

AGENDA
Cascade Charter Township Zoning Board of Appeals
Tuesday, October 8, 2024
5:30 pm
2870 Jacksmith Ave

Public may access the meeting via video conference software Zoom

Webinar ID: 885 8269 6721

<https://us02web.zoom.us/j/88582696721>

- ARTICLE 1. Call the meeting to order
Record the attendance**
- ARTICLE 2. Pledge of Allegiance to the Flag**
- ARTICLE 3. Approve the current Agenda**
- ARTICLE 4. Approve the Minutes from the August 13, 2024 Meeting.**
- ARTICLE 5. Acknowledge visitors and those wishing to speak to non-agenda items.
(Comments are limited to five minutes per speaker.)**
- ARTICLE 6. Case #24-3856 – Robert & Maria Melaca
Public Hearing
Property Address: 1800 Watermark Drive SE
Requested Action: Variance to build an addition to the existing residential structure within the rear setback.**
- ARTICLE 7. Case #24-3860 – Brian Esbaugh
Public Hearing
Property Address: 5320 McCords Ave SE
Requested Action: Variance to build an accessory building in the front yard, on an existing concrete pad.**
- ARTICLE 8. Any Other Business**
- ARTICLE 9. Adjourn**

Meeting format

1. **Staff Presentation** *Staff report and recommendation*
2. **Project presentation-** *Applicant presentation and explanation of project*
 - a. **PUBLIC HEARINGS**
 - i. *Open Public Hearing. Comments are limited to five minutes per speaker; exception may be granted by the chair for representative speakers and applicants*
 - ii. *Close public hearing*
3. **Commission discussion –** *May ask for clarification from applicant, staff or public*
4. **Commission decision - Options**
 - a. *Table the decision*
 - b. *Deny*
 - c. *Approve*
 - d. *Approve with conditions*
 - e. *Recommendation to Township Board*

**CASCADE CHARTER TOWNSHIP
ZONING BOARD OF APPEALS**

**TUESDAY, October 8, 2024
5:30 PM**

ARTICLE 4.

Approve the Minutes of the
August 13, 2024, Meeting.

Minutes

Cascade Charter Township
Zoning Board of Appeals
Tuesday, August 13, 2024
5:30 pm
2870 Jacksmith Ave SE

- ARTICLE 1.** Chair Moxley called the meeting to order at 5:30 pm.
Members Present: McDonald, Mead, Moxley, Berra, Milliken
Members Absent: None
Others Present: Community and Planning Director Andrea Hendrick, Planning Administrative Assistant Nick Govan and others listed on the sign-in sheet.
- ARTICLE 2. Pledge of Allegiance**
- ARTICLE 3. Approve the current Agenda**
Motion was made by Member McDonald to approve the current agenda. Supported by Member Mead.
Motion carried 5 to 0.
- ARTICLE 4. Approve the Minutes of the June 25, 2024 Meeting**
Motion was made by Member Berra to approve, the June 13, 2024 meeting minutes Supported by Vice Chair Milliken.
Motion carried 5 to 0.
- ARTICLE 5. Acknowledge visitors and those wishing to speak**
There was no one wishing to speak.
- ARTICLE 6. Case #24-3846 Kraft Avenue Partners LLC., Scott Geerlings**
Property Address: 5824 Kraft Ave SE
Requested Action: The applicant is requesting a variance for driveway spacing.
Planning Director Hendrick presented the case, explaining that the applicant was requesting a variance for driveway spacing less than 300 feet apart. She noted that this was part of a larger project that had previously come to the planning commission.
Hendrick explained that the property is part of an industrial campus, and the applicant

was recently approved to build a building to the north of this site. The current request is for an expansion with another building.

Hendrick detailed that the north and south buildings would work together with a U-shaped drive located on the subject property. Because the driveways are closer than 300 feet, they require a variance from the zoning ordinance. She emphasized that the applicant is asking for the minimal variance necessary and has worked well with staff to address concerns. Hendrick recommended approval, noting that the design is appropriate and consistent with the rest of the development on Kraft Drive.

Jack, representing Scott Geerlings, provided additional context about the request. He explained that there is an existing building just to the north of their property that was previously granted a variance for U-shaped driveways. Jack pointed out that the existing driveways to the north are closer together than what they are proposing.

Jack clarified that the existing use to the north was not developed by Mr. Geerlings, but it was approved for less than the 300 feet spacing requirement. He stated that they are requesting a spacing of 267 feet between driveways.

Jack then explained that Mr. Geerlings had purchased the existing home and parcel at 5844 Kraft Avenue in order to maximize the spacing they could achieve. He said that they pushed the drive as far as they could, and that the existing house would be demolished. The new driveway would come out close to where the existing driveway is, resulting in the 267-foot spacing.

**Motion was made by Trustee McDonald to open public hearing.
Supported by Member Mead.
Motion carried 5 to 0.**

John Kuiper, with Advantage CRE, spoke in support of the request on behalf of Trane. He emphasized that the drive is a key component for safety and flow, helping to keep truck and car traffic moving in a circular fashion to limit disruption.

Motion was made by Trustee McDonald to close public hearing.

Supported by Member Mead.

Motion carried 5 to 0.

Member Mead noted that staff had done a thorough job capturing everything and providing a strong recommendation.

Motion was made by Member Mead to approve the variance for a reduction in the minimum spacing requirement between a proposed driveway and all other driveways from 300 to 267 feet at 5824 Kraft Ave SE.

Supported by Member Berra.

Motion carried 5 to 0.

ARTICLE 7. Case #24-3847 Ed with Stedfast Construction Inc, Kingsland Ace Hardware

Property Address: 6579 28th Street SE

Requested Action: The applicant is requesting a variance to maintain an existing nonconforming setback for reconstruction.

Scott Kingsland, representing Ace Hardware, presented a request for a variance to rebuild an existing non-conforming storage facility. He explained that they wish to update the building to match their newer buildings while maximizing storage space. Scott noted that the existing west wall, which is on the property line in question, is currently metal with wood studs and wouldn't meet current code for a remodel. Their proposal is to rebuild with a block wall to bring it up to code and make it last longer.

Member McDonald asked Scott about the possibility of placing the building in a conforming location, noting that staff had inquired about this. Scott responded that due to limited indoor storage space, losing the extra footage would significantly impact their operations. He emphasized their desire to maximize the use of the land and storage space, noting that the property to the west is more of a culvert and drainage ditch, currently unusable.

Trustee McDonald also inquired about the potential to move some outdoor storage items inside. Scott confirmed this was part of their goal, aiming to clean up the site a bit as well.

Chair Moxley asked about the foundation plans. Scott confirmed they would redo the foundations to bring them up to code.

Member Mead asked if there were existing issues with water runoff from the current newer buildings. Scott addressed concerns about stormwater management explaining that there are drains in the front that are part of the existing new buildings, and all water that runs off flows to the east side and down the hill, completely off the east side of the property, not off the backside. He stated that this would be the same situation with the new building, tying all drains into the same system so that all water drains to the east.

Chair Moxley asked about the roof design to which Scott confirmed that it would run north and south, with no runoff going towards the west. He added that this would match the two existing newer constructed buildings that are currently there.

Planning Director Hendrick provided context and expressed staff's difficulty in recommending approval based on variance standards. She explained that when the building was originally approved in the 1970s, it appeared that the side yard setback for this zone district was zero lot line, so the original building met the requirements of the ordinance at that time. However, current standards expect non-conforming buildings to come into conformity when rebuilt.

Planning Director Hendrick highlighted concerns present by nearby residents about erosion, particularly related to a more recent addition on the northeast side of the property. She presented pictures showing erosion issues, including the use of tarps as a temporary solution that had remained in place for years. She noted that some trees that were removed were never replaced, leading to ongoing erosion and water problems.

Hendrick emphasized that one of the reasons for requiring side yard setbacks is to provide space for landscaping and vegetation needed to maintain the existing terrain. She explained that these issues were seen as problematic in not requiring the site to meet the setback requirement for the new build.

Member Mead questioned whether this would be classified as a complete tear-down and if there had been any discussion with the building department about renovation versus new construction classification. Planning Director Hendrick explained that based on the project's value relative to the non-conforming structure, it did not meet the

threshold to maintain non-conformity, making this variance the only option available to the applicant.

Motion was made by Trustee McDonald to open public hearing.

Supported by Vice Chair Milliken.

Motion carried 5 to 0.

Ed Holmes (6569 Waybridge Dr SE), expressed concerns about the building's appearance and potential impact on property values.

Marcia Dillard (Grenelefe Condo Association), raised concerns about runoff to the backside of the property towards the north and tree removal from previous construction. Scott addressed this by responded that they would keep as much of the trees as possible and that they are looking into solutions to correct the runoff.

Motion was made by Member Mead to close public hearing.

Supported by Vice Chair Milliken.

Motion carried 5 to 0.

Member Mead added that if the variance were granted, the applicant would need to bring everything up to current compliance standards, particularly regarding runoff issues, as part of the site plan review process. Planning Director Hendrick responded that they would be subject to site plan review that would make sure it complies with the stormwater issue.

Trustee McDonald led the final discussion, noting that while staff's recommendation to deny the variance was correct based on the ordinance, there were exceptional conditions to consider. He outlined those conditions discussed the property complying with the ordinance when originally constructed, the neighboring property to the west writing a letter of support, the design keeping stormwater on site, as well as allowing for moving the items stored outdoors would be moved indoors.

Motion was made by Trustee McDonald to approve the variance based on factors discussed with the following conditions.

- 1. No changes that affect ingress or egress to the property.**
- 2. The roof slope of the new structure is changed to pitch from north /south (currently east/west flow), to keep storm water runoff on the Kingsland property.**
- 3. The new building is in line with the main store building's setback.**

Supported by Member Mead.

Member Moxley abstained due to previously voting on the case at the Planning Commission.

Motion carried 4 to 0.

ARTICLE 8. Any Other Business

No other business.

ARTICLE 9. Adjourn

Motion was made by Member Mead to adjourn. Supported by Member Berra.

Motion carried 5 to 0. The meeting adjourned at 6:03PM.

ZONING BOARD OF APPEALS

**TUESDAY, October 8, 2024
5:30 PM**

ARTICLE 6.

Case #24-3856 – Public Hearing

Applicant: Robert & Maria Meleca

Property Address: 1800 Watermark Drive SE

Parcel Number: 41-19-06-489-012

Requested Action: Variance to build an addition to the existing residential structure within the rear setback.

Zoning & Parcel Map





CASCADE CHARTER TOWNSHIP

5920 Tahoe Drive SE Grand Rapids, Michigan 49546-7140

PLANNING DEPARTMENT STAFF REPORT

STAFF REPORT: Case # 24-3856
 REPORT DATE: October 3, 2024
 PREPARED FOR: Cascade Charter Township Zoning Board of Appeals
 MEETING DATE: October 8, 2024
 PREPARED BY: Andrea Hendrick, Planning Director

APPLICATION SUMMARY

APPLICANT: Applicant: Robert & Maria Meleca
 Property Owner: Robert & Maria Meleca

ADDRESS: 1800 Watermark Drive SE

PARCEL NUMBER: 41-19-06-489-012

REQUESTED ACTION: The applicant is requesting a variance to build an addition to the existing residential structure within the rear setback.

REQUIREMENTS: PUD-15: Watermark Planned Unit Development
 Section VIII.A.2(c) Setback Requirements.
 Zoning Ordinance
 Section 23.07: Functions, Considerations – Decisions and Authority of the Zoning Board of Appeals

EXISTING ZONING: PUD-15 – Watermark Planned Unit Development

GENERAL LOCATION: The subject property is an existing single-family residential home located on the east side of Watermark Dr. The nearest cross street to the north is Cascade Road.

PARCEL SIZE: 0.37 acres

EXISTING LAND USE: Residential

ADJACENT PROPERTIES: N: PUD-15 – Single Family Residential
 W: PUD-15 – Single Family Residential
 S: PUD-15 – Single Family Residential
 E: PUD-15 – Golf Course

PROPERTY HISTORY

1997 – Forest Hills Golf Course / Watermark Condominium Planned Unit Development Adopted

2017 – Home Built

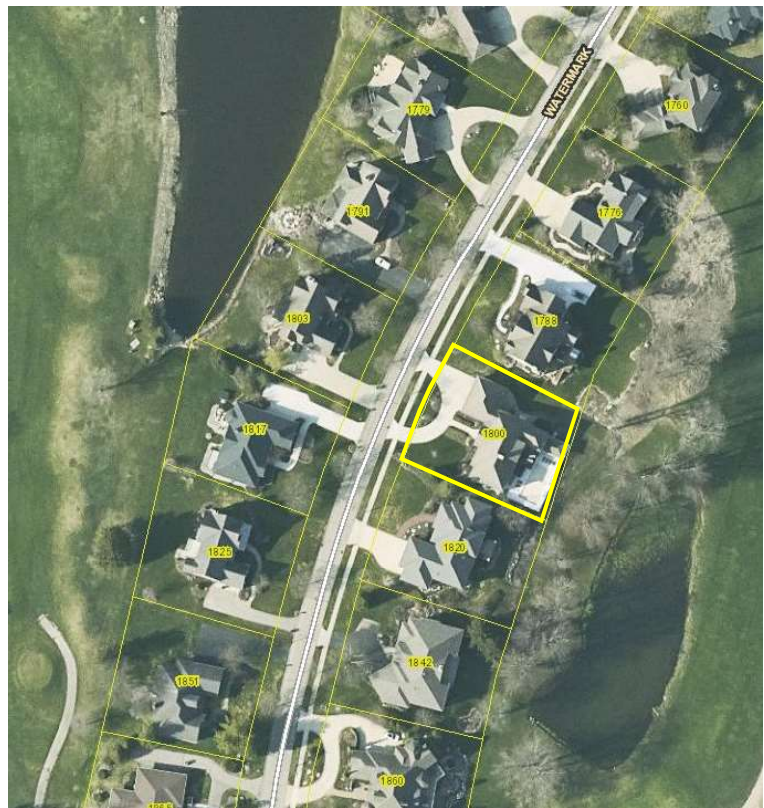
2022 – Construction of a pool

Source: Cascade Charter Township - Planning and Building Records

The current home a ranch style home with a finished basement. When it was constructed in 2017, it was comprised of 4,730 sf of finished living space, 442 sf of unfinished space in the basement, a 1,072 sf attached, three-stall garage. In addition to the single family home, a pool was added in 2022. There is also a covered patio measuring roughly 375 sf in floor area, that is built in the rear setback. No history of permits could be found for this structure.

PROPOSED USE

The applicant is proposing a 1,100 addition to the existing home. The purpose is to care for their aging parents. The addition includes two (2) bedrooms, two (2) bathrooms, and a living area with a kitchen. The addition will be accessed from a door located on the north side of the mudroom.



NEIGHBORS COMMENTS

One neighbor reached out with concerns about the size of the new addition. They felt that the site was already built to capacity. They did not understand why a variance would be required when the house is already so large.

CONSIDERATIONS

Zoning Board of Appeals Determination

The CCT Zoning Ordinance gives the Zoning Board of Appeals the authority to deliberate and determine if the proposed plans meet the standards for a Variance.

<i>Section 23.07(2)(1)</i>	<i>Findings</i>
Before granting any variance, the Zoning Board of Appeals must find that all of the following standards are met:	
That there are exceptional or extraordinary conditions or circumstances that are inherent to the property in question and that do not apply generally to the other nearby properties in the same zoning district.	The property was built on the inside of a curved road meant to accommodate the design of the golf course to the east. However, the lot is consistent in size with lots within the Watermark PUD. Additionally, other requests for variances have been submitted for Watermark Dr. and have been denied. The first case was in 2001, and an applicant wished to build the principal building two (2) feet into the rear setback at 1987 Watermark Dr. The other, in 2008, wished to construct a roof on an existing patio. No permits or documentation for approval of the construction of the deck could be found. The roof was denied; however, the deck was approved for a variance to encroach into the setback. Staff finds that this standard is not met.
That the exceptional or extraordinary conditions or circumstances are not the result of actions of the applicant taken subsequent to the adoption of this Ordinance	The applicant is choosing to build an 1,100 sf addition to a home that is already 4,730 sf. Staff finds that the creation of such a large addition is a result of action taken by the applicant. This standard is not met.
That such variance is the minimum variance that will make possible the reasonable use of the land, building, or structure.	While the requested variance is minimal, it is consistent with previous variances that have been requested in the past. Those requests were denied. Additionally, a smaller addition would still allow the applicant reasonable use of the land, building, and structure. This standard is not met.
That the granting of the variance will not be injurious to the neighborhood or otherwise detrimental to the public welfare.	The requested variance is for the rear yard, which abuts the golf course. Therefore, granting the variance will likely be minimally detrimental. Conversely, approval would set a precedent that could have a negative impact on the neighborhood.
That the condition or situation of the specific piece of property, or the intended use of the property, for which the variance is sought is not of so general or recurrent nature as to make it more reasonable and practical to amend the Zoning Ordinance.	The applicant could ask to amend the Ordinance. This is not a request that the planning department has heard on a regular basis or sees as a general and reoccurring issue within the Watermark PUD. Staff finds that this standard is not met.

RECOMMENDATION

Staff recommends that the Zoning Board of Appeals DENY the variance request for case #24-3856, a 2'2" reduction in the rear yard setback at 1800 Watermark Drive SE to expand the existing residential building because the standards for granting a variance have not been met.

ATTACHMENTS

1. Application
2. Site Plan
3. Applicant Narrative
4. PUD-15 Ordinance
5. Minutes from the 1978 Watermark Dr Variance Request
6. Minutes from the 1919 Watermark Dr Variance Request ([Link](#))



CASCADE CHARTER TOWNSHIP

Received

5920 Tahoe Dr. SE, Grand Rapids, Michigan 49546-7140

AUG 19 2024

Cascade Charter Township Planning Department

PLANNING & ZONING APPLICATION

APPLICANT: Name: Robert + Maria Meleca
 Address: 1800 Watermark Drive SE
 City & Zip Code: Grand Rapids MI 49546
 Telephone: (616) 307-8445 (maria)
 Email Address: riameleca@gmail.com + rmeleca@yahoo.com

OWNER: * (If different from Applicant)
 Name: same
 Address: _____
 City & Zip Code: _____
 Telephone: _____
 Email Address: _____

NATURE OF THE REQUEST: (Please check the appropriate box or boxes)

<input type="checkbox"/> Administrative Appeal	<input type="checkbox"/> Administrative Site Plan Review
<input type="checkbox"/> Deferred Parking	<input type="checkbox"/> P.U.D. – Rezoning *
<input type="checkbox"/> P.U.D. – Site Condominium *	<input type="checkbox"/> Rezoning
<input type="checkbox"/> Site Plan Review *	<input type="checkbox"/> Sign Variance Subdivision
<input type="checkbox"/> Special Use Permit	<input type="checkbox"/> Plat Review *
<input checked="" type="checkbox"/> Zoning Variance	<input type="checkbox"/> Other: _____ *

* Requires an initial submission of 5 copies of the completed site plan

BRIEFLY DESCRIBE YOUR REQUEST:**

see attached

(**Use Attachments if Necessary)
-SEE OTHER SIDE-

LEGAL DESCRIPTION OF PROPERTY**:

Legal Description noted on attached survey.

(**Use Attachments if Necessary)

PERMANENT PARCEL (TAX) NUMBER: 41-19 06-489-012

ADDRESS OF PROPERTY: 1800 Watermark Dr

PRESENT USE OF THE PROPERTY: Primary residence.

NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS HAVING A LEGAL OR
EQUITABLE INTEREST IN THE PROPERTY:

Name(s)	Address(es)
<u>NA</u>	<u></u>
<u></u>	<u></u>

SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) also agree to reimburse the Cascade Charter Township for all costs, including consultant costs, to review this request in a timely manner. I (we) understand that these costs may also include administrative reviews which may occur after the Township has taken action on my (our) request.

I (we) the undersigned also acknowledge that the proposed project does not violate any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.)

Owner – Print or Type Name
(*If different from Applicant)

* _____
Owner’s Signature & Date
(*If different from Applicant)

Robert + Maria Meleca
Applicant – Print or Type Name

Robert Meleca - Maria Meleca
Applicant’s Signature & Date

PLEASE ATTACH ALL REQUIRED DOCUMENTS NOTED IN THE PROCESS REVIEW SHEET – THANK YOU

Rev. 7/27/21

We would like to build an addition to our home for our elderly parents who we are taking care of. One parent has dementia that is progressing rapidly. The other is trying to take care of him; however, at 88, we need to be more available to help out. The addition's east wall (golf course facing wall) would line up with the golf course facing wall of the established home's sunroom, thus creating an aesthetically appealing structure. The variance would not encroach toward the neighbors to the North. The variance only encroaches toward the open golf course.

We are asking for a variance into the rear set back of a maximum of 2.2 feet, starting at the NE corner of the addition and tapering off to zero feet at the SE corner of the addition. An architectural floor plan is attached that outlines in yellow the "triangular shaped" area being requested as a variance.

Thank you for your consideration.

1. The area we are requesting for the variance starts at 2.2ft, at the NE corner of the addition, and narrows down to zero at the SE corner. Just a small triangle into the rear setback. That area faces our rear yard and golf course. With this variance, we can line up the addition with our current sunroom and have a roofline that conforms better to our current roof to provide a more aesthetically appealing facade and roofline for the neighbors to the north and the golf course.
2. We have aging parents who are 88 (mom) and 87 (dad). Dad has dementia that is progressing rapidly. Mom can live independently but she needs help taking care of Dad. Having them close makes the best sense so we can help. The variance is of no fault of our own. We want to provide an aesthetically appealing facade and roofline based on our current sunroom so we have an addition that looks like it has always been there and flows with the current home. The only way to do that is to request this variance.
3. The variance request is the minimum amount (small triangle shape from 2.2ft narrowing down to zero) of space needed to line up the addition with our current sunroom and roofline to create an aesthetically appealing structure.
4. The variance will not encroach toward the neighbors to the north and the addition will not be in sight of the neighbor to the south. It will not be injurious to anyone or be of any detriment to the neighborhood. All exterior products used will be the same products used on our home to continue to keep up property values by maintaining our home's curb appeal.
5. The variance request relates to our property only, due to the fact that we want to line the addition up with our current sunroom and roofline in the best structural and appealing way.
6. To comply with the ordinance will make it so we cannot line up the addition with the sunroom for a better aesthetic and we will also have to do a different roofline that would change the structure of the roof to an unappealing option. We currently have a hip roof and the addition, if the variance is approved, will be structured to resemble a hip roof versus sloped.

Thank you for your consideration.

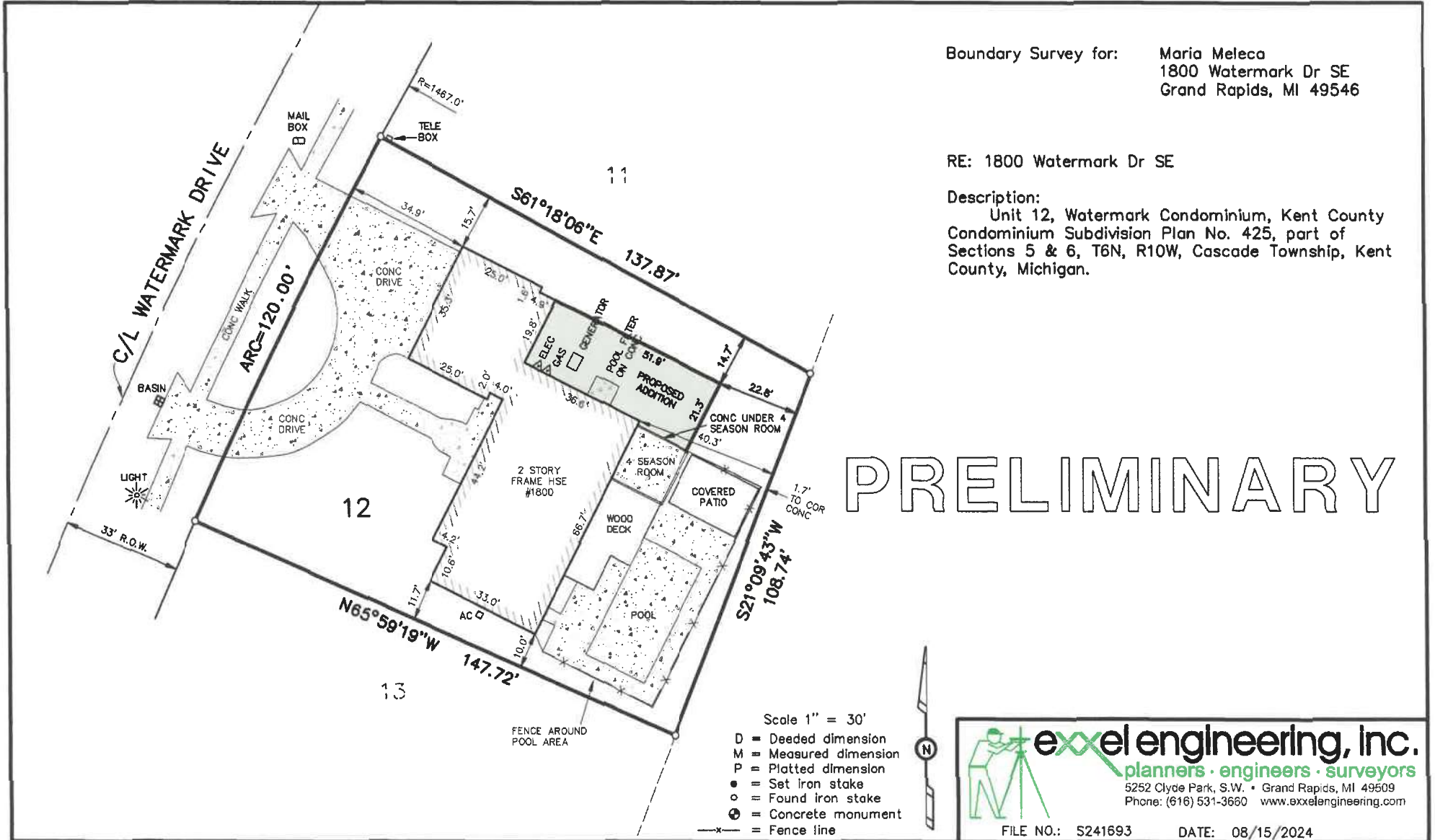
The Meleca's

Boundary Survey for: Maria Meleca
 1800 Watermark Dr SE
 Grand Rapids, MI 49546

RE: 1800 Watermark Dr SE

Description:
 Unit 12, Watermark Condominium, Kent County
 Condominium Subdivision Plan No. 425, part of
 Sections 5 & 6, T6N, R10W, Cascade Township, Kent
 County, Michigan.

PRELIMINARY



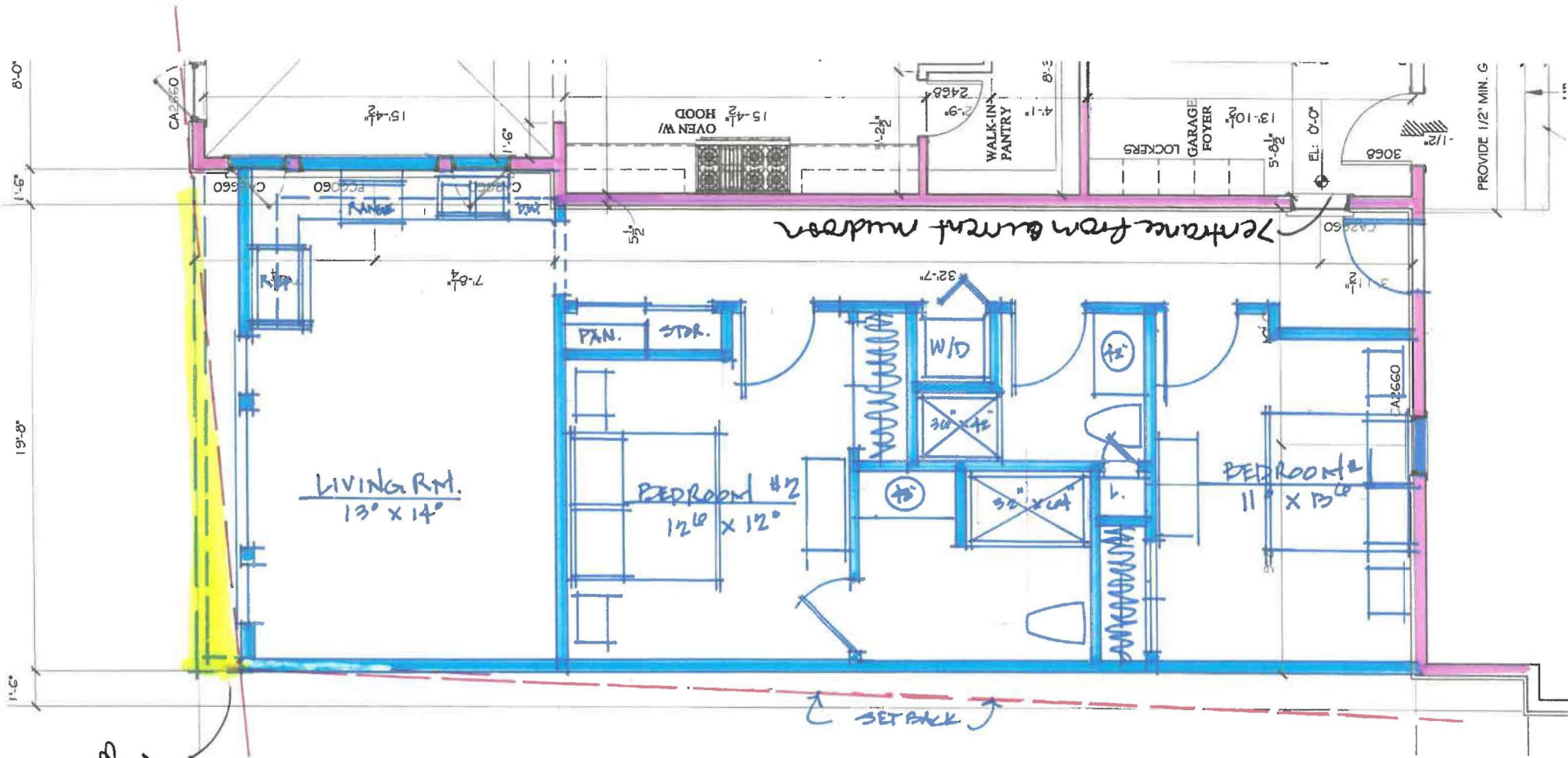
- Scale 1" = 30'
- D = Deeded dimension
 - M = Measured dimension
 - P = Platted dimension
 - = Set iron stake
 - = Found iron stake
 - ⊕ = Concrete monument
 - x- = Fence line



exxel engineering, inc.
 planners • engineers • surveyors
 5252 Clyde Park, S.W. • Grand Rapids, MI 49509
 Phone: (616) 531-3660 www.exxelengineering.com

FILE NO.: S241693 DATE: 08/15/2024

P: \Project\2024\241693\Drawings\241693.dwg-ADDN-bfey



Variance Request Area

Permit from current mddra

SETBACK

PROVIDE 1/2" MIN. G

LIVING RM.
13' x 14'

BEDROOM #2
12'6" x 12'

BEDROOM #1
11' x 13'

OVEN W/
HOOD

WALK-IN
PANTRY

GARAGE
FOYER
LOCKERS

W/D

PAN. STR.

8'-0"

9'-1"

19'-8"

9'-1"

15'-4 1/2"

9'-1"

7'-8 1/2"

5'-2"

2'-9"

3'-2"

8'-3"

4'-1"

13'-10"

5'-0"

EL: 0'-0"

3'-0"

1/2"

1/2"

1/2"



EMERGENCY EGRESS WINDOW: PROVIDE 57 SQ. FT. MIN.

36" TALL CEMENTIOUS RAILING

INSECT SCREENING

CASCADE CHARTER TOWNSHIP

Ordinance #10 of 1997

As amended by Ord No 8 of 2000; May 31, 2000
As amended by Ord No 17 of 2000; October 18, 2000
As amended by Ord No 8 of 2003; June 11, 2003
As amended by Ord No 11 of 2010; August 11, 2010
As amended by Ord No 3 of 2019; May 22, 2019
As amended by Ord No 6 of 2019; October 9, 2019

**AN ORDINANCE TO AMEND THE CASCADE CHARTER TOWNSHIP ZONING
ORDINANCE AND ZONING MAP TO ESTABLISH THE
FOREST HILLS GOLF COURSE/WATERMARK CONDOMINIUMS
PLANNED UNIT DEVELOPMENT PROJECT**

Cascade Charter Township Ordains:

Section I. An Amendment to the Cascade Charter Township Zoning Ordinance.

The application received from Forest Hills Development, L.L.C. or their assigns (hereinafter referred to as the “Developer”), for Planned Unit Development designation for the proposed Forest Hills Golf Course/Watermark Condominiums Planned Unit Development Project (herein after referred to as the “Project”) was recommended by the Cascade Charter Township Planning Commission for approval on July 7, 1997. The Project is recommended for rezoning from PUD, Planned Unit Development and R1, Residential to PUD, Planned Unit Development permitting a golf course, clubhouse, office buildings, condominiums and site condominiums. This action requires an amendment to the Cascade Charter Township Zoning Ordinance and Zoning Map to incorporate the Planning Commission’s recommendation and the Cascade Charter Township Board of Trustees’ action on August 27, 1997.

Section II. Legal Description.

The legal description of the Project is as follows:

Part of Section 5, 6 and 7, Town 6 North, Range 10 West, Cascade Township, Kent County, Michigan, described as: BEGINNING at the Northeast corner of said Section 7; thence South 89 degrees 38’ 08” West 1265.00 feet along the North line of said Section 7; thence south 00 degrees 52’09” East 1025.20 feet to a point being South 00 degrees 52’ 11” East 1023.75 feet (as measured along the East section line) and south 89 degrees 07’49” West 165.00 feet from said Northeast one-quarter of Section 7; thence North 80 degrees 49’ 21” West 253.58 feet; thence south 55 degrees 40’39” West 160.00 feet; thence south 18 degrees 19’21” East 276.02 feet to the South line of the North one-half of the Northeast one-quarter of said Section 7; thence South 89 degrees 09’24” West 1973.76 feet along said line; thence North 01 degrees 11’44” West 208.71 feet; thence south 89 degrees 09’24” West 208.71 feet; thence North 01 degrees 11’44” West 1144.75

feet along the North – South one-quarter line of said Section 7 to the North one-quarter corner; thence North 00 degrees 44'02" West 200.00 feet along the North – South one-quarter line of said Section 6; thence North 89 degrees 38'08" East 827.47 feet; thence North 00 degrees 50'19" West 549.43 feet; thence North 89 degrees 30'01" East 499.99 feet; thence North 00 degrees 50'19" West 574.90 feet along the West line of the East one-half of the southeast one-quarter of Section 6; thence South 89 degrees 30'01" West 500.00 feet along the South line of the Northwest one-quarter of the Southwest one-quarter of Section 6; thence North 00 degrees 50'19" West 824.53 feet; thence North 89 degrees 30'01" East 440.00' thence North 00 degrees 50'19" West 315.84 feet to a point being 185.00 feet South 00 degrees 50'19" East from the East – West one-quarter line; thence North 89 degrees 21'53" East 60.00 feet to a point being south 00 degrees 50'19" East 185.00 feet from the Southwest corner of Lot 32 of Cascade Gardens; thence continuing North 89 degrees 21'53" East 320.00 feet parallel with the East – West one-quarter line; thence North 08 degrees 53'53" East 170.38 feet to the extended south line of Lot 32; thence south 87 degrees 50'58" East 15.13 feet along said line to the East right of way line of Galbraith Avenue (as platted); thence Northerly along said Avenue 171.40 feet on a 1205.02 foot radius curve to the right, the chord of which bears North 04 degrees 24'39" East 171.26 feet; thence North 08 degrees 29'09" East 950.26 feet along said Avenue; thence Northeasterly 71.28 feet along said Avenue on a 33.80 foot radius curve to the right, the chord of which bears North 68 degrees 54'05" East 58.79 feet; thence south 50 degrees 41'00" East 769.59 feet along the South right of way line of Cascade Road; thence southeasterly 47.12 feet along said right of way on a 30.00 foot radius curve to the right, the chord of which bears South 05 degrees 41'00" East 42.42 feet; thence South 39 degrees 19'00" West 337.99 feet along the Westerly right of way line of MacNider Avenue (as platted); thence South 00 degrees 56'34" East 262.72 feet along said right of way and extension thereof; thence south 00 degrees 52'59" East 150.00 feet to a point being 360.00 feet West of the East line of Section 6; thence South 44 degrees 08'34" East 138.78 feet to a point being 250.00 feet South of the South line of Lot 154 Cascade Gardens and 265.00 feet West of the East line of Section 6;p thence North 89 degrees 44'58" East 265.02 feet parallel with the South line of said Lot 154; thence North 00 degrees 56'34" West 83.52 feet along the East line of Section 5 to a point being 115.50 feet South of the East one-quarter corner of Section 5; thence North 89 degrees 03'26" East 300.00 feet; thence North 00 degrees 56'34" West 107.05 feet of the East – West one-quarter line; thence North 00 degrees 56'01" West 315.42 feet parallel with the West line of Section 5 to the centerline of Cascade Road (100.00 foot wide public right of way); thence South 50 degrees 41'00" East 475.91 feet along said centerline; thence south 00 degrees 51'02" East 2080.73 feet along the East line of the West one-half of the West one-half of the Southwest one-quarter of Section 5 to a meander line for Walden Lake; thence North 89 degrees 29'54" West 69.27 feet along said meander line; thence South 48 degrees 37'43" West 66.03 feet along said meander line; thence south 03 degrees 53'41" East 75.27 feet along said meander line; thence south 24 degrees 07'03" East 95.98 feet along said meander line for Walden Lake; thence South 19 degrees 25'50" West 196.07 feet along a line which if extended would intersect the South line of Section 5 at a point being North 89 degrees 34'10" West 218.87 feet (as measured along the South section line) from the Southeast corner of the West one-half of the Southwest one-quarter of said Section 5p thence North 89 degrees

34'10" West 100.00 feet; thence South 00 degrees 25'50" West 200.00 feet to a point being 250.00 feet West of the Southeast corner of the West one-quarter of the Southwest one-quarter of Section 5; thence North 89 degrees 34'10" West 409.11 feet along the South line of Section 5 to the place of beginning. Also including all land lying between the shore line of Walden Lake and the meander line for said lake.

(225 acres more or less including right of way and Consumers Energy Parcel)

The following described property shall be amended into the Watermark Condominium PUD As amended by Ord No 17 of 2000; October 18, 2000

Part of the Northwest one-quarter of the Southeast one-quarter of Section 6, Town 6 North, Range 10 West, Cascade Township, Kent County, Michigan, described as follows: Beginning North 88 degrees 31 minutes 00 seconds West 1382.97 feet (as measured along the East-West one-quarter line) and south 01 degrees 16 minutes 48 seconds West 185.00 feet (as measured along the West line of the East 60.00 feet of the Northwest one-quarter of the Southeast one-quarter of said section) from the East one-quarter corner of said Section 6; thence South 01 degrees 16 minutes 48 seconds West 315.84 feet; thence North 88 degrees 22 minutes 52 seconds West 440.00 feet along the North line of the South 824.53 feet of the Northwest one-quarter of the Southeast one-quarter of said section; thence North 01 degrees 16 minutes 47 seconds East 297.80 feet; thence South 88 degrees 31 minutes 00 seconds East 140.00 feet; thence South 01 degrees 29 minutes 00 seconds West 16.00 feet; thence South 88 degrees, 31 minutes 00 seconds East 163.00 feet; thence North 01 degrees 29 minutes 00 seconds East 21 feet; thence South 88 degrees 31 minutes 00 seconds East 47.00 feet; thence North 83 degrees 53 minutes 00 seconds East 90.73 feet to the place of beginning.

2.9815 acres

The following legal description describes a parcel to be leased from Consumers Energy

Part of the Northwest one-quarter of the Southeast one-quarter and part of the Southwest one-quarter of the Northeast one-quarter of Section 6, Town 6 North, Range 10 West, Cascade Township, Kent County, Michigan, described as follows: Beginning on the East-West one-quarter line at a point being North 88 degrees 31 minutes 00 seconds West 1822.96 feet from the East one-quarter corner of said Section 6; thence South 01 degrees 16 minutes 47 seconds West 270.00 feet along the West line of the East 500.00 feet of the Northwest one-quarter of the Southeast one-quarter of said section; thence North 88 degrees 31 minutes 00 seconds West 230.00 feet; thence North 01 degrees 16 minutes 47 seconds East 409.92 feet; thence South 88 degrees 31 minutes 00 seconds East 225.83 feet; thence South 00 degrees 25 minutes 43 seconds East 140.00 feet (along a line which goes through a point being 101.65 feet Northwesterly (as measured along a line being parallel with and 70.00 feet Southwesterly of the centerline of Cascade Road) of the West line of the East 500.00 feet of the West one-half of the Northeast one-quarter of said section) to the place of beginning.

2.1577 acres

The following described properties shall be added into the Watermark Condominium PUD: As amended by Ord No 8 of 2003; June 11, 2003

The North Project Site:

Part of the Northwest one-quarter of the Southwest one-quarter of Section 5 and part of the Northeast one-quarter of the southeast one-quarter of Section 6, all being in Town 6 North, Range 10 West, Cascade Township, Kent County, Michigan, described as: Beginning on the West section line at a point being south 00 degrees 56 minutes, 34 seconds East 15.50 feet from the West one-quarter corner of said Section 5; thence North 89 degrees, 03 minutes, 26 seconds, East 300.00 feet; thence south 00 degrees, 56 minutes, 34 seconds East 83.52 feet along aforesaid West section line; thence south 89 degrees, 44 minutes, 58 seconds West 100.00 feet along a line being parallel with and south 250.00 feet of the south line of Lot 154, Cascade Gardens; thence North aforesaid West section line to the place of beginning.

36,375 square feet

The South Project Site:

The East 500.00 feet of the South 246.40 feet of the North 574.90 feet of the Southwest one-quarter of the Southeast one-quarter of Section 6, Town 6 North, Range 10 West, Township of Cascade, Kent County, Michigan.

2.828 Acres.

Section III. General Provisions

The following provisions shall hereby apply to the Project, in addition to those Provisions outlined in Chapter 16 of the Cascade Charter Township Zoning Ordinance (Ordinance No. 11 of 1988, as amended).

Section IV. Purpose

The Project occupies approximately 225 acres of land that presently contains a golf course, club house, and a few single family residential homes. The project is proposed to be developed into a revised golf course, a new club house and restaurant building, two office buildings, and condominium units around some of the golf holes. The Planned Unit Development technique has been chosen by the Developer to provide more control over the Project's aesthetics and appearance. This development technique provides the Developer with the ability to develop the Project in a manner to meet market expectations and develop the project in a unified manner.

The regulations contained herein are established to define the procedures necessary to insure high quality development in the Project. Additionally, they are designed to achieve integration of this development with adjacent land uses.

Section V. Approval Limitations

A. The provisions of this Ordinance are not intended as a substitute for the Cascade Charter Township Zoning Ordinance and the General Development plan, nor do they in any way relieve the Developer from obtaining all approvals and permits required by the township, except as otherwise expressly provided herein. In the event that a development issue or site plan element is not addressed by this Ordinance, the specifications and requirements of the Cascade Charter Township Zoning Ordinance shall be enforced.

B. Except as otherwise provided herein, the Developer and his assigns must meet all applicable provisions and regulations of Cascade Charter Township, as well as federal and state law, and must obtain all necessary approvals from state and county governmental agencies that are required for operation or use.

C. This PUD approval is expressly contingent upon all conditions of approval herein remaining fully effective and valid. If any condition imposed herein is determined to be illegal or contrary to law as a result of a successful legal challenge by the Developer or its assigns, or any other party, the Township reserves the right to review the entire Project under the PUD provisions of the Cascade Charter Township Zoning Ordinance, and further, to withdraw its approval of this PUD if it finds that, absent the effect of any condition imposed herein, the PUD no longer meets the standards for PUD approval contained in the Zoning Ordinance.

D. All conditions contained herein shall be binding upon the Developer, as well as its successors, tenants and assigns. The conditions may be modified or amended only pursuant to a formal amendment of the PUD approval and ordinance amendment.

E. This approval document shall be recorded with the Kent County Register of Deeds by the Developer prior to construction occurring on site and shall run with and bind the lands involved. Copies of this recorded document shall be supplied by the Developer to the Cascade Charter Township Clerk.

F. Failure to comply with the site plan or any condition of approval herein shall be deemed a violation of the Cascade Charter Township Zoning Ordinance.

Section VI. Development Areas. (amended by Ord #3 of 2019)

The Project consists of three different development areas as follows:

- | | |
|----------------------|--|
| Development Area A” | Condominiums, site condominiums, and golf course. |
| Development Area “B” | Clubhouse, restaurant, driving range, office building, swim center/health club, and other associated facilities. |
| Development Area “C” | Office buildings along Cascade Road frontage. |

These three development areas shall be governed by specific regulations contained within this PUD Ordinance as described in Section VIII in addition to the regulations found in the other Sections of this Ordinance which apply to the development in its entirety.

Section VII. Permitted Uses.

The permitted uses for the Forest Hills “Golf Course/Watermark Condominium PUD are as follows:

- A. Single Family Residences.
- B. Accessory buildings customarily incidental to a single family residence, subject to the provisions of Section 4.08 and 4.09 of the Cascade Charter Township Zoning Ordinance, as may be amended.
- C. Signs. Subject to the provisions of the Cascade Charter Township Sign Ordinance (Ordinance 12 of 1988, as amended) and this Ordinance.
- D. One (1) clubhouse/restaurant/pro shop/cart storage building with a maximum size of 30,000 square feet.
- E. One combined office building located west of the clubhouse with a maximum size of 14,000 sq ft. The building shall be consistent with the approved elevation plan approved dated 8/14/09.(Amended by Ord #3 of 2019)
- F. Two (2) office buildings. No individual building shall contain more than 10,000 square feet.
- G. One (1) 18 hole golf course with associated practice, maintenance, and accessory facilities no larger than 1,000 square feet.
- H. Swim Center/Healthclub (Amended by Ord #3 of 2019)

Section VIII. Specific Development Regulations.

The Project shall be developed in accordance with the site plan approved by the Township. No alterations, expansions or additions may take place to the Project without an amendment to this Ordinance, unless authorized otherwise herein.

**A. Development Area “A”
Condominiums, Site Condominiums, Golf Course**

1. Site Condominium/Condominium Documents and Plans.

- a. Specific controls relating to architectural elements, common elements of the site condominium and condominium projects, construction materials, size and space requirements, improvements and out buildings, specific prohibitions and rules of conduct shall be governed by site condominium and condominium

bylaws and master deeds. These restrictions shall become part of this Ordinance by reference.

b. The Project shall be developed in accordance with the site plan approved and signed by the Township. The site plan shall indicate where each condominium unit will be located and provide appropriate measurements demonstrating compliance with Section 16.11(2) of the Zoning Ordinance. Engineering plans and documents relating to utilities, topography, drainage, and the survey of the Project shall be reviewed and approved by the Township Engineer. Approval of these documents shall be based upon their meeting the requirements of Section 16.11(4) of the Zoning Ordinance and meeting recognized, acceptable engineering standards and practices. Once it has been determined that the plans have met Township requirements, the Township Engineer shall sign and mark these plan documents as “Approved”, and forward them to the Developer. Only approved plan documents shall be recorded with the appropriate county and state agencies.

c. The number of building sites may be reduced or consolidated with the Project upon review and approval of the Township Planning Department. The proposed changes to the site/survey plan to reduce or consolidate building sites shall be reviewed by the Planning Department to insure compliance with the Cascade Charter Township zoning Ordinance and this PUD Ordinance. Once approved by the Planning Department, the amended site/survey shall then be recorded with the Kent County Register of Deeds Office and the appropriate State agencies by the Developer at his cost. A copy of the recorded site/survey plan shall be forwarded to the Planning Department, so that accurate files regarding the development can be maintained.

2. Design Guidelines, Requirements and Limitations (As amended by Ord No 8 of 2000; May 31, 2000) and (As amended by Ord No 8 of 2003; June 11, 2003)

a. Maximum Number of Residential Units – The Project shall be limited to 91 building sites for single-family detached condominium units, 50 sites for traditional condominiums and 24 sites for Estate Homes, which will contain a maximum of three (3) units per building. The number of building sites within the Project shall not be increased by the Township Board. (As amended by Ord No 8 of 2003; June 11, 2003)

b. Maximum Building Height – 35 feet or 2-1/2 stories whichever is the lesser.

c. Setback Requirements – All site condominiums shall meet the following minimum setback requirements:

1. Front Yard Setback: 35 feet from the front yard area line. The following site condominium units shall maintain a minimum setback of 25

feet from the front yard area line: Sites 17 through 25, 45 through 51, and 93 through 97.

Front Yard Averaging – where the average front yard setback of two (2) or more condominium units within two-hundred (200) feet of the site in question and on the same side of the street is greater than the minimum front yard setback prescribed above, then the required front yard setback of such unit shall not be less than the average existing front yard setback of such condominium units.

2. Side Yard Setback – 10 feet minimum from the side yard area line for one side and 25 feet minimum with both sides combined.
3. Rear Yard Setback – 25 feet form the rear yard area line.

d. All clubhouse condominium units shall be separated from each other by at least 25 feet. All Estate Homes shall be setback and separated from each other as shown on the site plan dated 5-31-00. (As amended by Ord No 8 of 2000; May 31, 2000)

e. Minimum Floor Area – Each site condominium unit shall contain a minimum of 2,000 square feet of finished livable area above grade level, exclusive of the garage, decks, porches and breezeways. Each club home condominium shall contain a minimum of 1,600 square feet of livable area above grade level, exclusive of the garage, decks, porches and breezeways. Each estate home shall contain a maximum of three (3) units per building, with one unit containing a minimum of 1,200 square feet of livable area above grade level, exclusive of the garage, decks, porches and breezeways. The remaining two units shall contain a minimum of 1,800 square feet of livable area above grade level, exclusive of the garage, decks, porches and breezeways. (As amended by Ord No 8 of 2000; May 31, 2000)

f. Minimum Parking Requirements – Each site condominium dwelling unit shall have a minimum of two (2) enclosed off-street parking spaces.

g. Signs. The following signs shall be permitted for the residential and golf course development:

1. One (1) freestanding ground mounted development identification sign for each public street frontage of the development. One along Cascade Road and one along Spaulding Avenue. Such signs shall contain no more than 32 square feet and shall not be lighted in any manner.
2. Within the development each of the club home developments shall be permitted one ground mounted freestanding sign with a maximum sign area of 32 square feet.

3. The golf course shall be permitted one ground mounted freestanding identification sign with a maximum sign area of 50 square feet. This sign may be used to advertise the golf course, clubhouse, and restaurant. This sign may be installed in lieu of the existing sign that must be removed from the site. If the Developer desires to light this sign, he must first bring the proposed sign to the Planning Commission for final review and approval.

B. DEVELOPMENT AREA “B”

Clubhouse, Restaurant, Driving Range, office building, Swim center/healthclub and other associated facilities. Amended by Ord No 3 of 2019 & No 6 of 2019

Design Guidelines, Requirements and Limitations

1. All of the requirements of the Cascade Township Zoning Ordinance, as may be amended, must be complied with for site plan review for any redevelopment within the Project. Those associated facilities that are existing on site may remain and are considered acceptable (maintenance buildings).

2. The maximum size of the clubhouse/restaurant facility shall be limited to 30,000 square feet.

3. The maximum size of the professional office shall be 14,000 sq ft. as shown on the approved floor plans dated 9.3.09. This building is not to be used for any tenant or third party other than Watermark employees with the exception that the existing tenant space of no more than 3,100 sq ft may be leased out for professional office use. Examples of professional office include: attorney, engineer, accountant or other low impact type offices as determined by the Planning Commission.

The swim center building shall be built consistent with the approved site plan/elevation plan dated 7/12/19 and the approved engineering plan dated 8/7/19.
(Amended by Ord 6 of 2019)

4. **Signs** Amended by Ord No 11 of 2010

a. The existing Forest Hills Golf Course and Club East Restaurant identification sign along Cascade Road shall be permanently removed from its existing location by the time any building permits are issued for the clubhouse/restaurant.

b. The clubhouse/restaurant building shall be permitted 50 square feet of wall sign area. This sign area may be divided into multiple signs.

c. The office building shall be permitted 50 square feet of wall sign. In lieu of the 50 sq ft wall sign the owner can choose to install a 30 sq ft wall sign and a 20 sq ft ground sign in the location shown on the approved site plan dated 1/13/10. (Amended by Ord 3 of 2019)

d. A 12 sq ft directional sign at the south end of Galbraith is permitted in the location shown on the approved site plan dated 1/13/10.

**C. DEVELOPMENT AREA “C”
Office Buildings along Cascade Road**

In addition to meeting the criteria found in the Cascade Township Zoning Ordinance, as may be amended, the development of any offices within the Project must comply with the following design criteria. Some of these criteria were derived from the Cascade Road/Spaulding Avenue Corridor Study.

1. Maximum Building size of 10,000 square feet.
2. The building must be constructed with an actual sloped or pitched roof.
3. The building must be at least 50% owner occupied.
4. Parking shall not be permitted in the front yard between the building and Cascade Road.
5. Maximum building height of 25 feet.
6. Increased landscaping where necessary.
7. Low profile freestanding monument sign with no lighting of any kind.
8. Controlled access to site.
9. Front yard setback of 100 feet from any public right of way line.
10. One office building shall be permitted to be constructed during Phase I of the residential development. The second office building can not be constructed until the Phase I residential development is complete and/or Phase II has commenced.

Section XIX. Private Street Development As amended by Ord No 8 of 2003; June 11, 2003

A. The Developer shall submit a street construction, maintenance and pavement plan consistent with Section 16.11(4)(f) of the Zoning Ordinance. The Developer may establish private streets to serve the Project provided the roads are constructed in accordance with the “Cascade Charter Township Engineering Design Requirements and Standards for Private Streets” and the following specifications:

1. The road grades shall not exceed an 8 percent grade. All grades shall be sufficient to allow safe ingress/egress of emergency vehicles.
2. The private streets shall be posted with signs stating the street names. These signs shall be consistent with Kent County Road Commission standards and requirements and shall be installed at the Developer’s cost.
3. A clear vision triangle shall be established by the Developer to insure safe turning movements to and from the Project onto Cascade Road and Spaulding Avenue. This

clear vision triangle shall be developed to the specifications established by the Kent County Road Commission.

4. Any private street shall intersect any public road at a 90 degree angle.
5. Copies of any permits required by the Kent County Road Commission to connect the private street to any public road shall be provided to the Township Planning Department by the Developer.
6. Street lighting within the Project shall be provided at the developer's expense. Street lighting shall not extend more than 20 feet in height. Luminaires shall be shrouded to minimize the emission of light rays.
7. All condominium units shall be served by the internal private roads. No direct access shall be permitted to Spaulding Avenue or Cascade Road by any individual condominium unit.
8. The use of speed bumps on the private road shall be prohibited.
9. Sidewalks shall be provided on one side of the private road within the Project at the Developer's expense. The sidewalks in Phase I, II and III must be completed within thirty-six (36) months after the date on which a Master Deed for each phase of Watermark is recorded. The sidewalk along Watermark Drive within the Project shall be open for public use at all times. **As amended by Ord No 8 of 2000; May 31, 2000**
10. Overhead street lights shall be placed at the existing Cascade Road and Watermark Drive intersection and at the proposed Spaulding Road and Watermark Drive intersection, at the developer's expense, by December 2000. **As amended by Ord No 8 of 2000; May 31, 2000**
11. The Developer, at their expense, shall install a left turn lane on Spaulding Road, at the Spaulding Road and Watermark Drive intersection and shall install a deceleration lane on Spaulding Road. The Developer shall also install a deceleration lane 12 feet wide for 125 feet on Cascade Road. **As amended by Ord No 8 of 2000; May 31, 2000**
12. The North Project site of Phase IV occupies approximately 36,375 square feet of land that presently contains vacant property. This will create three new lots. The Project is proposed to be developed into single-family site condominiums. This will create an additional private street to be named Sunnybank Court. This road must comply with VIX (B). **As amended by Ord No 8 of 2003; June 11, 2003**
13. The South Project site of Phase IV occupies approximately 2.828 acres of land that presently contains a single-family residence and vacant property. This will create 5 new lots and will extend Talamore Court north to service these new lots. The dead end portion of Talamore Court is not to service more than 21 units and no new secondary access to Spaulding Road is to be constructed. **As amended by Ord No 8 of 2003; June 11, 2003**

B. In accordance with Section G of the “Cascade Charter Township engineering design Requirements and Standards for Private Streets”, the Developer of the Project shall provide a disclosure statement on all property deeds to all owners of the private street, all those who utilize the private street and all persons securing a building permit to construct a building or structure served by the private street, by applying for and securing a building permit for construction of a building or structure that utilizes the private street, all such persons shall use the private street at their own risk and the township shall not be responsible for any aspect of the private street.

C. In accordance with Section I of the “Cascade Charter Township Engineering Design Requirements and Standards for Private Streets”, it shall be the responsibility of the Developer and its successors or the individual property owners to fully maintain and keep the private access street in good repair at all times and to ensure that snow and ice is removed in a timely fashion during the winter.

D. No combustible building materials may be erected on the Project until a temporary access road is constructed to within 100 feet of the furthest point of the structure. Such road shall be a minimum 18 feet wide and be able to support 20 tons on a single axle with dual wheels and standard road tires.

Section X. Temporary Buildings.

No structure of a temporary nature; trailer, tent or construction shack shall be constructed, placed or maintained within the Project except accessory to and during construction of buildings or infrastructure improvements.

Section XI. Utilities.

A. Public Water and Sanitary Sewer – All buildings within the Project shall be served by public sanitary sewer and water at the developer’s expense. No occupancy permits will be issued for any construction within the Project until the public utility system is approved and accepted by the City of Grand Rapids and Cascade Township.

B. Stormwater Drainage – All proposed stormwater drainage facilities shall be reviewed and approved by the township engineer and the Kent County drain Commissioner’s office prior to the development of the Project. The developer shall provide the Township Planning Department with copies of all correspondence and permits received from the Kent County Drain Commissioner and Michigan Department of Environmental Quality regarding stormwater disposal and wetland issues. All stormwater drainage with the Project shall be continuously monitored by the Developer and Township Engineer to insure that there are no adverse impacts on the watersheds or adjacent properties as a result of this development. The Developer shall be responsible for any necessary improvements that are needed to control stormwater within this Project area that are caused as a result of this development.

C. The Developer shall provide all necessary easements within the Project for telephone, electricity, gas and cable television to the appropriate utility provider without cost. Said easements shall be recorded with the Kent County Register of Deeds and provided to each utility provider for their records.

Section XII. Soil Erosion Control Requirements

Prior to each phase of construction, the Developer shall submit a soil erosion control plan showing all temporary and permanent soil erosion control measures to be taken before, during, and after construction on the Project. This plan shall be reviewed and approved by the Township Engineer prior to commencing any building on the site.

Section XIII. Performance Guarantee.

To insure compliance with this Ordinance and any conditions herein, Cascade Township may require reasonable performance guarantees, as authorized under the Township Rural Zoning Enabling Act to insure completion of improvements such as, but not limited to, landscaping, drainage, lighting, roads, and utilities. The Township Board, Engineer, or Planning Department may require such guarantees at any time they deem necessary to insure completion of the improvements.

Section XI. Master Development Plan – Phasing.

The project shall conform in as much as reasonably possible to the master development plan approved by the Township Board and signed by the Township Supervisor on August 27, 1997. In the event that the developer elects to develop the project in separate and distinct phases, he shall be required to submit site plans of each phase. The Planning Commission shall review and approve these plans prior to the construction of the intended phase to insure consistency with the master development plan.

All phases of the Project shall comply with the Permitted Uses listed in section II and the Specific Development Regulations in Section VIII of this Ordinance. Site plan approval of each phase shall only be granted in accordance with Chapters 16 and 21 of the Zoning Ordinance, as may be amended.

Section XV. Consistency With Planned Unit Development (PUD) Standards.

The rezoning to Planned Unit Development will result in a recognizable benefit to the ultimate users of the Project and to the community. Current and future residents will recognize the benefits of a residential/golf development which offers a low density land use pattern while preserving open space and wetland areas around the golf course.

In relation to the underlying zoning (R1, Residential and PUD, Planned Unit Development) the Township finds the Project will not result in a material increase in the need for public services. Utility extensions and construction will be the responsibility of the Developer and will not place a material burden upon the subject property or the surrounding properties. The Project is not anticipated to cause undo impact to the stormwater drainage of the surrounding area. All stormwater and soil erosion control plans have been approved by the township engineer and the appropriate County and State agencies. All stormwater created by this development will be maintained on site. This

project should help improve the handling of stormwater within the Schoolhouse Creek Watershed.

The Project has been determined by the Township to be compatible with the General Development Plan of the Township and with the spirit and intent of the Planned Unit Development Chapter of the Zoning Ordinance.

The Township finds the Project will not result in an unreasonable negative economic impact upon surrounding properties.

The Township finds the Project to have more wetlands, green areas, and usable open space than would typically be required by the Township Zoning Ordinance. The golf course will remain as open space in the development.

Finally, the Township recognizes the Project will be under single ownership or control. The Township recognizes that the Developer or its assigns will retain ownership and control of the condominium portion of the Premises until a majority of the site condominium and condominium units are purchased for single family residential purposes.

Section XVI. Effective Date

This Ordinance shall become effective upon publication of the ordinance, or a summary thereof, in The Grand Rapids Press, a newspaper of general circulation within Cascade Charter Township.

The foregoing Ordinance was offered by Board Member Carpenter, supported by Board Member Timmons. The roll call vote being as follows:

YEAS: Carpenter, Goodyke, Julien, Kleinheksel, Timmons, Van Strien

NAYS:

ABSENT: Johnson

Marlene Kleinheksel
Cascade Charter Township Clerk

CERTIFICATION

I hereby certify the foregoing to be a true copy of an Ordinance adopted at a Regular Meeting of the Cascade Charter Township Board on the 27th day of August, 1997.

Marlene Kleinheksel
Cascade Charter Township Clerk

MINUTES

Cascade Charter Township Zoning Board of Appeals
Tuesday, February 12, 2002
7:00 pm

- ARTICLE 1.** Vice Chairman Lewis called the meeting to order.
Members Present: Beahan, Erickson, Goldberg, Lewis, Wilson.
Members Absent: Timmons (excused).
Others Present: Planner Otey, Admin. Assistant Thompson and those listed on Supplement #1.
In the absence of the Chair, Vice Chair Lewis conducted the meeting.
- ARTICLE 2.** **The agenda was approved on motion by Member Beahan and supported by Member Wilson. The motion carried.**
- ARTICLE 3.** The Minutes of the January 8, 2002 meeting were received and filed.
- ARTICLE 4.** The Planning Commission Minutes of December 3, 2001 and January 7, 2002 were received and filed.
- ARTICLE 5.** **Case #01-2456: Kevin & Laura Hausch**
The applicant requested a variance to allow the corner of the new house and deck to encroach into the rear yard setback at 1987 Watermark Drive.
- Planner Otey related the Zoning Ordinance does require a rear yard setback of 25 feet as does the Watermark PUD Ordinance. When the builder applied for a building permit in December, 2001, the site plan did comply with the setback requirements. After the foundation was poured it did not meet the setback. This property does back up to the Watermark Golf Course. Watermark will add an additional two feet of property onto the applicant's property if this variance request is denied. Planner Otey then went through the factors to be considered before granting a variance. She noted: 1) no extraordinary circumstances exist on the property; 2) the situation is a result of the actions taken by the builder; 3) the square footage of the house could be reduced, however the foundation is in. 4) Watermark is willing to add an additional two feet of property onto the back of the applicant's property which would allow the applicant to meet the setback; 5) the granting of the variance could be viewed as injurious to the neighborhood as the applicant would be enjoying a privilege that others do not

enjoy; 6) it would not be practical to amend the zoning ordinance or PUD ordinance as a result of this application.

Planner Otey recommended denial of this request as there is no hardship, it is a self created situation and Watermark is willing to add two feet of property to the applicant's lot to correct the situation.

Mr. Hausch, the applicant was present. He related his builder poured the footings. He recommended a change in the shape of a room to make it fit on the lot. Mr. Hausch related the builder tried to sell him on change of shape of house from a 45 degree angle to a 30 degree angle. Mrs. Hausch felt the carpeting would not look right if that was done. Mr. Hausch then called the township office and talked to someone in charge. He was told the township would not approve a variance to build a bigger house. Mr. Hausch related he is requesting a section of variance not across the whole house. Mr. Hausch related he asked Doug Bouwer of Watermark if they could do anything. Mr. Bouwer told him they could probably give him two feet. Mr. Hausch related because of the delay he is mortgaged out for two months and has incurred 60 days of additional expense. Property that he would have to get from Watermark will be another expense and changing the Watermark Master Deed will cost \$1,500. Most of his neighbors mentioned the variance is fine and they don't have a problem with it. Mr. Hausch related the original Watermark documents specify a side loading garage. Since then they have allowed people to turn their garage to face the front. Mr. Hausch believes the house will look good on the lot. Mr. Hausch related he does not think the golf course wants to continue re-writing their Master Deed.

Member Lewis related it sounds like the builder himself is in error here and you are standing all the expense. Member Lewis asked if the builder has insurance? Mr. Hausch responded he has made adjustments but no financial has come forth. Mr. Hausch related he is willing to ask for something whatever his resolution would be. Mr. Hausch related he bought the property three years ago and this has been an emotional roller coaster for them regarding faith and trust in their builder. Now the trust is gone. They believe he is a quality builder but they don't want to create another problem.

Member Erickson asked do you have a licensed architect or engineer? Mr. Hausch responded he thinks what happened is the way the property is shaped there was a difference of eight feet in length from one end of the property to the other. It would fit on

one corner but not the other. The second survey showed the first was in error.

Member Erickson related Exxel who drew the plans would probably have insurance for this. Mr. Hausch related two feet has already been taken from the garage. A third survey agreed with the second survey.

Member Beahan asked Mr. Hausch to clarify the 60 day mortgage problem. Mr. Hausch related the error was found just before Christmas. He filled out the variance application but wasn't able to get it in for the January meeting. He has incurred some significant expense.

Member Wilson asked where did they take the two feet off the garage. Mr. Hausch responded they took one foot between the second and third garage stall and one foot between the house and garage. The foundation was poured wrong on the garage as well.

Member Wilson supported by Member Beahan moved to open the public hearing. The motion carried and the public hearing was opened.

Planner Otey related she talked to a neighbor who had no problem. She received a letter from Watermark and they support the variance request.

Member Wilson supported by Member Beahan moved to close the public hearing. The motion carried and the public hearing was closed.

Member Wilson related there is nothing in our report that indicates there have been similar cases. Planner Otey related we had one a couple of years ago in Eastmont Meadows. There was one also on Tanglewood where the builder had to re-do the foundation to meet the setback.

Member Lewis related the Zoning Board of Appeals has to meet certain criteria. It is kind of hard to look at a situation like this with a vacant piece of property and somebody makes a mistake. Our goal is to give the smallest variance possible. In this particular instance he was surprised to see a letter by Watermark Country Club offering relief from this problem. If this variance is granted it would set a precedent. It sets a precedent.

Mr. Hausch related the point he wants to make is he would not have pursued this unless indicated by your office that this has never happened.

Member Lewis related within the last few years he does not remember any similar cases.

(Chairman Goldberg entered the meeting at 7:25 pm.)

Member Beahan related if we allow this it would start a precedent. be a tough one to follow. There is a situation here that is fairly easily remedied with the adjacent land owner willing to give property to make this legal.

Member Wilson related regarding what the township may have told you, she would be slightly angry as well. If they discouraged you from coming for a variance, it could work that way too. Member Wilson related the applicant has a recourse in another area. The Zoning Board of Appeals is charged with keeping the Ordinance intact. Financial hardship is not a criteria the Zoning Board can consider. The builder should remedy the situation financially in this.

Member Erickson related she feels for the applicant. The only thing she sees as a solution is to change the design and have the builder re-build it. It would not a big change to take off both corners.

Member Lewis related the Chair is in agreement.

Member Wilson supported by Member Beahan moved that the variance requested be denied in light of the fact there are other remedies. The motion carried.

(Chairman Goldberg acted as Chair for the remainder of the meeting.)

ARTICLE 6.

Case #02-2458: Tom Wisner

The applicant requested a variance for the construction of an accessory building to be taller than the Zoning Ordinance permits.

Planner Otey related this was originally noticed for two variances. We determined the second variance for front yard setback was not needed. We are just here for the height variance tonight. This will go before the Planning Commission next week for a Special Use permit for this building. We have had height requests in the past,

**CASCADE CHARTER TOWNSHIP
ZONING BOARD OF APPEALS**

**TUESDAY, October 8, 2024
5:30 PM**

ARTICLE 7.

Case #24-3860 - Public Hearing

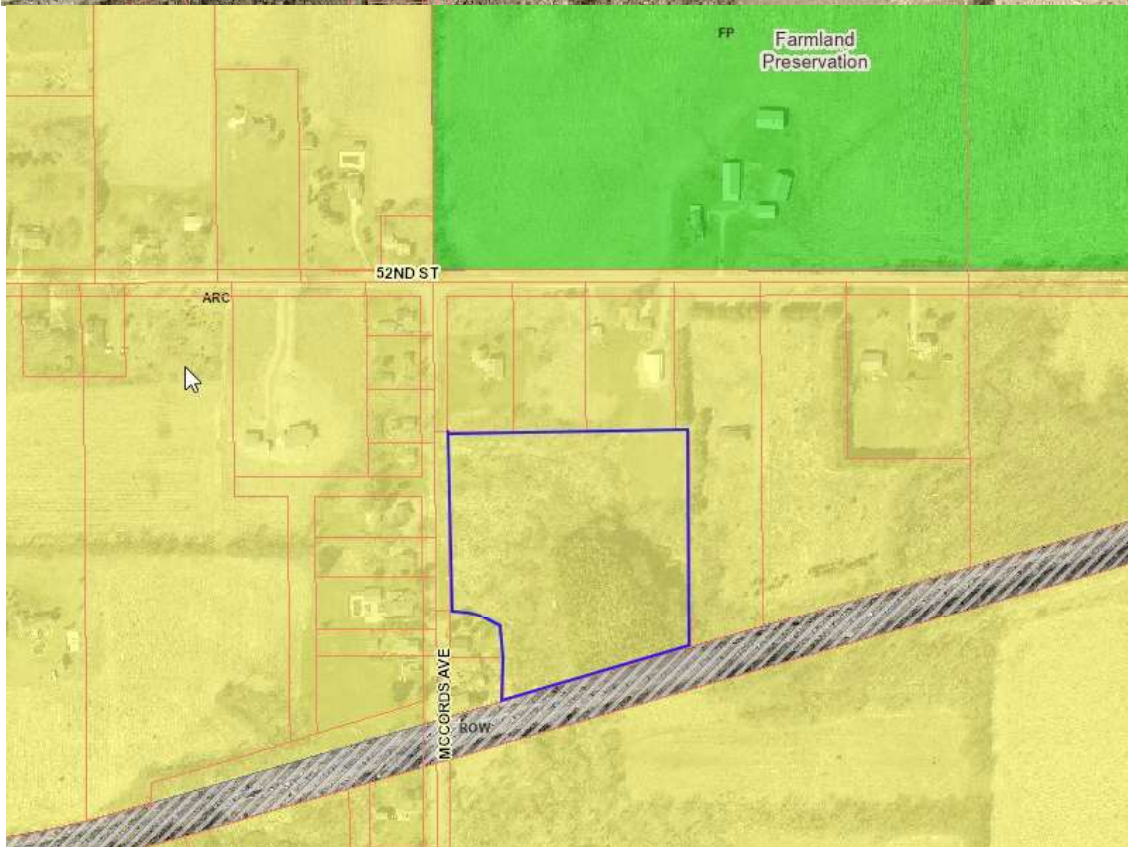
Applicant: Brian Esbaugh

Property Address: 5320 McCords Avenue SE

Parcel Number: 41-19-36-126-017

Requested Action: Variance to permit the construction of a detached garage (720 square feet) in the front yard of a lot.

Zoning & Parcel Map





CASCADE CHARTER TOWNSHIP

5920 Tahoe Drive SE Grand Rapids, Michigan 49546-7140

PLANNING DEPARTMENT STAFF REPORT

STAFF REPORT: Case # 24-3860
REPORT DATE: October 3, 2024
PREPARED FOR: Cascade Charter Township Zoning Board of Appeals
MEETING DATE: November 12, 2024
PREPARED BY: Danielle Bouchard, AICP, Contract Planner

APPLICATION SUMMARY

APPLICANT: Applicant: Brian Esbaugh
Property Owner: Brian & Traci Esbaugh

ADDRESS: 5320 McCords Avenue SE Alto, MI 49302

PARCEL NUMBER: 41-19-36-126-017

REQUESTED ACTION: A variance to permit the construction of a detached garage (720 square feet) in the front yard of a lot.

REQUIREMENTS: Section 4.08.3, Accessory Buildings and Structures

EXISTING ZONING OF SUBJECT PARCEL(S): ARC, Agriculture Rural Conservation

GENERAL LOCATION: The subject property includes a single family home (constructed in 2023) located on the east side of McCords Avenue, just north of the existing railroad right-of-way, and south of 52nd Avenue.

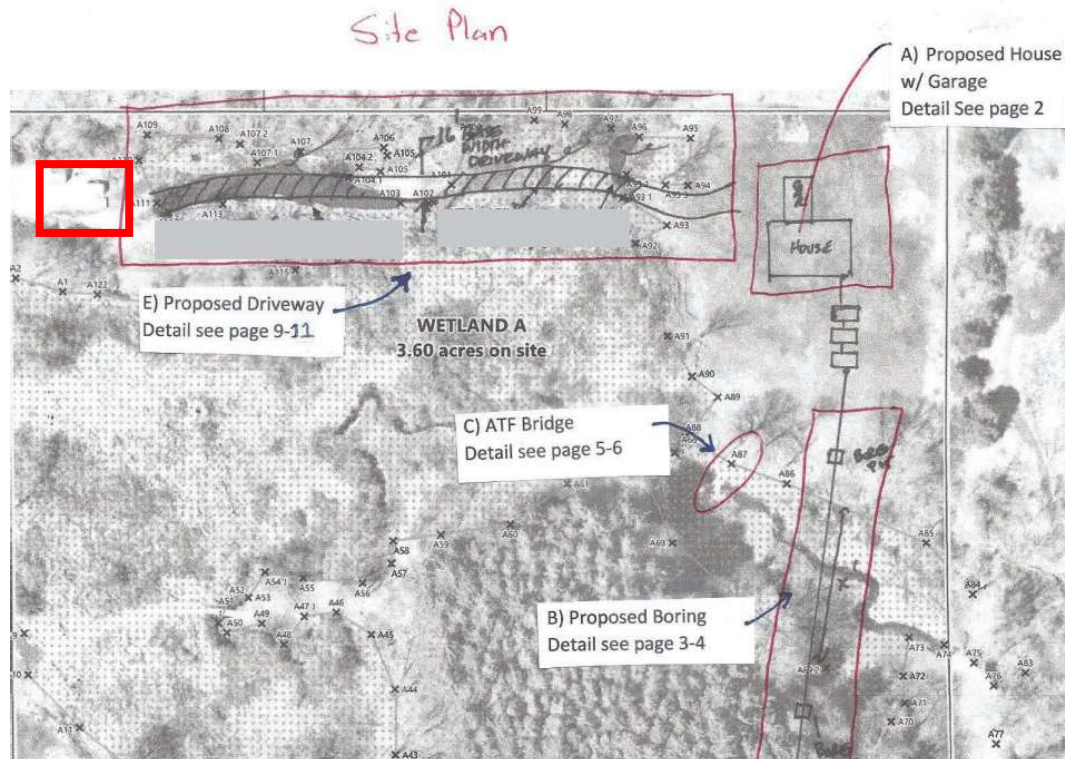
PARCEL SIZE: 7.76 acres

EXISTING LAND USE: Single-Family Residential

ADJACENT PROPERTIES: N, S, E, W: ARC, Agricultural Rural Conservation

PROPOSED USE

The applicant is requesting a deviation from Zoning Ordinance requirements, Section 4.08.3., to permit the construction of a detached accessory structure (garage) in what would be defined as the front yard of a residential lot. The proposed garage is 720 square feet in area. Section 4.08.3 requires that accessory structures be placed in the side or rear yard of a lot. The red square below indicates the proposed location of the detached accessory structure, to be located in the front yard.

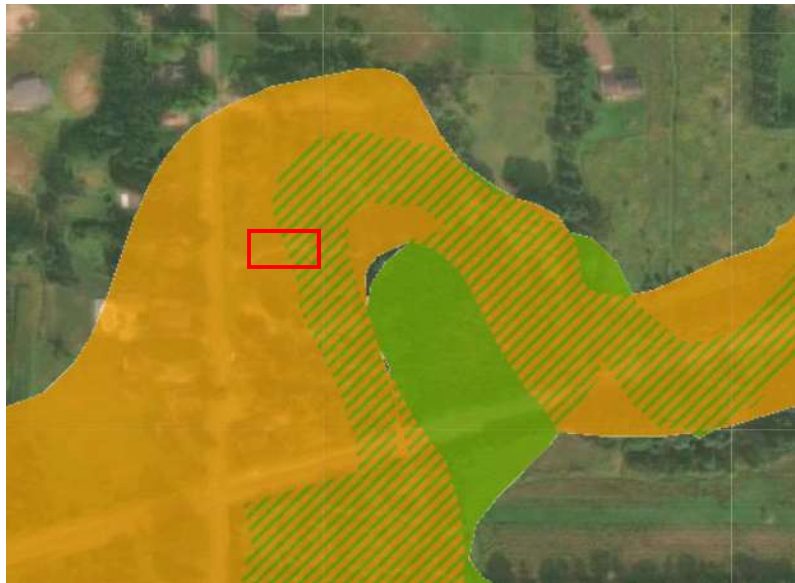


CONSIDERATIONS

Zoning Board of Appeals Determination

The Zoning Ordinance gives the Zoning Board of Appeals the authority to deliberate and determine if the proposed plans meet the standards for a Variance.

<i>Section 23.07(2)(1)</i>	<i>Findings</i>
Before granting any variance, the Zoning Board of Appeals must find that all of the following standards are met:	
That there are exceptional or extraordinary conditions or circumstances that are inherent to the property in question and that do not apply generally to the other nearby properties in the same zoning district.	The site has unique topography and wetland conditions. According to EGLE, regulated wetland conditions currently exist on the site. The image below includes a snapshot of the designated wetland areas of the site (from EGLE’s wetland viewer). According to EGLE, the site includes both wetland soils and regulated wetlands. These conditions are present throughout the entirety of the parcel.



Further, 2ft contours of the subject site, obtained from Kent County parcel viewer, indicate the site's hilly characteristics, which can result in difficult building conditions, especially considering avoiding the wetlands and wetland soils. The snapshot image below includes the 2 ft contours of the proposed building area. *Note, the aerial images were taken before the existing home was constructed.*



These conditions are unlike majority of parcels in the Township, given the site's topography and wetlands. Therefore, these conditions could be interpreted as extraordinary circumstances.

That the exceptional or extraordinary conditions or circumstances are not the result of actions of the applicant taken subsequent to the adoption of this Ordinance

The location of the wetlands and the topography of the site have been in existence prior to the adoption of the Zoning Ordinance. Further, the conditions of the site, pertaining to the wetlands and topography, are circumstances not created by action of the applicant.

<p>That such variance is the minimum variance that will make possible the reasonable use of the land, building, or structure.</p>	<p>It appears that the proposed location of the detached accessory structure is to be placed in one of the few buildable portions of the lot, given the topography challenges and wetlands. The requested variance, to place the detached accessory structure in the front yard, is the minimum variance needed that would make the construction possible on this particular site. No other variance is requested. The applicant intends to place the proposed detached accessory structure on an existing concrete pad, therefore utilizing the existing footprint of a previous structure.</p>
<p>That the granting of the variance will not be injurious to the neighborhood or otherwise detrimental to the public welfare.</p>	<p>Given that the intended characteristic of the detached accessory structure is for a residential garage, it is not anticipated that by granting the variance that the built conditions would be detrimental to the public welfare or surrounding neighbors.</p> <p>It should also be acknowledged that there are local precedents for accessory garages to be placed in the front yard. The residential site located just north of the subject site, 5250 McCords Avenue, includes a detached garage located in the front yard. Therefore, it can be reasoned that by constructing a detached accessory structure (garage) in the front yard would not result in conditions that are uncharacteristic for the area or ARC District.</p>
<p>That the condition or situation of the specific piece of property, or the intended use of the property, for which the variance is sought is not of so general or recurrent nature as to make it more reasonable and practical to amend the Zoning Ordinance.</p>	<p>If the conditions of the lot were ordinary, the variance would not be requested, as the site is large enough to accommodate both the residential home and detached accessory structure. As such, the uniqueness of the lot are the primary reasons for the variance request. Therefore, it can be reasonably inferred that the conditions of this variance are not general or recurrent in nature – given that the site’s conditions are not general or recurrent for majority of other lots in the Township.</p>

COMMENTS FROM THE PUBLIC

The Planning Department received one comment pertaining the proposed project on September 24, 2024 via phone call. The resident expressed the following:

- Mentioned past conflict with 5320 (attempted tree removal on her property)
- No explicit opposition to the current project
- Expressed hope for an aesthetically pleasing result
- Noted properties in the area are in poor and unsafe conditions

- Overall Impression: Caller seemed more concerned about the appearance of the new structure rather than opposing its construction.

RECOMMENDATION

Staff recommends that the variance request for case #24-3860, a variance for constructing a detached accessory structure in the front yard located at 5320 McCords Avenue SE, be APPROVED based on the findings above, with the following conditions:

1. The application and plans submitted by the applicant and signed, dated, and stamped by the Planning Director, shall constitute the approved plans, except if plan elements are amended in this resolution, or do not meet the requirements of the Zoning Ordinance.
2. The detached accessory structure shall be placed a minimum of:
 - a. 10' setback from the side property line
 - b. 35' setback from the front property line

ATTACHMENTS

1. Application
2. Applicant Narrative
3. Site Plan

~~\$100.00 - cash or check.~~ \$500.00 fee.
over 832sqft - special use permit.

Received



CASCADE CHARTER TOWNSHIP

AUG 23 2024

Cascade Charter Township
Planning Department

5920 Tahoe Dr. SE, Grand Rapids,
Michigan 49546-7140

PLANNING & ZONING APPLICATION

APPLICANT: Name: Brian Esbaugh
Address: 5320 McLords Ave SE
City & Zip Code: Alto, MI 49302
Telephone: 616-902-7444
Email Address: Tracie_138@yahoo.com

OWNER: * (If different from Applicant)

Name: _____
Address: _____
City & Zip Code: _____
Telephone: _____
Email Address: _____

NATURE OF THE REQUEST: (Please check the appropriate box or boxes)

<input type="checkbox"/> Administrative Appeal	<input type="checkbox"/> Administrative Site Plan Review
<input type="checkbox"/> Deferred Parking	<input type="checkbox"/> P.U.D. - Rezoning *
<input type="checkbox"/> P.U.D. - Site Condominium *	<input type="checkbox"/> Rezoning
<input type="checkbox"/> Site Plan Review *	<input type="checkbox"/> Sign Variance Subdivision
<input type="checkbox"/> Special Use Permit	<input type="checkbox"/> Plat Review *
<input checked="" type="checkbox"/> Zoning Variance	<input type="checkbox"/> Other: _____ *

* Requires an initial submission of 5 copies of the completed site plan

BRIEFLY DESCRIBE YOUR REQUEST:**

Assemble 24x30 Garage on Existing Concrete pad
Add Foundation Area At 5320 McLords Ave SE

(**Use Attachments if Necessary)
-SEE OTHER SIDE-

deadline - Nov. 20 to Dec. 18.

LEGAL DESCRIPTION OF PROPERTY**:

(**Use Attachments if Necessary)

PERMANENT PARCEL (TAX) NUMBER: 41-19 36-126-017

ADDRESS OF PROPERTY: 5320 McDords AVE. SE.

PRESENT USE OF THE PROPERTY: Private Res.

NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS HAVING A LEGAL OR
EQUITABLE INTEREST IN THE PROPERTY:

Name(s)	Address(es)
<u>Lmco - Mortg</u>	_____
_____	_____

SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) also agree to reimburse the Cascade Charter Township for all costs, including consultant costs, to review this request in a timely manner. I (we) understand that these costs may also include administrative reviews which may occur after the Township has taken action on my (our) request.

I (we) the undersigned also acknowledge that the proposed project does not violate any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.)

Brian Esbaugh
Owner – Print or Type Name
(*If different from Applicant)

Brian Esbaugh
Applicant – Print or Type Name


Owner’s Signature & Date
(*If different from Applicant)


Applicant’s Signature & Date

PLEASE ATTACH ALL REQUIRED DOCUMENTS NOTED IN THE PROCESS REVIEW SHEET – THANK YOU

Rev. 7/27/21

5320 McCords Ave SE, Alo MI 49302

1. Creek and wetlands occupy a majority of the 8 acres at this address.
2. The exceptional or extraordinary condition of this property is not the result of the applicant or predecessor.
3. The variance would allow the placement of the building on the existing concrete slab without any disturbance to site.
4. The granting of the variance would eliminate clutter that is visible to neighbors.
5. The situation for the variance is specific to this property.
6. Complying with the ordinance would present difficulty due to the location of the dwelling.

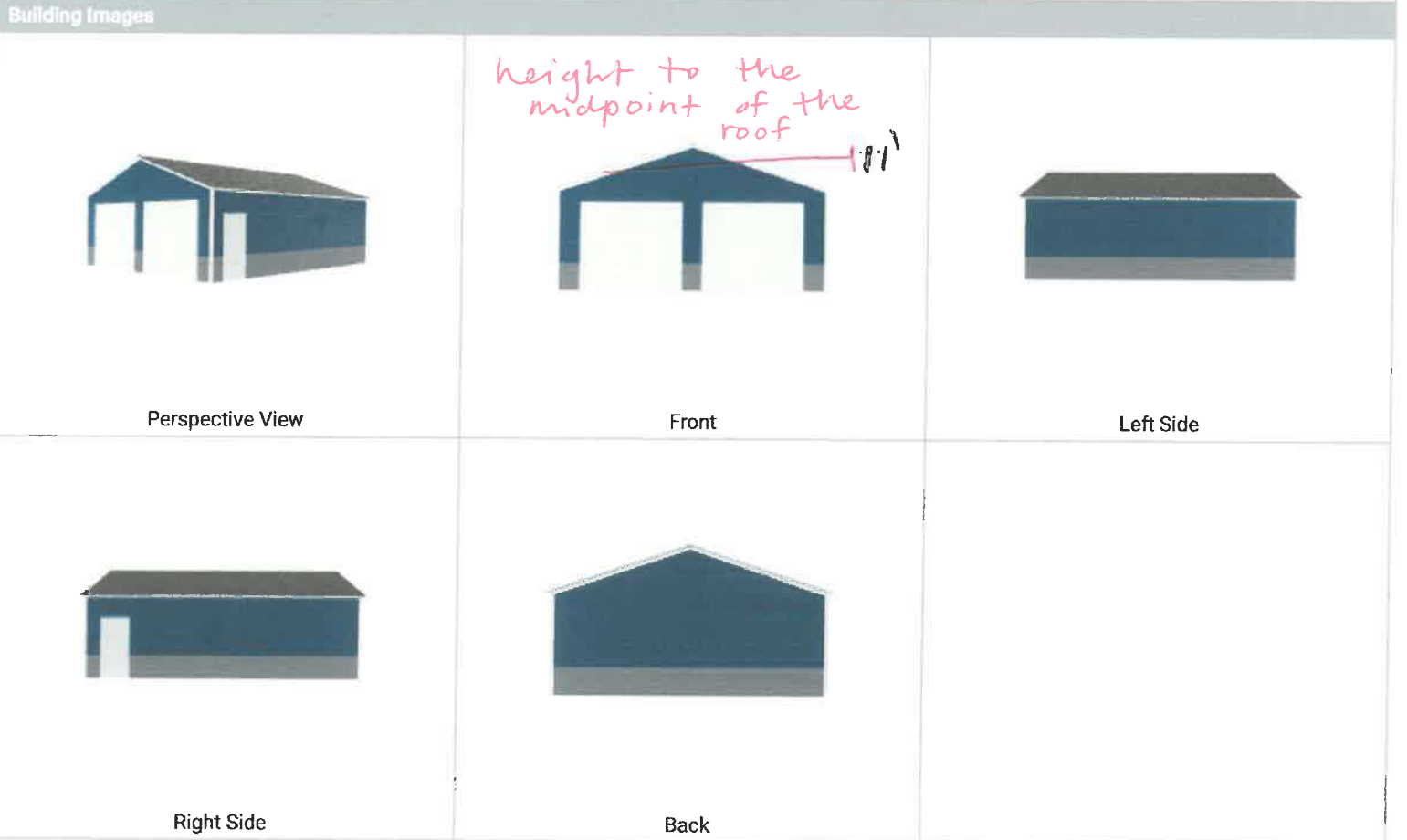


Customer Order - Aug 15, 2024

Ship To			
Name	Order # 1723755377362324		
Install Address			
City	State MI	Zip Code 49302	
Email	Phone #	Mobile #	

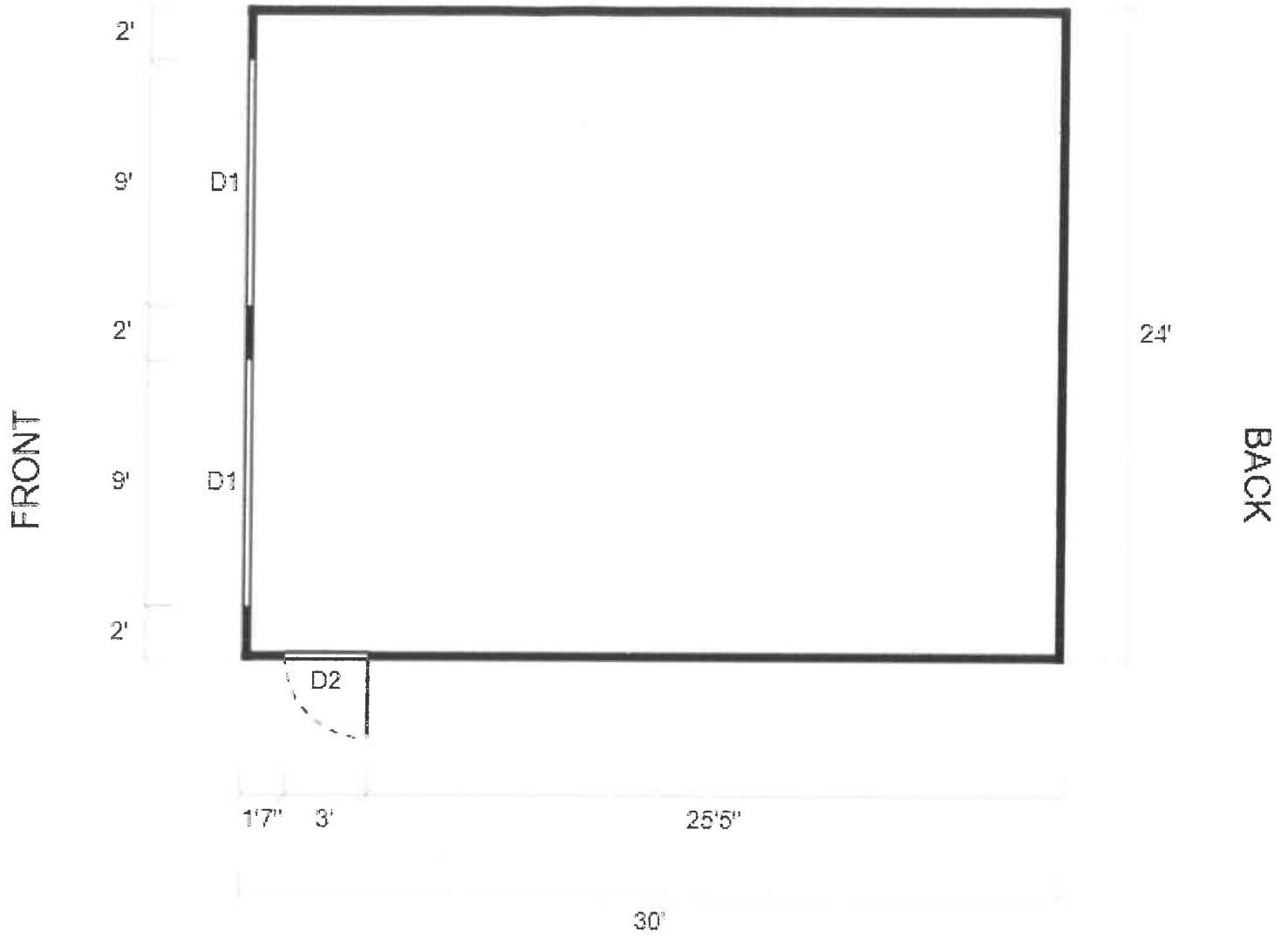
Building Info	Size	Color	Anchoring & Site Preparation
Style: Garage	24' X 30' X 9' Width X Length X Leg Height <i>4x12 pitch</i>	Roof <i>Pewter Grey</i> Burnished Slate <input checked="" type="checkbox"/>	Installation Surface: Concrete
Roof Overhang: 6"		Trim: Bright White <input type="checkbox"/>	
Roof Style: A-Frame Vertical Style		Siding: Gallery Blue <input checked="" type="checkbox"/>	
Gauge: 12-Gauge Framing		Wainscot: Pewter Grey <input checked="" type="checkbox"/>	
Leg Style: Standard			
Brace: Standard Brace			

Design Link & Notes
 Design Link: <https://steel.usabuildingsdirect.com/?lng=en-US#35ab63b3aa3c86fa1996cc33cc1f3b17>



#1723755377362324

LEFT SIDE



= 1ft

RIGHT SIDE

SYMBOL LEGEND			
D1 	9x8 Garage Door	D2 	Walk-in Door 36x80
	Closed Wall		

#1723755377362324

Section	Description	Quantity	Amount
Structure Details			
	Style: Garage	1	-
	Base Price: 24'x30'	1	\$6,910.00
	Installation Surface: Concrete	1	-
	Roof: Burnished Slate	1	-
	Trim Colors: Bright White	1	-
	Siding Color: Gallery Blue	1	-
	Garage Door: Bright White	1	-
	Two Tone Siding: Pewter Grey	1	-
	Roof Style: A-Frame Vertical Style	1	\$1,095.00
	Roof Pitch: 4/12	1	\$800.50
	Roof Overhang: 6"	1	-
	Trusses: Standard	1	-
	Gauge: 12-Gauge Framing	1	-
	Brace: Standard Brace	1	-
	Leg Height: 9'	1	-
	Left Side: Fully Enclosed	1	\$370.00
	Left Side Siding: Horizontal	1	\$533.00
	Right Side: Fully Enclosed	1	-
	Right Side Siding: Horizontal	1	\$533.00
	Front End: Fully Enclosed	1	-
	Front End Siding: Horizontal	1	\$1,350.00
	Back End: Fully Enclosed	1	-
	Back End Siding: Horizontal	1	\$1,350.00
	Anchor Package: Concrete	1	-
Roll Doors & Ramps			
	9x8 Garage Door	2	\$1,880.00
Doors & Ramps			
	Walk-in Door 36x80	1	\$430.00
	Left Outswing	1	-
Additional Options			
	Colored Screws	1	\$207.30
Additions and Adjustments			
All	Summer Sale	1	-\$2,318.85
Subtotal:			\$13,139.95
Sales Tax (6%):			\$788.40
Total Order Amount:			\$13,928.35
Deposit Required to Order:			\$2,365.19
Final Balance Due at Installation:			\$11,563.16

Signatures	
Customer Signature:	
Date:	
Desired Delivery Date:	
Delivery Notes:	

#1723755377362324

Signatures

Dealer or Manufacturer Signature:

Date:

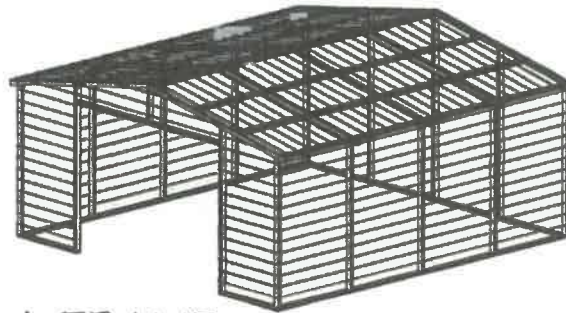
Pricing Table (For Internal Use): Northedge Steel - Michigan

This estimate is provided by USA Buildings Direct. Use of this estimate with any other company violates the terms and conditions of USA Buildings Direct and will be subject to legal action.



USA Buildings Direct
3100 Central Ave #260
Toledo, OH, 43606
844-923-3961
sales@usabuildingsdirect.com

#1723755377362324



REGULAR / A-FRAME 24'-0" WIDE CARPORT STYLE BUILDINGS

DESIGN NOTES

- ALL CONSTRUCTION SHALL BE PROVIDED IN ACCORDANCE WITH IBC 2018, OSHA, AISC 360, AISI 100, ASCE 7-16, AWS D1.3 CODES AND ALL APPLICABLE LOCAL REQUIREMENTS.
- ALL MATERIALS IDENTIFIED BY MANUFACTURER NAME MAY BE SUBSTITUTED WITH MATERIAL EQUAL OR EXCEEDING ORIGINAL.
- ALL SHOP CONNECTIONS SHALL BE WELDED CONNECTIONS.
- ALL STRUCTURAL FIELD CONNECTIONS SHALL BE #12-14 X 3/4" SDS (ESR-2196 OR EQ) WITHOUT WASHERS.
- STEEL SHEATHING SHALL BE 29GA CORRUGATED GALV. OR PAINTED STEEL - MAIN RIB HT. 3/4" (FY=80KSI) OR EQ. CONNECTIONS SHALL BE #12-14 X 3/4" SDS (ESR-2196 OR EQ) WITH NEOPRENE WASHERS.
- ALL STRUCTURAL LIGHT GAUGE TUBING AND CHANNELS SHALL BE GRADE 50 STEEL (FY = 50 KSI, FU = 65 KSI).
- STRUCTURAL TUBE 2 1/2" X 2 1/2" - 14GA. IS EQUIVALENT TO TS 2 1/4" X 2 1/4" - 12GA AND EITHER ONE MAY BE USED IN LIEU OF THE OTHER.
- GYPSUM BOARD OR DRYWALL FINISH OR ANY BRITTLE BASE MATERIAL IS NOT CONSIDERED OR ACCOUNTED FOR ON THE DESIGN CRITERIA.
- ALL DESIGN CRITERIA MUST BE INCREASED TO THE NEXT HIGHER INCREMENT BASED ON THE TABLES ON PAGE 4. NO INTERPOLATION IS ALLOWED.

DESIGN CRITERIA

PREVAILING CODE: MBC 2015 (IBC 2015)
 USE GROUP: U (CARPORTS, BARNES)
 RISK CATEGORY: I

- ROOF DEAD LOAD (D) $D = 4 \text{ PSF}$
- ROOF LIVE/SNOW LOAD (Lr) $Lr = 20 - 61 \text{ PSF}$
(AS PER SNOW LOAD SEE TABLE 4)
- SNOW LOAD (S)
GROUND SNOW LOAD $P_g = 20 - 90 \text{ PSF}$
IMPORTANCE FACTOR $I_s = 0.8$
THERMAL FACTOR $C_t = 1.2$
EXPOSURE FACTOR $C_e = 1.0$
ROOF SLOPE FACTOR $C_s = 1.0$
- WIND LOAD (W)
BASIC WIND SPEED $V_{ULT} = 105 - 180 \text{ MPH}$
EXPOSURE C
- SEISMIC LOAD (E)
DESIGN CATEGORY D
IMPORTANCE FACTOR $I_e = 1.00$

LOAD COMBINATIONS:

- $D + (Lr \text{ OR } S)$
- $D + (0.6W \text{ OR } \pm 0.7E)$
- $D + 0.75 (0.6W \text{ OR } \pm 0.7E) + 0.75 (Lr \text{ OR } S)$
- $0.6D + (0.6W \text{ OR } \pm 0.7E)$

DRAWING INDEX

COVER SHEET	----	1
SCHEDULES & MEMBER - SECTIONS	----	2
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PURLIN & GIRT SCHEDULES	----	5
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CORNER BRACING DETAILS	----	9
OPTIONAL LEAN-TO ADDITION	----	10
FOUNDATION OPTIONS	----	11-A TO 11-D

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
 LOCATION: STATE OF MICHIGAN
 PROJECT NO.: 451-22-1572
 SHEET TITLE:

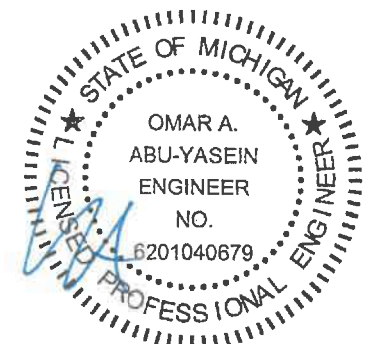
COVER SHEET

SHEET NO.: 1 / 11
 DRAWN BY: A.W. DATE: 5/17/22
 CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

- ANY DUPLICATION OF THIS DRAWING IN WHOLE OR PART IS STRICTLY FORBIDDEN. ANYONE DOING SO WILL BE PROSECUTED UNDER THE FULL EXTENT OF THE LAW.
 - DRAWINGS VALID UP TO 1 YEAR FROM DATE OF ISSUE.

SEAL:



DATE EXPIRES: 03-24-2024
 DATE SIGNED: 05-20-2022

CUSTOMER INFORMATION

OWNER:
 ADDRESS:

DESIGN LOADS

GROUND SNOW:
 ROOF LIVE LOAD:
 BASIC WIND SPEED:

BUILDING INFORMATION

WIDTH:
 LENGTH:
 HEIGHT:

FRAME TYPE: A-FRAME
 REGULAR
 ENCLOSURE TYPE: FULL
 PARTIAL
 OPEN

CERTIFICATION VALIDITY NOTICE

DATE OF PLANS EXPIRATION: 05-20-2023
 CERTIFICATION ON THESE DRAWINGS IS VALID FOR ONE YEAR FROM DATE OF ISSUE

TABLE 2.1: MEMBER PROPERTIES

NO.	LABEL	PROPERTY	DETAIL NO.
1	COLUMN POST	2.5" X 2.5" X 14GA TUBE	1
2	ROOF BEAM	2.5" X 2.5" X 14GA TUBE	1
3	BASE RAIL	2.5" X 2.5" X 14GA TUBE	1
4	PEAK BRACE	2.5" X 2.5" 14GA CHANNEL	4
5	KNEE BRACES	2.5" X 1.5" 14GA CHANNEL	4
6	CONNECTOR SLEEVE	2.25" X 2.25" X 12GA TUBE	2
7	BASE ANGLE	2" X 2" X 3" LG. 3/16" ANGLE	10
8	PURLIN	4.25" X 1.5" X 14GA / 18GA HAT CHANNEL	5
9	GIRT	4.25" X 1.5" X 14GA / 18GA HAT CHANNEL	5
9A	OPT. END WALL GIRT	2.5" X 1.5" 14GA CHANNEL	1
10	SHEATHING	29 GA CORRUGATED SHEET	8
11	END WALL POST	2.5" X 2.5" X 14GA TUBE	1
12	DOOR POST	2.5" X 2.5" X 14GA TUBE	1
13	SINGLE HEADER	2.5" X 2.5" X 14GA TUBE	1
14	DOUBLE HEADER	DBL. 2.5" X 2.5" X 14GA TUBE	1
15	SERVICE DOOR / WINDOW FRAMING	2.5" X 2.5" X 14GA TUBE	1
16	ANGLE BRACKET	2" X 2" X 2" LG. 14GA ANGLE	7
17	STRAIGHT BRACKET	2" X 2" X 4" LG. 14GA PLATE	6
18	PB SUPPORT	2.5" X 2.5" X 14GA TUBE	1
19	DIAGONAL BRACE	2" X 2" X 14 GA TUBE	3
20	GABLE BRACE	2" X 2" X 14 GA TUBE	3
21	DB BRACKET	2.25" X 2.25" X 6" LG. 14GA ANGLE	9
22	TRUSS SPACER	2.5" X 2.5" X 14GA TUBE	1
23	ALL FASTENERS	#12 X 1" SELF-DRILL SCREWS (ESR-2196 OR EQ) W/ NEOPRENE/STEEL WASHER	

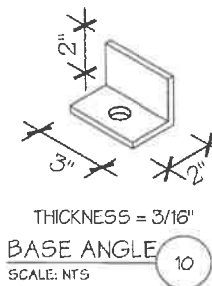
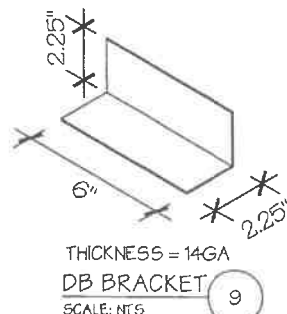
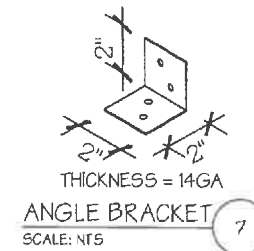
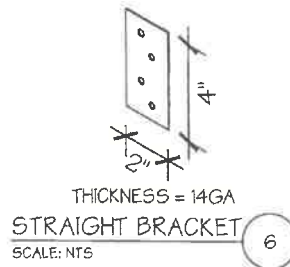
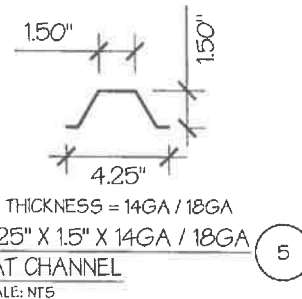
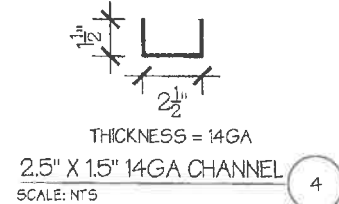
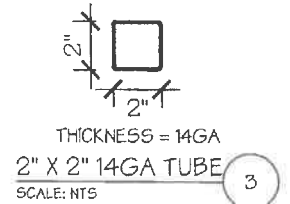
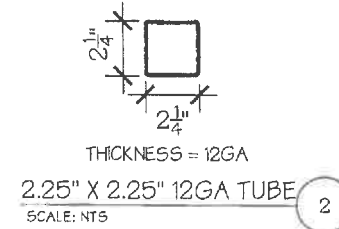
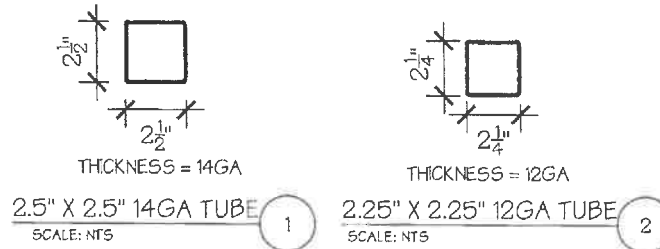
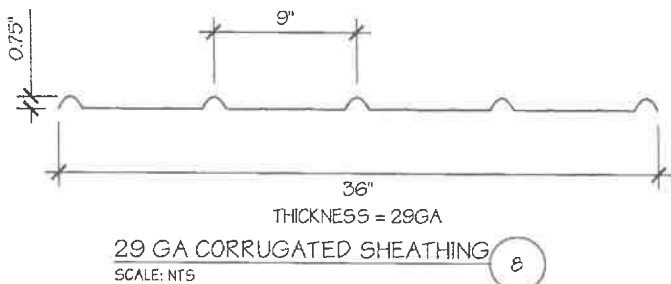
TABLE 2.2: SHEATHING FASTENER SCHEDULE

LOCATION	CORNER PANELS	SIDE LAPS	EDGE LAPS	ELSEWHERE
SPACING	9" C/C	MIN. 1	4 1/2" C/C	9" C/C

FASTENER TYPE: #12X1" SELF-DRILL SCREWS (ESR-2196 OR EQ) W/ NEOPRENE/STEEL WASHER
 *SEE TYP. SHEATHING FASTENER SCHEDULE DIAGRAM ON PAGE 6.

TABLE 2.3: GAUGE THICKNESS

GAUGE	29	18	14	12
THICKNESS (IN)	0.0135	0.049	0.083	0.109



MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
 LOCATION: STATE OF MICHIGAN
 PROJECT NO.: 451-22-1572
 SHEET TITLE:

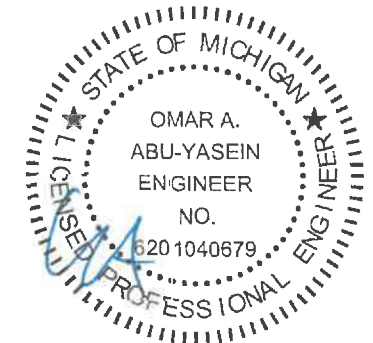
SCHEDULES & MEMBER SECTIONS

SHEET NO.: 2 / 11
 DRAWN BY: A.W. DATE: 5/17/22
 CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

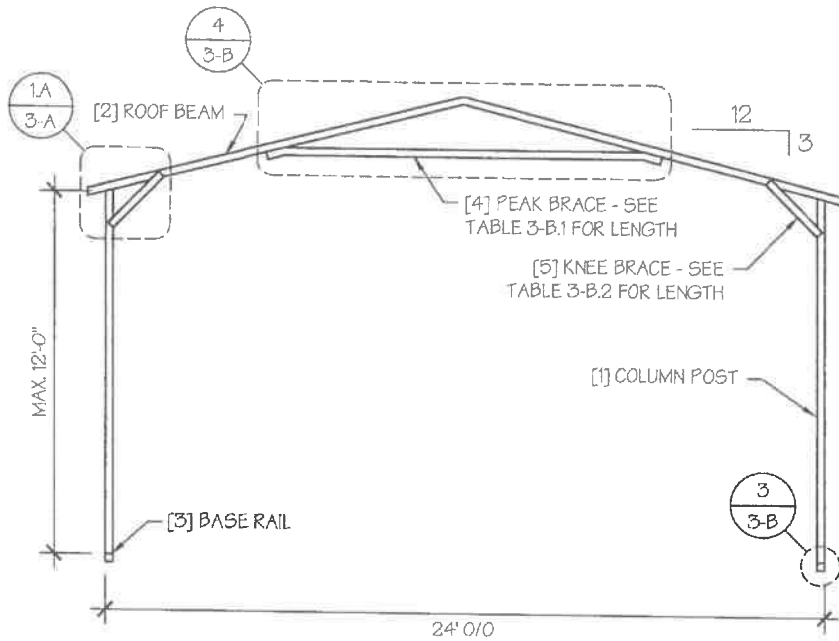
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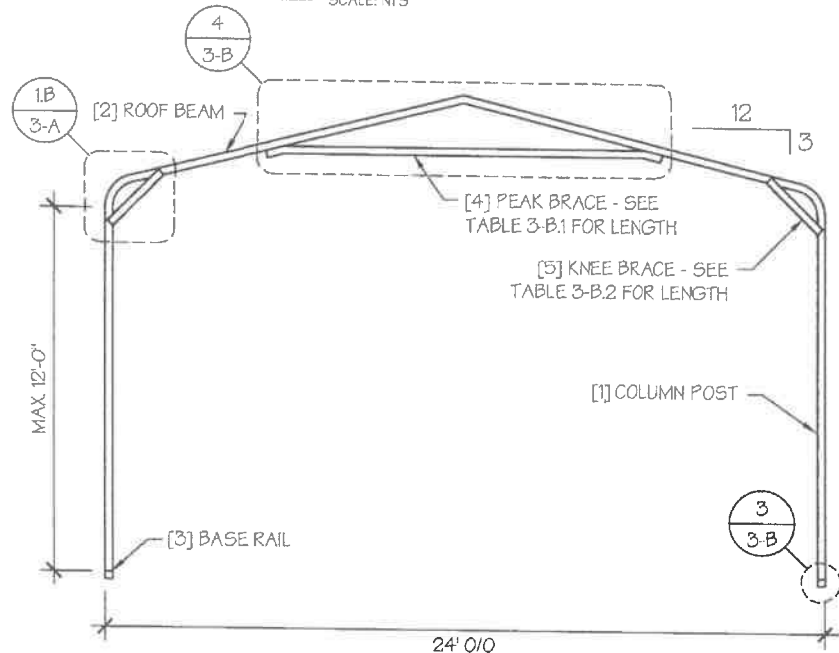


DATE EXPIRES: 03-24-2024

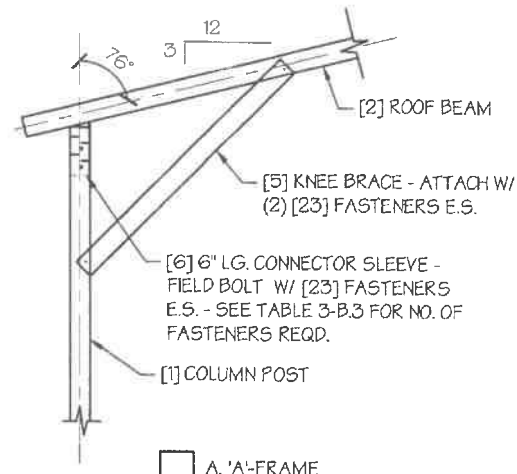
DATE SIGNED: 05-20-2022



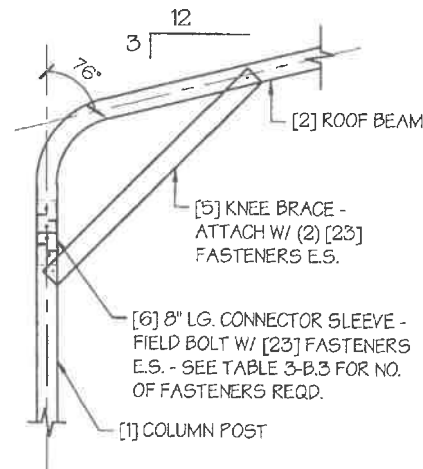
TYP. A-FRAME SECTION
SCALE: NTS



TYP. REGULAR FRAME SECTION
SCALE: NTS



A. 'A'-FRAME



B. REGULAR-FRAME

EAVE DETAIL 1
SCALE: NTS

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

FRAME SECTIONS & DETAILS

SHEET NO.: 3-A / 11

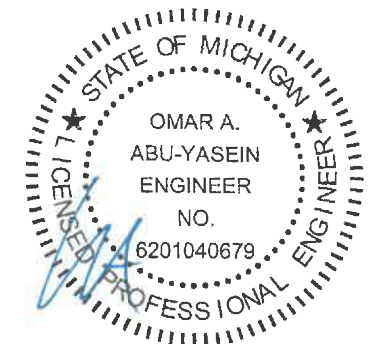
DRAWN BY: A.W. DATE: 5/17/22

CHECKED BY: OAA DATE: 5/17/22

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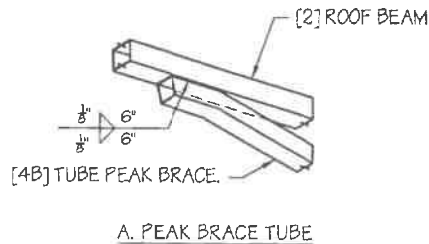
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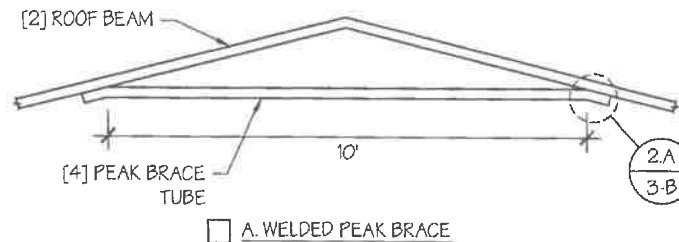
DATE EXPIRES: **03-24-2024**

DATE SIGNED: **05-20-2022**

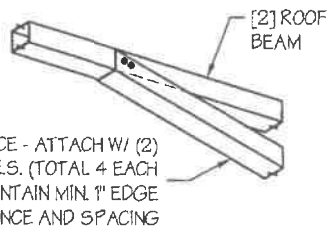
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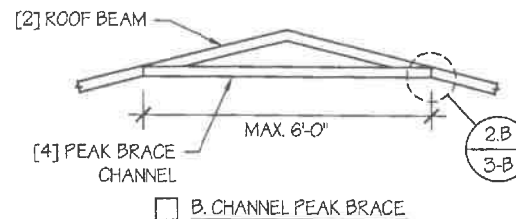
A. PEAK BRACE TUBE



A. WELDED PEAK BRACE



B. PEAK BRACE CHANNEL



B. CHANNEL PEAK BRACE

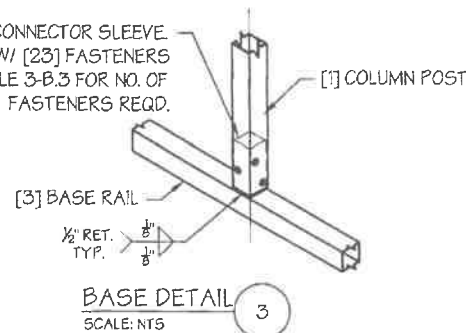
PEAK BRACE DETAILS 4

SCALE: NTS

PEAK BRACE CONNECTION DETAILS 2

SCALE: NTS

[6] 6" LG. CONNECTOR SLEEVE FIELD BOLT W/ [23] FASTENERS - SEE TABLE 3-B.3 FOR NO. OF FASTENERS REQD.



BASE DETAIL 3
SCALE: NTS

TABLE 3-B.1: PEAK BRACE SCHEDULE

GROUND SNOW / ROOF LIVE LOAD (PSF)	WIND SPEED	
	105 TO 130	140 TO 180
□ 30 / 20	6'	10'
□ 35 / 25 TO 90 / 61	10'	10'

TABLE 3-B.2: KNEE BRACE SCHEDULE

EAVE HEIGHT	KNEE BRACE LENGTH
□ UP TO 8'	24"
□ 9' TO 12'	36"

TABLE 3-B.3 FASTENER SCHEDULE

WIND SPEED (MPH)	NO. OF FASTENERS
□ 105 TO 125	4
□ 130 TO 155	6
□ 160 TO 180	8

NOTE: COLUMN POST MAY BE ADJUSTED ±1" FOR LEVELING. MANUFACTURER IS NOT RESPONSIBLE FOR LEVELING OF GROUND AND/OR CONCRETE SURFACE PROVIDED BY OTHERS.

DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
 LOCATION: STATE OF MICHIGAN
 PROJECT NO.: 451-22-1572
 SHEET TITLE:

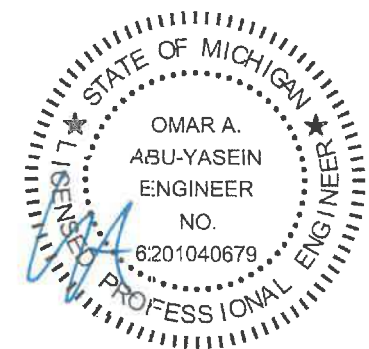
FRAME DETAILS

SHEET NO.: 3-B / 11
 DRAWN BY: A.W. DATE: 5/17/22
 CHECKED BY: OAA DATE: 5/17/22

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DATE EXPIRES: 03-24-2024
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TABLE 4: FRAME SPACING CHART / SCHEDULE

GROUND SNOW / ROOF LIVE LOAD (PSF)	ENCLOSED BUILDINGS							OPEN BUILDINGS						
	WIND SPEED (MPH)							WIND SPEED (MPH)						
	105	115	130	140	155	165	180	105	115	130	140	155	165	180
30 / 20	60	60	54/60	54	42	42	36	48	48	48	42	36	30	24
40 / 27	48/60	48/60	42/60	42/54	42	42	36	42	42	42	42	36	30	24
50 / 34	40/48	40/48	40/48	40/48	40/42	40/42	36	30	30	30	30	30	30	24
60 / 41	36	36	36	36	36	36	36	30	30	30	30	30	30	24
70 / 47	30	30	30	30	30	30	30	24	24	24	24	24	24	24
80 / 54	24	24	24	24	24	24	24	24	24	18	18	18	18	18
90 / 61	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30 / 20	60	60	54/60	54	48	42/48	42	54	54	48/54	42/54	36/48	36	30
40 / 27	48/60	48/60	42/60	42/54	42/48	42/48	42	42	42	42	42	36/42	36	30
50 / 34	40/48	40/48	40/48	40/48	40/48	40/48	40/42	36	36	36	36	36	36	30
60 / 41	36	36	36	36	36	36	36	30	30	30	30	30	30	30
70 / 47	30	30	30	30	30	30	30	24	24	24	24	24	24	24
80 / 54	24	24	24	24	24	24	24	24	24	24	24	24	24	24
90 / 61	---	---	---	---	---	---	---	---	---	---	---	---	---	---
30 / 20	60	60	54/60	54	48	42/48	42	60	54/60	48/60	42/54	36/48	36/42	36
40 / 27	48/60	48/60	42/60	42/54	42/48	42/48	42	48	48	42/48	42/48	36/48	36/42	36
50 / 34	40/48	40/48	40/48	40/48	40/48	40/48	40/42	40/42	40/42	40/42	40/42	36/42	36	36
60 / 41	36	36	36	36	36	36	36	36	36	36	36	36	36	30
70 / 47	30	30	30	30	30	30	30	30	30	30	30	30	30	30
80 / 54	24	24	24	24	24	24	24	24	24	24	24	24	24	24
90 / 61	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NOTES:

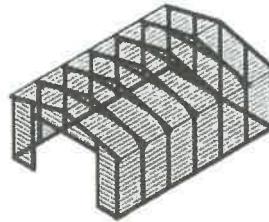
1. FRAME SPACINGS ARE IN UNITS OF INCHES (IN).
2. WHERE TWO VALUES ARE SHOWN, THE HIGHER VALUE CAN ONLY BE USED FOR VERTICAL SHEATHING.
3. SNOW LOADS AND ROOF LIVE LOADS ARE IN POUNDS PER SQUARE FOOT (PSF). WIND SPEED IS 3 SEC. GUST IN MILES PER HOUR (MPH).
4. FOR VALUES THAT LIE BETWEEN TWO CELLS, THE HIGHER (MORE STRINGENT) VALUE HAS TO BE USED. INTERPOLATION BETWEEN CELLS IS NOT ALLOWED.

ENCLOSURE CLASSIFICATION:

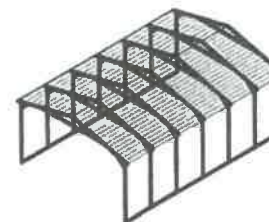
1. ENCLOSED BUILDING = ALL 4 WALLS FULLY ENCLOSED WITH DOORS/WINDOWS = USE ENCLOSED BUILDING SPACING CHART.
2. OPEN BUILDING = ALL 4 WALLS FULLY OPEN = USE OPEN BUILDING SPACING CHART.
3. 3FT PARTIALLY ENCLOSED = BOTH END-WALLS FULLY OPEN, WITH BOTH SIDE-WALLS ONLY 3FT ENCLOSED = USE OPEN BUILDING SPACING CHART.
4. PARTIALLY ENCLOSED = BOTH END-WALLS FULLY OPEN, WITH BOTH SIDE-WALLS ENCLOSED MORE THAN 3FT = START WITH OPEN BUILDING SPACING CHART AND THEN REDUCE SPACING BY 6".
5. 3 SIDED ENCLOSED = ALL WALLS ARE ENCLOSED EXCEPT FOR 1 END-WALL = START WITH ENCLOSED BUILDING SPACING + THE OPEN END FRAME MUST HAVE EITHER A GABLED END OR HAVE DOUBLED WELDED LEGS & ROOF.
6. FOR ALL SHEATHING ENCLOSURES NOT LISTED ABOVE, REFER TO SHEET 5 FOR SPACING AND DESIGN REQUIREMENTS.

GENERAL NOTES:

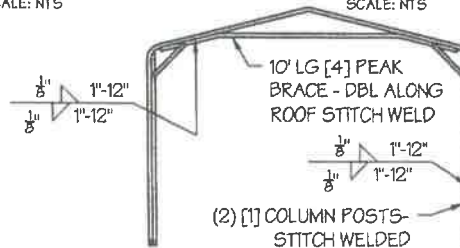
1. THE MAX. BUILDING LENGTH FOR ENCLOSED BUILDINGS IS 50'-0". THIS CAN BE INCREASED BY ADDING A DOUBLE FRAME AT THE CENTER TO BREAK THE LENGTH OF THE BUILDING.
2. BUILDINGS WITH PARTIALLY ENCLOSED END WALLS NEED TO HAVE SIDE WALL BRACING TO SUPPORT THE PARTIALLY ENCLOSED END WALL. (SEE FIGURE A ON SHEET 5).
3. ALL BUILDINGS WITH AN OPEN END WALL MUST HAVE A 10'-0" TUBE PEAK BRACE.



TYP. ENCLOSED BUILDING
SCALE: NTS



TYP. OPEN BUILDING
SCALE: NTS



(2) [1] COLUMN POSTS-
STITCH WELDED
TYP. OPEN END WALL ON 3
SIDE ENCLOSED BUILDING
SCALE: NTS

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
LOCATION: STATE OF MICHIGAN
PROJECT NO.: 451-22-1572
SHEET TITLE:

SPACING SCHEDULES
& ENCLOSURE NOTES

SHEET NO.: 4 / 11

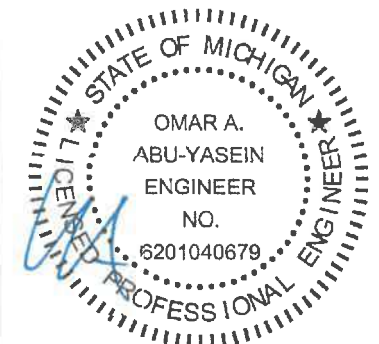
DRAWN BY: A.W. DATE: 5/17/22

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DATE EXPIRES: 03-24-2024

DATE SIGNED: 05-20-2022

TABLE 5.1: PURLIN SPACING SCHEDULE

GROUND SNOW / ROOF LIVE LOAD (PSF)	14GA. HAT CHANNEL PURLIN							18GA. HAT CHANNEL PURLIN						
	WIND SPEED (MPH)							WIND SPEED (MPH)						
	105	115	130	140	155	165	180	105	115	130	140	155	165	180
30/20	54	48	42	36	30	24	24	36	30	24	18	18	12	12
40/27	42	42	42	36	30	24	24	30	30	24	18	18	12	12
50/34	40	40	40	36	30	24	24	24	24	24	18	18	12	12
60/41	36	36	36	36	30	24	24	18	18	18	18	18	12	12
70/47	32	32	32	32	30	24	24	18	18	18	18	18	12	12
80/54	30	30	30	30	30	24	24	18	18	18	18	18	12	12
90/61	24	24	24	24	24	24	24	12	12	12	12	12	12	12
30/20	54	48	42	42	36	30	30	48	36	30	24	18	18	12
40/27	42	42	42	42	36	30	30	42	36	30	24	18	18	12
50/34	40	40	40	40	36	30	30	30	30	30	24	18	18	12
60/41	36	36	36	36	36	30	30	30	30	30	24	18	18	12
70/47	32	32	32	32	32	30	30	24	24	24	24	18	18	12
80/54	32	32	32	32	32	30	30	18	18	18	18	18	18	12
90/61	30	30	30	30	30	30	30	18	18	18	18	18	18	12
30/20	54	48	42	42	36	36	30	54	48	36	30	24	24	18
40/27	42	42	42	42	36	36	30	42	42	36	30	24	24	18
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60/41	36	36	36	36	36	36	30	36	36	36	30	24	24	18
70/47	32	32	32	32	32	32	30	30	30	30	30	24	24	18
80/54	32	32	32	32	32	32	30	24	24	24	24	24	24	18
90/61	30	30	30	30	30	30	30	24	24	24	24	24	24	18
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70/47	32	32	32	32	32	32	30	32	32	32	32	32	30	30
80/54	32	32	32	32	32	32	30	32	32	32	32	32	30	30
90/61	30	30	30	30	30	30	30	30	30	30	30	30	30	30
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70/47	32	32	32	32	32	32	30	32	32	32	32	32	32	30
80/54	32	32	32	32	32	32	30	32	32	32	32	32	32	30
90/61	30	30	30	30	30	30	30	30	30	30	30	30	30	30

- NOTES:
 1. PURLIN SPACING UNITS ARE IN INCHES.
 2. FRAME SPACING NEEDS TO BE DETERMINED FROM TABLE 4.

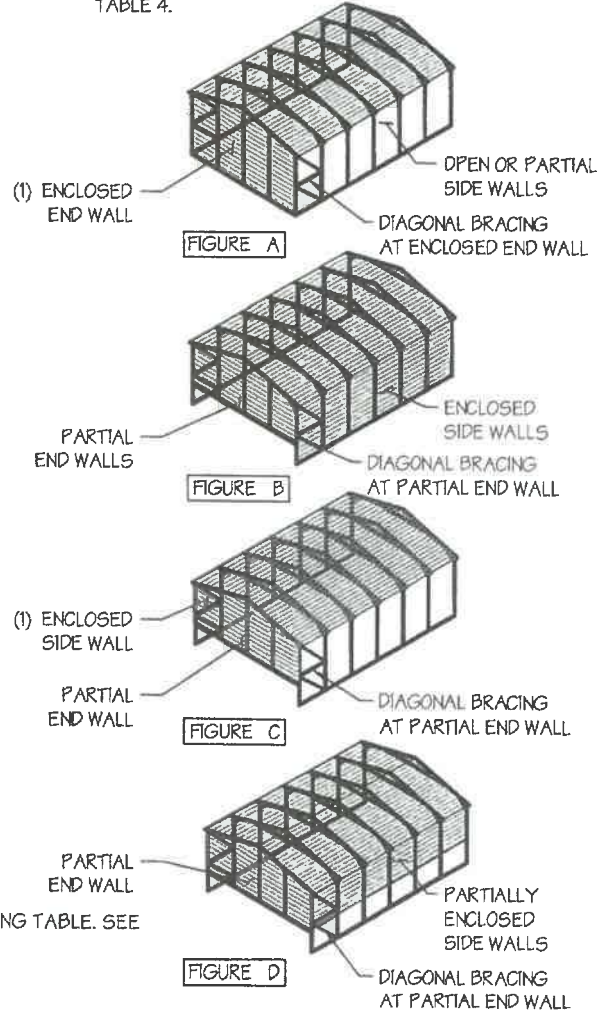
REGULAR BUILDING NOTES:

- FIGURES A, B, C & D ON THE RIGHT INDICATE EXAMPLES OF IRREGULAR BUILDINGS.
- FOR IRREGULAR BUILDINGS, FRAME SPACING MUST BE REDUCED BY 12" FROM OPEN BUILDING SPACING TABLE. SEE SHEET 4 FOR OPEN BUILDING TABLE.
 - SITE SPECIFICS MAY ALLOW FOR ALTERNATIVE SPACING.
 - IRREGULAR BUILDING & BUILDINGS W/ MORE THAN 2 SIDE OPENINGS MUST HAVE A 10' TUBE PEAK BRACE ON ALL FRAMES.

TABLE 5.2: GIRT SPACING SCHEDULE

FRAME SPACING	WIND SPEED (MPH)						
	105	115	130	140	155	165	180
5'-0"	60	48	36	30	24	24	18
4'-6"	60	60	48	42	36	30	24
4'-0"	60	60	54	54	42	36	30
3'-6"	60	60	54	54	48	42	42
2'-0" TO 3'-0"	60	60	54	54	48	42	42

- NOTES:
 1. GIRT SPACING UNITS ARE IN INCHES.
 2. THIS SCHEDULE IS TO BE USED FOR BOTH 14GA AND 18 GA GIRTS.
 3. FRAME SPACING NEEDS TO BE DETERMINED FROM TABLE 4.



MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
 LOCATION: STATE OF MICHIGAN
 PROJECT NO.: 451-22-1572
 SHEET TITLE:

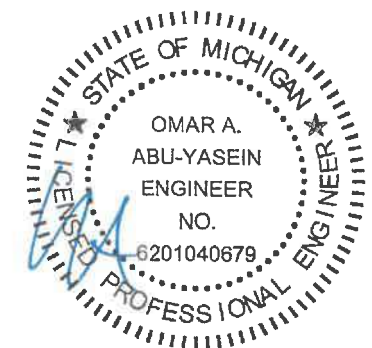
PURLIN & GIRT SPACING SCHEDULES

SHEET NO.: 5 / 11
 DRAWN BY: A.W. DATE: 5/17/22
 CHECKED BY: OAA DATE: 5/17/22

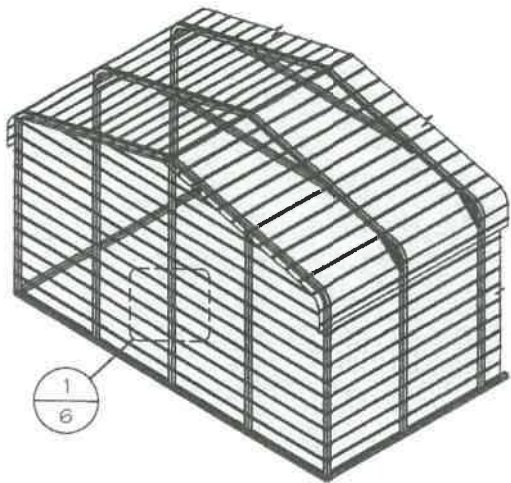
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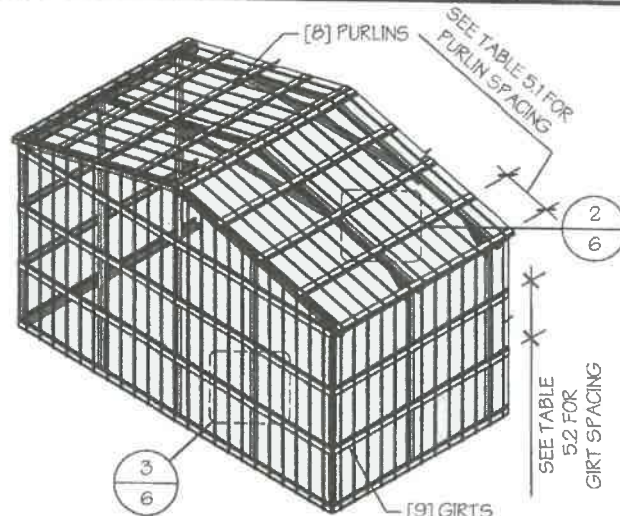
SEAL:



DATE EXPIRES: 03-24-2024
 DATE SIGNED: 05-20-2022



□ TYP. HORIZONTAL SHEATHING
SCALE: NTS



□ TYP. VERTICAL SHEATHING
SCALE: NTS

GENERAL SHEATHING NOTES:

1. REGULAR STYLE BUILDINGS CAN ONLY HAVE HORIZONTAL SHEATHING ON ROOF AND WALLS.
2. A-FRAME STYLE BUILDINGS CAN HAVE ANY COMBINATION OF HORIZONTAL OR VERTICAL SHEATHING ON ROOFS AND WALLS. BOTH HORIZONTAL AND VERTICALS ROOF SHEATHING CAN HAVE MAX. 6" OVERHANG.
3. USING VERTICAL SHEATHING MAY ALLOW FOR GREATER FRAME SPACING. SEE NOTE 2 UNDER TABLE 4.
4. VERTICAL SHEATHING RECOMMENDED FOR BUILDINGS 30' OR LONGER

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

SHEATHING OPTIONS & DETAILS

SHEET NO.: 6 / 11

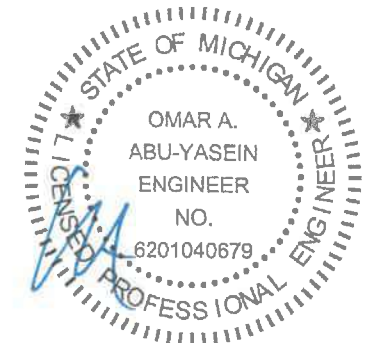
DRAWN BY: A.W. DATE: 5/17/22

CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

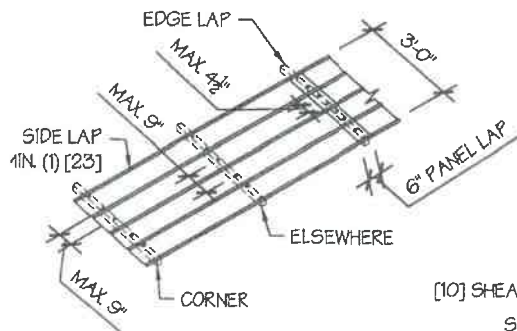
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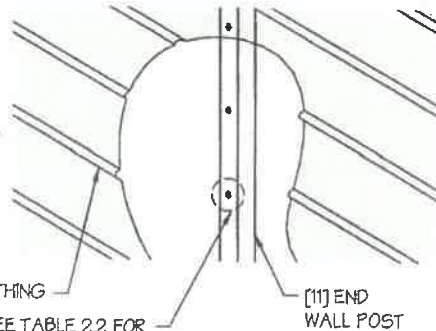


DATE EXPIRES: 03-24-2024

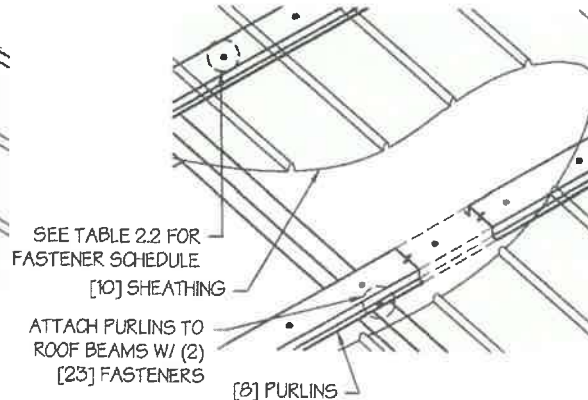
DATE SIGNED: 05-20-2022



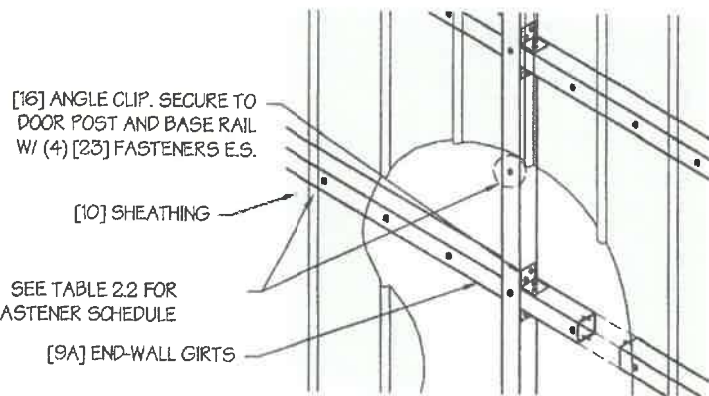
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SCALE: NTS



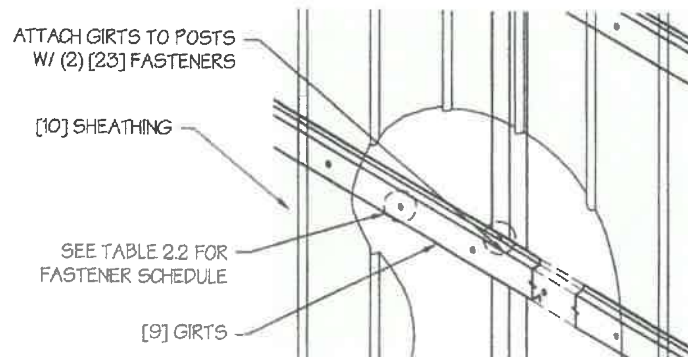
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ROOF VERTICAL SHEATHING DETAIL 2
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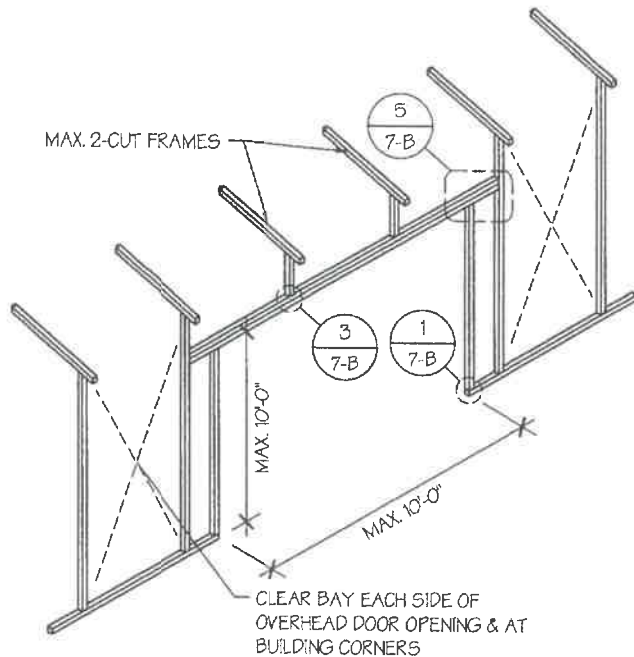


□ WALL VERTICAL SHEATHING - TUBE DETAIL 3
SCALE: NTS

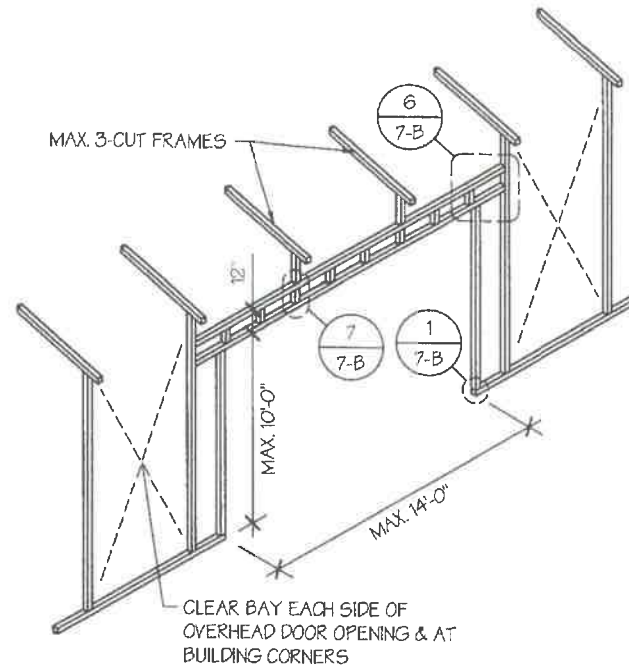


□ WALL VERTICAL SHEATHING - HAT CHANNEL DETAIL 3
SCALE: NTS

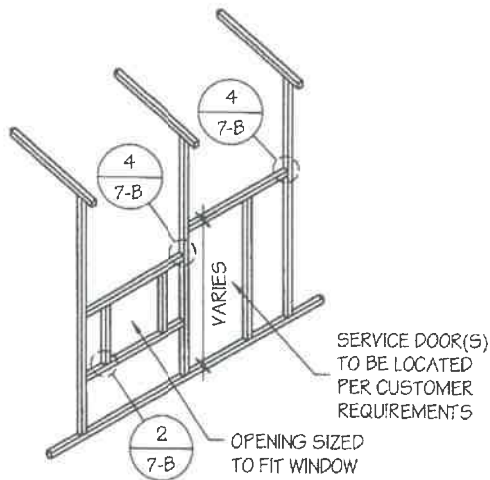
MANUFACTURED BY:



SIDE WALL OVERHEAD DOOR OPENINGS
SCALE: NTS



SIDE WALL OVERHEAD DOOR OPENINGS WITH TRUSS STYLE HEADER
SCALE: NTS



SIDE WALL SERVICE DOOR / WINDOW OPENINGS
SCALE: NTS

SIDE WALL FRAMING NOTES:

1. TRUSS-STYLE HEADERS ARE REQUIRED FOR WHERE THE GROUND SNOW LOAD IS 40 PSF OR GREATER.
2. DESIGNS AND DETAILS SHOWN HERE ARE APPLICABLE TO BOTH REGULAR AND A-FRAME STYLE BUILDINGS.
3. MAX. HEIGHT OF SIDE WALL OVERHEAD DOOR OPENINGS IS 2 FT LESS THAN THE EAVE HEIGHT.
4. OVERHEAD DOOR OPENINGS CANNOT CUT THROUGH MORE THAN 2 FULL FRAMES.
5. MIN. 1 CLEAR BAY MUST BE MAINTAINED BETWEEN ANY 2 OVERHEAD DOOR OPENINGS. A CLEAR BAY IS A SPACE BETWEEN TWO FRAMES THAT HAS NO OVERHEAD DOOR OPENINGS.
6. MIN. 1 CLEAR BAY MUST ALSO BE MAINTAINED FROM THE BUILDING CORNERS.
7. SERVICE DOORS AND WINDOWS CAN BE PLACED IN CLEAR BAYS OR ANY WHERE ELSE AS NEEDED.

DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

SIDE WALL FRAMING & OPENINGS

SHEET NO.: 7-A / 11

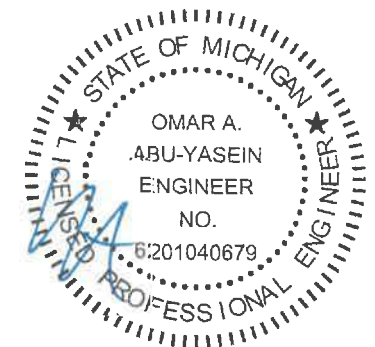
DRAWN BY: A.W. DATE: 5/17/22

CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

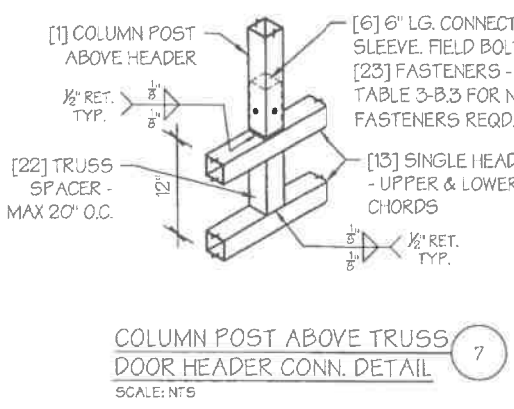
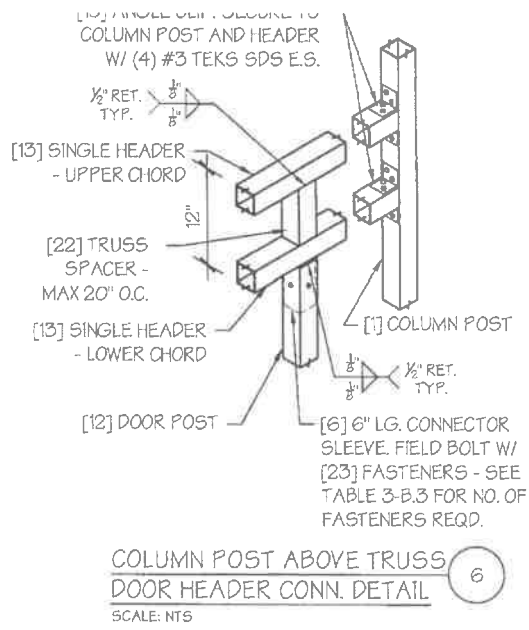
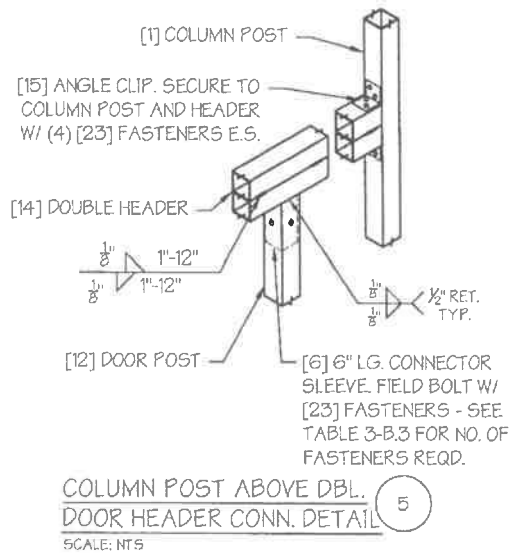
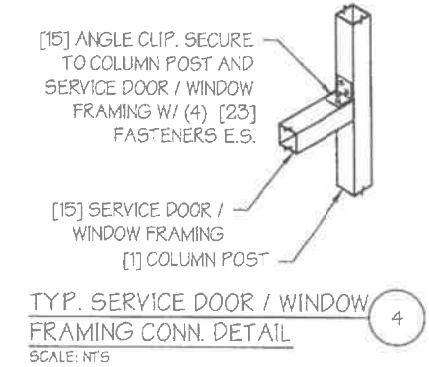
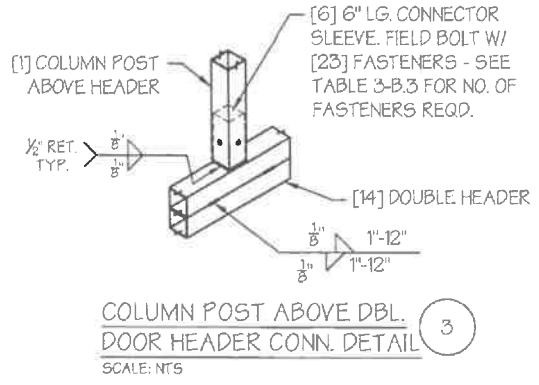
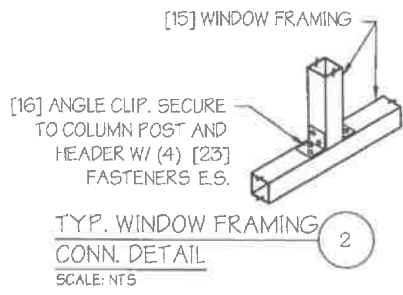
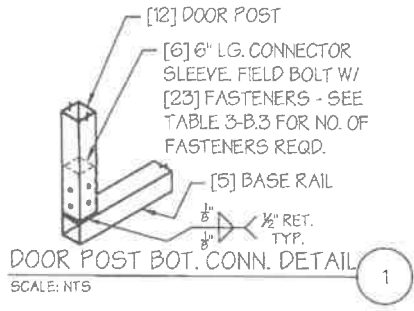
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SEAL:



DATE EXPIRES: 03-24-2024

DATE SIGNED: 05-20-2022



MANUFACTURED BY:

NE STEEL

DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE: SIDE WALL FRAMING DETAILS

SHEET NO.: 7-B / 11

DRAWN BY: A.W. DATE: 5/17/22

CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

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SEAL:

STATE OF MICHIGAN
OMAR A. ABU-YASEIN
ENGINEER
NO. 6201040679
LICENSED PROFESSIONAL ENGINEER

DATE EXPIRES: **03-24-2024**

DATE SIGNED: **05-20-2022**

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
 LOCATION: STATE OF MICHIGAN
 PROJECT NO.: 451-22-1572
 SHEET TITLE:

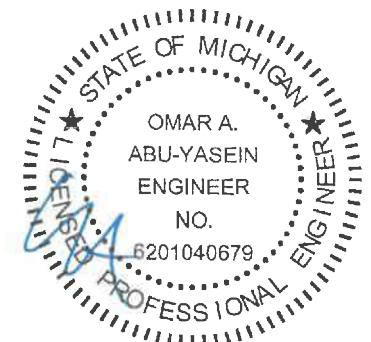
END WALL FRAMING

SHEET NO.: 8-A / 11
 DRAWN BY: A.W. DATE: 5/17/22
 CHECKED BY: OAA DATE: 5/17/22

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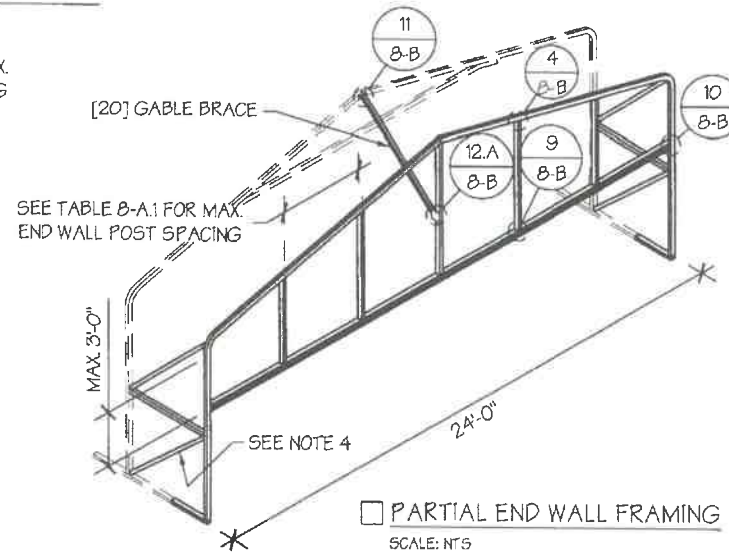
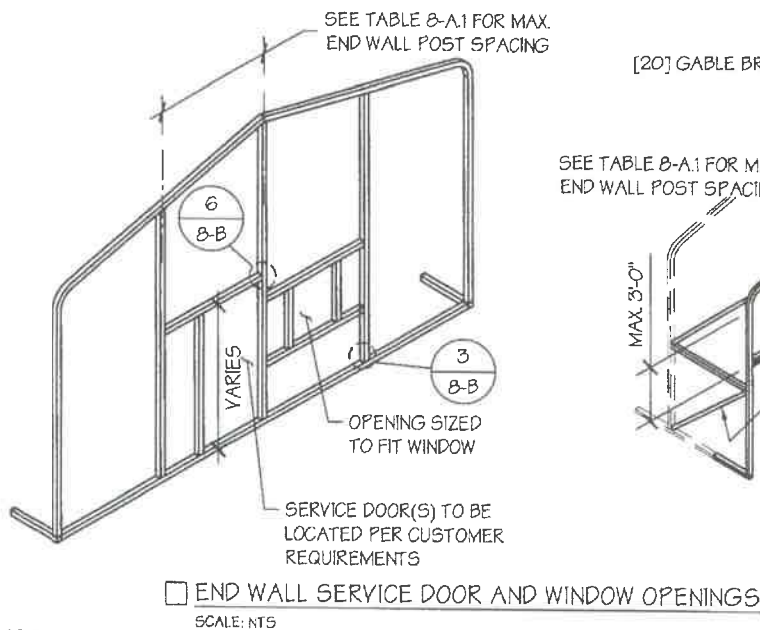
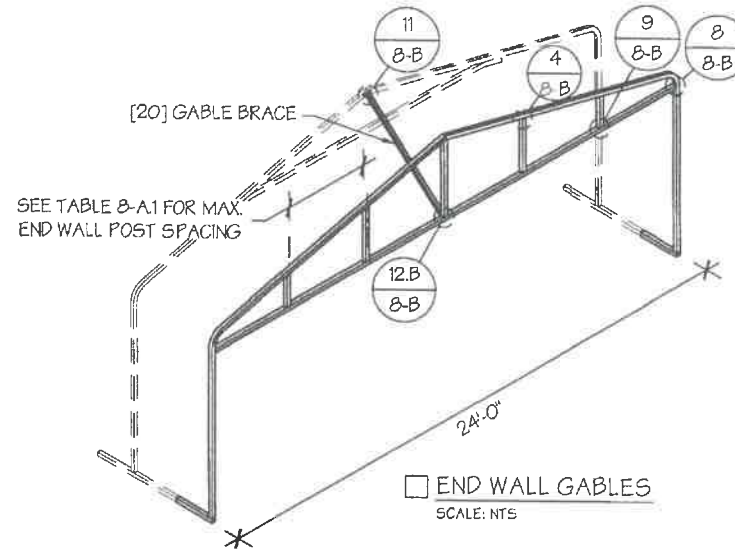
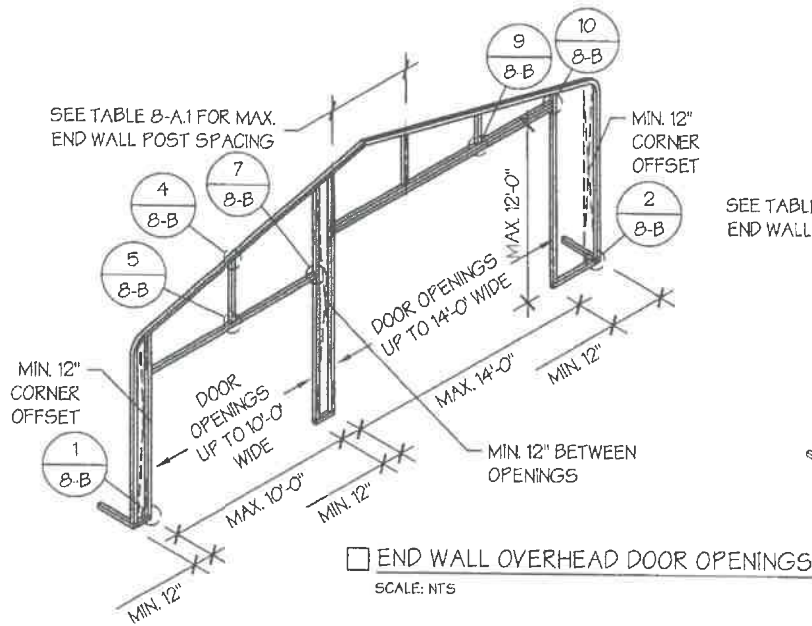
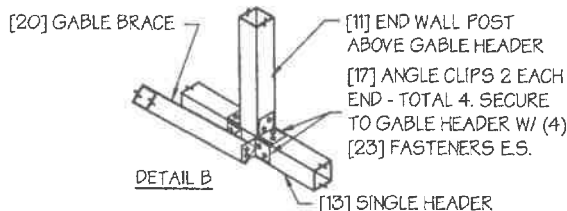
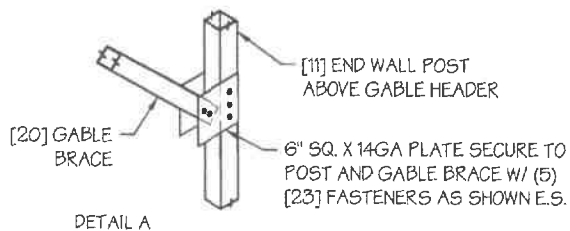
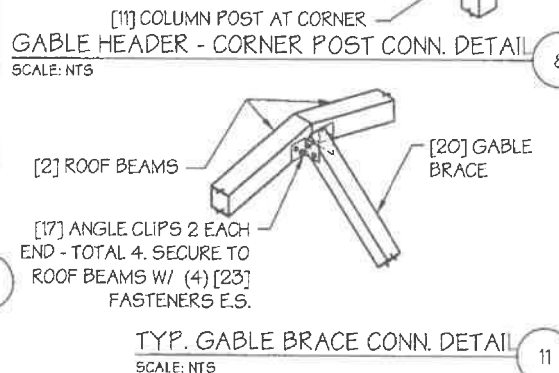
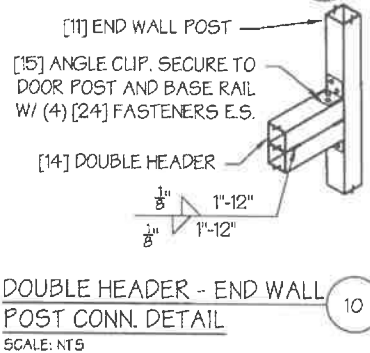
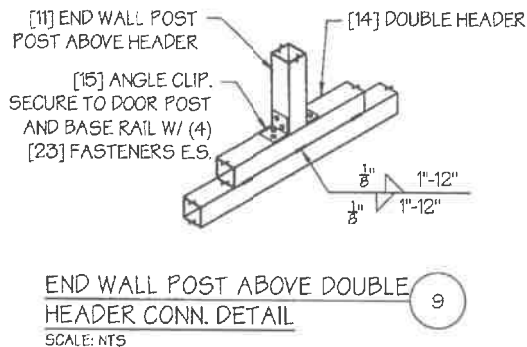
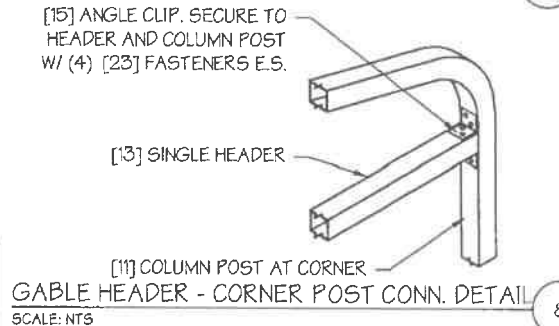
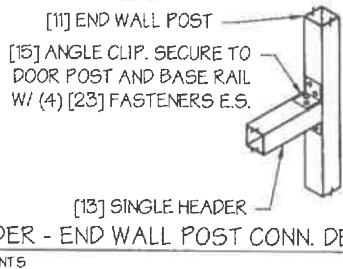
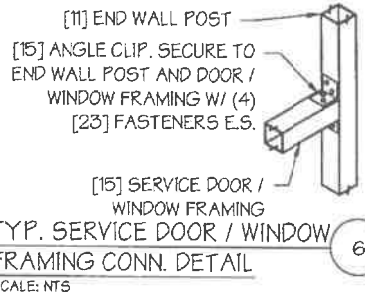
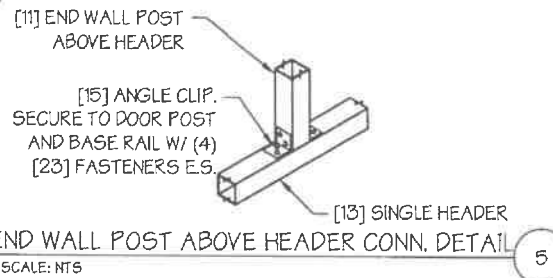
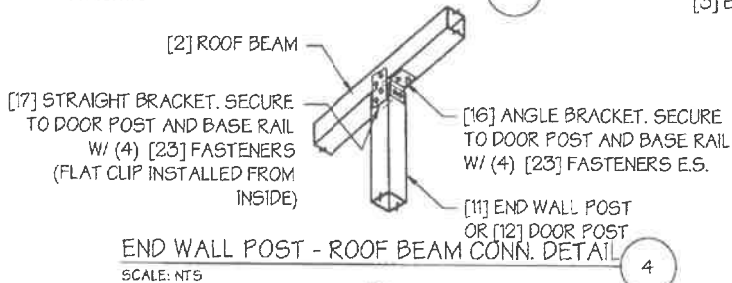
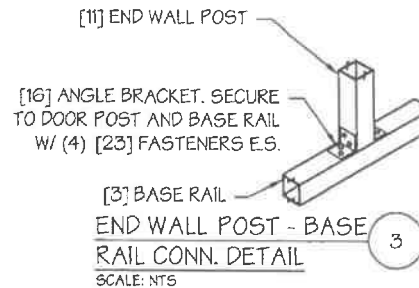
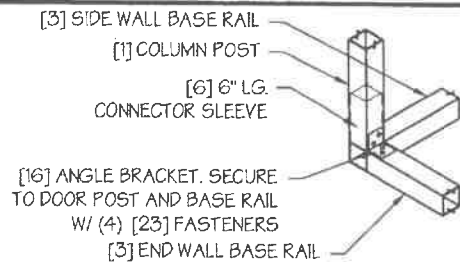
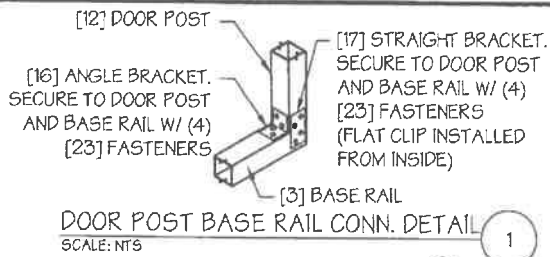


TABLE 8-A.1: END WALL POST SPACING SCHEDULE

WIND SPEED (MPH)	EAVE HEIGHT		
	UP TO 7'	8' TO 9'	10' TO 12'
105	5'	5'	5'
115	5'	5'	4.5'
130	4.5'	4.5'	4'
140	4.5'	4.5'	3'
155	4'	4'	2.5'
165 - 180	3.5'	3'	2'

END WALL FRAMING NOTES:

- DESIGNS AND DETAILS SHOWN HERE ARE APPLICABLE TO BOTH REGULAR AND A-FRAME STYLE BUILDINGS.
- MIN. 12" CLEARANCE MUST BE MAINTAINED BETWEEN ANY TWO OPENINGS (OVERHEAD DOOR OR SERVICE DOOR) AND FROM CORNERS.
- SERVICE DOORS AND WINDOWS CAN BE PLACED AS NEEDED.
- DIAGONAL BRACES NEED TO BE ADDED FOR PARTIAL END WALL ENCLOSURES. SEE SHEET 9 FOR DIAGONAL BRACE CONNECTION DETAILS.



MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

END WALL FRAMING DETAILS

SHEET NO.: 8-B / 11

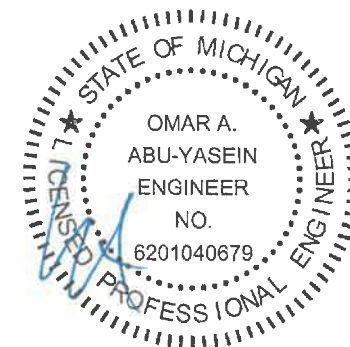
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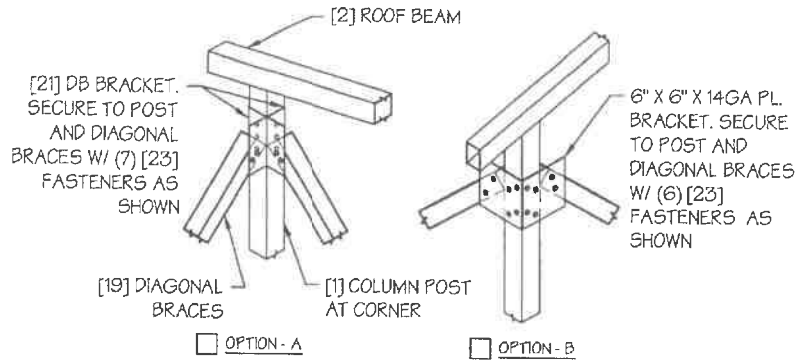
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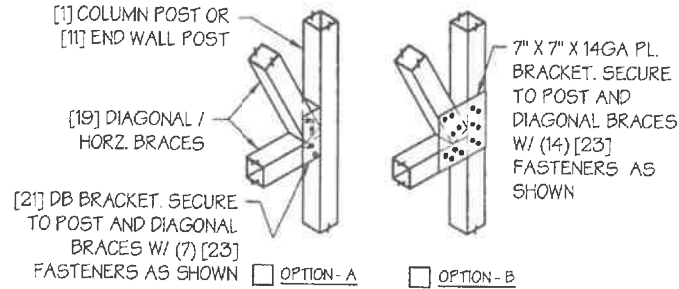
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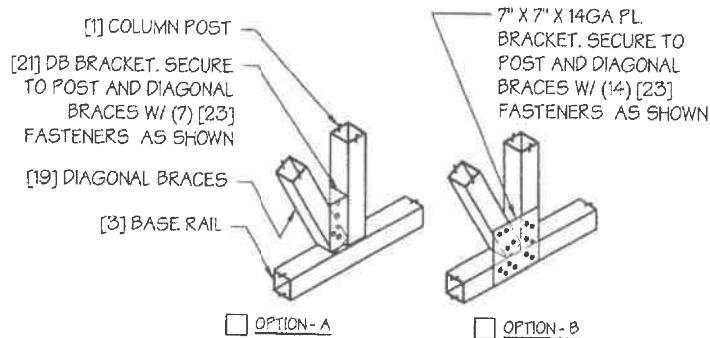
DIAGONAL BRACE TOP CORNER CONN. DETAIL* 1

SCALE: NTS



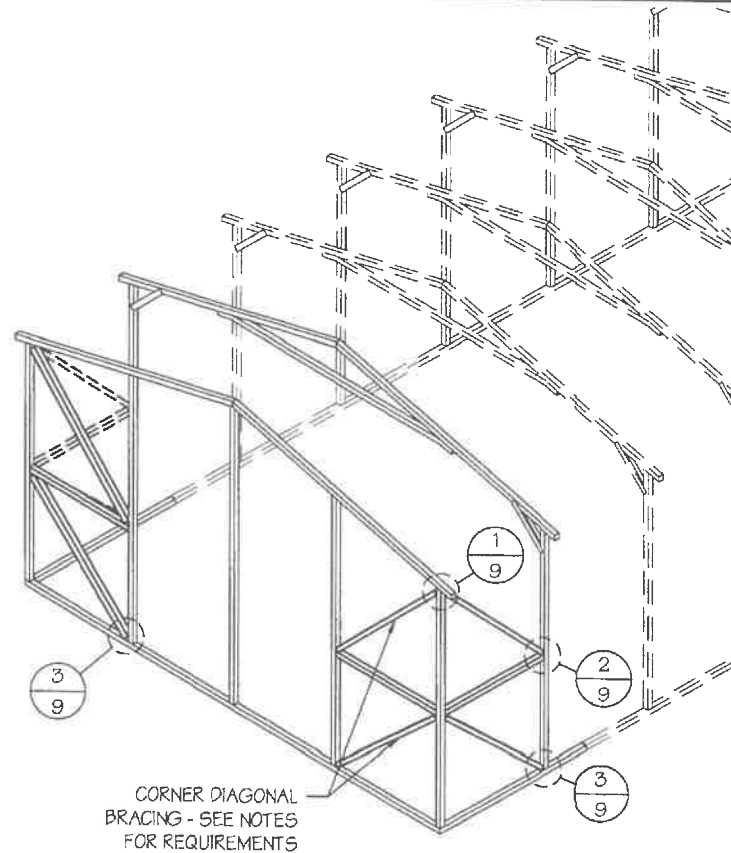
DIAGONAL BRACE - POST CONN. DETAIL* 2

SCALE: NTS



DIAGONAL BRACE BOT. CORNER CONN. DETAIL* 3

SCALE: NTS



DIAGONAL BRACING AT CORNERS

SCALE: NTS

CORNER BRACING NOTES:

- DIAGONAL BRACING AT BUILDING CORNERS IS REQUIRED FOR ALL BUILDINGS IN LOCATIONS WHERE WIND SPEED IS 140 MPH OR GREATER.
 - FOR 3 SIDED ENCLOSED BUILDINGS 140 MPH OR GREATER WIND SPEED - THE BUILDING MUST BE DESIGNED WITH OPEN BUILDING SPACING AND DIAGONAL BRACING IS REQUIRED ON ALL ENCLOSED WALLS.
- SIDE-WALL DIAGONAL BRACING IS REQUIRED WHEN THE ADJACENT END-WALL IS PARTIALLY ENCLOSED.
- ALL BUILDINGS WITH IRREGULAR ENCLOSURE (SEE SHEET 5) WILL REQUIRE SIDE-WALL BRACING CLOSE TO THE PARTIALLY ENCLOSED END-WALL.

DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

CORNER BRACING
DETAILS

SHEET NO.: 9 / 11

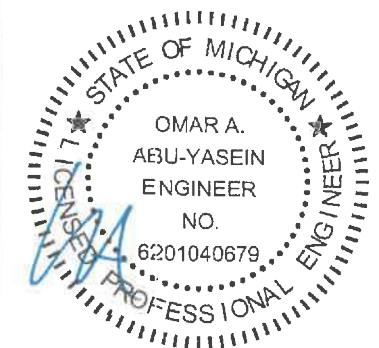
DRAWN BY: A.W. DATE: 5/17/22

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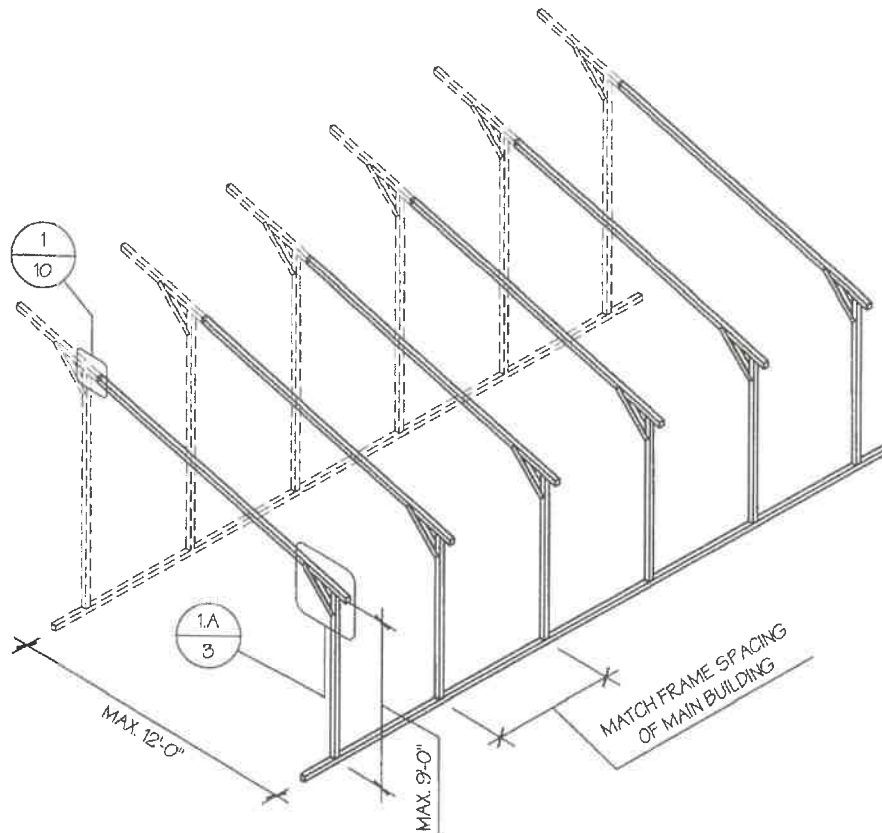


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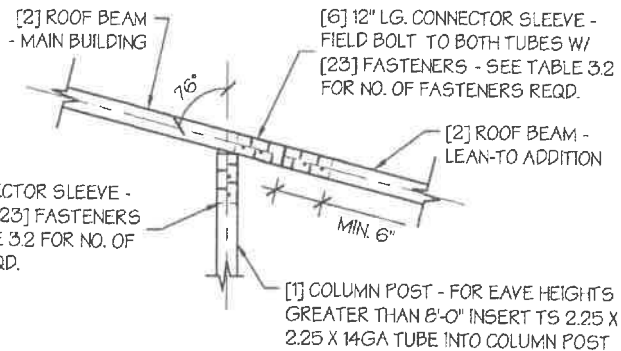
DATE SIGNED: 05-20-2022

* INSIDE VIEW SHOWN FOR CLARITY

MANUFACTURED BY:



OPTIONAL LEAN-TO ADDITION
SCALE: NTS



LEAN-TO ATTACHMENT DETAIL
SCALE: NTS

LEAN-TO ADDITION NOTES:

1. LEAN-TO ADDITIONS CAN BE ADDED ON EITHER OR BOTH SIDES OF THE BUILDING.
2. ROOF SLOPE, PURLIN, GIRT AND FRAME SPACING OF THE ADDITION HAVE TO MATCH THAT OF THE MAIN STRUCTURE.
3. IF THE LEAN-TO ADDITION IS "OPEN" (BOTH END WALLS OR SIDE WALL IS NOT ENCLOSED), THE DESIGN OF THE MAIN BUILDING HAS TO USE THE FRAME SPACING OF AN OPEN BUILDING FROM TABLE 4.

DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

OPTIONAL LEAN-TO
ADDITION

SHEET NO.: 10 / 11

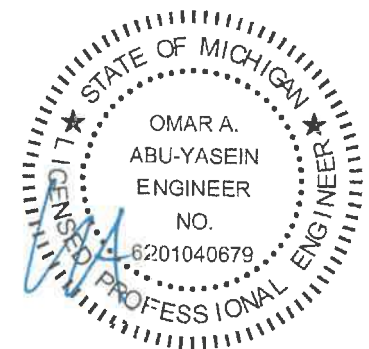
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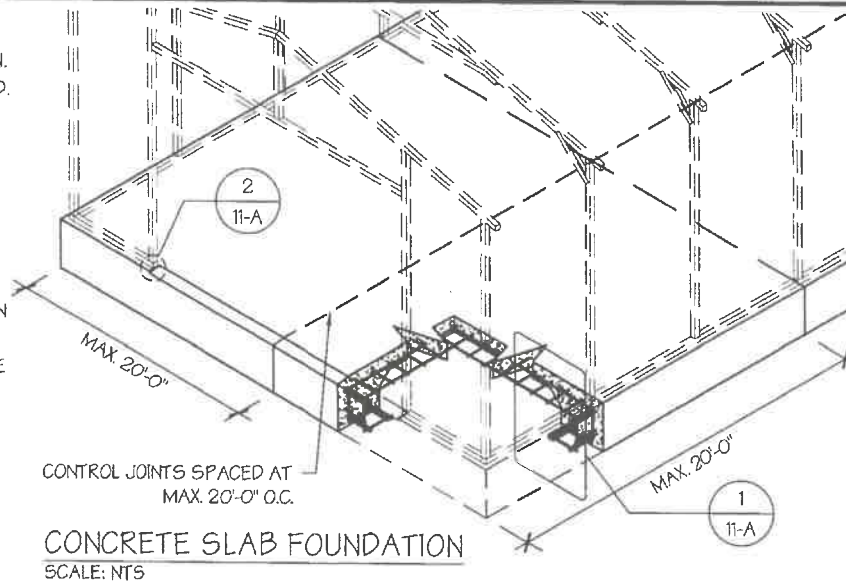


DATE EXPIRES: 03-24-2024

DATE SIGNED: 05-20-2022

CONCRETE SLAB FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE SLAB FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
- CONCRETE ANCHORS SHALL BE LOCATED NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST.
- ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
- MIN. NUMBER OF CONCRETE ANCHORS PER POST SHALL BE AS SHOWN IN TABLE 11-A.2.
- THE SIZE OF THE SLAB SHALL BE THE SIZE (WIDTH AND LENGTH) OF THE BUILDING PLUS 5 1/2" FOR 14GA MATERIAL AND 5 3/4" FOR 12GA MATERIAL.
- DEPTH OF SLAB TURN DOWN FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
- CONTROL JOINTS SHALL BE PLACED SO AS TO LIMIT MAX. SLAB SPANS TO 20' IN EACH DIRECTION.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.



MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

FOUNDATION OPTION 1:
CONCRETE SLAB

SHEET NO.: 11-A / 11

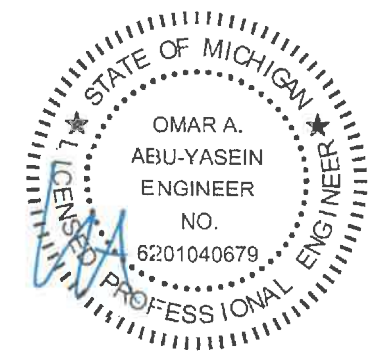
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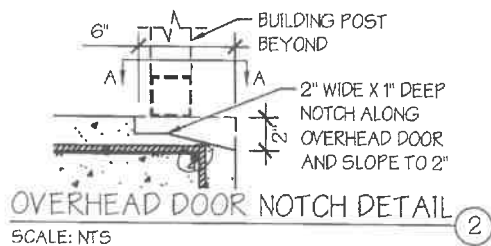


TABLE 11-A.2: CONCRETE SLAB ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	□ 105 TO 135	(1) 1/2"Ø X 7"
	□ 136 TO 180	(2) 1/2"Ø X 7"
OPEN	□ 105 TO 135	(1) 1/2"Ø X 7"
	□ 136 TO 180	(2) 1/2"Ø X 7"

NOTES:

- ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
- MIN. EMBEDMENT DEPTH TO BE 2 1/2".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.

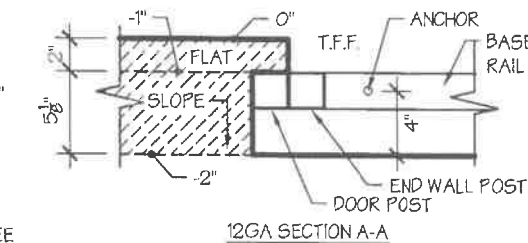
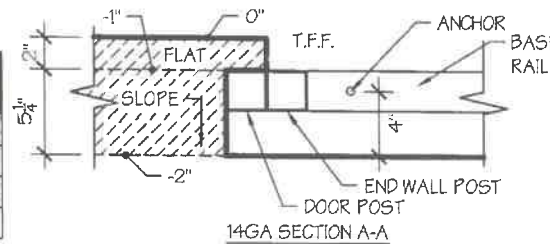
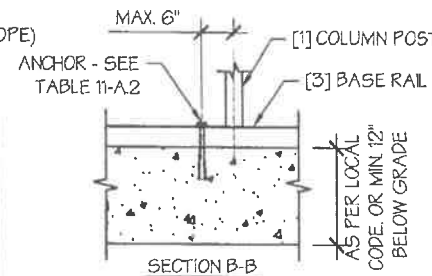
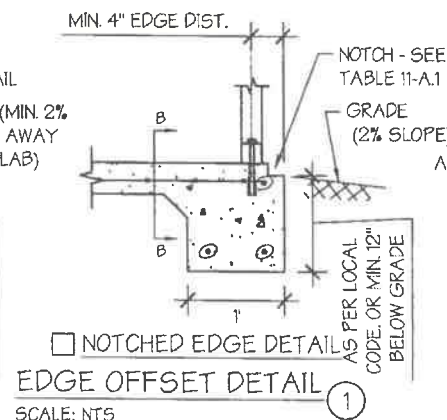
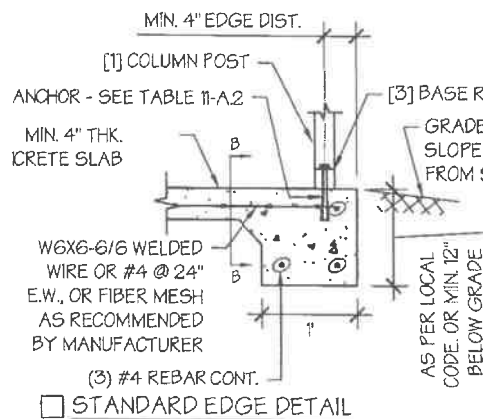


TABLE 11-A.1: NOTCH WIDTH

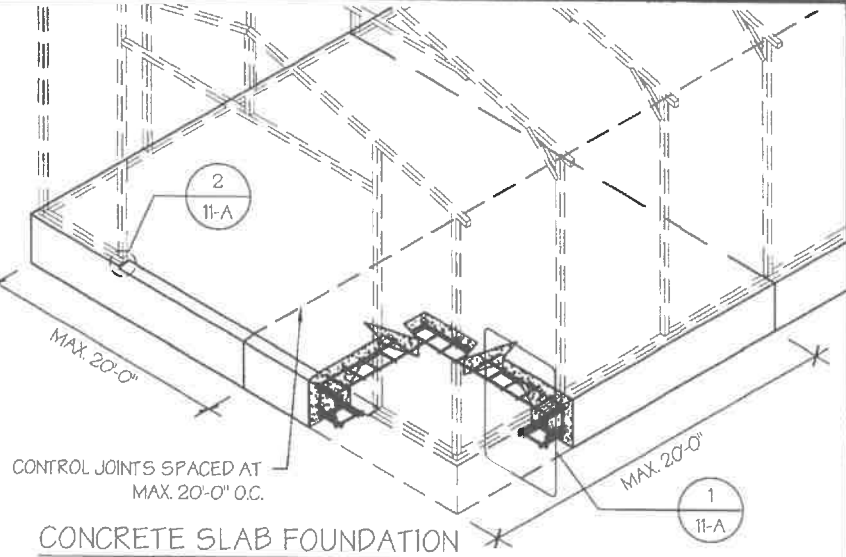
HORIZONTAL/OPEN		VERTICAL	
□ 14GA	□ 12GA	□ 14GA	□ 12GA
2 3/4"	2 7/8"	1 3/4"	1 7/8"

NOTE: DEPTH IS TO BE 1 1/2"



CONCRETE SLAB FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE SLAB FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
- CONCRETE ANCHORS SHALL BE LOCATED NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST.
- ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
- MIN. NUMBER OF CONCRETE ANCHORS PER POST SHALL BE AS SHOWN IN TABLE 11-A.1.
- THE SIZE OF THE SLAB SHALL BE THE SIZE (WIDTH AND LENGTH) OF THE BUILDING PLUS 1/2" FOR 14GA MATERIAL AND 1" FOR 12GA MATERIAL.
- DEPTH OF SLAB TURN DOWN FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
- CONTROL JOINTS SHALL BE PLACED SO AS TO LIMIT MAX. SLAB SPANS TO 20' IN EACH DIRECTION.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.

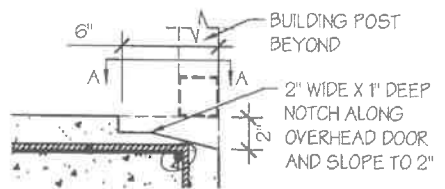


CONCRETE SLAB FOUNDATION
SCALE: NTS

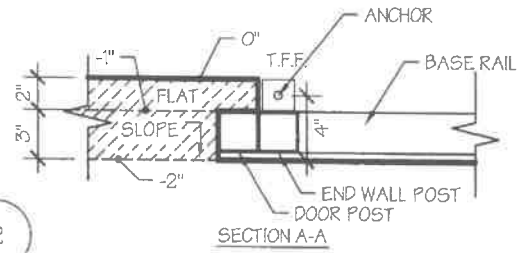
TABLE 11-A.1: CONCRETE SLAB ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	105 TO 135	(1) 1/2"Ø X 7"
	136 TO 180	(2) 1/2"Ø X 7"
OPEN	105 TO 135	(1) 1/2"Ø X 7"
	136 TO 180	(2) 1/2"Ø X 7"

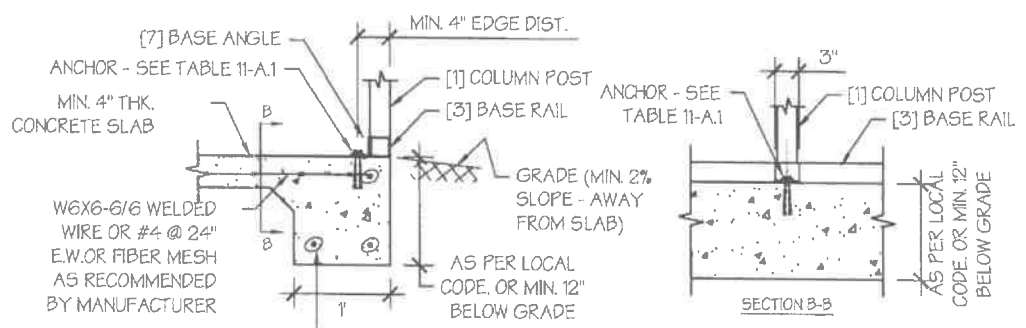
- NOTES:**
- ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
 - MIN. EMBEDMENT DEPTH TO BE 2 2/3".
 - ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.



OVERHEAD DOOR NOTCH DETAIL
SCALE: NTS



SECTION A-A



EDGE FLUSH DETAIL
SCALE: NTS

MANUFACTURED BY:



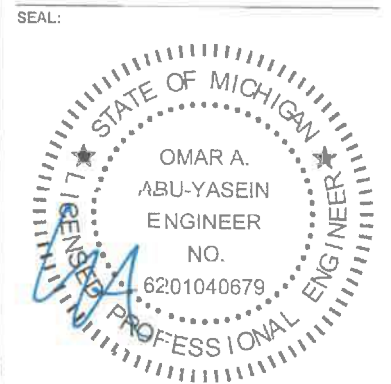
DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
 LOCATION: STATE OF MICHIGAN
 PROJECT NO.: 451-22-1572
 SHEET TITLE: FOUNDATION OPTION 1: CONCRETE SLAB

SHEET NO.: 11-A / 11
 DRAWN BY: A.W. DATE: 5/17/22
 CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

- ANY DUPLICATION OF THIS DRAWING IN WHOLE OR PART IS STRICTLY FORBIDDEN. ANYONE DOING SO WILL BE PROSECUTED UNDER THE FULL EXTENT OF THE LAW.
 - DRAWINGS VALID UP TO 1 YEAR FROM DATE OF ISSUE.



DATE EXPIRES: 03-24-2024
 DATE SIGNED: 05-20-2022

TABLE 11-B.1: ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	□105 TO 135	(1) 1/2"Ø X 7"
	□136 TO 180	(2) 1/2"Ø X 7"
OPEN	□105 TO 135	(1) 1/2"Ø X 7"
	□136 TO 180	(2) 1/2"Ø X 7"

NOTES:

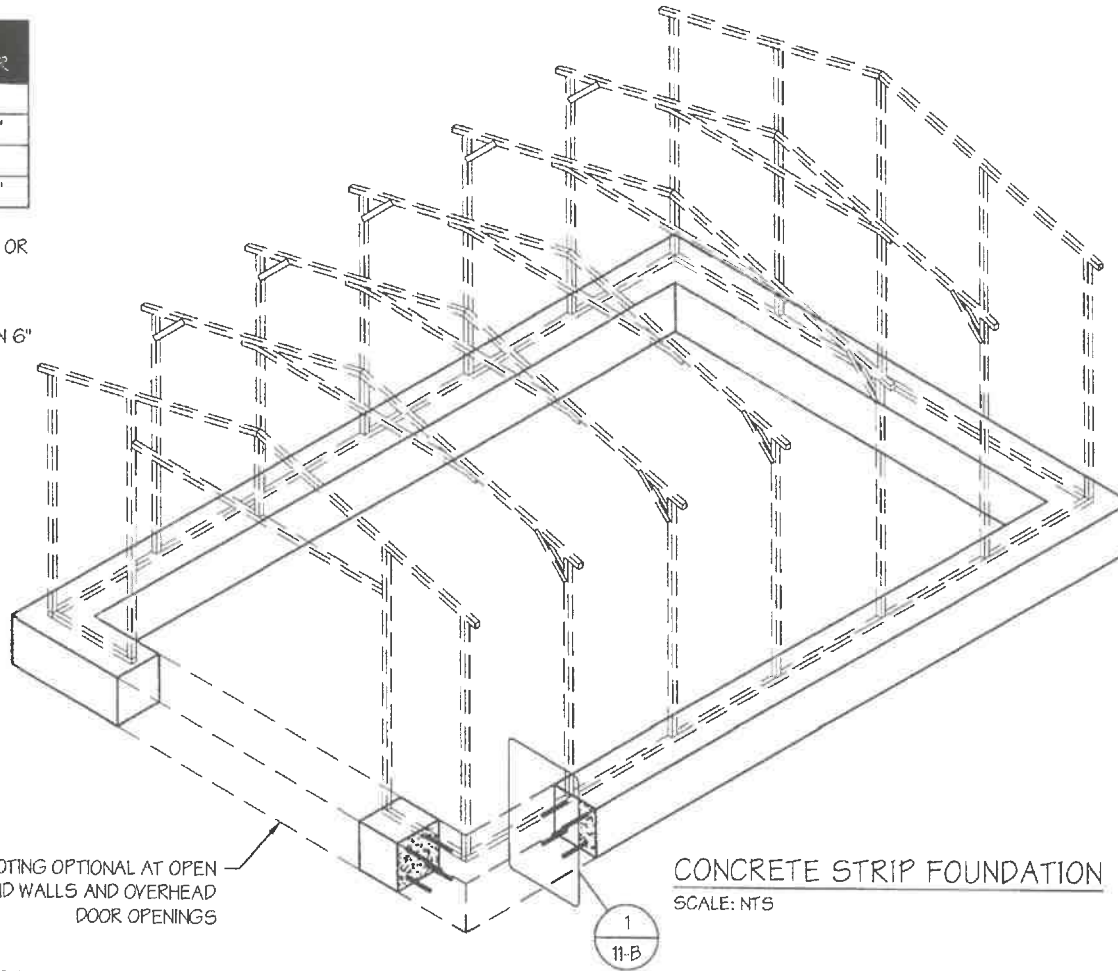
1. ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
2. MIN. EMBEDMENT DEPTH TO BE 2 3/8".
3. ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.

TABLE 11-B.2: CONC. STRIP SCHEDULE

WIND SPEED (MPH)	MIN. SIZE REQD.
□105 TO 130	15" X 12"
□140 TO 155	24" X 12"
□165 TO 180	30" X 12"
	24" X 15"
	20" X 18"

NOTES:

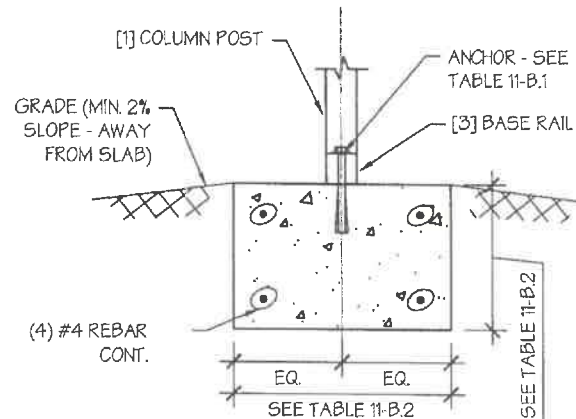
1. WIDTH AND DEPTH DIMENSIONS CAN BE INTERCHANGED.



CONCRETE STRIP FOUNDATION
SCALE: NTS

CONCRETE STRIP FOUNDATION NOTES:

1. DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE STRIP FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
2. CONCRETE ANCHORS SHALL BE LOCATED NEXT TO EVERY POST AND ON EITHER SIDE OF OPENINGS. TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST.
3. MIN. NUMBER OF CONCRETE ANCHORS PER POST SHALL BE AS SHOWN IN TABLE 11-B.1.
4. ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
5. DEPTH OF CONCRETE STRIP FOOTING SHALL BE GREATER THAN FROST DEPTH SPECIFIED PER LOCAL CODE.
6. ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
7. CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.
8. BUILDING IS TO BE MOUNTED ON THE CENTER OF THE STRIP FOUNDATION.



CONCRETE STRIP FOUNDATION DETAIL
SCALE: NTS

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

FOUNDATION OPTION 2:
CONCRETE STRIP

SHEET NO.: 11-B / 11

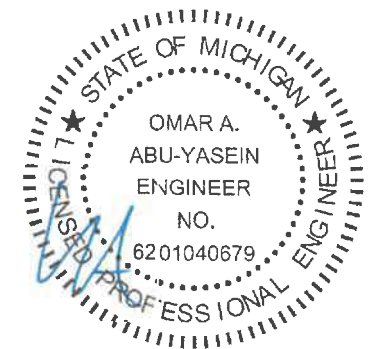
DRAWN BY: A.W. DATE: 5/17/22

CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

- ANY DUPLICATION OF THIS DRAWING IN WHOLE OR PART IS STRICTLY FORBIDDEN. ANYONE DOING SO WILL BE PROSECUTED UNDER THE FULL EXTENT OF THE LAW. - DRAWINGS VALID UP TO 1 YEAR FROM DATE OF ISSUE.

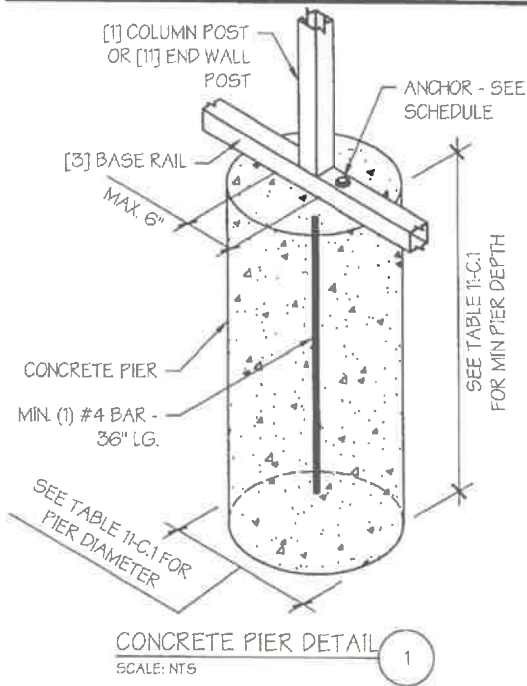
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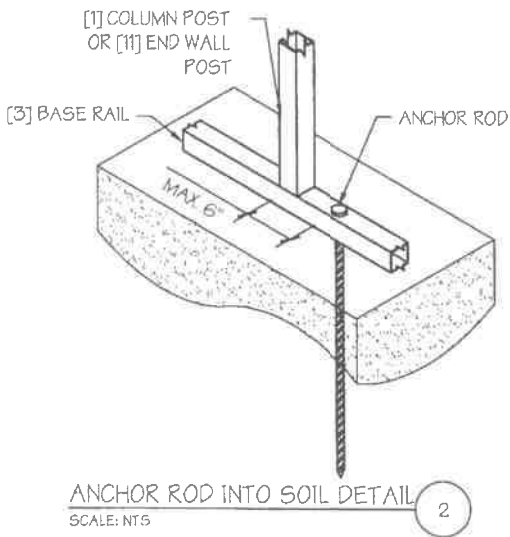
DATE EXPIRES: 03-24-2024

DATE SIGNED: 05-20-2022

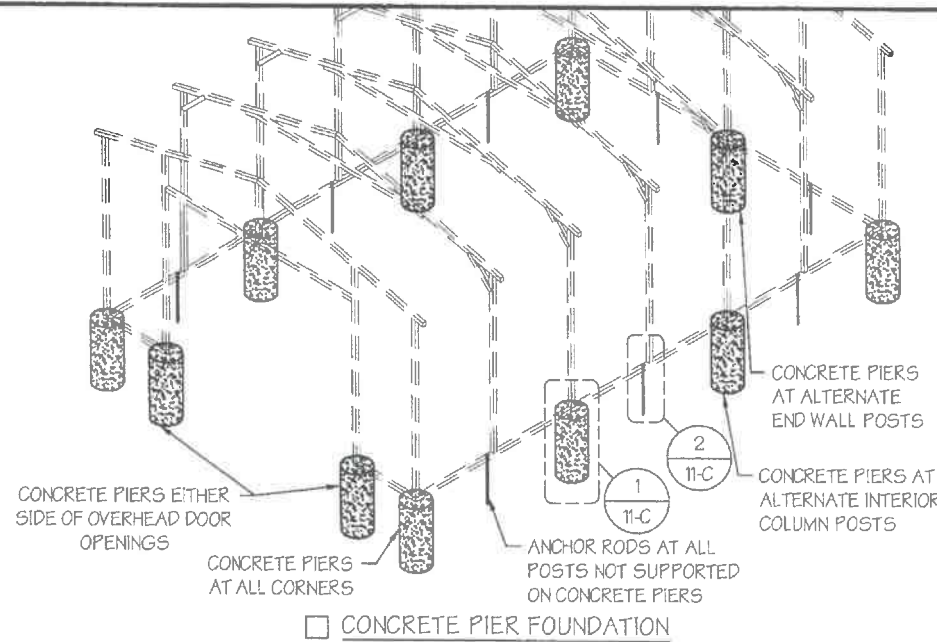
MANUFACTURED BY:



CONCRETE PIER DETAIL 1
SCALE: NTS



ANCHOR ROD INTO SOIL DETAIL 2
SCALE: NTS



CONCRETE PIER FOUNDATION
SCALE: NTS

CONCRETE PIER FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR CONCRETE PIER FOUNDATION. ANY OF THE FOUNDATIONS SHOWN ON SHEETS 11-A THRU C CAN BE USED.
- CONCRETE PIERS SHALL BE LOCATED AT ALL 4 CORNERS, ON EACH SIDE OF OVERHEAD DOOR OPENINGS AND ON ALTERNATE INTERIOR COLUMN POSTS AND END WALLS POSTS.
- TWO ANCHORS SHALL BE INSTALLED AT CORNERS OF ENCLOSED BUILDINGS WITH END WALLS - ONE ON EACH BASE RAIL. IN LOCATIONS REQUIRING TWO ANCHORS DUE TO WIND, ONE ANCHOR IS TO BE ON EACH SIDE OF THE COLUMN POST WITH A PIER.
- ANCHORS IN CLOSE PROXIMITY TO EACH OTHER MUST HAVE A MIN. 4" SPACING.
- MIN. NUMBER OF CONCRETE ANCHORS PER POST WITH A PIER SHALL BE AS SHOWN IN TABLE 11-C.2.
- TWO ANCHORS AND A PIER ARE REQUIRED AT DIAGONAL BRACING LOCATIONS WHEN REQUIRED.
- ALL POSTS NOT SUPPORTED ON CONCRETE PIERS SHALL BE ANCHORED TO THE GROUND WITH A 1/2" X 30" LG. THREADED ROD. RODS WILL HAVE A PRE-FORMED HEAD AT THE TOP AND ONE COAT OF RUST PROOF MATERIAL.
- PIERS SHALL BE FORMED BY DIGGING A HOLE OF THE SAME SIZE AS THE PIER ON LEVEL GRADE AND FILLING IT WITH CONCRETE. THIRD. ROD ANCHORS SHOULD BE DROPPED INTO THE PIERS PRIOR TO POURING THE CONCRETE.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.
- CONCRETE STRENGTH TO BE A MIN OF 2500 PSI @ 28 DAYS.

TABLE 11-C.2: ANCHOR SCHEDULE

ENCLOSURE	WIND SPEED (MPH)	ANCHOR SIZE/NUMBER
ENCLOSED	□ 105 TO 135	(1) 1/2" Ø X 7"
	□ 136 TO 180	(2) 1/2" Ø X 7"
OPEN	□ 105 TO 135	(1) 1/2" Ø X 7"
	□ 136 TO 180	(2) 1/2" Ø X 7"

NOTES:

- ANCHORS ARE TO BE CONCRETE WEDGE OR EXPANSION ANCHORS.
- MIN. EMBEDMENT DEPTH TO BE 2 7/8".
- ANCHORS TO BE SPACED NO MORE THAN 6" FROM POSTS.

TABLE 11-C.1: CONC. PIER SCHEDULE

WIND SPEED (MPH)	MIN. SIZE REQD.
□ 105 TO 130	24" Ø X 36"
□ 140 TO 155	24" Ø X 42"
□ 165 TO 180	24" Ø X 48"

DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS

LOCATION: STATE OF MICHIGAN

PROJECT NO.: 451-22-1572

SHEET TITLE:

FOUNDATION OPTION 3:
CONCRETE PIERS

SHEET NO.: 11-C / 11

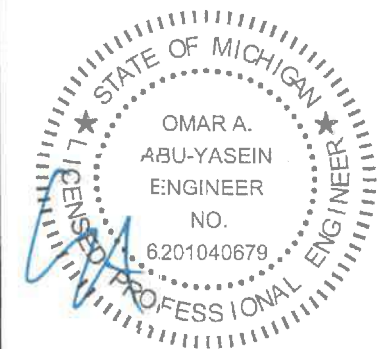
DRAWN BY: A.W. DATE: 5/17/22

CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

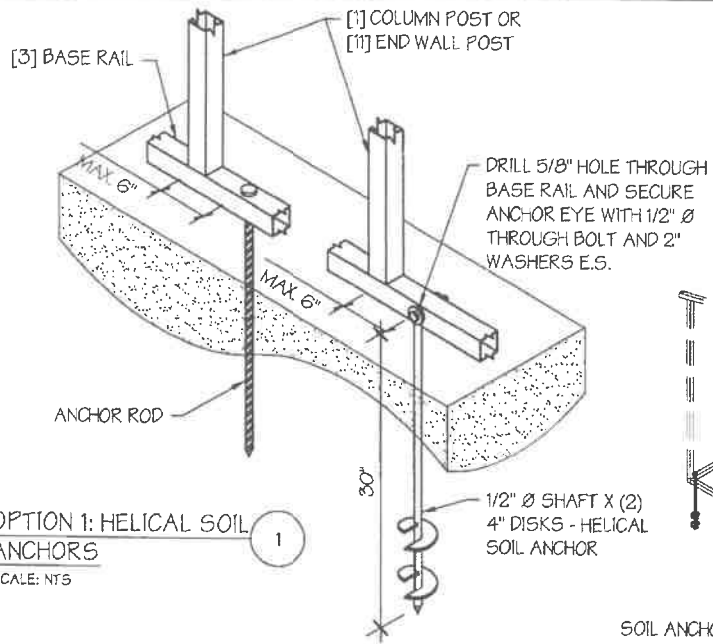
- ANY DUPLICATION OF THIS DRAWING IN WHOLE OR PART IS STRICTLY FORBIDDEN. ANYONE DOING SO WILL BE PROSECUTED UNDER THE FULL EXTENT OF THE LAW.
- DRAWINGS VALID UP TO 1 YEAR FROM DATE OF ISSUE.

SEAL:

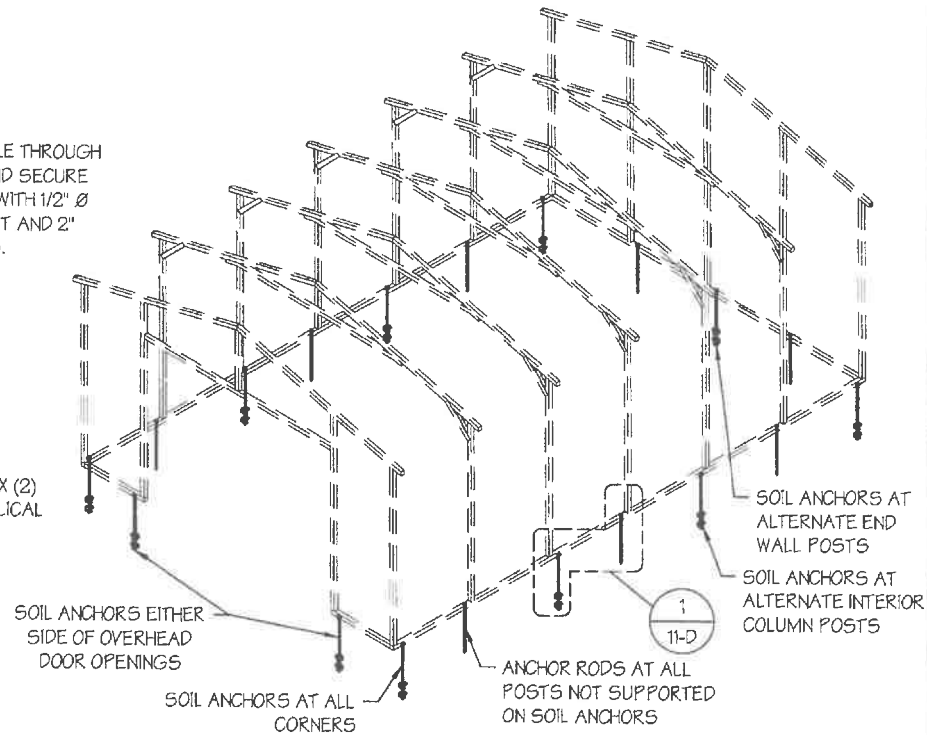


DATE EXPIRES: 03-24-2024

DATE SIGNED: 05-20-2022



OPTION 1: HELICAL SOIL ANCHORS
SCALE: NTS



OPTION 2: ROCK / ASPHALT ANCHORS
SCALE: NTS

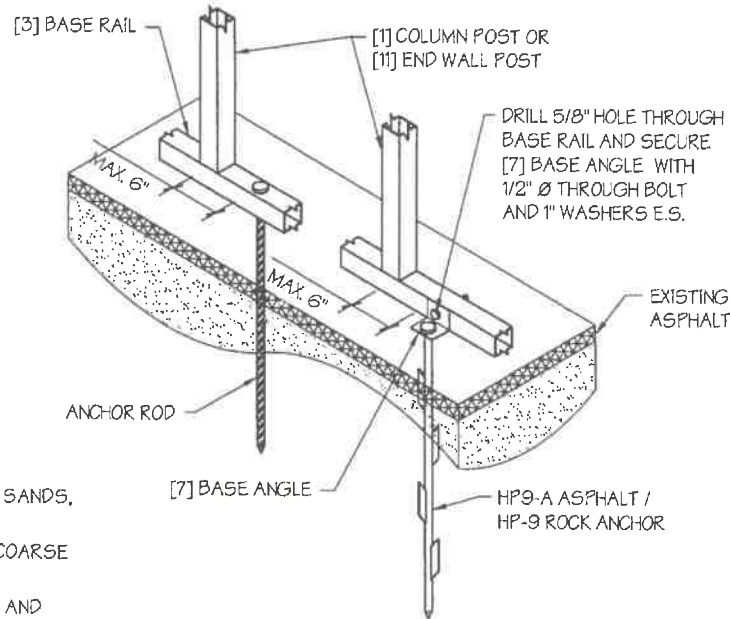
SOIL FOUNDATION NOTES:

- DESIGNS SHOWN ON THIS SHEET ARE FOR SOIL ANCHOR FOUNDATION.
- SOIL ANCHORS (HELICAL OR ROCK/ASPHALT) SHALL BE LOCATED AT ALL 4 CORNERS, ON EACH SIDE OF OVERHEAD DOOR OPENINGS, ON POSTS WITH DIAGONAL BRACING IF REQUIRED, AND ON ALTERNATE INTERIOR COLUMN POSTS AND END WALLS POSTS.
- HELICAL ANCHORS ARE TO BE USED ONLY IF THE DRIVING TORQUE INTO THE GROUND IS 150 FT-LBS OR GREATER. MANUFACTURER IS NOT RESPONSIBLE FOR SOIL QUALITY AT SITE.
- HELICAL ANCHORS CAN ONLY BE USED FOR CLASS 2, 3 & 4 SOILS (SEE SOIL CLASSIFICATIONS THIS PAGE).
- ALL POSTS WITH NO ANCHORS ADJACENT SHALL BE ANCHORED TO THE GROUND WITH A 1/2" X 30" LG. ROD. RODS WILL HAVE A PRE-FORMED HEAD AT THE TOP AND ONE COAT OF RUST PROOF MATERIAL.
- ASSUMED SOIL BEARING CAPACITY IS TO BE A MIN. OF 1500 PSF.

SOIL CLASSIFICATIONS:

SOIL CLASS	DESCRIPTION
2	SANDY GRAVEL AND GRAVEL, VERY THIN DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL/COBBLER, PRELOADED SILTS, CLAYS AND CORAL.
3	SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL, MEDIUM DENSE COARSE SANDS, SANDY GRAVEL, VERY STIFF SILT AND SANDY CLAYS.
4	LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS AND ALLUVIAL FILLS.

"FROM HUD "MODEL MANUFACTURED HOME INSTALLATION STANDARDS"



OPTION 2: ROCK / ASPHALT ANCHORS
SCALE: NTS

MANUFACTURED BY:



DRAWING INFORMATION

PROJECT: 24'-0" WIDE BUILDINGS
LOCATION: STATE OF MICHIGAN
PROJECT NO.: 451-22-1572
SHEET TITLE:

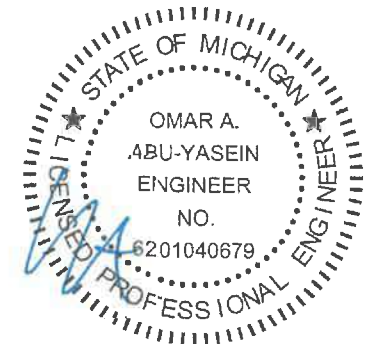
FOUNDATION OPTION 4:
SOIL ANCHORS

SHEET NO.: 11-D / 11
DRAWN BY: A.W. DATE: 5/17/22
CHECKED BY: OAA DATE: 5/17/22

LEGAL INFORMATION

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SEAL:



DATE EXPIRES: **03-24-2024**
DATE SIGNED: **05-20-2022**