



**Planning Commission  
Regular Meeting  
November 15, 2016  
7:00 p.m.**

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF OCTOBER 18, 2016 MINUTES
5. CORRESPONDENCE / BOARD REPORTS
6. APPROVAL OF AGENDA
7. Public Comment: Restricted to (3) minutes regarding issues not on this agenda
8. **New Business**
  - A. SPR-2016-17: Woodland Investments LLC  
Location: 2260 E. Remus Rd.
  - B. LSL Planning Commission Mauter Plan Kickoff
9. Old Business
10. Other Business
11. Extended Public Comment
12. ADJOURNMENT

**CHARTER TOWNSHIP OF UNION**  
**Planning Commission**  
**Regular Meeting**

A regular meeting of the Charter Township of Union Planning Commission was held on October 18, 2016 at the Township Hall.

**Meeting was called to order at 7:00 p.m.**

**Roll Call**

**Present:** Fuller, LaBelle, McGuirk, Mielke, Robinette, Squatrito, Woerle, and Zerbe

**Excused:** Strachan

**Others Present**

Peter Gallinat, Township Planner, Mark Stuhldreher, Township Manager & Jennifer Loveberry

**Approval of Minutes**

**Woerle** moved **Zerbe** supported the approval of the September 20, 2016 meeting minutes as presented. **Vote: Ayes: 8 Nays: 0. Motion carried.**

**Correspondence / Reports**

Board of Trustees – Mielke stated that the Board of Trustees approved the additional funds needed for Master Plan update.

**Approval of Agenda**

**Mielke** moved **Woerle** supported approval of the agenda with changes – removing SPR 2016-13 from the Agenda. **Vote: Ayes: 8 Nays 0. Motion carried.**

**Public Comment** – Open 7:05 p.m.

No Comments.

**New Business**

**A. SPR 2016-14: International RV**

**Location: 5365 E. Pickard Rd.**

Tim Beebe, CMS& D presented SPR 2016-14, a revision to a previously approved site plan proposing an asphalt parking lot.

Township Planner Gallinat confirmed that he has received approvals from the Isabella County Transportation Commission, Isabella County Road Commission, Isabella County Drain Office for Storm Water Management, and Mt. Pleasant Fire Department and Township Utilities (additional construction drawings may be needed for Township Utilities final approval after the site plan has been approved).

Discussion was held by the Planning Commissioners.

**Robinette** moved **LaBelle** supported to approve SPR 2016-14 International RV site plan review with the condition that sidewalks are temporarily waived on Airway Dr. until the Township deems necessary. **Vote: Ayes: 8 Nays 0. Motion carried.**

**B. SPR 2016-15: Doug's Small Engine**

**Location: 1875 Airway Dr.**

Pete Lorenz, Lapham Associates, presented SPR 2016-15, a proposed 8,960 sq. ft. structure for office and storage use, he noted that the 1,040 sq. ft. block structure will be kept, and the two existing accessory structures will be demolished.

Township Planner Gallinat confirmed that he has received approvals from the Isabella County Transportation Commission, Isabella County Road Commission, Isabella County Drain Office for Storm Water Management, and Mt. Pleasant Fire Department and Township Utilities (additional construction drawings may be needed for Township Utilities final approval after the site plan has been approved).

Discussion was held by the Planning Commissioners.

**McGuirk** moved **Mielke** supported to approve SPR 2016-15 Doug's Small Engine site plan review with the condition that sidewalks are temporarily waived on Airway Dr. until the Township deems necessary. **Vote: Ayes: 8 Nays 0. Motion carried.**

**C. SPR 2016-16: Lux Funeral Home**

**Location: 2300 S. Lincoln Rd.**

Pete Lorenz, Lapham Associates, presented SPR 2016-16 a 2,132 sq. ft. addition to the Lux Funeral Home for public gatherings. The applicant has already been approved for a Special Use Permit back in January 2016, granting public gatherings in the new reception area. The applicant was previously approved in February 2016 for a site plan review; however, due to the reduction in the size of the addition (3,768 sq. ft. to 2,132 sq. ft.) a new site plan had to be submitted.

Township Planner Gallinat confirmed that he has received approvals from the Isabella County Transportation Commission, Isabella County Road Commission, Isabella County Drain Office for Storm Water Management, and Mt. Pleasant Fire Department and Township Utilities (additional construction drawings may be needed for Township Utilities final approval after the site plan has been approved).

Discussion was held by the Planning Commissioners.

**Woerle** moved **Robinette** supported to approve SPR 2016-16 Lux Funeral Home site plan review as presented. **Vote: Ayes: 8 Nays 0. Motion carried.**

**D. SPR 2016-08: Messenger**

**Location: S. Isabella Rd.**

The township received notification by representatives of Paras Group LLC that unauthorized construction was occurring on parcel 14-014-40-002-02; which they own. Messenger Medical Center had an approved site plan on July 19, 2016 and a Building Permit was issued October 10, 2016. After it was determined that the Parcel (14-014-40-002-02) was indeed owned by Paras Group LLC and not Messenger Medical Center, a Stop Work Order was issued by the Building Official on October 11, 2016.

**Mielke** moved **Woerle** supported to declare that site plan 2016-08 Messenger Medical Center on S. Isabella Rd. parcel number 14-014-40-002-02 as no longer valid. **Vote: Ayes: 7 Nays 1.**  
**Motion carried.**

**Old Business**

**Other Business**

**Extended Public Comment** –open 8:08 p.m.  
No comments.

**Adjournment** – Chairman Squattrito adjourned the meeting at 8:08 p.m.

**APPROVED BY:**

\_\_\_\_\_  
**Alex Fuller - Secretary**

*(Recorded by Jennifer Loveberry)*

DRAFT



Peter Gallinat, Township Planner  
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2010 South Lincoln  
Mt. Pleasant, MI 48858  
Phone 989-772-4600 Ext. 241  
Fax 989-773-1988

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11/09/16

TO: Planning Commission  
FROM: Township Planner

SUBJECT: SPR 2016-17 Woodland Investments LLC

**Location:** 2260 E REMUS RD Mt Pleasant, MI 48858

**Current Zoning:** B-5 Highway Business District

**Adjacent Zoning:** B-5 to the north across the road, B-5 to the east, B-5 to the west, B-5 to the south.

**Future Land Use/Intent:** Commercial: Shopping, office and professional services with mixed residential use

**Current Use:** Residential

**Reason for Request:** 1,792sqft addition onto existing accessory building for commercial business storage. The existing accessory building and principal structure will remain for one-family residential use.

**History:** Applicant requested to add a 1,792sqft accessory structure to the existing accessory structure on the property. Currently there is a one family dwelling with a garage as a supporting accessory structure for the one family dwelling. The current use of the existing accessory structure and principal structure is residential. This is a nonconforming existing use. The applicant has proposed to continue this same non conforming existing use with both existing structures. There will be no increase or enlargement of the degree or manner of nonconformance. The addition will be strictly used for commercial storage. The applicant originally proposed placing the new structure away from the current garage but this is not feasible due to setback requirements. There is a dimensional variance required for this parcel. The existing lot width is 99ft. The applicant has sought a 1 foot variance to meet the 100ft requirement in advance of the planning commission meeting.

**Objective of board:** Approve the site plan for Woodland Investments LLC

**Recommendation:** Site Plan has been reviewed and approved by Isabella County Transportation Commission. Isabella County Road Commission, Isabella County Drain Office for Storm Water Management, Mt Pleasant Fire Department, Twp Utilities (note additional construction drawings may be needed for Twp Utilities final approval after the site plan has been approved) I have no other zoning issues with the site plan in accordance with Section 12, Section 9 or Section 23 of the zoning ordinance.

**Recommend Approval of SPR 2016-17**

**Following Conditions:**

- Sidewalks to be installed and shown on site plan per Sec 8.325 of the zoning code

**SUBJECT: LSL Planning Commission Master Plan Kickoff**

Kathleen Duffy and Josh Penn from LSL will join us for our Master Plan Kickoff meeting. This is the first step in our Master Plan review. In your packet is an attached memo explaining the goals of the kickoff meeting. These include:

- Plan Goals
- Map Exercise
- Process

Copies of goals/objectives and the future land use map have been provided in your packet. These documents will help you with the Plan Goals and Map Exercise portion of the kickoff. These documents are also available in your copy of the current Master Plan from 2011. It is expected that the kickoff meeting will be 1 hour-1 hour 1/2

Peter Gallinat

Twp Planner

## Union Township Site Plan Review Application 2015 Revision

FILL OUT THE FOLLOWING

- I. This application is for (circle one) Preliminary Site Plan Review Final Site Plan Review
- II. Applicant Name WOODLAND INVESTMENTS LLC
- III. Applicant Address P.O. BOX 526, MT. PLEasant, MI 48804
- IV. Applicant Phone \_\_\_\_\_ Owner Phone \_\_\_\_\_
- V. Applicant is (circle) Contractor Architect/Engineer Developer Land Owner (skip V& VI)  
Other
- VI. Land Owner Name DOUG JANES - WOODLAND INVESTMENTS LLC
- VII. Land Owner Address SAME AS ABOVE
- VIII. Project/Business Name 2260 E. REMUS ROAD
- IX. Fill out check list that follows. You must check off that each item has been included in the drawing. If an item is not going to be included in the construction, note that in the comment area. For the first three items, check off if you have made the required submittals to other reviewing agencies.

SUBMITTALS TO OTHER AGENCIES	Off	
<b>Storm water management plan approval prior to application. Reviewed by the County Engineer</b>	<input checked="" type="checkbox"/>	Copy of Union Township Storm Water Management Plan available upon request. Submit (2) copies of plan and calculations directly to the Isabella County Engineer, contact Bruce Rohrer at (989) 772 0911, ext. 231. Any review fees are additional.
<b>All curb cuts, acceleration/deceleration lanes, additional drives, and other matters pertaining to roads to be approved by MDOT or Isabella County Road Commission prior to application.</b>	<input checked="" type="checkbox"/>	MDOT (M 20, BR 127 sites) at (989) 773 7756. Contact Isabella County Road Commission (all other county roads) at (989) 773 7131. Submit (3) copies.
<b>Mt. Pleasant Fire Dept.</b>	<input checked="" type="checkbox"/>	Sgt Randy Keeler (989) 779-5122, (2) copies
<b>Isabella Co Transportation Commission (ICTC)</b>	<input checked="" type="checkbox"/>	Rick (989) 773 2913, (2) copies
<b>WELLHEAD PROTECTION REPORTING FORMS (Required for all Site Plans)</b>		
<b>Hazardous Substances Reporting Form Part I and II</b> (Forms included in this packet)	<input checked="" type="checkbox"/>	Kim Smith (989) 772-4600 ext 224 ksmith@uniontownshipmi.com
<b>PERMIT INFORMATION - DEQ Check List</b>		
<b>SITE PLAN REQUIREMENTS</b>	<b>I Of</b>	<b>Comments - (also indicate any features which will not be included in the development or are not applicable)</b>
Name and addresses of Property Owner	<input checked="" type="checkbox"/>	
Name and Address of Applicant	<input checked="" type="checkbox"/>	
Provide Construction Type (per Mi Building Code) and if sprinkled, (assume Type IVb, un-sprinkled if not provided)		

## Union Township Site Plan Review Application 2015 Revision

<p>The date, north arrow and scale. The scale shall be not less than 1"= 20' for property under three (3) acres and not more than 1"=40' for property greater than three acres.</p>	✓	
<p>All lot and/or property lines are to be shown and dimensioned, including building setback lines</p>	✓	
<p>The location and dimensions of all existing and proposed:          fire hydrants (within 400 feet of building) - - -          drives,-----          sidewalks, (required ) -----          curb openings, -----          acceleration/deceleration lanes, -----          signs, -----          exterior lighting on buildings and parking lots, - -          parking areas (including handicapped parking spaces, barrier-free building access, unloading areas), -----          recreation areas, -----          common use areas, -----          areas to be conveyed for public use and purpose. -</p>	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	
<p>Elevation of building front, side, and back. Include Sign size, height, and design. Canopy heights extending over driveways accommodate Public Transportation</p>	✓	
<p>Source of utilities. Public water and sewer approval by Union Township Utility Coordinator prior to application.</p>	✓	<p>Note: Union Township policy is to issue sewer and water permits after application for a building permit. Applicant is advised to contact the utility department for availability prior to site plan review. The township does not coordinate other utility matters. Applicant to assure himself that site is suitable for septic systems, contact Central Michigan District Health Department</p>
<p>All dumpsters shall be screened from public view with an opaque fence or wall no less than six feet in height. Show location. (Note most refuse contractors require concrete pad to place dumpsters upon)</p>	✓	
<p>The location and right-of-way width of all abutting roads, streets, alleys and easements.</p>	✓	
<p>A locational sketch drawn to scale giving the section number and the nearest crossroads.</p>	✓	



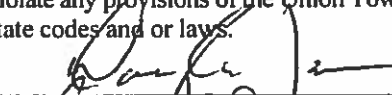
**Union Township Site Plan Review Application 2015 Revision**

The zoning of the subject property and the abutting properties.	✓	
The location, height and type of fences and walls.	✓	
The location and detailed description of landscaping.	✓	
For multiple family and mobile home parks, contour intervals shall be shown (two foot intervals for average slopes ten percent and under and five foot intervals for slopes over ten percent). Topography, however, is encouraged to be shown on all site plans.	• .	
The location of all existing and proposed structures on and within one hundred feet of the subject property's boundary.	✓	
For apartments, provide a count of bedrooms per building and total count of bedrooms for the project.		

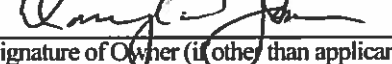
**APPLICANT COMMENTS**


**Union Township Site Plan Review Application** 2015 Revision

I submit the site plan and this application as a true representation of existing and proposed conditions. I agree to install all features as shown and to abide by conditions placed upon approval of this plan by the Union Township Planning Commission . False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and / or removal of work installed. Any changes to the Site Plan now or in the future must be approved by the Union Township Planning Commission or Zoning Administrator. Approval of this plan shall not constitute the right to violate any provisions of the Union Township Zoning Ordinance 1991-5, or other applicable building or state codes and or laws.

  
\_\_\_\_\_  
Signature of Applicant

10-20-16  
Date

  
\_\_\_\_\_  
Signature of Owner (if other than applicant)

10-20-16  
Date

PLEASE PLACE OUR REVIEW ON THE OCTOBER 27, 2016 (INSERT DATE)  
PLANNING COMMISSION MEETING. An owners representative WILL / WILL NOT attend. You will not receive a reminder of the scheduled meeting.

**Union Township Site Plan Review Application 2015 Revision**

<u>Township use</u>	<u>Review Comments</u>
File # <u>2016-17</u>	_____
Fee Paid initial <u>\$225</u>	_____
Receipt # <u>76389</u>	_____
Date received <u>10-20-16</u>	_____
Date review completed by Zoning Administrator <u>10-20-16</u>	_____
Place on the <u>11-15</u> Planning Commission Agenda	
Planning Commission Decision _____	
	_____

# CHARTER TOWNSHIP OF UNION

## SITE PLAN REVIEW HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: WOODLAND INVESTMENTS LLC

Name of business owner(s): DOUG JANES

Street and mailing address: P.O. BOX 526 . MT. PLEASANT, MI 48804

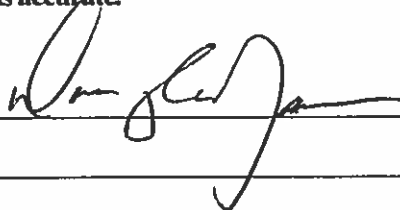
Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: djanes@ga-ins.com

**I affirm that the information submitted is accurate.**

Owner(s) signature and date:

 10-20-16

Information compiled by:

SHANEE THAYER, OFFICE MANAGER  
CENTRAL MICHIGAN SURVEYING & DEVELOPMENT

## Part 1: Management of Hazardous Substances and Polluting Materials

1. Y  N

Will the proposed facility store, use or generate hazardous substances or polluting materials (including petroleum-based products) now or in the future? If yes, please complete this form and submit with your site plan. A catalogue and map of natural resources on and near the site, including an assessment of groundwater vulnerability is required to be submitted with your plan.

2. Y N

~~Will the proposed facility~~  
on-site?

3. Y  N

Will any hazardous substances or polluting materials be stored on-site? If yes, identify the storage location on the site plan. Describe the size and type of secondary containment structure here or on an attached page. Submit a map and/or diagram of facilities on the site related to groundwater protection, including secondary containment structures, loading/unloading areas, drinking water wells, septic systems, underground storage tanks and storm drain inlets.

4. Y  N

Will the new underground storage tanks be located less than 2000 feet from a drinking water well serving more than a single household?

5. Y  N

Are existing underground storage tanks on-site less than 200 feet from a drinking water well serving more than a single household?

If the answer to questions 4 or 5 are yes, you may be in violation of the State of Michigan underground storage tank regulations . For specific requirements, please contact the MDEQ Underground Storage Tank Division. District Office Telephone: 989-894-6200 (Saginaw Bay District Office)

6. Y  N

Will the interior of the facility have general purpose floor drains? (general purpose floor drains should not be connected to a sanitary sewer system, stormwater drainage system, dry well or septic system). If yes, will the floor drain connect to: (circle one)

- a. on-site holding tank
- b. on-site system

The on-site system must be approved by the MDEQ.  
Contact: MDEQ Waste Management Division.  
District Office telephone: 989-894-6200 (Saginaw Bay District Office)

7. Y  N

Will hazardous substances or polluting materials be stored, used, or handled out-of doors near storm drains which discharge to lakes, streams, or wetlands? If yes, describe the type of catch basin or spill containment facilities which will be used (use an attached sheet with diagram if appropriate).

cc: Charter Township of Union Department of Public Works





# PERMIT INFORMATION

[www.michigan.gov/deqpermits](http://www.michigan.gov/deqpermits)

The Department of Environmental Quality (DEQ) has prepared a list of key questions to help identify what DEQ permits, licenses, or approvals of a permit-like nature may be needed. By contacting the appropriate offices indicated, you will help reduce the possibility that your project or activity will be delayed due to the untimely discovery of additional permitting requirements later in the construction process. While this list covers the existence of permits and approvals required from the DEQ, it is not a comprehensive list of all legal responsibilities. A useful way to learn whether other requirements will apply is to go through the Self-Environmental Assessment in the Michigan Guide to Environmental, Health, and Safety Regulations, online at: <http://www.michigan.gov/ehs/guide>. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the DEQ programs noted below.

KEY QUESTIONS:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	PROGRAM WEBPAGE AND CONTACTS
<b>MISCELLANEOUS CONSTRUCTION</b>			
<i>Air Quality Permit to Install:</i> Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Air Quality Division (AQD), <u>Permit Section</u>
<i>Asbestos Notification:</i> Does the project involve renovating or demolishing all or portions of a building? Notification is required for asbestos removal and required for all demolitions even if the structure never contained asbestos.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Asbestos Program</u>
<i>Land and Water Featured Programs (Water Resources Division) - USACE Consolidated Permits:</i> Please consult the <u>Land and Water Management Decision Tree</u> document to evaluate whether your project needs a land and water management permit (i.e., Does the project involve filling, dredging, placement of structures, draining, or use of a wetland?).	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Water Resources Division (WRD), <u>Joint Permit Application</u>
<i>Soil Erosion and Sedimentation Control:</i> Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Soil Erosion and Construction Storm Water</u> , or Contact your <u>Local Agency</u>
<i>NPDES Storm Water Discharge from Construction Sites Notice of Coverage:</i> Does the project involve construction which will disturb one or more acres that come into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	NPDES <u>Storm Water Permits Program</u> , or appropriate <u>DEQ District Office</u>
<i>Public Swimming Pool Construction (Spas/Hot Tubs) Permits:</i> Will your business involve the construction or modification of a public swimming pool, spa or hot tub?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Public Swimming Pool Program</u> , or appropriate <u>DEQ District Office</u>
<i>Threatened and Endangered Species:</i> Does the project involve activities that would destroy a protected species of plant or animal or disturb a protected animal species?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Endangered Species Assessment, <u>Threatened and Endangered Species Program</u> , 517-373-1552
Does the project involve construction or alteration of any sewage collection or treatment facility?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Appropriate <u>District Office</u> , WRD, Part 41 <u>Construction Permit Program</u>
Does the project involve construction of a facility that landfills, transfers, or processes of any type of solid non-hazardous waste on-site, or places industrial residuals/sludge into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Waste Management and Radiological Protection (OWMRP), <u>Solid Waste</u> , Appropriate <u>DEQ District Office</u>
Does the project involve the construction of an on-site treatment, storage, or disposal facility for hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Hazardous Waste Section, <u>Treatment, Storage and Disposal</u>
<b>WATER SUPPLY (More information, see: <a href="http://www.michigan.gov/deqwater">http://www.michigan.gov/deqwater</a>, select "drinking water")</b>			
I am buying water from my community water supply (i.e. city of Detroit or Grand Rapids)	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	Contact your <u>Local Water Utility</u>
I have a private or other water supply well (Type III)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Contact your (District or County) <u>Local Health Department</u>
I have a Non-Community Water Supply (Type II)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Guide</u> , Contact your (District or County) <u>Local Health Department</u>
I am a community water supply (Type I)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Community Water Supply</u> , <u>DEQ District Office Community Water Supply Program</u>

WASTEWATER MANAGEMENT			
<i>Storm Water Discharge to Wetlands:</i> Will storm water be collected, stored, or treated in a wetland area from a public road, industrial, commercial, or multi-unit residential development?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
<i>Great Lakes:</i> Does the project involve construction, filling, or dredging below the Ordinary High Water Mark of one of the Great Lakes?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
<i>Inland Lakes and Streams:</i> Does the project involve any dredging, filling, placement of structures, or the operation of a marina within an inland waterbody (e.g. lake, river, stream, drain, creek, ditch, or canal), enlargement of a waterbody, or excavation of a pond within 500 feet of a waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
<i>Storm Water Ponds and Discharges to Inland Lakes/Streams, or Great Lakes:</i> Will storm water from any road or any other part of the development be discharged either directly or ultimately to an inland waterbody, or one of the Great Lakes; or will a storm water pond be constructed within 500 feet of an inland waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Does the project involve placement of fill, earth moving, or placement of structures within the 100-year floodplain of a watercourse?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Does the project involve construction of a building or septic system in a designated Great Lakes high risk erosion area?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Shoreland Management</u>
Does the project involve dredging, filling, grading, or other alteration of the soil, vegetation, or natural drainage, or placement of permanent structures in a designated environmental area?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Shoreland Management</u>
Does the project propose any development, construction, silvicultural activities or contour alterations within a designated critical dune area?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Sand Dune Management</u>
Does the project involve construction of a dam, weir or other structure to impound flow?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Dam Safety Program</u>
CONSTRUCTION PERMITS (SECTOR SPECIFIC)			
Does the project involve the construction or alteration of a water supply system or sewage disposal system for a manufactured housing project?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Drinking Water & Municipal Assistance (ODWMA)
Does the project involve a subdivision or site condominium project utilizing individual on-site subsurface disposal systems or individual wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA
Does the project involve the construction or modification of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds program</u>
Does the project involve the construction or modification of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Swimming pools program</u>
OPERATIONAL PERMITS			
<b>Renewable Operating Permit:</b> Does your facility have the potential to emit any of the following: 100 tons per year or more of any criteria pollutant; 10 tons per year or more of any hazardous air pollutant; or 25 tons per year or more of any combination of hazardous air pollutants?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Permit Section</u>
<b>NPDES:</b> Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Appropriate DEQ District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program</u>
Does the facility have industrial activity that comes into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Permits Section, or appropriate DEQ District Office</u>
Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Groundwater Permits Program</u>
Does the project involve the drilling or deepening of wells for waste disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Oil, Gas and Minerals (OOGM)
Does the project involve landfilling, transferring, or processing of any type of solid non-hazardous waste on-site, or placing industrial residuals/sludge into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP or <u>Appropriate DEQ District Office</u>



Does the project involve the on-site treatment, storage, or disposal of hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Hazardous and Liquid Waste</u>
Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? ( <u>Web Site</u> )	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Appropriate <u>DEQ District Office</u>
Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Material and Standards Unit</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP <u>Radioactive Material and Standards Unit</u>
Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source other than the Great Lakes and their connecting waterways? Or, do you desire to develop a withdrawal of over 5,000,000 gallons of water per day from the Great Lakes or their connecting waterways?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, DWEHS, <u>Source Water Protection Unit</u>
<b>CHEMICAL ADDITION PROJECTS</b>			
Are you using chemicals or materials in, or in contact with, drinking water at any point in the water works system?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, Appropriate <u>DEQ District Office, Public Water Supply Program</u>
Are you applying a chemical treatment for the purpose of aquatic nuisance control (pesticide/herbicide etc) in a water body (i.e. lake, pond or river)? (5.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Aquatic Nuisance Control</u> and Remedial Action Unit
Are you applying materials to a water body for a water resource management project (i.e. mosquito control treatments, dye testing, or fish reclamation projects)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Surface Water Assessment Section</u>
<b>OPERATIONAL PERMITS (SECTOR SPECIFIC)</b>			
Does the project involve the transport of some other facility's non-hazardous liquid waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does the project involve the transport hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Acid Rain Permit Program</u>
Is the project a dry cleaning establishment utilizing perchloroethylene or a flammable solvent in the cleaning process?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, AQD, <u>Dry Cleaning Program</u>
Does your laboratory test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, <u>Laboratory Services Certifications</u>
Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Medical Waste Regulatory Program</u>
Does the project involve transport of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Septage Program</u>
Do you store, haul, shred or process scrap tires?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Scrap Tire Program</u>
Does the project involve the operation of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Public Swimming Pools Program</u>
Does the project involve the operation of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds</u>
Do you engage in the business of hauling bulk water for drinking or household purposes (except for your own household use)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Water Hauler Information</u>
<b>PERSONAL LICENSES/CERTIFICATIONS</b>			
Are you designated by your facility to be the Certified Operator to fulfill the requirements of a wastewater discharge permit (NPDES including Storm	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Operator Training, Storm Water Program</u>

Water or Groundwater)?			
Are you a drinking water operator in charge of a water treatment or water distribution system, back-up operator, or shift operator?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Operator Training</u>
Are you a water-well drilling contractor, pump installer, dewatering well contractor or dewatering well pump installer?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Well Construction Unit</u>
<b>OIL, GAS AND MINERALS</b>			
Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Petroleum Geology and Production Unit</u>
Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, Minerals and Mapping Unit, <u>Sand Dune Mining Program</u>
Does the project involve the diversion and control of water for the mining and processing of low-grade iron ore?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve the mining of nonferrous mineral deposits at the surface or in underground mines?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve mining coal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Do you want to change the status of an oil or gas well (i.e. plug the well)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve drilling of oil, gas, brine disposal, secondary recovery, or hydrocarbon storage wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve plugging or deepening of an oil or gas well, or conveying rights in the well as an owner to another person?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve changing the status or plugging of a mineral well?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve the drilling or deepening of wells for brine production, solution mining, storage, or as test wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Protection Programs</u>
<b>STORAGE TANKS (CONSTRUCTION AND OPERATION)</b>			
Does the project involve the installation of an aboveground storage tank for a flammable or combustible liquid (under 200 degrees Fahrenheit)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Michigan Department of Licensing and Regulatory Affairs (DLARA) - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a compressed natural gas dispensing station with storage?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a liquefied petroleum gas container filling location or storage location that has a tank with a capacity of more than 2,000 gallons or has two (2) or more tanks with an aggregate capacity of more than 4,000 gallons?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation, removal, or upgrade of an underground storage tank containing a petroleum product or a hazardous substance?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a hydrogen system?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>

## Union Township Site Plan Review Application 2015 Revision

### UNION TOWNSHIP CONSTRUCTION CONTACTS

**Building & Zoning Permits**  
**Sign Permit**  
**Water and Sewer review**  
**Site Plan Review**

Charter Township of Union  
2010 S. Lincoln Rd  
Mt. Pleasant, MI 48858

(989) 772 4600 (switchboard)  
(989) 773 1988 (FAX)

Building Official  
Randy Robinson - Ext. 227  
[rrobinson@uniontownshipmi.com](mailto:rrobinson@uniontownshipmi.com)

Zoning Administrator  
Peter Gallinat - Ext. 241  
[pgallinat@uniontownshipmi.com](mailto:pgallinat@uniontownshipmi.com)

Public Works Coordinator  
Kim Smith - Ext. 224  
[ksmith@uniontownshipmi.com](mailto:ksmith@uniontownshipmi.com)

**Road Permits**  
(submit (2) copies of site plan directly to proper authority prior to Site Plan Review)

State Highways M 20 and US 127 (portions of E. Pickard Rd, E Remus Rd, and Mission Rd)

MDOT  
1212 Corporate Drive  
Mt. Pleasant, MI 48858  
(989) 773-7756 FAX 775 6329

All other roads

Isabella County Road Commission  
2261 E. Remus Rd  
Mt. Pleasant, MI 48858  
(989) 773 7131 (FAX) 772 2371

ICTC  
2100 E Transportation Dr  
Mt. Pleasant, MI 48858  
(989)772-9441

## **Union Township Site Plan Review Application 2015 Revision**

### **Storm Water Management Plan**

Submit (2) copies of Storm Water Management Plan directly to county engineer prior to Site Plan Review  
Code - Union Township Ord. 1992-9 Storm Water Management

Isabella County Building

Resource Management  
ATTN: Bruce Rohrer PE  
200 N. Main St.  
Mt. Pleasant, MI 48858

(989) 772 0911 Ext. 231 (FAX) 773 7431

### **Plumbing, Electrical, Mechanical Permits**

Isabella County Building

Inspections

ATTN: (SEE FOLLOWING LIST)

200 N. Main St.

Mt. Pleasant, MI 48858

(989) 772 0911 Ext. (SEE FOLLOWING) (FAX) 773 7431

Electrical Inspector  
Tim Wardwell - Ext. 230

Plumbing and Mechanical Inspector  
Doug Elias - Ext. 228

### **Fire Department Review**

Sgt. Randy Keeler

804 E. High St.

Mt. Pleasant, MI 48858

((989) 779-5122 (FAX) 773 4020

[rkeeler@mt-pleasant.org](mailto:rkeeler@mt-pleasant.org)

### **Addressing**

Isabella County Building Official (989) 772 0911, Ext 228

### **Miscellaneous**

Phone - GTE (800) 483 5600, Verizon (800) 483 4000

Gas/Electric - Consumer Energy (800) 572 4788, MichCon (800) 477 4747 Central MI Dist. Health Dept. (989) 773 5921

Miss Dig (800) 482 7171

## Peter Gallinat

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**From:** Kim Smith [ksmith@uniontownshipmi.com]  
**Sent:** Tuesday, November 01, 2016 3:10 PM  
**To:** Peter Gallinat  
**Cc:** Timothy Bebee; Mark Stuhldreher  
**Subject:** 2260 E Remus Road Site Plan

Peter,

Good afternoon, I have reviewed the site plan for 2260 E Remus Road you forwarded to me today. This parcel has water and sewer available and the current residential building is connected to the sanitary sewer but not the water. The site plan submitted includes the existing sanitary sewer lead but does not include any additional water and/or sanitary sewer connections. Plans for any additional water and/or sewer connections will need to be submitted for review and approval by the Township Water and Sewer Department if the site plan is approved.

If you have any questions please let me know.

Thank you,

**Kim Smith**



Department of Public Works  
Charter Township of Union  
2010 S. Lincoln Road  
Mt. Pleasant, MI 48858  
Phone (989) 772-4600 ext. 224  
Fax (989) 773-1988  
Visit us on the Web at  
<http://www.uniontownshipmi.com>

**"This institution is an equal opportunity provider, and employer."**

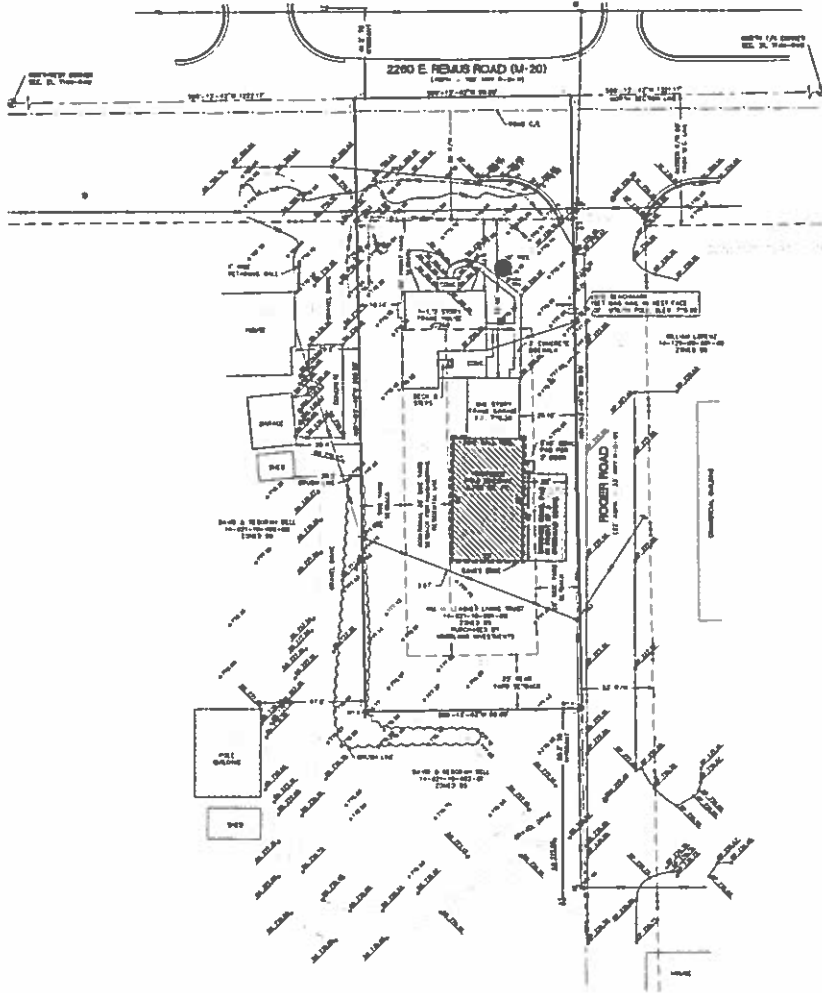
## Peter Gallinat

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**From:** Pat Gaffney [PGaffney@isabellaroads.com]  
**Sent:** Monday, October 24, 2016 11:31 AM  
**To:** Robyn Liptow (rliptow@cms-d.com); Peter Gallinat (pgallinat@uniontownshipmi.com)  
**Subject:** Pole Barn Rogers Road  
**Attachments:** 1610-152-SITEPLAN-REVISED.pdf

Please see approved revised site plan.

Patrick J. Gaffney, PE  
Engineer Superintendent  
Isabella CRC  
989-773-7131 x115  
989-772-2371 fax  
[pgaffney@isabellaroads.com](mailto:pgaffney@isabellaroads.com)



NO RECORDS IN RECORDS SECTION ROAD  
 EXISTING  
 AND LOTS TO ACCESS TO PROPOSED POLE BARN

Patrick J.  
 Gaffney, PE

Digitally signed by Patrick J. Gaffney PE  
 DN: cn=Patrick J. Gaffney, PE, o=JG&D  
 C=US, email=gaffney@cmsandd.com, cms  
 Date: 2016.06.24 11:27:37 -0500



NOTES  
 1. ALL SET BACKS SHALL BE AS SHOWN  
 2. EXISTING UTILITIES SHALL BE RELOCATED AT ALL CORNERS OF THE PROPOSED LOT AND AT INTERSECTIONS WITH ADJACENT LOTS AND ROADS. THE LOCATION OF ALL UTILITIES SHALL BE SHOWN IN ACCORDANCE TO THE LATEST RECORD DRAWINGS.

**CMS & D**  
 REVIEWING ENGINEERING  
 1000 W. 10TH STREET, SUITE 100  
 DENVER, CO 80202  
 PHONE: 303.733.1111  
 FAX: 303.733.1112

**SITE PLAN**  
**WOODLAND INVESTMENTS, LLC**  
 PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4  
 OF SECTION 36, T12N, R10W, MOUNTAIN  
 PLAIN, COLORADO

DATE	10/10/16
PROJECT	WOODLAND INVESTMENTS, LLC
SCALE	AS SHOWN
BY	PKJ
CHECKED BY	PKJ
DATE	10/10/16



**Mount Pleasant Fire Department  
804 E. High Street  
Mount Pleasant, Mi 48858**

City of Mt. Pleasant Site Plan Review

Friday October 21, 2016

**Residential**

2260 E Remus RD  
Mt. Pleasant, MI 48858

A Site Plan Review was conducted on Friday October 21, 2016 and revealed the following requirements listed below.

ORDER TO COMPLY: Since these conditions are contrary to code, you must correct them upon receipt of this notice. Please provide our department the documentation that verifies compliance with the code.

This list shall not be considered all-inclusive, as other requirements may be necessary, additional requirements are located in Chapter 5 and appendixes B, C, and D of the 2012 Edition of the International Fire Code.

If you have any questions regarding this matter, please feel free to contact me at (989) 779-5122.

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**Violation Code**

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1 PROPERTY Identification

Residential  
2260 E Remus Rd.

SPR 1610-152

Scope of project: New Pole Building Construction, approximately 1,792 square feet.

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NO COMMENTS/CONCERNS No Code Violations

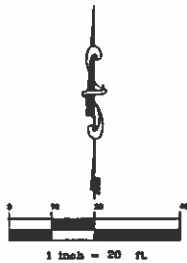
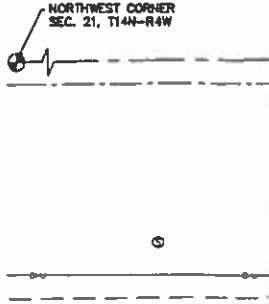
In review of the subject property, I have no comments or concerns.  
Site Plan meets requirements of IFC 2012 for access roads and water supply.

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Keeler, Randy  
Lieutenant  
Mount Pleasant Fire Department





**NOTES:**

1. ROLL OUT TRASH RECEPTACLES WILL BE USED.
2. EXTERIOR LIGHTING WILL BE INSTALLED AT ALL DOORS OF THE PROPOSED BUILDING IN ACCORDANCE WITH THE BUILDING CODE AND DOWNWARD SHIELDED IN ACCORDANCE WITH UNION TOWNSHIP REQUIREMENTS.

**CMS & D**  
 SURVEYING / ENGINEERING  
 510 W. PICKARD STREET, SUITE C  
 MT. PLEASANT, MICHIGAN 48850  
 PHONE: (810) 775-0758  
 FAX: (810) 775-5012  
 EMAIL: info@cms-d.com

**SITE PLAN**  
**WOODLAND INVESTMENTS, LLC**  
 PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4  
 OF SECTION 21, T14N-R4W, UNION TOWNSHIP,  
 ISABELLA COUNTY, MICHIGAN

JOB NUMBER: 1610-152		SUBMITTAL TO TOWNSHIP 10-20-16		REVISIONS:	
DRAWN BY: RLL					
DESIGNED BY: TELB					
CHECKED BY: TELB					
SCALE: 1" = 20'	SHEET NUMBER: 3 of 3				

**Shanee Thayer**

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**From:** "Rick Collins" <[rcollins@ictbus.com](mailto:rcollins@ictbus.com)>  
**Date:** Thursday, October 20, 2016 3:04 PM  
**To:** "Shanee Thayer" <[info@cms-d.com](mailto:info@cms-d.com)>; "Peter Gallinat" <[pgallinat@uniontownshipmi.com](mailto:pgallinat@uniontownshipmi.com)>  
**Subject:** 2260 E REMUS Site Plan

I have reviewed the site plans for 2260 E Remus Rd. We have no issues with any of option 1, option 2, or option 3.



**Rick Collins | Executive Director**  
2100 E. Transportation Dr | Mt. Pleasant, MI 48858  
Phone 989.773.6766 | Fax 989.773.1873  
[rcollins@ictbus.com](mailto:rcollins@ictbus.com)  
Visit our website at [ictbus.com](http://ictbus.com)

**S**am **B**er **E**ngineering

Bruce E. Rohrer P.E.  
957 Morey Dr.  
Mt. Pleasant, MI 48858  
(989) 330-2150

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October 21, 2016

Peter Galliant  
Union Township Zoning Administrator  
2010 South Lincoln Road  
Mt. Pleasant, Michigan 48858

RE: Storm Water Management Plan for 2260 Woodland Investments, LLC.

Dear Mr. Galliant:

I have reviewed the Storm Water Management Plan prepared by Tim Bebee, Central Michigan Surveying & Development Co. for the captioned project located in part of the Northwest ¼ of Section 21, Union Township at 2260 East Remus Road. The proposed plan is consistent with the Union Township Storm Water Ordinance.

If you have any questions or need any further information, please feel free to contact me in my office.

Sincerely,



Bruce E. Rohrer, P.E.  
Consulting Engineer  
Isabella County

BER/cs

Cc: Tim Bebee, CMS&D

**DETENTION POND DESIGN CALCULATION**

Site Location 2260 East Remus Road - Woodland Investment, LLC (Before Development)  
 Union Township, Isabella County, Michigan.

	Area (Acres)	C		
Hard Surface/Imperv. Area	0.07	0.95		
Gravel	0.00	0.75	Proposed Runoff "C" Value	0.39 (I)
Green Space/Lawn	0.44	0.30	Maximum Allowable Outflow (CFS)	0.10 (G)
Cont. Drainage Area (Acres)	0.51 (J)		Storm Recurrence Interval (Yrs)	25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.50	6.00	1.19	357	0.10	327
10	0.17	0.87	5.22	1.04	622	0.10	562
15	0.25	1.12	4.48	0.89	800	0.10	710
20	0.33	1.30	3.90	0.77	929	0.10	809
30	0.50	1.54	3.08	0.61	1,100	0.10	920
40	0.67	1.75	2.63	0.52	1,251	0.10	1,011
50	0.83	1.89	2.27	0.45	1,351	0.10	1,051
60	1.00	1.95	1.95	0.39	1,393	0.10	1,033
90	1.50	2.27	1.51	0.30	1,622	0.10	1,082
120	2.00	2.41	1.21	0.24	1,722	0.10	1,002
180	3.00	2.66	0.89	0.18	1,901	0.10	821
360	6.00	3.11	0.52	0.10	2,222	0.10	62
720	12.00	3.61	0.30	0.06	2,580	0.10	-1,740
1080	18.00	3.90	0.22	0.04	2,787	0.10	-3,693
1440	24.00	4.15	0.17	0.03	2,966	0.10	-5,674

Maximum: 1,082

**RETENTION POND DESIGN CALCULATION**

Retain back to back 25-Year 24 Hour Design Storm from the Entire Contributing Area (4.15 Inches of Rainfall)  
**5,981 CFT**

- A) Duration of the storm event in minutes.
- B) Duration of the storm event in hours.
- C) Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- D) Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- E) The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- F) The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- G) The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- H) The required retention storage is determined by multiplying the differention flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- I) Proposed weighted runoff coefficient.
- J) Contributing Drainage to the proposed detention or retention system.

Calculation By: Charley Baker  
 Date: 10-20-16

**DETENTION POND DESIGN CALCULATION**

Site Location 2260 East Remus Road - Woodland Investments  
~~Pleasant-Optical-Union Township~~ UNION TWP, ISABELLA COUNTY, Michigan.

	Area (Acres)	C		
Hard Surface/Imperv. Area	0.11	0.95		
Gravel	0.02	0.75	Proposed Runoff "C" Value	0.46 (I)
Green Space/Lawn	0.38	0.30	Maximum Allowable Outflow (CFS)	0.10 (G)
Cont. Drainage Area (Acres)	0.51 (J)		Storm Recurrence Interval (Yrs)	25

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.50	6.00	1.40	420	0.10	390
10	0.17	0.87	5.22	1.22	731	0.10	671
15	0.25	1.12	4.48	1.05	941	0.10	851
20	0.33	1.30	3.90	0.91	1,093	0.10	973
30	0.50	1.54	3.08	0.72	1,295	0.10	1,115
40	0.67	1.75	2.63	0.61	1,471	0.10	1,231
50	0.83	1.89	2.27	0.53	1,589	0.10	1,289
60	1.00	1.95	1.95	0.46	1,639	0.10	1,279
90	1.50	2.27	1.51	0.35	1,908	0.10	1,368
120	2.00	2.41	1.21	0.28	2,026	0.10	1,306
180	3.00	2.66	0.89	0.21	2,236	0.10	1,156
360	6.00	3.11	0.52	0.12	2,614	0.10	454
720	12.00	3.61	0.30	0.07	3,035	0.10	-1,285
1080	18.00	3.90	0.22	0.05	3,278	0.10	-3,202
1440	24.00	4.15	0.17	0.04	3,488	0.10	-5,152

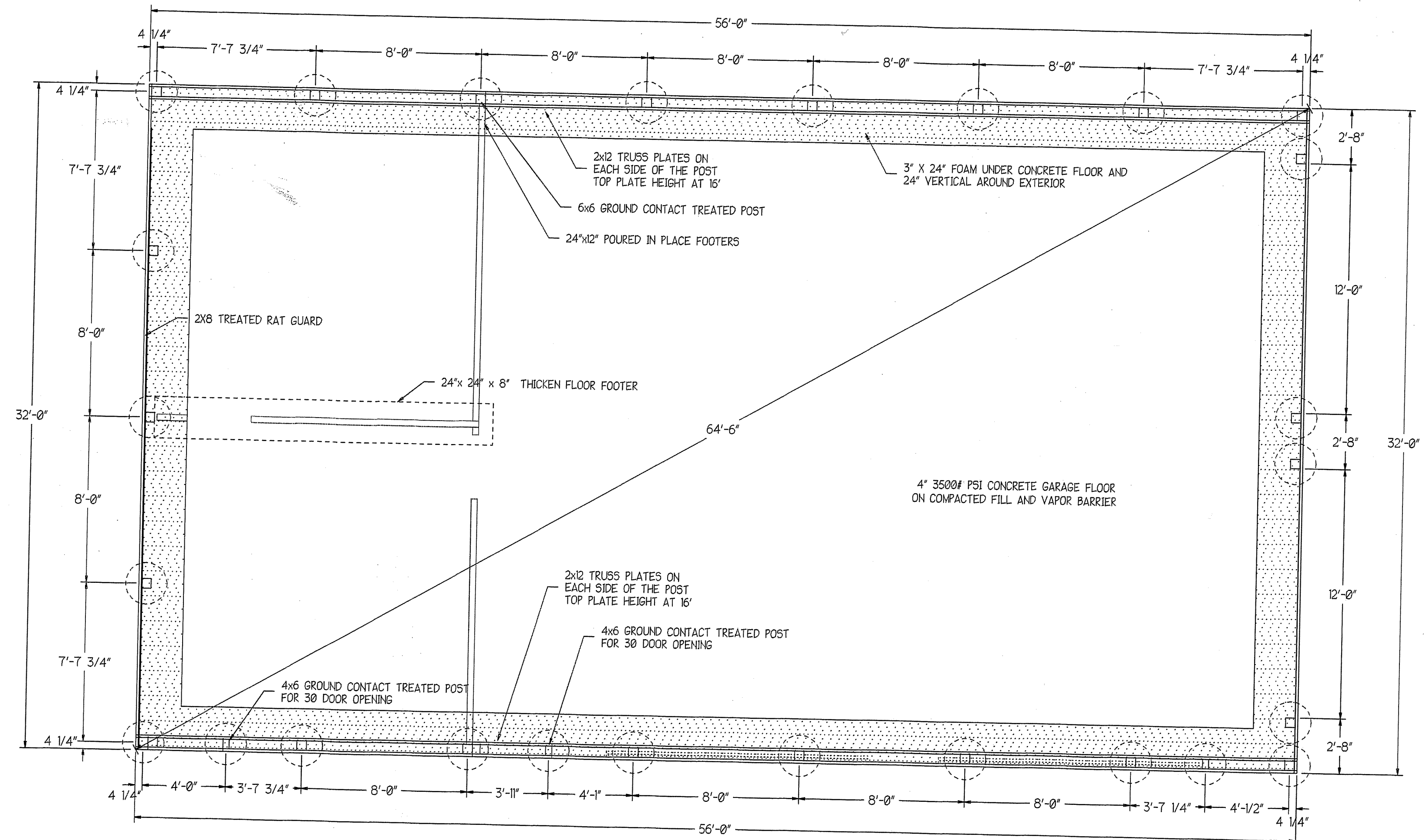
Maximum: 1,368

**RETENTION POND DESIGN CALCULATION**

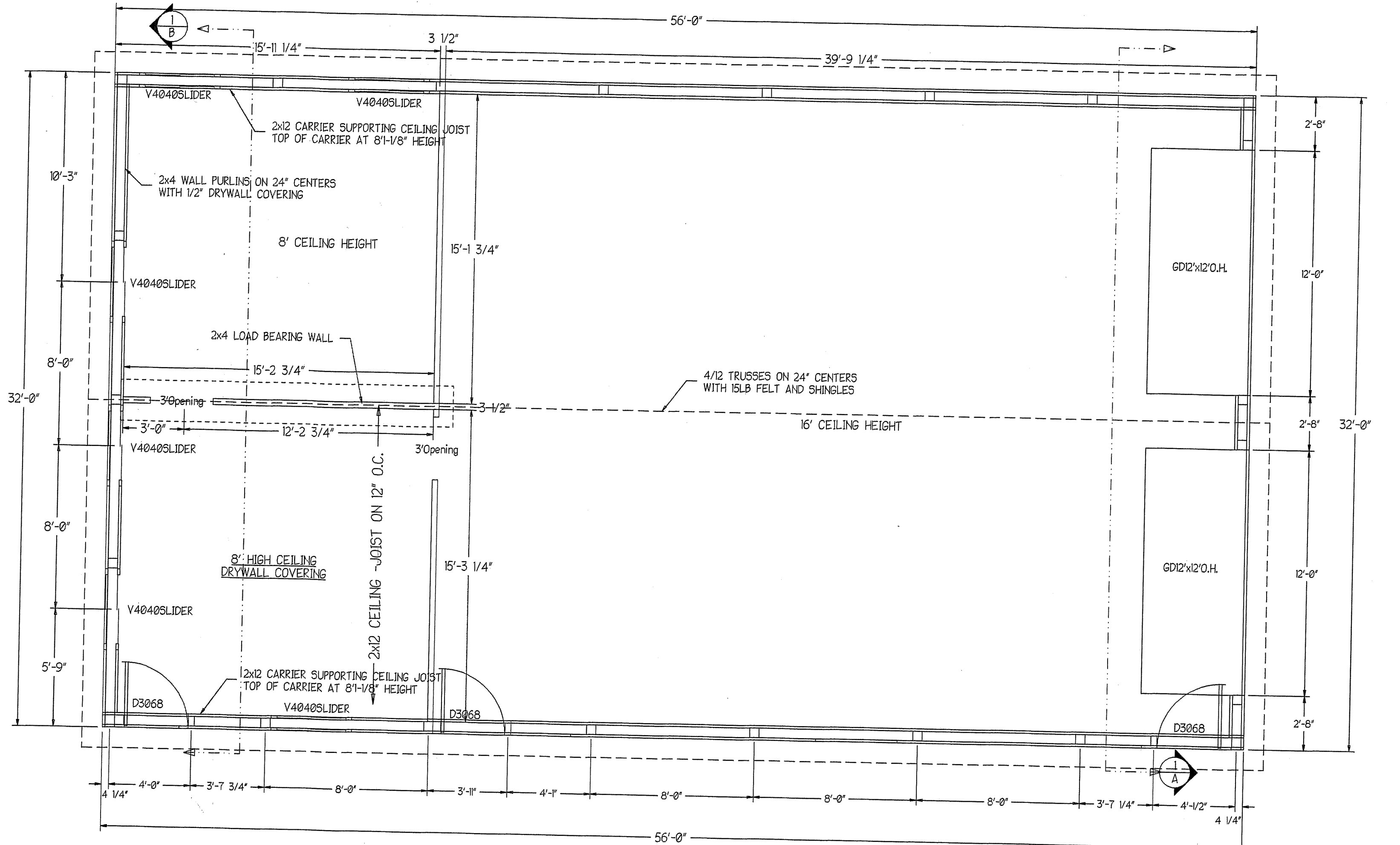
Retain back to back 25-Year 24 Hour Design Storm from the Entire Contributing Area (4.15 Inches of Rainfall)  
 7,035 CFT

- A) Duration of the storm event in minutes.
- B) Duration of the storm event in hours.
- C) Total amount of rainfall during a 25-year recurrence storm event for the given duration in Column A & B (ref.: midwestern climatological center rainfall Atlas-Bulletin 71).
- D) Average rainfall intensity during the 25-year recurrence storm event. Calculated by dividing Column C by Column B.
- E) The unrestricted 25-year recurrence discharge flow rate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D) and Drainage Area (L).
- F) The unrestricted storm event for the given duration in Column A and B. Calculated by multiplying the Proposed Runoff Flow Rate (E) by the Storm Duration (A) and by 60 seconds/minute.
- G) The maximum allowable discharge from the site is determined by multiplying the drainage area by 0.15 CFS per acre or if the proposed outlet is restrictive by determining the sites share of the existing outlets capacity on a contributing area basis.
- H) The required retention storage is determined by multiplying the differention flow rate (Inflow (E) - Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The amount of storage required for various storm durations will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage volume.
- I) Proposed weighted runoff coefficient.
- J) Contributing Drainage to the proposed detention or retention system.

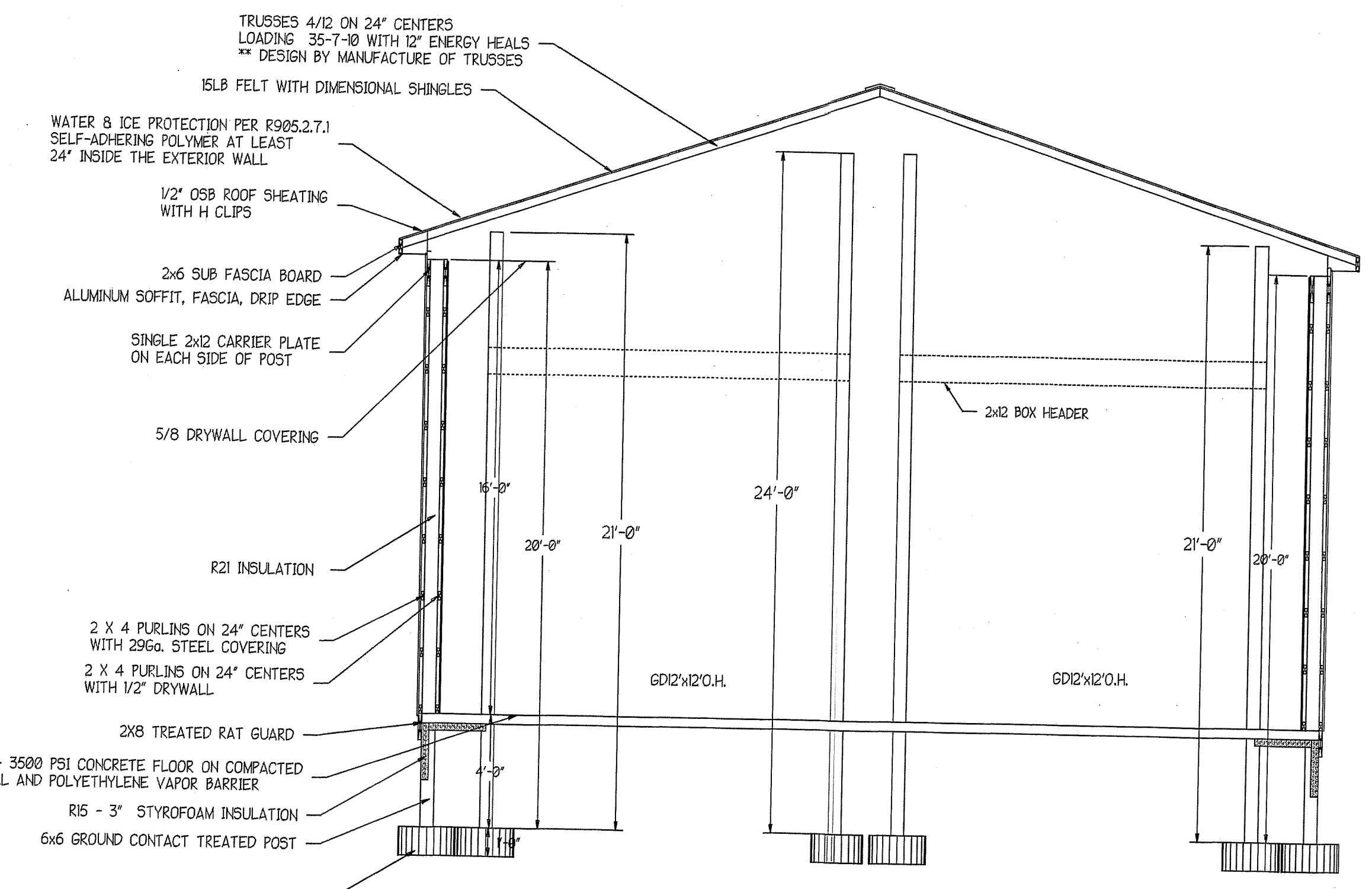
Calculation By: *Scotty Duke*  
 Date: 10-20-16



POST PLANS

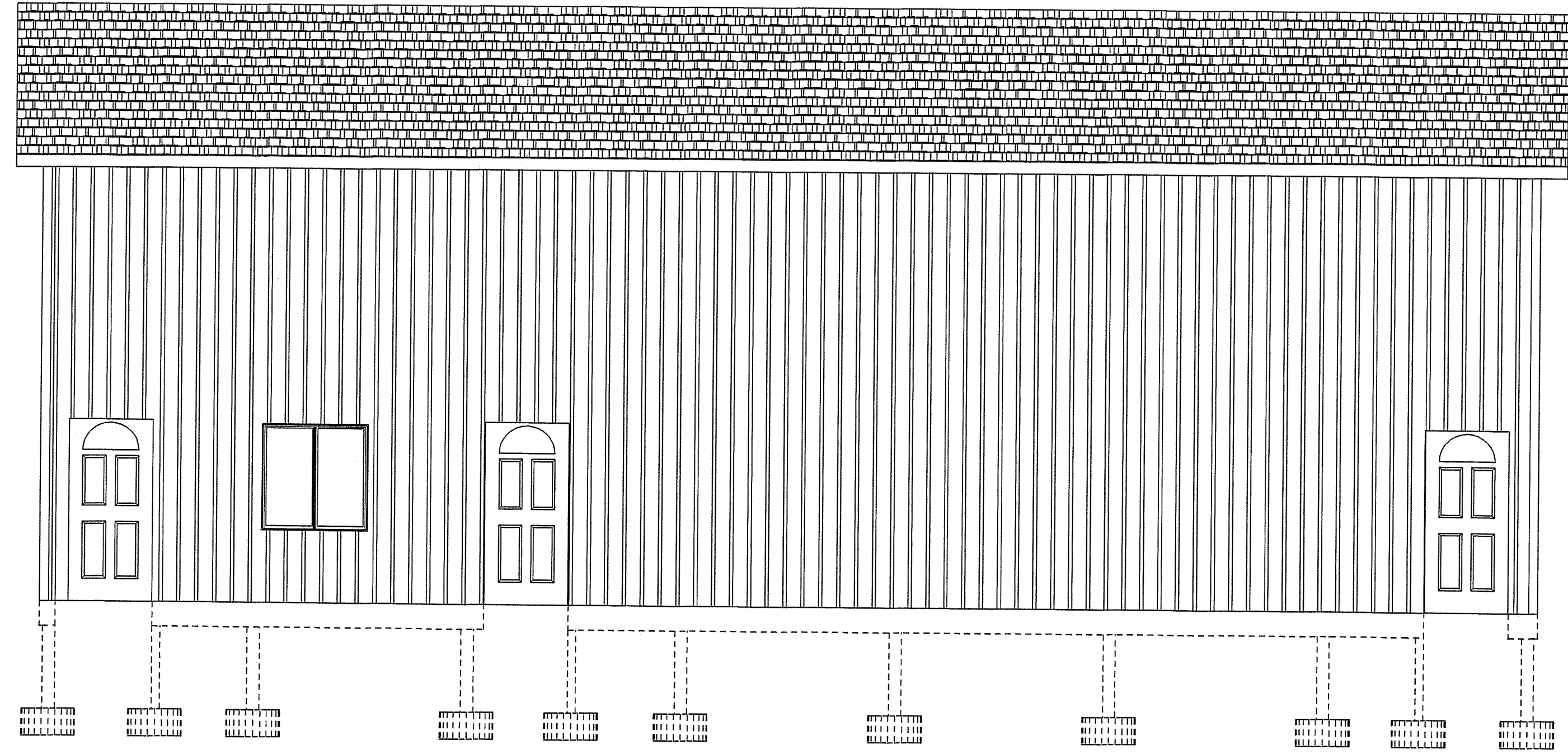


WALL SECTION 1A  
1/4"=1'

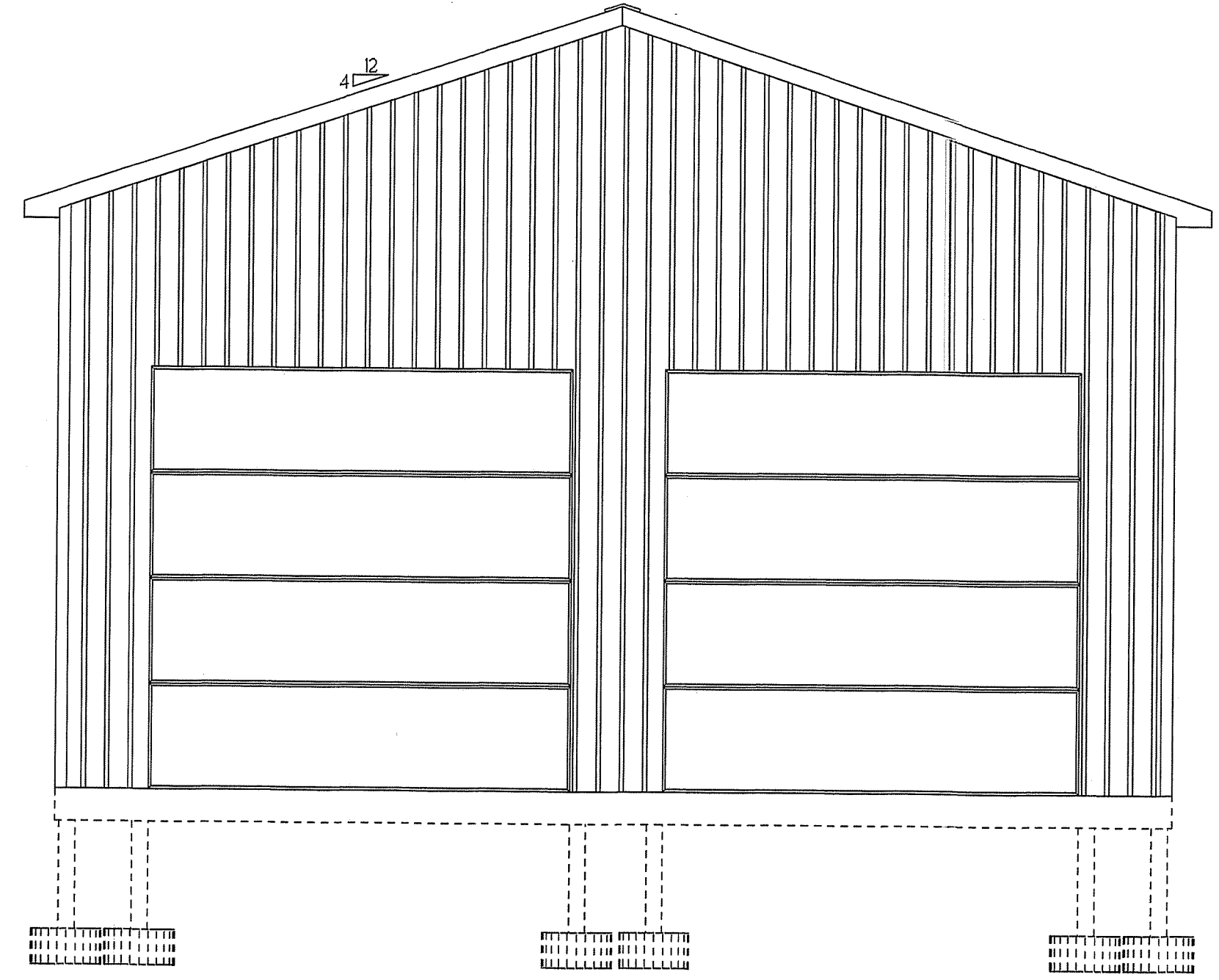


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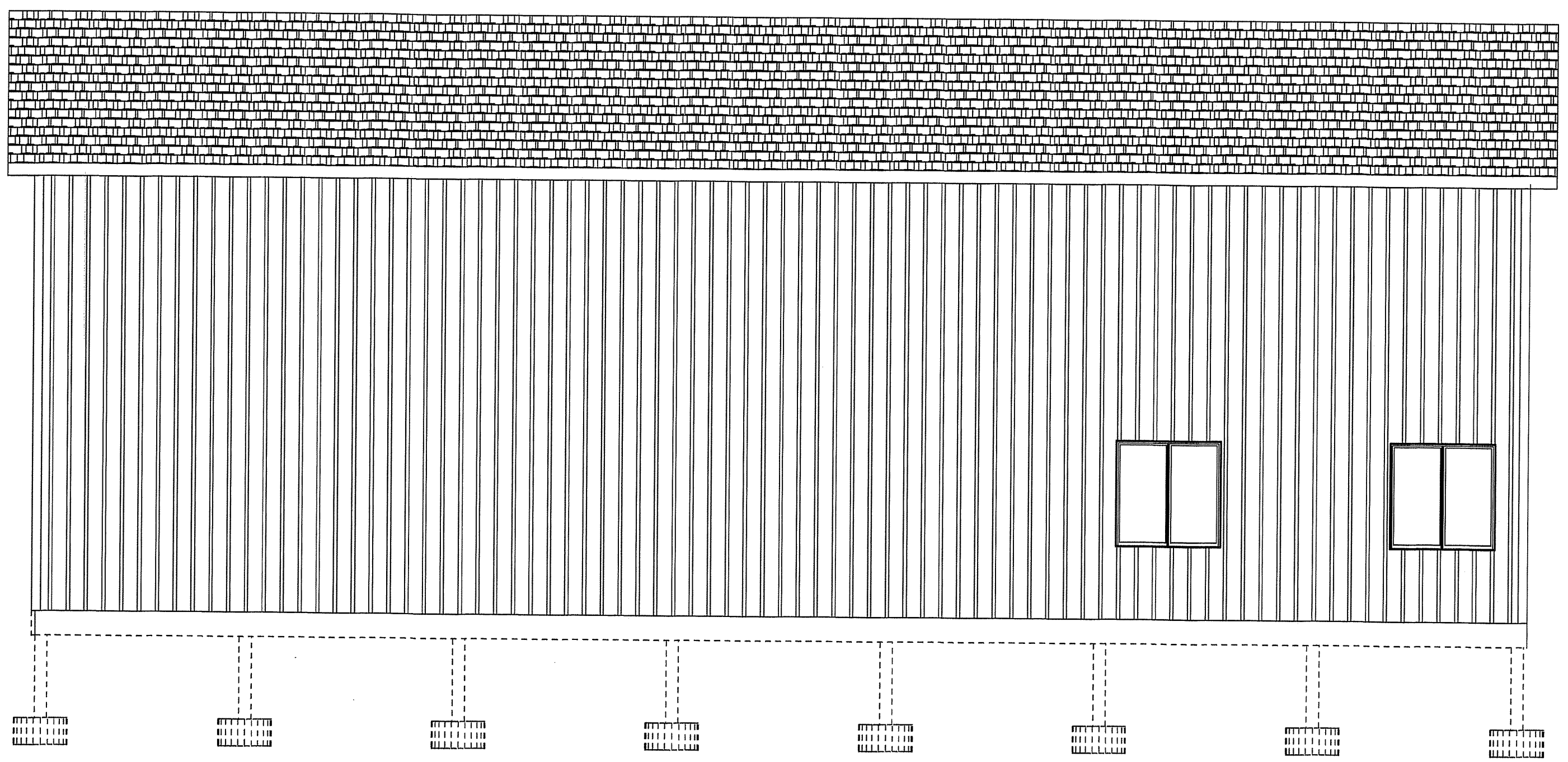




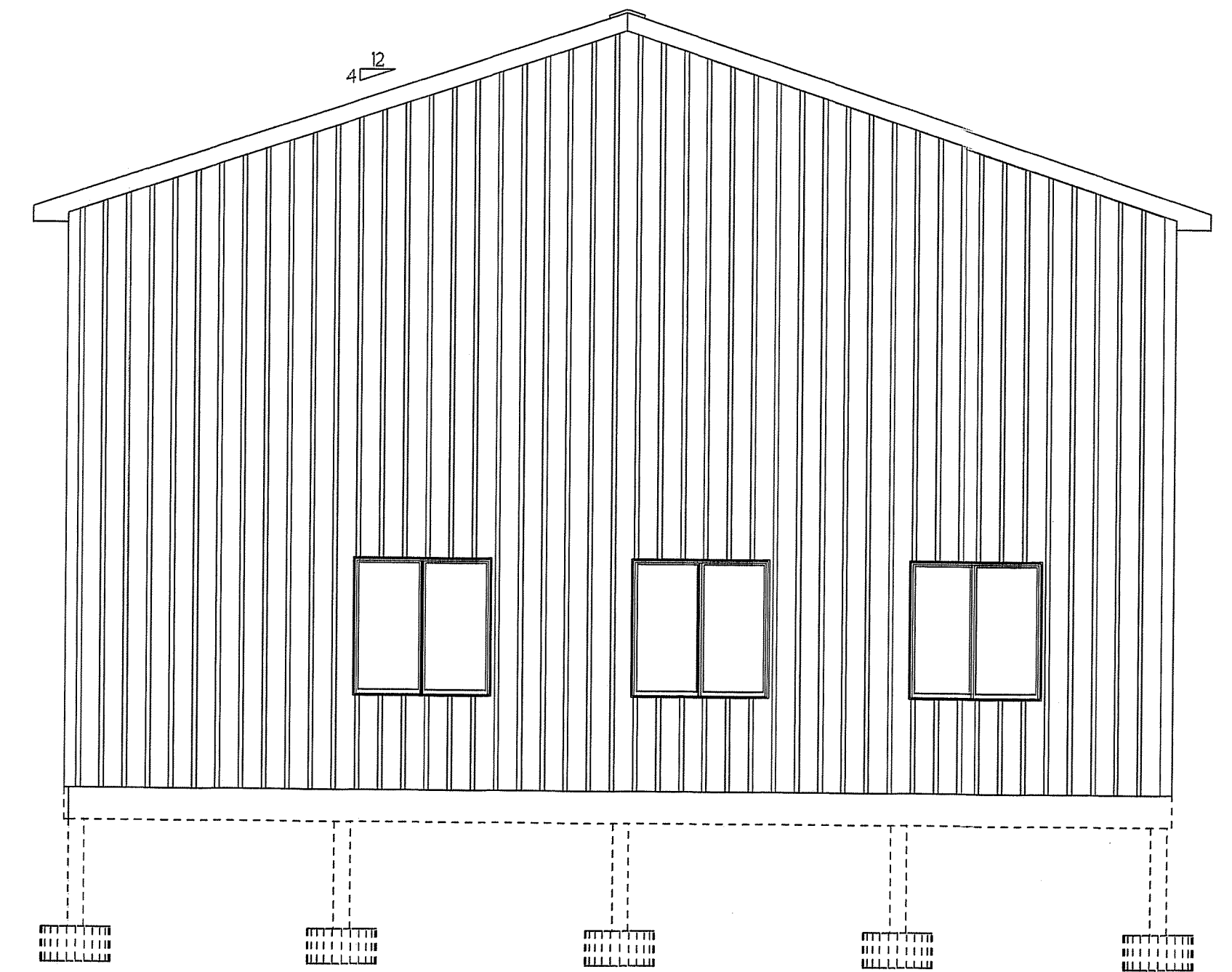
FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION



# 2260 E. REMUS ROAD

## SITE PLAN



PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4  
OF SECTION 21, T14N-R4W, UNION TOWNSHIP,  
ISABELLA COUNTY, MICHIGAN

### LOCATION MAP

SCALE: 1" = 300'

ZONED B-5 HIGHWAY BUSINESS DISTRICT	
MINIMUM LOT AREA	16,000 SQ. FT.
MINIMUM LOT WIDTH	100 FT
MAXIMUM STRUCTURE HEIGHT	35 FT
MINIMUM FRONT YARD SETBACK	50 FT (A,B)
MINIMUM SIDE YARD SETBACK	20 FT (B)
MINIMUM REAR YARD SETBACK	25 FT (A,B)
MAXIMUM LOT COVERAGE	30% (BY ALL BLDGS.)

(A) Off-street parking shall be permitted to occupy a portion of the required front yard, provided that there shall be maintained a minimum unobstructed and landscaped setback of ten (10) feet between the nearest point of the off street parking areas, exclusive of access driveways and the nearest right-of-way line as indicated on the Major Thoroughfare Plan.

(B) A lot in the B-4 and B-5 District will provide a side and rear yard of at least forty (40) feet when abutting a residential District.

#### MISS DIG:

FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL "MISS DIG" 1-800-482-7171 A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY EXCAVATION. ALL "MISS DIG" PARTICIPATING MEMBERS WILL BE APPROPRIATELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

### LEGEND

#### SYMBOLS

○ BOLLARD	☐ GAS RISER	⊙ SOIL BORING
▣ CATCH BASIN (CURB INLET)	↗ GUY ANCHOR	⊕ STORM SEWER MANHOLE
⊙ CATCH BASIN (ROUND)	⊕ HYDRANT - EXISTING	⊕ TELEPHONE RISER
⊕ CATCH BASIN (SQUARE)	⊕ HYDRANT - PROPOSED	● TREE - CONIFEROUS
⊙ CLEAN OUT	⊕ LIGHT POLE	● TREE - DECIDUOUS
→ DRAINAGE FLOW	☐ MAILBOX	⊕ UTILITY POLE
⊕ ELECTRICAL BOX	⊕ MONITORING WELL	⊕ WATER MAIN VALVE
● FOUND CONC. MONUMENT	⊕ SANITARY SEWER MANHOLE	⊕ WATER SHUT-OFF
○ FOUND IRON	● SET IRON	⊕ FLOOD LIGHT
⊕ GAS MAIN VALVE	⊕ SIGN	⊕ GAS METER

#### LINE TYPES

—ELEC—	BURIED ELECTRICAL CABLE
—PHONE—	BURIED TELEPHONE CABLE
---DITCH---CL---	CENTERLINE OF DITCH
---FM---	FORCE MAIN
---GAS---	GAS MAIN
---RD---CL---	ROAD CENTERLINE
---8" SAN---	SANITARY SEWER
---12" SS---	STORM SEWER
---EX-TOS---	TOE OF SLOPE
---EX-TOB---	TOP OF BANK
---OHE---	UTILITIES - OVERHEAD
---UTL---	UTILITIES - UNDERGROUND
---12" WM---	WATER MAIN

#### HATCH PATTERNS

[Hatch Pattern]	ASPHALT - EXISTING
[Hatch Pattern]	ASPHALT - PROPOSED
[Hatch Pattern]	CONCRETE
[Hatch Pattern]	GRAVEL
[Hatch Pattern]	LANDSCAPING
[Hatch Pattern]	RIP-RAP
[Hatch Pattern]	EXISTING BUILDING

#### DESCRIPTION PROVIDED:

THE NORTH 17 RODS (280.50 FEET) OF THE EAST 6 RODS (99.00 FEET) OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 21, T14N-R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN.

### SHEET INDEX

SHEET 1.....	COVER SHEET
SHEET 2.....	TOPOGRAPHIC SURVEY
SHEET 3.....	SITE PLAN
SHEET 4.....	STORM WATER MANAGEMENT, SOIL EROSION & GRADING PLAN

#### BENCHMARKS:

BENCHMARK #1: FOUND AN ALUMINUM MICHIGAN DEPARTMENT OF TRANSPORTATION HEIGHT MODERNIZATION MARK DISK SET IN THE TOP OF A 12 INCH DIAMETER CONCRETE POST. LOCATION IS AT THE SOUTH EAST CORNER OF THE LINCOLN ROAD AND REMUS ROAD (M-20) INTERSECTION. ELEVATION 786.62

BENCHMARK #2: FOUND CAPPED IRON AT THE NORTHWEST CORNER OF ROGERS ROAD AND INDEPENDENCE DRIVE. ELEVATION 774.19

SITE BENCHMARK: SET MAG NAIL IN WEST FACE OF UTILITY POLE ON THE EAST SIDE OF THE PROPERTY AT THE RIGHT OF WAY OF ROGERS ROAD, AS SHOWN. ELEVATION: 778.98

#### BEARING BASIS:

THE NORTH SECTION LINE BETWEEN THE NORTH 1/4 CORNER AND THE NORTHWEST CORNER WAS TAKEN AS S89°-13'-42"W FROM A PREVIOUS CMS&D SURVEY, JOB NO. 1601-013.

#### UTILITY NOTE:

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY COMPANY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE LOCATION AND DEPTH OF UNDERGROUND UTILITIES WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" (1-800-282-7171) PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THESE UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL MAKE EVERY EFFORT TO PROTECT AND OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND. UNDERGROUND SERVICE LEADS FOR GAS, ELECTRIC, TELEPHONE AND CABLE MAY BE ACROSS PROPERTY, NO INFORMATION AVAILABLE PLEASE CALL MISS DIG.

#### SITE:

2260 E. REMUS ROAD  
MT. PLEASANT, MI 48858

#### OWNER:

WOODLAND INVESTMENTS, LLC  
P.O. BOX 526  
MT. PLEASANT, MI 48804  
CONTACT: DOUG JAMES

#### CONSULTANT:

CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.  
510 W. PICKARD STREET - SUITE C  
MT. PLEASANT, MI 48858  
CONTACT PERSON: TIMOTHY E BEBEE  
PHONE: (989) 775-0756  
FAX: (989) 775-5012  
EMAIL: info@cms-d.com

#### CHARTER COMMUNICATIONS

915 E. BROOMFIELD ROAD  
MT. PLEASANT, MI 48858  
(989) 621-4932  
RANDY BUNKER  
rbunker@chartercom.com

#### CONSUMERS ENERGY

1325 WRIGHT AVENUE  
ALMA, MI 48801  
(989) 466-4282  
KIM STUDDT  
kimberly.studdt@cmsenergy.com

#### FRONTIER

345 PINE STREET  
ALMA, MI 48801  
(989) 463-0392  
MARK A. MARSHALL  
Mark.Marshall@fr.com

#### DTE ENERGY

4420 44TH ST., S.E., SUITE B  
KENTWOOD, MI 49512  
(616) 954-4623  
MARY JO MCKERSIE  
mckersiem@dteenergy.com

#### MT. PLEASANT FIRE DEPARTMENT

804 EAST HIGH STREET  
MT. PLEASANT, MI 48858  
(989) 779-5100 EXT 5122  
SGT. RANDY KEELER  
rkeeler@mt-pleasant.org

#### CHARTER TOWNSHIP OF UNION

PUBLIC WATER/PUBLIC SEWER  
2010 N. LINCOLN ROAD  
MT. PLEASANT, MI 48858  
(989) 772-4600 EXT 24  
KIM SMITH  
ksmith@uniontownshipmi.com

#### CHARTER TOWNSHIP OF UNION

PLANNING & ZONING  
2010 NORTH LINCOLN ROAD  
MT. PLEASANT, MI 48858  
(989) 772-0911  
PETER GALLINAT  
pgallinat@uniontownshipmi.com

#### DRAIN COMMISSIONERS OFFICE

ISABELLA COUNTY BUILDING  
200 NORTH MAIN STREET ROOM 140  
MT. PLEASANT, MI 48857  
(989) 772-0911  
RICK JAKUBIEC  
drain@isabellacounty.org

#### ISABELLA COUNTY ROAD COMMISSION

2261 EAST REMUS ROAD  
MT. PLEASANT, MI 48858  
(989) 773-7131 EXT 115  
PATRICK GAFFNEY  
PGaffney@isabellaroads.com

**CMS & D**  
SURVEYING / ENGINEERING  
510 W. PICKARD STREET - SUITE C  
MT. PLEASANT, MICHIGAN 48858  
MT. PHONE: (989) 775-0756  
FAX: (989) 775-5012  
EMAIL: info@cms-d.com



**COVER SHEET**  
WOODLAND INVESTMENTS, LLC  
PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4  
OF SECTION 21, T14N-R4W, UNION TOWNSHIP,  
ISABELLA COUNTY, MICHIGAN

REVISIONS:

1610-152

SUBMITTALS:  
SUBMITTAL OF SITE PLAN TO TOWNSHIP 10-21-16

JOB NUMBER:  
1610-152

DRAWN BY:  
RLB

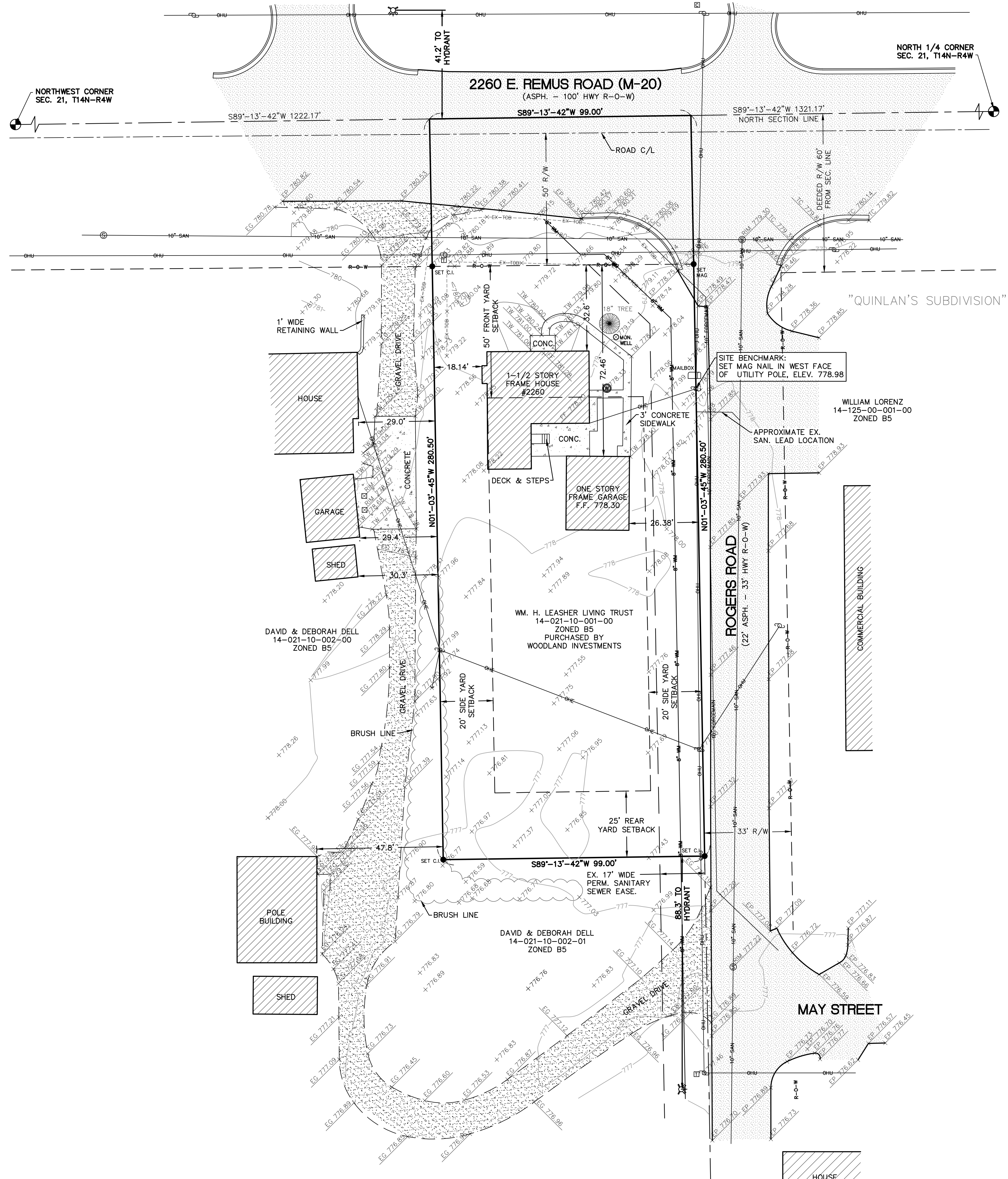
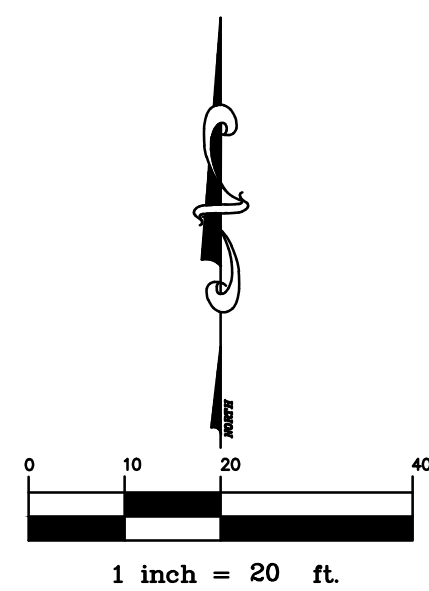
DESIGNED BY:  
TELB

CHECKED BY:  
TELB

SCALE:  
1" = 20'

SHEET NUMBER:  
1 OF 4





SCALE  
1" = 20'

JOB NUMBER:  
1610-152  
DRAWN BY:  
RLI  
DESIGNED BY:  
TELB  
CHECKED BY:  
TELB

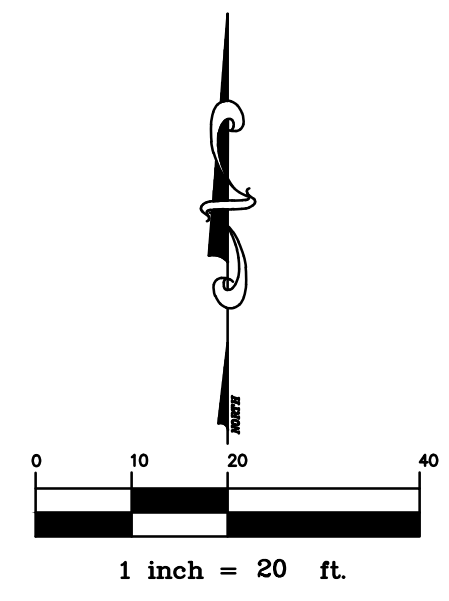
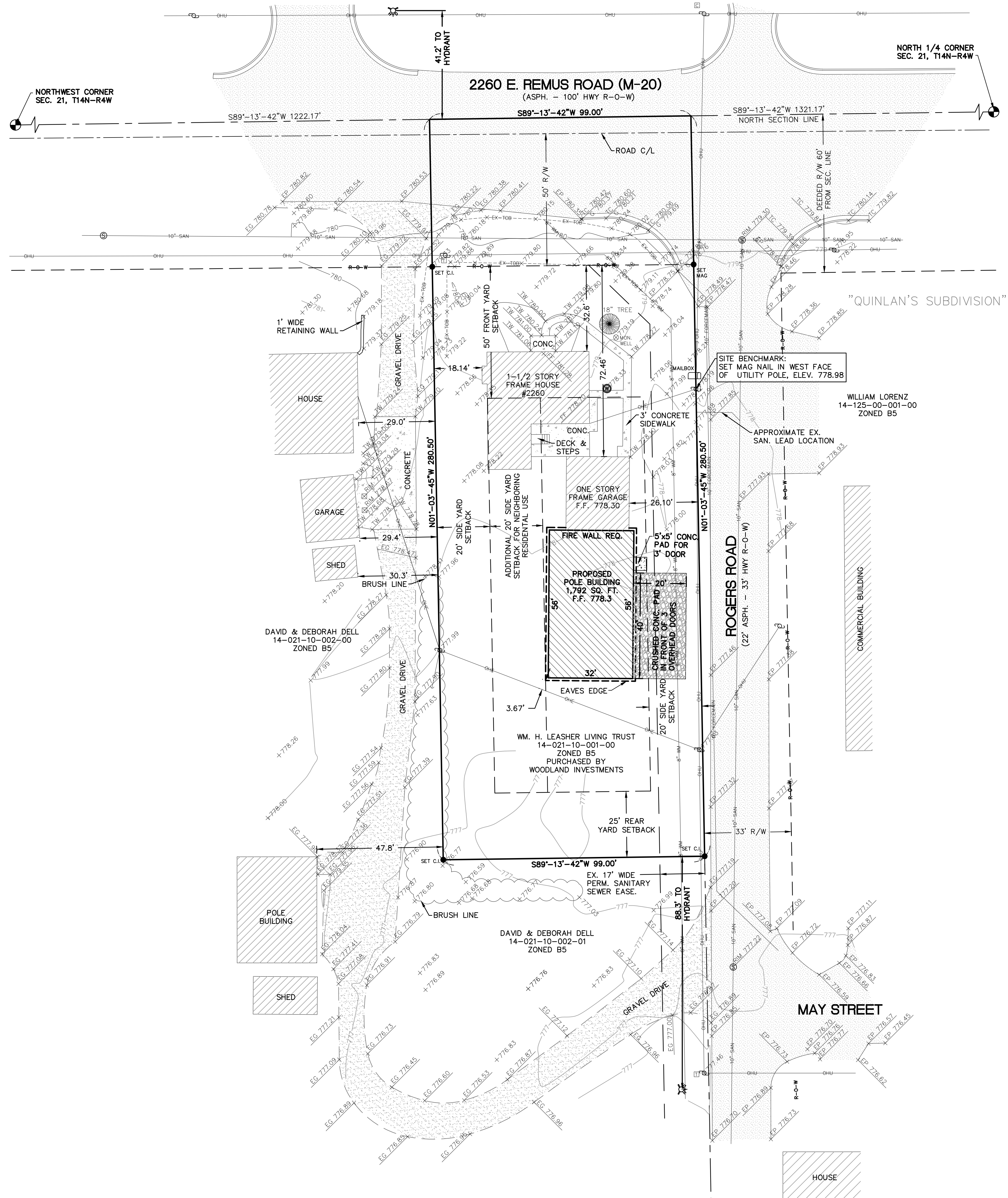
SUBMITTALS:  
SUBMITTAL OF SITE PLAN TO TOWNSHIP 10-21-16

REVISIONS:

TOPOGRAPHIC SURVEY  
WOODLAND INVESTMENTS, LLC  
PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4  
OF SECTION 21, T14N-R4W, UNION TOWNSHIP,  
ISABELLA COUNTY, MICHIGAN



**CMS & D**  
SURVEYING / ENGINEERING  
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MT. PHONE: (989) 775-0756  
FAX: (989) 775-5012  
EMAIL: info@cms-d.com



**UTILITY NOTES:**  
 EXISTING UTILITY CONDITIONS ON SITE:  
 THE EXISTING HOUSE IS CONNECTED TO A WELL ON THE PROPERTY AND THE HOUSE IS CONNECTED TO THE UNION TOWNSHIP SANITARY SEWER SYSTEM

PROPOSED UTILITIES ON THE SITE:  
 THE PROPOSED STRUCTURE SHALL BE CONNECTED TO THE EXISTING SEWER AND WATER SYSTEM.


ANY PROPOSED CONNECTION TO PUBLIC WATER OR PUBLIC SEWER MUST BE COORDINATED WITH THE UNION TOWNSHIP D.P.W. DIRECTOR.

SCHEDULE ANY INSPECTION WITH UNION TOWNSHIP UTILITY DEPARTMENT, AT (989) 772-4600 EXT. 224. AT LEAST 48 HOURS IN ADVANCE.

**SITE PLAN NOTES:**

- ROLL OUT TRASH RECEPTACLES WILL BE USED.
- EXTERIOR LIGHTING WILL BE INSTALLED AT ALL DOORS OF THE PROPOSED BUILDING IN ACCORDANCE WITH THE BUILDING CODE AND DOWNWARD SHIELDED IN ACCORDANCE WITH UNION TOWNSHIP REQUIREMENTS.

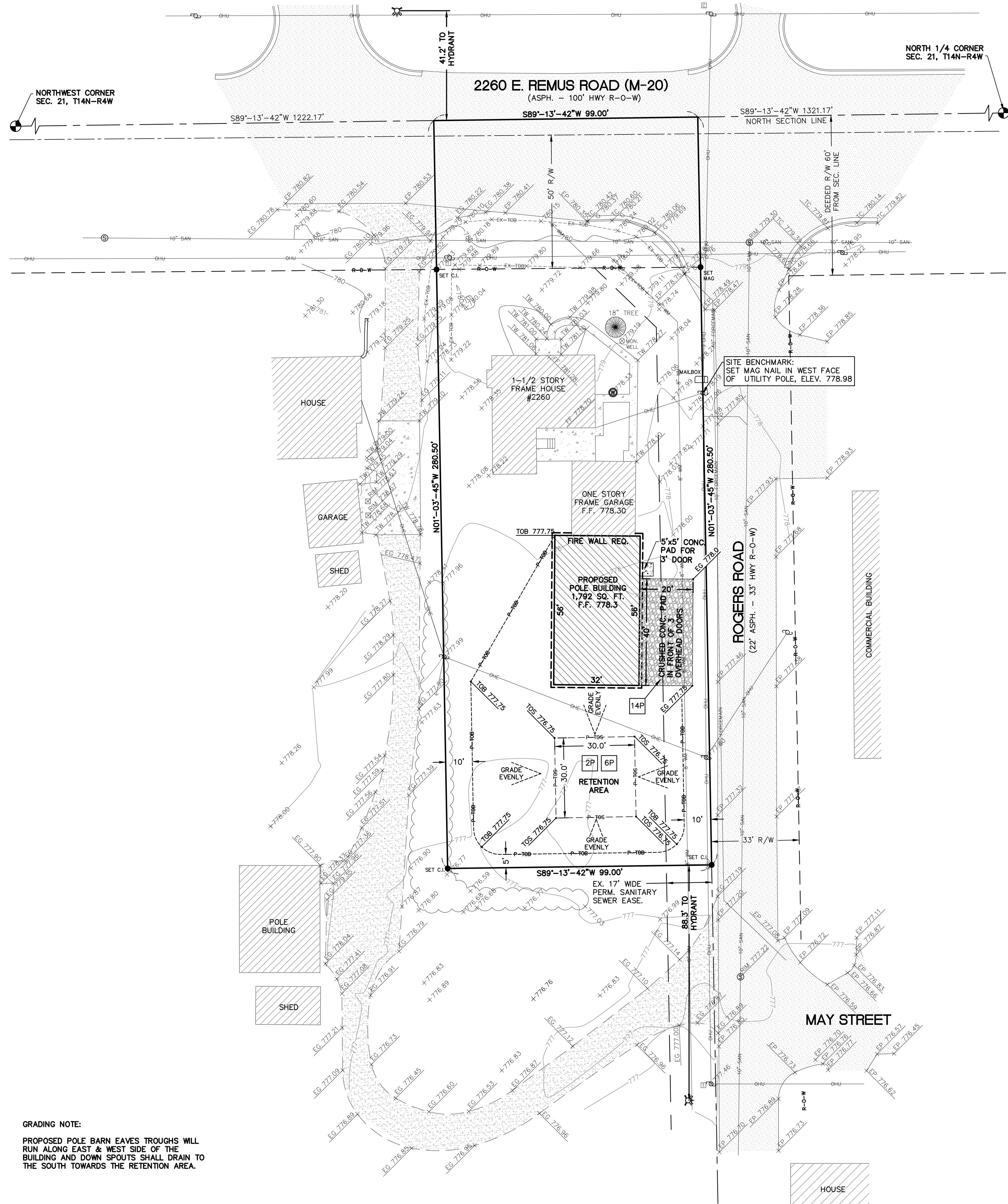
**CMS & D**  
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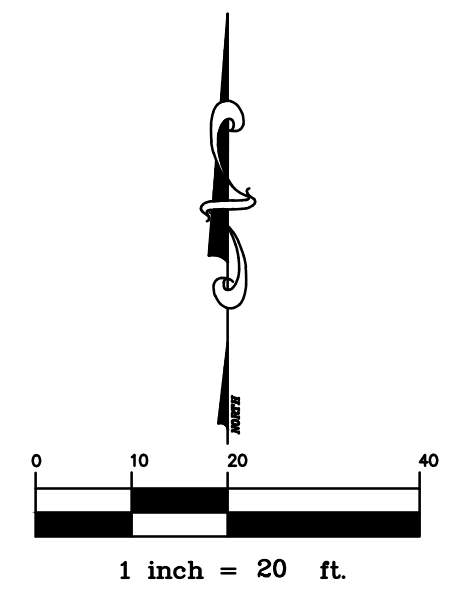
**SITE PLAN**  
 WOODLAND INVESTMENTS, LLC  
 PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4  
 OF SECTION 21, T14N-R4W, UNION TOWNSHIP,  
 ISABELLA COUNTY, MICHIGAN

REVISIONS:	
SUBMITTALS:	SUBMITTAL OF SITE PLAN TO TOWNSHIP 10-21-16
JOB NUMBER:	1610-152
DRAWN BY:	RLI
DESIGNED BY:	TELB
CHECKED BY:	TELB
SCALE:	1" = 20'
SHEET NUMBER:	3 OF 4





**GRADING NOTE:**  
 PROPOSED POLE BARN EAVES TROUGHS WILL RUN ALONG EAST & WEST SIDE OF THE BUILDING AND DOWN SPOUTS SHALL DRAIN TO THE SOUTH TOWARDS THE RETENTION AREA.



Primary Soil Type - Mecosta Sand - Verified by Hand Auger

This soil type is typically found in nearly level areas and is considered somewhat excessively drained. Typically, the surface layer is very dark grayish brown sand having a typical depth of 9 inches thick. The subsoil down to approximately 36 inches is a yellow to brown loose sand with a gravel mix at lower depths. The substratum is a brown loose gravelly sand to a depth of 60 inches. Permeability is considered rapid in the upper part of the soil and very rapid in the lower part. Surface runoff is very slow. This soil type has a high potential for use as building sites and septic absorption fields.

(Site Condition) Total Depth of Hand Auger 42 inches  
 +/- 4 inches of dark loamy topsoil  
 +/- 8 inches of dark brown sandy  
 +/- 30 inches primarily light brown to yellow sand with some small gravel.

Permeability Classification System

- Very Rapid = Greater than 10 inches/hour
- Rapid = 5 to 10 inches/hour
- Moderately Rapid = 2.5 to 5 inches/hour
- Moderate = 0.8 to 2.5 inches/hour
- Moderately Slow = 0.2 to 0.8 inches/hour
- Slow = 0.05 to 0.2 inches/hour
- Very Slow = Less than 0.05 inches/hour

The soil present on site would have a permeability rate of between 5 to 10 inches/hour. This converts to 0.0001157 to 0.0002315 feet/second.

The graded area for storm water retention and infiltration is 30 feet by 30 feet. This would give an infiltration rate of 0.10 cfs to 0.20 cfs for the site. As the infiltration areas will have topsoil placed and seeded, we will utilize the lesser rate for our calculations.

The site is currently developed. The proposed plan is to add a 32 foot by 56 foot structure and a 20 foot by 40 foot gravel pad. Utilizing the County's Storm Water Spread Sheet to calculate the required storage for the current conditions and the required storage for the proposed conditions, each at 0.1 cfs infiltration rate gives the following.

Existing Site Conditions: Impervious Area = 0.07 Acres  
 Pervious Area = 0.44 Acres  
 Detention = 1082 CF

Proposed Site Conditions: Impervious Area = 0.11 Acres  
 Semi Impervious Area = 0.02 Acres  
 Pervious Area = 0.38 Acres  
 Detention = 1368 CF

Required Detention = 1368 CF - 1082 CF = 286 CF of Storm Water Storage.

Therefore, the required depth of storage = 286 CF / 900 SQFT = 0.32 FT = 4 inches.  
 The Proposed Top of Storage for the Required Retention for Expansion = 777.05

The Top of Storage for the 25 Yr - 24 Hr Storm for the Entire Site = 777.25  
 The Top of Storage for the 100 Yr - 24 Hr Storm for the Entire Site = 777.50  
 The Proposed Overflow Elevation = 775.75  
 Maximum Storage At Overflow = +/- 3,650 CF > 100 Year Required Storage Volume.

*MICHIGAN UNIFIED KEYING SYSTEM*  
**SOIL EROSION & SEDIMENTATION CONTROL MEASURES**

KEY	DETAIL	CHARACTERISTICS
2	Selective Grading & Shaping	Water can be diverted to minimize erosion Flatter slopes ease erosion problems
6	Seeding w/ Mulch and/or Matting	Facilitates establishment of vegetative cover Effective for drainageways with low velocity Easily placed in small quantities by inexperienced personnel Should include prepared topsoil bed
14	Aggregate Cover	Stabilizes soil surface, thus minimizing erosion Permits construction traffic in adverse weather May be used as part of permanent base construction of paved areas

**\*SINGLE NET STRAW BLANKET (90 DAY)\***

- MUST CONTAIN 100% WHEAT STRAW.
- MUST BE SINGLE POLYPROPYLENE, RAPID PHOTODEGRADABLE NETTING.
- MUST HAVE NYLON PHOTODEGRADABLE THREAD.
- TERMED AS APPROX. 3 MONTH LIFE SPAN.
- MUST CONFORM TO THE FEDERAL HIGHWAY ADM. STANDARDS FOR FULLY PHOTO/BIODEGRADABLE BLANKET MATERIAL.

EXAMPLE OF ACCEPTABLE MATERIAL:  
 ENVROSCAPE - S10000 SINGLE NET STRAW BLANKET.

- SOIL EROSION GENERAL NOTES:**
- PRIOR TO ANY SITE WORK, CONTRACTOR MUST INSTALL TEMPORARY CONSTRUCTION ENTRANCE AND SILT FENCE AS SHOWN ON THE PLANS. IF GRADING AND SHAPING IS TO BE USED IN LIEU OF SILT FENCE, THIS WORK MUST BE CARRIED OUT PRIOR TO STRIPPING OF TOPSOIL.
  - CONTRACTOR TO INSTALL TEMPORARY SEDIMENTATION COLLECTION BAGS IN EACH CATCH BASIN LOCATED IN THE ROADWAYS OR PARKING LOTS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE & REPLACEMENT OF BAGS AS NEEDED. BAGS TO BE REMOVED ONLY AFTER SITE HAS BEEN STABILIZED AT THE COMPLETION OF CONSTRUCTION.
  - CONTRACTOR TO STOCKPILE SOIL ON SITE AT A MAXIMUM SLOPE OF 1 ON 3. ALL SPOIL PILES ARE TO BE SEEDED TO MAINTAIN SLOPE STABILITY.
  - EXCESS TOPSOIL IS TO BE REMOVED FROM SITE. CONTRACTOR TO COORDINATE THESE ACTIVITIES WITH PROPERTY OWNER. CONTRACTOR TO ENSURE THAT A MINIMUM 50' BUFFER STRIP IS MAINTAINED BETWEEN ALL STOCKPILES & PROPERTY LINE.
  - ALL STOCKPILES THAT ARE TO BE LEFT UNDISTURBED FOR MORE THAN 30 DAYS ARE TO BE SEEDED AND STABILIZED.
  - CONTRACTOR WILL TAKE ALL NECESSARY STEPS TO ELIMINATE SOILS/SEDIMENT FROM LEAVING THE PROJECT SITE.
  - THE CONTRACTOR MUST KEEP STREETS FREE OF SEDIMENTATION OR TAKE STEPS TO CLEAN STREETS.
  - SOIL EROSION MAY ALSO OCCUR WHEN SOILS ARE DRY. SOIL EROSION DUE TO BLOWING WINDS MUST BE MINIMIZED BY USE OF WATER TANK TRUCKS.
  - AS SOON AS POSSIBLE SOILS WILL BE COMPACTED TO MINIMIZE SOIL EROSION. IF SOILS ARE LEFT UNCOMPACTED FOR LENGTHY PERIODS THEY MUST BE SEEDED TO MINIMIZE SOIL EROSION.
  - TEMPORARY MEASURES SHALL STAY IN PLACE UNTIL THE CONSTRUCTION ACTIVITIES HAVE ENDED AND/OR THE PERMANENT MEASURES ARE COMPLETED.
  - UPON COMPLETION OF CONSTRUCTION THE CONTRACTOR MUST CLEAN ALL SUMPS AND SEDIMENTATION TRAPS.
  - CONTRACTOR IS TO ENSURE THAT ALL CONTROL MEASURES ARE ADEQUATELY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.

**CMS & D**  
 SURVEYING / ENGINEERING  
 510 W. PICKARD STREET, SUITE C  
 MT. PLEASANT, MICHIGAN 48858  
 MT. PHONE: (989) 775-0756  
 FAX: (989) 775-5012  
 EMAIL: info@cms-d.com



**STORM WATER MANAGEMENT, SOIL EROSION & GRADING PLAN**  
 WOODLAND INVESTMENTS, LLC  
 PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 21, T14N-R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:	
JOB NUMBER:	1610-152
DRAWN BY:	RLB
DESIGNED BY:	TELB
CHECKED BY:	TELB
SCALE:	1" = 20'
SHEET NUMBER:	4 OF 4
SUBMITTALS:	10-21-16
REVISIONS:	



Date: November 8, 2016

To: Union Township Planning Commission

From: Kathleen Duffy, Senior Planner and Josh Penn, Project Planner

**Subject: Discussion Items for November 15, 2016 Kickoff Session on the Master Plan Update**

We look forward to kicking off our work with you on the Union Township Master Plan at next week's Planning Commission meeting. The outline below describes the topics to be covered, so be thinking about questions you may have about the process and ideas you want to ensure are included in this update.

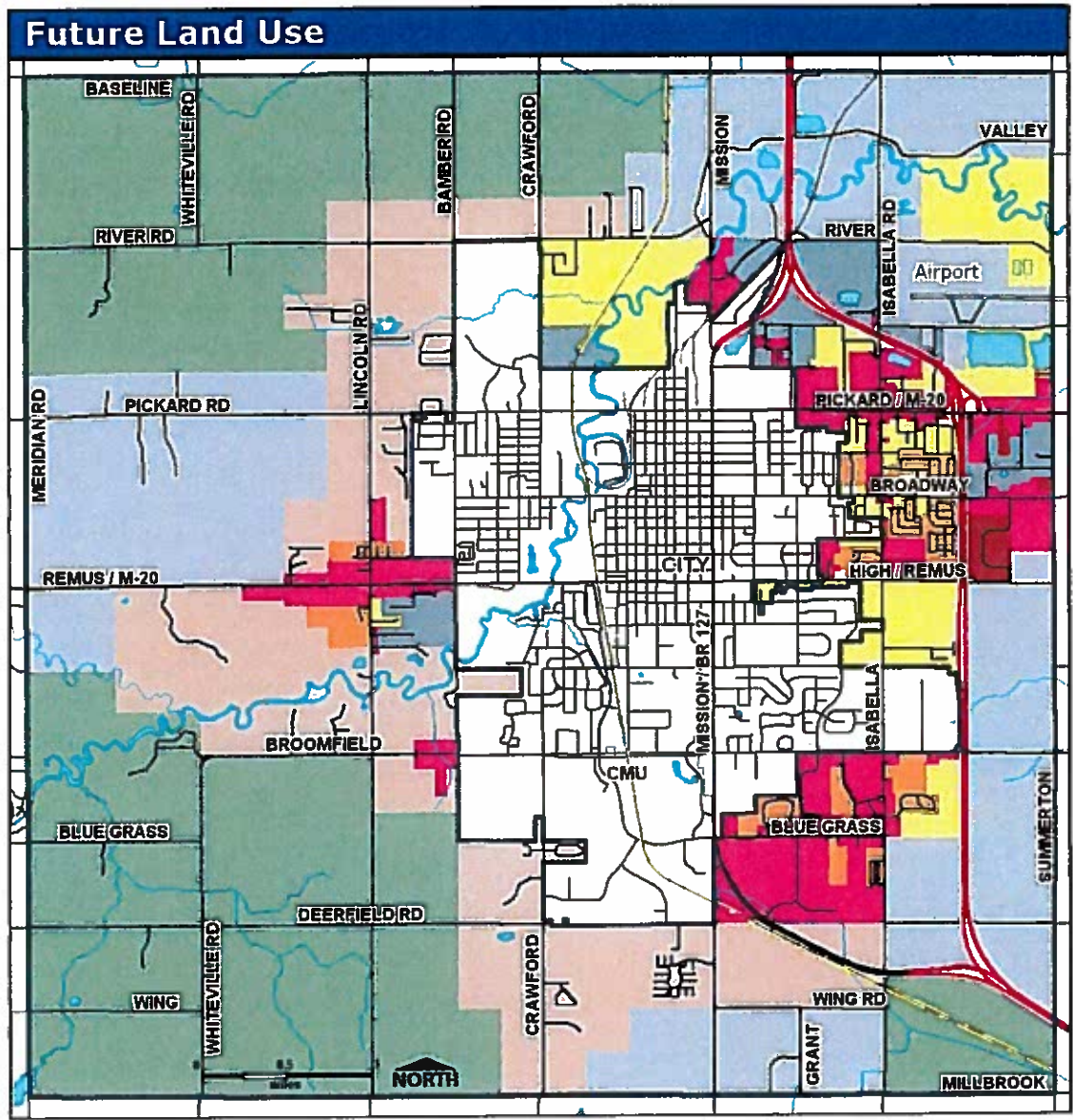
1. Plan Goals – We will be discussing the current plan's goals, as well as some preliminary ideas for how they might be refreshed. Please review the existing plan goals and objectives at the end of each chapter and reflect on whether any adjustments are necessary.
2. Map Exercise – You will be asked to make note of specific areas in the Township that should either be preserved as they are, enhanced, or transformed from their current state into something else entirely. These may be site-specific (for example, a community eyesore) or larger in extent as you see fit. Please review the Township Zoning Map or another community-wide map and find at least one example of each category Preserve, Enhance, Transform.
3. Process – After tonight's meeting, we will update the community demographics and community groups sections of the plan, and will create infographics based on our findings. By our next meeting, we will have begun analyzing the future land use (FLU) section of the plan and will solicit your input during a work session on the FLU map. The remaining meetings will be discussed in greater detail as the process moves forward.

Later in the process, the Township will be sending a copy of the draft Master Plan update for your review and comment, as required by the Planning Act.

Thank you, in advance, for your cooperation and assistance. We look forward to meeting you!



Map 17 Future Land Use



Future Land Use

- A-1
- A-2
- A-3
- Commercial
- Industrial
- Residential
- High-Density Residential
- Tribal Trust Lands

Map Produced In March 2011 by:  
Union Township GIS Department

Respondents were asked: "What do you believe is the most important issue affecting the quality of life in Union Township?" The issue of jobs and the economy ranked among the top three general categories of responses. Examples of these comments are: "to financially survive, more jobs needed," "job availability," and "not enough decent paying jobs to provide a decent lifestyle." This is consistent with residents' support of growth in industrial development.

## Stakeholder Interviews

Several of the stakeholders interviewed for the Master Plan commented on commercial and industrial issues in the Township:

**Saginaw Chippewa Indian Tribe** stated that they would like to partner with township and region to promote tourism and lobbying strength.

Representatives from the **Middle Michigan Development Corporation** emphasized that the Township is prime location for industry because of easy access via railroad, M-20, US -127, and the airport. They also commented that they believe the Township needs more industrial land but that it may not be beneficial for the Township to own their own industrial park. And finally, they made the observation that areas can't fight among themselves - this causes businesses to go elsewhere - everyone needs to partner to make it work.

## GOALS AND OBJECTIVES

4.1 Goal: Prevent premature conversion of agricultural land to scattered non-farm development

- Ensure that lot sizes in Agricultural zoning districts are large enough to prevent fragmentation of identified priority agricultural areas
- Do not approve sewer or water line extensions into or across priority agricultural areas

4.2 Goal: Establish clear priorities for land to be developed in the Township

- Create a map of lands most appropriate for development, buffer lands, and priority preservation areas



- Consider rezoning requests only in those areas designated for the next “tier” of development
- Revise the zoning ordinance to include clear rules for development in agricultural areas
- Steer future commercial and industrial development toward appropriate infill sites before approving new developments in greenfield locations.

4.3 Goal: Revise Zoning Ordinance to meet currently identified needs and wants.

- Ensure that mixed use opportunities are available in the zoning ordinance, to encourage sustainable and walkable development.
- Update zoning ordinance per guideline in the MDA Agriculture Tourism Zoning Guidebook.
- Evaluate employment opportunities in the region and include appropriate industrial/office lands in the Master Plan so that the Township can contribute to employment for its citizens.
- Evaluate the availability of commercial lands (including vacant and underutilized properties) and target development in those areas first.

4.4 Goal: Promote a sustainable community.

- Find partnerships to develop a community-based food system
- Develop community food profile for the region with partners
- Ensure that the future land use plan reflects a balance between employment, services, residential and rural uses.

## GOALS, OBJECTIVES AND TASKS

Several of the Goals and Objectives identified by the Township Planning Commission relate to utilities:

5.1 Goal: Promote collaborative efforts among municipalities and agencies.

- Plan utility expansion and use with adjacent agencies and municipalities.  
- Well head Protection w/ City 12/2011

5.2 Goal: Revise Zoning Ordinance to meet currently identified needs and wants.

- Establish a well head protection program with appropriate zoning ordinance changes using the resources available from the State of Michigan. *Started*
- Utilize the sewer service areas as a guide in zoning decisions.
- Consider groundwater quality in zoning decisions
- Require additional information for site plans proposed in groundwater recharge areas
- Add impervious surface limitations to the Zoning Ordinance
- Revise parking regulations with a maximum number of allowed parking spaces, land banking of areas for parking and allowances for pervious surfaces in parking and loading areas.
- Require vegetated buffers from all wetlands, streams, lakes and rivers to protect water quality.
- Update screening requirements to allow rain gardens, bioswales, bioretention areas and filter strips.
- Require septic systems to be located at least 100 feet from a lake, wetland, stream or other water feature.

5.3 Goal: Preserve Farmland and Agricultural Interests.

- Expand infrastructure in a coordinated and efficient fashion.
- Permit extension of water and sewer pipes into or across prime agricultural areas only when absolutely necessary.



## Capacity Increases and Pipe Extensions

Some excess capacity is always needed in a wastewater or water system in order to handle extraordinary events. These events could be a hot summer month when many are watering their lawns or significant seepage of storm water into the waste water system. However, both the Mt. Pleasant system and the Township system, once planned upgrades are installed, will have capacity beyond the needed cushion. The excess capacity can be a catalyst for inefficient growth unless utility extensions are carefully controlled and regulated.

In order to maintain the integrity of the master plan and control growth in Union Township in an orderly manner, further capacity increases beyond what is existing, under construction or proposed in approved capital improvement plans should only be constructed in one of the following circumstances:

- An upgrade in capacity is critical to the health and safety of Union Township residents and service customers.
- An upgrade is needed to maintain the operational safety of a facility.

Pipes should only be extended to new areas in the Township under the following circumstances:

- The area to be serviced is directly adjacent to property currently serviced by the system proposed for extension.
- The area is currently undeveloped and master planned for a land use requiring sewer and/or water services.
- The area to be serviced is not an area designated for agricultural protection by either the Union Township Master Plan or the Isabella County Master Plan or unnecessarily passes through an agricultural protection area.
- The extension of the services will not adversely impact the Chippewa River, streams, lakes, wetlands, groundwater recharge areas or well head protection areas.
- Services are needed due to changed circumstances to provide safe drinking water or waste water treatment to existing residents.



6.4 Goal: Promote a sustainable community.

- Link sanitary sewer and municipal water expansion to future land plan
- Produce and distribute educational materials for residents on how to limit water use outside their homes and how to capture storm water runoff through rain barrels, rain gardens and green roofs.
- Promote and encourage design methods to lessen storm water run-off and pollution, also known as low impact development (LID), by providing educational materials and a list of area contractors skilled in this area.



## GOALS, OBJECTIVES AND TASKS

6.1 Goal: Establish and promote non-motorized transportation.

- Integrate paths with sidewalks and bike lanes.
  - Prepare a complete inventory of sidewalks and bike lanes throughout the area.
  - Identify gaps, particularly between parks, apartment complexes, neighborhoods and subdivisions and important destinations
  - Prioritize necessary connections based on the nearby users/residents and the routes to important destinations
- Require sidewalks in all new developments.
  - Consistently implement the provisions of the Sidewalks and Pathways ordinance adopted in 2009
  - Utilize the Healthy Development Checklist, published by the Walkable Communities Institute ([www.walkable.org](http://www.walkable.org)) when reviewing new site plans
- Establish sidewalk program to construct sidewalks where they are required.
  - Utilize the Township's Pathways Committee to inventory the gaps in sidewalks and prioritize new installations
- Connect all schools, parks, apartment complexes, neighborhoods and subdivisions and bus stops.
  - Create a GIS inventory of apartment complexes, parks and bus stops
  - Connect with sidewalk/pathway inventory to identify gaps
  - Prioritize areas within ¼ mile of bus stops and schools for sidewalk and pathway installation
  - Adopt Complete Streets design standards.
- Promote mixed use developments to encourage walkability
  - Revise the zoning ordinance to permit mixed uses in commercial and high density residential areas
- Offer incentives for reuse of vacant structures to encourage infill and density

C.2

Goal: Create an access management plan as a part of the overall redevelopment plan for Bluegrass Road.

- Adopt access management policies and a definitive plan for driveway closures, driveway placement, shared parking, non-motorized access and limitation of turning movements.
  - Create a GIS inventory of all existing driveways and access points along Bluegrass Road
  - Create a land use inventory along the corridor, including vacant properties
  - Work with property owners to establish a plan for appropriate access to each business, including possible shared access points, and closing driveways that are no longer necessary
  - For public safety purposes, ensure appropriate number of access points for large residential complexes, creating new ones and connecting to adjacent developments where possible
  - Revise the zoning ordinance to require joint access for new development

element in most of the other issues that ranked as high priority for township residents, including road improvements and alternative energy.

## Stakeholder Interviews

During the stakeholder interviews, planners asked participants about their relationship with the Township. The responses relevant to housing issues are included below:

Central Michigan University: would like to work with the Township to improve the appearance of apartment complexes geared toward students. The University is not planning to add housing to campus.

Isabella County Farm Bureau: would like more land zoned to encourage higher residential densities and therefore less land area used for residential purposes. They would also like to see fewer large-lot splits in the agricultural areas. These activities would be intended to encourage infill rather than green field development.

## GOALS, OBJECTIVES AND TASKS

Several of the Goals and Objectives identified by the Township Planning Commission relate to housing, and developing a wide range of housing opportunities.

7.1 Goal: Promote collaborative efforts among municipalities and agencies.

- Plan proactively for the needs of students in all areas, specifically transportation, safety and housing.
- Promote the region as a destination for industry and tourism.

7.2 Goal: Revise the zoning ordinance to meet currently identified needs and wants.

- Study affordable housing needs, so that the housing stock meets the needs of a wide variety of ages, family structures and income levels. Note that the existing



### Table 7.5 Support for Change

Residents Sample, Percentage Distributions	Definitely Support	Probably Support	Probably Oppose	Definitely Oppose
Curbside recycling	57.1	17.5	8.5	16.8
Protect existing farmland	46.5	44.0	7.4	2.1
Develop more low income housing	36.1	39.1	14.9	9.9
Growth in industrial development	33.9	40.6	14.4	11.1
Creating cohesive neighborhood	22.3	24.4	34.0	19.3
Growth in commercial development	20.9	46.2	21.8	11.1
Develop more upscale housing	8.3	27.3	36.0	38.5
Develop more rental housing	2.5	10.9	30.3	56.3

Students' opposition is most pronounced in three areas. About 50 percent of the student sample is probably or definitely opposed to developing more upscale housing and to the growth in industrial development. Interestingly, 45 percent of the student sample is also probably or definitely opposed to developing more rental housing in the township.

The issue of enhancing cooperation with local governments ranked as an

### Table 7.6 Support for Change

Student Sample, Percentage Distributions	Definitely Support	Probably Support	Probably Oppose	Definitely Oppose
Curbside recycling	80.7	17.0	1.1	1.1
Develop more affordable low income housing	65.9	26.1	6.3	1.7
Protect existing farmland	35.5	58.4	5.4	0.6
Growth in commercial development	32.2	48.0	15.8	4.1
Creating cohesive neighborhood	26.8	42.7	26.8	3.8
Develop more rental housing	23.3	32.0	29.7	15.1
Growth in industrial development	10.7	40.2	34.3	14.8
Develop more upscale housing	3.0	42.8	38.6	15.7

extremely high priority in the residents' survey. Collaboration is also a key

affordable housing that has historically been occupied by students may now be occupied more frequently by people who become permanent residents.

- document how much housing we have that meets the definition of affordable to determine if we need more of any one kind of housing with respect to our population.
- work with senior citizens and advocacy groups, such as the Isabella County Commission on Aging, to assess and meet the needs of older residents.
- Promote higher density development in all districts.
- Permit large houses on smaller lots. Decrease yard requirements.
- Promote variety in housing style and orientation.
- Promote neighborhood development through subdivision regulations and private road standards.
- Increase mixed use options by permitting residential uses in all districts and limited nonresidential uses in residential districts.
- Promote infill development through the use of higher densities, joint access, shared parking, and land use decisions that allow development only in infill areas or areas designated for the next "tier" of development.
- Revise industrial districts to permit retail, research and computer-related uses and to enhance growth.
- Adopt design guidelines for commercial and industrial development.

7.3 Goal: Create a plan for redeveloping Bluegrass Road.

- Adopt access management policies and a definitive plan for driveway closures, driveway placement, shared parking, non-motorized access and limitation of turning movements.
- Establish maximum setbacks, façade design guidelines.
- Lower the height and number of signs. Standardize signage size and placement.
- Research the feasibility and acceptability of amortizing nonconforming signs and façades.

7.4 Goal: Improve quality of rental housing

- Establish design guidelines.



- Adopt frequent inspection program.
- Improve safety features of the development.
- Establish consistent public safety system for rental complexes.

7.5 Goal: Promote a sustainable community

- Balance local and regional integrity.
- Have local employment.
  - Expand locations and types of uses allowed for increased local employment.



## GOALS, OBJECTIVES AND TASKS

Goals and Objectives identified by the Township Planning Commission relate to collaboration with neighboring communities and other agencies.

8.1 Goal: Promote collaborative efforts among municipalities and agencies.

- Plan utility expansion and use with adjacent agencies and municipalities
  - Create an ad-hoc committee to discuss future utility expansion, with a special focus on sewer and water services (which have a great impact on land use development patterns)
  - Develop a Capital Improvement Plan for the Township that is consistent with the City of Mt. Pleasant Master Plan and Capital Improvement Plan
- Share public safety resources among municipalities and the university.
  - Conduct a cost-of-services study for public safety services, in cooperation with adjacent municipalities
  - Explore inter-governmental agreements with adjacent municipalities
- Plan motorized and non-motorized transportation with all area agencies.
  - Assist the ICTC with planning for future fixed route service
  - Coordinate the road and non-motorized amenities of new developments with those in surrounding jurisdictions
- Promote the region as a destination for industry and tourism.
  - Meet regularly with area Chambers of Commerce and Downtown Development Authorities to discuss opportunities
  - Explore the development of marketing materials for the region jointly with these agencies
- Plan proactively for the needs of students in all areas, specifically transportation, safety and housing.
  - Establish a regular line of communication with CMU and receive regular updates on enrollment and projections

**Table 8.3 Summary of Collaboration Opportunities**

	What	Who	How
Sewer and Water	Distribute excess capacity to areas/municipalities that need it	Union Township Public Works City of Mt. Pleasant CMU	Ad-hoc committee Capital Improvements Plan
	Coordinate future utility expansion	Tribe	Establish water and sewer authority
Public Safety	Share public safety resources	City Fire and Police Departments County Sheriff State Police Township Board	Cost of service study Inter-governmental agreements
Housing	Plan proactively for the needs of students, seniors, and other population groups	Township Planning Commission CMU	Meet regularly to discuss student population projections
		Home builders association	Community Meetings in/near student housing developments
Transportation	Plan motorized and non-motorized transportation with all area agencies	ICTC CMU Township planning Commission Township zoning administrator DDAs County Road Commission	Coordinate design of new developments Work with ICTC on plans for new fixed route service
		Township DDA Chamber of Commerce City DDA Middle Michigan Development Corporation	Regular Meetings Marketing Materials Communicate on new and potential business activity

- Hold community meetings on a regular basis in/near student housing developments/hang outs to discuss the needs of students and how to plan for them
- Embrace change when justified. Resist the status quo when unjustified.
  - Research thoroughly new ideas to promote collaboration
  - Revisit old ideas to reevaluate their potential effectiveness apart from political concerns