# **Materials Management Plan**

**MCABI-Tyco Redevelopment Site** 

1310-1330 Main Street, Marinette, Wisconsin BRRTS# 02-38-564236

Prepared by:

Lynelle Caine

Senior Project Manager

Stu Gross

Associate

September 7, 2016 Project Number 193704595





## **Materials Management Plan**

#### Site Name:

MCABI-Tyco Redevelopment Site 1310-1330 Main Street Marinette, WI

#### Prepared For Property Owner:

Marinette County Association for Business and Industry Inc. (MCABI) Ann Hartnell, Executive Director 1926 Hall Avenue Marinette, WI 54143 (715) 732-7421 ahartnell@mcabi.com

#### Prepared By:

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#### Submitted To:

Robert Klauk Wisconsin Department of Natural Resources 2984 Shawano Avenue Green Bay, WI 54313 (920) 662-5164 <u>Robert.Klauk@wisconsin.gov</u>



#### MATERIALS MANAGEMENT PLAN – TYCO REDEVELOPMENT SITE 1310-1330 Main Street, Marinette, Wisconsin WDNR BRRTS #02-38-564236

This Materials Management Plan (MMP) presents a plan to manage, redeposit and cap excavated soil and historic fill during upcoming redevelopment activities at 1310-1330 Main Street in the City of Marinette, Wisconsin (The "Property" or "Site"). The Property is currently owned by the Marinette County Association for Business and Industry, Inc. (MCABI) which purchased the entire 2.42 acre parcel (parcel #251-04268.00) located at the northwest corner of Main and Stanton Streets from the former owner, Tyco Fire Products, LP in 2016. MCABI plans to construct a one story, 23,775 square foot (sf) industrial incubator and office building at the Site to be known as the Wisconsin Maritime Center of Excellence (WMCOE) with construction anticipated to start in October 2016. The project area and approximate parcel boundaries are illustrated on Figure 1. The proposed development will include paved drive areas, walkways, and landscaped areas. Site renderings of the proposed development and the Site grading plan are included in Attachment A.

To match desired ground surface elevations and address excavated materials associated with the redevelopment, the on-site management of contaminated soils/fill in compliance with Chapter NR 718 Wisconsin Administrative Code (Wis. Adm. Code) requirements will be required. Any excavated soil not re-used on-site will be disposed of at a solid waste disposal facility. Further information regarding the proposed materials management plan is provided below.

#### BACKGROUND INFORMATION

During June 2015, Stantec Consulting Services Inc. (Stantec) completed a Phase I Environmental Site Assessment (ESA) to evaluate potential environmental liabilities associated with the Property. Based on the information gathered during the Phase I ESA, Stantec identified six recognized environmental conditions (RECs) associated with the Site:

- The historic presence of a coal yard occupying central portions of the Property; The former presence of the Chicago and North Western rail line though central portions of the Property and the petroleum storage tanks that were formerly present adjacent to the rail line;
- The former presence of a service station with petroleum storage tanks on the southeastern portion of the Property;
- The known presence of a buried solid waste being encountered at the adjacent properties and the undocumented fill material placed in the former log run near the northwestern portion of the Property;
- Former use of portions of the southwestern portion of the Property as an auto repair business, battery services and machine shop, and tool works; and
- The historic presence of a print shop and associated underground storage tank at an adjacent Property up-gradient of the Property.

To determine if the identified RECs affected soil and/or groundwater quality at the Site, Stantec completed a Phase II ESA in August 2015. As part of the Phase II ESA, 12 soil borings were advanced with five additional blind drilled borings completed directly adjacent to existing borings as temporary groundwater monitoring wells. Soil and groundwater samples were collected from the boreholes and temporary well locations. The Phase II ESA identified up to 16 feet of generally sandy fill across the Site. The fill also contained discontinuous layers or intermixing solid waste (i.e. wood chips and metal, slag, paper, glass, and/or plastic debris). The fill material appears to be the likely source of the contaminants detected at the Site.

During September 2015, Stantec submitted a site investigation workplan to the Wisconsin Department of Natural Resources (WDNR). Following input from the WDNR's Voluntary Pollution Liability Exemption (VPLE) committee, a revised workplan was subsequently approved by the WDNR.



During October 2015, Stantec oversaw the completion of eight additional soil borings and six monitoring wells to further evaluate the extent of soil and groundwater impacts at the Site. Based on the finding of the additional soil sampling, it was determined that the extent of soil impacts was sufficiently defined. Polynuclear aromatic hydrocarbon (PAH), lead and/or arsenic impacted soil appears to be widespread at the Site with volatile organic compound (VOC) (benzene or tetrachloroethene [PCE]) impacted soil near the north central and east central portions of the property. A limited volume of PCB impacted soil is also present in the north western portion of the Site.

The results of the Phase II ESA and groundwater investigation activities indicate that PAHs and arsenic were present in the groundwater at concentrations in excess of the NR140 PAL and/or ES.VOCs were not detected in the groundwater in excess of the PAL or ES indicating that the low levels of PCE and benzene detected in soil samples are not impacting groundwater. During August 2016, an additional round of groundwater samples was collected from select monitoring wells. The August 2016 data indicates that PAH and arsenic concentrations initially detected in the monitoring wells have decreased with only arsenic concentrations remaining above the PAL in two monitoring wells. In addition, PCBs were not detected in the groundwater sampling it appears that historic fill and contaminated soil are not having a significant impact to groundwater quality at the Site. Copies of the site investigation data are included in Attachment B.

Based on the investigation activities completed to date, the WDNR has indicated that remedial action is necessary to address soil that contains PAHs, arsenic, and lead concentrations exceeding their respective NR 720 Wisconsin Administrative Code (NR 720) direct contact Residual Contaminant Levels (RCLs). Additional groundwater monitoring is also needed to document contaminant concentration trends in groundwater.

Several discussions with the WDNR were held between MCABI and Stantec to discuss remedial alternatives that would be the most technically and economically feasible given the future use of the Site. In an email dated January 28, 2016, the WDNR agreed with capping of the entire site to address soil with residual PAH, arsenic, and lead concentrations that pose direct contact concerns. The WDNR also agreed that soil excavated could be redeposited on the Property as an alternative to off-site landfill disposal, contingent upon receipt of an approved Soil/Materials Management Plan. Any soil redeposited on-site would be capped with an impermeable surface (i.e. asphalt, concrete) or an approved soil cap. Any excess material that could not be redeposited would be transported offsite to an approved landfill for disposal pending acceptance of the soils.

A separate request for Development at a Historic Fill Site was submitted to the WDNR for this Property on September 1, 2016 with approval pending.

#### CHAPTER NR 718.12 CONSIDERATIONS

To match desired ground surface elevations associated with the overall redevelopment and to minimize the out-of-pocket expenses associated with off-site disposal of the excavated soil, the onsite management of contaminated soils in compliance with WAC Chapter NR 718 requirements is needed. Further information regarding the proposed materials management plan is provided below.

WAC NR 718.12(1)(c) lists criteria that require a written exemption from the WDNR. Applying these criteria, the following is known about the Site.

- The Reuse Area <u>is not</u> in a floodplain;
- The Reuse Area is within 100 feet of a wetland;
- The Reuse Area is not within 300 feet of a navigable river, stream, lake, pond, or flowage;
- There <u>are no</u> on-site water supply wells and it <u>is not</u> within 300 feet of any known offsite water supply wells;
- Excavated soil is not anticipated to be placed within 3 feet of the high groundwater level;



• Excavated soil <u>will not</u> be placed at a depth greater than the depth of the original excavation;

The excavated soil is expected to contain PAHs, arsenic, and lead constituents at concentrations above applicable WAC NR 720 non-industrial direct contact RCLs or groundwater protection. Therefore, the soil contamination poses a threat to public health and the environment and does not meet some of the requirements outlined in WAC NR 718.12 (1)(c). However, the proposed redevelopment plan includes construction of a cap across the entire Property (buildings, pavement, and associated landscape areas) to protect public health and the environment using WDNR RR-709 "Guidance for Cover Systems as Soil Performance Standard Remedies". Therefore, Stantec requests an exemption be issued for proposed materials management activities. The following information is provided in support of the exemption.

#### WASTE CHARACTERISTICS AND QUANTITIES

Waste material to be excavated at the Site consists primarily of sand intermixed with discontinuous layers of solid waste (i.e. wood chips, metal, slag, paper, glass, and/or plastic debris) that may contain PAHs, lead, and/or arsenic above applicable WAC NR 720 protection of groundwater and/or non-industrial direct contact residual contaminant levels. Soil and fill material containing low levels of benzene, PCE, and PCBs was also identified during the investigative activities on the northern and eastern portions of the Property, however, soil in this area of the Site is not expected to be excavated as part of the redevelopment. Approximately 3,525 cubic yards of excavated soil originating primarily from the southern portion of the Site primarily below the parking lot areas is anticipated to be re-used as fill on the remainder of the Site primarily below the parking lot areas on the northern half of the property. Additional soil may be generated during installation of utilities or the foundation support system (i.e. geopiers or an alternative foundation support system). Per WAC NR 718.12 (1)(e), it is requested that no additional sampling be required based on the amount of existing data.

#### GEOLOGIC AND HYDROGEOLOGIC CHARACTERISTICS

Results of the site investigation activities indicated that soil types on the Property consist of sand intermixed with discontinuing layers of solid waste (i.e. wood chips, metal, slag, paper, glass, and/or plastic debris). Where present, the solid waste was found to exist at depths of 0.5 to 12 feet below grade (fbg). The Fill is underlain by dark gray to black, fine grained, poorly graded silty sand, believed to be native deposits. During drilling activities, auger refusal was encountered ranging from approximately 30 to 40 fbg, likely indicating the bedrock surface. Groundwater was encountered at the Site between 4 and 11 fbg. Excavated soil/fill to be managed on site will be placed on the existing ground surface and will not be placed within 3 feet of the groundwater table.

#### UNAVAILABILITY OF ENVIRONMENTALLY SUITABLE ALTERNATIVES

The remedial action activities are part of a redevelopment in Marinette that will turn an underutilized vacant industrial property into a maritime and industrial business support center creating jobs within the community and in turn, northeastern Wisconsin. In comparing the reuse alternative to other options such as complete off-site landfill disposal, it was determined that the project would not be economically feasible to complete due to the added financial burden. Given that the excavated soil is of "like" character to *in-situ* soil in the placement area, on-site management appears to be a practical and environmentally suitable option.

#### COMPLIANCE WITH OTHER STATE AND FEDERAL REGULATIONS

Soil management will be in compliance with other state and Federal regulations. The soil will not be transported on or across any roadways unless being transported under manifest to a licensed landfill. The entire area is being managed as a construction site with proper erosion control, and the soil will be managed per the existing materials management and capping plans for the Site designed to be protective of human health and the environment.



Site plans also include the partial filling of a wetland on the western edge of the Property. Permits have been obtained from the WDNR and Army Corp of Engineers (ACOE) for the purpose of filling the existing onsite wetland. Excavated soils will partially be reused on the Site to fill this wetland to achieve the desired final subgrade in this area. Although not delineated beyond the Property boundaries, it appears the wetland extends offsite to the west. Therefore, contaminated soil will likely be placed within 100 feet of a wetland. Given that soil with similar contaminants are already present in the areas where contaminated soil will be placed it is unlikely that placement of additional impacted soil within 100 feet of an off-site wetland will have adverse impacts to the wetland. Therefore, Stantec requests an exemption from the Management of contaminated soil requirement presented in NR718.12 (1)(c). To prevent offsite contamination, silt fencing will be used to prevent erosion of contaminated soils into this area. Copies of the WDNR and ACOE permits are included as Attachment C.

If necessary, soil excavations may be dewatered in accordance with an approved stormwater management plan. Any required fluid removal will be pumped through a contained settling basin or filtration device and into a nearby sanitary sewer. Precaution will be taken to prevent water from migrating off-site.

#### MATERIALS MANGEMENT PLAN

#### Proposed Excavation and Placement of Impacted Soil

During building construction and Site grading, soil excavation activities are anticipated to include excavation of PAH, lead and/or arsenic impacted soil. The excavation activities will include, but are not limited to, utility trenches, installation of the stormwater retention pond, building foundation, and various site grading activities including removal of geotechinically unsuitable soil. Approximately 8,275 cubic yards of soil are expected to be excavated during construction with approximately 3,525 cubic yards of the material reused on-site as construction fill. Soil excavation is expected to extend to a maximum depth of 5 fbg with soil excavated primarily along the southern edge of the property boundary adjacent to Main Street as well as the small triangular extension on the northwestern corner of the Property as illustrated on Figure 2.

Excavated soil from these locations will be redeposited on the northern portion of the Site. The elevation of the northern half of the property will be raised and a concrete block retention wall placed along Ludington Street along the northern Property line and extending along portions of the western and eastern Property boundaries. Redeposited soil will be used to raise the ground surface elevation of the northern portion of the Site in preparation for the WMCOE building and surrounding parking lots.

In order to reduce the volume of contaminated soil to be excavated, the WMCOE building will be constructed using a standard spread footing foundation supported by geopiers. Soil generated during construction of the foundation and/or support system is also anticipated to be reused on-site. Any excavated soil deemed geotechnically unsuitable for on-site reuse will be transported off-site to Waste Management's Menominee, Michigan landfill for disposal. A map depicting the areas of the anticipated excavation and on-site soil placement is included as Figure 2.

As noted above, low levels of benzene, PCE and PCBs were detected in the soil excess of RCLs based on protection of groundwater quality; however, soil containing these contaminants is not anticipated to be encountered during the soil excavation activities. Specifically, PCE impacted soil was encountered at B400 at 6 to 8 fbg and is not anticipated to be encountered during the redevelopment activities since the lateral and horizontal extent of the excavation is not anticipated to extend beyond 5 fbg or to that portion of the Property. Benzene impacted soil detected near B1500 and B400 is also anticipated to be limited in extent. The building foundation near these borings is proposed to sit above the current ground surface elevation and excavation is not anticipated to be excavated near B700 and B1800 on the northern half of the Site where low levels of benzene and PCBs were detected at 4 to 6 fbg in the respective borings. Care will be taken during the excavation to



document these areas of known impacts and observe any petroleum odors in the soil, and if encountered, segregate this material for off-site landfill disposal.

During active excavation, a representative of MCABI will be on-site to direct and monitor Site activities. Appropriate erosion control measures will be put in place and appropriate permits obtained prior to Site activities. Construction contractors will be responsible to implement and use best management practices for minimizing tracking of soil off-site. Dust suppression methods will also be utilized. Site-specific health and safety plans will be developed by each contractor and consulting firm working at the Site, as applicable to protect Site workers. Management of potentially contaminated materials and other waste is described below.

In general, excavated soil that cannot be reused on-site will be loaded directly into trucks and transported off-site for appropriate disposal. Excavated materials will be monitored for the presence of:

- Strong or unusual odors including petroleum odors;
- Unusual soil discoloration not previously noted;
- Change in soil conditions not previously noted; and
- Other solid waste (e.g. debris, tires, etc.).

If any of the above or other suspect materials are unexpectedly identified during excavation operations, excavation in this area will be suspended until the materials encountered are evaluated for proper management methods. The Site representative or designee of the Developer will evaluate unusual situations on a case-by-case basis to determine the appropriate alternative response required. In each situation, the Site representative or designee will direct the contractor on proper disposal or relocation of the regulated material.

The protocol when such unusual or changed conditions arise is as follows:

- 1. If the material encountered is unplanned or unexpected, stop work immediately within the general area of the discovery until directed otherwise by the Site representative or designee. The contractors may continue working in a different area if one is available.
- 2. Notify Ms. Lynelle Caine, Senior Project Manager Stantec, immediately at (715) 854-3360 (direct), (920) 655-7211 (cell), or Lynelle.caine@stantec.com.
- 3. The Site representative or designee will document the location where the discovery was made, the waste material type, volume, and characteristics.
- 4. As directed by the Site representative or designee, the contractor shall temporarily stockpile the waste material. Depending on the materials encountered, special precautions such as encapsulation of stockpiled materials in plastic may be implemented.
- 5. Stantec will develop a plan for more permanent remediation or management of the newly discovered waste material including materials handling alternatives, staging requirements, additional sampling and analyses, and additional waste characterization profiling for disposal and/or reuse. The contractors shall have, and understand, the plan prior to continuing work in the affected area.
- 6. Stantec or its designee will complete the required additional notifications to WDNR, if warranted, and direct contractors in the loading, manifesting, and transport if off-site disposal is required.

These records will be accumulated throughout the duration of the construction project and will be incorporated into the post construction documentation.

#### Proposed Cap and Vapor Barrier Installation

Upon completion (likely during Summer 2017) of the soil excavation and on-site relocation of excavated materials, the entire Site will require permanent engineering controls in the form of building slabs, paved areas, and/or clean soil cap (including landscaping) that will remain in place



following redevelopment. In landscaped areas where soil capping is necessary, the cap will consist of filter fabric laid across the ground surface to be covered with 12 inches of "clean" fill and another 6 inches of "clean" topsoil for planting. In total the cap will be 18 inches thick. The term "clean" means only fill and topsoil that has been approved by the WDNR for use prior to being transported onto the Site for capping purposes. The retention pond will be constructed with a Type B liner following the WDNR specifications for a Wet Detention Pond Technical Standard 1001. The approved liners include; 2 feet of Clay, 40 mils High Density Polyethylene (HDPE), 30 mils Polyethylene Pond Liner (PPL) or any liner satisfying Type A Liner criteria (for more information see specifications outlined on page nine [sheet C2.2] of the Site Plan included in Attachment A). A site map showing the landscape surface materials including the building, paved, and landscaped locations comprising the cap is included as Figure 3.

The goal of the Site cover system is to:

- Provide stormwater drainage patterns that limit potential erosion; and
- Prevent direct contact with contaminated soil.

After placing the cap outlined above, Stantec will prepare a Cover System Maintenance Plan that outlines the responsibilities associated with inspecting, maintaining, disturbing, or preparing the caps.

As a precautionary measure, a vapor barrier will be installed beneath the concrete floor of the Site building. The vapor barrier will consist of 10 mil plastic with a minimum of 12 inches of overlap.

### CONTAMINATED GROUNDWATER, STORMWATER AND OTHER FLUIDS

Significant dewatering is not anticipated at this time. As previously discussed, appropriate stormwater and erosion control measures will be put in place and appropriate permits obtained prior to Site activities to minimize erosion and Site stormwater runoff. As practicable, the weather forecast shall be used to schedule Site activities to minimize the potential for significant stormwater accumulation. However, potentially impacted groundwater and stormwater may accumulate in areas requiring removal.

Any required fluid removal will be pumped through a contained settling basin or sediment filtration system and into a nearby sanitary sewer. Warren Howard, City of Marinette WWTP Operations Manager will be contacted at (715) 938-0811 or <u>whoward@marinette.wi.us</u> prior to any discharge.

#### DOCUMENTATION AND REPORTING

Stantec will prepare a report that documents materials management and construction activities associated with this redevelopment. Stantec may be present to monitor grading activities as they occur and would observe these activities to ensure that contaminated soil is being handled and moved as proposed in the materials management plan. Documentation will be submitted to the WDNR after completion of grading activities and may include, but not necessarily limited to:

- Physical description of the waste(s) encountered;
- The general location of the waste within a specific excavation and/or throughout the project area;
- A description of the time and date when the discovery of an unusual or unsuspected waste was made; and
- An estimate of the amount of unusual waste removed and the interim and/or final disposition of the waste.

### OTHER CONSIDERATIONS – MONITORING WELL SAMPLING AND ABANDONMENT

During the excavation and redevelopment activities it is anticipated that several of the Site monitoring wells could potentially be damaged or lost. Some of the monitoring wells including



MW2000 and MW1600 are located near or within the building footprint and will need to be abandoned prior to the start of excavation activities. MW1900 is also located within the footprint of the retention pond and will need to be removed. All of the Site monitoring wells, with the exception of MW1800 and MW2000, exhibited two rounds of sampling with concentrations at or below the NR140 PAL. Based on these results, we recommend that monitoring wells, MW1500, MW1600, MW1700, and MW1900 be abandoned and no additional groundwater monitoring be completed in these areas of the Site. Concentrations of PAHs and arsenic have decreased to below the NR140 ES in MW2000 and MW1800 during the last round of groundwater sampling completed on August 4, 2016. Since MW2000 will need to be removed during the excavation activities, we recommend collecting an additional sample from this well prior to the start of the excavation activities and properly abandon the well following sampling. Given the timing of the proposed start of the excavation work, the sampling intervals at MW2000 may only be two months apart instead of the typical 3 months and we are seeking WDNR approval of this plan. The location of MW1800 will be carefully marked prior to the start of excavation activities in order to retain the monitoring well for future sampling, if needed. It is anticipated that MW1800 will be sampled again during November 2016 for arsenic. Pending the sampling results, WDNR approval to abandon the well may be sought at that time. The location of the soil borings in location to the proposed excavation extent is shown on Figure 4.

#### MATERIALS MANAGEMENT PLAN SUMMARY

An engineered barrier consisting of parking lots, sidewalks, buildings, and landscaped areas will be constructed across the entire Property. Landscaped areas are planned and will include a minimum of 18 inches of clean WDNR approved fill material. The engineered caps covering these areas will prevent direct contact exposure to the impacted soil. Future case closure will include adding the case to the WDNR GIS Registry of Closed Remediation Sites. A barrier maintenance plan for the entire Property will be prepared and/or revised as necessary based on final as-built conditions. Case closure is anticipated to be requested upon installation of the final cap and documentation of a decreasing trend in the groundwater.

#### LIMITATIONS

The MMP was created in accordance with generally accepted practices for the environmental consulting profession, undertaking similar studies or work at the same time and in the same geographical area as the work conducted by Stantec. Stantec observed the degree of care and skill that is generally exercised by the profession under similar circumstances and conditions. No other warranty is expressed or implied.

Stantec's observations, findings, and opinions should not be considered as scientific certainties, but only as opinion based upon our professional judgment concerning the significance of the data gathered during the course of this project. Due to limitations of the investigation process and the necessary use of data furnished by others, Stantec and its subcontractors cannot assume liability if actual conditions differ from the information presented in this MMP.

#### **CERTIFICATION STATEMENT**

"I, Stuart Gross, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

com

Stuart Gross, P.G.

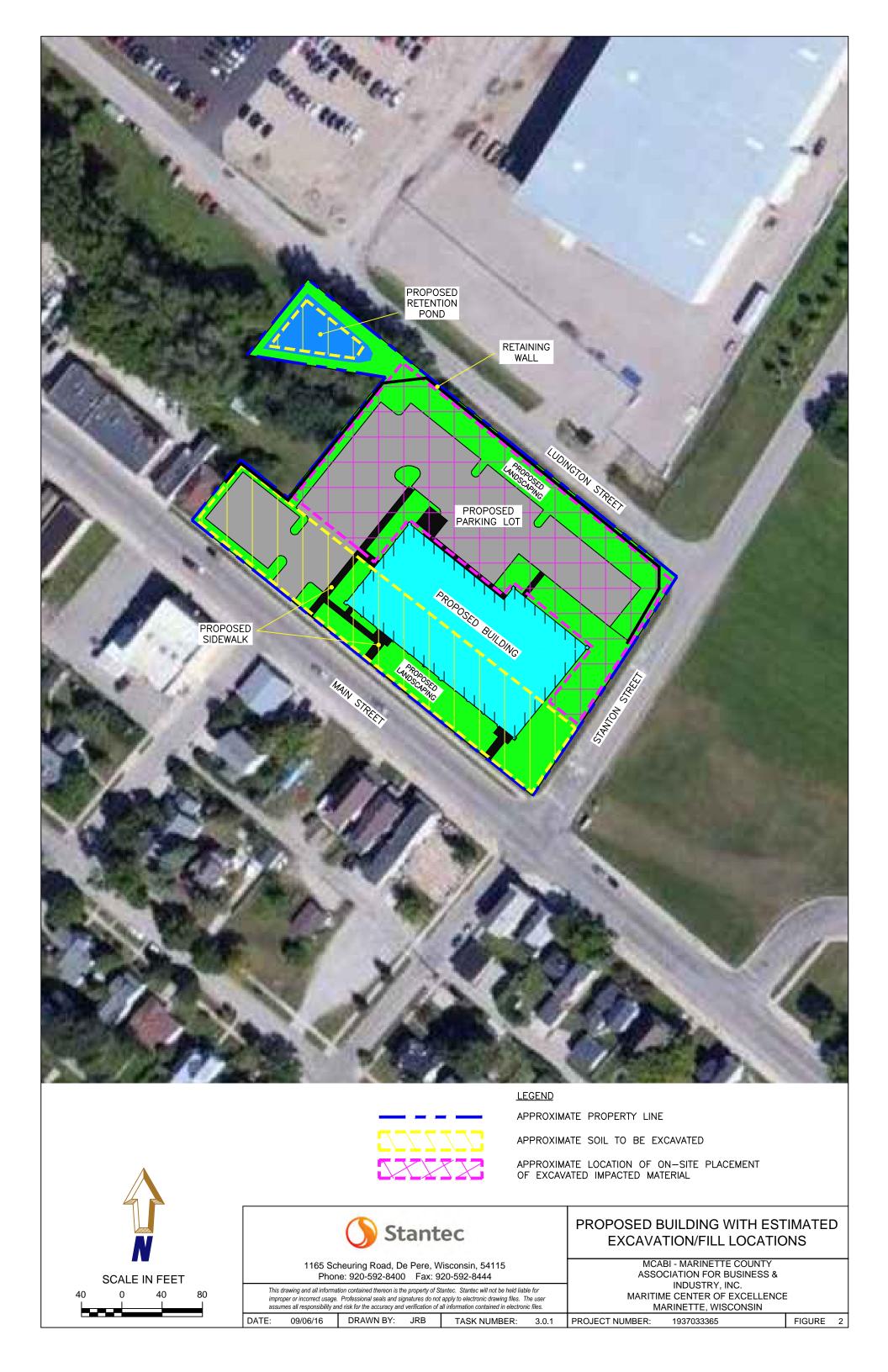
September 7, 2016 Date



# Figures

- Figure 1 Site Layout
- Figure 2 Proposed Building with Estimated Excavation / Fill Locations
- Figure 3 Proposed Building and Cap Locations
- Figure 4 Proposed Building with Soil Boring Locations











**Attachments** 



# Attachment A

Site Civil Plans and Renderings of Future Building

# **PROPOSED NEW BUILDING:**

# MARITIME CENTER OF EXCELLENCE FOR: Marinette County Association for Business & Índustry, Inc.

1300 MAIN STREET MARINETTE, WISCONSIN

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# PROJECT INFORMATION

MARITIME CENTER OF EXCELLENCE MARINETTE COUNTY ASSOCIATION FOR BUSINESS & INDUSTRY, INC. PROJECT: ADDRESS: 1300 MAIN STREET MARINETTE, WI OFFICE BUILDING USE: ZONING (ZONING) - B-3 MARINETTE COU FOR BUSINESS ( 1226 HALL AVE MARINETTE, WI P. 715- 732-7421 CONTACT: CONTACT: ANN HARTNELL DESIGNERS OF RECORD:

CIVIL ENGINEERING DAVEL ENGINEERING I&II RACINE STREET MENASHA, WI 54304 P (920) 991 1866

CONTACT: TIM WITTMAN

ARCHITECTURAL FIGHER & ASSOCIATES ARCHITECTS / PLANNERS 416 CEDAR STREET MRIGHTSTORN, NI S4160 P(420) 532-4194 C.(420) 316-0001

CONTACT: RICK FISHER

STRUCTURAL ENGINEERS: LARSON ENGINEERING OF MISCONSIN 2001 ENTERPRISE AVE APPLETON, MISCONSIN 54413 P.(420) T34-4860 F.(420) T34-4860 CONTACT: JIM RICHARDS



OCCUPANCY FI, SI & B (NON-SEPARATED ) TYPE OF CONSTRUCTION. IIB (METAL FRAMED WPROTECTED) SPRINKLED PER NFPA 13 OCCUPANT LOAD:

OFFICE 23.775/100 = 238 000

GRADE LEVEL

TOTAL

FIRE FIGHTING APPARATUS

THE BUILDING IS 22'-0" TALL

THIS BUILDING HAS ONE FLOOR LEVEL

CONTROL AREAS

THE BUILDING IS LIMITED IN AREA THE FIRE LANE IS UNOBSTRUCTED

THE FIRE LANE IS WITHIN 150 ' OF ALL PARTS OF THE EXTERIOR WALL WITH A MIN. UNOPERTRUCTED HEIGHT OF 13'-6"

NO HAZARDOUS MATERIALS WILL BE STORED WITHIN THIS BUILDING PER TABLES 301.7(1) AND 301.7 (2) ALLOWABLE HEIGHT NOT REGULATED PER 503.1.1

IABLE AREA PER FLC

USE GROUP FI, SI, AND B SEPARATED 15500 X4 = 62,000 ALLOWABLE ARE FRONTAGE INCREASE NOT CALCULATE

EGRESS WIDTH REQUIRED 2"/ OCCUPANT EXIT WIDTH REQUIRED 48" EXIT ACCESS TRAVEL DISTANCE 250' PER TABLE 1004.2.4

TOILET FACILITIES PER TABLE 2402.1

 125/100 = 1.25 W.C.
 125/100 = 1.25 LAVS.

 2 W.C. REQUIRED
 2 LAV. REQUIRED

UP TO 50% OF TOILETS MAY BE URINALS 3 W.C. 4 U. # 3 LAV PROVIDED WOMENS 125

125/100 = 1.25 LAVS. 2 LAV. REQUIRED 125/100 = 1.25 W.C. 2 W.C. REQUIRED 3 W.C. & 3 LAV PROVIDED

I SERVICE SINKS PROVIDED

NAVY SPACE THIS FACILITY WILL EMPLOY APPROXIMATELY 85 PERSONS PER SHIFT TOILET FACILITIES PER OSHA TABLE 1910.141 J.I. DESIGN MEETS REQUIRMENTS FOR 115 EMPLOYEES

3 WC = 55 MEN + I U = 4 FIXTURES = 80 MEN 2/3 OF REQUIRED FIXTURES MUST BE W.C.

2 WC = 35 WOMEN

NCUBATOR SPACE HIS FACILITY WILL EMPLOY APPROXIMATELY 85 TERSONS PER SHIFT TOILET FACILITIES PER OSHA TABLE 1910.141 J.I DESIGN MEETS REQUIRMENTS FOR 115 EMPLOYEES

I WC = 15 MEN + I U = 1.5 FIXTURES = 20 MEN 2/3 OF REQUIRED FIXTURES MUST BE W.C.

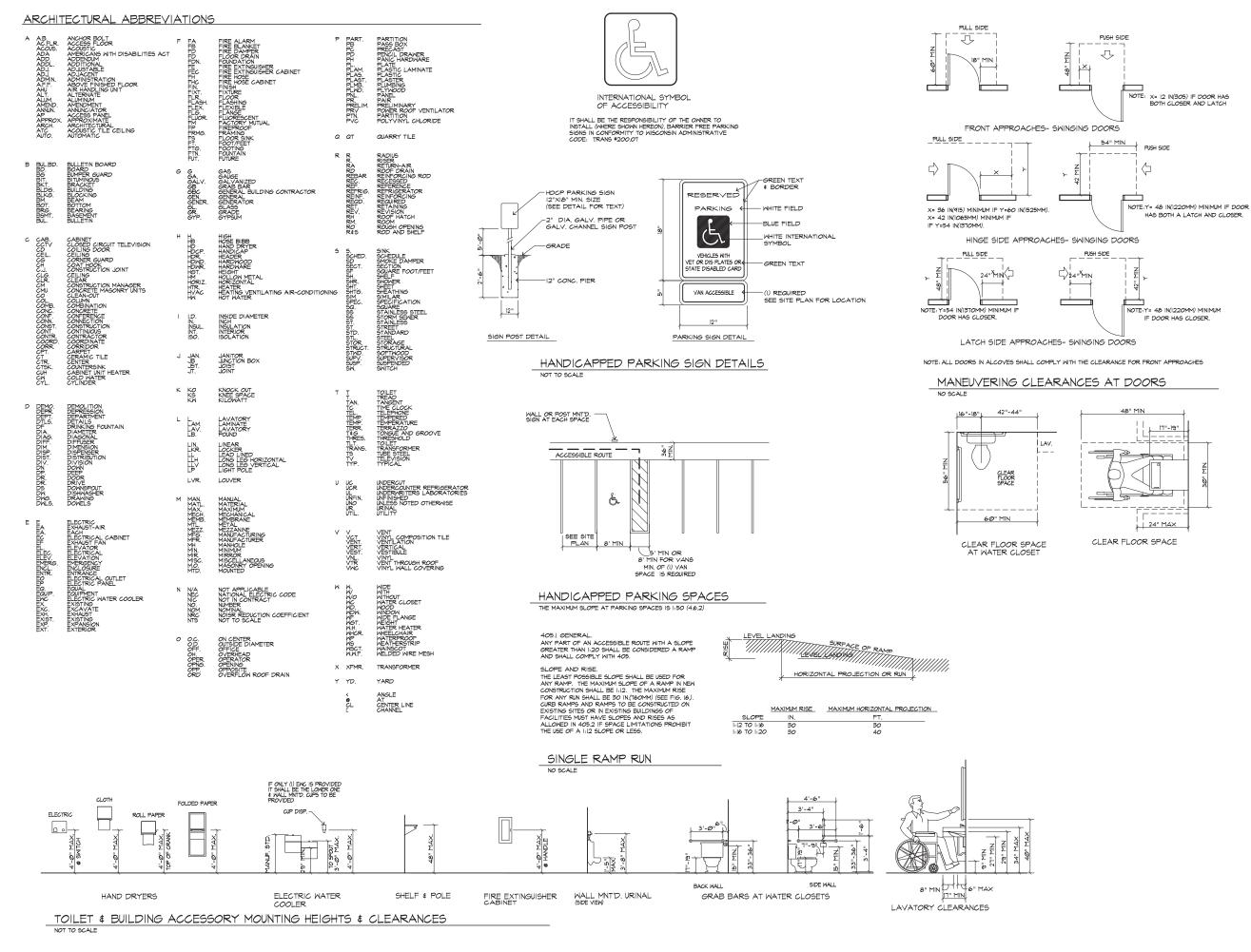
2 MC = 35 MOMEN

GRADE PLAN DETERMINATION NUMBER OF STORIES (1) THE GREATEST HGT. FROM GRADE TO TOP OF WALL IS 22'-0"

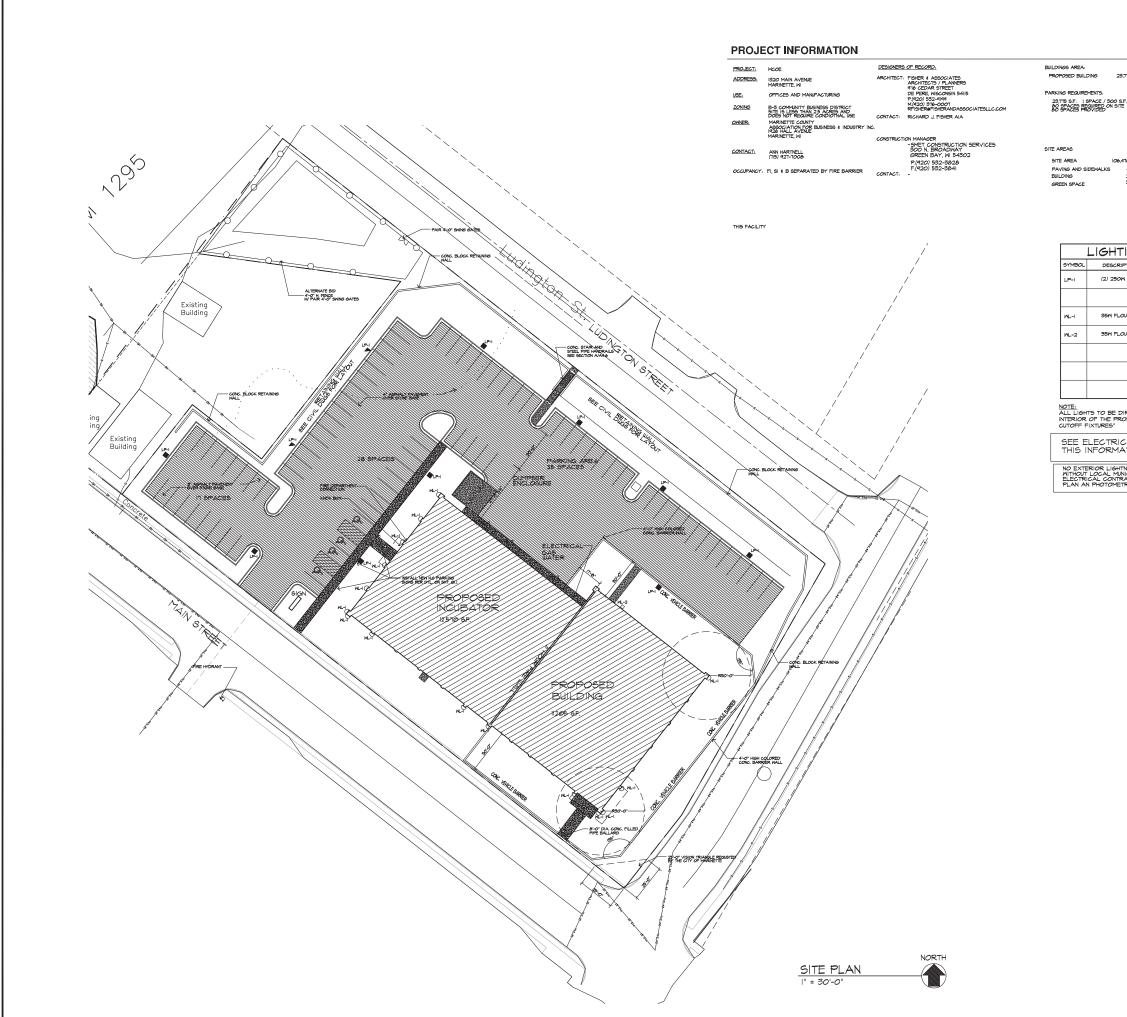
23,775 S.F

		AΤ	THIS	TIME
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			OUR REPUTATION IS BU	CORPORATE OFFICE MARIN	300 N. BROADWAY, SUITE 2B 1428 MAIN	CHEEN BAY, WI 54303 MARIN	PHONE (800) 2/5-18/2 FAX (920) 532-3831 E-M
\ -	FICHED & ASSOCIATES IIC	FINITEN & ANNUCIATED, LLU	/ Architects / Planners	ald rende strefft he bere Mi falls	Ph/(420) 532-4144	rfisher@fisherandassociatesllc.com	
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28,775 S.F.

LANDSCAPE REQUIREMENTS I TREE PIER I/IOOD 5.F. OF FLOOR SPACE 24 TREES REQUIRED 5% PARKING LOT GREEN SPACE REQUIRED

106,416 S.F. 2.44 ACRES 35 47,280 S.F. 44,8 % 25,715 S.F. 22,5 % 34,535 S.F. 32,7 %

SETBACKS FRONT YARD SIDE YARD REAR YARD BUILDING FLOOR AREA RATIO

0'-0" 0'-0" 20'-0" 50% MAX. OF LOT

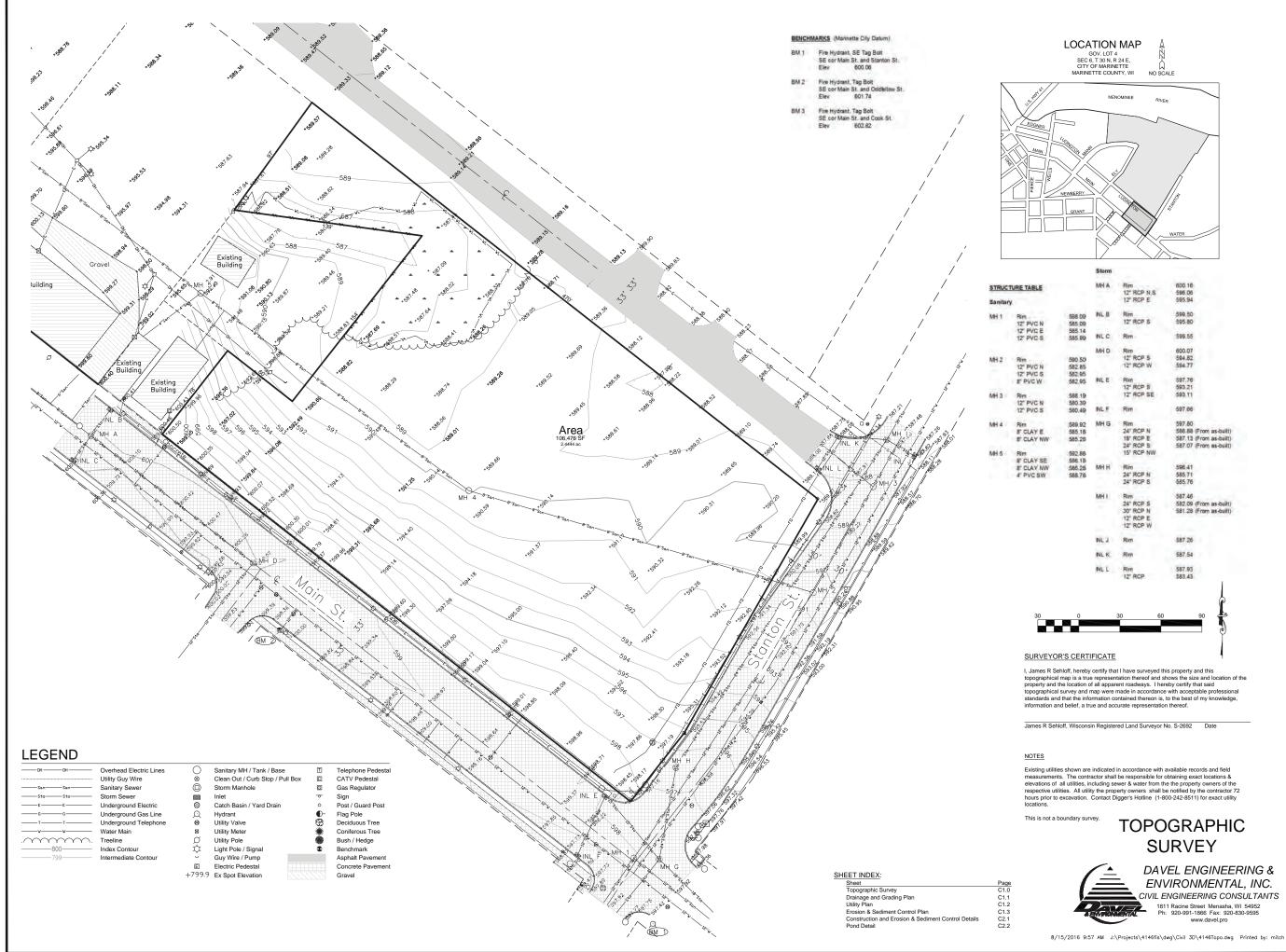
IGHTING SCHEDULE					
DESCRIPTION	QTY.	REMARKS			
(2) 250W FIXTURE	12	POLE MOUNTED (30')			
35W FLOUR. FIXTURES	12	WALL MOUNTED UP/DOWN			
35W FLOUR. FIXTURES	4	Wall Mounted Wall Pack			

NOTE: ALL LIGHTS TO BE DIRECTED TO SHINE TOWARD THE INTERIOR OF THE PROPERTY. THE FIXTURES TO BE "FULL CUTOFF FIXTURES"

SEE ELECTRICAL DRAWINGS FOR FINAL DESIGN THIS INFORMATION IS FOR INTENT ONLY

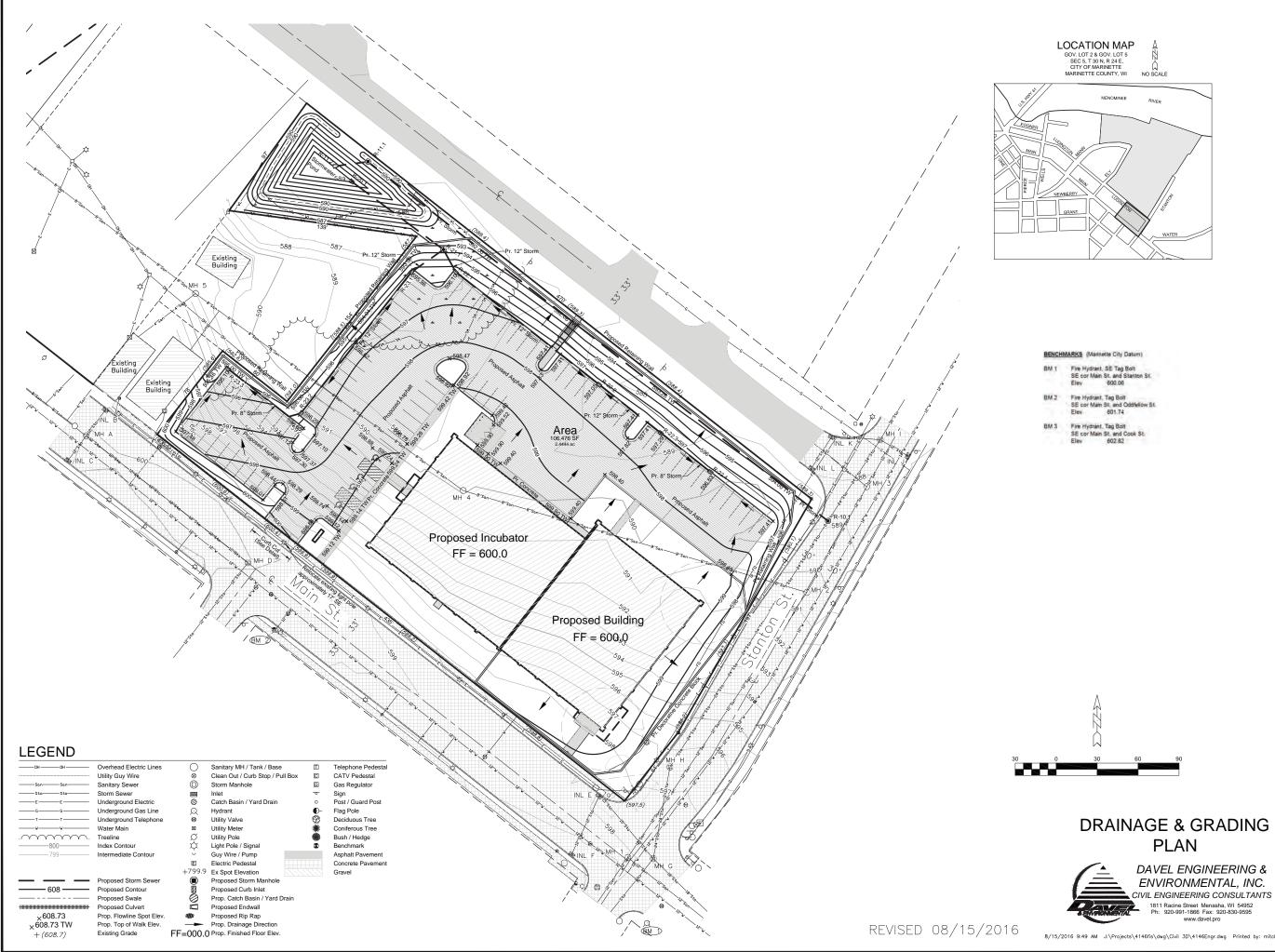
NO EXTERIOR LIGHTNING WORK TO BE PERFORMED MITHOUT LOCAL MUNICIPALITY APPROVAL ELECTRICAL CONTRACTOR TO SUBMIT LIGHTING PLAN AN PHOTOMETRIC DESIGN FOR APPROVAL





VCN	585.09		12" RCP 5	595.80
VCE	585.14			
VCS	585.99	INL C	Rim	599.55
		MHD	Rim	600.07
	590.50		12" RCP 5	594.82
VCN	582.85		12" RCP W	594.77
VCS	582.95			
VCW	582.95	INL E	Rim	597.76
10.11	2012.00	1.00	12" RCP 5	593.21
	588 19		12" RCP SE	593.11
VCN	580.39			
VC S	580.49	INL F	Rim	597,66
	589.92	MHG	Rim	597.80
LAYE	585.18		24" RCP N	586.88 (From as-built)
AYNW	585.28		18" RCP E	587.13 (From as-built)
	1		24" RCP 5	587.07 (From as-built)
	592,88		15" RCP NW	
LAY SE	586.18			
LAY NW	586.28	MH H	Rim	596.41
VCSW	588.78		24" RCP N	565.71
			24" RCP S	565.76
		MHI	Rim	587.46
			24" RCP S	582.09 (From as-built)
			30" RCP N	581.28 (From as-built)
			12" RCP E	
			12" RCP W	
		NL J	Rim	587 26
		INL K.	Rim	587.54
		NUL	Rim	587.93
			12" RCP	583.43
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30	0		30 60	90
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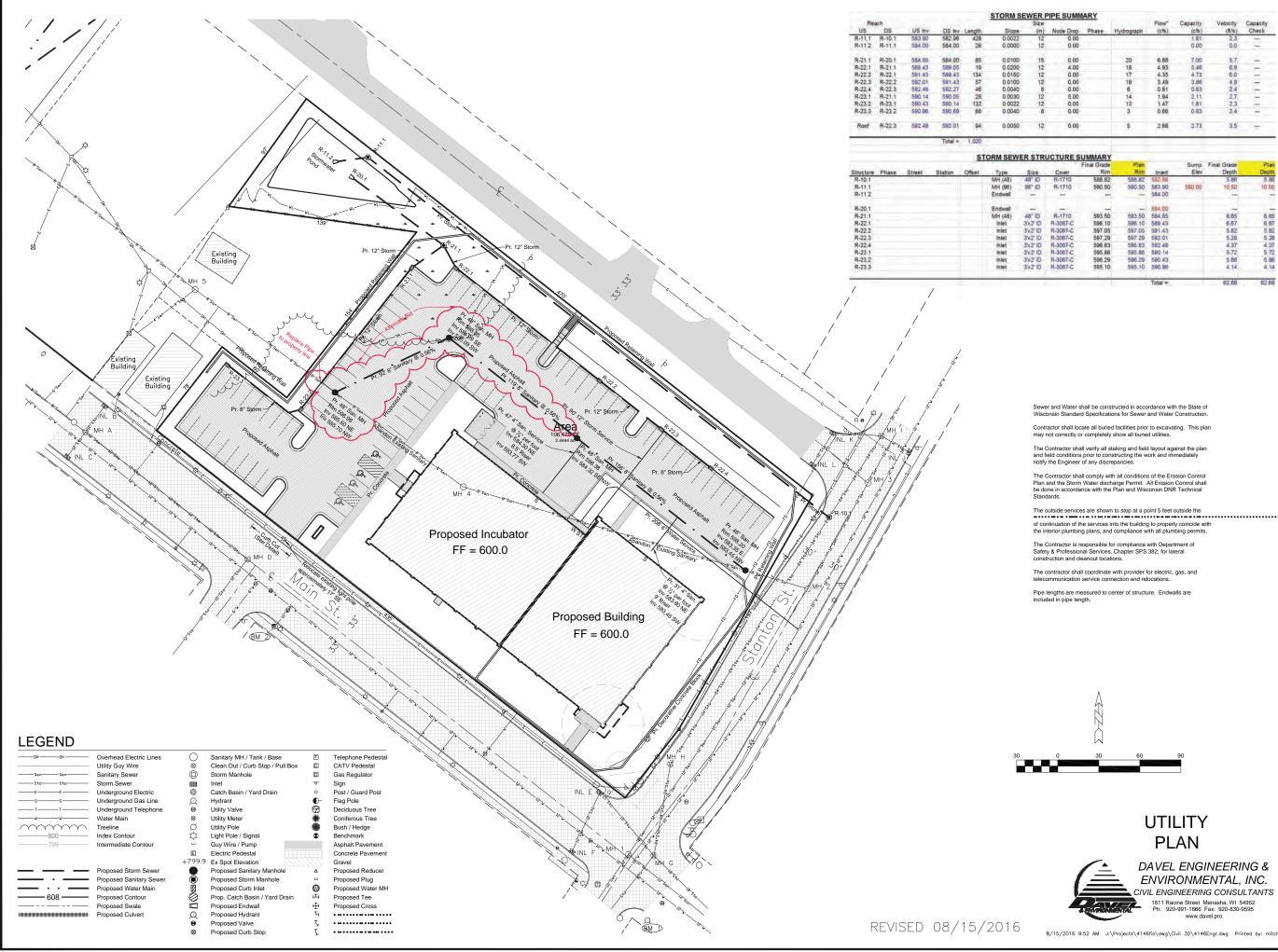
IIIISMET	CONSTRUCTION SERVICES	OUR REPUTATION IS BUILDING	8 27	CREEN BAY, WI 54303 MARINETTE, WI 5443 PHONE (800) 275-1872 FAX (820) 532-3831 E-MAIL BUILD'S SMET.COM
	FISHER & ASSOCIATES, LLC	/ Architects / Planners	916 CEUJAK SIREEL, DE PERE, W 54115 Ph.(920) 532-9199 Fax (920) 532-9119	rfisher@fisherandassociatesllc.com
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		MCABI		Business & Industry, Inc.



8M 1	Fire Hydrant, SE Tag Bolt SE cor Main St. and Stanton St. Elev 600.06
BM 2	Fire Hydrant, Tag Bolt SE cor Main St. and Oddfellow St. Elev 601.74
BM 3	Fire Hydrant, Tag Bolt SE cor Main St, and Cook St. Elay 802.82

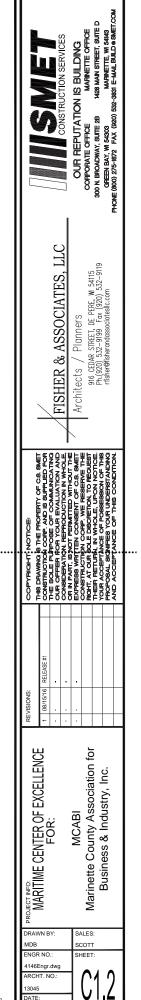
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FISHER & ASSOCIATES, LLC	Architects / Planners 916 cEDAR STRET, DE PERE, W 54115 Ph,1920) 532-9199 Fox (920) 532-9119 rifisher@fisherondessociatesle.com
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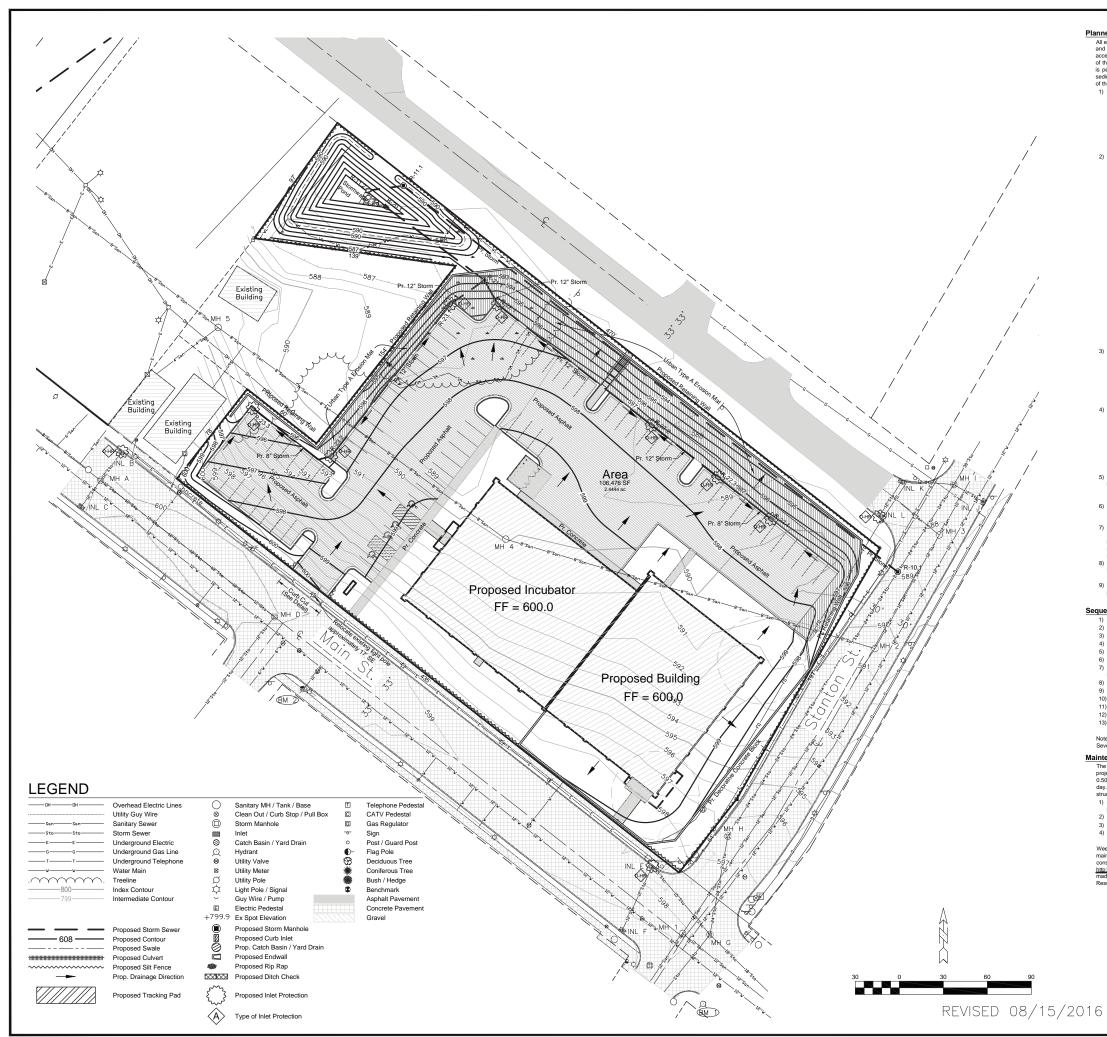


Size				Flow*	Capacity	Velocity	Capacity
(in)	Node Drop	Phase	Hydrograph	(cfs)	(cfs)	(贵/S)	Check
12	0.00		1.000		1.81	2.3	-
12	0.00				0.00	0.0	+
15	0.00		20	6.88	7.00	5.7	-
12	4.00		18	4.93	5.46	6.9	-
12	0.00		17	4.35	4.73	6.0	-
12	0.00		16	3.49	3.86	4.9	-
8	0.00		6	0.81	0.83	2.4	-
12	5.00		14.	1.94	2.11	2.7	-
12	0.00		13	1.47	1.81	2.3	-
8	0.00		3	0.66	0.83	2.4	-
12	0.00		5	2.68	2.73	3.5	-

Size	Cover	Final Grade Rim	Pian Rim	Invert	Sump Elev	Final Grade Depth	Plan Depth
48" ID	R-1710	588,82	588.82	582.96	-	5.86	5.88
96" ID	R-1710	590.50	590.50	583.90	580,00	10,50	10,50
	-	-	-	584.00		-	-
-	-	-	-	584,00		-	-
48" ID	R-1710	593.50	593.50	584.85		8.65	8.65
3'x2' ID	R-3067-C	596.10	596.10	589.43		6.67	6.67
3x2 1D	R-3067-C	597.05	597.05	591.43		5.62	5.62
3x2' ID	R-3067-C	597.29	597.29	592.01		5.28	5.28
3'x2' ID	R-3067-C	596.83	596.83	592.46		4.37	4.37
3'x2' ID	R-3067-C	595.86	595.86	590.14		5.72	5.72
3x2'ID	R-3067-C	596.29	596.29	590.43		5 86	5.86
3x2 1D	R-3067-C	595.10	595.10	590.96		4.14	4.14
			_		_		



DATE:



#### Planned Sediment and Erosion Control Practices

anned Sediment and crosion control relatives All erosion control practices shall be in place prior to disturbing the site. All sediment and erosion control devices and methods shall be in accordance with DNR Technical Standards and the WisDOT Erosion Control product acceptability its (PAL). It is the responsibility of the Contractor to minimize the area disturband and the duration of the disturbance. Erosion & sediment control measures shall be maintained on a continuing basis until the site is permanently stabilized. All applicable controls must be in place at the end of each work day. All off-site sediment deposits occurring as a result of construction work or a stom event shall be cleaned up at a minimum of the end of each day or as necessary. Flushing shall not be allowed.

- of the end of each day or as necessary. Flushing shall not be allowed.
  1) Diverting Flow
  a) Permanent Diversion Intended to divert runoff around disturbed areas to a location where the water can be discharged without adversely impacting the receiving area or channel. Permanent diversions will be used to route runoff to the ponds.
  b) Temporary Diversion Intended to divert runoff around disturbed areas to a location where the water can be discharged without adversely impacting the receiving area or channel. Unlike a permanent diversion, the temporary diversion will be temporary diversion will be temporary diversions will be used usplope of any sol piles to reduce the amount of sediment transported. All diversions all be installed and maintained in accordance with DNR Technical Standard 1066. 2) Overland Flow
- a) Silt Fence Intended to provide a temporary barrier to the transportation of sediment offsite. Silt fence Sin Perces - interiore to provide a temporary barrier to the transportation to sediment unsist. Sint enford also reduces the velocity of share flow, thereby reducing the erosion potential of flowing water. Sint fencing is not to be used in areas of channelized flow and sediment deposits shall be removed when a 6 inch depth is reached. The silf tence shall be required or replaced as necessary to maintain a barrier. All Silt Fence shall be installed and maintained in accordance with DNR Technical Standard 1056. It will be placed at the following locations:
- along the site boundary where runoff will leave the site, and at the toe of soil piles if the pile will remain in place for more than seven (7) days.
- ny and a dre de origin pies i dre pies will remain in piace for more than seven (7) days.
  b) Sediment Bale Barrier Intended to intercept and detain small amounts of sediment from construction operations to prevent sediment from leaving the site. Sediment Bale Barriers are not to be used in areas of channelized flow. All Sediment Bale Barriers shall be installed and maintained in accordance with DNR Technical Standard 1055. Sediment Bale Barriers may be used in place of silt fence around soil stockpiles.
- accordance with onk retrincts standard tool. Security is beamine bale ballies intry be used in place to sill fonce automs doil stockyles.
  c) Mulching and Erosion Mat Intended to reduce the amount of erosion caused by raindrop impact, high overland and concentrated flow velocities and assist the establishment of both temporary and permanent vegetation. All Erosion Mat shall be installed and maintained in accordance with DNR Technical Standard 1058. In addition to mulching, Erosion Mat is required per plan with installation per manufacturer specifications. O Seeding Intended to provide a reduction of overland flow velocities and stabilize disturbed areas. Seeding will be used on all disturbed areas within seven days of the completion of the activity that will disturb the area. All seeding shall be in accordance with DNR Technical Standard 1059. Seed mixture 40 (per WisDOT Specifications, Soction 630) shall be applied at 5 pounds per 1000 square feet for permanent seeding prior to Spethemore 15th. If required, temporary seeding shall be in to later than November 15t. Sod placement may occur at anytime sod is available and the sod and soil are not frozen. Trapping Sediment in Channelize Flow
- 3) Trapping Sediment in Channelized Flow
- Trapping Sediment in Channelized Flow a) Ditch Checks Interded to settle suspended sediment in channelized flow by reducing the flow velocity. All Ditch Checks shall be installed and maintained in accordance with DNR Technical Standard 1062. Ditch Checks will be used where indicated on the plan as sediment logs. Additional ditch checks may be required in areas where erosion is occurring. b) Sediment Basin Intended to detain sediment-lader runoff from disturbed areas for a sufficient time to allow the sediment to settle. Once constructed, the proposed pond may function as a sediment basin during the construction of the project in accordance with WDNR Technical Standard 1064.
- 4) Permanent Channel Stabilization
- a) Armored Waterway Intended to establish a non-erosive lining in the channel to prevent erosion. This can be accomplished using riprap. Riprap will be used in the following areas
- can be accomplished using nprap. Kuprap will be used in the following areas: i) drainage swales and pipe outilist, as indicated on the plans b) Vegetated Waterway Intended to establish permanent vegetation to reduce the velocity of concentrated runoff threeby protecting the vaterway from errosion. The type of erosion mat used will depend upon the velocity of the runoff in the channel and are specified in accordance with DOT Erosion Control Product Acceptability Lists (PAL). Vegetated waterways will be used in the following areas: i) drainage swales, as indicated on the plans Let Denote the periode. Instruction the continuent of the runoff the control product Acceptability (155) (PAL).
- i) Unallage swates, as inducated to revert the sedimentation of storm water conveyance structures. All Inlet Protection Barriers Intended to prevent the sedimentation of storm water conveyance structures. All Inlet Protection Barriers shall be installed and maintained in accordance with DNR Technical Standard 1060. As required, inlet protection barriers will be used at all storm sever inlets as indicated on the single standard the plans.
- the plans. 6) Stone Tracking Pad Intended to reduce the amount of sediment transported onto public roads. The Tracking Pad shall be installed and maintained in accordance with DNR Technical Standard 1057. A tracking pad will be constructed at the sile entrance as indicated on the plan. 7) Devatering BMP Intended to reduce the amount of sediment conveyed due to dewatering practices. Devatering practices require compliance with DNR Technical Standard 1061. The use of gootextile bags is required to prevent sedimentation with discharge to the adjacent storm water pond. The bags shall meet the requirements of Technical Standard 1061. Uno completion of the dewatering operation, all materials must be disposed of properly in accordance with all state and local requirements.
- materials must be disposed of properly in accordance with all state and local requirements. 8) Dust Control Intended to reduce surface to air transport of dust during construction. Dust control shall be implemented with use of methods provided in DNR Technical Standard 1068. These methods include the use of polymers, seeding, and mulch. 9) Waste Material All onsite waste and construction materials shall be handled and disposed of ------New pavement material, rundi from concrete washout, or other waste material is allowed to enter the storm sewer system or receiving waters.

#### Sequence of Construction

- Obtain plan approval and other app
   Flag work limits. November 2016 -other applicable permit
- 3) Install and maintain all erosion & sediment control measures. November 2016 4) Construct stormwater pond. November 2016
- Utility construction. November 2016
- 6) Strip top soil from proposed pavement and building areas and fill site. November 2016
- Prepare and construct gravel base for driveway and parking area. Field inspect and add additional measures if necessary. December 2016
- Temporary seeding of disturbed areas. December 2016
   Ocnstruct building foundation. December 2016
   Ocnstruct building. December 2016 April 2017

- 11)Asphalt paving. May June 2017
- 12)Seed and mulch lawn areas. No later than June 15, 2017 13)Remove all temporary measures upon final stabilization of the site.
- Note: The dates provided are approximate and subject to weather conditions and overall project schedule. Several work items as listed above may occur simultaneously with others.

#### Maintenance Plan

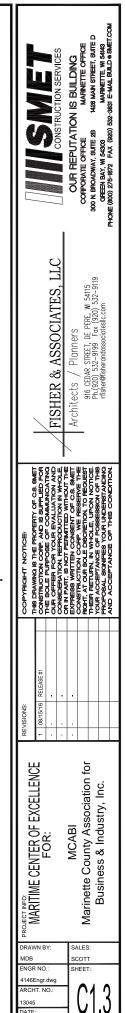
- nsible for inspection and maintenance of sediment and erosion control measures until the The contractor is res The contractor is responsible for inspection and maintenance or sediment and erosion control measures unui the project is completed. The inspections shall be made every sever days or within 24-hours of a rainfall event of 0.50-inch or greater. Any practices that are damaged or not working properly shall be repaired by the end of the day. Accumulated sediment shall be removed when it has reached a height of one-half the height of the structure. In addition, the following measures shall be taken:
- All seeded or sodded areas will be repaired as necessary according to the specifications in the planned practices to maintain a vigorous, dense vegetated cover. Remove silt fence and temporary structures only after final stabilization and vegetative cover is established
- 3) Avoid the use of fertilizers and pesticides in or adjacent to channels or ditches
- 4) Construction and waste materials shall be properly disposed.
- Weekly inspection reports shall be maintained by the contractor. These reports shall document inspections and maintenance performed. The date and time of the inspections, the inspector's name, and the status of construction and any maintenance performed. Refer to Appendix C of this report or visit http://dnc.wi.og/windfistormwater/constrforms.htm for a template. Upon request, the inspector reports shall be made available to the owner, the engineer, the City of Marinette, or the Wisconsin Department of Natural Presume.

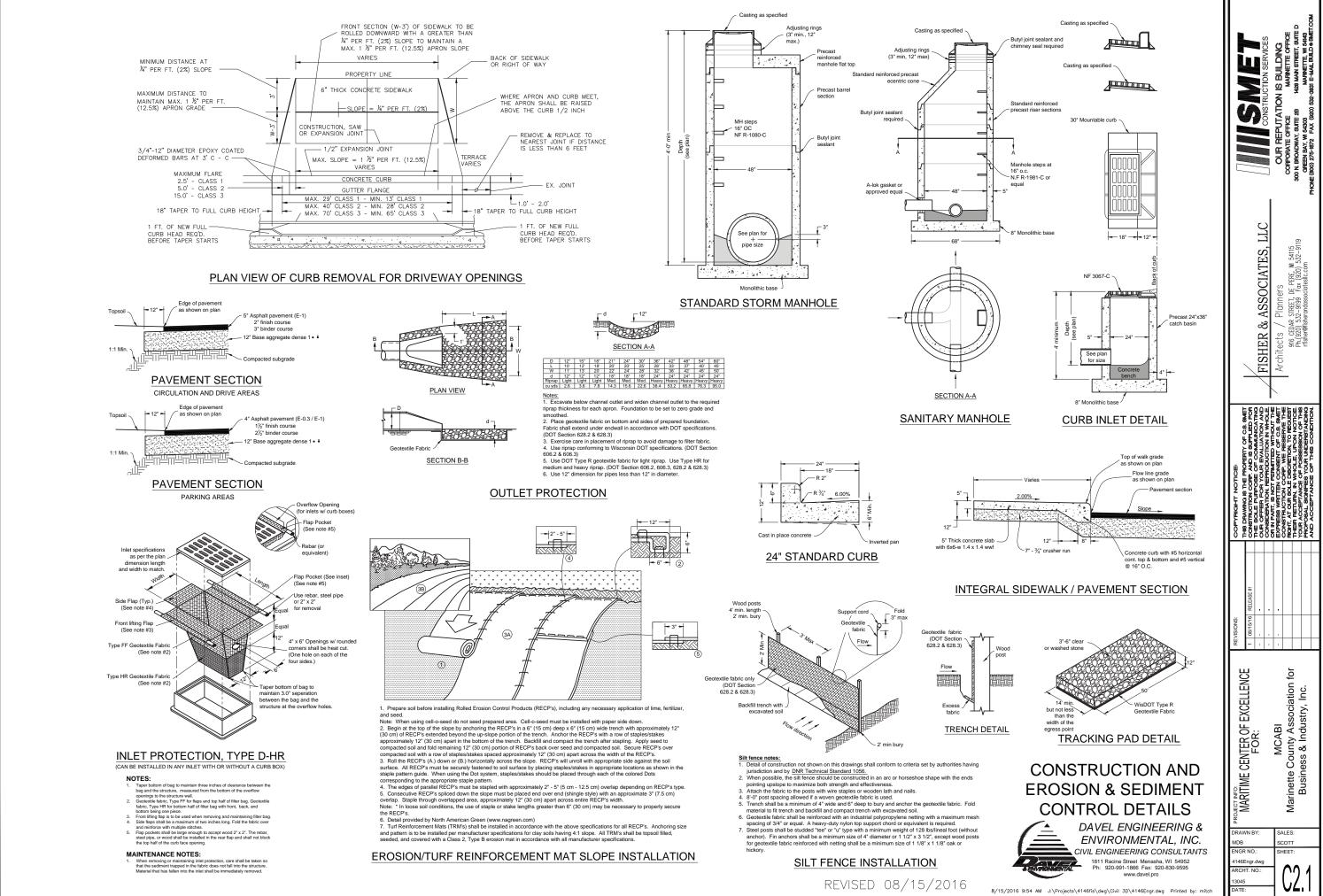
# **EROSION & SEDIMENT** CONTROL PLAN DAVEL ENGINEERING &

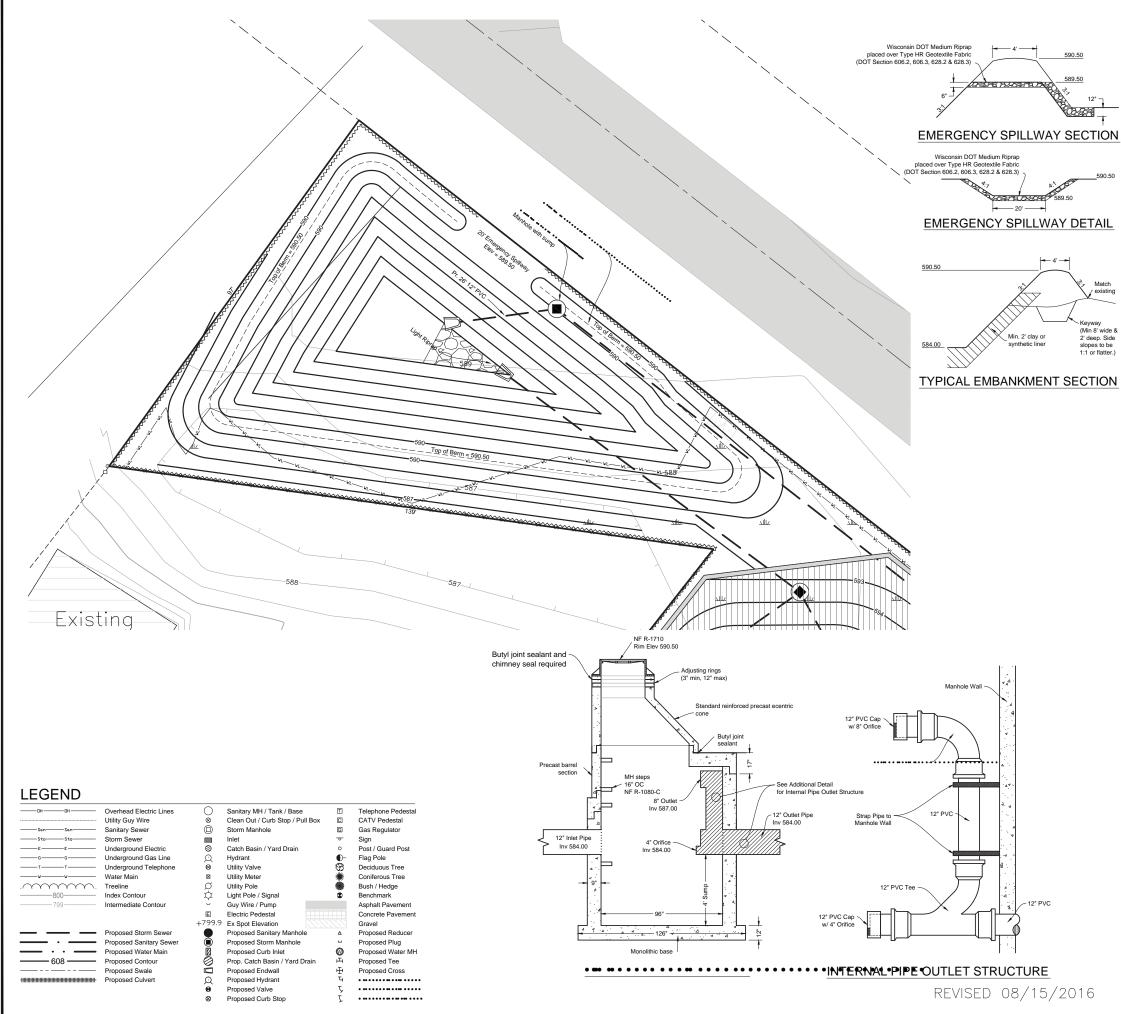
ENVIRONMENTAL, INC. CIVIL ENGINEERING CONSULTANTS 1811 Racine Street Menasha, WI 54952 Ph: 920-991-1866 Fax: 920-830-9595 www.davel.pro

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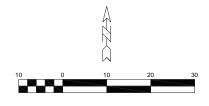


- Pond Notes:
   The base of the embankment shall be stripped of all vegetation, stumps, topsoil and other matter. Stripping shall be to a minimum of 6 inches.
   Embankments shall be constructed with non-organic soils and compacted to 90% standard proctor according to the procedures outlined in ASTM D-698. No tree during no atthematic approximation (article ball be busic) in the procedures outlined in ASTM D-698. No tree stumps, or other organic material shall be buried in the embankment. The constructed embankment height shall be increased a
- embankment. The constructed embankment height shall be increased a minimum of 5% to account for settling.
   All pipes extending through the embankment shall be bedded and backfilled with embankment or equivalent soils. The bedding and backfill shall be compacted in lifts and to the same standard as the original embankment. Excavation through a completed embankment shall have a side slope of 1:1 or firster.
- or flatter. Topsoil shall be spread on all disturbed areas, except for elevations below the safety shelf, as work is completed. The minimum depth of topsoil shall be 4 inches.
- be 4 inches.
  All areas disturbed by pond construction shall be seeded as work is completed. Pond side slopes above permanent pool shall be temporarily seeded with annual rye or cats immediately after pond is 'roughed in." This will require topsoil application. Slopes steeper than 10:1 but less than 4:1 will require properly anchored mulch in accordance with Section 627.1 of the DOT Standard Specifications for Highway and Structure Construction. DOT Class 1, Type B erosion mat will be required on slopes steeper than 4:1 (Section 628.2 & 623.3).
  Riprap at all inflow points shall extend a minimum of 18 vertical inches below the permanent pool. (Section 662.2 & 606.3)
  Any rock encountered shall be excavated to a depth two feet deeper than the proposed pool grade.
  The pond shall be constructed with a Type B Liner with the following WDNR specifications (Vet Detention Pond Technical Standard 1001). Liners include: (Clay, High Density Polyethylene (HDPE), Polyethylene Pond Liner (PPL) or any liner satisfying Type A Liner criteria.
  Soy6 fines (200 sieve) or more.
  Hydraulic conductivity of 1 x 10-6 cm/sec or less.
  Average liquid limit of 16 or greater, with no value less than 14. 5. All areas disturbed by pond construction shall be seeded as work is

- Average liquid limit of 16 or greater, with no value less than 14.
   Average Pl of 7 or more, with no values less than 5.
   Clay compaction and documentation as specified in NRCS Wisconsin
- Clay compaction and documentation as specified in NRCS Wisconsin Construction Specification 204, Earthfill for Waste Storage Facilities.
   Minimum thickness of 2 feet.
   If in-situ soils meet the above requirements of the specification for a Type B Clay Liner, including a minimum saturated hydraulic conductivity of 1 x 10-6 cm/sec to a depth of 4 feet below the pond bottom, the in-situ soils then satisfy the pond liner requirements.
   HDPE liner specifications are as follows:
   Minimum thickness of 40 mils.
   Design according to the criteria in Table 3 of NECS 313, Waste Storage

- Minimum thickness of 40 mils.
   Design according to the criteria in Table 3 of NRCS 313, Waste Storage
   Facility Technical Standard.
   Install according to NRCS Wisconsin Construction Specification 202,
   Polyethylene Geomembrane Lining.
   PPL liner Specifications are as follows:
   Minimum thickness of 30 mils.
   Design according to the criteria in Table 3 of NRCS 313, Waste Storage
   Facility Technical Standard.
   Install according to NRCS Wisconsin Construction Specification 202,
   Polyethylene Geomembrane Lining.
- Polyethylene Geomembrane Lining.
- 9. All liners must extend above the permanent pool up to the elevation of the 2-year, 24-hour rainfall event (Elev 587.20).

Pon	d Elevation
Rainfall Event	Water Surface Elevation
1 – yr	586.98
2-yr	587.17
5-yr	587.73
10-yr	588.11
25-yr	588.44
50-yr	588.78
100-yr	588.99

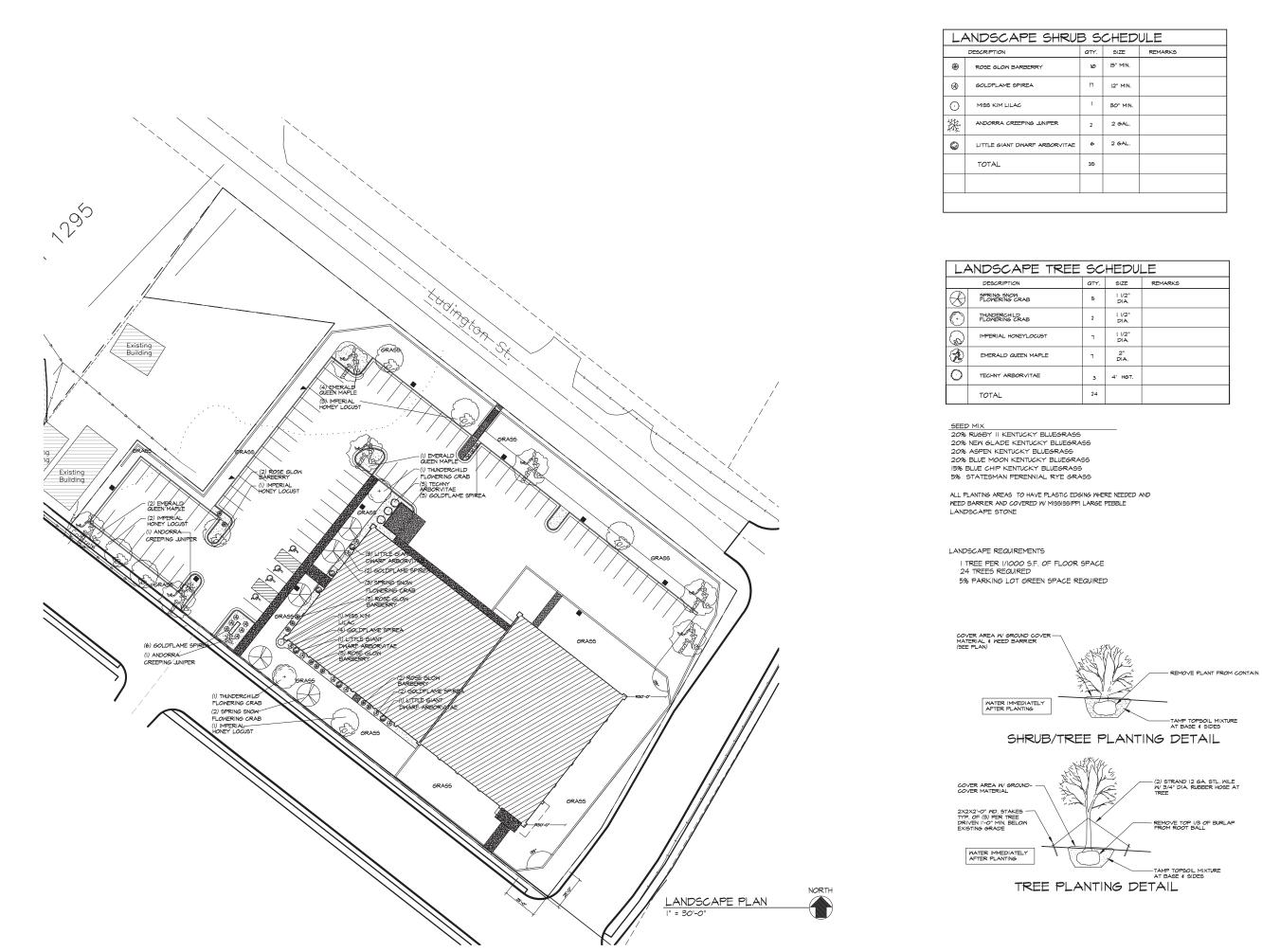


## POND DETAIL



CONSTRUCTION SERVICES	OUR REPUTATION IS BUILDING CORPORATE OFFICE MARNETTE OFFICE 300 BROADWAY, SUITE 28 448 MAN STREET, SUITE D 46EBI BAY, MI 65005 MARNETTE, MI 5648 PHOKE (600) 275-1872 FAX (920) 532-3831 E-MAL BULD 6 SAKETCOM
FISHER & ASSOCIATES, LLC	Architects / Planners 96 cEDRe STREET, DE PERE, W 54115 Ph.(920) 532-9199 Fox (920) 532-9119 risher@fisherandossociateslic.com
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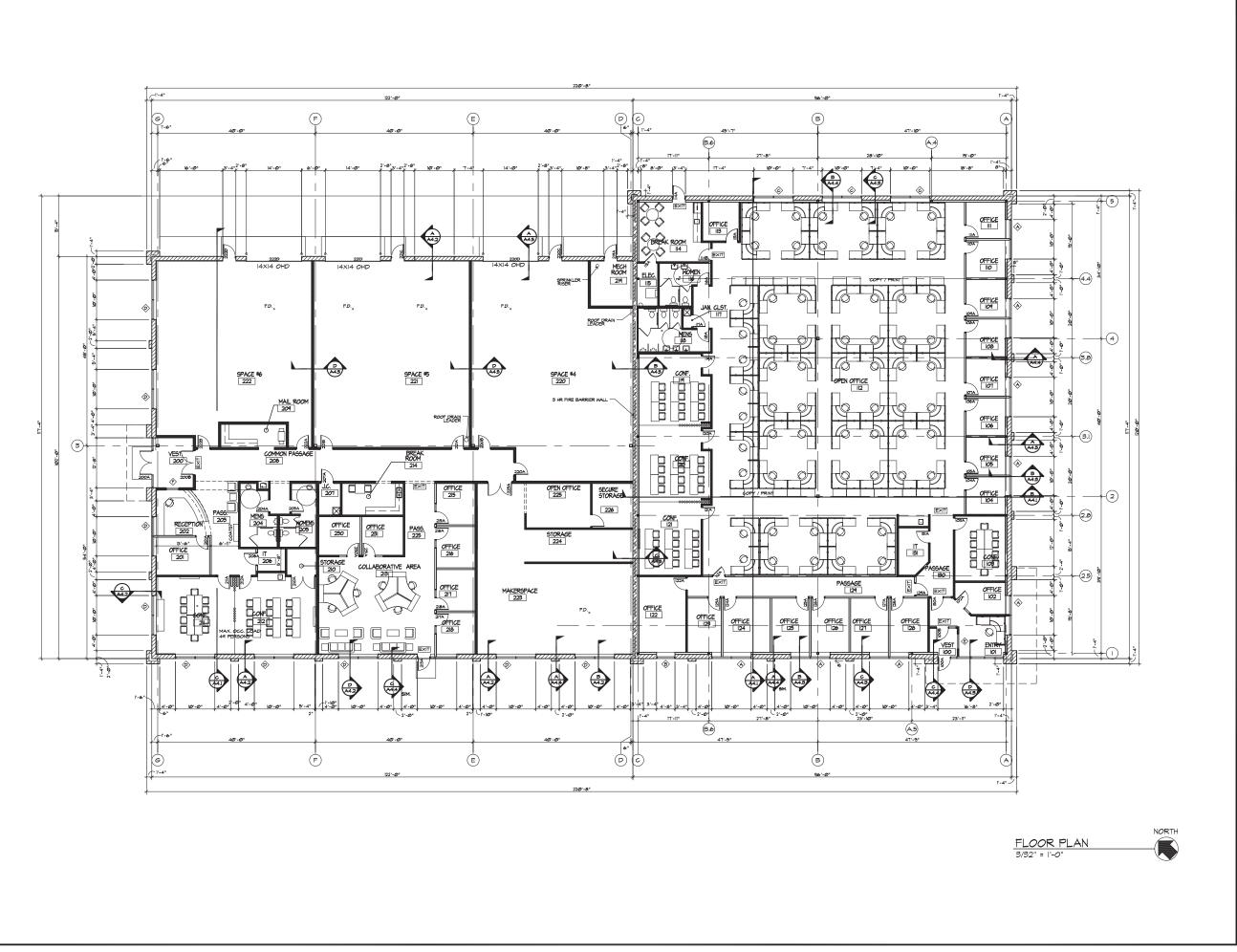
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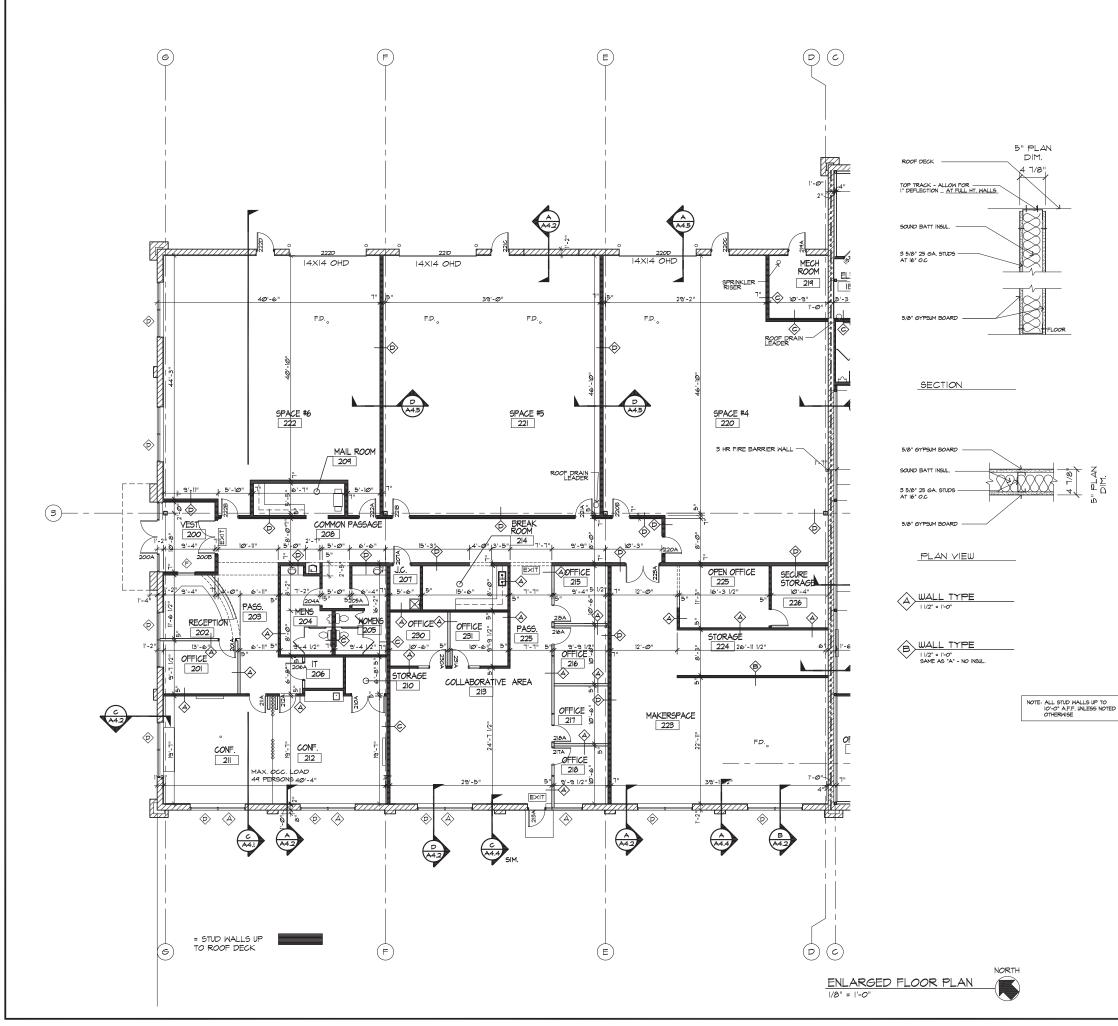
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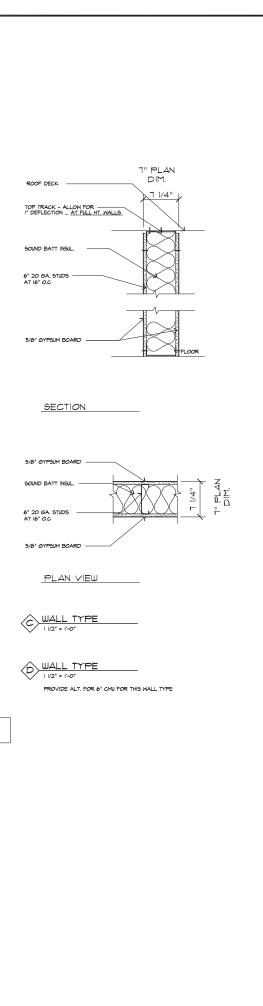
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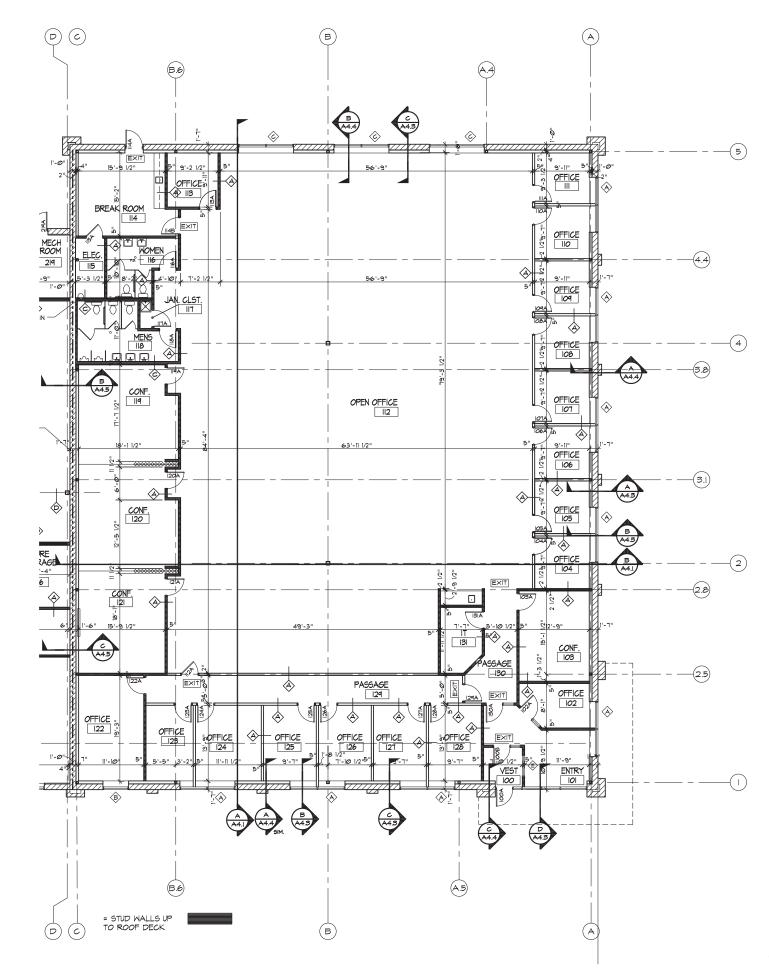






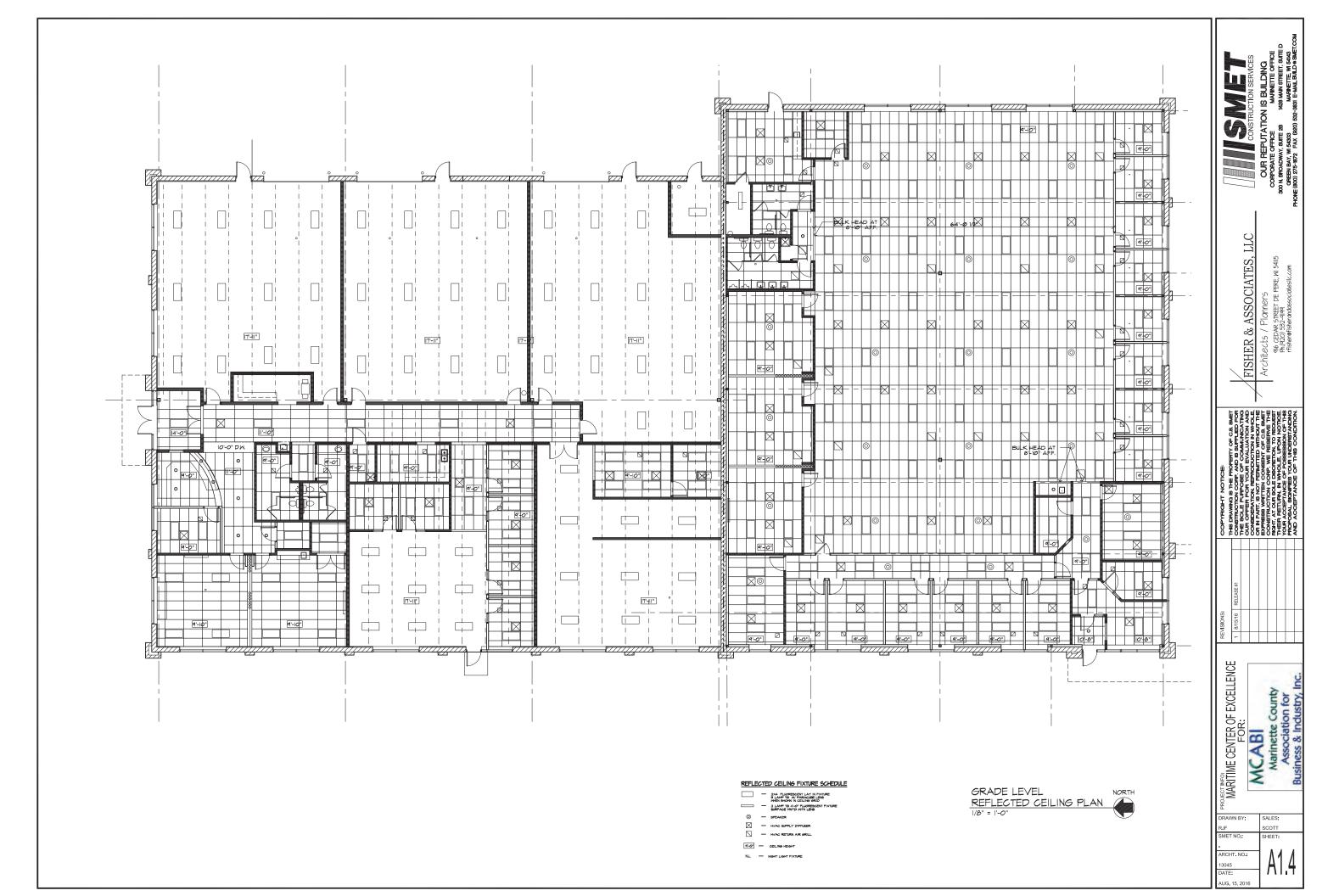


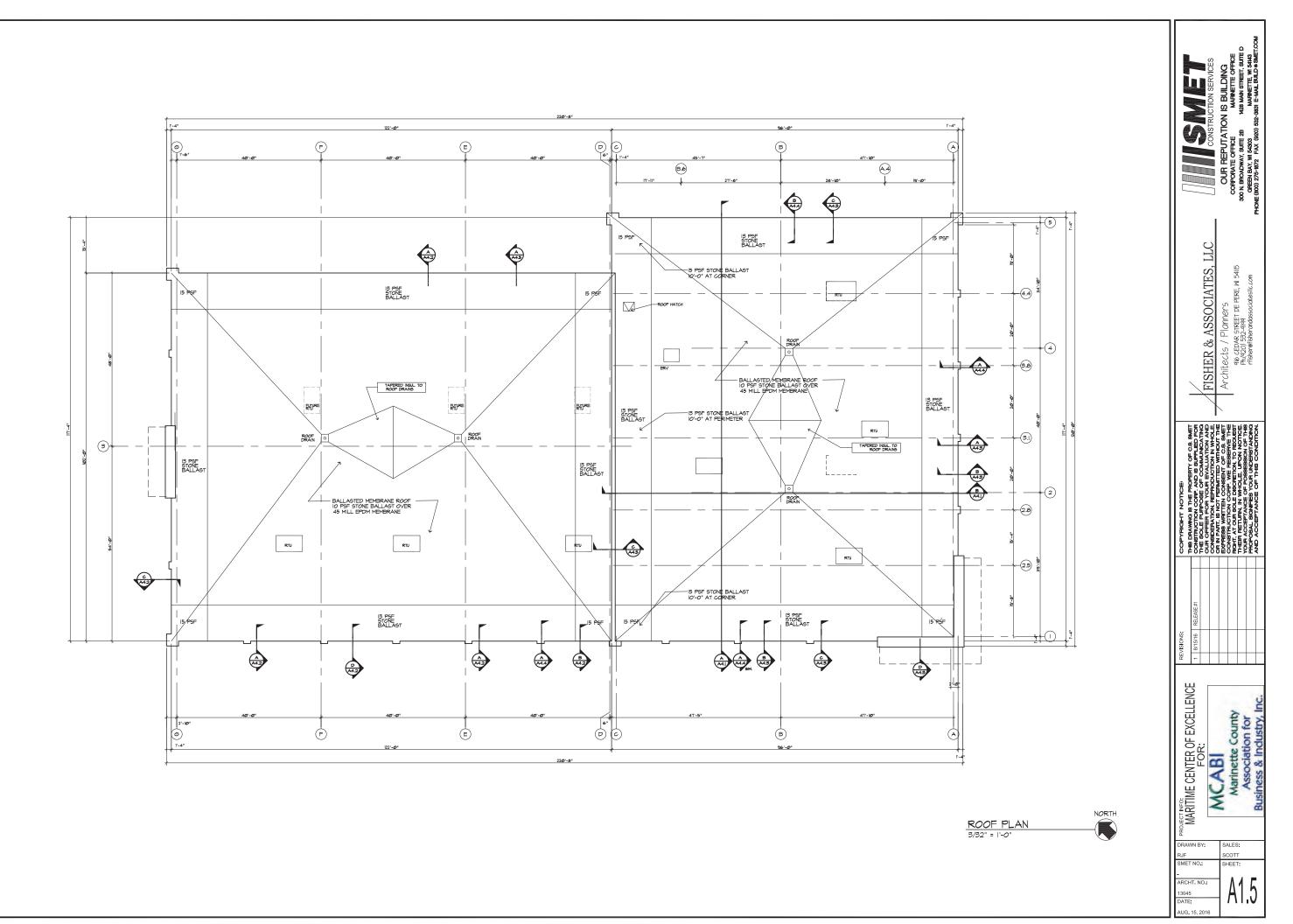


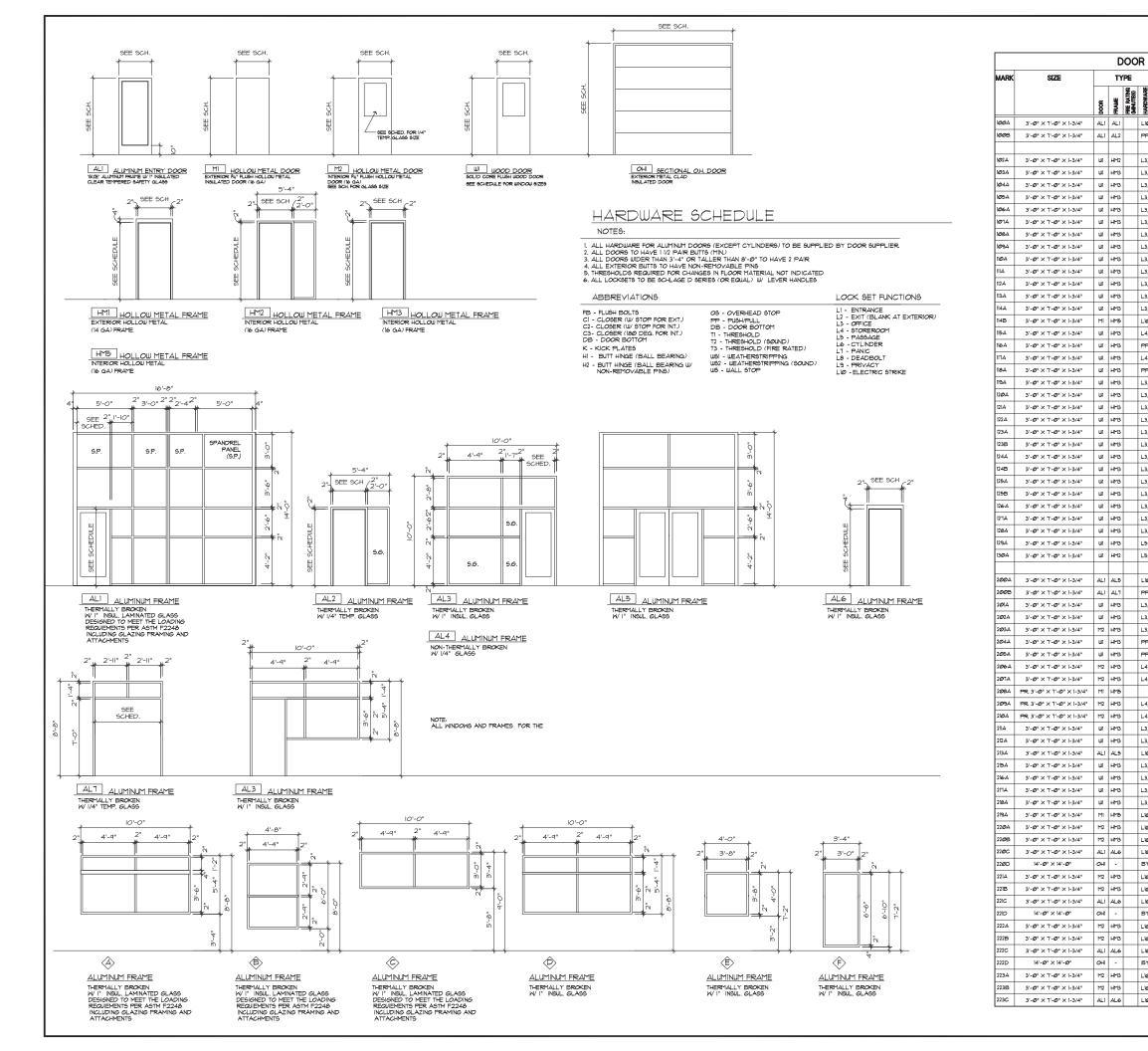


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REVISIONS:
MARITIME CENTER OF EXCELLENCE MARITIME CENTER OF EXCELLENCE FOR: Marinette county Association for Business & Industry, Inc.
RAF SCOTT SMET NO.: 13045 DATE: Aug. 15, 2016









	FRA	ME	OTHER		
	RAVE	ANCHOR	REQUIREMENTS		
, LT, L6, H2, T1, W81, C1	4 1/2		HDWR BY ALUM. DR SUPPLIER ELEC. STRIKE		
H1, C2, W6	4 1/2		HOWR BY ALUM, DR SUPPLIER		
H1, W5	5 3/4 5 3/4	DW			
H1, DB, W6 H1, DB, W6	5 3/4	DW			
HI, DB, WS	5 3/4	DW			
HI, DB, WS	5 3/4	DW			
H1, DB, W6	5 3/4	DW			
HI, DB, WS	5 3/4	DW			
HI, DB, WS HI, DB, WS					
HI, DB, WS	5 3/4	DW			
H1, WS	5 3/4	DW			
H1, DB, W6	5 3/4	DW			
H1, DB, W6	5 3/4	DW	24" X 30" GLASS VERIFY SIZE		
H2, C1, W61, T1	T 3/4	MAS.			
H1, W5 H1, C2, W6, K	5 3/4 5 3/4	DW	34" X 10" KICK PLATE SIGNAGE " MENS"		
HI, US	5 3/4	DW	SIGNAGE "MENS" 34" X 10" KICK PLATE		
HI, C2, W6, K	5 3/4	DW	34" X 100" KICK PLATE SIGNAGE " WOMENS"		
HI, WS	5 3/4	DW			
H1, WS	5 3/4	DW			
H1, W6	5 3/4	DW			
H1, W6	5 3/4	DW			
ні, ше	5 3/4 5 3/4	DW			
H, WS	5 3/4	DW			
41, WS	5 3/4	DW			
41, WS	5 3/4	DW			
41, WS	5 3/4	DW			
41, WS	5 3/4	DW			
41, WS	5 3/4	DW			
41, WS	5 3/4	DW			
41, WS	5 3/4 5 3/4	DW			
1, 40	5 5/4	20			
L7, L6, H2, T1, W61, C1	4 1/2		HDWR BY ALUM. DR SUPPLIER ELEC. STRIKE		
HI, C2, WS	4 1/2		HOWR BY ALUM. DR SUPPLIER		
41, WS	5 3/4	DW			
41, WS	5 3/4				
41, WS	1 3/4	DW	24" × 30" GLA96 VERIFY 91ZE ELEC. 9TRIKE 34" × 10" KICK PLATE		
H1, C2, W6, K H1, C2, W6, K	5 3/4 5 3/4	DW	34" X 10" KICK PLATE SIGNAGE " MENS" 34" X 10" KICK PLATE SIGNAGE " WOMENS"		
41, WS	5 3/4	DW	SIGNAGE "WOMENS"		
41, WS	5 3/4	DW			
	7 3/4	DW			
HI, WS	7 3/4	DW			
HI, WS	5 3/4	DW			
HI, WS	5 3/4	DW			
H, WS L1, L6, H2, T1, WS1, C1	5 3/4	DW	HDWR BY ALUM. DR SUPPLIER		
LT, LG, H2, T1, W51, C1	4 1/2 5 3/4	DW	and the second sec		
41, WS	5 3/4	DW			
41, WS	5 3/4	DW	1		
41, WS	5 3/4	DW			
H2, C1, W61, T1	7 3/4	MAS.			
H1, C2, WS	7 3/4	DW			
H1, C2, WS	7 3/4	DW			
L6, H2, TI, W6I, CI BUPPLIER	4 1/2	MAS.	HDWR BY ALUM. DR SUPPLIER HI-LIFT TRACK - ELEC. OPERATOR		
HI, C2, WS	7 3/4	DW			
HI, C2, W5	1 3/4	DW			
L6, H2, T1, W61, C1	4 1/2	MAS.	HOWR BY ALUM. DR SUPPLIER		
SUPPLIER			HI-LIFT TRACK - ELEC. OPERATOR		
H1, C2, WS	7 3/4	DW			
HI, C2, WS	7 3/4	DW			
L6, H2, TI, WSI, CI	4 1/2	MAS.	HDWR BY ALUM. DR SUPPLIER HI-LIFT TRACK - ELEC. OPERATOR		
SUPPLIER	+ 0/2		HILLIN IRAUN - ELEC. OPERATOR		
HI, C2, WS	T 3/4	DW			



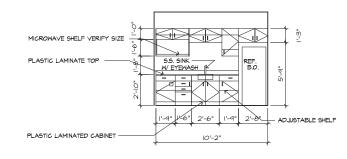
	DOOL	-							NIC.	1
NO.	ROOM	FLOOR	DACE	WALL	E	RIAL /	FINISH	CEI	LING HGT	OTHER REQUIREMENTS
					-	-				
100	VESTIBULE	СТ	СТ	DW/P	DW / P	DW/P	DW / P	ACTI	14'-Ø"	
101	ENTRY	CT	CT	DW/P	DW / P	DW / P	DW / P	ACTI	14'-Ø"	
1Ø2	OFFICE	CPT	VВ	DW/P	DW / P	DW / P	DW / P	ACTI	9'-Ø"	
1Ø3	CONFERENCE	CPT	VВ	DW/P	DW/P	DW / P	DW/P	ACTI	9'-1Ø"	
1004	OFFICE	CPT	vв	DW/P	DW/P	DW/P	DW/P	ACTI	9'-Ø"	
105	OFFICE	CPT	vв	DW/P	DW/P	DW/P	DW / P	ACT1	9'-Ø"	
106	OFFICE	CPT	vв	DW/P	DW/P	DW/P	DW/P	ACTI	9'-Ø"	
107	OFFICE	CPT	vв	DW/P	DW/P	DW / P	DW/P	ACTI	9'-Ø"	
108	OFFICE	CPT	vв	DW/P	DW/P	DW / P	DW/P	ACTI	9'-Ø"	
109	OFFICE	CPT	vв	DW/P	DW / P	DW/P	DW / P	ACTI	9'-0"	
110	OFFICE	CPT	vв	DW/P	DW/P	DW/P	DW / P	ACTI	9'-0"	
111	OFFICE	CPT	vв	DW/P	DW / P	DW / P	DW / P	ACTI	9'-0"	
112	OPEN OFFICE	CPT	VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-10"	
113	OFFICE	CPT	VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	
114	BREAK ROOM	VCT	VВ	DW/P	DW/P	DW/P	DW/P	ACT1	9'-Ø"	
115	ELEC.	SC	-	DW/P	DW / P	DW/P	DW / P	ES	14'-8"	
116	WOMENS	СТ						ACT2	9'-0"	
117	JANITOR	SC	vв	DW/P	DW/P	DW / P	DW / P	ACT1	9'-Ø"	
118	MENS	CT						ACT2	9'-Ø"	
119	CONFERENCE	CPT	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-1Ø"	
12Ø	CONFERENCE	CPT	vв	DW/P	DW/P	DW / P	DW/P	ACTI	9'-1Ø"	
121	CONFERENCE	CPT	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-10"	
122	OFFICE	CPT	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-0"	
123	OFFICE	CPT	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-0"	
124	OFFICE	CPT	vв	DW/P	DW / P	DW/P	DW / P	ACTI	9'-0"	
125	OFFICE	CPT	VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	
126	OFFICE	CPT	VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	
127	OFFICE	CPT	VB VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	
128	OFFICE	CPT	VB VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	
129										
	PASSAGE	CPT	VB	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	
13Ø	PASSAGE	CPT	VВ	DW / P	DW / P	DW / P	DW / P	ACTI	9'-Ø"	
200	VESTIBULE	СТ	СТ	DW/P	DW / P	DW / P	DW / P	ACTI	14'-Ø"	
2Ø1	OFFICE	CTP	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-Ø"	
2Ø2	OFFICE	CPT	VВ	DW/P	DW/P	DW / P	DW/P	ACTI	9'-Ø"	
2Ø3	PASSAGE	CPT	vв	DW/P	DW/P	DW/P	DW / P	ACTI	9'-Ø"	
2Ø4	MENS	ст						ACT2	9'-Ø"	
2Ø5	WOMENS	СТ						ACT2	9'-Ø"	
206	LT.	CPT	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-Ø"	
2Ø7	JAN.	CPT	vв	DW/P	DW/P	DW/P	DW/P	ACTI	9'-0"	-
2Ø8	COMMON PASSAGE	CPT	vв	DW/P	DW/P	DW / P	DW / P	ACTI	9'-0"	
209	MAIL ROOM	VCT	vв	DW/P	DW/P	DW/P	DW / P	ACTI	9'-0"	
21Ø	STORAGE	VCT	vв	DW/P	DW/P	DW/P	DW/P	ACTI	9'-Ø"	
211	CONFERENCE	CPT	VB	DW/P		DW/P		ACTI	9'-10"	
212	CONFERENCE	CPT	VB VB	DW/P	DW/P			ACTI	9'-10"	
212		-								
215	OPEN OFFICE	CPT	VB					ACTI	14'-Ø"	VERIFY EXP. STR
	BREAK ROOM	VCT	VB	DW/P	DW/P		DW/P	ACTI	9'-0"	
215	OFFICE	CPT	vв	DW/P	DW / P		DW / P	ACTI	9'-Ø"	
216	OFFICE	CPT	vв	DW/P	DW/P			ACTI	9'-Ø"	
217	OFFICE	CPT	vв	DW/P	DW/P		DW / P	ACTI	9'-Ø"	
218	OFFICE	CPT	vв	DW/P	DW/P	DW / P	DW/P	ACTI	9'-Ø"	
219	MECH. ROOM	9C	٧В	DW/P	DW/P	DW / P	DW / P	ESP	18'-Ø"	
22Ø	SPACE *3	SC	-	DW	DW	DW	DW	ESP	18'-Ø"	
221	SPACE 4	SC	-	DW	DW	DW	DW	ESP	18'-Ø"	
222	SPACE #5	SC	-	DW	DW	DW	DW	ESP	18'-Ø"	
223	SPACE 16	sc	-	DW	DW	DW	DW	ESP	18'-Ø"	
23Ø	OFFICE	CPT	vв	DW / P	DW / P	DW / P	DW / P	ACT1	9'-Ø"	
		+								

#### MATERIALS KEY

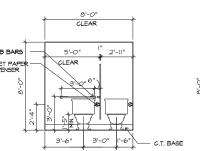
- DW DRYWALL CB CONCRETE BLOCK CP CONCRETE WALL PANEL
- ES EXPOSED STRUCTURE MLP METAL LINER PANEL

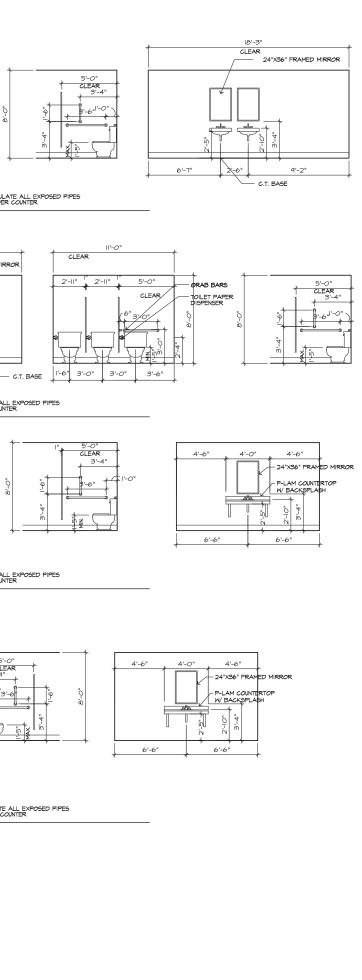
F	INISH KEY		
	FLOOR		WALL
CTI	CERAMIC TILE - DAL TILE 18"X18" FRANSCISCAN STATE TERRA MARRONE F558	ALUM	ALUMINUM FRAMED WINDOWS
CT2	CERAMIC TILE - DAL TILE 18"X18" COLOR TED	P	PAINT
CT3	CERAMIC TILE - DAL TILE 18"X18" COLOR TED	EP	EPOXY PAINT
RT	RUBBER STAIR TREADS & RISERS - JOHNSONITE	DW	DRYWALL
CPTI	CARPET- BROADLOOM PHILADELPHIA COMMERCIAL HIGH VOLTAGE , COLOR JET PROPEL	СВ	CONCRETE BLOCK
CPT2	CARPET- TILE PHILADELPHIA COMMERCIAL HIGH VOLTAGE , COLOR JET PROPEL	CP	CONCRETE WALL PANEL
VCT	VINYL COMPOSITE TILE	MA	MASONRY
LVŤ	KARNDEEN LUXURY VINYL TILE VANGOGH-GRANDEWOOD 1"X48" COLOR TBD	WTI	CERAMIC WALL TILE DAL TILE 12'X12'CONTINENTAL SLATE W/ 6' ACCENT TILE COLORS AND LOCATIONS TO BE DETRUMINED
RF	RESINOUS COATING		
9C	SEALED CONCRETE	WT2	CERAMIC WALL TILE DAL TILE 12"X12"ALATA VISTA
	BASE		CELING
VB4	VINYL BASE 4"	ACTI	2' × 2' ACOUSTIC CEILING TILE REVEAL EDGE
RB4	RESINCUS BASE 4"	ACT2	2' X 2' VINYL COATED DRYWALL TILE
CT4	CERAMIC TILE BASE 4"	ACT3	2" × 2" ACOUSTIC CEILING TILE
СТб	CERAMIC TILE BASE 6"	EXP	EXPOSED STRUCTURE
WBI	WOOD BASE I" X 4"	DW	DRYWALL

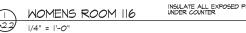


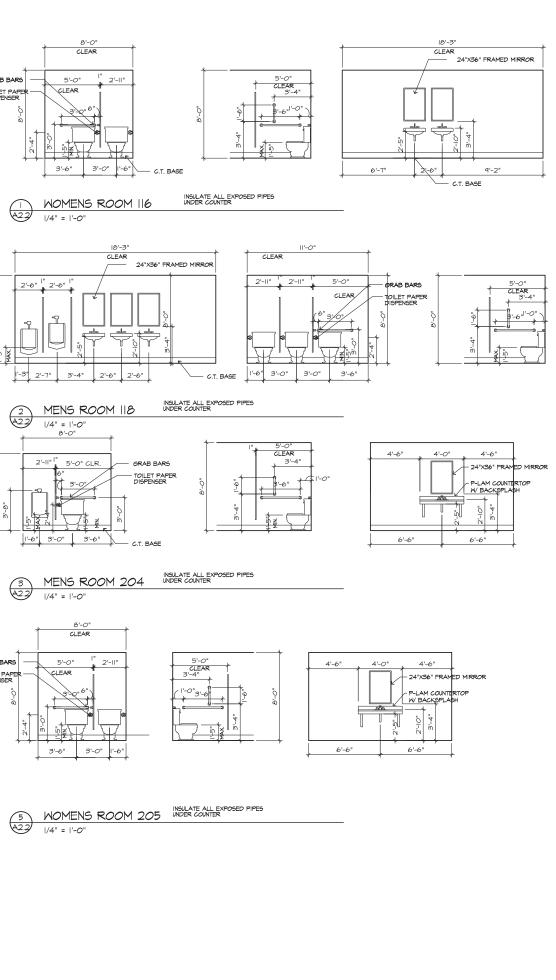


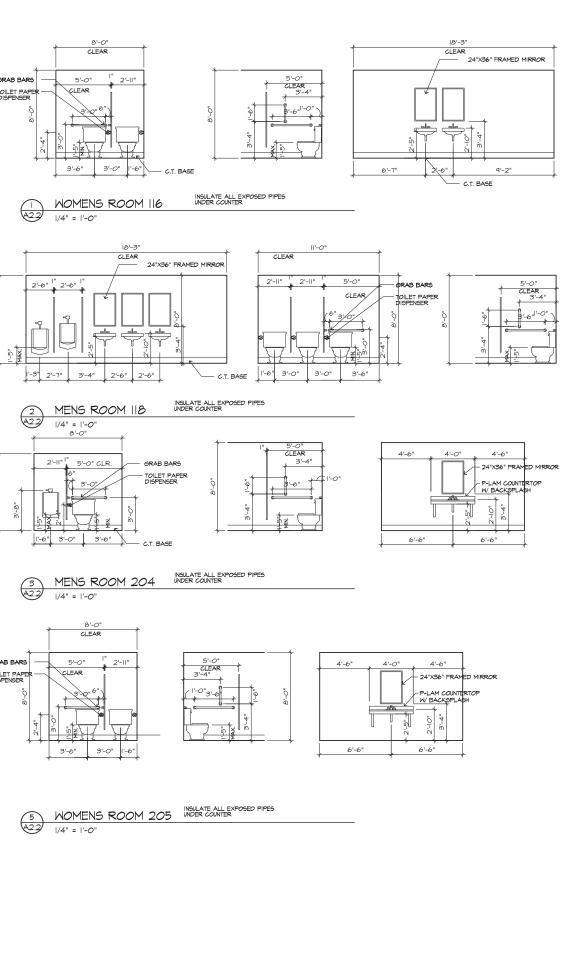
4 BREAK ROOMS ||4 \$ 2|4

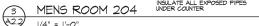


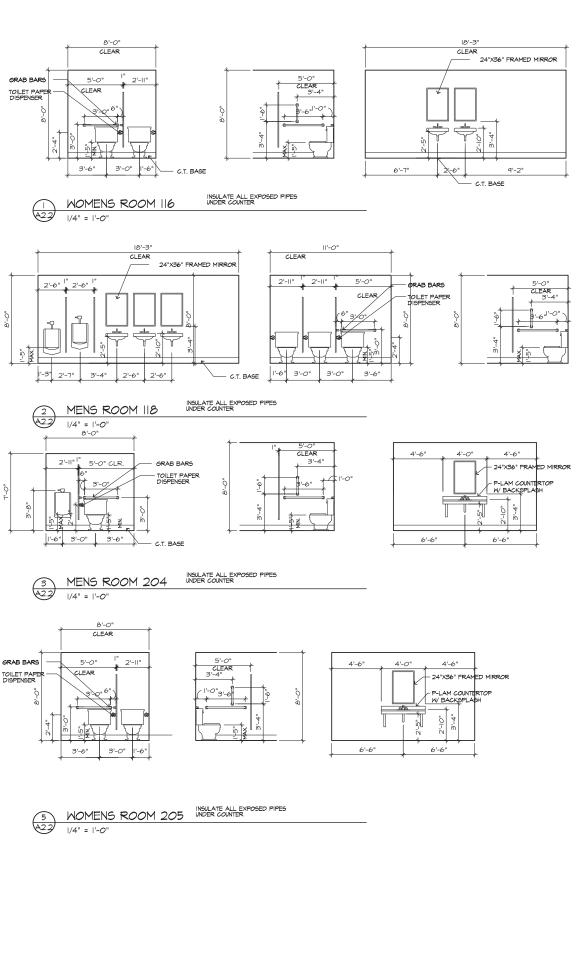


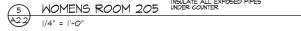




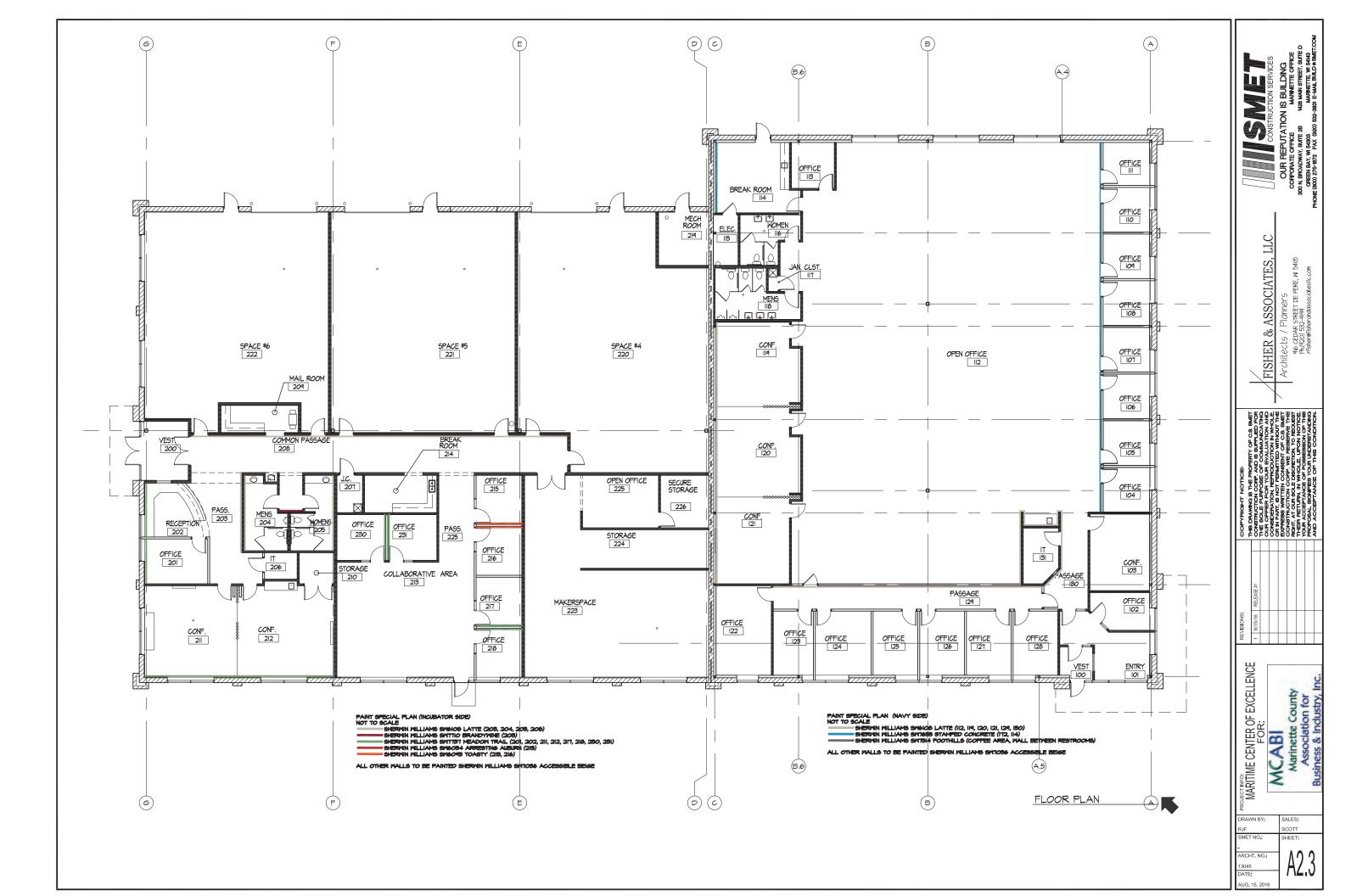


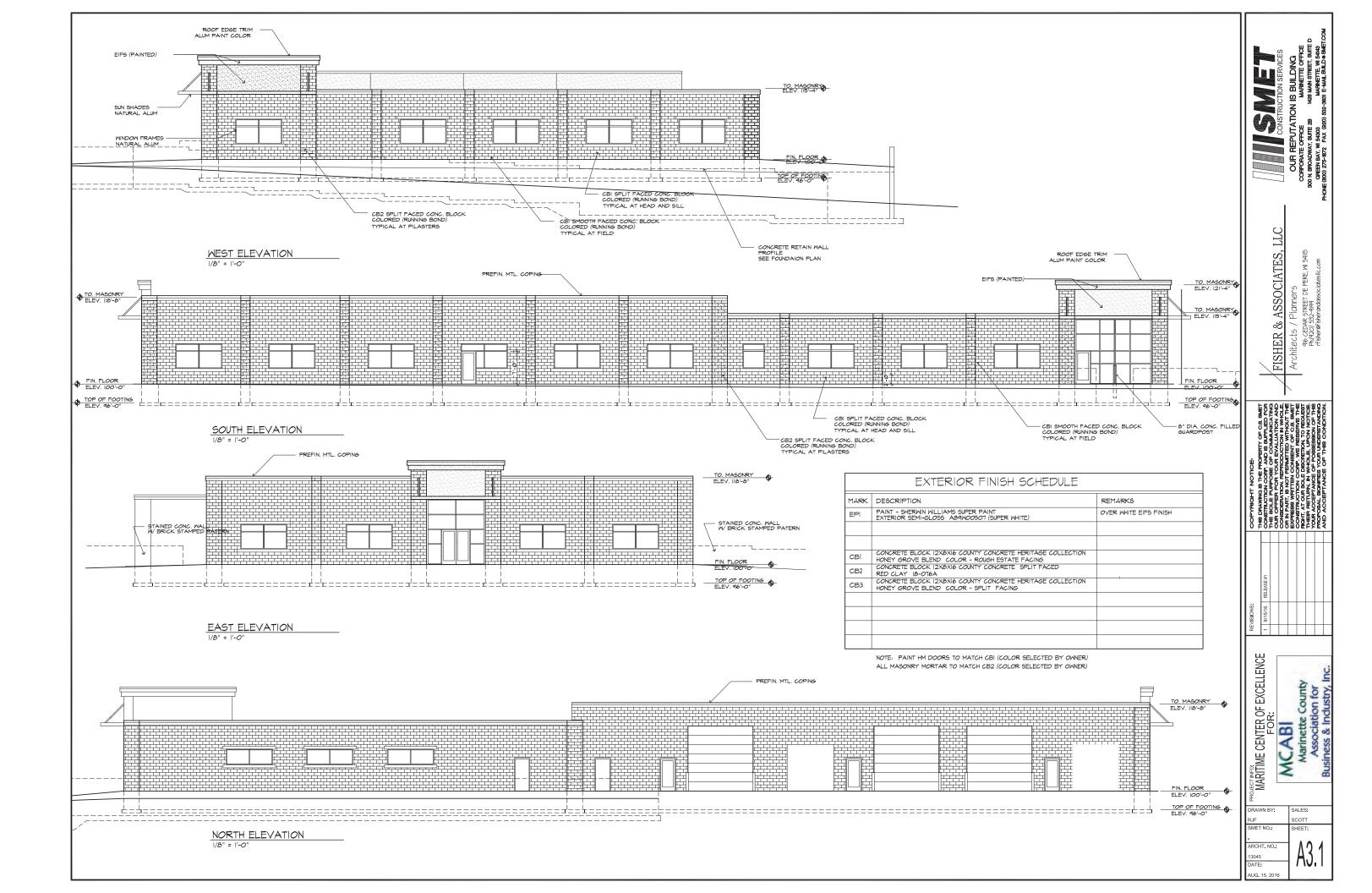


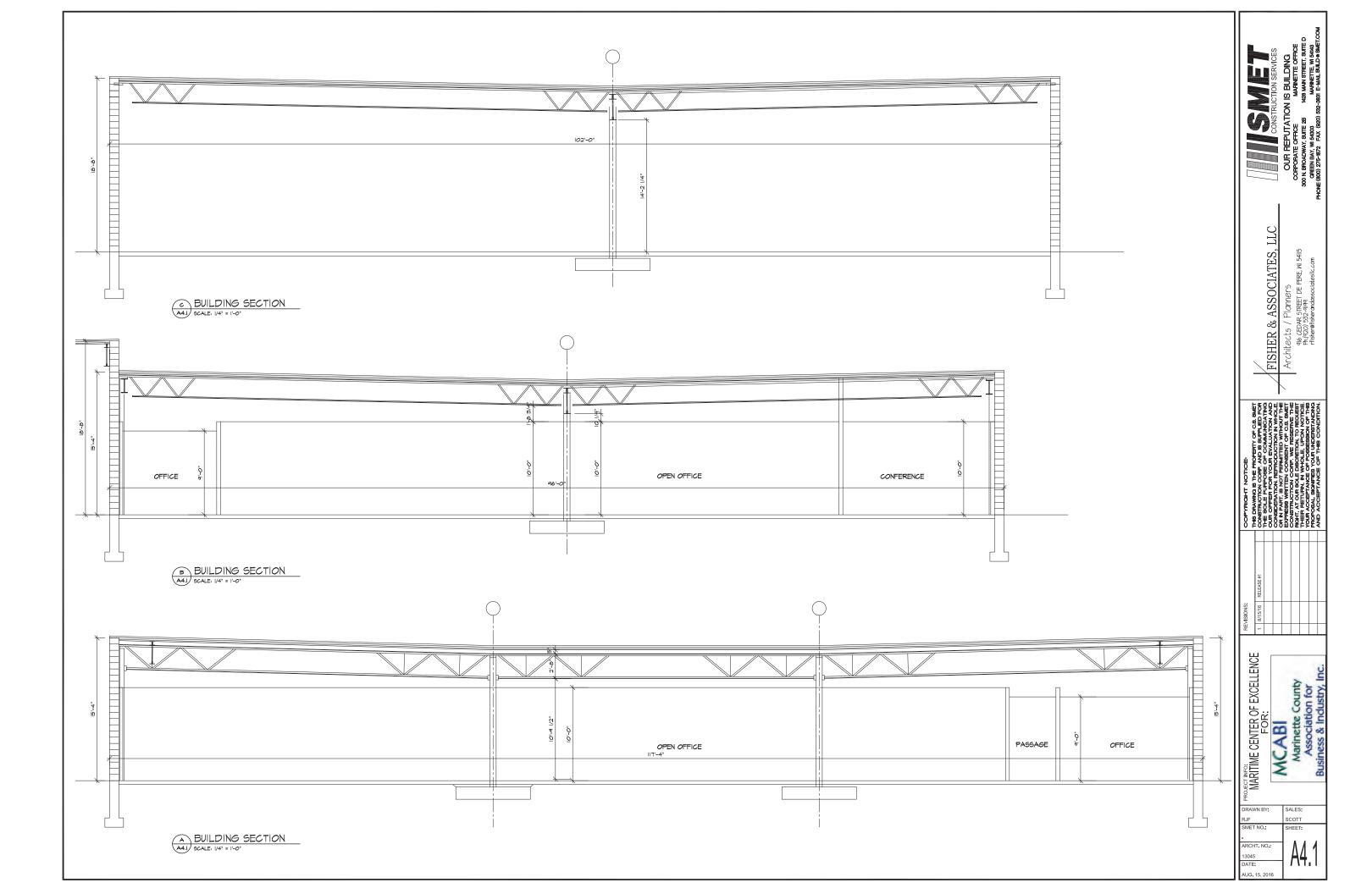


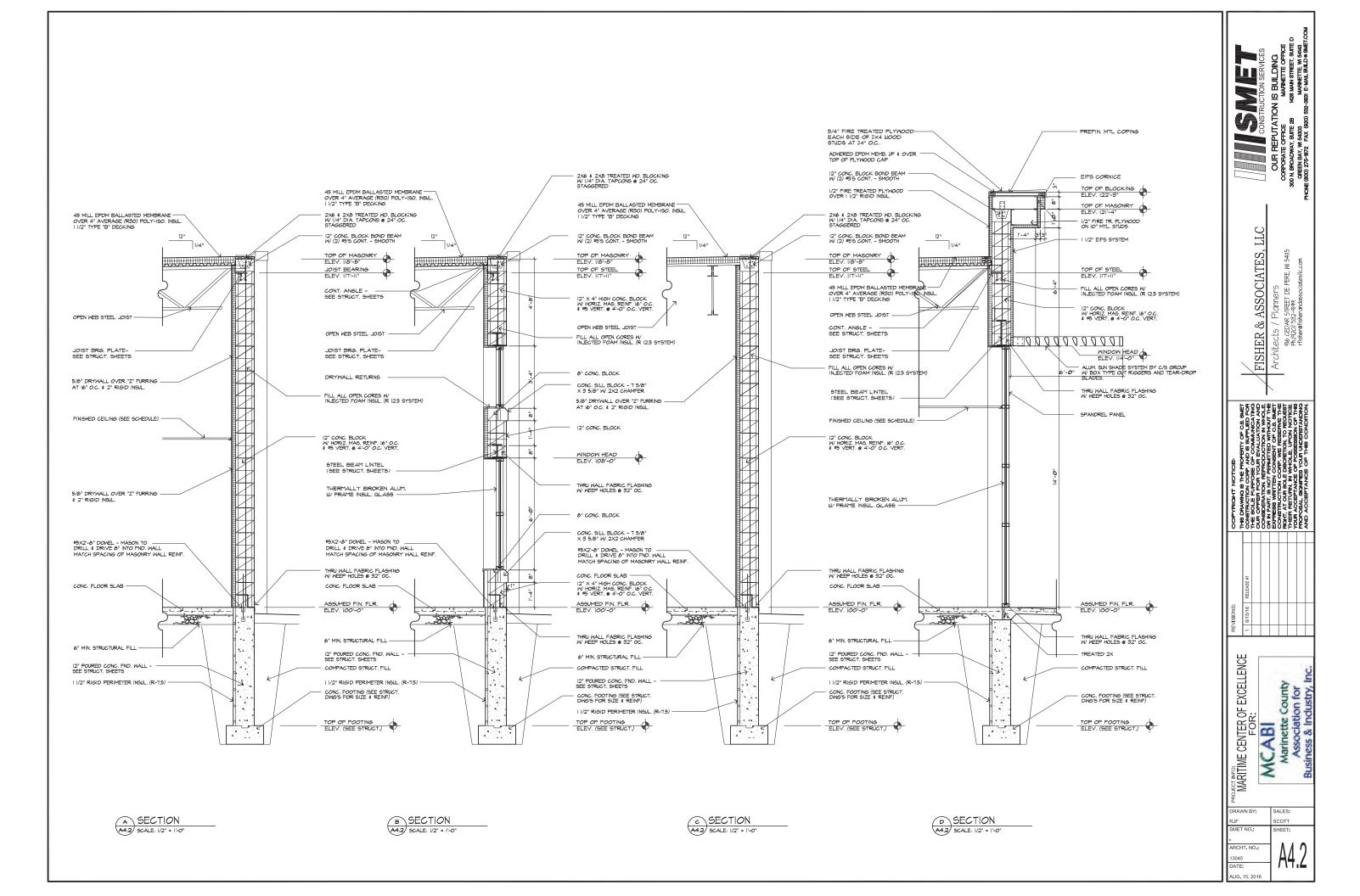


CONSTRUCTION SERVICES OUR REPUTATION IS BUILDING COPPORTE OFFICE MATRETIS MAR SHOW MATRETE, MISHOW MATRETE, MILE DING MATRETE,
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Revisions:
MARITIME CENTER OF EXCELLENCE FOR: FOR: MCABI Marinette County Association for Business & Industry, Inc.
DRAWN BY: SALES: RJF SCOTT SMET NO.: ARCHT. NO.: 13045 DATE

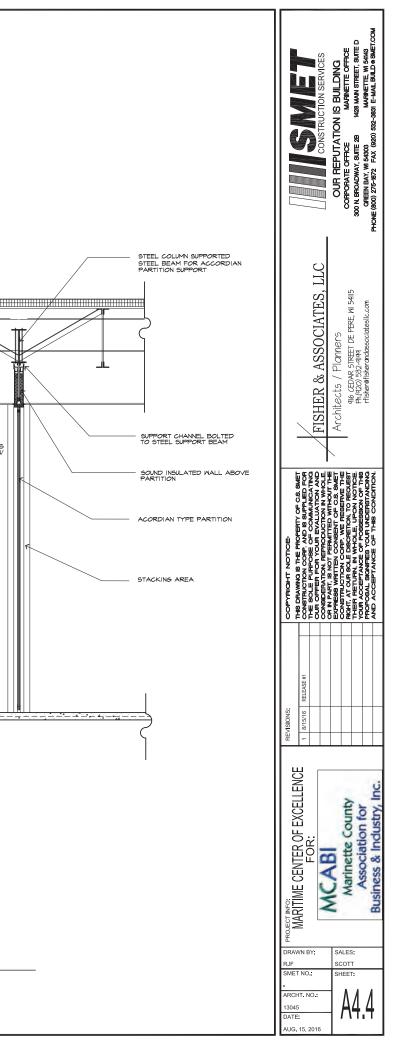


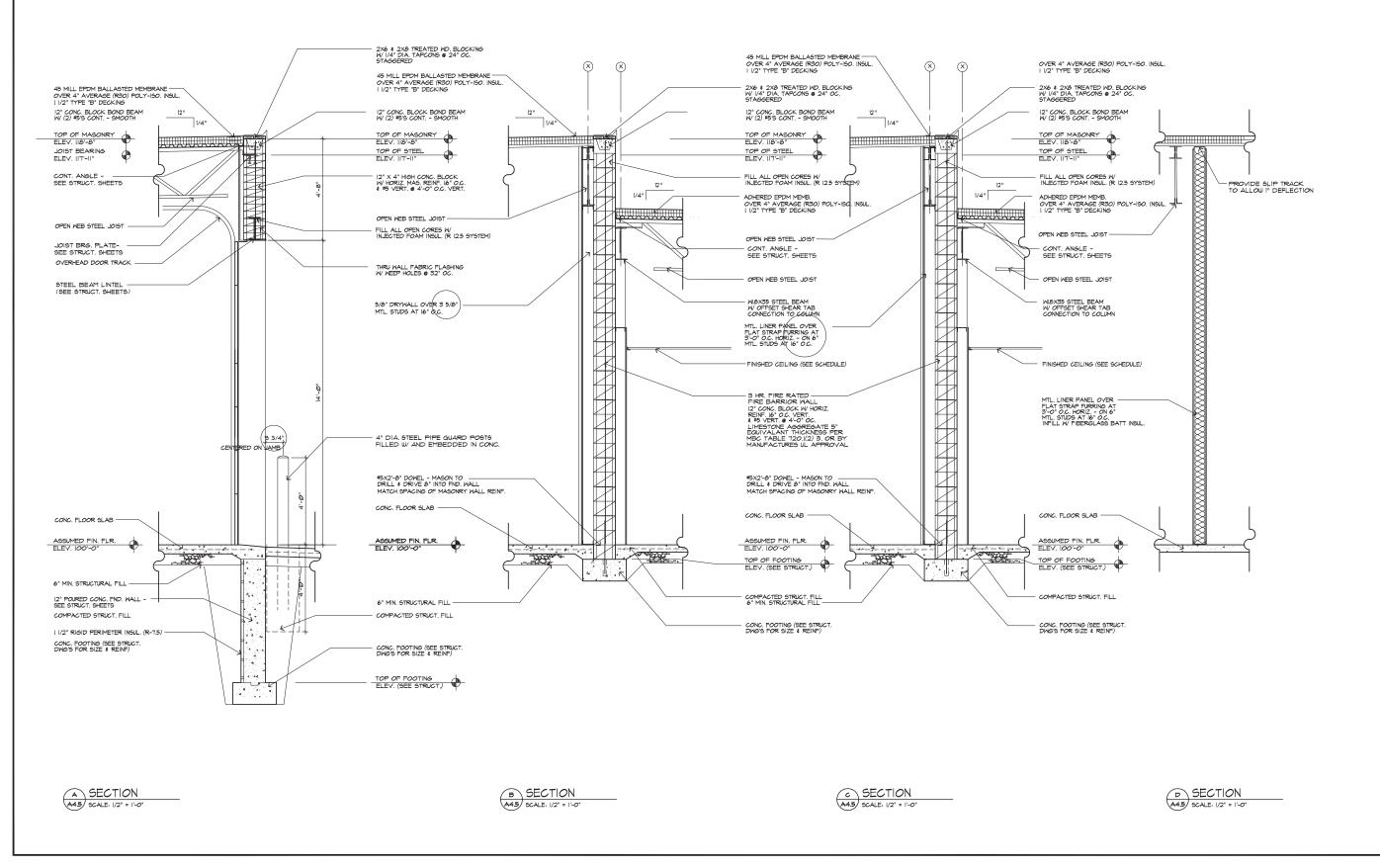


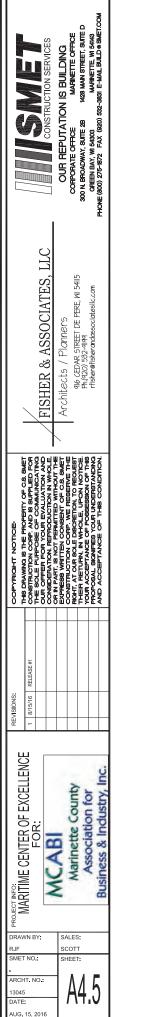


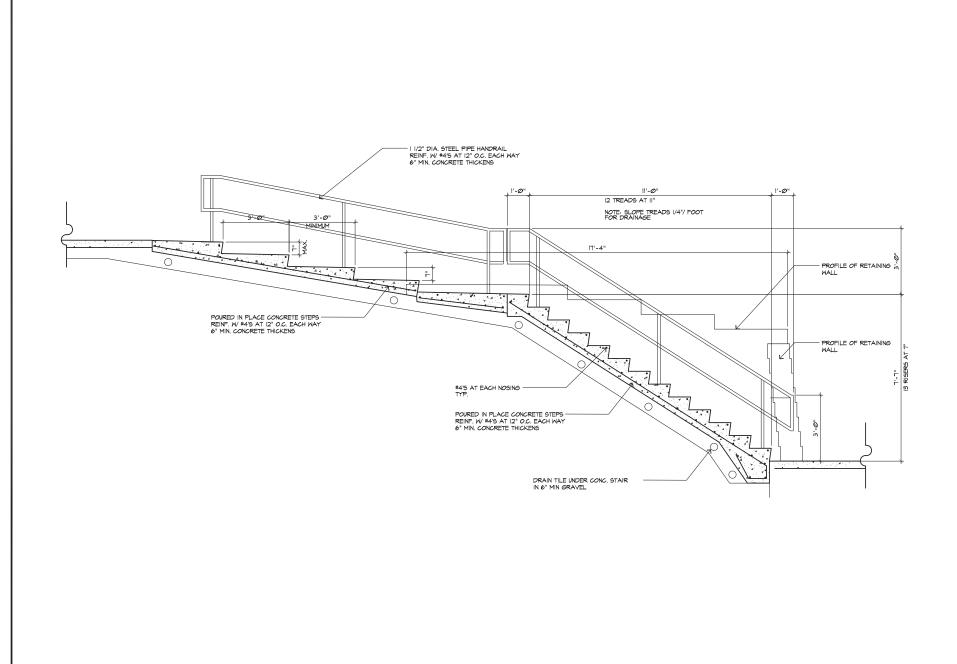


3/4" FIRE TREATED PLYWOOD EACH SIDE OF 2×4 WOOD PREFIN. MTL COPING ADHERED EPDM MEMB. UP & OVER TOP OF PLYWOOD CAP EIFS CORNICE 12" CONC. BLOCK BOND BEAM W/ (2) #5'S CONT. - SMOOTH TOP OF BLOCKING ELEV. 122'-3" 1/2" FIRE TREATED PLYWOOD OVER I 1/2" RIGID INSUL. TOP OF MASONRY ELEV. 121'-4" 1/2" FIRE TR. PLYWOOD ON 10" MTL. STUDS 12" 12" 71/4 2X6 & 2X8 TREATED MD. BLOCKING W/ I/4" DIA. TAPCONS © 24" OC. STAGGERED TOP OF MASONRY далалал (X)TOP OF STEEL TOP OF STEEL ELEV. 117'-11" 45 MILL EPDM BALLASTED MEMBRANE OVER 4" AVERAGE (R30) POLY-ISO. INSUL. I I/2" TYPE "B" DECKING 12" CONC. BLOCK BOND BEAM W/ (2) #5'S CONT. - SMOOTH 1/4 OPEN WEB STEEL JOIST OPEN WEB STEEL JOIST TOP OF MASONRY ELEV. 115'-4" TOP OF STEEL ELEV. 114'-7" JOIST BRG. PLATE-SEE STRUCT. SHEETS H K JOIST BRG. PLATE-SEE STRUCT. SHEETS 12" X 4" HIGH CONC. BLOCK W HORIZ. MAS. REINF. 16" O.C. \$ #5 VERT. @ 4'-0" O.C. VERT. ACOUST. TILE CLG. SEE SCHED. 5/8" DRYWALL OVER "Z" FURRING \$ 2" RIGID INSUL. 5/8" DRYWALL OVER "Z" FURRING \$ 2" RIGID INSUL. VERIFY ALL DETAILS AND CLEARANCES W/ DOOR MANUF. OPEN WEB STEEL JOIST FILL ALL OPEN CORES W/ INJECTED FOAM INSUL. (R 12.5 SYSTEM) FINISHED CEILING (SEE SCHEDULE) FINISHED CEILING (SEE SCHEDULE) 5/8" DRYWALL OVER 3 5/8" MTL. -STUDS AT 16" O.C. & 2" RIGID INSUL. 12" CONC. BLOCK WINDOW HEAD ELEV. 109'-0"  $\mathbb{R}$ -FINISHED CEILING (SEE SCHEDULE) 5/8" DRYWALL OVER "Z" FURRING \$ 2" RIGID INSUL. THRU WALL FABRIC FLASHING W/ WEEP HOLES @ 32" OC. 5/8" DRYWALL OVER "Z" FURRING \$ 2" RIGID INSUL. STEEL BEAM LINTEL (SEE STRUCT, SHEETS) 8" CONC. BLOCK CONC. SILL BLOCK #5X2'-8" DOWEL - MASON TO DRILL & DRIVE 8" INTO FND. WALL MATCH SPACING OF MASONRY WALL REINF. #5X2'-8" DOWEL - MASON TO \_\_\_\_\_ DRILL & DRIVE 8" INTO FND. WALL MATCH SPACING OF MASONRY WALL REINF. #5X2'-8" DOWEL - MASON TO DRILL \$ DRIVE 8" INTO FND. WALL MATCH SPACING OF MASONRY WALL REINF. 12" X 4" HIGH CONC. BLOCK W HORIZ. MAS. REINF. 16" O.C. \$ #5 VERT. @ 4'-0" O.C. VERT. CONC. FLOOR SLAB CONC. FLOOR SLAB  $\mathbb{H}$ U R ASSUMED FIN. FLR. 4 2000 283 2000 THRU WALL FABRIC FLASHING W/ WEEP HOLES © 32" OC. 6" MIN. STRUCTURAL FILL -----6" MIN. STRUCTURAL FILL 4 6" MIN. STRUCTURAL FILL 12" POURED CONC. FND. WALL -SEE STRUCT. SHEETS 12" POURED CONC. FND. WALL -SEE STRUCT. SHEETS SEE STRUCT. SHEETS. FILL I 1/2" RIGID PERIMETER INSUL. (R-7.5) I 1/2" RIGID PERIMETER INSUL. (R-7.5) I I/2" RIGID PERIMETER INSUL. (R-7.5) 14 14.6 44 CONC. FOOTING (SEE STRUCT. DWG'S FOR SIZE & REINF) **a** 4 TOP OF FOOTING ELEV. (SEE STRUCT.) و المور A SECTION A4.4 SCALE: 1/2" = 1'-0" C SECTION A4.4 SCALE: 1/2" = 1'-0" D SECTION A4.4 SCALE: 1/2" = 1'-0" **B** SECTION A4.4 SCALE: 1/2" = 1'-0"









A SECTION A46 SCALE: 1/2" = 1'-0"

OUR REPUTATION IS EVICES OUR REPUTATION IS BUILDING CORPORTE OFFICE MARKETE OFFICE 300 REDAMAN; SUITE 29 300 MAN STREET, SUITE D MARKETE, MIS 5003 HORE (800) 275-872 FAX (820) 552-3631 E-MAL BULD & SMETCOM
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REVISIONS:
MARITIME CENTER OF EXCELLENCE FOR: Marinette County Association for Business & Industry, Inc.
DRAWN BY:         SALES:           RJF         SCOTT           SMET NO.:         SHEET:           -         ARCHT. NO.:           13045         DATE:           AUG. 15, 2016         ARCHT.

### MAGONRY BLOCK CELLS CONTAINING VERTICAL REINFORCING SHALL BE GROUTED SOLID. FILLING CELLS WITH MORTAR IS UNACCEPTABLE. 8. THE BASE OF EACH CELL IN WHICH A BAR IS PLACED, MUST HAVE A CLEANOUT HOLE. 9. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 6 10. PROVIDE CONTINUOUS REINFORCED BOND-BEAMS IN ALL REINFORCED MASONRY WALLS AT TOPS OF WALLS, IMMEDIATELY BELOW STEEL, BEARINGS AND WEREVER CALLED FOR IC CONTRACT DRAWINGS, BOND BEAM REINFORCING SHALL EXTEND INTO AND BE CONTINUOUS WITH ALL INTERSECTING BOND BEAMS.

II. REINFORCED MASONRY WALLS SHALL HAVE #9 GAUGE (TRUSS TYPE) HORIZONTAL REINFORCING AT SPACING AS NOTED ON THE CONTRACT DRAWINGS, BUT AT A MINIMUM

12. FILL CORES OF MASONRY UNDER ALL BEARING PLATES FOR A WIDTH EQUAL TO THREE TIMES THE BEARING PLATE LENGTH FOR THREE COURSES BELOW BEARING.

15. PROVIDE AND INSTALL ONE LINTEL FOR EACH 4" OF WALL THICKNESS ACCORDING TO THE FOLLOWING SCHEDULE:

 OPENING
 LINTEL

 3'-O'
 3 1/2X3 1/2X 5/16

 4'-O'
 L4X3 1/2X5/16

 5'-O''
 L4X3 1/2X5/16

 6'-O'
 L5X3 1/2X5/16

 1'-O'
 L6X3 1/2X5/16

LINTELS SHALL BEAR A MINIMUM OF 6" ON EACH SIDE OF OPENING. LONG LEG OF ANGLE SHALL BE VERTICAL.

FOR NON-BEARING WALLS

- 6. ALL CONCRETE BLOCK MASONRY UNITS SHALL BE LAID IN A RUNNING BOND.

- THE REQUIRED MINIMUM 28-DAY COMPRESSIVE STRENGTH OF THE COMBINATION OF CONCRETE BLOCK, GROUT AND MORTAR ON THE NET AREA OF THE WALL (FM) SHALL BE (JSO PS).

ALL REINFORCED CONCRETE MAGONRY MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:

ACI 530.1-42/ASCE 6-42/TMS 602-42 SPECIFICATIONS FOR MASONRY STRUCTURES"

ACI 550-42/ASCE 5-42/TMS 402-42 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

CONCRETE BLOCK SHALL CONFORM TO ASTM C-40. THE REQUIRED STRENGTH ON THE NET CROSS SECTIONAL OF THE CONCRETE BLOCK SHALL BE 2,500 PSI.

GROUT SHALL CONFORM TO ASTM C416. GROUT MAY BE PLACED BY THE 'HIGH LIFT METHOD, CONFORMING TO THE GROUTING PATTERS REQUIRED BY THE CONTRACT DRAWINGS

5. MORTAR SHALL BE TYPE M OR 5, CONFORMING TO ASTM C210.

REINFORCEMENT

BAR SIZE

BEAMS OR COLUMNS:

ALL OTHERS

REINFORCED MASONRY

CLASS A SPLICE LENGTH

CLASS SPLICE

LENGTH

NOTES

DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:

ACI 385 - 'DETAILS AD DETAILING OF CONCRETE REINFORCEMENT ACI 380 - 'BUILDING CODE REGUREMENTS FOR REINFORCED CONCRETE' MSG2 - 'KGB MANAL OF STANDARD FRACTICORCING STEEL' ANS D14 - 'STRICTIRAL NELDING CODE - REINFORCEMENTS MEL - NELDEWIRE FARRIC MANAL OF STANDARD FRACTICE'

STEEL REINFORCING BARS SHALL CONFORM TO ASTM A615 (GRADE 60), DEFORMED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

REINFORCEMENT FABRICATOR SHALL PROVIDE AND SCHEDULE ON SHOP DRAWINGS ALL REQUIRED REINFORCING STEEL AND THE NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN PLACE AT THE CORRECT LOCATIONS.

CLEARANCES FOR REINFORCEMENT. CONCRETE PLACED DIRECTLY ON EARTH (FOOTINGS, SLABS, ETG.) 3" FROM BOTTOM. ALL OTHER CONCRETE PROVIDE 2" CLEAR TO REINFORCING.

CONTRACTOR SHALL REFER TO TYPICAL DETAILS SHOWN ON CONTRACT DRAWINGS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.

WELDED WIRE FABRIC SHALL LAP A MINIMUM OF 6" AND BE TIED TOGETHER.

ALL SPLICE LENGTHS SHALL BE CLASS B UNLESS NOTED OTHERWISE.

4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST IN THE MEMBER BELOW THE REINFORCEMENT. (EXCEPT IN WALLS)

SPLICE AND DEVELOPMENT LENGTHS IN THIS SCHEDULE ARE BASED ON THE SPACING GREATER THAN OR EQUAL SIX(6) BAR DUAMETERS AND CONCRETE COVER OF REATER THAN OR EQUAL TO TWO(2) INCHES, IN NORMAL WEIGHT CONCRETE.

WHERE REINFORCEMENT IS REQUIRED IN SECTIONS, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER SECTION APPLIES.

CONTRACTOR SHALL NOTIFY ARCHITECT OF COMPLETION OF REINFORCEMENT INSTALLATION AND ALLON AT LEAST 24 HORS BEFORE SCHEDULED CONCRETE PLACEMENT FOR ARCHITECT TO INSPECT REINFORCEMENT.

REINFORCEMENT DEVELOPMENT AND SPLICE LENGTH SCHEDULE Fy = 60 KSI f'c = 3000 PSI

2. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE 3. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS

ARC CALCULATED PER ACI 318-95. SECTIONS 12.2 AND 12.15 RESPECTIVELY. TABULATED VALUES FOR BEAMS AND COLUMNS ARE BAS ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MIN. CODE REQUIREMENTS. LENGTHS ARE IN INCHES.

#3 #4 #5 #6 #7 #8 #9 #10 #1

COVER AT LEAST 1.0 BAR DIA. AND C.-C. SPACING AT LEAST 2.0 BAR DIA.

COVER AT LEAST 1.0 BAR DIA. AND C.-C. SPACING AT LEAST 3.0 BAR DIA.

BASE

 TOP BARS
 22
 29
 36
 43
 63
 72
 91
 91
 10

 OTHERS
 17
 22
 28
 33
 48
 55
 62
 70
 78

TOP BARS 28 37 47 56 81 93 105 118 131

OTHERS 22 29 36 43 63 72 81 91 10

STRUCTURAL STEEL

MINIMUM BOLT DIAMETER: 3/4"

STEEL DECK

STEEL JOISTS

I. STRUCTURAL STEEL WORK SHALL CONFORM TO THE FOLLOWING:

ANS DI.I - "STRUCTURAL WELDING CODE - STEEL"

2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING

AISC - "STRUCTURAL STEEL DETAILING MANUAL

TUBULAR STEEL - ASTM A500 GRADE B (FY=46 KSI)

HIGH STRENGTH BOLTS - ASTM A325N (BEARING TYPE) ASTM A325F (FRICTION TYPE) ANCHOR BOLTS - ASTM A301 OR A36

AISC - "SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STEEL FOR BUILDINGS".

AISC - "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".

HOT ROLLED WIDE-FLANGE - ASTM A942 (FY=50 KSI) ALL OTHER STRICTURAL SHAPES AND PLATES - ASTM A36 (FY=56KSI) STRICTURAL STEEL FIPE - ASTM A35 (SRADE 8 (FY=55 KSI))

PROVIDE 2 MIL. THICK RED OR GREY OXIDE PRIMER ON ALL STEEL SURFACES UNLESS NOTED OTHERWISE.

 LEVELING PLATES AND BEARING PLATES SHALL BE SET IN FULL BED OF NON-SHRINK GROUT. CONNECTIONS MAY BE EITHER BOLTED OR WELDED AT THE FABRICATOR'S OPTION. BOLTED CONNECTIONS SHALL BE AS FOLLOWS:

4. ANCHOR BOLTS SHALL BE PRESET WITH TEMPLATES AT REQUIRED LOCATIONS.

SHEAR CONNECTIONS FOR MOMENT CONNECTED MEMBERS: FRICTION TYPE HIGH STRENGTH BOLTS IN SINGLE OR DOUBLE SHEAR.

SHEAR CONNECTIONS FOR OTHER MEMBERS: BEARING TYPE HIGH STRENGTH BOLTS IN SINGLE OR DOUBLE SHEAR.

SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER AISC REQUIREMENTS FOR 'UNRESTRAINED MEMBERS'.

ALL BEAM CONNECTIONS NOT DETAILED, SHALL SUPPORT 1/2 THE TOTAL UNIFORM LOAD CAPACITY FOR THE GIVEN BEAM AND SPAN OR THE INDICATED REACTORY, MHICHEVER 15 GREATER, CONNECTIONS SHALL GENERALLY FOLLOW THE TYPES SHOWN IN THE "AISC MANUAL OF STELL CONSTRUCTION," TABLE II, III, OR X.

WELDS SHALL FULLY DEVELOP STRENGTH OF THE MATERIALS BEING WELDED, UNLESS NOTED OTHERNISE, EXCEPT THAT FILLET WELDS SHALL BE A MINIMUM 3/16".

IO. CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SUPPORTS TO HOLD STRUCTURAL STELL FRAMMOS ESCURELY IN POSITION. TEMPORARY BRACING SHALL REMAIN UNTIL THE PERMANENT LATERAL BRACING HAS BEEN INSTALLED AND AND THE CONCRETE FOR FLOOR SLASS HAG ATTAINED TS% OF ITS REGUIRED STRENGT.

I. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE FINAL BOLTING OR WELDING OF CONNECTIONS.

CONTRACTOR SHALL NOT MODIFY OR CUT ANY STRUCTURAL STEEL WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

CONTRACTOR SHALL FIELD TOUCH UP ALL ABRASIONS, BURNS AND SIMILAR DEFECTS IN PAINT OF THE STRUCTURAL STEEL, JOISTS AND STEEL DECK.

ALL STEEL DECK MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING STANDARDS:

AISI - "SPECIFICATIONS FOR THE DESIGN OF LIGHT-GAUGE COLD-FORMED STEEL STRUCTURAL MEMBERS"

AISC - "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS"

ROOF DECK SHALL BE I-I/2" DEEP X 22 GAUGE, WIDE RIB STEEL DECK CONFORMING TO ASTM AGII, GRADE C (PAINTED) OR ASTM A446, GRADE A (GALVANIZED) WITH A MINIMUM YIELD STRESS OF 35 KSI.

4. PRIMER PAINT SHALL BE SHOP APPLIED OVER CLEANED AND PHOSPHATIZED STEEL

5. STEEL DECK SHALL EXTEND OVER THREE OR MORE SPANS WHEREVER POSSIBLE.

STEEL ROOF DECK SHALL BE FASTENED TO SUPPORTS WITH #12-24 TEKS SCREWS AT SPACING NOTED ON DRAVINGS, SIDE LAPS SHALL BE FASTENED WITH #10-16 TEKS SCREWS AT SPACING NOTED ON DRAVINGS.

L STEEL JOIST MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING. SJI - "STANDARD SPECIFICATION FOR OPEN HEB, LONGSPAN AND DEEF LONG SPAN STEEL JOIST AND JOIST GROEPER". SJI - "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GROEPEN".

STEEL JOISTS SHALL BE STANDARD DLH-SERIES AND LH-SERIES, WITH 5" DEEP JOIST SEAT, EXCEPT AS NOTED ON PLANS.

JOIST MANUFACTURER SHALL PROVIDE CONNECTIONS FOR CROSS BRIDGING WHERE REGURED.

SUSPENDED LOADS SHALL BE APPLIED AT PANEL POINTS OF JOISTS OR ADDITIONAL JOIST WEB MEMBERS ARE TO BE ADDED PER THE TYPICAL DETAILS.

IO. MINIMUM BEARING ON STEEL SUPPORT SHALL BE 2-1/2" FOR K-SERIES AND 4" FOR LH SERIES.

CONTRACTOR SHALL SUBMIT COMPLETE, DETAILED SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL DEFORE PROCEEDING WITH FABRICATION. INCLIDE METHODS OF FASTENING AND MISCELLANEOUS ITEMS.

I. ALL COLD FORMED STRUCTURAL MATERIAL AND WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING:

2. COLD FORMED STEEL SHALL CONFORM TO THE FOLLOWING

COLD FORMED STRUCTURAL STEEL MEMBERS INCLUDING LIGHT GAUGE STEEL

AISI "SPECIFICATIONS FOR THE DESIGN OF LIGHT-GAUGE COLD-FORMED STEEL STRUCTURAL MEMBERS"

AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS"

LIGHT GAUGE STUDS, JOIST, TRACKS AND ACCESSORIES: ASTM A 653 /653 M, 660 GALVANIZED.

II. PROVIDE BOLTED CONNECTIONS AT COLUMNS FOR ERECTION.

K-SERIES JOISTS SHALL BE ATTACHED TO SUPPORTS WITH A MINIMUM OF 2-1/8" FILLET WELDS, 2 INCH LONG.

DLH-SERIES AND LH-SERIES JOISTS SHALL BE ATTACHED TO SUPPORTS WITH A MINIMUM OF 2-1/4\* FILLET WELDS 2 INCHES LONG.

JOISTS SHALL RECEIVE ONE COAT OF SHOP PAINT CONFORMING TO THE MINIMUM REQUIREMENTS OF THE "STEEL STRUCTURES PAINTING COUNCIL SPECIFICATIONS".

STEEL JOISTS SHALL BE STANDARD K-SERIES, WITH 5" DEEP JOIST SEAT, EXCEPT AS NOTED ON PLANS.

4. PROVIDE BRIDGING IN CONFORMANCE WITH THE STEEL JOIST INSTITUTE RECOMMENDATIONS.

ANS DDI.3 - "STRUCTURAL WELDING CODE - SHEET METAL"

5. GALVANIZING SHALL CONFORM TO ASTM A525, COATING CLASS G-60.

SDI - "CODE OF STANDARD PRACTICE"

WELDED CONNECTIONS SHALL BE MADE BY APPROVED CERTIFIED WELDERS USING FILLER METAL CONFORMING TO ETOXX.

GENERAL

DESIGN LOADS

GROUND SNOW LOAD ROOF SNOW LOAD SNOW EXPOSURE SNOW LOAD IMPORTANCE THERMAL FACTOR

SNOW LOADS:

WIND LOADS:

BASIC WIND SPEED

EXPOSURE ENCLOSED BUILDING IMPORTANCE FACTOR

FOUNDATIONS

CONCRETE

ALL MATERIALS, WORKMANSHIP AND DETAILS SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 EDITION OF THE "INTERNATIONAL BUILDING CODE".

THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL ARCHITECTURAL, MECHANICAL AND ELECTRICAL, DRAWINGS TO VERIFY THE LOCATION AND DIMENSIONS OF CHASES, INSERTS, OPENNIGS, ELEVES, REGLETS, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE REVISED WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT & ENGINEER.

SEISMIC LOADS PER IBC 1616.4:

ANCY CATEGORY

SITE CLASS SEISMIC CATEGORY SEISMIC RESISTANCE SYSTEM

= 6.3% =5.1% = 1.1 = D = A

MASONRY SHEAR WALLS = .061 = .050

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.

FOUNDATION WORK FOR THIS PROJECT SHALL CONSIST OF SPREAD FOOTINGS, CONTINUOUS WALL FOOTINGS AND SLABS-ON-GRADE.

THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBJECTACE CONDITIONS DESCRIEDD IN THE DRAININGS, SPECIFICATIONS, TEST BORINGS OR GEOTECHICAL, REPORTS, THEE DATA ARE INCLUDE TO ASSIST THE CONTRACTOR DIRING BIDDING ADDIESUBSECUTION ON THE OT REPRESENT CONDITIONS ONLY AT SPECIFIC LOCATIONS AT THE PARTICULAR TIME OBSERVATIONS HERE MADE.

ALL FOUNDATIONS SHALL BE SUPPORTED ON APPROVED EXISTING SUBGRADE OR APPROVED COMPACTED STRUCTURAL FILL HAVING A PRESUMED MINIMUM ALLOWABLE BEARING CAPACITY OF 2020 PSF

ALL EXTERIOR FOUNDATIONS SHALL BEAR ON APPROVED SUBGRADE AT A MINIMUM DEPTH OF 4'-O" BELOW ADJACENT FINISH EXTERIOR GRADE.

CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS AS REQUIRED TO PREVENT HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT WHICH WILL ENDANGER ADJACENT STRACTIRES, STREETS OR UTILITIES.

8. NO FOUNDATION(S) SHALL BE PLACED ON FROZEN SUBGRADE

FOOTING ELEVATIONS SHOWN ON THE DRAWINGS REPRESENT ESTIMATED DEPTHS AND ARE NOT TO BE CONSTRUED AS LIMITING THE AMOUNT OF EXCAVATION REQUIRED TO REACH SUITABLE BERNIS MATERIAL

CONTRACTOR SHALL PROVIDE CONTROL OF SURFACE AND SUBSURFACE WATER PROMPTLY TO INSURE THAT ALL FOUNDATION WORK IS DONE IN THE DRY.

PROTECT IN-PLACE FOUNDATIONS AND SLABS-ON-GRADE FROM FROST PENETRATION UNTIL THE PROJECT IS COMPLETE.

FORDATION WALLS SHALL BE BRACED DIRING BACKFILLING AND COMPACTION OPERATIONS, BRACING SHALL BE LIFT IN POSITION UNTL PERMANENT STRUCTURAL SUPPORT SYSTEM IS INSTALLED AND APPROVED BY ARCHITECT.

I. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING STANDARDS

ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE" ACI MCP - "MANAL OF CONCRETE PRACTICE" ACI 310 - "BUILDING CODE REGUREMENTS FOR REINFORCED CONCRETE" ACI 310.1 - "BUILDING CODE REGUREMENTS FOR STRUCTURAL PLAIN CONCRETE"

CONCRETE MIX DESIGN (INCLUDING AGGREGATE SIZE, WATER/CEMENT RATIO, AIR ENTRIMMENT, ADMIXINGES AND SLUMP) SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY WORK. MAXIMUM WATER/CEMENT RATIOS PERMITTED AS FOLLOWS:

CONCRETE TO BE EXPOSED TO THE WEATHER SHALL HAVE AIR-ENTRAINING ADMIXTURE AS REQUIRED TO PROVIDE 4-6% AIR ENTRAINMENT.

CONCRETE STRENGTH SHALL BE EVALUATED ACCORDING TO METHOD I OR METHOD 2 AS DESCRIBED IN ACI 301. THE RESULTS OF THESE ANALYSES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ANY WORK.

CONTRACTOR SHALL MAKE REVISIONS TO ALLOW AN INDEPENDENT TESTING AGENCY, HIRED BY THE OWNER, TO CAS'T 4 TEST CYLINDERS FOR EACH 50 CUBC TWRDS OF COLKRETE DY ALLOE OR FOR ANY ONE DAY'S OPPRATION. TESTING AGENCY SHALL BE RESPONSIBLE FOR CASTING AND CUBCH SPECIFIES IN CONFORMANCE TO ASTIN GI AND TESTING SPECIFIES IN CONFORMANCE TO ASTIN CGI.

DRAMINGS SHOWING THE LOCATION OF CONSTRUCTION JOINTS, CONTROL JOINTS AND PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO THE PREPARATION OF REINFORCING SHOP DRAMINGS.

CONSTRUCTION JOINTS SHOWN ON THE CONTRACT DRAWINGS SHALL NOT BE ALTERED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.

IO. CONTRACTOR SHALL USE SMOOTH FORMS FOR EXPOSED CONCRETE SURFACES. BOARD FORMS MAY BE USED FOR UNEXPOSED CONCRETE SURFACES. EARTH FORMS ARE FORBIDDEN.

PROVIDE A MINIMUM OF 6" COMPACTED GRANULAR FILL UNDER ALL SLABS-ON-GRADE

FLATWORK CONTRACTOR SHALL SUBMIT FLOOR SLAB PLACEMENT SEQUENCE TO ENGINEER FOR APPROVAL PRIOR TO BEGINNING WORK.

FLOOR FLATNESS AND LEVELNESS. CONCRETE SLABS-ON-GRADE SHALL HAVE MINIMUM F NUMBERS OF IP SPILIZE AS RECORNIZED BY THE MOST CURRENT VERSION OF ASTM E 1195 AND ACI 302.1. SEE SPECIFICATIONS FOR TURITER RESTRICTIONS IF APPLICABLE.

GROUT USED TO SET PLATES SHALL BE NON-SHRINK AND NON-METALLIC

CONCRETE SHALL HAVE A MINIMUM 28-DAY ULTIMATE COMPRESSIVE STRENGTH AS FOLLOWS:

 THE CAPS AND GRADE BEAMS
 5500 PSi

 SLABS-ON-GRADE
 5000 PSi

 FOOTINGS AND REGIST WALLS
 5000 PSi

 PRELEAST CONCRETE
 5000 PSi

 EXTERICE PROPED CONCRETE
 5000 PSi

0.50 FOR SLABS-ON-GRADE 0.54 FOR BELON GRADE CONCRETE 0.48 FOR EXPOSED CONCRETE

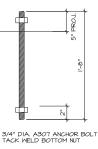
II. BACKFILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDES OF WALL.

THE TYPICAL DETAILS SHOWN ON THE DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE CONTRACT DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.

6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SAFETY DURING CONSTRUCTION.

Pg = 50 PSF Pf = 38.5 PSF

V= 90 MPH



ASTM 5653 COLD FORMED GALVANIZED LIGHT GAUGE FRAMING MEMBERS

B. TRACKS SHALL BE CHANNEL SHAPED SOLID WEB, DEPTH COMPATIBLE WITH STUDS, GAUGE AND GRADE AS SHOWN ON THE DRAWINGS (AS REQUIRED BY STRUCTURAL CAI (21 ATONS)

D. SCREWS SHALL BE CORROSION RESISTANT, SELF DRILLING PAN OR HEX WASHER HEAD AS SHOWN ON THE DRAWINGS (AS REQUIRED BY STRUCTURAL CALCULATIONS)

E. PONDER ACTUATED FASTENERS: AISI IO62 OR IO65 STELL, MINIMAM CORE HARDNESS 50 TO 54 HRC AND ZINC PLATED IN ACCORDANCE WITH ASTM B 633 DIAMETER AND LENSTH AS SHOWN ON THE DRAWINGS (AS REQUIRED BY STRUCTURAL CALCULATIONS).

F. ALL LIGHT GAUGE FRAMING MEMBERS SHALL BE DIETRICH CS.J OR CSW SERIES UNLESS NOTED OTHERWISE.

WIND DESIGN LOADING FOR SECONDARY FRAMING PER (THE LATEST ADDITION OF ASCET FOR COMPONENTS AND CLADDING, MIND DESIGN SPEED AND EXPOSITE AND EXPOSITE UNDER DESIGN LOADS.

H. MATERIAL SUPPLIER IS RESPONSIBLE FOR MEMBER DESIGN, THEREFORE CALCULATIONS MUST BE INCLUDED WITH SHOP DRAWINGS FOR APPROVAL.

SAWCUT C.J. OR PLASTIC INSERT

51.0

(51.0)

5/8" DIA. X 18" SMOOTH ROD A 12" O.C. COAT ONE END TO PREVENT BONDING

3/4

CONTROL JOINT (C.J.)

COMPACTED FILL

COMPACTED FILI

NOTE: TO BE USED AT END OF EACH POUR.

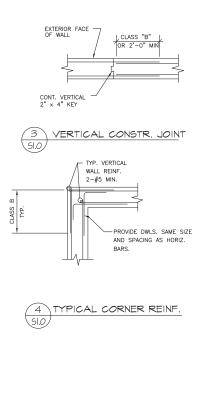
2 CONSTRUCTION JOINT

C. FRAMING ACCESSORIES SHALL HAVE A MINIMUM YIELD STRENGTH OF 65 KSI.

A STUDS AND JOISTS SHALL BE CHANNEL SHAPED WITH LIPPED FLANGES, PUNCHED MEB, SIZE, GAUGE AND GRADE AS SHOWN ON THE DRAWINGS (AS REQUIRED BY STRUCTURAL CALCULATIONS).

ANCHOR BOLT (ABI)

/IARK	PLAN	DEPTH	REINFORCING	T.O. FTG.	ANCHOR			PIER	
	DIMENSION				BOLTS	T.O.P.	PLAN DIM,	REINFORCIN	G
F-I	5'-6" × 5'-6"	12"	(6) #5'S EACH WAY	96'-0"	ABI	99'-4"	20" × 28"	(8) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-2	8'-0" × 8'-0"	18*	(8) #6'5 EACH WAY	96'-0"	ABI	99'-4"	24" × 24"	(8) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-3	4'-0" × 4'-0"	12"	(4) #5'S EACH WAY	96'-0"	ABI	99'-4"	20" × 28"	(6) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-4	4'-0" × 4'-0"	12*	(4) #5'S EACH WAY	96'-0"	ABI	99'-4"	20" × 34"	(8) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-5	4'-0" × 4'-0"	12"	(4) #5'5 EACH WAY	96'-0"	ABI	99'-4"	20" × 28"	(6) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-6	5'-4" × 5'-4"	12*	(6) #5'S EACH WAY	96'-0"	ABI	99'-4"	40" × 40"	(12) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-7	4'-4" × 5'-4"	12"	(4) #5'5 LONG MAY (5) #5'5 SHORT WAY	96'-0"	ABI	99'-4"	40" X 40" IRREGULAR	(12) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-8	5'-4" × 5'-4"	12"	(6) #5'S EACH WAY	96'-0"	NONE	100'-0"	40" X 40" IRREGULAR	(12) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-9	SET ON	WALL FOO	PTING	96'-0"	NONE	100'-0*	24" × 20"	(4) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O" O.C.
F-8	4'-0" × 4'-0"	12"	(4) #5'S EACH WAY	96'-0"	NONE	100'-0"	40" X 28" IRREGULAR	(6) #6'5	#3 TIES, TOP 3 AT 5" REMAINDER AT I'-O' O.C.









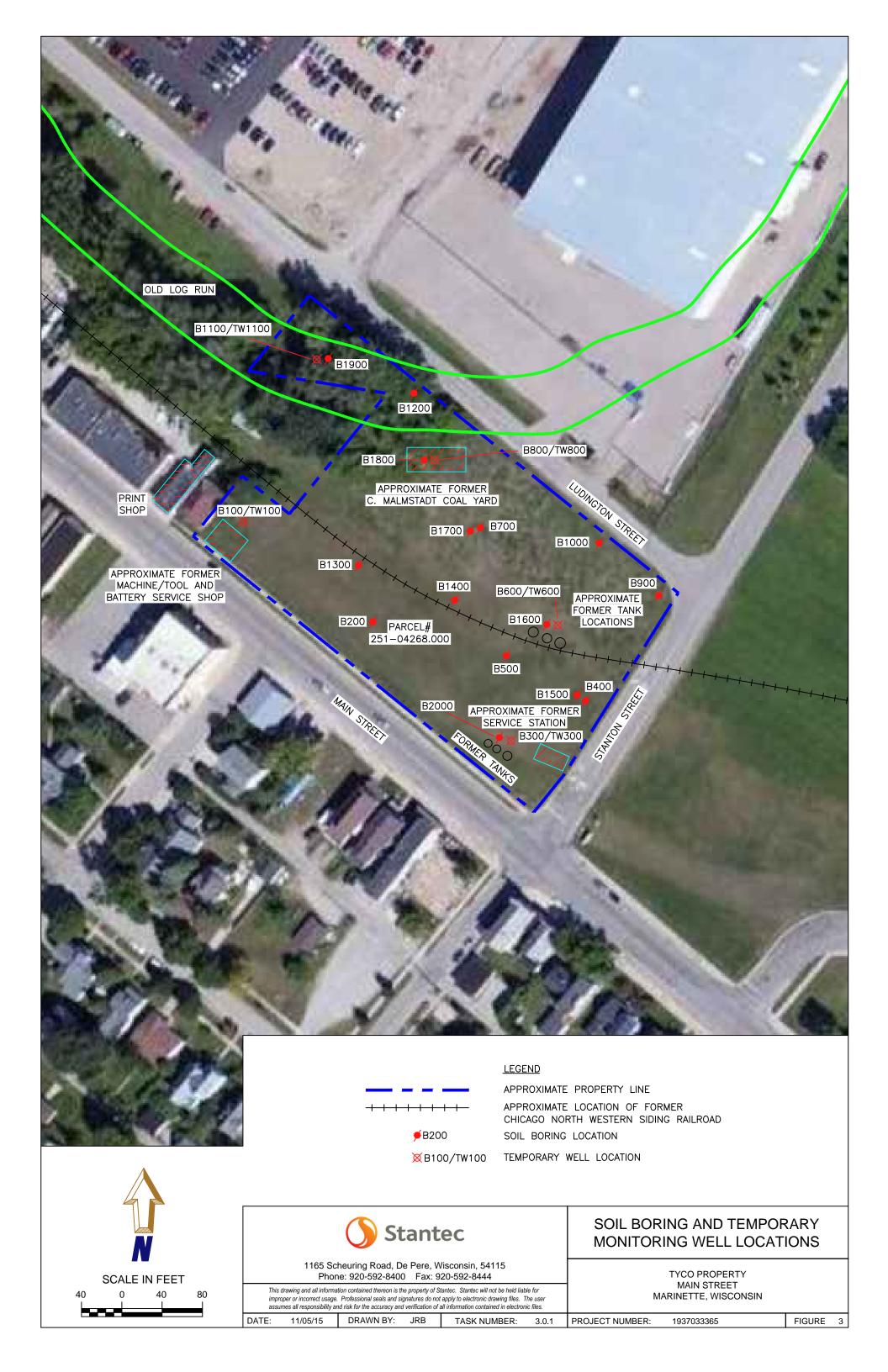


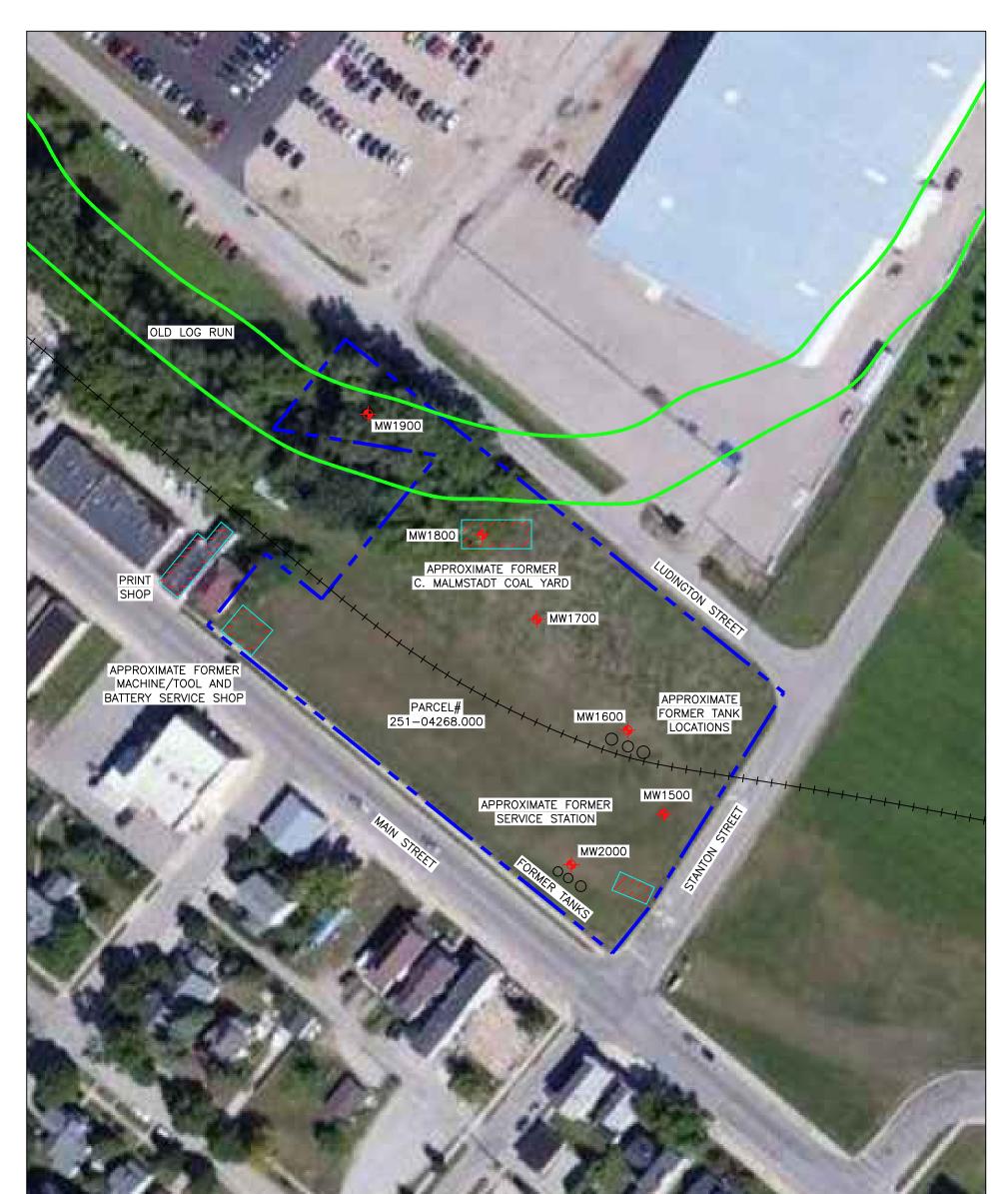


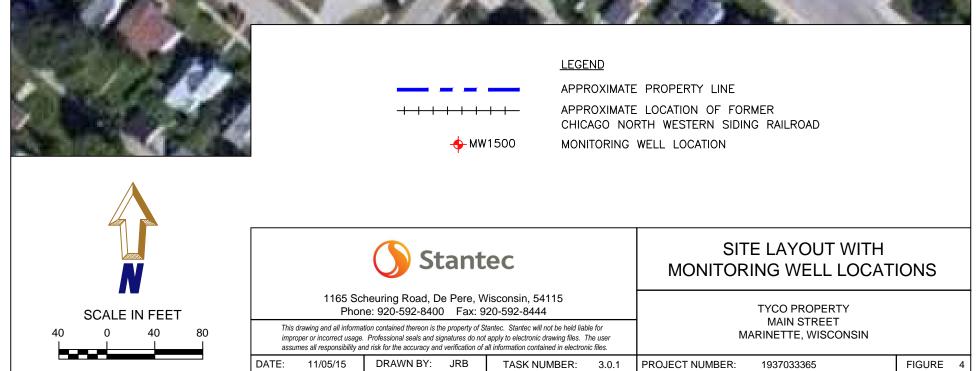


# Attachment B

Site Investigation Data







						PID	Headspace Ana	lysis
Boring Number	Sample Number	Sample Depth (feet)	Sample Odor	Sample Description	Date Collected	Time Collected	Time Analyzed	PID Response (IUI)
B100/TW100	S101	0-2	None	Sand	7/8/2015	840	900	2.3
	S102*	2-4	None	Sand/Fill	7/8/2015	845	905	2.3
	S103	4-6	None	Sand/Fill	7/8/2015	855	915	1.3
	S104	6-8	None	Sand/Fill	7/8/2015	900	917	1
	S105	8-10	None	Sand	7/8/2015	905	920	2.0
	S106	10-12	None	Fill	7/8/2015	910	925	1.4
	S107	12-14	None	Sand	7/8/2015	915	930	1.7
	S108	14-16	None	Sand	7/8/2015	920	935	0.6
B200	S201*	0-2	None	Sand	7/8/2015	1028	1045	3.7
	S202	2-4	None	Sand	7/8/2015	1031	1046	2.3
	S203	4-6	None	Sand	7/8/2015	1034	1050	0.9
	S204	6-8	None	Sand	7/8/2015	1039	1055	2.1
	S205	8-10	None	Sand	7/8/2015	1043	1059	1.5
	\$206	10-12	None	Fill	7/8/2015	1047	1104	2.0
	S200	12-14	None	Fill	7/8/2015	1050	1105	1.8
	S207	14-16	None	Sand	7/8/2015	1050	1105	2.7
B300/TW300	\$301	0-2	None	Sand	7/8/2015	1150	1205	4.8
B300/1W300	\$301	2-4	None	Sand	7/8/2015	1153	1205	5.2
	\$302 \$303	4-6	None	Sand	7/8/2015	1157	1207	7.2
	\$303 \$304	4-0 6-8	None	No Recovery	7/8/2015	1201	1214	
	\$305*	8-10		Sand/Fill	7/8/2015	1201	1220	9.3
			None	Sand/Fill				
	\$306	10-12	None		7/8/2015	1210	1225	6.5
	\$307	12-14	None	Sand		1214	1230	2.9
B.400	S308	14-16	None	Sand	7/8/2015	1219	1235	3.2
B400	S401	0-2	None	Sand	7/8/2015	1317	1333	2.2
	S402	2-4	None	Sand/Fill	7/8/2015	1320	1335	2.5
	S403	4-6	None	Sand/Fill	7/8/2015	1324	1340	5.9
	S404*	6-8	None	Sand/Fill	7/8/2015	1328	1345	5.9
	S405	8-10	None	Sand/Fill	7/8/2015	1332	1348	6.1
	S406	10-12	None	Silty Sand/Fill	7/8/2015	1338	1355	4.5
	S407	12-14	None	Silty Sand/Fill	7/8/2015	1347	1402	6.1
	S408	14-16	None	Sand	7/8/2015	1351	1406	3.9
B500	S501	0-2	None	Sand	7/8/2015	1448	1504	5.9
	S502*	2-4	None	Sand	7/8/2015	1450	1506	6.1
	S503	4-6	None	Sand	7/8/2015	1453	1508	5.2
	S504	6-8	None	Sand/Fill	7/8/2015	1458	1515	1.6
	S505	8-10	None	Sand/Fill	7/8/2015	1501	1516	2.2
	S506	10-12	None	Sand/Fill	7/8/2015	1506	1520	7.4
	S507	12-14	None	Sand/Fill	7/8/2015	1511	1526	7.3
	S508	14-16	None	Sand	7/8/2015	1516	1532	4.7
B600/TW600	S601	0-2	None	Sand	7/9/2015	745	800	3.3
	S602	2-4	None	Sand	7/9/2015	748	805	4.6
	S603	4-6	None	Sand	7/9/2015	753	810	4.9
	S604*	6-8	None	Sand/Fill	7/9/2015	755	811	5.8
	S605	8-10	Petroleum	Sand/Fill	7/9/2015	759	815	>300
	S606	10-12	Petroleum	Sand/Fill	7/9/2015	803	819	>300
	S607	12-14	None	Silty Sand/Fill	7/9/2015	806	822	47
	S608	14-16	None	No Recovery	7/9/2015	814		
B700	S701	0-2	None	Sand/Fill	7/9/2015	911	925	7.6
	\$702	2-4	None	Sand/Fill	7/9/2015	913	929	5.9
	S703*	4-6	Slight Petroleum	Silty Sand/Fill	7/9/2015	918	935	9.6
	S704	6-8	None	Silty Sand/Fill	7/9/2015	923	940	10.8
	\$705	8-10	None	Sand/Fill	7/9/2015	928	944	5.2
	\$706	10-12	None	Silty Sand/Fill	7/9/2015	932	948	5.5
	\$700	12-14	None	Sand	7/9/2015	940	955	6.8
	\$708	14-16	None	Sand	7/9/2015	948	1000	6.8

Page	2	of	2
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						PID	Headspace Ana	lysis
Boring Number	Sample Number	Sample Depth (feet)	Sample Odor	Sample Description	Date Collected	Time Collected	Time Analyzed	PID Response (IUI)
B800/TW800	S801	0-2	None	Sand	7/9/2015	1036	1050	10.4
	S802*	2-4	None	Sand	7/9/2015	1038	1053	12.2
	S803	4-6	None	Fill	7/9/2015	1042	1057	9.1
	S804	6-8	None	Silty Sand/Fill	7/9/2015	1047	1102	6.2
	S805	8-10	None	Sand/Fill	7/9/2015	1050	1105	6.5
	S806	10-12	None	Silty Sand/Fill	7/9/2015	1055	1110	5.7
	S807	12-14	None	Sand	7/9/2015	1100	1115	4.6
	S808	14-16	None	No Recovery	7/9/2015	1105		
B900	S901	0-2	None	Sand	7/9/2015	1155	1210	7.6
	S902*	2-4	None	Sand/Fill	7/9/2015	1159	1215	10.0
	S903	4-6	None	Sand/Fill	7/9/2015	1202	1218	7.9
	S904	6-8	None	Sand	7/9/2015	1206	1221	2.1
	S905	8-10	None	Sand/Fill	7/9/2015	1210	1225	3.9
	S906	10-12	None	Sand/Fill	7/9/2015	1215	1230	3.3
	S907	12-14	None	Sand	7/9/2015	1219	1235	2.3
	S908	14-16	None	Sand	7/9/2015	1225	1240	1.2
B1000	S1001	0-2	None	Sand	7/9/2015	1345	1400	3.1
	S1002*	2-4	None	Sand/Fill	7/9/2015	1349	1405	7.1
	S1003	4-6	None	Sand/Fill	7/9/2015	1352	1408	4.6
	S1004	6-8	None	Sand/Fill	7/9/2015	1356	1410	4.6
	S1005	8-10	None	Sand/Fill	7/9/2015	1400	1415	3.6
	S1006 S1007	10-12 12-14	None None	Sand Sand	7/9/2015	1403 1408	1418 1425	3.8 2.8
	S1007	12-14	None	No Recovery	7/9/2015	1408		2.0
B1100/TW1100	S1101	0-2	None	Sand	7/9/2015	1512	1530	5.5
	S1102*	2-4	None	Sand/Fill	7/9/2015	1514	1530	6.5
	S1103	4-6	None	Sand	7/9/2015	1519	1535	7.5
	<u>\$1104</u> \$1105	6-8 8-10	Slight Petroleum None	Fill Fill	7/9/2015 7/9/2015	1522 1526	1538 1540	9.5 17.0
	S1105	10-12	None	Silty Sand/Fill	7/9/2015	1531	1545	12.3
	S1107	12-14	None	Silty Sand/Fill	7/9/2015	1536	1550	10.3
	S1108	14-16	None	Sand/Fill	7/9/2015	1540	1555	4.4
B1200	\$1201 \$1202*	0-2	None	Sand Sand/Fill	7/8/2015	1236 1239	1252	1.6 9.4
	S1202" S1203	2-4 4-6	None None	Sand/Fill	7/8/2015 7/8/2015	1239	1255 1306	9.4 1.8
B1300	\$1301*	0-2	None	Sand	10/7/2015	939	955	7.8
	S1302	2-4	None	Sand	10/7/2015	945	1000	4.4
B1400	S1401*	0-2	None	Sand	10/7/2015	952	1007	1.4
B1500	S1402 S1501	2-4 0-2	None None	Sand/Fill Sand	10/7/2015 10/7/2015	954 1007	1010 1022	1.2 0.5
81500	\$1501 \$1502*	2-4	None	Sand	10/7/2015	1015	1030	1.1
	S1503	4-6	None	Sand	10/7/2015	1020	1035	1.7
	S1504	6-8	Wood/Organic	Sand/Fill	10/7/2015	1028	1044	19.4
	S1505	8-10	None Wood/Organic	Sand/Fill	10/7/2015	1035	1050	2.9 47.0
	S1506 S1507	10-12 12-14	None	Sand/Fill Sand/Fill	10/7/2015 10/7/2015	1040 1051	1055 1105	2.0
B1600	S1601	0-2	None	Sand	10/7/2015	1138	1153	0.2
	S1602*	2-4	None	Sand	10/7/2015	1140	1155	0.4
	S1603	4-6	None	Sand	10/7/2015	1145	1200	0.4
	S1604 S1605	6-8 8-10	Slight Burnt Slight Burnt	Sand Sand/Fill	10/7/2015 10/7/2015	1150 1154	1205 1210	2.4 7.1
	S1605 S1606	8-10	None	Sand/Fill Sand/Fill	10/7/2015	1154	1210	24.7
	S1607	12-14	None	Sand	10/7/2015	1200	1213	7.9
B1700	S1701	0-2	None	Sand	10/7/2015	1245	1300	0.6
	S1702*	2-4	None	Sand/Fill	10/7/2015	1247	1303	24.0
	S1703* S1704	4-6 6-8	None None	Sand Silty Sand/Fill	10/7/2015 10/7/2015	1251 1256	1307 1312	5.4 3.3
	S1704	8-10	None	Silty Sand/Fill	10/7/2015	1300	1312	2.9
	S1706	10-12	None	Silty Sand	10/7/2015	1304	1320	1.1
B4077	S1707	12-14	None	Sand	10/7/2015	1310	1325	0.4
B1800	S1801	0-2	None	Sand	10/7/2015	1404	1420	0.7
	S1802 S1803*	2-4 4-6	None None	Sand Sand	10/7/2015 10/7/2015	1406 1415	1422 1430	0.8
	S1804	6-8	None	Sand/Fill	10/7/2015	1413	1436	7.4
	S1805	8-10	None	Sand/Fill	10/7/2015	1424	1440	1.8
84455	S1806	10-12	None	Sand/Fill	10/7/2015	1429	1445	0.7
B1900				Blind Drilled	10/7/2015			

 Key:
 PID
 = Photoionization Detector

 iui
 = Instruments units as isobutylene

 \*
 = Submitted for laboratory analysis

 --- = Not Analyzed or Unknown

#### Table 2a Soil Sample RCRA Metal, Polynuclear Aromatic Hydrocarbon, and PCB Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

		Si	ample					Metal	s (milligram pe	er kilogram)									F	olynuclear A	romatic Hyd	rocarbon Lab	oratory Resu	llt (microgram p	er kilogram)									Polychlorin	ated Biphe	enyls (PCBs)			
Borehole Number	Sample Label	Date	Depth (feet below grade)	PID Response (lui)	Description	Total Arsenic	Total Barium	Total Cadmium	Total Chromium	Total Lead	Total Mercury	Total Selenium	Total Silver	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Benzo(a) pyrene	Chrysene	Dibenzo(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) pyrene	1-Methyl naphthalene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
	WDNR Direct C	ontact RCI		_	Non-Industrial	8* [0.613]	15,300	70	NE	400	3.13	391	391	3,440,000	NE	17,200,000	148	148	NE	1,480	15	14,800	15	2,290,000	2,290,000	148	15,600		5,150	NE	1,720,000	3.93	0.159	0.159	0.221	0.221	0.221		0.221
					Industrial	8* [2.39]	100,000	799	NE	800	3.13	5,110	5,110	33,000,000	NE	100,000,000	2,110	2,110	NE	21,100	211	211,000	211	22,000,000	22,000,000	2,110	53,100	22,000,000	26,000	NE	16,500,000	21.2	0.589	0.589	0.744	0.744	0.744		0.744
	WDNR RCL fo	or Groundwa	ater Protect	tion**		<b>8</b> * [0.584]	364* [164.8]	<b>1*</b> [0.752]	360,000	52* [27]	0.208	0.52	0.85	NE	NE	197,727.3	NE	479.3	NE	NE	470	144.6	NE	88,817.9	14,802.7	NE	NE	NE	658.7	NE	54,132.2	NE	0.0094						
	Backg	round Thresh	old Value			8	364	1	44	52	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
B100	\$102	07/08/15	2-4	2.3	Sand	2.4	51.7	0.018 J	8.3	377	0.037	<0.30	0.73	2.71	10.6	20.3	71.1	86.0	79.1	24.4	65.2	80.1	11.2	115	5.07	38.3	146	150	111	158	107								
B200	S201	07/08/15	0-2	3.7	Sand	<0.26	8.3	<0.016	3.2	2.5	0.0056	<0.43	<0.10	<0.30	0.327	<0.41	3.52	7.22	4.41	1.91	4.29	4.09	<1.1	7.87	<0.41	3.58	<0.27	0.809	0.622	3.17	6.74								
B300	\$305	07/08/15	8-10	9.3	Sand	0.59 J	13.8	<0.016	4.1	10.3	0.044	<0.43	<0.10	38.5	20.9	200	778	835	198	186	<u>614</u>	616	48.9	1510	48.4	194	9.42	10.20	23.6	861	1200								
B400	S404	07/08/15	6-8	5.9	Sand	2.9	145	0.17	7.4	108	0.11	<0.50	<0.12	1610	335	11,100	26,300	32,800	22,800	9,630	24,100	25,700	<u>3,810</u>	56,900	1,900	18,100	459	492	914	44,400	48,900								
B500	S502	07/08/15	0-2	6.1	Sand	<0.29	97.5	<0.018	3.5	3.5	0.0049 J	<0.48	<0.11	<0.31	<0.28	<0.43	1.62	2.56	2.19	<0.96	1.60	1.38	<1.2	1.72	<0.43	1.66	<0.28	0.723	0.678	1.30	2.31								
B600	S604	07/09/15	6-8	5.8	Sand	0.72 J	108	0.092	6.9	50.1	0.036	<0.50	<0.12	24.6	183	215	1,060	1,320	363	388	<u>836</u>	1,010	105	2,230	61.5	363	784	902	492	1,170	1,550								
B700	S703	07/09/15	4-6	9.6	Silty Sand	<u>62.2</u>	116	< 0.014	6.4	73,900	0.097	<0.38	1.5	16.4	46.8	50.3	211	296	105	82.4	171	229	27.1	353	22.2	91.6	203	246	164	320	302								
B800	\$802	07/09/15	2-4	12.2	Sand	<u>67.4</u>	104	0.035 J	6.8	41.0	0.14	<0.39	<0.094	3.92	12.8	13.5	87.5	126	48.9	28.8	69.8	98.3	11.5	83.2	7.82	37.8	174	146	38.3	122	113								
B900	\$902	07/09/15	2-4	10.0	Sand	<u>8.4</u>	104	<0.018	5.6	37.7	0.050	<0.48	<0.12	4.57	35.7	29.2	163	262	97.9	59.3	159	161	21.4	273	8.00	79.2	45.3	54.6	40.8	153	252								
B1000	\$1002	07/09/15	2-4	7.1	Sand	4.3	102	<0.017	7.2	35.1	0.052	<0.45	<0.11	7.60	51.0	46.2	245	339	116	88.1	253	240	26.1	350	12.7	96.8	47.4	52.0	38.4	232	414								
B1100	\$1102	07/09/15	2-4	6.5	Sand	0.61	125	0.026	9.6	56.3	0.034	<0.58	<0.14	115	41.5	340	1,520	2,240	471	641	<u>1,210</u>	1,650	121	3,510	127	501	42.8	59.0	56.9	2,000	2,540								
B1200	\$1202	07/08/15	2-4	9.4	Sand	4.0	152	0.10	7.5	210	0.14	<0.66	<0.16	3,330	74.7	3,980	4,920	5,540	1,350	1,410	<u>3,630</u>	4,000	318	13,100	2,960	1,300	403	387	581	17,600	9,620								
B1300	\$1301	10/07/15	0-2	7.8	Sand																											< 0.0061	< 0.0075	< 0.0075	< 0.0056	< 0.0067	< 0.0037	< 0.0084	< 0.0455
B1400	\$1401	10/07/15	0-2	1.4	Sand																											< 0.0059	< 0.0073	< 0.0073	< 0.0055	< 0.0066	< 0.0036	<0.0082	< 0.0444
B1500	S1502	10/07/15	2-4	1.1	Sand					94				84 J	390	490	2100	3000	890	1300	2200	1700	270	3800	310	740	120 J	130 J	220	1900	3200								
B1600	S1602	10/07/15	2-4	0.4	Sand																											< 0.0059	< 0.0073	< 0.0072	< 0.0055	< 0.0065	< 0.0036	<0.0081	<0.0441
B1700	S1702	10/07/15	2-4	24.0	Sand					230																													
	S1703	10/07/15	4-6	5.4	Sand					220																													
B1800	S1803	10/07/15	4-6	1.5	Sand																											< 0.0073	< 0.0091	< 0.0090	<0.0068	0.170	< 0.0045	<0.010	0.170

Note: • compound not detected to a detection limit of x • not laboratory analyzed XX\* [XXX] = standard in boid are background threshold values (BTVs) being utilized for the purpose of evaulation under ch. NR700 WAC. The established WAC RCL is noted in brackets. XXX = exceeds WDNR Not Industrial RCL for direct contact risk XXX = exceeds WDNR Industrial RCL for direct contact risk XXX = exceeds WDNR Industrial RCL for direct contact risk XXX = exceeds WDNR Chustrial RCL for direct contact risk XXX = exceeds WDNR Rot or protection of groundwater and/or BTV NE = not established by WAC (Wis. Adm. Code) or WDNR Soil RCL Summary Table • exceeds WDNR Rot due less than BTVs are not considered a direct contact or groundwater pathway concern with respect to site releases requiring further remediation action. However, the detection could represent a personal health risk if detected above health based standards. \* analyte detected between the limit of detection and limit of quantification iui = instrument units as isobutylene PID = photoionization detector RCL = residual contaminant level \* WDNP soil RCL Summary table (January 2015) used to establish RCLs for groundwater protection and direct contact.

Notes: WDNR soil RCL Summary table (January 2015) used to establish RCLs for groundwater protection and direct contact. For the purpose of this evaluation under ch. NR 700, background threshold values are being considered as representative of background conditions. However, constituent concentrations less than background threshold values may represent a potential health risk if concentrations are greater than health-based standards.

## Table 2b Soil Sample Volatile Organic Compound Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

			Sample									Volatile Or	rganic Comp	oound Labora	atory Resu	ult (microgra	m per kilogra	am)							
Borehole Number	Number	Date	Depth (feet below grade)	PID Response (iui)	Description	Acetone	Benzene	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	Carbon disulfide	cis-1,2- Dichloroethene	Ethylbenzene	Naphthalene	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene (TCE)	Trichloro fluromethane	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Vinyl Chloride	Total Xylenes
	WDNR Direct (	Contact RCL			Non-Industrial	6.38E+07	1,490	4,720	608	342,000	7.38E+05	156,000	7,470	5,150	NE	30,700	818,000	640,000	1,480	1,260	1.12E+06	89,800	182,000	67	258,000
			-		Industrial	1.E+08	7,410	23,700	3,030	1.19E+06	7.38E+05	2.04E+06	37,000	26,000	NE	153,000	818,000	640,000	7,340	8,810	1.23E+06	219,000	182,000	2,030	258,000
	WDNR RCL fo	or Groundwa	ater Prote	ction**		3676.60	5.1	482.8	2.8	5	591.9	41.2	1570	658.2	NE	4.5	1107.2	140.2	3.2	3.6	NE	1382.1 (Co	ombined)	0.10	3940
B100	S102	07/08/15	2-4	2.3	Sand	<190	<11	<15	<14	<15	<25	<11	<12	<27	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	<36
B200	S201	07/08/15	0-2	3.7	Sand	<190	<11	<15	<14	<15	<25	<11	<12	<27	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	<36
B300	S305	07/08/15	8-10	9.3	Sand	<190	<11	<15	<14	<15	<25	<11	<12	61.7 J	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	<36
B400	S404	07/08/15	6-8	5.9	Sand	<190	<11	<15	<14	<15	<25	<11	<12	71.0 J	<25	109	<25	<14	<15	<12	<19	<27	<30	<15	<36
B500	S502	07/08/15	2-4	6.1	Sand	<190	<11	<15	<14	<15	<25	<11	<12	<27	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	<36
B600	S604	07/09/15	6-8	5.8	Sand	<200	<12	<16	<15	<16	<27	<12	<13	119	<27	<13	<27	<15	<16	<13	<20	38.8 J	<32	<16	78.2 J
B700	S703	07/09/15	4-6	9.6	Silty Sand	<190	24.2 J	<15	<14	<15	<25	<11	<12	<27	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	41.1 J
B800	S802	07/09/15	2-4	12.2	Sand	<190	<11	<15	<14	<15	<25	<11	<12	<27	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	<36
B900	S902	07/09/15	2-4	10.0	Sand	<190	<11	<15	<14	<15	<25	<11	<12	31.6 J	<25	<12	27.0 J	<14	<15	<12	<19	<27	<30	<15	52.5 J
B1000	S1002	07/09/15	2-4	7.1	Sand	179 J	<11	<15	<14	<15	26.6 J	<11	<12	<27	<25	<12	<25	<14	<15	<12	<19	<27	<30	<15	36.0 J
B1100	S1102	07/09/15	2-4	6.5	Sand	217 J	<12	<16	<15	<16	<26	<12	<13	<28	<26	<13	<26	<15	<16	<13	<20	<28	<32	<16	<38
B1200	S1202	07/08/15	2-4	9.4	Sand	<240	<14	<19	<17	<19	<31	<14	23.0 J	197	<31	<15	44.6 J	<17	<19	<15	<24	85.9 J	<37	<19	118.3 J
B1500	S1502	10/07/15	2-4	1.1	Sand		94	<45	<43	<43		<45	68		<45	<40	150	<42	<39	<18	<47	130	<42	<29	250

Notes: WDNR soil RCL Summary table (January 2015) used to establish RCLs for groundwater protection and direct contact.

<x = compound not detected to a detection limit of x</pre>

not analyzed

XXX = exceeds WDNR RCL for direct contact risk for Non-Industrial

XXX = exceeds WDNR RCL for direct contact risk for Industrial

 XXX NE
 = exceeds WDNR RCL for protection of groundwater

 NE
 = not established by Wisconsin Administrative Code (Wis. Adm. Code) or WDNR Soil RCL Summary Table

\*\* =

"J" = analyte detected between limit of detection and limit of quantification

iui = instrument units as isobutylene

RCL = residual contaminant level

### Table 2c Soil Sample Organochlorine Pesticides Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

			Sample									Volatile Orga	anic Compou	Ind Laborato	ry Result (micro	ogram per ki	ogram)									
Borehole Number	Number	Date	Depth (feet below grade)	PID Response (iui)	Description	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	4,4'-DDD	4,4' -DDE	4,4'-DDT	delta-BHC	Dieldrin	Endosulfan l	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Methoxychlor	Toxaphene
	WDNR Direct Co	ontact PCI			Non-Industrial	29	NE	NE	NE	2,020	1,430	1,720	NE	30	367,000	NE	NE	18,300	NE	NE	NE	NE	108	53	306,000	441
	WDINK Dilect Co		-		Industrial	101	NE	NE	NE	7,180	5,070	7,030	NE	108	3,690,000	NE	NE	185,000	NE	NE	NE	NE	383	189	3,080,000	1,570
	WDNR RCL for	Groundwa	ater Prote	ction**		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	161.6	NE	NE	NE	NE	66.2	8.2	4,320	928
B1300	S1301	10/07/15	0-2	7.8	Sand	<0.71	<0.44	<0.87	<0.53	<0.34	<0.28	<0.90	<0.54	<0.24	<0.75	<0.28	<0.31	<0.24	<0.29	<0.39	<0.37	<0.45	<0.72	<0.61	<0.33	<7.2
B1400	S1401	10/07/15	0-2	1.4	Sand	<0.69	<0.42	<0.84	<0.52	<0.33	3.5	5.0	<0.53	<0.23	<0.73	<0.27	<0.30	<0.23	<0.28	<0.38	<0.36	<0.44	<0.70	<0.59	<0.32	<7.0
B1600	S1602	10/07/15	2-4	0.4	Sand	<6.9	<4.2	<8.4	<5.2	<3.3	<2.8	<8.8	<5.2	<2.3	<7.3	<2.7	<3.0	<2.3	<2.8	<3.8	<3.6	<4.4	<7.0	<5.9	<3.2	<70

Notes: WDNR soil RCL Summary table (January 2015) used to establish RCLs for groundwater protection and direct contact.

<x = compound not detected to a detection limit of x</pre>

not analyzed

XXX = exceeds WDNR RCL for direct contact risk for Non-Industrial

XXX = exceeds WDNR RCL for direct contact risk for Industrial

 XXX
 = exceeds WDNR RCL for protection of groundwater

 NE
 = not established by Wisconsin Administrative Code (Wis. Adm. Code) or WDNR Soil RCL Summary Table

\*\* =

"J" = analyte detected between limit of detection and limit of quantification

iui = instrument units as isobutylene

RCL = residual contaminant level

			Labo	ratory Re		nicrogram Metals	s per liter	(µg/l)	
Well Number	Date Collected	Arsenic	Barium	Cadmium	Chromium	read	Mercury	Selenium	Silver
NR 140 Preventive	Action Limit (µg/l)	1	400	0.5	10	1.5	0.2	10	10
NR 140 Enforceme	ent Standard (µg/l)	10	2000	5	100	15	2	50	50
TW100	07/09/15	1.1	59.5	<0.26	<1.0	<1.5	<0.050	<12	<2.0
TW300	07/09/15	<0.50	32.1	<0.26	<1.0	<1.5	<0.050	<12	2.2 J
TW600	07/10/15	4.5	165	<0.26	<1.0	<1.5	<0.050	<12	<2.0
DUP (TW600)	07/10/15	5.2	170	<0.26	<1.0	<1.5	<0.050	<12	3.8 J
TW800	07/10/15	65.2	71.8	<0.26	<1.0	<1.5	<0.050	<12	<2.0
TW1100	07/10/15	9.7	140	<0.26	2.4 J	<1.5	<0.050	26.7 J	<2.0
MW1600	10/14/15	<0.44							
MW1700	10/14/15 08/04/16	<b>1.0</b> 0.74J				0.15 J 			
MW1800	10/14/15 08/04/16	24 5.5							
MW1900	10/14/15 08/04/16	7.0 4.0						<0.83 	

## Table 3a Groundwater Sample RCRA Metals Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

### Notes:

RCRA	= Resource Conservation and Recovery Act
<x< th=""><th><ul> <li>analyte not detected above method detection limit</li> </ul></th></x<>	<ul> <li>analyte not detected above method detection limit</li> </ul>
"J"	<ul> <li>analyte detected between limit of detection and limit of quantitation</li> </ul>
X	<ul> <li>concentration detected above Chapter NR 140, Wisconsin Administrative Code(NR 140, Wis. Adm. Code)</li> <li>preventive action limit (PAL)</li> </ul>
X	= concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES)
NE	= not established
	= not analyzed

### Table 3b Groundwater Sample Volatile Organic Compound Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

														Detecte	ed Volatile	Organic C	ompounds	(µg/L)													
Well Number	Date Collected	Acetone	Benzene	2-Butanone	n-Butylbenzene	Chloroethane	Chloroform	Chloromethane	Dibromochloromethane	Dichlorodifluoromethane	1,2-Dichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	p-Isopropyltoluene	4-Methyl-2-pentanone	Methylene Chloride	Naphthalene	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	1,1,1-Trichloroethane (1,1,1-TCA)	1,1,2-Trichloroethane (1,1,2-TCA)	Trichloroethene (TCE)	Trichlorofluoromethane	Total Trimethylbenzene	Vinyl Chloride	Total Xylenes
NR 140 Preventive	Action Limit (µg/l)	1,800	0.5	NE	NE	80	0.6	0.3	6	200	0.5	85	0.7	7	20	140	NE	NE	NE	0.5	10	NE	0.5	160	40	0.5	0.5	NE	96	0.02	400
NR 140 Enforcemen	nt Standard (µg/l)	9,000	5	NE	NE	400	6	3	60	1000	5	850	7	70	100	700	NE	NE	NE	5	100	NE	5	800	200	5	5	NE	480	0.2	2,000
TW100	07/09/15	12 J	<0.30	<4.0	<0.40	<0.80	<0.30	<0.80	<0.40	<0.80	<0.30	<0.40	<0.27	<0.30	<0.30	<0.30	<0.40	<0.40	<7.0	<0.30	<1.0	<0.40	<0.40	<0.27	<0.30	<0.30	<0.30	<0.60	<0.60	<0.18	<1.0
TW300	07/09/15	<7.0	<0.30	<4.0	<0.40	<0.80	<0.30	<0.80	<0.40	<0.80	<0.30	<0.40	<0.27	<0.30	<0.30	<0.30	<0.40	<0.40	<7.0	<0.30	<1.0	<0.40	<0.40	<0.27	<0.30	<0.30	<0.30	<0.60	<0.60	<0.18	<1.0
TW600	07/10/15	18 J	<0.30	4.1 J	<0.40	<0.80	0.43 J	<0.80	<0.40	<0.80	<0.30	<0.40	<0.27	<0.30	<0.30	<0.30	<0.40	<0.40	<7.0	<0.30	<1.0	<0.40	<0.40	<0.27	<0.30	<0.30	<0.30	<0.60	0.66 J	<0.18	<1.0
DUP (TW600)	07/10/15	23	<0.30	<4.0	<0.40	<0.80	0.34 J	<0.80	<0.40	<0.80	<0.30	<0.40	<0.27	<0.30	<0.30	<0.30	<0.40	<0.40	<7.0	<0.30	<1.0	<0.40	<0.40	<0.27	<0.30	<0.30	<0.30	<0.60	0.69 J	<0.18	<1.0
TW800	07/10/15	<7.0	<0.30	<4.0	<0.40	<0.80	<0.30	<0.80	<0.40	<0.80	<0.30	<0.40	<0.27	<0.30	<0.30	<0.30	<0.40	0.93 J	<7.0	<0.30	<1.0	<0.40	<0.40	<0.27	<0.30	<0.30	<0.30	<0.60	<0.60	<0.18	<1.0
TW1100	07/10/15	13 J	<0.30	<4.0	<0.40	<0.80	<0.30	<0.80	<0.40	<0.80	<0.30	<0.40	<0.27	<0.30	<0.30	<0.30	<0.40	<0.40	7.5 J	<0.30	<1.0	<0.40	<0.40	<0.27	<0.30	<0.30	<0.30	<0.60	<0.60	<0.18	<1.0
MW1500	10/14/15		<0.15		<0.39	<0.47	<0.37	<0.32	<0.49	<0.54	<0.39	<0.41	<0.39	<0.41	<0.35	<0.18	<0.39	<0.36		<1.6	<0.34	<0.41	<0.37	<0.15	<0.38	<0.35	<0.16	<0.43	<0.61	<0.20	<0.22
DUP (MW1500)	10/14/15		<0.15		<0.39	<0.47	<0.37	<0.32	<0.49	<0.54	<0.39	<0.41	<0.39	<0.41	<0.35	<0.18	<0.39	<0.36		<1.6	<0.34	<0.41	<0.37	<0.15	<0.38	<0.35	<0.16	<0.43	<0.61	<0.20	<0.22
MW1700	10/14/15		<0.15		<0.39	<0.47	<0.37	<0.32	<0.49	<0.54	<0.39	<0.41	<0.39	<0.41	<0.35	<0.18	<0.39	<0.36		<1.6	<0.34	<0.41	<0.37	<0.15	<0.38	<0.35	<0.16	<0.43	<0.61	<0.20	<0.22

*Notes:* "J"

X

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= Analyte detected between Limit of Detection and Limit of Quantitation

= Concentration detected above Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL)

= Concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES)

# Table 3c Groundwater Sample Polynuclear Aromatic Hydrocarbon Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

								Det	ected Polyn	uclear Arom	atic Hydroc	arbons (µg	/L)						
Well Number	Date Collected	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g, h, i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a, h,)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methyl naphthalene	2-Methyl naphthalene	Naphthalene	Phenanthrene	Pyrene
	e Action Limit (µg/l)	NE	NE	600	NE	0.02	0.02	NE	NE	0.02	NE	80	80	NE	NE	NE	10	NE	50
NR 140 Enforcem	ent Standard (µg/l)	NE	NE	3,000	NE	0.2	0.2	NE	NE	0.2	NE	400	400	NE	NE	NE	100	NE	250
TW100	07/09/15	0.0092 J	0.0074 J	<0.0060	0.021	0.016	0.019	0.015 J	0.014 J	0.016	0.0077 J	0.023	0.028	0.013 J	0.018	0.029	0.17	0.059	0.020
TW300	07/09/15	0.0081 J	0.020	0.012 J	0.048	0.080	0.087	0.071	0.039	0.045	0.015 J	0.048	0.019	0.059	0.025	0.031	0.051	0.049	0.056
TW600	07/10/15	0.011	0.060	0.041	0.14	0.13	0.17	0.089	0.074	0.13	0.024	0.29	0.019	0.083	0.12	0.080	0.087	0.13	0.22
DUP (TW600)	07/10/15	0.015	0.045	0.036	0.095	0.092	0.12	0.062	0.043	0.090	0.017 J	0.22	0.020	0.058	0.15	0.098	0.079	0.13	0.16
TW800	07/10/15	0.012	0.012 J	0.013 J	0.025	0.026	0.034	0.021	0.017 J	0.029	0.0067 J	0.046	0.020	0.018 J	0.028	0.028	0.046	0.056	0.044
TW1100	07/10/15	0.017	0.032	<0.0060	0.0061 J	<0.0050	<0.0060	<0.0060	<0.0070	0.0055 J	<0.0060	0.0073 J	0.0065 J	<0.0060	0.040	0.063	0.059	0.024	0.0070 J
MW1500	08/04/16	<0.24	<0.21	<0.26	<0.044	<0.077	<0.062	<0.29	<0.050	<0.053	<0.039	<0.34	<0.19	<0.058	<0.23	<0.050	<0.24	<0.23	<0.33
MW1600	10/14/15 08/04/16	<0.24 <0.24	<0.21 <0.20	<0.26 <0.25	0.090 J <0.043	<0.077 <0.075	<b>0.11 J</b> <0.061	<0.29 <0.29	<0.050 <0.049	<i>0.060 J</i> <0.052	<0.039 <0.039	<0.35 <0.35	<0.19 <0.19	<0.058 <0.057	<0.23 <0.23	<0.050 <0.050	<0.24 <0.24	<0.23 <0.23	<0.33 <0.32
MW1700	08/04/16	<0.23	<0.20	<0.25	<0.043	<0.075	<0.061	<0.28	<0.048	<0.052	<0.038	<0.34	<0.18	<0.057	<0.23	<0.049	<0.23	<0.23	<0.32
MW1800	10/14/15 08/04/16	<0.23 <0.25	<0.20 <0.22	<0.25 <0.27	0.52 <0.046	<b>0.52</b> <0.081	<b>0.69</b> <0.066	<0.29 <0.31	0.27 <0.052	<b>0.50</b> <0.056	0.068 J <0.041	0.69 J <0.37	<0.19 <0.20	0.31 <0.061	<0.23 <0.25	<0.050 <0.053	<0.23 <0.25	0.24 J <0.25	0.75 J <0.35
MW2000	10/14/15 08/04/16	<0.24 <0.24	<0.21 <0.20	<0.26 <0.26	0.32 <0.043	<b>0.27</b> <0.076	<b>0.37</b> <0.062	<0.29 <0.29	0.15 J <0.049	<b>0.32 J</b> <0.052	<0.039 <0.039	0.72 J <0.35	<0.19 <0.19	0.15 J <0.057	<0.23 <0.23	<0.051 <0.050	<0.24 <0.24	0.60 J <0.23	0.63 J <0.33

Notes:

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X

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- = Analyte detected between Limit of Detection and Limit of Quantitation
- = Concentration detected above Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL)
- = Concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES)

					PCBs (µg/L	)							
Well No.	Well No. Date Collected 9101 BCB 1016 BCB 20 BCB 20		-12	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260					
NR 140 Preventive Action Limit (µg/L)		NE	NE	NE	NE	NE	NE	NE					
NR 140 Enforcement Standard (µg/L)		NE	NE	NE	NE	NE	NE	NE					
MW1800	08/04/16	<0.066	<0.20	<0.20	<0.20	<0.20	<0.20	<0.069					

Table 3d Groundwater Sample Polychlorinated Biphenyls Laboratory Results, MCABI - Tyco Property, Marinette, Wisconsin

Notes:



= Analyte detected between Limit of Detection and Limit of Quantitation

= Concentration detected above Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL)

= Concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES)

# Table 4 Water Level Data, MCABI - Tyco Property, Marinette, Wisconsin

Well	Ground Surface	<b>Reference Point</b>	Top / Bottom	Date	Depth to V	Vater (feet)	Water Table
I.D.	Elevation (msl)	Elevation (msl)	Well Screen Elevation		Below	Below	Elevation
			(msl or fbg)		Riser	Grade	(feet)
MW1500	91.08	90.53	5-15 fbg	10/14/15	7.61	8.16	82.92
MW1600	90.08	89.41	5-15 fbg	10/14/15	6.49	7.16	82.92
MW1700	87.27	87.10	4-14 fbg	10/14/15	4.13	4.30	82.97
MW1800	87.40	87.12	3-13 fbg	10/14/15	4.19	4.47	82.93
MW1900	87.41	87.24	3-13 fbg	10/14/15	4.59	4.76	82.65
MW2000	95.69	95.48	5-15 fbg	10/14/15	12.05	12.26	83.43

Key:

\*

msl = Mean Sea Level

= Well Screen Submerged

fbg = Feet Below Grade

--- = Not Collected

Page 1 of 1



# Attachment C

Extent of Wetland and Associated Fill Permits



DEPARTMENT OF THE ARMY ST. PAUL DISTRICT, CORPS OF ENGINEERS 180 FIFTH STREET EAST, SUITE 700 ST. PAUL MN 55101-1678

JUL 2 5 2016



Operations Regulatory (MVP-2016-01211-RJH)

REPLY TO ATTENTION OF

Ann Hartnell Marinette County Association of Business & Industry 1926 Hall Avenue, Room C314 Marinette, Wisconsin 54143

Dear Ms. Hartnell:

We have completed our review of your pre-construction notification to discharge fill material in 0.19 acres of wetland for the purpose of commercial development. The project site is in the SE <sup>1</sup>/<sub>4</sub> of the SE <sup>1</sup>/<sub>4</sub> of Sec. 06, T. 30 N., R. 24 E., Marinette County, Wisconsin.

This work is authorized under the Clean Water Act by category 3.a.3 of Department of the Army General Permit (GP-004-WI) PROVIDED THE ENCLOSED CONDITIONS ARE FOLLOWED. Projects authorized under Section 404 of the Clean Water Act by GP-004-WI are not valid unless and until SECTION 401 WATER QUALITY CERTIFICATION or waiver is received from the Wisconsin Department of Natural Resources (WDNR).

You should contact Robert Rosenberger of the WDNR office in Peshtigo (715) 582-5041, concerning water quality certification and wetland permits required for your project. The WDNR has asked that we provide you with the enclosed materials. This information should be forwarded to the WDNR office.

The Wisconsin Coastal Management Program (WCMP) in the Department of Administration may conduct a federal consistency review to verify that the project will comply with state policies in Wisconsin's coastal zone. Further information may be obtained from the Federal Consistency Coordinator at: Wisconsin Coastal Management Program, P.O. Box 8944, Madison, WI 53708; (608) 267-7988.

If your project will require off-site fill material that is not obtained from a licensed commercial facility, you must notify us at least five working days before start of work. A cultural resources survey may be required if a licensed commercial facility is not used.

This General Permit is valid until December 31, 2017, unless reissued, or revoked. The time limit for completing the work described above ends on that date. It is the permittee's responsibility to remain informed of changes to the General Permit program. If this authorized work is not undertaken within the above time period, or the project specifications have changed, our office must be contacted to determine the need for further approval or re-verification.

Operations Regulatory (MVP-2016-01211-RJH)

It is your responsibility to ensure that the work complies with the terms of this letter and the enclosures AND TO OBTAIN ALL REQUIRED STATE AND LOCAL PERMITS AND APPROVALS BEFORE YOU PROCEED WITH YOUR PROJECT.

A preliminary jurisdictional determination (JD) has been prepared for the site of your project. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps representative identified in the final paragraph of this letter. You also may provide new information for further consideration by the Corps to reevaluate the JD. If this JD is acceptable, please sign and date both copies of the Preliminary Jurisdictional Determination form and return one copy to the address below within 15 days from the date of this letter.

U.S. Army Corps of Engineers Ryan Huber Green Bay Field Office 211 North Broadway Street Suite 221 Green Bay, Wisconsin 54303-2757

If you have any questions, contact Ryan Huber in our Green Bay office at (651) 290-5859. In any correspondence or inquiries, please refer to the Regulatory number shown above.

Charl S. Konickson Chief, Regulatory Branch

Enclosures WDNR information sheets

Copy furnished to: WDNR, Robert Rosenberger (Reference WDNR No. 2016-38-01198)

### NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applic	cant: Ann Hartnell	File Number: MVP-2016-01211-RJH	Date: JUL 2 5 2016			
Attache	d is:	See Section b				
INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)		A				
	PROFFERED PERMIT (Standard Permit or Letter of Permission)		В			
	PERMIT DENIAL	ENIAL				
1	APPROVED JURISDICTIONAL DETERMINATION		D			
Х	PRELIMINARY JURISDICTIONAL DETERMINATION		Е			

SECTION I The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <a href="http://www.usace.army.mil/cecw/pages/reg\_materials.aspx">http://www.usace.army.mil/cecw/pages/reg\_materials.aspx</a> or Corps regulations at 33 CFR Part 331. A. INITIAL PROFFERED PERMIT: You may accept or object to the permit.

• ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approve jurisdictional determinations associated with the permit.

• **OBJECT**: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B. PROFFERED PERMIT: You may accept or appeal the permit.

• ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

• APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C. **PERMIT DENIAL**: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D. APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information

• ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

• APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E. PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

### SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

**REASONS FOR APPEAL OR OBJECTIONS**: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limit	ed to a review of the adminis	strative record, the Corps memorandum for the
larify the administrative record. Neither the appellant nor ou may provide additional information to clarify the locat	the Corps may add new infor ion of information that is alre	eview officer has determined is needed to mation or analyses to the record. However,
clarify the administrative record. Neither the appellant nor you may provide additional information to clarify the locat POINT OF CONTACT FOR QUESTIONS OR IN f you have questions regarding this decision and/or	the Corps may add new infor ion of information that is alre <b>FORMATION</b>	eview officer has determined is needed to mation or analyses to the record. However,
clarify the administrative record. Neither the appellant nor you may provide additional information to clarify the locat POINT OF CONTACT FOR QUESTIONS OR IN If you have questions regarding this decision and/or	the Corps may add new infor ion of information that is alre FORMATION If you only have question also contact: Administrati Mississippi V P.O. Box 80	eview officer has determined is needed to mation or analyses to the record. However, eady in the administrative record. Ins regarding the appeal process you may we Appeals Review Officer Valley Division (1400 Walnut Street) AS 39181-0080 321
clarify the administrative record. Neither the appellant nor you may provide additional information to clarify the locat <b>POINT OF CONTACT FOR QUESTIONS OR IN</b> If you have questions regarding this decision and/or the appeal process you may contact: Mr. Ryan Huber U.S. Army Corps of Engineers Green Bay Field Office 211 North Broadway Street Suite 221 Green Bay, Wisconsin 54303-2757nickel 651-290-5859 <b>RIGHT OF ENTRY</b> : Your signature below grants the re- consultants, to conduct investigations of the project site dur	the Corps may add new infor ion of information that is alree <b>FORMATION</b> If you only have question also contact: Administrati Mississippi V P.O. Box 80 Vicksburg, N (601) 634-58 (601) 634-58	eview officer has determined is needed to mation or analyses to the record. However, eady in the administrative record. Ins regarding the appeal process you may we Appeals Review Officer Valley Division (1400 Walnut Street) AS 39181-0080 321 316 (fax) ineers personnel, and any government process. You will be provided a 15 day notice
U.S. Army Corps of Engineers Green Bay Field Office 211 North Broadway Street Suite 221 Green Bay, Wisconsin 54303-2757nickel	the Corps may add new infor ion of information that is alree <b>FORMATION</b> If you only have question also contact: Administrati Mississippi V P.O. Box 80 Vicksburg, N (601) 634-58 (601) 634-58	eview officer has determined is needed to mation or analyses to the record. However, eady in the administrative record. Ins regarding the appeal process you may we Appeals Review Officer Valley Division (1400 Walnut Street) AS 39181-0080 321 316 (fax) ineers personnel, and any government process. You will be provided a 15 day notice

### **GP-004-WI GENERAL INFORMATION AND CONDITIONS**

Operations - Regulatory (MVP-2016-01211-RJH)

#### GENERAL CONDITIONS

1. <u>Duration of Authorization</u>. GP-004-WI expires on December 31, 2017 (unless suspended, revoked or modified). Unless otherwise specified in the Corps confirmation letter, the time limit for completing work authorized by GP-004-WI ends upon the expiration, suspension, or revocation date of this GP-004-WI (2012-01421-DJM). Activities authorized under the non-reporting categories of GP-004-WI where construction has commenced or are under contract to commence construction, will remain authorized provided the activity is completed within 12 months of the date of the GP-004-WI expiration, suspension, or revocation; whichever is sooner. If you find that you require additional time to complete activities authorized, submit your time extension request to this office for consideration at least three months before the expiration date is reached.

2. Special Conditions. The Corps may impose additional conditions on a project authorized pursuant to the reporting categories of GP-004-WI that are determined necessary to avoid or minimize adverse effects on navigation or the environment to ensure that the project is in the public interest. Such conditions will be specifically identified in any Corps confirmation letter. Failure to comply with all conditions and limitations of the authorization, including special conditions incorporated into the Corps' confirmation letter, constitutes a permit violation and may subject the permittee to criminal, civil or administrative penalties, and appropriate environmental remediation (which could include restoration of the site to its pre-violation condition).

3. <u>Maintenance and Transfer</u>. You must maintain the activity authorized by GP-004-WI in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party. Should you wish to cease to maintain an activity authorized by a reporting category of GP-004-WI, or abandon it without a good faith transfer; you must obtain a modification of the authorization from this office, which may require restoration of the area. If you wish to transfer responsibility for completion or maintenance of the project to another entity, please contact this office so we may document the transfer of the authorization. You are not relieved of your responsibilities under this permit until the transfer has been processed and acknowledged by the Corps of Engineers.

4. <u>Historic Properties, Cultural Resources.</u> Project proponents for reporting GP-004-WI categories shall notify the Corps if any historic properties listed, determined eligible, or which the project proponent has reason to believe may be eligible for listing on the NRHP, might be affected or is in the vicinity of the project. Information concerning the location and existence of cultural resources may be obtained by contacting the State Historic Preservation Officer (SHPO) at (608) 264-6505, the NRHP, and the appropriate tribal government.

(a) No activity which may affect historic properties listed, or eligible for listing, on the NRHP is authorized, until the Corps has complied with the provisions of 33 CFR 325, Appendix C.

(b) If cultural, archaeological, or historical resources are unearthed during activities authorized by this permit, work must be stopped immediately and the Corps, SHPO and/or Tribal Historic Preservation Office (THPO) must be contacted for further instruction. If you discover any previously unknown historic or archaeological remains while accomplishing any activity authorized by GP-004-WI, you must immediately stop work and notify this office of what you have found. The Corps will initiate the coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing on the NRHP.

5. <u>Site Access</u>. You must allow representatives from this office to inspect the proposed project site and the authorized activity at any time deemed necessary to ensure that it is being, or has been, constructed and maintained in accordance with the terms and conditions of GP-004-WI.

6. <u>Navigation</u>. The following conditions are part of all Corps of Engineers permits that provide authorization under Section 10 of the Rivers and Harbors Act:

(a) No activity may cause more than a minimal adverse effect on navigation and there shall be no unreasonable interference with navigation by use of the activity authorized herein.

(b) Any safety lights and signals prescribed by the United States Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

7. <u>Discretionary Authority</u>. The Corps retains discretionary authority to require a standard individual permit review of any activity eligible for authorization under GP-004-WI based on concern for navigation, the aquatic environment, or any public interest factor.

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### Operations - Regulatory (MVP-2016-01211-RJH) GENERAL INFORMATION AND CONDITIONS

8. <u>Federal Responsibility to Indian Tribes.</u> Projects the Corps finds to have potential to affect tribal interests will be coordinated with the appropriate Indian Tribal governments and the Bureau of Indian Affairs as appropriate. The Tribe's views will be considered in the Corps evaluation of the project. Based on treaty rights, no activity or its operation may impair reserved treaty rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

9. Form and Confirmation of Authorization. Every reporting GP-004-WI authorization will be confirmed in writing by the Corps. Any confirmation issued may include special conditions which are part of this permit as it pertains to that project being authorized.

10. <u>Avoidance and Minimization</u>. Impacts to waters of the United States must be avoided and minimized to the maximum extent practicable (please see 1.a.9., above for a definition of practicable).

11. <u>Water Quality Standards</u>. All work or discharges to a watercourse resulting from GP-004-WI authorized construction activities, particularly hydraulic dredging, must meet applicable federal, state, and local water quality and effluent standards on a continuing basis. Water intakes or other activities that may be affected by suspended solids and turbidity increases caused by work in the watercourse must be identified and sufficient notice must be given to the owners of property where the activities would take place to allow them to prepare for any changes in water quality. Installation of intake structures that are not directly associated with an outfall structure or outfall structures that are not in compliance with regulations issued under the National Pollutant Discharge Elimination System program (Section 402 of the Clean Water Act) are not eligible for authorization under GP-004-WI.

12. <u>Erosion and Siltation Controls</u>. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark shall be permanently stabilized at the earliest practicable date. Work should be done in accordance with state-approved published practices as described in NR 216 of Wisconsin Administrative Code.

Upon completion of earthwork operations, all exposed slopes, fills, and disturbed areas must be given sufficient protection by appropriate means such as landscaping, or planting and maintaining vegetative cover, to prevent subsequent erosion. Cofferdams shall be constructed and maintained so as to prevent erosion into the water. If earthen material is used for cofferdam construction, sheet piling, riprap or a synthetic cover shall be used to prevent dam erosion. All non-biodegradable erosion controls must be removed within two weeks of site stabilization unless otherwise noted in the Corps GP-004-WI reporting confirmation letter.

13. <u>Removal of Temporary Fills</u>. All temporary fills must be entirely removed and the affected areas returned to their preexisting elevation and hydrology. The timeframe for completing this removal shall be:

(a) Not later than the timeframe stipulated in the activity description (unless modified in writing by our office);

(b) Not later than the timeframe stipulated in our office's reporting GP-004-WI confirmation letter; or

(c) Not longer than two weeks from the date the temporary fill was placed in waters of the United States (condition (c) applies only if a timeframe is not otherwise established by applying (a) or (b) above).

14. Federal Threatened and Endangered Species. Prospective permittee's for reporting GP-004-WI categories shall notify the Corps if any federal threatened or endangered (protected) species or critical habitat might be affected or is in the vicinity of the project. Information about protected species may be obtained by contacting the United States Fish and Wildlife Service (FWS) at (920) 866-1717. The Corps website (<u>http://www.mvp.usace.army.mil/regulatory/</u>) also contains a link to the FWS list of protected species for each Wisconsin county.

(a) No activity is authorized by GP-004-WI which is likely to jeopardize the continued existence of a protected species or a species proposed for such designation, as identified under the Endangered Species Act (ESA) or which is likely to destroy or adversely modify the critical habitat of such species, unless those activities are determined to comply with the applicable procedures of Section 7 of the ESA.

(b) Authorization of an activity under GP-004-WI does not authorize the take of a protected species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with incidental take provisions, etc.) from the FWS, both lethal and non-lethal takes of protected species are in violation of the ESA.

15. <u>Spawning Areas.</u> Activities, including discharges in spawning areas during spawning seasons must be avoided to the maximum extent practicable.

16. <u>Obstruction of High Flows</u>. To the maximum extent practicable, activities authorized by GP-004-WI shall not permanently restrict or impede the passage of normal or expected high flows or cause the relocation of the water (unless the primary purpose of the fill is to impound waters).

### Operations - Regulatory (MVP-2016-01211-RJH) GENERAL INFORMATION AND CONDITIONS

17. <u>Adverse Effects from Impoundments and Diversions of Water</u>. If the activity authorized creates an impoundment of water, adverse effects on the aquatic system caused by the accelerated passage of water and/or the restriction of its flow shall be minimized to the maximum extent practicable. GP-004-WI may not be used to authorize all or any portion of a project that would divert more than 10,000 gallons/day of surface water or groundwater into or out of the Great Lakes Basin.

18. Fills Within 100-Year Floodplains. All Corps GP-004-WI authorizations shall comply with applicable FEMA approved state or local floodplain management requirements.

19. <u>Waterfowl Breeding Areas</u>. Impacts to breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

20. <u>Aquatic Life Movements</u>. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the waterbody, including those species which normally migrate through the area, unless the activity's primary purpose is to impound water.

21. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.

22. <u>Preventive Measures</u>. Measures must be adopted to prevent potential pollutants from entering waters of the United States. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in a way that allows them to enter the watercourse as a result of spillage, natural runoff, or flooding.

23. <u>Disposal Sites</u>. If dredged or excavated material is placed on an upland disposal site (above the ordinary high-water mark), the site must be securely diked or contained by an acceptable method that prevents the return of potentially polluting materials to the watercourse by surface runoff or by leaching. Construction of containment areas, whether bulkhead or upland disposal site, must be complete prior to the placement of any dredged material.

24. <u>Suitable Fill Material</u>. All fill (including riprap), if authorized under this permit, must consist of suitable material (e.g. no trash, debris, car bodies, asphalt, etc.,) free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

25. <u>Spill Contingency Plan</u>. A contingency plan must be formulated that would be effective in the event of a spill. This requirement is particularly applicable in operations involving the handling of petroleum products. If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the state Emergency Management Duty Officer at I-800-943-0003 and the National Response Center at the United States Coast Guard at telephone number 1-800-424-8802.

26. <u>Other Permit Requirements</u>. A Corps GP-004-WI authorization does not eliminate the need for other local, state or federal authorizations, including but not limited to National Pollutant Discharge Elimination System (NPDES) or State Disposal System (SDS) permits.

27. <u>State of Wisconsin Section 401 Water Quality Certification</u>. The Wisconsin Department of Natural Resources has denied blanket for water quality certification for GP-004-WI. Therefore all projects authorized by GP-004-WI and involving a discharge of dredged or fill material under Section 404 require the permittee obtain a Section 401 Water Quality Certification or waiver from the WDNR prior to starting work.

28. <u>Wisconsin Coastal Zone Management Program (WCMP) Conditions.</u> The WCMP's Federal consistency determination for GP-004-WI provides that no reporting (category 3.a) GP-004-WI authorization for an activity taking place in coastal wetlands identified as ridge and swale complexes and/or wetlands adjacent to the Mink River (Door County), and the Kakagon and Bad Rivers (Ashland County) will be valid unless and until a Federal consistency determination is granted or waived by the WCMP. This requirement therefore is incorporated as a permit condition of reporting GP-004-WI. Applicants will be notified of this condition in the Corps' GP confirmation letter for projects in these areas.

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State of Wisconsin <u>DEPARTMENT OF NATURAL RESOURCES</u> Peshtigo Service Center 101 N Ogden Road P.O. Box 208 Peshtigo, WI 54157

Scott Walker, Governor Cathy Stepp, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



May 9, 2016

GP-NE-2016-38-01198



Ann Hartnell MCABI 1926 Hall Ave Room 314 Marinette, WI 54143

RE: Coverage under the wetland statewide general permit for wetland fill or disturbance for residential, commercial, or industrial development, located in the City of Marinette, Marinette County, also described as being in the SE1/4 of the SE1/4 of Section 6, Township 30 North, Range 24 East.

Dear Ms. Hartnell:

Thank you for submitting an application for coverage under the wetland statewide general permit for wetland fill or disturbance for residential, commercial, or industrial development.

You have certified that your project meets the eligibility criteria and conditions for this activity. Based upon your signed certification you may proceed with your project to fill 0.18 acres of wetlands. Please take this time to re-read the permit eligibility standards and conditions. The eligibility standards can be found on your application checklist or in the statewide general permit WDNR-GP1-2012 (found at <u>http://dnr.wi.gov/topic/waterways/construction/wetlands.html</u>). The permit conditions are attached to this letter. You are responsible for meeting all general permit eligibility standards and permit conditions. This includes notifying the Department before starting the project, and submitting photographs within one week of project completion. Please note your coverage is valid for 5 years from the date of the department's determination or until the activity is completed, whichever occurs first. This permit coverage constitutes the state of Wisconsin's wetland water quality certification under USCS s. 1341 (Clean Water Act s. 401).

The Department conducts routine and annual compliance monitoring inspections. Our staff may follow up and inspect your project to verify compliance with state statutes and codes. If you need to modify your project please contact your local Water Management Specialist, Robert Rosenberger at (715) 582-5041 or email Robert.Rosenberger@wisconsin.gov to discuss your proposed modifications.

The General Permit eligibility standards do not allow the construction of a storm water pond in a wetland.

Wetland impact is not for any type of constructed storm water treatment facility including but not limited to a pond, infiltration basin, or swale.

The Department would typically require an Individual Permit for the construction of the stormwater

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pond in a wetland. This specific site is unique because the site is a "brownfield" and the Department has determined that the site will likely be capped to control pollution. Due to the very site specific facts and circumstances, the Department has determined that the construction sequence for filling and then pond construction allows the issuance of a General Permit for this project.

The permit decision at this site should not be interpreted as a precedent in any other permitting process. Each permit is evaluated based on the facts and statutes, and the circumstances in this case lead the Department to conclude that the project meets the eligibility standard #6.

The Department of Natural Resources appreciates your willingness to comply with wetland regulations, which help to protect the water quality, fish and wildlife habitat, natural scenic beauty and recreational value of Wisconsin's wetland resources for future generations. Please be sure to obtain any other local, state or federal permits that are required before starting your project.

For project details, maps, and plans related to this decision, please see application number WP-GP-NE-2016-38-X04-13T08-05-01 on the Department's permit tracking website at <u>https://permits.dnr.wi.gov/water/SitePages/Permit%20Search.aspx</u>.

If you have any questions, please call me at (715) 582-5041 or email Robert.Rosenberger@wisconsin.gov.

Sincereb Robert Rosenberge

Water Management Specialist

cc: Ryan Huber, U.S. Army Corps of Engineers Conservation Warden

You agree to comply with the following conditions:

- Application. You shall submit a complete application package to the Department as outlined in the application materials and section 2 of this permit. If requested, you shall furnish the Department, within a reasonable timeframe, any information the department needs to verify compliance with the terms and conditions of this permit.
- Certification. Acceptance of general permit WDNR-GP1-2012 and efforts to begin work on the activities authorized by this general permit signifies that you have certified the project meets all eligibility standards outlined in Section 1 of this permit and that you have read, understood and have agreed to follow all terms and conditions of this general permit.
- Reliance on Applicant's Data. The determination by this office that a confirmation of authorization is not contrary to wetland water quality standards will be based upon the information provided by the applicant and any other information required by the DNR.

- Project Plans. This permit does not authorize any work other than what is specifically
  described in the notification package and plans submitted to the Department and you
  certified is in compliance with the terms and conditions of WDNR-GP1-2012
- Expiration. This WDNR-GP1-2012 expires on October 9, 2017. The time limit for completing work authorized by the provisions of WDNR-GP1-2012 ends 5 years after the date on which the discharge is considered to be authorized under WDNR-GP1-2012 or until the discharge is completed, whichever occurs first.
- Other Permit Requirements. You are responsible for obtaining any other permit or approval that may be required for your project by local zoning ordinances, other local authority, other state permits and by the U.S. Army Corps of Engineers before starting your project.
- Authorization Distribution. You must supply a copy of the permit coverage authorization to every contractor working on the project.
- 8. Project Start. You shall notify the Department before starting construction.
- 9. Permit Posting. You must post a copy of this permit coverage letter at a conspicuous location on the project site prior to the execution of the permitted activity, and remaining at least five days after stabilization of the area of permitted activity. You must also have a copy of the permit coverage letter and approved plan available at the project site at all times until the project is complete.
- 10. Permit Compliance. The department may modify or revoke coverage of this permit if the project is not constructed in compliance with the terms and conditions of this permit, or if the Department determines the project will be detrimental to wetland water quality standards. Any act of noncompliance with this permit constitutes a permit violation and is grounds for enforcement action. Additionally, if any applicable conditions of this permit are found to be invalid or unenforceable, authorization for all activities to which that condition applies is denied.
- Construction Timing. Once wetland work commences, all wetland construction activities must be continuous until the permitted activity is completed and the site is stabilized.
- 12. **Construction**. No other portion of the wetland may be disturbed beyond the area designated in the submitted plans.
- 13. Project Completion. Within one week of completion of the regulated activity, you shall submit to the Department a statement certifying the project is in compliance with all the terms and conditions of this permit, and photographs of the activities authorized by this permit. This statement must reference the Department-issued docket number, and be submitted to the Department staff member that authorized coverage.
- 14. Proper Maintenance. You must maintain the activity authorized by WDNR-GP1-2012 in good condition and in conformance with the terms and conditions of this permit utilizing best management practices. Any structure or fill authorized shall be properly maintained to ensure no additional impacts to the remaining wetlands.

- 15. Site Access. Upon reasonable notice, you shall allow access to the site to any Department employee who is investigating the project's construction, operation, maintenance or permit compliance with the terms and conditions of WDNR-GP1-2012 and applicable laws.
- 16. Erosion and siltation controls. The project site shall implement erosion and sediment control measures that adequately control or prevent erosion, and prevent damage to wetlands as outlined in NR 151.11(6m), Wis. Adm. Code.
- 17. Equipment use. The equipment used in the wetlands must be low ground weight equipment as specified by the manufacturer specifications.
- 18. Invasive Species. All project equipment shall be decontaminated for removal of invasive species prior to and after each use on the project site by utilizing other best management practices to avoid the spread of invasive species as outlined in NR 40, Wis. Adm. Code. For more information, refer to http://dnr.wi.gov/topic/Invasives/bmp.html.
- 19. Federal and State Threatened and Endangered Species. WDNR-GP1-2012 does not affect the DNR's responsibility to insure that all authorizations comply with Section 7 of the Federal Endangered Species Act, s. 29.604, Wis. Stats and applicable State Laws. No DNR authorization under this permit will be granted for projects found not to comply with these Acts/laws. No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act and/or State law or which is likely to destroy or adversely modify the critical habitat of a species as identified under the Federal Endangered Species Act.
- 20. Special Concern Species. If the Wisconsin National Heritage Inventory lists a known special concern species to be present in the project area you will take reasonable action to prevent significant adverse impacts or to enhance the habitat for the species of concern.
- 21. Historic Properties and Cultural Resources. WDNR-GP1-2012 does not affect the DNR's responsibility to insure that all authorizations comply with Section 106 of the National Historic Preservation Act and s. 44.40, Wis. Stats. No DNR authorization under this permit will be granted for projects found not to comply with these Acts/laws. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places. If cultural, archaeological, or historical resources are unearthed during activities authorized by this permit, work must be stopped immediately and the State Historic Preservation Officer must be contacted for further instruction.
- 22. Preventive Measures. Measures must be adopted to prevent potential pollutants from entering a wetland or waterbody. Construction materials and debris, including fuels, oil, and other liquid substances, will not be stored in the construction area in a manner that would allow them to enter a wetland or waterbody as a result of spillage, natural runoff, or flooding. If a spill of any potential pollutant should occur, it is the responsibility of the permittee to remove such material, to minimize any contamination resulting from this spill, and to immediately notify the State Duty Officer at 1-800-943-0003.

- 23. Suitable fill material. All fill authorized under this permit must consist of clean suitable soil material, as defined by s. NR 500.03(214), Wis. Admin. Code, free from hazardous substances as defined by s. 289.01(11), Wis. Stats., and free from solid waste as defined by s. 289.01(11) and (33), Wis. Stats.
- 24. Standard for Coverage. Wetland impacts from the project will cause only minimal adverse environmental impacts as determined by the Department.
- 25. **Transfers**. Coverage under this permit is transferable to any person upon prior written approval of the transfer by the Department.
- 26. Limits of State Liability. In authorizing work, the State Government does not assume any liability, including for the following:
  - Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the State in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
  - Damage claims associated with any future modification, suspension, or revocation of this WDNR-GP1-2012.
- 27. Reevaluation of Decision. The Department may suspend, modify or revoke authorization of any previously authorized activity and may take enforcement action if any of the following occur:
  - a. The applicant fails to comply with the terms and conditions of WDNR-GP1-2012.
  - The information provided by the applicant in support of the permit application proves to have been false, incomplete, or inaccurate.
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.





<u>Legend</u>

Approximate Project Location DNR 24k Hydrography

🥏 Perennial Stream Sample Point

Field Delineated Wetland

Intermittent Stream 庈 Waterbody

# Figure No. 5 Title Field Collected Data Client/Project Marinette County Association for Business & Industry Tyco Development 193703365 Prepared by MCP on 2015-06-18 Technical Review by MP on 2015-07-07 Independent Review by MR on 2015-07-07 Project Location T30N, R24E, S06 C. of Marinette, Marinette Co., WI 0 50 100 Feet 1:1,200 (at original document size of 8.5x11) Stantec

Coordinate System: NAD 1983 StatePlane Wisconsin Central FIPS 4802 Feet
 Data Sources Include: Stantec, WDNR, WDOT
 Orthophotography: 2013 NAIP

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