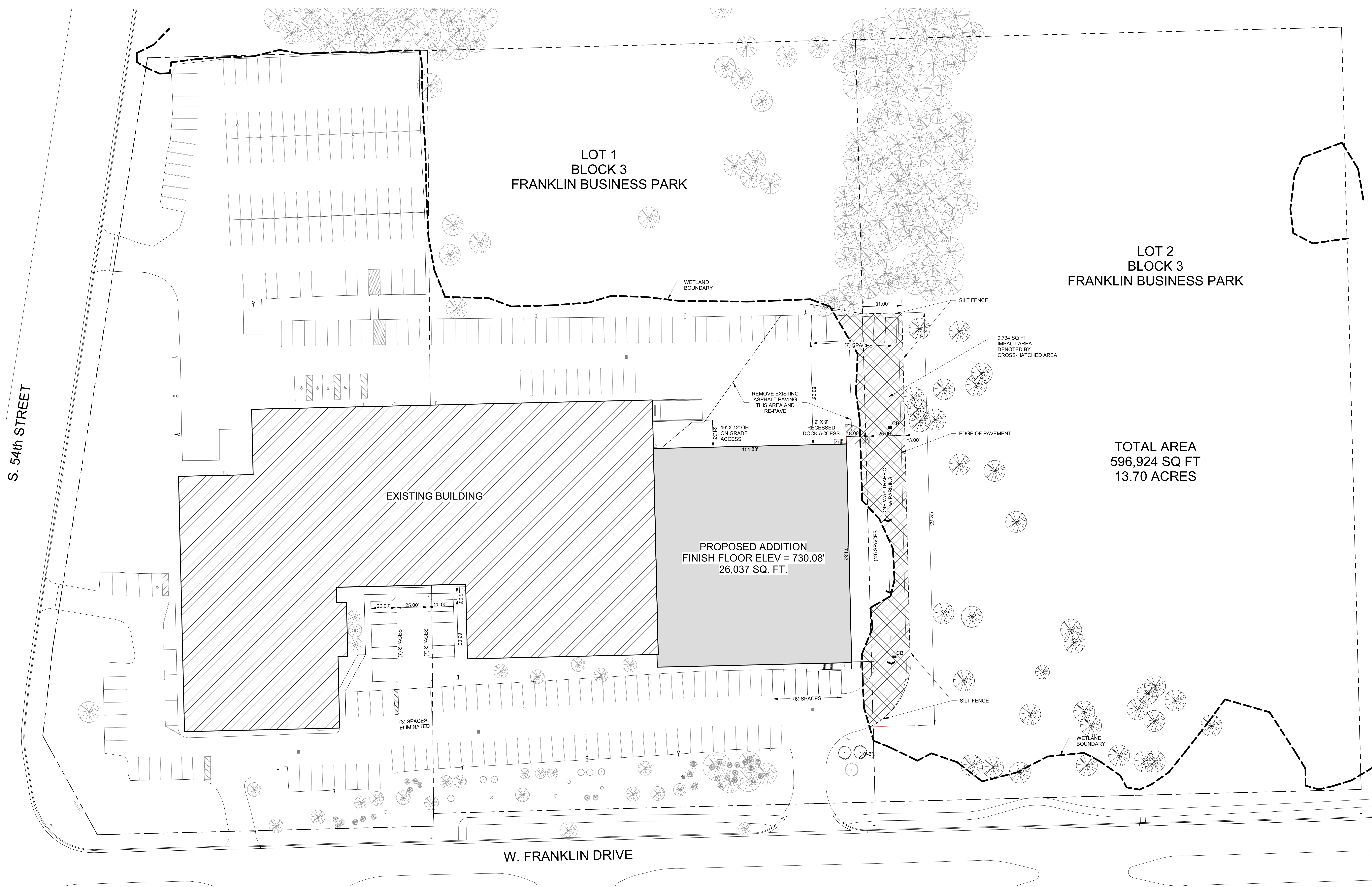
Indirect effects to wetlands will be managed by using sediment and erosion control BMPs in accordance with the WDNR's technical standards. Specifically, this will include silt fence and hay bales to meet the best practices requirements for erosion control. This will also include installation and maintenance of orange construction fence to clearly delineate the limits of disturbance and avoid inadvertent encroachment into wetland areas during construction. Additionally, runoff water from impervious surface will be captured and diverted to a regional storm water facility.

To the extent possible, this will help to alleviate the recent increases in wetland hydrology resulting from increases in surrounding impervious surfaces. The increase in surrounding impervious surface and discharge of runoff water to wetland from surrounding properties appears to have increased hydrology and caused tree mortality. Carlisle IT, through storm water management, is helping to minimize these types of indirect effects.

The final facility expansion activity alternative is proposing to impact just 0.23-acres of hardwood swamp. This is the least amount of impacts to wetland via means determined to be practicable without foregoing the basic purpose and need of the project.

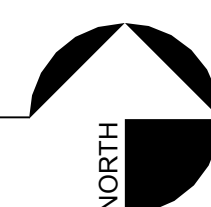


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SITE PLAN

SCALE: 1" = 30'-0"



PARKING SCHEDULE		
Existing		
279	9' x 18'	
7	9' x 18' (5' AISLE)	ADA VAN ACCESSIBLE PARKING SPACE
4	10' x 20' (Parallel Space)	
Existing: 290		
Phase 1B' Building		
48	9' x 18'	
Phase 1B' Building: 48		
Parking Spaces Total: 338		



Results you can rely on

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October 3, 2016

Steve Jastrow
Carlisle Interconnect Technologies Inc.
5300 W Franklin Drive
Franklin, WI 53132

Subject: **Carlisle IT Natural Resource Protection Plan (NRPP)**
5300 W Franklin Drive, Franklin, WI
TRC Project Number 255682
Submitted October 4, 2016

Dear Mr. Jastrow,

As part of the Carlisle IT Franklin Facility Expansion approval process, TRC Environmental Corporation (TRC) has prepared this Natural Resource Protection Plan (NRPP) for the property located at 5300 West Franklin Drive, City of Franklin, Milwaukee County, Wisconsin (Figure 1, Appendix A). The purpose of the NRPP is to identify and map natural resource features that are defined and protected by the City of Franklin's Unified Development Ordinance (UDO), and provide mitigation measures where necessary.

The property is located in Section 26, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin. The property is located in the zoning district Planned Development District (PDD). Mr. Steve Jastrow, Director of Operations of this property, may be reached at the following phone number: (414) 377-8733.

Ron Londré and Amanda Larsen of TRC conducted a field assessment on May 11 and 13, 2016 to determine whether natural resources as defined by the City of Franklin's Unified Development Ordinance (UDO) were present on the property. As defined by the UDO, natural resource features include steep slopes, mature woodlands, young woodlands, lakes, ponds, streams, shore buffers, floodplains, wetlands, and wetland buffers. Each feature is defined in the UDO, along with their respective protection standards.

Based on the field assessment, it was determined that wetland, wetland buffer, wetland setback, and mature forest areas are associated with the project site (Refer to Figure 2 NRPP Sheet in Appendix A).

A wetland delineation conducted by Wisconsin Department of Natural Resources (WDNR) Assured Wetland Delineator Ron Londré (May 2016) determined that wetland habitat is located on much of the unimproved portions of the property. The wetland delineation report is included in Appendix B.

Tables 15-3.0503 from the UDO (Appendix C) was used to calculate the total acres of land in each natural resource feature and the acres of land required to be preserved based on the UDO's protection standards. Also included in Appendix C are the Site Intensity Calculations (Table 15-3.0504) for the property, and the NRPP Checklist. Site photographs are included in Appendix D for additional reference.

Existing Natural Resources

The 13.70-acre (596,924 square feet) parcel currently contains one building with associated driveways, parking areas, landscaped areas, one mature hardwood forest, one wetland, a 30 foot wetland buffer, a 50 foot wetland setback, one open water (pond), and a 75 foot open water buffer. Additional parking areas, impervious surfaces, and a building expansion are being proposed for this site.

Steep Slopes

There are no steep slopes, as defined by the UDO, located on the property.

Lakes and Ponds

There are is one pond located on the property. The UDO defines ponds as any body of water less than or equal to two acres in size as measured by shoreline at its maximum condition rather than permanent pool condition. The pond on the property is 0.09-acre (3,929 square feet).

Streams

There are no streams located on the property.

Shore Buffers

Shore buffers include the undisturbed land area within 75 feet landward of the ordinary high water mark (OHWM) of all navigable waters (lakes, ponds, stream) and parallel to that OHWM. The shore buffer associated with the pond is 0.6-acre (24,595 square feet).

Floodplains/Floodways/Floodlands

There are no floodplains/floodways/floodlands located on the property.

Woodlands

One mature woodland occurs on the property. The UDO defines mature woodlands as "an area or stand of trees whose total combined canopy covers an area of one (1.0) acre or more and at least fifty (50) percent of which is composed of canopies of trees having a diameter at breast height (DBH) of at least ten (10) inches; or any grove consisting of eight (8) or more individual trees having a DBH of at least twelve (12) inches whose combined canopies cover at least fifty (50) percent of the area encompassed by the grove."

This 5.30-acres (230,860 square feet) mature woodland is a part of a larger woodland area that extends outside the property boundary (total mature woodland is estimated to be 7.02-acres (305,791 square feet), as determined by aerial photography interpretation). The mature woodland boundary was determined by using aerial photography to interpret the lateral extent of foliage (drip line) of the continuous tree canopy (see NRPP Sheet in Appendix A and photos in Appendix D).

The mature woodland associated with this property consists of bur oak (*Quercus macrocarpa*), white oak (*Quercus alba*), swamp white oak (*Quercus bicolor*), red oak (*Quercus rubra*), pin oak (*Quercus palustris*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), red maple (*Acer rubrum*), shagbark hickory (*Carya ovata*), and American basswood (*Tilia americana*) in the tree layer with American hornbeam (*Carpinus caroliniana*), Eastern hophornbeam (*Ostrya virginiana*), and common buckthorn (*Rhamnus cathartica*) in the shrub layer.

Individual trees, with a DBH \geq 8 inches within the study area, located east of the existing facility in the general area where the expansion is being proposed were identified and measured by David J. Frank Landscaping and surveyed by Terratec Engineering, LLC on July 18 and 25, 2016.

There are a total of 15 trees mature trees within 25 feet of the proposed impact area. Of these 15 trees, five (5) trees are located within the proposed impact area.

There are no young woodlands present on site. The UDO defines a young woodland as "An area or stand of trees whose total combined canopy covers an area of one-half (0.50) acre or more and at least fifty (50) percent of which is composed of canopies of trees having a diameter at breast height (DBH) of at least (3) three inches."

Wetlands and Shoreland Wetlands

One wetland is located on the property, totaling 6.44-acres (280,567 square feet). A full site wetland delineation was completed by TRC (Ron Londre, WDNR Assured Delineator and Amanda Larsen) on May 11 and 13, 2016 (Wetland Delineation Report, Appendix B). This wetland complex is comprised of shallow marsh, hardwood swamp (mature), and shrub-carr habitat types. This area is depicted on the NRPP sheet (Appendix A). Based on current observations, a prior wetland delineation conducted in 2008, and a review of historical aerial imagery, the wetland appears to have grown substantially. The current extent of wetland appears to be a result of drainage management within the industrial park.

Wetland Buffers (30 feet)

There is one wetland buffer, associated with the wetland on this property. A total of 0.63-acre (27,373 square feet) of the 30 foot buffer is located within the property (see NRPP Sheet in Appendix A). Portions of the wetland buffer extend either onto impervious surface or off the property; these portions of the buffer are not included in the calculated area of buffer. Wetland buffers are defined as the undisturbed land area (including undisturbed natural vegetation) within 30 feet landward of the delineated wetland boundary parallel to that boundary.

Wetland Setbacks (50 feet)

There is one wetland setback (which includes the area in the wetland buffer), associated with the wetland on this property. A total of 0.75-acre (32,806 square feet) of the 50 foot setback is located within the property (Refer to NRPP Sheet in Appendix A). Portions of the wetland setback extend either onto impervious surface or off the property; these portions of the setback are not included in the calculated setback area. Wetland setbacks are defined as all of that landward land area defined by the minimum required horizontal setback distance of 50 feet from a delineated wetland boundary.

Proposed Natural Resources Impacts and Protection

As stated above a mature woodland, wetland, wetland buffer, wetland setback, pond, and shore buffer are located on the property.

Woodlands

According to the City of Franklin's UDO, mature woodlands carry a 70% protection standard, and mitigation is permitted for parcels zoned as Industrial. A total of 0.34-acre (14,810 square feet) of woodland impact is proposed, which is within the amount allowed by the UDO.

Wetlands and Shoreland Wetlands

Wetlands carry a 100% protection standard; however, mitigation is allowed in nonresidential areas. A total of 0.23-acre of wetland impact is proposed. A Natural Resource Special Exemption Application will be submitted to the City of Franklin for proposed impacts. A wetland fill permit application has also been submitted to WDNR and the U.S. Army Corps of Engineers dated September 21, 2016.

Wetland Buffers (30 feet)

Wetland buffers carry a 100% protection standard; however, mitigation is allowed in nonresidential areas. A total of 0.12-acre (5,227 square feet) of wetland buffer impact is proposed. A Natural Resource Special Exemption Application will be submitted to the City of Franklin for proposed impacts.

Wetland Setback (50 feet)

Wetland setbacks carry a 100% protection standard; however, mitigation is allowed in nonresidential areas. A total of 0.13-acre (5,663 square feet) of wetland setback impact is proposed (which also includes the acreage of the 30 feet Wetland Buffer noted above). A Natural Resource Special Exemption Application will be submitted to the City of Franklin for proposed impacts.

The total unadjusted natural resource protection land is 13.77-acres (599,821 square feet). Due to overlapping natural resources the adjusted natural resource protection land is 6.43-acres (280,091 square feet) (see Table 15-3.0503 in Appendix C).

MITIGATION

To offset the proposed 0.23-acre impact to the wetland and 0.13-acre impact to the wetland buffer/setback, onsite mitigation is planned in the form of natural area enhancements outlined below. Natural area enhancements will be conducted within the mature woodland, wetland, and buffer areas as outlined on Figure 3 (Appendix E). This mitigation is being offered at a ratio of more than 14:1.

Invasive shrub management and monitoring is proposed within the 4.92-acre (214,315 square feet) mature woodland for a period of three (3) years. Common buckthorn and honeysuckle are the most abundant of the invasive shrubs within the understory. These invasive shrubs will be cut and the stumps will be treated with herbicide. Shrubs may be cut using a hand held brush cutter or chainsaw and stumps will be treated immediately following cutting with herbicide. Shrubs in wetland areas should only be treated with aquatic approved herbicides; label instructions will be followed for all treatment applications.

Common reed grass, *Phragmites australis*, an invasive grass, is present in the northwestern portion of the property along the wetland edge (~0.16-acre). Management and monitoring is proposed for a period of three (3) years. *Phragmites* will be managed using an aquatic approved herbicide, following label instructions. In the third year following annual treatment in the areas where *Phragmites* is treated, a native seed mix will be installed. A nursery specializing in native seed will be consulted for design and purchase of the seed mix. Examples of appropriate species that may be seeded include switch grass, blue joint grass, Virginia wild rye grass, New England aster, purple stem aster, swamp milk weed, mountain mint, boneset, and blue vervain.

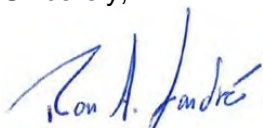
The wetland will be further enhanced by planting native trees in the area north of the existing building and parking area. Up to 50 saplings/bare root trees will be planted. Native trees tolerant of wetland conditions such as swamp white oak, silver maple, and red maple will be planted.

Wetland buffer will be enhanced through the seeding of native vegetation in the area between the parking lot and wetland in the northern portion of the property (~0.09-acres). This area is currently mowed turf grass. The buffer area will need to be prepared prior to seeding. This may be conducted by herbicide application (at least two applications recommended, using an aquatic approved herbicide given the close proximity to the wetland) or shading of the vegetation. Native species should be seeded in the spring or fall following site preparation. A nursery specializing in native seed will be consulted for design and purchase of the seed mix. Examples of appropriate species that may be seeded include New England aster, purple coneflower, wild bergamot, mountain mint, yellow coneflower, sweet black-eyed Susan, Prairie dock, little bluestem, big bluestem, Indian grass, Canada wild rye, and switch grass.

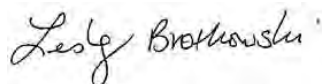
CLOSING

We appreciate the opportunity to work with you on this project. If you have any questions or comments concerning this report, please contact me at 262-901-2139 or by e-mail at rlondre@trcsolutions.com.

Sincerely,



Ron Londré, PWS
Senior Ecologist



Lesley Brotkowski
Senior Ecologist

Attachments:

- Appendix A: Figure 1 – Site Location Map
- Figure 2 – NRPP
- Appendix B: Wetland Delineation Report
- Appendix C: Table 15-3.0503
- Table 15-3.0504
- NRPP Checklist
- Appendix D: Site Photos
- Appendix E: Figure 3 – Mitigation Map


APPENDIX A

Figure 1 – Site Location Map

Figure 2 – NRPP

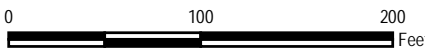



LEGEND

STUDY AREA

NOTES

1. BASE MAP IMAGERY FROM MILWAUKEE COUNTY LAND INFORMATION OFFICE, 2015.



1" = 100'
1:1,200


PROJECT: CARLISLE INTERCONNECT TECHNOLOGIES, INC. 5300 WEST FRANKLIN DRIVE FRANKLIN, WISCONSIN			
TITLE: SITE LOCATION MAP			
DRAWN BY: SUENICHT R		PROJ NO.: 255682	
CHECKED BY: LONDRE R		FIGURE 1	
APPROVED BY: LONDRE R			
DATE: SEPTEMBER 2016			
		150 North Patrick Blvd., Suite 180 Brookfield, WI 53045 Phone: 262.879.1212 www.trcsolutions.com	
FILE NO.:		255682-014.mxd	

Table 15-3.0503 Worksheet for the Calculation of Natural Resource Protection Land				
Natural Resource Feature	Zoning District Type: Non-Residential (b) Protection Standard (%)	Area of Resource in Study Area (acres)	Protection Requirement (acres)	Area of Proposed Disturbance in Study Area (acres)
Steep Slopes:				
10 - 19%	40%	0.00	0.00	0.00
20 - 30%	70%	0.00	0.00	0.00
> 30%	80%	0.00	0.00	0.00
Woodlands & Forests:				
Mature	70%	5.30	3.71	0.34
Young	50%	0.00	0.00	0.00
Lakes & Ponds	100%	0.09	0.09	0.00
Streams	100%	0.00	0.00	0.00
Shore Buffer	100%	0.56	0.56	0.00
Floodplains/Floodlands	100%	0.00	0.00	0.00
Wetland Buffers (30')	100%	0.63	0.63	0.12
Wetland Setback (50')*	100%	0.75	0.75	0.13
Wetlands & Shoreland Wetlands	100%	6.44	6.44	0.23

* The 50' Wetland Setback also includes the land within the 30' Wetland Buffer.

The total unadjusted natural resource protection land is 13.77 acres; however, the mature woodland, wetland, wetland buffer, wetland setback, pond, and shore buffer overlap covers 7.34 acres. Due to overlapping natural resources, the adjusted natural resource protection land is 6.43 acres.

Trees Over 8" DBH Within 25' of Proposed Improvement			
Tree ID	Species	DBH in Inches	To Be Removed
AE-01	American elm	8.5	Yes
AE-02	American elm	8.5	No
BO-07	bur oak	34	Yes
PO-01	pin oak	11	Yes
SB-03	shagbark hickory	14.5	No
SWO-02	swamp white oak	18	No
SWO-03	swamp white oak	10	No
SWO-04	swamp white oak - stem 1	18	No
SWO-04	swamp white oak - stem 2	20	No
SWO-06	swamp white oak	8.5	Yes
WO-01	white oak	24	Yes
WO-05	white oak	16	No

LEGEND

TREES OVER 8" DBH WITHIN 25' OF PROPOSED IMPROVEMENT

SITE LAYOUT

TOPOGRAPHIC CONTOURS (1' INTERVAL)

RIGHT OF WAYS

MATURE WOODLAND

TRC DELINEATED WETLAND

OPEN WATER (POND)

30' WETLAND BUFFER

50' WETLAND BUILDING SETBACK

75' SHORE BUFFER

AREA OF PROPOSED DISTURBANCE

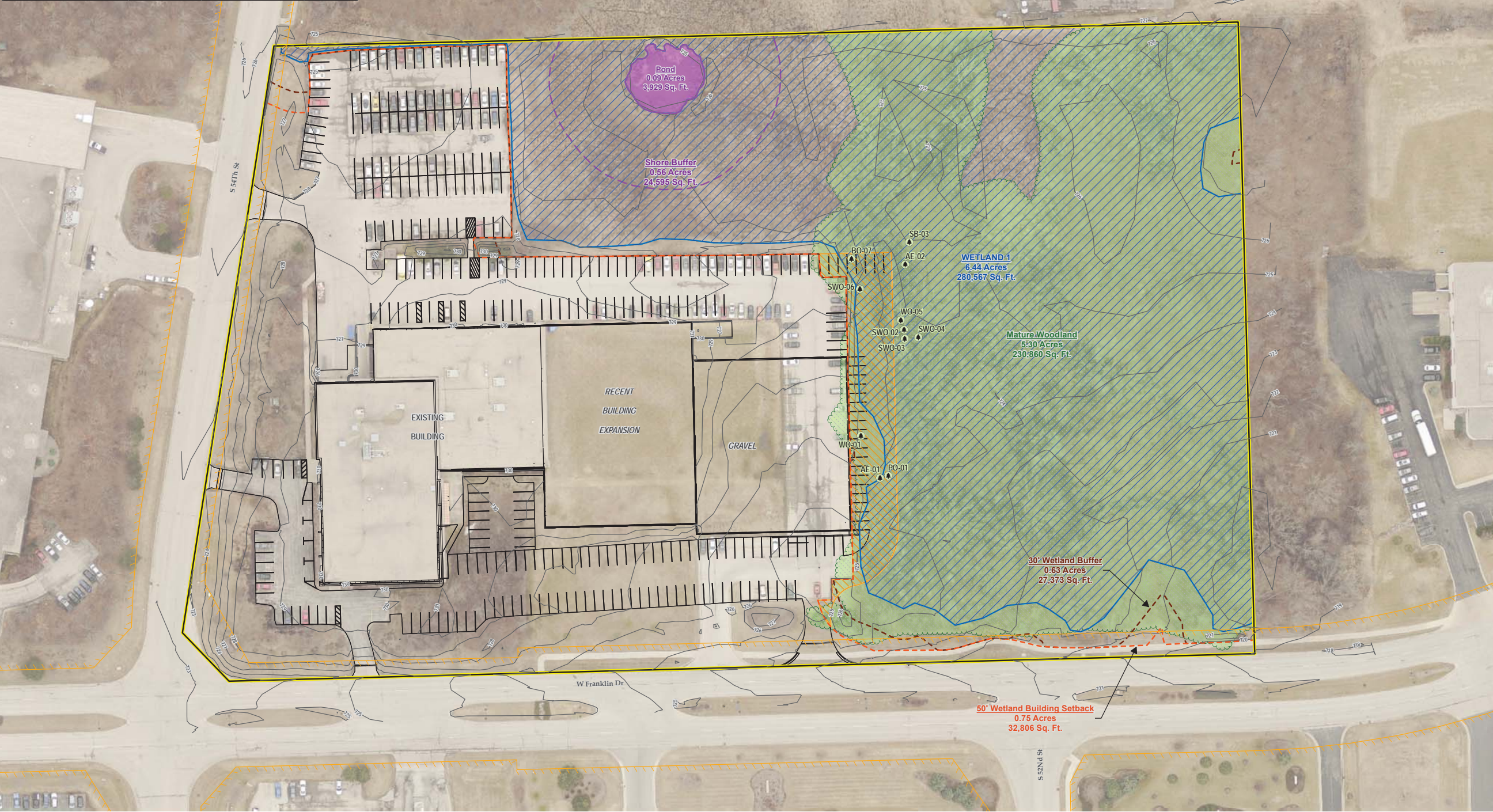
STUDY AREA

- NOTES
1. BASE MAP IMAGERY FROM MILWAUKEE COUNTY LAND INFORMATION OFFICE, 2015.

2. PROPERTY BOUNDARY, CONTOURS PROPOSED DEVELOPMENT AREAS DIGITIZED FROM SITE PLAN PROVIDED BY TerraTec ENGINEERING, LLC (MAY 2016).

3. RIGHT OF WAYS ACQUIRED FROM WISCONSIN STATE CARTOGRAPHER'S OFFICE STATEWIDE PARCEL LAYER, LOCATIONS ARE APPROXIMATE.

4. WETLAND DELINEATED BY RON LONDRE OF TRC IN MAY 2016.



0 50 100 Feet

1" = 50' 1:500

NTS

PROJECT: CARLISLE INTERCONNECT TECHNOLOGIES, INC.
5300 WEST FRANKLIN DRIVE
FRANKLIN, WISCONSIN

TITLE: NATURAL RESOURCE PROTECTION PLAN
CARLISLE IT FACILITY EXPANSION

DRAWN BY: RSUEMNIHT PROJ. NO.: 255682

CHECKED BY: RLONDRE

APPROVED BY: RLONDRE

DATE: SEPTEMBER 2016

FIGURE 2

150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.: 255682-013.mxd

APPENDIX B

Wetland Delineation Report

WETLAND DELINEATION REPORT

**Carlisle Interconnect
5300 W. Franklin Blvd
Franklin, Wisconsin**

June 7, 2016

TRC Project No: 255682.0000

Prepared For:

JP Cullen
13040 West Lisbon Road, Suite 900
Brookfield, Wisconsin 53005

Prepared By:

Ron Londré, PWS
TRC Environmental Corporation
150 N. Patrick Blvd., Suite 150
Brookfield, Wisconsin 53045



TABLE OF CONTENTS

	Page No.
1.0 INTRODUCTION	1
1.1 STATEMENT OF QUALIFICATIONS	1
1.2 AGENCY REGULATORY AUTHORITY.....	2
2.0 METHODS	2
2.1 OFF-SITE REVIEW.....	3
2.2 ON-SITE FIELD INVESTIGATION	3
3.0 RESULTS	4
3.1 OFF-SITE REVIEW	4
3.2 ON-SITE FIELD INVESTIGATION	5
3.2.1 <i>Site Description</i>	5
3.2.2 <i>Uplands</i>	5
3.2.3 <i>Wetlands</i>	5
3.2.4 <i>Other Aquatic Resources</i>	7
3.2.5 <i>Professional Opinion On Wetland Susceptibility Per NR 151</i>	7
4.0 CONCLUSIONS	7
5.0 REFERENCES	9
Appendices	
Appendix A: FIGURES	
Appendix B: ANTECEDENT PRECIPITATION DATA / WETS ANALYSIS	
Appendix C: WETLAND DELINEATION MAP	
Appendix D: SITE PHOTOGRAPHS	
Appendix E: WETLAND DETERMINATION DATA FORMS	
Appendix F: PROFESSIONAL OPINION ON WETLAND SUSCEPTIBILITY	

1.0 INTRODUCTION

On behalf of JP Cullen, TRC Environmental Corporation (TRC) conducted a wetland delineation within a designated Study Area at 5300 W. Franklin Blvd (Figure 1, Appendix A). The Study Area was approximately 14 acres and located in Section 26, Township 5 North, Range 21 East, in the City of Franklin, Milwaukee County, Wisconsin.

Landowner's Name and Contact Information:

Carlisle Interconnect Technologies, Inc.
5300 W Franklin Drive
Franklin, Wisconsin 53132

The purpose of this wetland delineation was to determine the current location and extent of wetlands located within the designated Study Area for the proposed expansion of the Carlisle Interconnect manufacturing facility. Our study is presented here in terms of methodology, results, and conclusions.

The wetland delineation field investigation was conducted by TRC scientists Ron Londré (WDNR Assured Delineator), and Amanda Larsen on May 11, 2016 and May 13, 2016. Ron Londré was the lead investigator and is the author of this report.

1.1 Statement of Qualifications

TRC has extensive experience managing and conducting wetland delineations and assessments across the United States. TRC's biologists and ecologists have been trained to properly and consistently apply the methods set forth in the 1987 Corps of Engineers Wetland Delineation Manual and applicable regional supplements. They have direct experience identifying and documenting indicators of hydrophytic vegetation, wetland hydrology, and hydric soil and are experienced in dealing with naturally problematic and disturbed conditions.

TRC's large natural resources staff have the capability to coordinate wetland survey teams to meet fast-track project schedules and satisfy the challenges of complex or controversial projects.

Mr. Ron Londré, PWS, WDNR Assured Wetland Ecologist, is a Senior Ecologist at TRC with over twelve years of professional experience in wetland ecology. He is certified by the Society of Wetland Scientists Professional Certification Program as a Professional Wetland Scientist (PWS # 2436) and is certified by the Ecological Society of America as an Ecologist. His academic studies, from which he earned M.S. and B.S. Degrees in Biological Science, focused on plant community ecology and restoration ecology. Mr. Londré has completed the following wetland delineation technical training workshops provided by UW-La Crosse: Advanced Wetland Delineation; Basic Wetland Delineation; Critical Methods in Wetland Delineation; Hydric Soils; and Grasses, Sedges, and Rushes. Additionally, he has completed the Regional Supplement Seminar and Field Practicum training provided by the Wetland Training Institute and the Wetland Delineation

Training Workshop provided by the University of Wisconsin-Milwaukee. Mr. Londré is a part of the Wetland Delineation Professional Assurance Initiative of the Wisconsin Department of Natural Resources (WDNR). This means his work is assured for purposes of State of Wisconsin wetland delineations.

Ms. Amanda Larsen is a biologist with TRC and has over five years of experience working on a variety of natural resource projects throughout the United States. She specializes in conducting wetland delineations and assessments, biological surveys, water monitoring, habitat restoration, and invasive species control. Ms. Larsen has a B.S. degree in Conservation and Environmental Science from UW-Milwaukee with a focus on water resources. She has taken the following technical trainings related to wetland delineation: Wetland Delineation Critical Methods Workshop (2016), Advanced Wetland Delineation (2014), Basic Wetland Delineation (2013), provided by UW-La Crosse; and Significant Nexus Determination (2014) provided by the Swamp School.

1.2 Agency Regulatory Authority

Under Section 404 of the Clean Water Act (CWA), wetlands and waterways that are considered Waters of the U.S. are subject to federal regulation. The jurisdictional regulatory authority under Section 404 of the Clean Water Act (CWA) lies with the U.S. Army Corps of Engineers (USACE). Under Chapters 30 and 281 Wisconsin State Statutes, and Wisconsin Administrative Code NR 103, 151, 299, 350, and 353 wetlands are subject to regulation. The jurisdictional regulatory authority under the Wisconsin State Statutes and Administrative Code lies with the Wisconsin Department of Natural Resources (WDNR). Municipalities, townships and counties may also have local zoning authority over certain areas or types of wetlands and waterways. The determination that a wetland or waterway is subject to regulatory jurisdiction is made independently by the federal, state and local agencies.

2.0 METHODS

This wetland delineation was conducted in accordance with the guidelines of the 1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0, 2010). National Wetland Indicator status and taxonomic nomenclature is referenced from The National Wetland Plant List (Lichvar, 2016). National Wetland Indicator status is based on the Midwest Region. Indicators of hydric soil are based on the Field Indicators of Hydric Soils in the United States guide Version 7.0 (Vasilas, L. M. et. al. 2010). This report has also been prepared in accordance with the guidelines set forth in the "Guidance for Submittal of Delineation Reports to the St. Paul District Corps of Engineers and the Wisconsin Department of Natural Resources" document issued March 4, 2015.

2.1 Off-Site Review

Prior to conducting fieldwork, TRC scientists Ron Londré and Amanda Larsen reviewed several maps including the United States Geological Survey (USGS) 7.5' Quadrangle maps, Natural Resource Conservation Service (NRCS) Soil Survey Map, Wisconsin Wetland Inventory (WWI) Map, and aerial photographs. These sources were used to identify areas likely to contain wetlands.

Precipitation data from approximately 90 days prior to the field investigation were obtained from a weather station near the Study Area and compared with 30-year average precipitation data obtained from a NRCS WETS Table for the County where the Study Area was located to determine if antecedent hydrologic conditions at the time of the site visit were normal, wetter, or drier than the normal range.

2.2 On-Site Field Investigation

Areas having wetland indicators within the Study Area were evaluated in the field by TRC wetland scientists Ron Londré and Amanda Larsen on May 11, 2016 and May 13, 2016. Sample points were located in areas exhibiting wetland and upland characteristics to document the presence and/or absence of wetlands and to provide support for the delineated wetland boundaries. At each sample point, data were collected to document the vegetation and hydrophytic vegetation indicators, soil profiles and hydric soil indicators, and wetland hydrology indicators.

Plant species were identified at each sample point and their wetland indicator status; obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), or upland (UPL); was determined by referencing The National Wetland Plant List (Lichvar 2014). Soil pits were dug to the depth needed to document the indicator or confirm the absence of indicators. Soil color was determined using a Munsell soil color chart. The sample point plots and soil pits were evaluated for the presence of wetland hydrology indicators.

The wetland boundaries were delineated and staked using wire pin flags and when needed flagging tape. Wetland boundaries were generally determined by distinct to subtle differences in the abundance of hydrophytic vegetation and non-hydrophytic vegetation, presence versus absence of hydric soil indicators, and presence versus absence of wetland hydrology indicators.

3.0 RESULTS

3.1 Off-Site Review

The 2-Foot Contour Map (Appendix A, Figure 2) showed elevations ranging from 720 to 730 feet above sea level. Based on the contour map, water would be expected to drain from the southwest and western portions of the site towards the southeastern portion of the site.

According to the NRCS Soil Survey map (Appendix A, Figure 3) three mapped soil units are located within the Study Area. The soils mapped within the Study Area are listed on Table 1 below.

Table 1 – Mapped Soils

Map Unit Symbol	Map Unit Name	Drainage Class	Hydric Rating	% of Study Area
AsA	Ashkum silty clay loam, 0-2 percent slopes	Poorly Drained	97	28.2
BlA	Blount silt loam, 1 to 3 percent slopes	Somewhat Poorly Drained	0	63.6
MzdB	Morley silt loam, 2 to 6 percent slopes	Well Drained	0	8.2

The Wisconsin Wetland Inventory (WWI) map (Appendix A, Figure 4) shows three wetlands within the Study Area. The types of wetland shown on the WWI map within the Study Area are listed in Table 2 below.

Table 2 – Mapped WWI Wetland Types

Map Unit Symbol	Description
T3K	Forested, Broad leaved deciduous, Wet soil, Palustrine
E2K	Emergent/wet meadow, Narrow-leaved persistent, Wet soil, Palustrine

A review of aerial imagery from 2000, 2005, 2007, 2010, and 2015 (Appendix A, Figures 5-9) shows the Study Area as containing a building and associated parking lots and drives as well as having a forested area to the east of the building and emergent vegetation to the north of the building. There does not appear to be any observable land use change during this time period.

Prior to conducting the field visit, antecedent precipitation data were analyzed. Data were obtained from a nearby weather station (MILWAUKEE MITCHELL AP (WI) USW00014839) and compared to data from a nearby WETS station (MILWAUKEE MITCHELL AP (WI) USW00014839). The most recent rainfall event prior to the site visit was 1.12 inches, which occurred on May 10, 2016. Precipitation for the 14 days prior to the site visit was 2.04 inches. The precipitation data for the 90 day period prior to the field visit (Appendix B, Table 3) were entered into a WETS

analysis worksheet (Appendix B, Table 4) to weight the information from each preceding month to analyze hydrologic conditions. Based on this analysis, the antecedent hydrologic conditions were considered to be within a normal range, suggesting that climatic/hydrologic conditions were normal for this time of year.

3.2 On-Site Field Investigation

3.2.1 Site Description

The Study Area was comprised of a manufacturing building and associated parking lots and drives with some ornamental landscaping and lawn areas surrounding the western and southern portions of the building. The eastern portion of the Study Area was predominantly forested mixed with areas dominated by shrubs. The north central portion of the Study Area contained predominantly herbaceous plant communities.

Naturally problematic conditions and disturbed (atypical) conditions were encountered within the Study Area. The naturally problematic conditions included relatively high abundances of FACU plant species in some areas of forested wetlands. The disturbed conditions included areas of mowed lawn and artificially planted vegetation.

3.2.2 Uplands

Upland plant communities observed in the Study Area included small portions of upland forest and areas of lawn with ornamental trees. All other areas of upland were built upon containing a building, parking lot, and drives. Sample points SP-2, SP-4, SP-6, SP-8, and SP-10 were located in upland areas.

3.2.3 Wetlands

One wetland was delineated. The delineated wetland boundaries and sample points are shown on a map (Exhibit A) in Appendix C. Photographs were taken at sample points and other notable locations (Appendix D). Data were collected and recorded on Wetland Determination Data Forms at 12 sample points to document wetland and upland locations (Appendix E).

Wetland (Shallow Marsh, Hardwood Swamp, Shrub Carr wetland complex)

The wetland was approximately 6.53 acres within the Study Area and consisted of shallow marsh, hardwood swamp, and shrub-carr plant communities. There were patches of sedge meadow within the shallow marsh area just to the north of wetland sample point SP-3. The boundary of the wetland extends beyond the Study Area offsite to the north and east. Seven wetland sample points (SP-1, SP-3, SP-5, SP-7, SP-9, SP-11, and SP-12) were taken within the wetland and five upland sample points (SP-2, SP-4, SP-6, SP-8, and SP-10) were taken in adjacent upland areas.

The dominant vegetation at wetland Sample Point SP-1, which was taken in a shrub-carr plant community, included *Ulmus americana* (American elm) in the tree stratum, *Rhamnus cathartica* (common buckthorn) in the shrub stratum, and *Phragmites australis* (common reed grass) in the herb stratum. The dominant vegetation at wetland Sample Point SP-3, which was taken in a shallow marsh plant community, included *Fraxinus pennsylvanica* (green ash), *Acer negundo* (boxelder), and *Salix bebbiana* (Bebb's willow) in the shrub stratum; and *Typha angustifolia* (narrow leaved cattail), and *Carex stricta* (tussock sedge) in the herb stratum. The dominant vegetation at wetland Sample Point SP-5, which was in a mixed hardwood swamp / shrub-carr plant community, included *Fraxinus pennsylvanica* and *Quercus alba* (white oak) in the tree stratum, *Rhamnus cathartica* in the shrub stratum; and *Carex bromoides* (brome-like sedge), *Ribes cynosbati* (prickly gooseberry), and *Rhamnus cathartica* in the herb stratum. The dominant vegetation at wetland Sample Point SP-7, which was taken in a mixed hardwood swamp / shrub-carr plant community, includes *Carya ovata* (shagbark hickory) and *Fraxinus pennsylvanica* in the tree stratum, *Rhamnus cathartica* and *Ostrya virginiana* (American hophornbeam) in the shrub stratum; and *Carex bromoides*, *Ribes cynosbati*, and *Rhamnus cathartica* in the shrub stratum. The dominant vegetation at wetland Sample Point SP-9, which was taken in a mixed hardwood swamp / shrub-carr plant community, included *Quercus rubra* (red oak) and *Quercus bicolor* (swamp white oak) in the tree stratum; *Carpinus caroliniana* (musclewood) and *Rhamnus cathartica* in the shrub stratum; and *Ribes cynosbati*, *Carpinus caroliniana*, *Prunus virginiana*, and *Rhamnus cathartica* in the herb stratum. The dominant vegetation at wetland Sample Point SP-11, which was taken in a hardwood swamp plant community, included *Carya ovata* and *Tilia americana* in the tree stratum, *Carpinus caroliniana* and *Ostrya virginiana* in the shrub stratum, and *Carpinus caroliniana* in the herb stratum. The dominant vegetation at wetland Sample Point SP-12, which was taken in a hardwood swamp plant community, included *Quercus alba*, *Quercus bicolor*, and *Acer saccharinum* (silver maple) in the tree stratum; *Carpinus caroliniana* and *Ostrya virginiana* in the shrub stratum; and *Carex pennsylvanica* in the herb stratum. Species including *Ostrya virginiana*, *Rhamnus cathartica*, *Carya ovata*, and *Tilia americana* were frequently exhibiting morphological adaptation to saturated or inundated conditions including adventitious roots, shallow root systems, and/or buttressing. This suggests that there may have been an increase in hydrology in recent years that may not have been the historical condition.

Hydrology generally appeared to be sustained by surface water runoff from the adjacent impervious surfaces and a limited outlet for water from the site. Wetland hydrology indicators observed at the wetland Sample Points included High Water Table (A2), Saturation (A3), Water Marks (B1), Water-Stained Leaves (B9), Saturation Visible on Aerial Imagery (C9), Geomorphic Position (D2), and Positive FAC-neutral tests (D5). Saturation and possible inundation is visible in some wetland areas in a 2014 Google Earth image during spring leaf-off. Hydric soils indicators observed at the wetland Sample Points included Depleted Below Dark Surface (A11), Depleted Matrix (F3), and Redox Dark Surface (F6),

The boundary of the wetland was based on subtle topographic breaks, the boundary between hydrophytic and non-hydrophytic vegetation, the boundary between the presence and absence of wetland hydrology indicators, and the boundary between hydric and non-hydric soil. In some

areas, the wetland extended nearly to the edge of the parking lot in the northern portion of the Study Area.

3.2.4 Other Aquatic Resources

No other aquatic resources were identified within the Study Area.

3.2.5 Professional Opinion On Wetland Susceptibility Per NR 151

Table 5 in Appendix F lists a professional opinion on wetland susceptibility, based on a request by the WDNR, to do so per revised NR 151 guidance (Guidance #3800-2015-02). Please note that the final determination of wetland susceptibility rests with the WDNR.

4.0 CONCLUSIONS

Based on the wetland delineation completed by TRC, one wetland was delineated totaling 6.53 acres of wetlands within the approximately 14 acre Study Area. No other aquatic resources were observed within the Study Area.

The results of this field study are based on site conditions at the time of the field study, which was conducted in accordance with current regulatory policy and methods.

Wetlands and other aquatic resources delineated and identified in this report are a professional finding based on current regulatory policy accepted by the USACE and WDNR methodology at the time the resources were delineated. Unknown and future conditions that affect observations of field indicators or change in interpretation of regulatory policy or methods may modify future findings.

The ultimate authority to determine the location of the wetland boundary and jurisdictional authority over the wetlands and other aquatic resources identified in this report resides with the USACE and WDNR. Decisions made by staff of these regulatory agencies may result in modifications to the location of the wetland or other aquatic resource boundaries shown in this report. In addition, the USACE and WDNR have jurisdictional authority to determine which features are exempt from regulation including stormwater ponds and conveyance features. If the client proposes to modify a potentially exempt feature, a WDNR Artificial Determination Exemption and USACE Approved Jurisdictional Determination (AJD) requests would need to be submitted. Furthermore, municipalities, townships and counties may have local zoning authority over certain areas or types of wetlands and waterways. The determination that a wetland or waterway is subject to regulatory jurisdiction is made independently by the agencies.

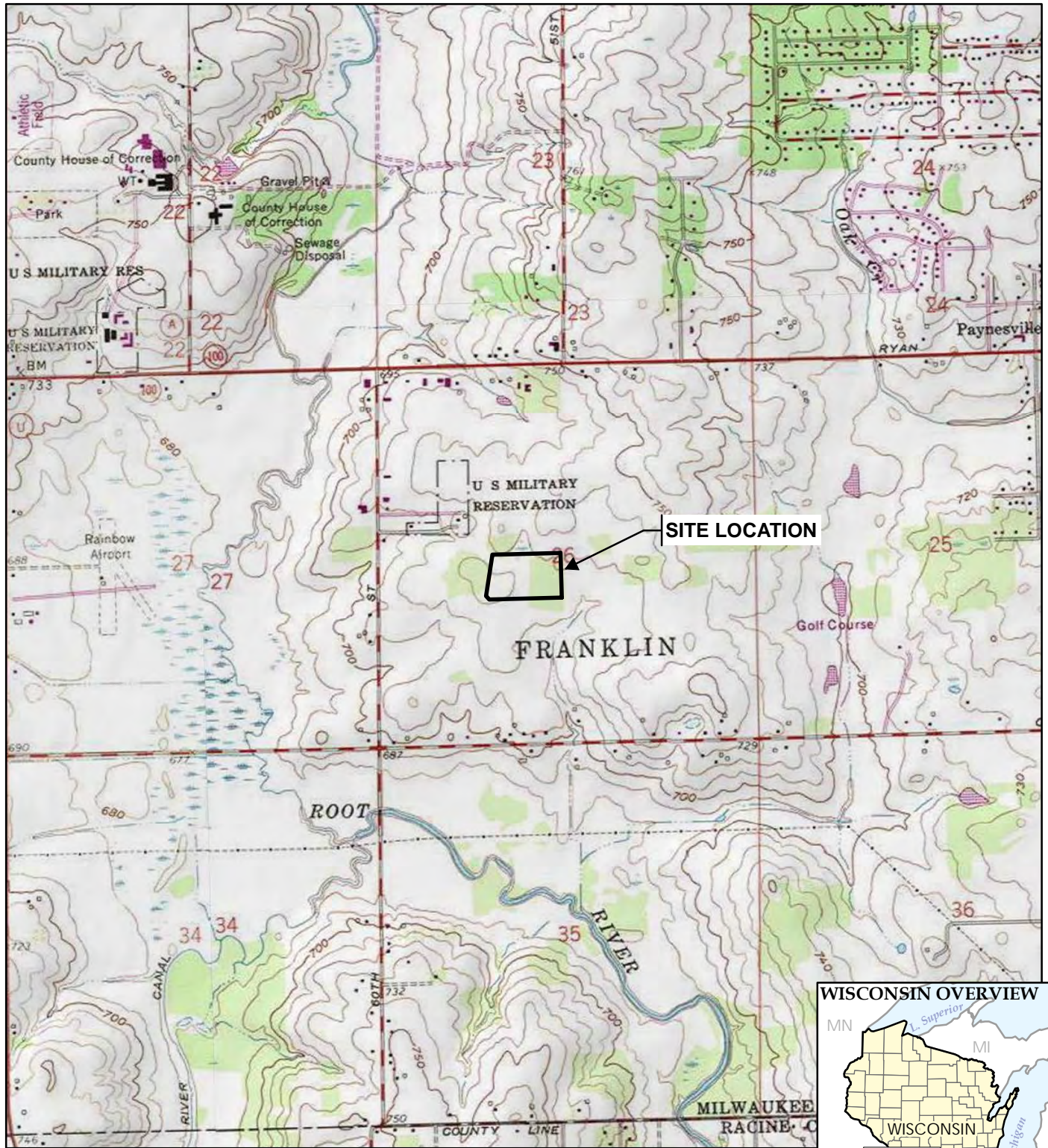
Any activity in a delineated wetland or below the Ordinary High Water Mark of other aquatic resources may require USACE permits and WDNR Water Quality Certification, and local

government permits. If the Client proceeds to change, modify or utilize the property in question without obtaining authorization from the appropriate regulatory agency, it will be done at the Client's own risk and TRC Environmental Corporation shall not be responsible or liable for any resulting damages.

5.0 REFERENCES

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- Woodward, D.E. 1997. Hydrology Tools for Wetland Determination, Chapter 19. In: Engineering Field Handbook, U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.

APPENDIX A: FIGURES



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



150 North Patrick Blvd.
Suite 180
Brookfield, WI 53045
Phone: 262.879.1212

TRC - GIS

PROJECT: **CARLISLE INTERCONNECT WETLAND DELINEATION
5300 WEST FRANKLIN DRIVE
FRANKLIN, WISCONSIN**


TITLE: **SITE LOCATION MAP**


DRAWN BY:	SUEMNICHT R
CHECKED BY:	LONDRE R
APPROVED BY:	LONDRE R
DATE:	JUNE 2016
PROJ. NO.:	255682
FILE:	255682-001slm.mxd

FIGURE 1



LEGEND


 STUDY AREA

 2' CONTOUR INTERVAL

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO & PARTNERS, JUNE 2015.

2. CONTOURS DERIVED FROM USGS, NATIONAL ELEVATION DATASET, 1/9TH ARCSECOND RESOLUTION.



0100200
Feet

1" = 100'
1:1,200

PROJECT:

CARLISLE INTERCONNECT WETLAND DELINEATION
5300 WEST FRANKLIN DRIVE
FRANKLIN, WISCONSIN


TITLE:

CONTOUR MAP

DRAWN BY:SUERNICHT R
CHECKED BY:LONDRE R
APPROVED BY:LONDRE R
DATE:JUNE 2016

PROJ NO:255682

FIGURE 2



150 North Patrick Blvd., Suite 180
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Phone: 262.879.1212
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FILE NO:255682-002.mxd

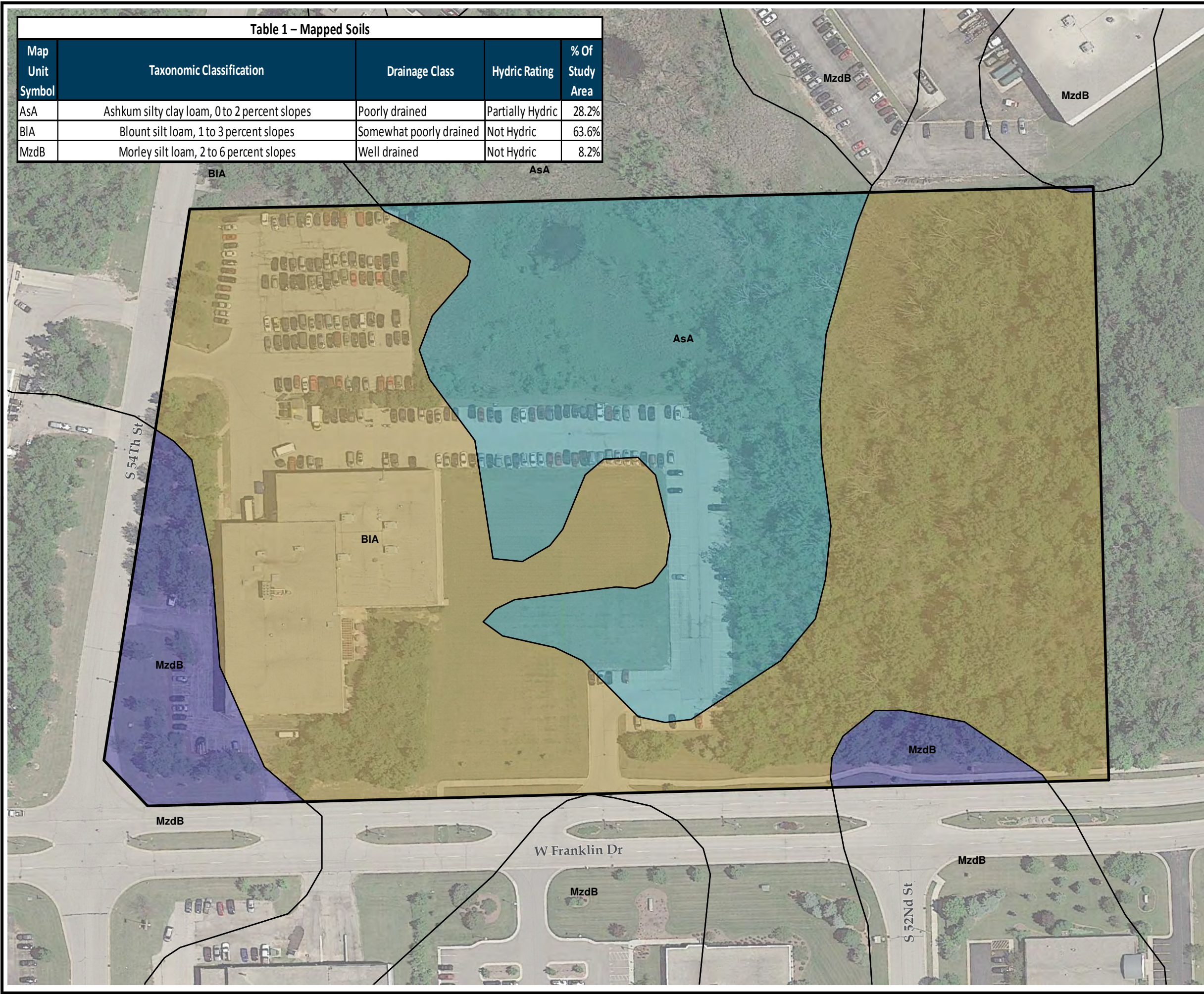


Table 1 – Mapped Soils

Map Unit Symbol	Taxonomic Classification	Drainage Class	Hydric Rating	% Of Study Area
AsA	Ashkum silty clay loam, 0 to 2 percent slopes	Poorly drained	Partially Hydric	28.2%
BIA	Blount silt loam, 1 to 3 percent slopes	Somewhat poorly drained	Not Hydric	63.6%
MzdB	Morley silt loam, 2 to 6 percent slopes	Well drained	Not Hydric	8.2%

LEGEND



STUDY AREA

SOIL CLASSIFICATION

- ASHKUM SILTY CLAY LOAM,
0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM,
1 TO 3 PERCENT SLOPES
- MORLEY SILT LOAM,
2 TO 6 PERCENT SLOPES

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO & PARTNERS, JUNE 2015.
2. SOILS DATA FROM USDA/NRCS SSURGO DATABASE.



0 100 200
Feet

1" = 100'
1:1,200

PROJECT:
CARLISLE INTERCONNECT WETLAND DELINEATION
5300 WEST FRANKLIN DRIVE
FRANKLIN, WISCONSIN

TITLE:
NRCS SOILS MAP

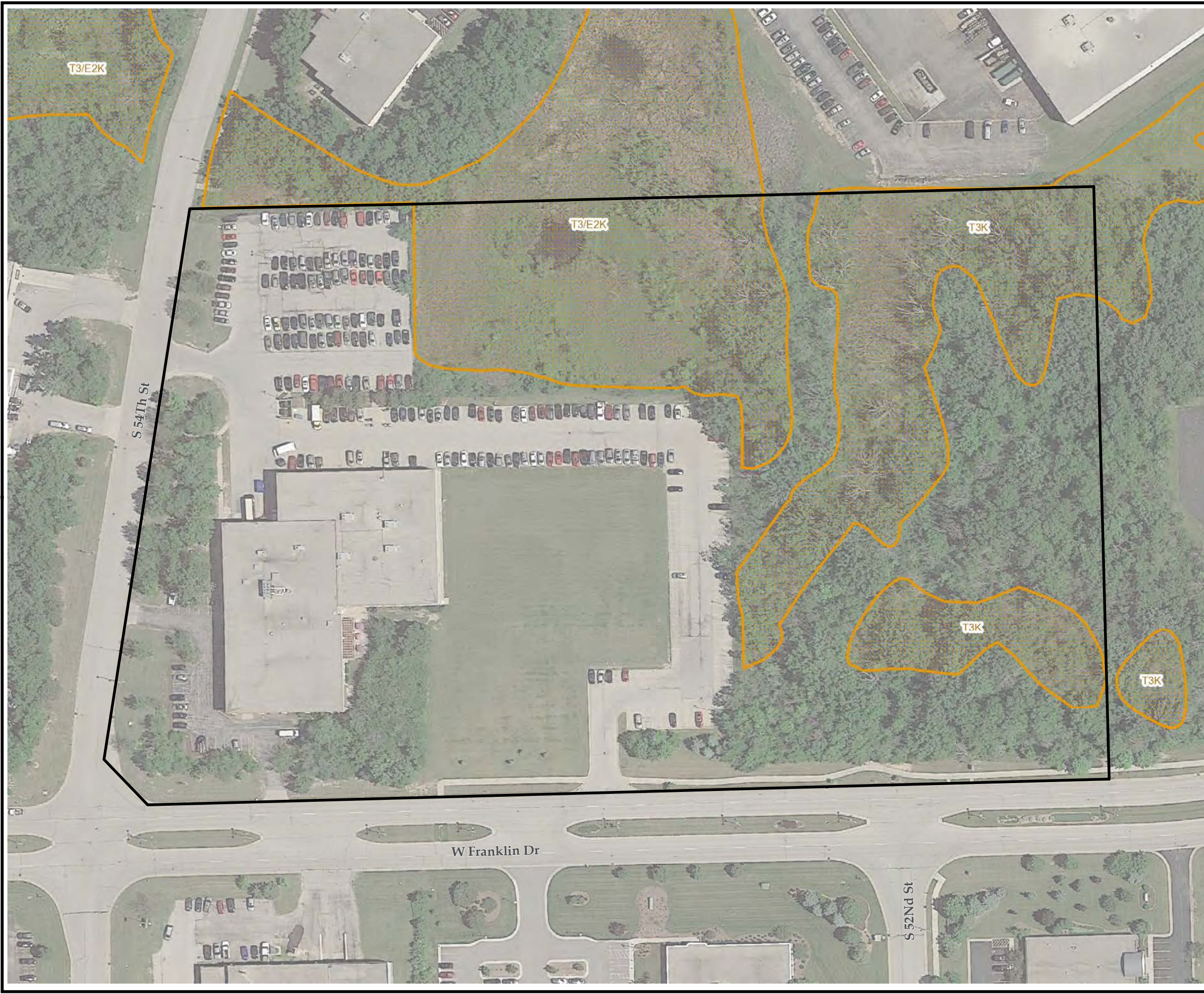
DRAWN BY: SUENICHT R
CHECKED BY: LONDRE R
APPROVED BY: LONDRE R
DATE: JUNE 2016

PROJ NO.: 255682


FIGURE 3


150 North Patrick Blvd., Suite 180
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FILE NO.: 255682-003.mxd



LEGEND


 STUDY AREA

 WETLAND CLASS AREAS

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO & PARTNERS, JUNE 2015.

2. WDNR WWI WETLANDS ACQUIRED FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES.



0100200
Feet

1" = 100'
1:1,200

PROJECT:

CARLISLE INTERCONNECT WETLAND DELINEATION
5300 WEST FRANKLIN DRIVE
FRANKLIN, WISCONSIN

TITLE:

DNR WWI MAP

DRAWN BY:SUEMNICHT R


CHECKED BY:LONDRE R

APPROVED BY:LONDRE R

DATE:JUNE 2016

PROJ NO.:255682

FIGURE 4




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FILE NO.:255682-004.mxd

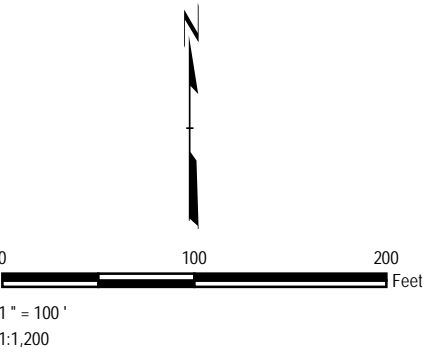



LEGEND

 STUDY AREA

NOTES


1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO & PARTNERS, JUNE 2015 .



PROJECT: CARLISLE INTERCONNECT WETLAND DELINEATION 5300 WEST FRANKLIN DRIVE FRANKLIN, WISCONSIN			
TITLE: 2015 AERIAL IMAGERY			
DRAWN BY:	SUEMNICHT R	PROJ NO.:	255682
CHECKED BY:	LONDRE R	FIGURE 5	
APPROVED BY:	LONDRE R		
DATE:	JUNE 2016		
		150 North Patrick Blvd., Suite 180 Brookfield, WI 53045 Phone: 262.879.1212 www.trcsolutions.com	
FILE NO.:		255682-005.mxd	

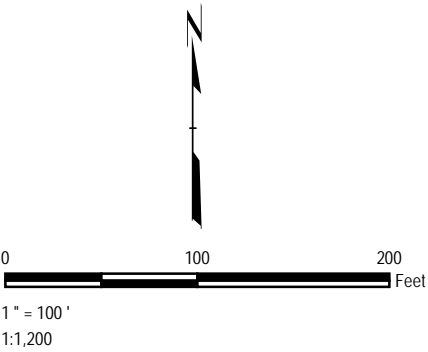



LEGEND

 STUDY AREA

NOTES

1. BASE MAP IMAGERY FROM WISCONSIN DNR GIS SERVER, WISCONSIN REGIONAL ORTHOPHOTO CONSORTIUM (WROC), 2010.



PROJECT: CARLISLE INTERCONNECT WETLAND DELINEATION 5300 WEST FRANKLIN DRIVE FRANKLIN, WISCONSIN			
TITLE: 2010 AERIAL IMAGERY			
DRAWN BY:	SUEMNICHT R	PROJ NO.:	255682
CHECKED BY:	LONDRE R	FIGURE 6	
APPROVED BY:	LONDRE R		
DATE:	JUNE 2016		
		150 North Patrick Blvd., Suite 180 Brookfield, WI 53045 Phone: 262.879.1212 www.trcsolutions.com	
FILE NO.:		255682-006.mxd	



LEGEND

STUDY AREA

NOTES

1.

BASE MAP IMAGERY FROM USGS COUNTY HIGH RESOLUTION ORTHOIMAGERY FOR MILWAUKEE COUNTY, JUNE 2007.

0100200

Feet

1" = 100'

1:1,200

PROJECT:

CARLISLE INTERCONNECT WETLAND DELINEATION
5300 WEST FRANKLIN DRIVE
FRANKLIN, WISCONSIN

TITLE:

2007 AERIAL IMAGERY

DRAWN BY:SUEMNIGHT R

CHECKED BY:LONDRE R

APPROVED BY:LONDRE R

DATE:JUNE 2016

PROJ NO.:255682

FIGURE 7


150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.:


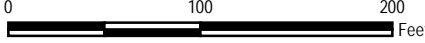
255682-007.mxd




LEGEND

 STUDY AREA


NOTES
1. BASE MAP IMAGERY FROM MILWAUKEE COUNTY PICTOMETRY, 2005.



1" = 100'
1:1,200

PROJECT: CARLISLE INTERCONNECT WETLAND DELINEATION 5300 WEST FRANKLIN DRIVE FRANKLIN, WISCONSIN		
TITLE: 2005 AERIAL IMAGERY		
DRAWN BY:	SUEMNICHT R	PROJ NO.: 255682
CHECKED BY:	LONDRE R	FIGURE 8
APPROVED BY:	LONDRE R	
DATE:	JUNE 2016	
		150 North Patrick Blvd., Suite 180 Brookfield, WI 53045 Phone: 262.879.1212 www.trcsolutions.com
FILE NO.:		255682-008.mxd

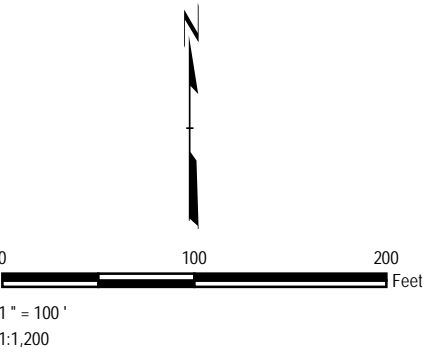



LEGEND

 STUDY AREA

NOTES

1. BASE MAP IMAGERY FROM USGS DIGITAL ORTHOPHOTO QUADRANGLE (DOQ), 2000.



PROJECT: CARLISLE INTERCONNECT WETLAND DELINEATION 5300 WEST FRANKLIN DRIVE FRANKLIN, WISCONSIN			
TITLE: 2000 AERIAL IMAGERY			
DRAWN BY:	SUEMNICHT R	PROJ NO.:	255682
CHECKED BY:	LONDRE R	FIGURE 9	
APPROVED BY:	LONDRE R		
DATE:	JUNE 2016		
		150 North Patrick Blvd., Suite 180 Brookfield, WI 53045 Phone: 262.879.1212 www.trcsolutions.com	
FILE NO.:		255682-009.mxd	

APPENDIX B:
ANTECEDENT PRECIPITATION DATA / WETS ANALYSIS

Table 3. Antecedent Precipitation Data					
February 11, 2016 - May 10, 2016					
Precipitation Data Source Location					
MILWAUKEE MITCHELL AP (WI) USW00014839					
3rd Month Prior		2nd Month Prior		1st Month Prior	
Date	PPT	Date	PPT	Date	PPT
2/11/2016	0	3/12/2016	0	4/11/2016	0
2/12/2016	0	3/13/2016	0.41	4/12/2016	0
2/13/2016	0	3/14/2016	0.02	4/13/2016	T
2/14/2016	0.05	3/15/2016	0.43	4/14/2016	0
2/15/2016	0.02	3/16/2016	0.08	4/15/2016	0
2/16/2016	0.03	3/17/2016	0	4/16/2016	0
2/17/2016	0	3/18/2016	0.08	4/17/2016	0
2/18/2016	T	3/19/2016	T	4/18/2016	0
2/19/2016	0	3/20/2016	0	4/19/2016	T
2/20/2016	0	3/21/2016	0	4/20/2016	0.12
2/21/2016	0	3/22/2016	0	4/21/2016	0.07
2/22/2016	0	3/23/2016	0.35	4/22/2016	0
2/23/2016	0	3/24/2016	0.95	4/23/2016	0
2/24/2016	0	3/25/2016	0	4/24/2016	0
2/25/2016	T	3/26/2016	0	4/25/2016	0.07
2/26/2016	0	3/27/2016	0.1	4/26/2016	T
2/27/2016	0	3/28/2016	T	4/27/2016	0.08
2/28/2016	0.01	3/29/2016	0	4/28/2016	0.03
2/29/2016	T	3/30/2016	0.02	4/29/2016	0.02
3/1/2016	0.15	3/31/2016	0.56	4/30/2016	0.4
3/2/2016	0	4/1/2016	0.03	5/1/2016	0.13
3/3/2016	T	4/2/2016	0.12	5/2/2016	0
3/4/2016	0.1	4/3/2016	T	5/3/2016	0.04
3/5/2016	T	4/4/2016	T	5/4/2016	T
3/6/2016	0	4/5/2016	0.03	5/5/2016	0
3/7/2016	T	4/6/2016	0.6	5/6/2016	T
3/8/2016	T	4/7/2016	0.01	5/7/2016	T
3/9/2016	0.09	4/8/2016	0.15	5/8/2016	0
3/10/2016	0	4/9/2016	0	5/9/2016	0.22
3/11/2016	0	4/10/2016	0.07	5/10/2016	1.12
Total = 0.45		Total = 4.01		Total = 2.3	

PPT - Precipitation in inches

T - Trace

M - Missing



Table 4. WETS Analysis

Project Site: Carslile Interconnect
 Period of interest: February 11, 2016 - May 10, 2016
 County: Milwaukee

Long-term rainfall records (from WETS table)

	Month	3 years in 10 less than	Normal	3 years in 10 greater than
1st month prior:	April	2.78	3.78	4.45
2nd month prior:	March	1.58	2.59	3.14
3rd month prior:	February	0.93	1.65	2.01
Sum =		8.02		

Site determination

Site Rainfall (in)	Condition Dry/Normal*/Wet	Condition** Value	Month Weight	Product
2.30	Normal	2	3	6
4.01	Wet	3	2	6
0.45	Dry	1	1	1
Sum =	6.76		Sum*** =	13

*Normal precipitation with 30% to 70% probability of occurrence

Determination:

Wet
 Dry
 Normal

**Condition value:

***If sum is:

X

Dry = 1
 Normal = 2
 Wet = 3

6 to 9 then period has been drier than normal
 10 to 14 then period has been normal
 15 to 18 then period has been wetter than normal

Precipitation data source: MILWAUKEE MITCHELL AP (WI) USW00014839

WETS Station: MILWAUKEE MITCHELL AP (WI) USW00014839

Reference: Donald E. Woodward, ed. 1997. *Hydrology Tools for Wetland Determination*, Chapter 19. Engineering Field Handbook. U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, TX.



**APPENDIX C:
WETLAND DELINEATION MAP**



LEGEND

- UPLAND SAMPLE LOCATION
- WETLAND SAMPLE LOCATION
- TRC DELINEATED WETLAND
- STUDY AREA

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO & PARTNERS, JUNE 2015.

1" = 100'
1:1,200

PROJECT: CARLISLE INTERCONNECT WETLAND DELINEATION 5300 WEST FRANKLIN DRIVE FRANKLIN, WISCONSIN		
TITLE: WETLAND DELINEATION MAP		
DRAWN BY: SUEMNICHT R	PROJ NO: 255682	EXHIBIT A
CHECKED BY: LONDRE R		
APPROVED BY: LONDRE R		
DATE: JUNE 2016		

150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.: 255682-010.mxd

**APPENDIX D:
SITE PHOTOGRAPHS**

Site Photographs

Project Name		Site Location	Project No.
Carlisle Interconnect		5300 W. Franklin Dr., Franklin, WI	255682
Photo No.	Date		
1	5/11/16		
Description			
Wetland sample point SP-1, facing west.			

Photo No.	Date	
2	5/11/16	
Description Upland sample point SP-2, facing west		

Site Photographs


Project Name		Site Location	Project No.
Carlisle Interconnect		5300 W. Franklin Dr., Franklin, WI	255682
Photo No.	Date		
3	5/11/16		
Description			
Wetland sample point SP-3, facing north.			

Photo No.	Date	
4	5/11/16	
Description Upland sample point SP-4, facing west.		

Site Photographs

Project Name		Site Location	Project No.
Carlisle Interconnect		5300 W. Franklin Dr., Franklin, WI	255682
Photo No.	Date		
5	5/11/16		
Description			
Wetland sample point SP-5, facing east.			

Photo No.	Date	
6	5/13/16	
Description Upland sample point SP-6, facing north.		