



## COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road  
Novi, MI 48375  
(248) 347-0415 Phone  
(248) 735-5600 Facsimile  
[www.cityofnovi.org](http://www.cityofnovi.org)

# ZONING BOARD OF APPEALS STAFF REPORT

**FOR:** City of Novi Zoning Board of Appeals

**MEETING DATE:** May 14, 2023

**REGARDING:** 905 South Lake Drive # 50-22-03-451-014 (PZ24-0005)

**BY:** Alan Hall, Deputy Director Community Development

### I. GENERAL INFORMATION:

#### **Applicant**

Forever Pergola

#### **Variance Type**

Dimensional Variance

#### **Property Characteristics**

Zoning District: This property is zoned One-Family Residential (R-4)

Location: on South Lake Drive, east of Thirteen Mile Road

Parcel #: 50-22-03-451-014

#### **Request**

The applicant is requesting a variance from the City of Novi Zoning Ordinance Section 3.32(7) for a rear yard setback of 12 ft. (17 ft. required, variance of 5 ft.).

### II. STAFF COMMENTS:

*The applicant is seeking a dimensional variance to allow a pergola in the backyard of the home. The height of the pergola is 9'-0" tall and will not be higher than the existing house roof line. The size of the structure is roughly 12' x 23'.*

III. RECOMMENDATION:

The Zoning Board of Appeals may take one of the following actions:

1. I move that we **grant** the variance in Case No. **PZ24-0005**, sought by \_\_\_\_\_, for \_\_\_\_\_ because Petitioner has shown practical difficulty requiring \_\_\_\_\_.

(a) Without the variance Petitioner will be unreasonably prevented or limited with respect to use of the property because \_\_\_\_\_.

(b) The property is unique because \_\_\_\_\_.

(c) Petitioner did not create the condition because \_\_\_\_\_.

(d) The relief granted will not unreasonably interfere with adjacent or surrounding properties because \_\_\_\_\_.

(e) The relief is consistent with the spirit and intent of the ordinance because \_\_\_\_\_.

(f) The variance granted is subject to:

1. \_\_\_\_\_.
2. \_\_\_\_\_.
3. \_\_\_\_\_.
4. \_\_\_\_\_.

2. I move that we **deny** the variance in Case No. **PZ24-0005**, sought by \_\_\_\_\_, for \_\_\_\_\_ because Petitioner has not shown practical difficulty requiring \_\_\_\_\_.

(a) The circumstances and features of the property including \_\_\_\_\_ are not unique because they exist generally throughout the City.

(b) The circumstances and features of the property relating to the variance request are self-created because \_\_\_\_\_.

(c) The failure to grant relief will result in mere inconvenience or inability to attain higher economic or financial return based on Petitioners statements that \_\_\_\_\_.

(d) The variance would result in interference with the adjacent and surrounding properties by \_\_\_\_\_.

(e) Granting the variance would be inconsistent with the spirit and intent of the ordinance to \_\_\_\_\_.

Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0417.

Alan Hall – Deputy Director Community Development - City of Novi



45175 Ten Mile Road  
 Novi, MI 48375  
 (248) 347-0415 Phone  
 (248) 735-5600 Facsimile  
 www.cityofnovi.org

## ZONING BOARD OF APPEALS APPLICATION

**APPLICATION MUST BE FILLED OUT COMPLETELY**

**RECEIVED**

**MAR 12 2024**

**CITY OF NOVI  
COMMUNITY DEVELOPMENT**

<b>I. PROPERTY INFORMATION (Address of subject ZBA Case)</b>				<b>Application Fee:</b> <span style="font-size: 1.2em; color: blue;">\$220.00</span> <b>Meeting Date:</b> <span style="font-size: 1.2em; color: blue;">5-14-24</span> <b>ZBA Case #:</b> <span style="font-size: 1.2em; color: blue;">PZ 24-0005</span>	
PROJECT NAME / SUBDIVISION Heath					
ADDRESS 905 S Lake Dr. Novi, MI				LOT/SIUTE/SPACE #	
SIDWELL # 50-22-		May be obtain from Assessing Department (248) 347-0485			
CROSS ROADS OF PROPERTY					
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			REQUEST IS FOR: <input type="checkbox"/> RESIDENTIAL <input type="checkbox"/> COMMERCIAL <input type="checkbox"/> VACANT PROPERTY <input type="checkbox"/> SIGNAGE		
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED? <input type="checkbox"/> YES <input type="checkbox"/> NO					
<b>II. APPLICANT INFORMATION</b>					
<b>A. APPLICANT</b>		EMAIL ADDRESS matthew@foreverpergola.com		CELL PHONE NO. 5173440014	
NAME Matthew Barron-Ratz				TELEPHONE NO.	
ORGANIZATION/COMPANY Forever Pergola				FAX NO.	
ADDRESS 11301 Brix Hwy		CITY Brooklyn,		STATE MI	ZIP CODE 49230
<b>B. PROPERTY OWNER</b> <input type="checkbox"/> CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER					
Identify the person or organization that owns the subject property:		EMAIL ADDRESS dheath14433@att.net		CELL PHONE NO. 2487058707	
NAME Elizabeth Heath				TELEPHONE NO.	
ORGANIZATION/COMPANY				FAX NO.	
ADDRESS 905 S Lake Dr.		CITY Novi		STATE MI	ZIP CODE 48315
<b>III. ZONING INFORMATION</b>					
<b>A. ZONING DISTRICT</b>					
<input type="checkbox"/> R-A <input checked="" type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4 <input type="checkbox"/> RM-1 <input type="checkbox"/> RM-2 <input type="checkbox"/> MH <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> RC <input type="checkbox"/> TC <input type="checkbox"/> TC-1 <input type="checkbox"/> OTHER _____					
<b>B. VARIANCE REQUESTED</b>					
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:					
1. Section <u>3.32(7)</u> Variance requested <u>rear setback of 12', 17' required, variance of 5'</u>					
2. Section _____ Variance requested _____					
3. Section _____ Variance requested _____					
4. Section _____ Variance requested _____					
<b>IV. FEES AND DRAWINGS</b>					
<b>A. FEES</b>					
<input checked="" type="checkbox"/> Single Family Residential (Existing) \$220 <input type="checkbox"/> (With Violation) \$275 <input type="checkbox"/> Single Family Residential (New) \$275 <input type="checkbox"/> Multiple/Commercial/Industrial \$330 <input type="checkbox"/> (With Violation) \$440 <input type="checkbox"/> Signs \$330 <input type="checkbox"/> (With Violation) \$440 <input type="checkbox"/> House Moves \$330 <input type="checkbox"/> Special Meetings (At discretion of Board) \$660					
<b>B. DRAWINGS    1-COPY &amp; 1 DIGITAL COPY SUBMITTED AS A PDF</b>					
<ul style="list-style-type: none"> <li>• Dimensioned Drawings and Plans</li> <li>• Site/Plot Plan</li> <li>• Existing or proposed buildings or addition on the property</li> <li>• Number &amp; location of all on-site parking, if applicable</li> </ul>			<ul style="list-style-type: none"> <li>• Existing &amp; proposed distance to adjacent property lines</li> <li>• Location of existing &amp; proposed signs, if applicable</li> <li>• Floor plans &amp; elevations</li> <li>• Any other information relevant to the Variance application</li> </ul>		





# ZONING BOARD OF APPEALS APPLICATION

## V. VARIANCE

### A. VARIANCE (S) REQUESTED

DIMENSIONAL     USE     SIGN

There is a five-(5) hold period before work/action can be taken on variance approvals.

### B. SIGN CASES (ONLY)

Your signature on this application indicates that you agree to install a **Mock-Up Sign** ten-(10) days before the schedule ZBA meeting. Failure to install a mock-up sign may result in your case not being heard by the Board, postponed to the next schedule ZBA meeting, or cancelled. A mock-up sign is **NOT** to be actual sign. Upon approval, the mock-up sign must be removed within five-(5) days of the meeting. If the case is denied, the applicant is responsible for all costs involved in the removal of the mock-up or actual sign (if erected under violation) within five-(5) days of the meeting.

### C. ORDINANCE

#### City of Novi Ordinance, Section 3107 – Miscellaneous

No order of the Board permitting the erection of a building shall be valid for a period longer than one-(1) year, unless a building permit for such erection or alteration is obtained within such period and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

No order of the Board permitting a use of a building or premises shall be valid for a period longer than one-hundred and eighty-(180) days unless such use is establish within such a period; provided, however, where such use permitted is dependent upon the erection or alteration or a building such order shall continue in force and effect if a building permit for such erection or alteration is obtained within one-(1) year and such erection or alteration is started and proceeds to completion in accordance with the terms of such permit.

### D. APPEAL THE DETERMINATION OF THE BUILDING OFFICIAL

PLEASE TAKE NOTICE:

The undersigned hereby appeals the determination of the Building Official / Inspector or Ordinance made

CONSTRUCT NEW HOME/BUILDING     ADDITION TO EXISTING HOME/BUILDING     SIGNAGE

ACCESSORY BUILDING     USE     OTHER Attached Pergola, Patio Cover

## VI. APPLICANT & PROPERTY SIGNATURES

### A. APPLICANT

  
Applicant Signature

3/8/24

Date

### B. PROPERTY OWNER

**If the applicant is not the owner, the property owner must read and sign below:**

The undersigned affirms and acknowledges that he, she or they are the owner(s) of the property described in this application, and is/are aware of the contents of this application and related enclosures. 03/11/2024

  
Property Owner Signature

Date

## VII. FOR OFFICIAL USE ONLY

### DECISION ON APPEAL:

GRANTED

DENIED

The Building Inspector is hereby directed to issue a permit to the Applicant upon the following and conditions:

\_\_\_\_\_  
Chairperson, Zoning Board of Appeals

\_\_\_\_\_  
Date



**Community Development Department**

45175 Ten Mile Road  
Novi, MI 48375  
(248) 347-0415 Phone  
(248) 735-5600 Facsimile  
www.cityofnovi.org

**REVIEW STANDARDS  
DIMENSIONAL VARIANCE**

The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed Dimensional Variance meets the required standards for approval. In the space below, and on additional paper if necessary, explain how the proposed project meets each of the following standards. (Increased costs associated with complying with the Zoning Ordinance will not be considered a basis for granting a Dimensional Variance.)

**Standard #1. Circumstances or Physical Conditions.**

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties in the same zoning district or in the general vicinity. Circumstances or physical conditions may include:

- a. Shape of Lot.** Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment.  
 Not Applicable     Applicable    If applicable, describe below:  
Narrowness and of lot prohibits the build of reasonable shade structures on house for patio cover.

*and/or*

- b. Environmental Conditions.** Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure.  
 Not Applicable     Applicable    If applicable, describe below:

*and/or*

- c. Abutting Property.** The use or development of the property immediately adjacent to the subject property would prohibit the literal enforcement of the requirements of the Zoning Ordinance or would involve significant practical difficulties.  
 Not Applicable     Applicable    If applicable, describe below:

## **Standard #2. Not Self-Created.**

Describe the immediate practical difficulty causing the need for the Dimensional Variance, that the need for the requested variance is not the result of actions of the property owner or previous property owners (i.e., is not self-created).

The home was built past the current setbacks. These setbacks were either not in place during the time of construction or not enforced. The homeowner is seeking the variance to address these pre-existing limitations, allowing for the practical use of the property.

## **Standard #3. Strict Compliance.**

Explain how the Dimensional Variance in strict compliance with regulations governing area, setback, frontage, height, bulk, density or other dimensional requirements will unreasonably prevent the property owner from using the property for a permitted purpose, or will render conformity with those regulations unnecessarily burdensome.

The Dimensional Variance we are seeking for the pergola is necessary as strict compliance with setback regulations will unreasonably prevent practical use of the property. The limited space between the house line and setback renders the backyard unusable for a permitted purpose. Granting the variance would ensure the property's usability, provide shade, and enhance the quality of life and enjoyment of the home without unnecessary burdens. The patio already exists within the setbacks, and proposed pergola to be located 12' past the house. 12' from the back yard property line where the adjacent property has a

## **Standard #4. Minimum Variance Necessary.**

Explain how the Dimensional Variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district.

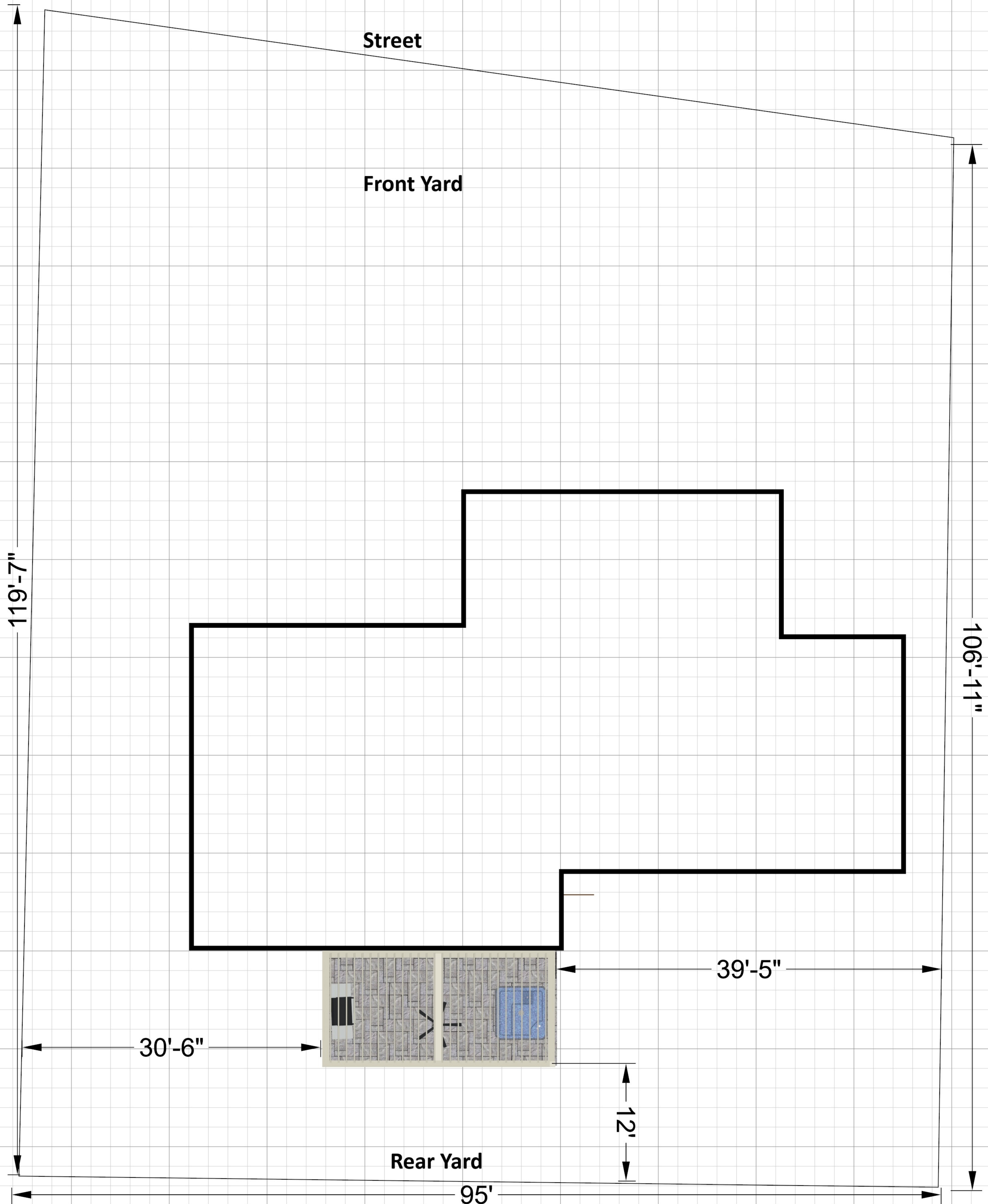
12' past the home for the build of this pergola is the minimum amount of space that would allow for the intended use of this back yard patio cover for backyard barbeques, and small social events of no more than 10 people on seldom occasions for typical single family dwellings.

## **Standard #5. Adverse Impact on Surrounding Area.**

Explain how the Dimensional Variance will not cause an adverse impact on surrounding property, property values, or the use and enjoyment of property in the neighborhood or zoning district.

This standard size pergola build will not go above the existing roof line and will not impede the view of adjoining properties. The color of the powder coated aluminum will blend in with the existing house siding and the narrow roof line of only 8" will not impact the surrounding area. The engineered construction plan will ensure that the build is structurally sound and will not cause any damage to the home or neighborhood during strong wind events.





905 S Lake Dr. Novi

Forever Pergola  
Proposed Plan



### REINFORCED CONCRETE

- ALL REINFORCED CONCRETE SHALL BE CONSTRUCTED ACCORDING TO THE GOVERNING BUILDING CODE AND ACI 318-14.
- STRUCTURAL CONCRETE SHALL COMPLY WITH THE MOST RESTRICTIVE REQUIREMENTS ACCORDING TO ACI 318 FOR THE EXPOSURE CATEGORIES AND CLASSES LISTED BELOW.

STRUCT. MEMBER	EXPOSURE CATEGORY AND CLASS	F0 - NEGLIGIBLE	S1 - MODERATE	P0 - NOT APPLICABLE	C0 - NOT APPLICABLE
FOOTINGS	F, FREEZING & THAWING:				
	S, SULFATE:				
	P, REQUIRING LOW PERMEABILITY:				
	C, CORROSION PROT. OF REINF.:				

- MINIMUM CONCRETE MIX REQUIREMENTS: CONCRETE COMPRESSIVE STRENGTH, f'c: 4500 PSI. (DESIGN BASED ON 2500 PSI NO SPECIAL INSPECTION REQUIRED)  
MAXIMUM WATER TO CEMENT RATIO: 0.45  
CEMENTITIOUS MATERIAL TYPE V
- STRUCTURAL CONCRETE SHALL REACH A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1500 PSI AND SHALL REACH THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS. CONCRETE COMPRESSIVE TESTS SHALL CONFORM TO ASTM C 140 TEST METHOD SAMPLING AND TESTING CONCRETE MASONRY UNITS AND RELATED UNITS. CEMENTITIOUS MATERIAL SHALL CONFORM TO ASTM C 150 SPECIFICATION FOR PORTLAND CEMENT.
- THE CONCRETE SHALL BE PROPORTIONED AND PRODUCED TO HAVE A SLUMP OF 4 INCHES OR LESS. A TOLERANCE OF 1 INCH ABOVE THIS AMOUNT SHALL BE PERMITTED FOR INDIVIDUAL BATCHES PROVIDED THE AVERAGE FOR ALL BATCHES DOES NOT EXCEED 4 INCHES. THE SLUMP SHALL BE DETERMINED BY "STANDARD TESTING METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE" (ASTM C 143). WHERE A SUPERPLASTICIZER ADMIXTURE IS USED, MAXIMUM SLUMP IS ALLOWED TO BE INCREASED 1-1/2" FOR EACH 1% OF SUPERPLASTICIZER UP TO A MAXIMUM INCREASE OF 3".
- WATER USED IN MIXING CONCRETE SHALL BE CLEAN FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE OR REINFORCEMENT. NON POTABLE WATER SHALL NOT BE USED.
- CONCRETE AGGREGATES SHALL CONFORM TO ASTM C 33 "STANDARD SPECIFICATIONS FOR CONCRETE AGGREGATES" OR ASTM C 330 "STANDARD SPECIFICATION FOR LIGHTWEIGHT AGGREGATES". THE NORMAL MAXIMUM SIZE OF COARSE AGGREGATES SHALL NOT BE LARGER THAN: 1/5 THE DISTANCE BETWEEN THE SIDES OF FORMS, 1/3 THE SLAB DEPTH, OR 3/4 THE MINIMUM CLEAR SPACING BETWEEN INDIVIDUAL REINFORCING BARS OR WIRES, BUNDLES OF BARS, INDIVIDUAL TENDONS, OR DUCTS.
- DEFORMED CONCRETE REINFORCING SHALL BE GRADE 60 REINFORCING STEEL CONFORMING TO ASTM A 615 "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN CARBON-STEEL BARS FOR CONCRETE REINFORCEMENT".
- BAR MATS FOR CONCRETE REINFORCING SHALL CONFORM TO ASTM A 184 "STANDARD SPECIFICATION FOR WELDED DEFORMED STEEL BAR MATS FOR CONCRETE REINFORCEMENT. REINFORCING BARS USED IN BAR MATS SHALL CONFORM TO ASTM A 515 OR ASTM A 706.
- WELDED PLAIN WIRE FOR CONCRETE REINFORCEMENT SHALL NOT BE SMALLER THAN D4 AND SHALL CONFORM TO ASTM A 496 "STANDARD SPECIFICATION FOR STEEL WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT". WELDED DEFORMED WIRE FOR CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A 497 "STANDARD SPECIFICATION FOR STEEL WELDED WIRE, DEFORMED, FOR CONCRETE REINFORCEMENT".
- NO ADMIXTURES, OTHER THAN AIR-ENTRAINING ADMIXTURE CONFORMING TO ASTM C 260 OR SUPERPLASTICIZER ADMIXTURE CONFORMING TO ASTM C 494 MAY BE USED WITHOUT THE WRITTEN APPROVAL FROM THE ENGINEER. CALCIUM CHLORIDE AND CONCRETE ADMIXTURES CONTAINING CHLORIDE SALTS ARE NOT PERMITTED.
- ALL REINFORCING LAP SPLICES SHALL BE CLASS 'B' SPLICES UNLESS NOTED OTHERWISE. LAP ALL REINFORCING BARS ACCORDING TO THE FOLLOWING LAP SPlice SCHEDULE. WHERE BEAM REINFORCING IS REQUIRED TO BE SPLICED, SPLICING SHALL ONLY TAKE PLACE IN COMPRESSION REGIONS, I.E. BOTTOM REINFORCING SPLICES ALLOWED OVER SUPPORTS AND TOP REINFORCING SPLICES ALLOWED IN THE BEAM MIDSPANS. WHERE COLUMN VERTICAL REINFORCING IS REQUIRED TO BE SPLICED, SPLICING WILL BE PERMITTED ONLY AT FLOOR LEVELS OR AREAS OF LATERAL SUPPORT.

### FOUNDATION & SLAB ON GRADE

- CONTRACTOR SHALL COMPLY WITH RECOMMENDATIONS IN THE PROJECT SOILS REPORT AND ALL ADDENDUMS, LETTERS, AND OTHER ASSOCIATED DOCUMENTS: PROJECT SOILS REPORT: NOT PROVIDED
- ALLOWABLE BEARING PRESURE = 1500 PSF  
ALLOWABLE LATERAL BEARING PRESSURE = 100 PCF  
MINIMUM FOOTING DEPTH = 42" BELOW THE NEAREST ADJACENT FINAL GRADE.
- ALL FOOTINGS SHALL BEAR ON STRUCTURAL FILL WITH AN ALLOWABLE BEARING CAPACITY OF AT LEAST 1500 PSF. STRUCTURAL FILL UNDER FOOTINGS SHALL BE ACCORDING TO THE FOLLOWING:  
CONTINUOUS FOOTINGS.....PER SOILS REPORT  
SPOT FOOTINGS.....PER SOILS REPORT  
SLABS ON GRADE.....PER SOILS REPORT
- WHERE STRUCTURAL FILL IS REQUIRED, STRUCTURAL FILL IS TO EXTEND BEYOND PERIMETER OF FOOTING A MINIMUM OF 6" PER 12" OF FILL DEPTH.
- CONTRACTOR SHALL ASSURE THAT SOIL FOOTINGS BEAR ON IS PROPERLY DRAINED AND DRY PRIORITY POURING FOUNDATION. FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE SOIL OR SOIL APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER OR BUILDING INSPECTOR. FOUNDATION SHALL HAVE A MINIMUM HORIZONTAL CLEARANCE FROM ASCENDING SLOPES SHALL BE A MINIMUM OF 25 FEET UNLESS APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER OR LOCAL JURISDICTION. FOOTING EXCAVATIONS TO BE CLEARED OF ALL DELETERIOUS MATERIAL BEFORE CONCRETE IS POURED.
- PROVIDE CRACK CONTROL JOINTS IN SLABS @ 10'-0" O.C. MAX BY SAW CUTTING @ 1/4" WIDE x 1 1/4" DEEP JOINTS SHOULD BE INSTALLED WITHIN 24 HOURS OF CONCRETE PLACEMENT.
- CONTRACTOR TO FOLLOW ALL SITE PREPARATION RECOMMENDATIONS FROM SOILS REPORT FOUNDATION STEPS SHALL NOT EXCEED 4 FEET OR 1/2 THE HORIZONTAL DISTANCE BETWEEN STEPS. HORIZONTAL REBAR SHALL BE 12" O.C. THROUGH STEP DOWNS AND EXTEND 48 INCHES EITHER SIDE OF STEP.
- ALLOW FOUNDATION 14 DAYS MINIMUM TO CURE PRIOR TO BACKFILL. PROVIDE BRACING AND/ OR FLOOR FRAMING BEFORE BACKFILLING ANY FOUNDATION WALLS.
- CONCRETE SLABS SHALL BE PROTECTED FROM LOSS OF SURFACE OVERTURE FOR NOT LESS THAN 7 DAYS BY USING A CURING COMPOUND CONFORMING TO ASTM C-309 OR BY WEIT BURLAP OR A PLASTIC MEMBRANE.
- LAP CONTINUOUS REINFORCING BARS WITH CLASS B LAP SPLICE ACCORDING TO CONCRETE LAP SPlice SCHEDULE UNDER REINFORCED CONCRETE NOTES. HOOK DISCONTINUOUS ENDS OF ALL TOP BARS WITH ACI STANDARD HOOKS. REINFORCING COVER SHALL BE AS FOLLOWS:  
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH (EXCEPT SLABS).....3"  
CONCRETE EXPOSED TO EARTH OR WEATHER BUT PLACED IN FORMS.....2"  
CONCRETE SLABS..... IN CENTER OF SLAB
- WATERPROOFING SHALL BE PLACED BETWEEN SOIL & CONCRETE WHEREVER SOIL IS USED AS A FORM FOR CONCRETE, EXCEPT FOR FOOTINGS.
- PLUMBING INSTALLED PARALLEL TO FOOTINGS SHALL BE INSTALLED ABOVE A 45 DEGREE LINE EXTENDING FROM THE NEAREST BOTTOM EDGE OF THE FOOTING. INSTALLING PLUMBING LINES UNDERNEATH AND PARALLEL WITH CONTINUOUS FOOTINGS IS PROHIBITED.
- WHERE PLUMBING RUNS BELOW AND PERPENDICULAR TO CONTINUOUS FOOTINGS, A PIPE SLEEVE SHALL BE PROVIDED THAT IS TWO PIPE SIZES GREATER THAN THE PIPE PASSING BELOW THE FOOTING. THE MINIMUM PIPE SLEEVE LENGTH SHALL BE THE WIDTH OF THE FOOTING PLUS 2 TIMES THE DEPTH OF THE PLUMBING LINE BELOW THE BOTTOM OF THE FOOTING. SPRAYED ON FOAM MAY BE USED IN LIEU OF A PIPE SLEEVE AND SHALL BE AT LEAST AS LARGE AS THE REQUIRED PIPE SLEEVE SIZE AND LENGTH.
- INSTALLING PLUMBING UNDERNEATH SPOT FOOTINGS IS PROHIBITED. SPOT FOOTINGS ELEVATIONS SHALL BE LOWERED TO KEEP PLUMBING ABOVE TOP OF SPOT FOOTINGS.
- HORIZONTAL PLUMBING PENETRATIONS THROUGH SPOT FOOTINGS ARE PROHIBITED. SPOT FOOTING ELEVATIONS MUST BE LOWERED TO KEEP PLUMBING ABOVE FOOTINGS WHERE POSSIBLE. HORIZONTAL PLUMBING PENETRATIONS IN CONTINUOUS FOOTINGS MUST BE APPROVED BY THE ENGINEER OF RECORD.
- VERTICAL PLUMBING PENETRATIONS THROUGH CONTINUOUS FOOTINGS AND SLABS SHALL BE PROVIDED WITH A PIPE SLEEVE TWO PIPE SIZES GREATER THAN THE PIPE PASSING THROUGH THE FOOTING. SPRAYED ON FOAM MAY BE USED IN LIEU OF A PIPE SLEEVE AND SHALL BE AT LEAST AS LARGE AS THE REQUIRED PIPE SLEEVE SIZE.
- ANY PIPE THAT PASSES THROUGH A FOUNDATION WALL SHALL BE PROVIDED WITH A RELIEVING ARCH, OR A PIPE SLEEVE PIPE SHALL BE BUILT INTO THE FOUNDATION WALL. THE SLEEVE SHALL BE TWO PIPE SIZES GREATER THAN THE PIPE PASSING THROUGH THE WALL. SPRAYED ON FOAM MAY BE USED IN LIEU OF A PIPE SLEEVE SO LONG AS THE FOAM IS AT LEAST AS LARGE AS THE REQUIRED PIPE SLEEVE SIZE. ALL REINFORCING SHOWN TO BE HOOKED SHALL HAVE STANDARD ACI HOOKS.
- CONCRETE SLABS SHALL BE PLACED AND FINISHED WITHIN A TOLERANCE OF 1/8 INCH IN EVERY 10 FEET, AS DETERMINED BY PLACING A 10 FOOT STRAIGHT EDGE ON THE SLAB IN ANY DIRECTION. ANY DEVIATION FROM THIS WHICH REQUIRES ADDITIONAL CUTTING OF OTHER BUILDING COMPONENTS SHALL BE THE RESPONSIBILITY OF THE CONCRETE CONTRACTOR.
- COMPACT CLEAN INTERIOR SAND FILL HAVING LESS THAN 10% FINES TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY, ASTM D 1557 AT OPTIMUM MOISTURE CONTENT. SOIL COMPACTION SHALL BE FIELD CONTROLLED BY QUALIFIED LABORATORY OR SOILS ENGINEER, APPROVED BY STRUCTURAL ENGINEER.
- CAST IN ANCHOR BOLTS AND POST INSTALLED THREADED RODS EPOXIED INTO CONCRETE SHALL BE ASTM F 1554 GR. 36.
- ALL LANDSCAPING MUST BE GRADED AWAY FROM THE STRUCTURE AT A MINIMUM GRADE OF 5% FOR THE FIRST 10 FEET OR AS FAR AS POSSIBLE TO MINIMIZE WATER INFILTRATION INTO THE SUBGRADE.

### GENERAL NOTES

- CONTRACTOR TO VERIFY ALL DIMENSIONS, SPANS, AND CONDITIONS WITH DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
- IF DISCREPANCIES ARE FOUND, THE MORE STRINGENT SPECIFICATION SHALL BE FOLLOWED. CONTRACTOR RESPONSIBLE FOR ADEQUATE BRACING OF STRUCTURAL MEMBERS, WALLS, AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION.
- THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE WORK HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY OMISSIONS, MISTAKES, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE WORK PRODUCT, THE ENGINEER SHALL BE PROMPTLY NOTIFIED AS SOON AS POSSIBLE SO OMISSIONS, MISTAKES OR DISCREPANCIES CAN BE RESOLVED
- MANY PORTIONS OF THESE DRAWINGS, NOTES AND SPECIFICATIONS ARE THE RESULT OF DEMANDS BY VARIOUS APPROVING AGENCIES THAT MUST BE PERFORMED AS PART OF THIS WORK. ANY ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER, BUT OF THE PARTIES RESPONSIBLE FOR MAKING THE CHANGE AND TAKING ACTION TO DO SO. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER OR THE CONTRADICTION TO THE ENGINEER'S WORK PRODUCT, THE INTENT, AND/OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER, BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION. THE ENGINEER SHOULD BE CONTACTED IN MATTERS OF ANY AND ALL CHANGES TO THE DRAWINGS AND SPECIFICATIONS HEREIN WITHOUT EXCEPTION.
- NON STRUCTURAL FRAMING REQUIREMENTS ARE NOT SPECIFIED ON STRUCTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ANY ADDITIONAL FRAMING REQUIRED.
- CONTRACTOR SHALL ASSURE THAT ALL PRODUCTS AND HARDWARE ARE USED PER MANUFACTURER'S RECOMMENDATIONS.
- AWNINGS ARE NOT TO BE ENCLOSED WITH SCREENS OR OTHER MEANS UNLESS SPECIFIED ON THESE DRAWINGS. ENCLOSED AWNINGS WITHOUT APPROVAL FROM THE ENGINEER WILL VOID THESE CONSTRUCTION DRAWINGS AND THE ASSOCIATED STRUCTURAL CALCULATIONS AND WILL ABSOLVE THE ENGINEER OF ALL LIABILITY FOR THE PROJECT.
- THESE CONSTRUCTION DRAWINGS ARE FOR THE AWNING AND ALL REQUIRED CONNECTIONS. DUE TO THE LACK OF INFORMATION AND/OR EXPOSED STRUCTURAL MEMBERS ON SUPPORTING EXISTING STRUCTURES, THE VERIFICATION OF ANY SUPPORTING EXISTING STRUCTURES TO SUPPORT NEW IMPOSED LOADS ARE THE RESPONSIBILITY OF OTHERS.
- ALL LANDSCAPING MUST BE GRADED AWAY FROM THE STRUCTURE AT A MINIMUM GRADE OF 5% FOR THE FIRST 10 FEET OR AS FAR AS POSSIBLE TO MINIMIZE WATER INFILTRATION INTO THE SUB-GRADE. AWNINGS SHALL HAVE A MINIMUM ROOF SLOPE OF 0.25/12' SLOPE AWAY FROM EX. BUILDING. CROSS SCOPE MAY BE REQUIRED DEPENDING ON SITE CONDITIONS. SUFFICIENT SLOPE, DRAINAGE AND DOWN SPOUTS ARE OUTSIDE THE SCOPE OF THESE DRAWINGS AND ARE THE RESPONSIBILITY OF THE INSTALLER.
- ALL ELECTRICAL OTHER ACCESSORIES MUST BE SURFACE MOUNTED UNLESS NOTED OTHERWISE. DRILLING HOLES IN STRUCTURAL MEMBERS LARGER THAN 1/4" IS NOT ALLOWED UNLESS SPECIFIED ON DRAWINGS.

### STRUCTURAL ALUMINUM

- ALL STRUCTURAL ALUMINUM COMPONENTS SHALL BE FABRICATED AND ERECTED ACCORDING TO THE GOVERNING BUILDING CODE AND ADMI-2015.
- ALL STRUCTURAL ALUMINUM SHALL BE THE FOLLOWING ALLOY AND TEMPER:  
ALL SHAPES 1/8".....6061-T6  
EQUINOX LOUVERS.....6063-T5
- STRUCTURAL ALUMINUM SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
- WHERE ALUMINUM IS IN CONTACT WITH OTHER METALS EXCEPT 300 SERIES STAINLESS STEEL, ZINC OR CADMIUM AND THE FAYING SURFACES ARE EXPOSED TO MOISTURE, THE OTHER METALS SHALL BE PAINTED OR COATED WITH ZINC, CADMIUM, OR ALUMINUM.
- UNCOATED ALUMINUM SHALL NOT BE EXPOSED TO MOISTURE OR RUNOFF THAT HAS COME IN CONTACT WITH OTHER UNCOATED METALS EXCEPT 300 SERIES STAINLESS STEEL, ZINC, OR CADMIUM.
- ALUMINUM SURFACES TO BE PLACED IN CONTACT WITH WOOD, FIBERBOARD, OR OTHER POROUS MATERIAL THAT ABSORBS WATER SHALL BE PAINTED.
- ALUMINUM SURFACES SHALL BE PAINTED IF THEY ARE TO BE PLACED IN CONTACT WITH CONCRETE OR MASONRY UNLESS THE CONCRETE OR MASONRY REMAINS DRY AFTER CURING AND NO CORROSIVE ADDITIVES SUCH AS CHLORIDES ARE USED.
- ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE WITH CORROSIVE ADDITIVES SUCH AS CHLORIDES IF THE ALUMINUM IS ELECTRICALLY CONNECTED TO STEEL. ALUMINUM EMBEDDED IN CONCRETE SHALL BE WRAPPED WITH 10 MIL PIPE WRAP OR PLASTIC TAPE. WRAP MUST PROTECT ALL ALUMINUM SURFACES FROM EXPOSURE TO CONCRETE
- STEEL FASTENERS WITH A SPECIFIED MINIMUM TENSILE ULTIMATE STRENGTH GREATER THAN 120 KSI IN THE LOAD BEARING PORTION OF THE SHANK SHALL NOT BE USED IN CONTACT WITH ALUMINUM. ALL FASTENERS SHALL BE LOCATED AT A SPACING THAT CONFORMS TO AISC STANDARD GAGE AND PITCH. AS AN ALTERNATIVE TO THE PREVIOUS REQUIREMENTS FOR ALUMINUM IN CONTACT WITH OTHER MATERIALS, ALUMINUM SHALL BE SEPARATED FROM THE MATERIALS OF THIS SECTION BY A NONPOROUS ISOLATOR COMPATIBLE WITH THE ALUMINUM AND THE DISSIMILAR MATERIAL.
- BOLT HOLES SHALL BE DRILLED THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16".
- FASTENERS SHALL BE 1/4"x3/4" #14 ITW BUILDEX TEKS SELF DRILLING FASTENERS OR EQUAL UNLESS NOTED OTHERWISE. SCREWS MUST BE INSTALLED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND MUST BY 3/16" LONGER THAN THE TOTAL MATERIAL THICKNESS UNLESS NOTED OTHERWISE.
- PREDRILL ALL HOLES FOR MATERIAL THICKER THAN 3/16"
- NOMINAL DIAMETER OF UNTHREADED HOLES FOR SCREWS SHALL NOT EXCEED THE NOMINAL DIAMETER OF THE SCREWS BY MORE THAN 1/16".
- THE SPACING BETWEEN SCREWS CENTER SHALL NOT BE LESS THAN 2.5 TIMES THE NOMINAL DIAMETER OF THE SCREWS.
- THE DISTANCE FROM THE EDGE OF A PART TO THE CENTER OF THE SCREWS SHALL NOT BE LESS THAN 3 TIMES THE NOMINAL DIAMETER OF THE SCREW.
- WASHERS SHALL HAVE A NOMINAL DIAMETER NOT LESS THAN 5/16" AND SHALL HAVE A NOMINAL THICKNESS NOT LESS THAN 0.050".
- ALL ELECTRICAL AND OTHER ACCESSORIES MUST BE SURFACE MOUNTED UNLESS NOTED OTHERWISE. DRILLING HOLES IN STRUCTURAL MEMBERS LARGER THAN 1/4" IS NOT ALLOWED UNLESS SPECIFIED ON DRAWINGS.

### SHEET INDEX

S1.0	COVER
S2.0	COVER
S3.0	ELEVATIONS
S4.0	FOUNDATION PLAN
S5.0	ROOF FRAMING
S6.0	SITE PLAN
S7.0	STRUCTURAL DETAILS
S8.0	TYPICAL DETAILS

### STRUCTURAL DESIGN CRITERIA - IBC 2015

#### STRUCTURE DESIGN LOADS

GRAVITY LOADS	
ROOF DEAD:	5 PSF
ROOF LIVE LOAD:	10 PSF
GROUND SNOW LOAD:	25 PSF
SNOW EXPOSURE FACTOR $C_e$ :	1.00
SNOW IMPORTANCE FACTOR $s$ :	1.00
THERMAL FACTOR $C_t$ :	1.20
ROOF SLOPE FACTOR $C_s$ :	1.00
ROOF SNOW LOAD:	21 PSF
SLIDING SNOW SURCHARGE:	AS SHOWN IN PLANS
DRIFT SUR CHARGE Pd:	N/A

#### DEFLECTION CRITERIA

DEFLECTION CRITERIA	
ROOF MEMBERS $\Delta$ (LIVE)	L/180
$\Delta$ (TOTAL LOAD)	L/120
ALUMINUM LOUVERS $\Delta$ (TOTAL LOAD)	L/60
STORY DRIFT:	0.02*HEIGHT

#### WIND DESIGN PARAMETERS

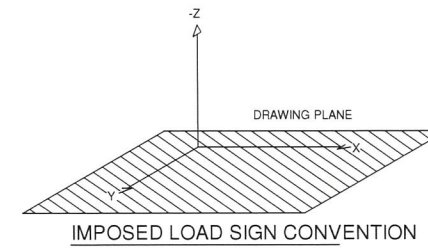
ULTIMATE WIND SPEED, $V_{ult}$ :	115 MPH ( $V_{asd} = 89$ MPH)
EXPOSURE:	C
RISK CATEGORY:	II
INTERNAL PRESSURE COEFFICIENT, $G_cP_i$ :	0.00

#### SEISMIC DESIGN PARAMETERS

SEISMIC DESIGN CATEGORY:	B
SITE CLASS:	D
RISK CATEGORY:	II
IMPORTANCE FACTOR, $i$ :	1.00
RESPONSE MOD. FACTOR, $R$ :	1.25
OVER STRENGTH FACTOR, $\phi$ :	1.25
DEFLECTION AMPLIFICATION FACTOR, $G_d$ :	1.25
BASIC SEISMIC-FORCE-RESISTING SYSTEM(S):	ORDINARY CANTILEVERED COLUMNS
DESIGN BASE SHEAR, $V$ :	C&W
SEISMIC DESIGN COEFFICIENT, $C_s$ :	0.0717
ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORCE
1.	0.084
2.	0.044
3.	0.070
SD1:	0.090
SDS:	

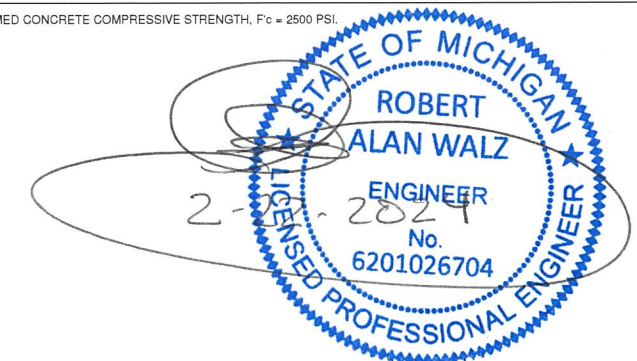
### EXISTING STRUCTURE NOTES

VERIFICATION OF EXISTING STRUCTURES TO SUPPORT NEW AWNING LOADS BY OTHERS. CONNECTIONS TO EXISTING MASONRY VENEER FOR STRUCTURAL SUPPORT OF AWNINGS IS STRICTLY PROHIBITED. IMPOSED LOADS ON THE EXISTING STRUCTURE FOLLOW THE SIGN CONVENTION SHOWN BELOW



### EX. FOUNDATION & SLAB ON GRADE NOTES

1. ASSUMED CONCRETE COMPRESSIVE STRENGTH,  $f_c = 2500$  PSI.



**BOB WALZ**  
**ENGINEERING**  
586-778614 EMAIL: BOB4WALZ@GMAIL.COM

#### PROJECT NAME

LAKE DRIVE EQUINOX

#### PROJECT ADDRESS

905 S LAKE DR, NOVI, MICHIGAN

#### PROJECT NUMBER

002

#### CLIENT

FOREVER PERGOLA

#### NO. REVISION

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

#### DRAWN BY:

Checker

#### TITLE SHEET:

COVER

#### SHEET:

**S1.0**



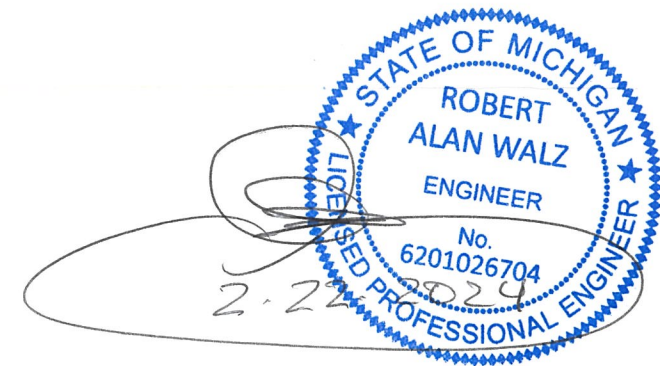
## STATEMENT OF SPECIAL INSPECTION

1. ALL SPECIAL INSPECTION REPORTS, TESTS, QUALIFICATIONS, AND CERTIFICATES OF COMPLIANCE SHALL BE APPROVED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE CITY BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
2. CONTRACTORS MUST SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY PER IBC 2015 SECTION 1704.4. CONTRACTOR IS REQUIRED TO FOLLOW THE STATEMENT OF SPECIAL INSPECTIONS PER IBC 2015 SECTION 1704.3.1.
3. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO SEE THAT THE TEST AND INSPECTIONS ARE PERFORMED. JOB SITE VISITS BY THE ENGINEER OF RECORD DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR SPECIAL INSPECTIONS.
4. CONTRACTOR SHALL PROVIDE NAME OF APPROVED SPECIAL INSPECTION AGENCY AND QUALIFICATION OF INDIVIDUAL TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION.
5. THE FOLLOWING SPECIAL INSPECTIONS ARE REQUIRED BY THE CURRENT EDITION OF THE IBC:

EXPANSION, ADHESIVE, AND POST INSTALLED ANCHORS	PER ICC EVALUATION REPORT	
ANCHOR	APPROVED APPLICATION	ICC ES EVALUATION #
- SIMPSON STRONG-BOLT	CONCRETE	#ESR-1771
- SIMPSON STRONG-BOLT 2	CONCRETE	#ESR-3037
- SIMPSON TITEN HD (3/8", 1/2" & 3/4" DIA.)	CONCRETE	#ESR-2713
- SIMPSON SET-XP EPOXY	CONCRETE	#ESR-2508
- HILTI KWIK BOLT TZ	CONCRETE	#ESR-1917
- HILTI HIT-RE 500-SD EPOXY	CONCRETE	#ESR-2322
- HILTI KWIK BOLT 3	MASONRY	#ESR-1358
- SIMPSON TITEN HD	MASONRY	#ESR-1056
- SIMPSON WEDGE-ALL	MASONRY	#ESR-1396
- SIMPSON SET-3G	CONCRETE	#ESR-4057

## STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL COMPONENTS SHALL BE FABRICATED AND ERECTED ACCORDING TO THE GOVERNING BUILDING CODE AND AISC 360-10 AND AISC 341-10.
2. CONTRACTOR SHALL PROVIDE NAME OF APPROVED FABRICATOR FOR WELDED STRUCTURAL COMPONENTS TO BUILDING OFFICIAL FOR APPROVAL PRIOR TO CONSTRUCTION.
3. ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
  - W SHAPE BEAMS.....ASTM A992, Fy = 50 KSI
  - RECTANGULAR HSS SECTIONS.....ASTM A500 GR. B, Fy = 46 KSI
  - ROUND HSS SECTIONS.....ASTM A500 GR. B, Fy = 42 KSI
  - STEEL PIPE.....ASTM A53 GR. B, Fy = 35 KSI
  - C CHANNEL SECTIONS.....ASTM A36, Fy = 36 KSI
  - ANGLE SECTIONS.....ASTM A36, Fy = 36 KSI
  - PLATES, BARS, AND OTHER SHAPES.....ASTM A36, Fy = 36 KSI
4. ALL BOLTED CONNECTIONS SHALL BE SNUG TIGHT WITH A325N BOLTS FOR ALL CONNECTIONS UNLESS NOTED OTHERWISE. USE AISC STANDARD GAGE AND PITCH FOR ALL BOLT SPACING. ALL BOLT HOLES SHALL BE AISC STANDARD HOLES.
5. ALL WELDING TO BE E70XX ELECTRODE UNLESS NOTED OTHERWISE AND SHALL CONFORM TO AWS D1.1 AND SHALL ONLY BE PERFORMED BY AWS CERTIFIED WELDERS.
6. ALL WELDS ARE TO BE AISC PREQUALIFIED WELDED JOINTS ACCORDING TO THE CURRENT AISC 360 UNLESS NOTED OTHERWISE.
7. STRUCTURAL STEEL SHALL BE FRAMED PLUMB AND TRUE AND ADEQUATELY BRACED DURING CONSTRUCTION.
8. SURFACES THAT ARE TO BE FIELD WELDED SHALL NOT BE PAINTED.
9. ALL SHOP DRAWINGS SHALL BE APPROVED BY THE ENGINEER OF RECORD. AFTER APPROVAL FROM THE ARCHITECT AND GENERAL CONTRACTOR. SHOP DRAWING REVIEW AND APPROVAL BY THE ENGINEER OF RECORD IS FOR SIZE AND SHAPE OF STRUCTURAL ELEMENTS ONLY. DIMENSIONS ON SHOP DRAWINGS ARE TO BE APPROVED BY THE ARCHITECT AND/OR GENERAL CONTRACTOR.
10. WHERE LEVELING IS REQUIRED FOR STEEL COLUMNS A MINIMUM OF 2" OF NON SHRINK GROUT IS REQUIRED UNDER THE BASE PLATE BEFORE ANY LOAD IS APPLIED. ALL SECOND POURS FOR INTERIOR EMBEDDED COLUMNS SHALL NOT BE POURED UNTIL ALL ROOF AND FLOOR FRAMING IS IN PLACE.



BOB WALZ  
ENGINEERING

586-770814 EMAIL: BOB.WALZ@GMAIL.COM

PROJECT NAME  
LAKE DRIVE EQUINOX

PROJECT ADDRESS  
905 S LAKE DR, NOVI,  
MICHIGAN

PROJECT NUMBER  
002

CLIENT  
FOREVER PERGOLA

NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

DRAWN BY:  
JVB

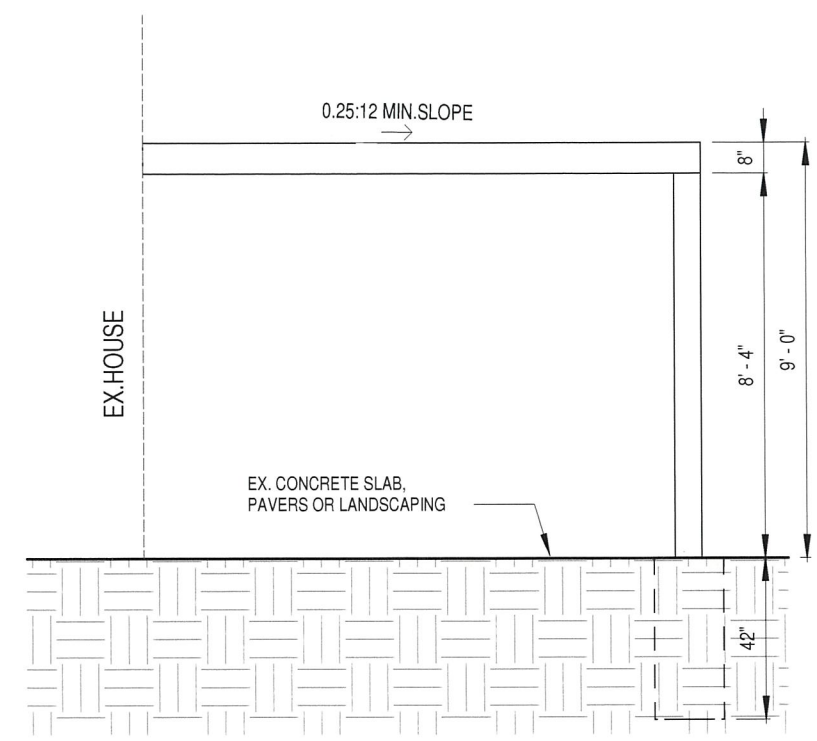
TITLE SHEET:  
COVER

SHEET:  
**S2.0**

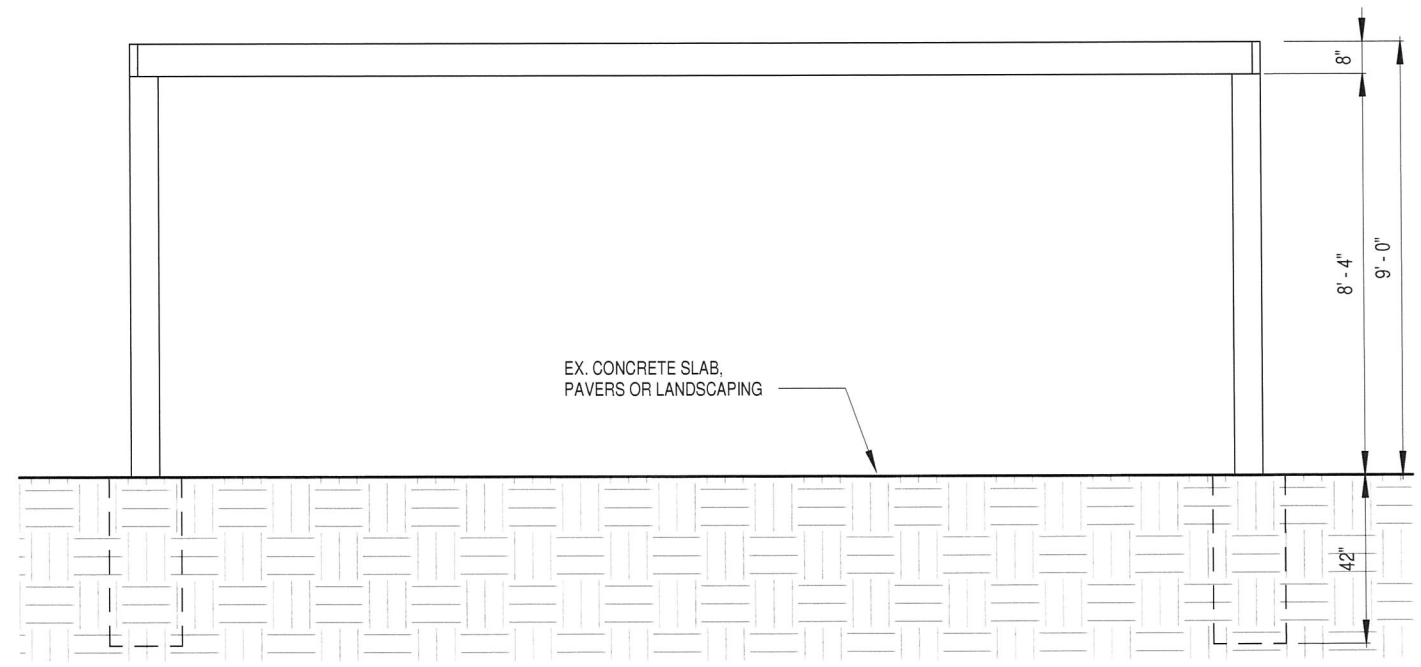
**GENERAL NOTES**

1. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES, OMISSIONS, OR ERRORS BEFORE CONSTRUCTION.
2. REFER TO SHEET S0.0 FOR ALL GENERAL FRAMING AND MATERIAL SPECIFICATIONS.
3. SEE ARCHITECTURAL PLANS FOR ANY ADDITIONAL DIMENSIONS
4. CONTRACTOR TO FOLLOW ALL SITE PREPARATIONS FROM SOILS REPORT.
5. AWNINGS SHALL HAVE A MINIMUM ROOF SLOPE OF 0.25"/12" SLOPE AWAY FROM EX BUILDING. CROSS SCOPE MAY BE REQUIRED DEPENDING ON SITE CONDITIONS. SUFFICIENT SLOPE, DRAINAGE AND DOWN SPOUTS ARE OUTSIDE THE SCOPE OF THESE DRAWINGS AND ARE THE RESPONSIBILITY OF THE INSTALLER.
6. ALL FLASHING AND WATERPROOFING IS RESPONSIBILITY OF OTHERS

**BOB WALZ**  
ENGINEERING  
986-770814 EMAIL: BOB.WALZ@GMAIL.COM



**1 WEST ELEVATION**  
S3.0 SCALE 1 : 50



**2 SOUTH ELEVATION**  
S3.0 SCALE 1/4" = 1'-0"

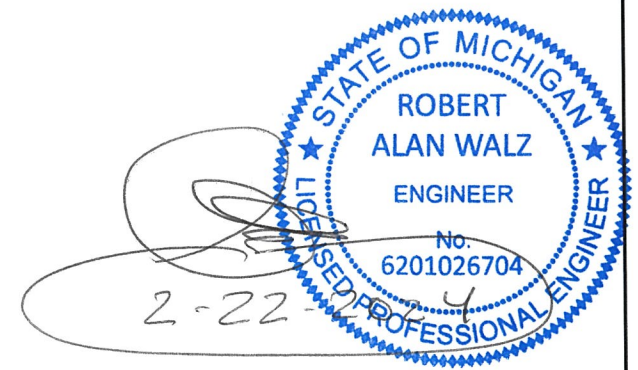
PROJECT NAME	LAKE DRIVE EQUINOX
PROJECT ADDRESS	905 S LAKE DR, NOVI, MICHIGAN
PROJECT NUMBER	002
CLIENT	FOREVER PERGOLA

NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

DRAWN BY:  
JVB

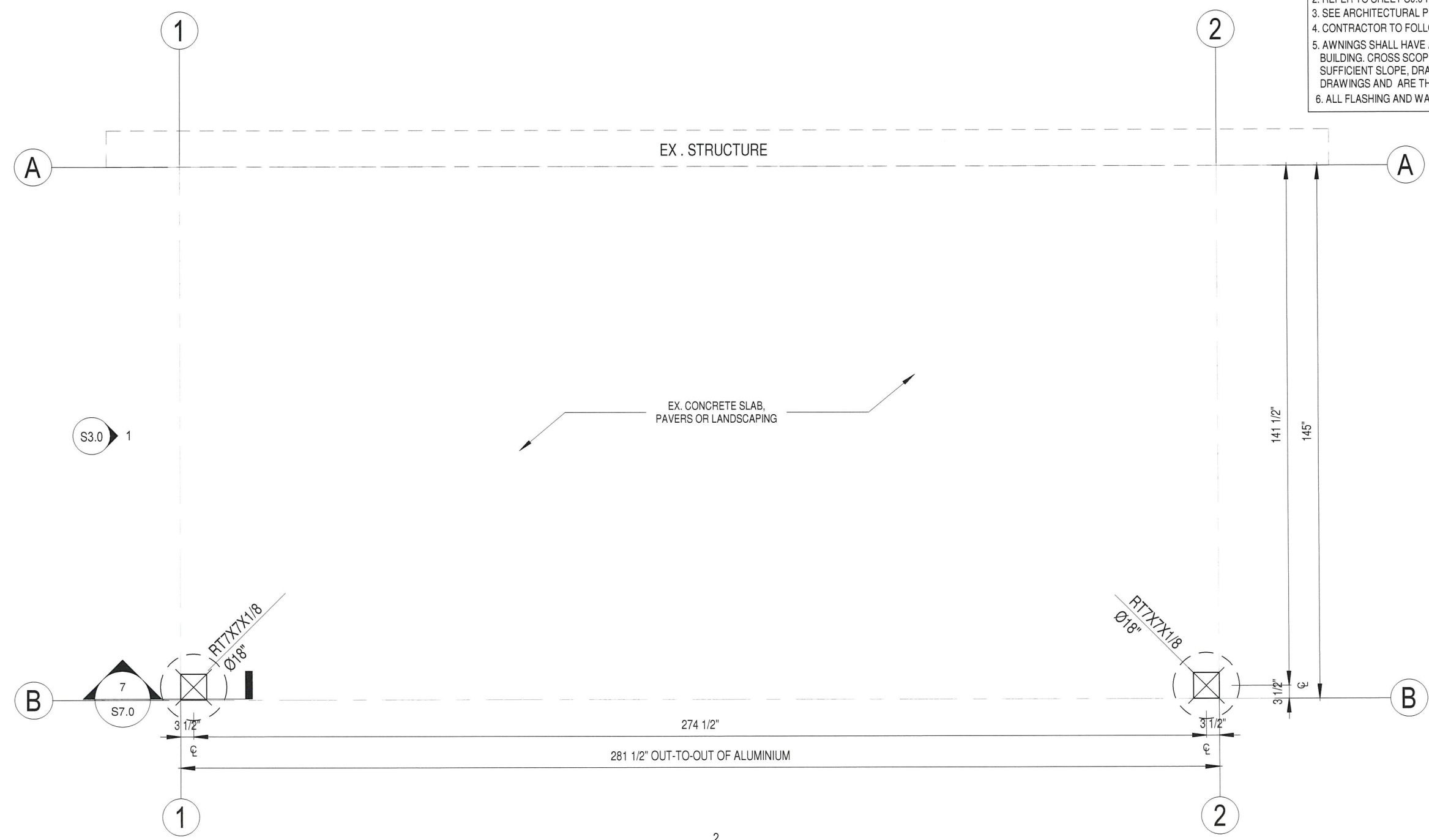
TITTLE SHEET:  
ELEVATIONS

SHEET:  
**S3.0**

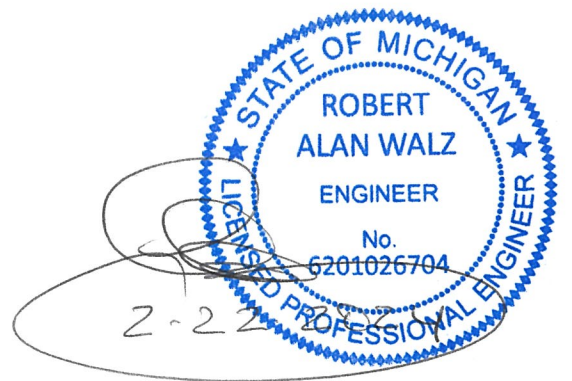


SYMBOL LEGEND	
---	FOOTING
	COL. SIZE & TYPE COLUMN SYMBOL
	EX. STRUCTURE

- GENERAL NOTES**
1. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES, OMISSIONS, OR ERRORS BEFORE CONSTRUCTION.
  2. REFER TO SHEET S0.0 FOR ALL GENERAL FRAMING AND MATERIAL SPECIFICATIONS.
  3. SEE ARCHITECTURAL PLANS FOR ANY ADDITIONAL DIMENSIONS
  4. CONTRACTOR TO FOLLOW ALL SITE PREPARATIONS FROM SOILS REPORT.
  5. AWNINGS SHALL HAVE A MINIMUM ROOF SLOPE OF 0.25"/12" SLOPE AWAY FROM EX BUILDING. CROSS SCOPE MAY BE REQUIRED DEPENDING ON SITE CONDITIONS. SUFFICIENT SLOPE, DRAINAGE AND DOWN SPOUTS ARE OUTSIDE THE SCOPE OF THESE DRAWINGS AND ARE THE RESPONSIBILITY OF THE INSTALLER.
  6. ALL FLASHING AND WATERPROOFING IS RESPONSIBILITY OF OTHERS



**1 FOUNDATION PLAN**  
S4.0 SCALE 3/8" = 1'-0"



PROJECT NAME	LAKE DRIVE EQUINOX
PROJECT ADDRESS	905 S LAKE DR, NOVI, MICHIGAN
PROJECT NUMBER	002
CLIENT	FOREVER PERGOLA

NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

DRAWN BY:  
Checker

TITLE SHEET:  
FOUNDATION PLAN

SHEET:  
**S4.0**

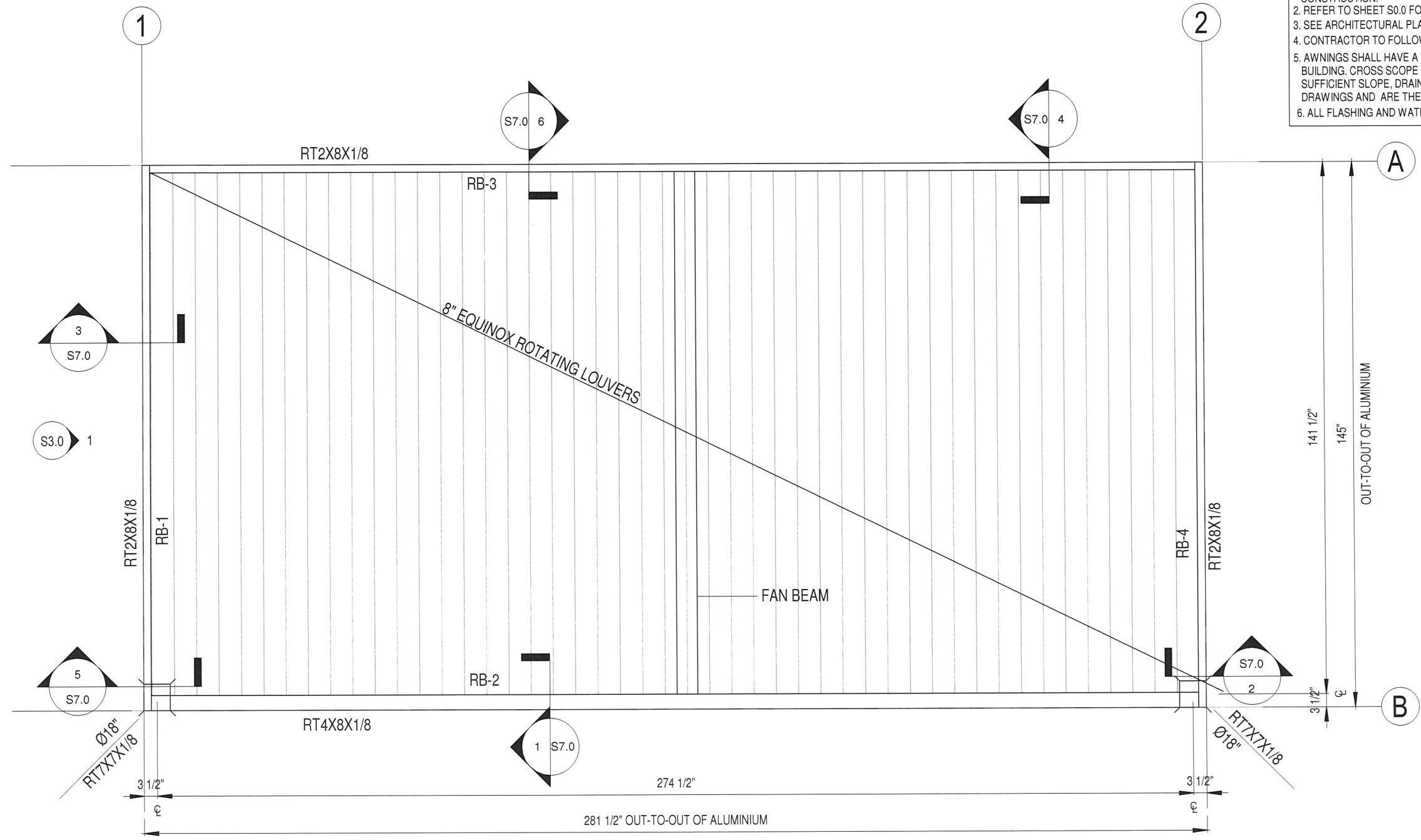


**SYMBOL LEGEND**

-----	FOOTING
	COLUMN SYMBOL
	EX. STRUCTURE

**GENERAL NOTES**

1. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES, OMISSIONS, OR ERRORS BEFORE CONSTRUCTION.
2. REFER TO SHEET S0.0 FOR ALL GENERAL FRAMING AND MATERIAL SPECIFICATIONS.
3. SEE ARCHITECTURAL PLANS FOR ANY ADDITIONAL DIMENSIONS
4. CONTRACTOR TO FOLLOW ALL SITE PREPARATIONS FROM SOILS REPORT.
5. AWNINGS SHALL HAVE A MINIMUM ROOF SLOPE OF 0.25"/12" SLOPE AWAY FROM EX BUILDING. CROSS SCOPE MAY BE REQUIRED DEPENDING ON SITE CONDITIONS. SUFFICIENT SLOPE, DRAINAGE AND DOWN SPOUTS ARE OUTSIDE THE SCOPE OF THESE DRAWINGS AND ARE THE RESPONSIBILITY OF THE INSTALLER.
6. ALL FLASHING AND WATERPROOFING IS RESPONSIBILITY OF OTHERS



**1 FLOOR PLAN**  
SCALE 3/8" = 1'-0"



PROJECT NAME  
LAKE DRIVE EQUINOX

PROJECT ADDRESS  
905 S LAKE DR, NOVI,  
MICHIGAN

PROJECT NUMBER  
002

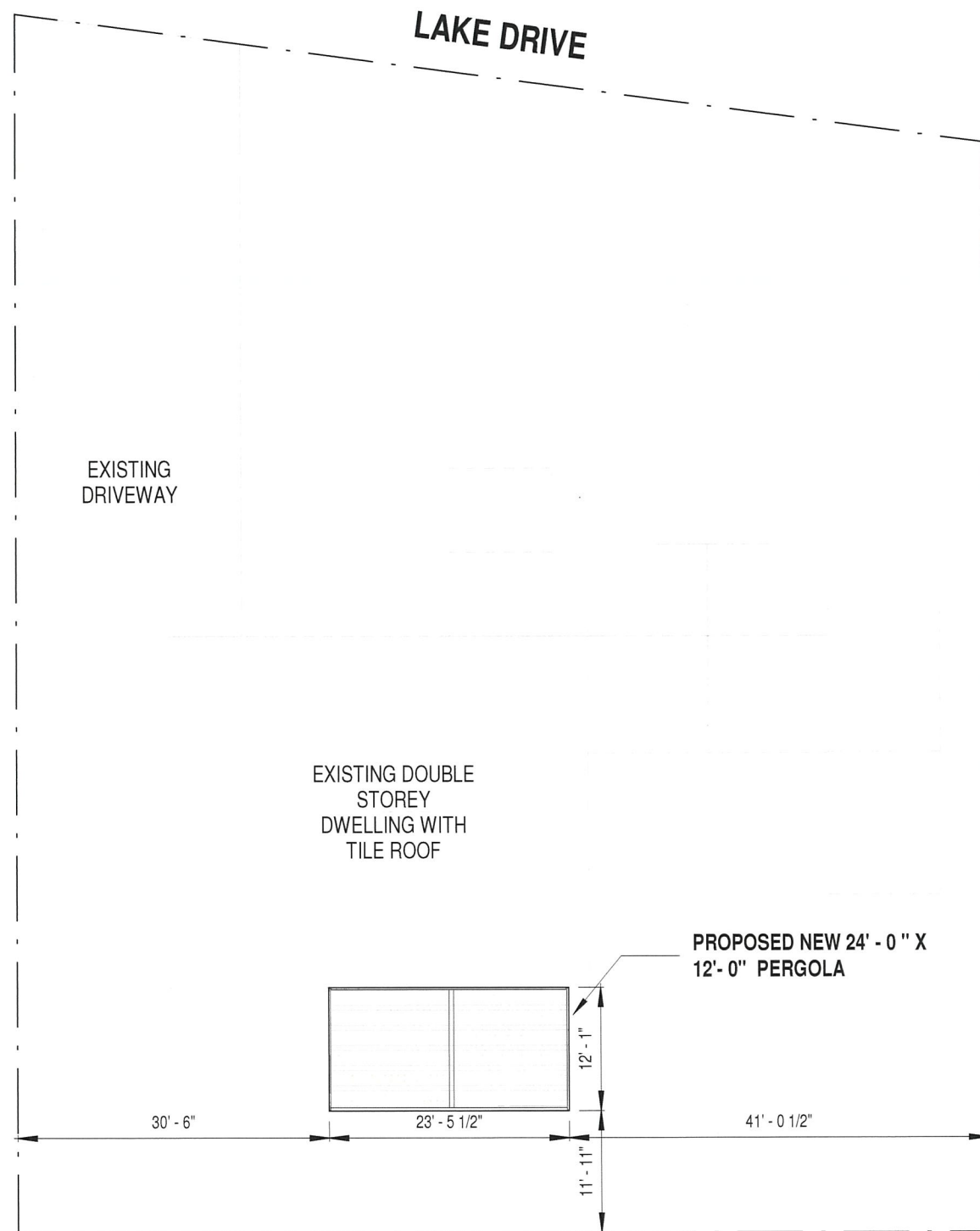
CLIENT  
FOREVER PERGOLA

NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

DRAWN BY:  
Checker

TITTLE SHEET:  
ROOF FRAMING

SHEET:  
**S5.0**



- GENERAL NOTES**
1. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PLANS AND NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES, OMISSIONS, OR ERRORS BEFORE CONSTRUCTION.
  2. REFER TO SHEET S6.0 FOR ALL GENERAL FRAMING AND MATERIAL SPECIFICATIONS.
  3. SEE ARCHITECTURAL PLANS FOR ANY ADDITIONAL DIMENSIONS
  4. CONTRACTOR TO FOLLOW ALL SITE PREPARATIONS FROM SOILS REPORT.
  5. AWNINGS SHALL HAVE A MINIMUM ROOF SLOPE OF 0.25"/12" SLOPE AWAY FROM EX BUILDING. CROSS SCOPE MAY BE REQUIRED DEPENDING ON SITE CONDITIONS. SUFFICIENT SLOPE, DRAINAGE AND DOWN SPOUTS ARE OUTSIDE THE SCOPE OF THESE DRAWINGS AND ARE THE RESPONSIBILITY OF THE INSTALLER.
  6. ALL FLASHING AND WATERPROOFING IS RESPONSIBILITY OF OTHERS

**BOB WALZ**  
ENGINEERING  
586-7706814 EMAIL: BOB.AWALZ@GMAIL.COM

PROJECT NAME  
LAKE DRIVE EQUINOX

PROJECT ADDRESS  
905 S LAKE DR, NOVI, MICHIGAN

PROJECT NUMBER  
002

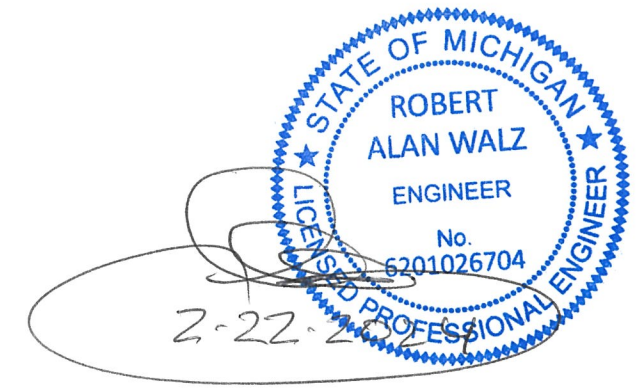
CLIENT  
FOREVER PERGOLA

NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

DRAWN BY:  
Checker

TITTLE SHEET:  
SITE PLAN

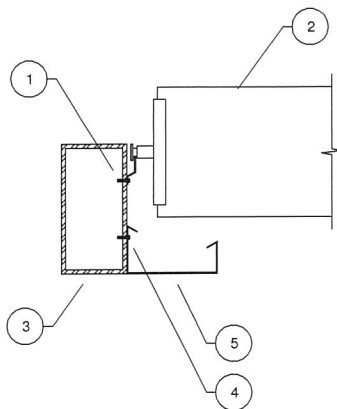
SHEET:  
**S6.0**



1 SITE PLAN  
S6.0 SCALE 1/16" = 1'-0"

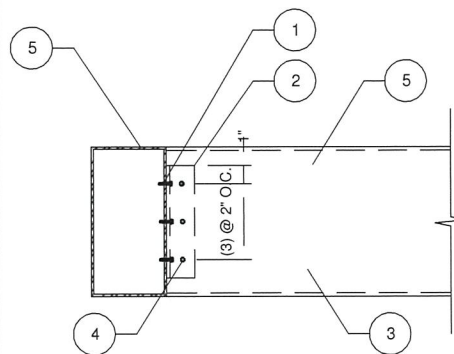


- NOTES:  
 1. #10 TEK SCREWS @ 8" O.C.  
 2. EQUINOX ROTATING LOUVERS  
 3. ALUMINUM BEAM PER PLAN  
 4. #14 TEK SCREWS @ 16" O.C.  
 5. CONTINUOUS ALUMINUM GUTTER



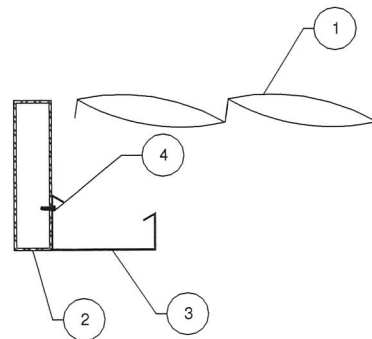
**1 LOUVERS PERPENDICULAR TO BEAM**  
 S7.0 SCALE 1" = 1'-0"

- NOTES:  
 1. (3) #14 TEK SCREWS EQ. SPACED EA. INSERT CHANNEL (6 SCREWS TOTAL FOR 4X AND MULTI PLY BEAMS)  
 2. 1-3/4"x2"x6"x1/8" ALUMINUM INSERT CHANNEL EA. PLY (2) INSERT CHANNELS REQD. FOR SINGLE 4X MEMBERS AND LARGER  
 3. LOUVERS AND GUTTER NOT SHOWN FOR CLARITY  
 4. (3) #14 TEK SCREWS EQ. SPACED EA. SIDE OF BEAM  
 5. ALUMINUM BEAM PER PLAN



**2 BEAM TO BEAM CONNECTION 4"**  
 S7.0 SCALE 1" = 1'-0"

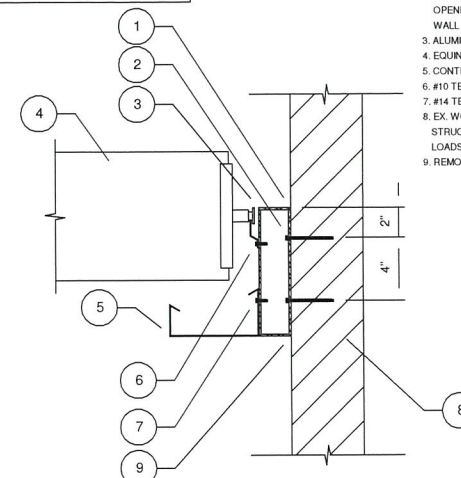
- NOTES:  
 1. EQUINOX ROTATING LOUVERS  
 2. ALUMINUM BEAM PER PLAN  
 3. CONTINUOUS ALUMINUM GUTTER  
 4. #14 TEK SCREW @ 16" O.C.



**3 LOUVERS PARALLEL TO BEAM**  
 S7.0 SCALE 1" = 1'-0"

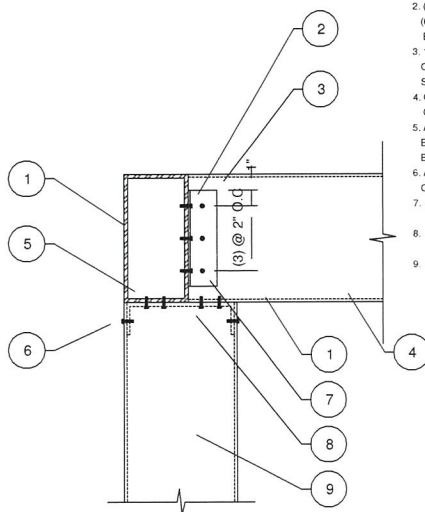
REFER TO S4.0 FOR LOADS IMPOSED ON EXISTING STRUCTURE  
 VERIFICATION OF EX. STRUCTURE TO SUPPORT NEW AWNING LOADS BY OTHERS

- NOTES:  
 1. SEAL WITH CONT. SILICONE BEAD  
 2. GALVANIZED 1/4"x3-1/2" SIMPSON SDS SCREWS OR. EQ. @ 16" O.C. STAGGERED INSTALL (3) ADDITIONAL SCREWS AT EA. SIDE OF EXISTING OPENINGS, DRILL 3/4" DIAMETER HOLE IN OUTER WALL OF BEAM TO INSTALL SCREWS  
 3. ALUMINUM LEDGER PER PLAN  
 4. EQUINOX ROTATING LOUVERS  
 5. CONTINUOUS ALUMINUM GUTTER  
 6. #10 TEK SCREWS @ 8" O.C.  
 7. #14 TEK SCREW @ 16" O.C.  
 8. EX. WOOD FRAMED WALL. VERIFICATION OF EX. STRUCTURE AWNING TO SUPPORT NEW AWNING LOADS BY OTHERS  
 9. REMOVE EXISTING SIDING AT BEAM LOCATION



**4 ALUMINUM BEAM TO WALL CONN.**  
 S7.0 SCALE 1" = 1'-0"

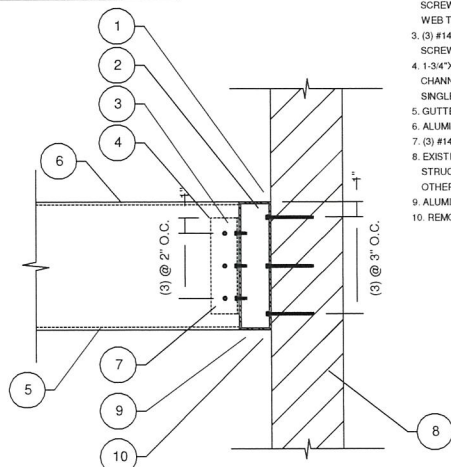
- NOTES:  
 1. ALUMINUM BEAM PER PLAN  
 2. (3) #14 TEK SCREWS EACH CLIP EA. SPACED (6 SCREWS TOTAL FOR 4X AND MULTI PLY BEAMS)  
 3. 1-3/4"x1-3/4"x1/8"x6" ALUMINUM INSERT CHANNEL EA. BEAM PLY (2) CLIPS REQD. FOR SINGLE 4X MEMBERS  
 4. GUTTER AND LOUVERS NOT SHOWN FOR CLARITY  
 5. ATTACH INSERT CHANNEL TO ALUMINUM BEAM W/ (6) #14 TEK SCREWS, (2) SCREWS EA. BEAM MIN.  
 6. ATTACH INSERT CHANNEL TO ALUMINUM COLUMN W/ (3) #14 TEK SCREWS EA. SIDE OF BEAM EQ. SPACED  
 7. (3) #14 TEK SCREWS EA. SIDE OF BEAM EQ. SPACED  
 8. 6-3/4"x1-3/4"x6-3/4"x1/8" ALUMINUM INSERT CHANNEL REFER TO S6.0  
 9. ALUMINUM COLUMN PER PLAN



**5 BEAM TO COLUMN CONNECTION**  
 S7.0 SCALE 1" = 1'-0"

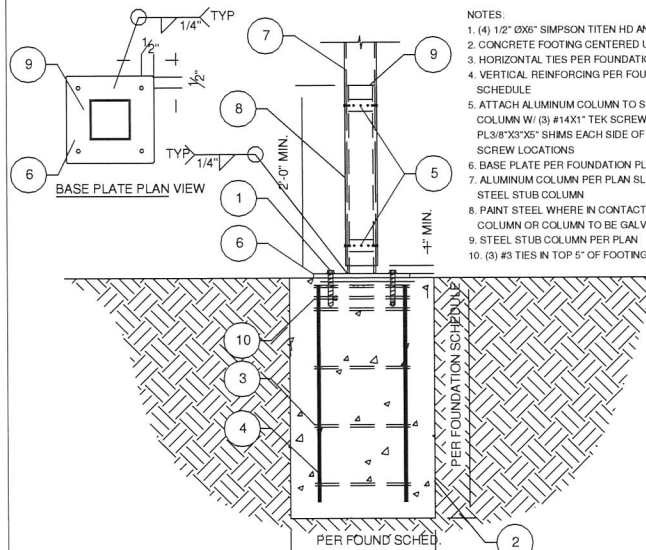
REFER TO S4.0 FOR LOADS IMPOSED ON EXISTING STRUCTURE  
 VERIFICATION OF EX. STRUCTURE TO SUPPORT NEW AWNING LOADS BY OTHERS

- NOTES:  
 1. SEAL WITH CONT. SILICONE BEAD  
 2. (2) ROWS OF (3) 1/4"x4" GALVANIZED SIMPSON SDS SCREWS WITHIN 16" OF EDGE BEAM. PROVIDE 5" MINIMUM SPACING BETWEEN ROWS OF SCREWS. DRILL 3/4" DIAMETER HOLE IN OUTER WEB TO INSTALL SCREWS  
 3. (3) #14 TEK SCREWS EACH CLIP EQ. SPACED (6 SCREWS TOTAL FOR 4X AND MULTI PLY BEAMS)  
 4. 1-3/4"x1-3/4"x1/8"x6" ALUMINUM INSERT CHANNEL EA. BEAM PLY (2) CLIPS REQD. FOR SINGLE 4X MEMBERS AND LARGER  
 5. GUTTER AND LOUVERS NOT SHOWN FOR CLARITY  
 6. ALUMINUM BEAM PER PLAN  
 7. (3) #14 TEK SCREWS EA. SIDE OF BEAM  
 8. EXISTING STRUCTURE. VERIFICATION OF EX. STRUCTURE TO SUPPORT NEW AWNING LOADS BY OTHERS  
 9. ALUMINUM LEDGER PER PLAN  
 10. REMOVE EXISTING SIDING AT BEAM LOCATION



**6 ALUMINUM BEAM TO WALL CONN.**  
 S7.0 SCALE 1" = 1'-0"

- NOTES:  
 1. (4) 1/2" Øx6" SIMPSON TITEN HD ANCHORS  
 2. CONCRETE FOOTING CENTERED UNDER POST  
 3. HORIZONTAL TIES PER FOUNDATION SCHEDULE  
 4. VERTICAL REINFORCING PER FOUNDATION SCHEDULE  
 5. ATTACH ALUMINUM COLUMN TO STEEL STUB COLUMN W/ (3) #14X1" TEK SCREWS EACH SIDE. PL3/8"x3"x5" SHIMS EACH SIDE OF COLUMN AT SCREW LOCATIONS  
 6. BASE PLATE PER FOUNDATION PLAN  
 7. ALUMINUM COLUMN PER PLAN SLEEVE OVER STEEL STUB COLUMN  
 8. PAINT STEEL WHERE IN CONTACT W/ ALUMINUM COLUMN OR COLUMN TO BE GALVANIZED  
 9. STEEL STUB COLUMN PER PLAN  
 10. (3) #3 TIES IN TOP 5" OF FOOTING



**7 FOOTING DETAIL**  
 S7.0 SCALE 1" = 1'-0"

**JEFF HEDMAN, PE**

216 W. ST. GEORGE SQUARE SUITE 203, LIT 48770  
 PH: 432-313-4102 EMAIL: jeh@hedmanengineering.com  
 ALL DRAWINGS AND PRINTS ARE THE PROPERTY OF JEFF HEDMAN, PE AND CONSTRUCTION OF THE DRAWINGS IS SUBJECT TO THE SPECIFICATIONS AND CONDITIONS OF THE DRAWING CONTRACT.  
 I HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MICHIGAN.

PROJECT NAME  
 LAKE DRIVE EQUINOX

PROJECT ADDRESS  
 905 S LAKE DR, NOVI, MICHIGAN

PROJECT NUMBER  
 002

CLIENT  
 FOREVER PERGOLA

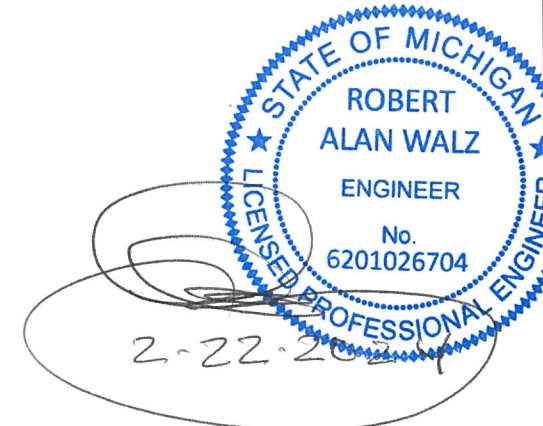
NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

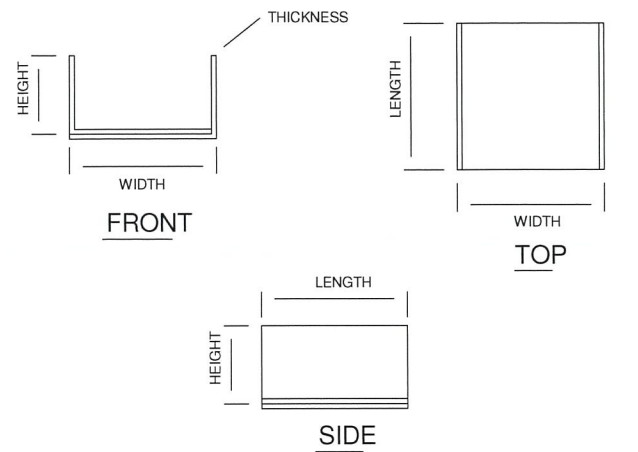
DRAWN BY:  
 JVB

TITLE SHEET:  
 STRUCTURAL DETAILS

SHEET:

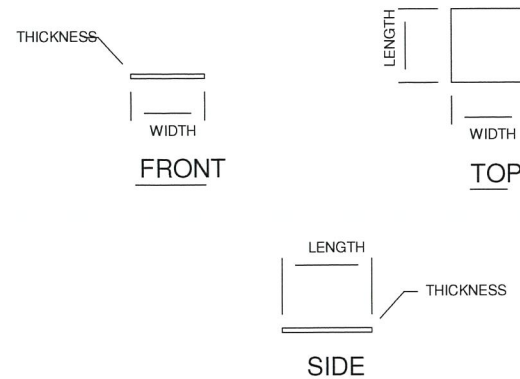
**S7.0**





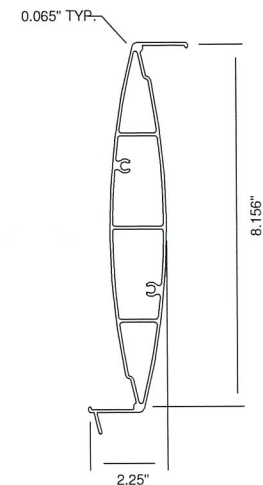
DESIGNATION:  
WIDTH X HEIGHT X THICKNESS X LENGTH

1 CUSTOM INSERT CHANNEL  
S8.0 SCALE 1" = 1'-0"

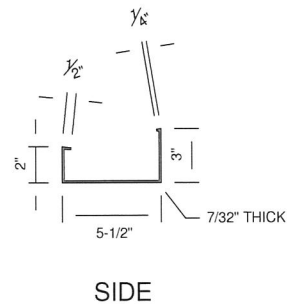


DESIGNATION:  
PL THICKNESS X LENGTH X WIDTH

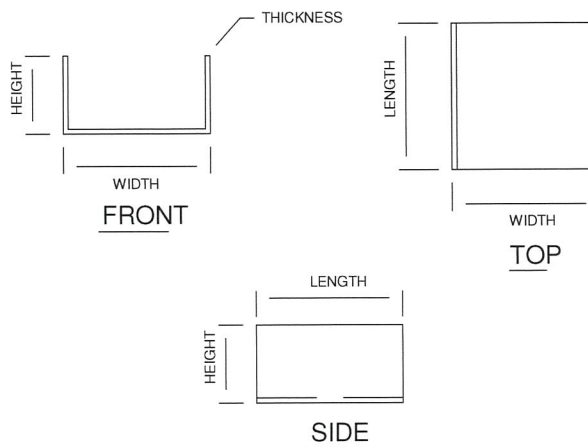
2 PLATES  
S8.0 SCALE 1" = 1'-0"



3 PLATES  
S8.0 SCALE 1" = 1'-0"

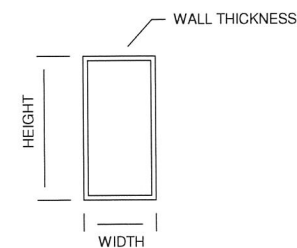


4 ALUMINUM GUTTER  
S8.0 SCALE 1" = 1'-0"



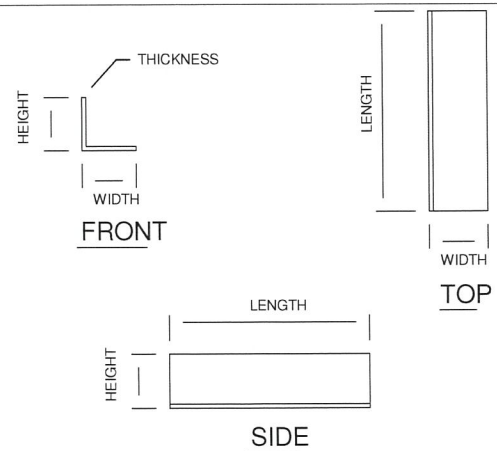
DESIGNATION:  
WIDTH X HEIGHT X THICKNESS X LENGTH

5 INSERT CHANNEL  
S8.0 SCALE 1" = 1'-0"



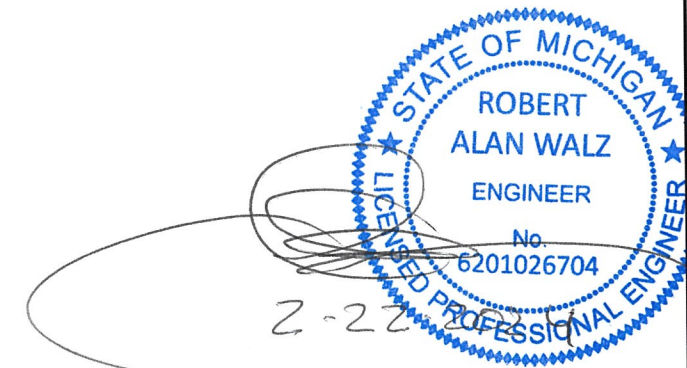
DESIGNATION:  
RT WIDTH X HEIGHT X WALL THICKNESS

6 INSERT CHANNEL  
S8.0 SCALE 1" = 1'-0"



DESIGNATION:  
L HEIGHT X WIDTH X THICKNESS X LENGTH

7 INSERT CHANNEL  
S8.0 SCALE 1" = 1'-0"



**JEFF HEDMAN, PE**  
216 W ST. GEORGE BOULEVARD SUITE 203, UT 84770  
PH: 435-313-4162 EMAIL: jeh@hedmanengineering.com  
ALL DRAWINGS AND PROJECTS ARE PART OF THE SERVICES PROVIDED BY JEFF HEDMAN, PE. THE PROJECT SHALL REMAIN THE PROPERTY OF JEFF HEDMAN, PE. ANY REVISIONS TO THE DRAWING SHALL BE MADE BY THE ENGINEER. THE ENGINEER IS NOT RESPONSIBLE FOR THE CONSTRUCTION OF THE PROJECT OR FOR THE SAFETY OF THE PROJECT WITHOUT THE WRITTEN CONSENT OF JEFF HEDMAN, PE.

PROJECT NAME  
LAKE DRIVE EQUINOX

PROJECT ADDRESS  
905 S LAKE DR, NOVI, MICHIGAN

PROJECT NUMBER  
002

CLIENT  
FOREVER PERGOLA

NO.	REVISION
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	

DRAWN BY:  
Checker

TITLE SHEET:  
TYPICAL DETAILS

SHEET:  
S8.0