DESIGN CRITERIA

DEAD LOAD:
FABRIC: 0.25 PSF

SNOW LOAD:
GROUND SNOW LOAD: 0 PSF
ROOF SNOW LOAD: 0 PSF
SNOW EXPOSURE FACTOR: 1.0
SNOW LOAD IMPORTANCE FACTOR: 1.0
THERMAL FACTOR: 1.2

LIVE LOAD:
ROOF LIVE LOAD: 2.5 PSF

WIND LOAD:
BASIC WIND SPEED: 75 MPH
WIND IMPORTANCE FACTOR: 1.0
WIND EXPOSURE CATEGORY: C
GUST EFFECT FACTOR: 0.89

SEISMIC DESIGN:
SEISMIC IMPORTANCE FACTOR: 1.0
SEISMIC SITE CLASS: D
SEISMIC DESIGN CATEGORY: V
BASIC SEISMIC FORCE RESISTING SYSTEM: CANTILEVERED COLUMNS DETAILED
TO INTERMEDIATE MOMENT FRAMES

OWNER NOTES
1. FABRIC MEMBRANE(S) MUST BE REMOVED IF LIVE LOAD/ROOF SNOW LOAD IS EXPECTED TO EXCEED 2.5 PSF AND/OR THE BASIC WIND SPEED IS EXPECTED TO EXCEED 75 MPH.
2. THE OWNER ACCEPTS FULL RESPONSIBILITY OF REMOVING THE FABRIC FROM THE STEEL FRAME WHEN ANY OR ALL OF THESE CONDITIONS MAY OCCUR.
3. THE STEEL STRUCTURE WITH THE FABRIC REMOVED IS DESIGNED TO WITHSTAND DEAD LOADS,ROOF LIVE LOADS, SNOW LOADS, SEISMIC LOADS AND WIND SPEEDS PER THE LOCAL CODE REQUIREMENTS.

GENERAL NOTES
1. FABRIC MEETS NFPA 701-04.
2. ALL EXPOSED STEEL TO BE POWDERCOATED.

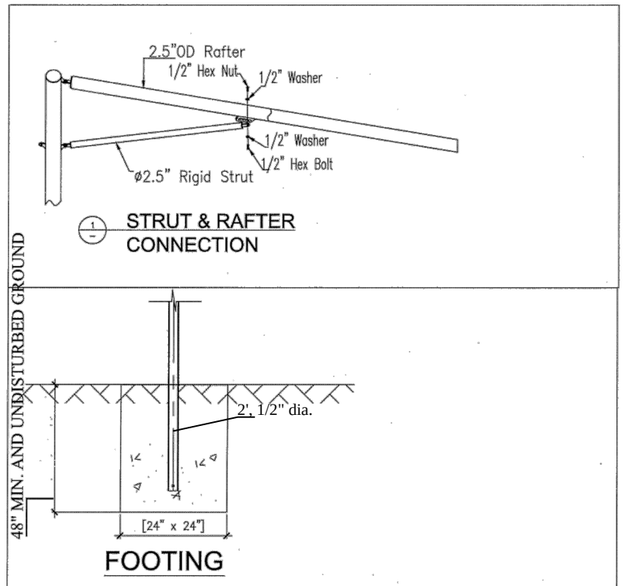
FOUNDATION DESIGN
CONCRETE COMPRESSIVE STRENGTH AFTER 28 DAYS: 2,500 PSI
STEEL REINFORCEMENT: ASTM-A615, GRADE 60
VERTICAL FOUNDATION PRESSURE: 1,500 PSF
LATERAL BEARING PRESSURE: 100 PSF/F

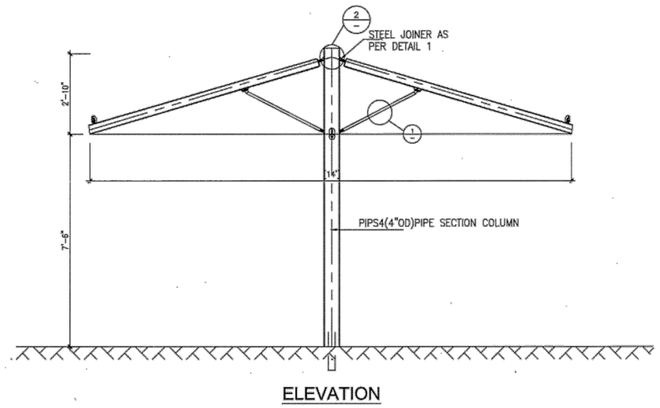
FOUNDATION NOTES:
1. THE FOUNDATION DESIGN IS BASED ON BUILDING CODE, MATERIAL.IF DIFFERENT SOIL CONDITIONS ARE ENCOUNTERED, IT IS RECOMMENDED THAT A SITE SPECIFIC GEOTECHNICAL REPORT IS CONDUCTED TO DETERMINE THE LOAD BEARING VALUES OF THE SOIL.
2. IF THE FOOTING DEPTH DOES NOT MEET LOCAL FROST REQUIREMENTS, FOOTINGS SHALL BE RE-DESIGNED UNDER THE DIRECTION OF AN ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCAL FROST DEPTH.

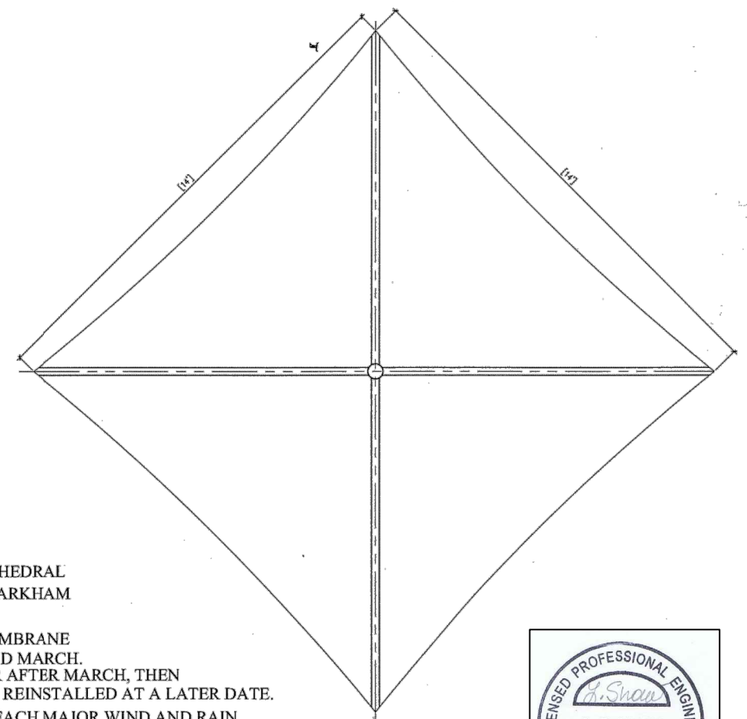
MATERIALS
1. ALL MATERIALS LISTED BELOW MAY NOT BE SPECIFIC TO THIS PROJECT.

| MEMBER TYPE | ASTM | MIN. YIELD STRENGTH |
|---|---|---|
| W SHAPES | A992 | 50 KSI |
| RECTANGULAR HSS TUBES | A500(GRADE B) | 46 KSI |
| SQUARE HSS TUBES | A500(GRADE B) | 46 KSI |
| ROUND HSS TUBES | A500(GRADE B) | 42 KSI |
| SCHEDULE PIPE | A53 (GRADE B) | 35 KSI |
| ROUND MECHANICAL TUBING | A519 | 42 KSI |
| MISCELLANEOUS PLATES/SHAPES | A36 | 36 KSI |
| CONNECTION BOLTS | A325 | 92 KSI |
| HEADED ANCHOR BOLTS | F1554 | 36 KSI |
| HOOKED ANCHOR BOLTS | A307 | 36 KSI |

3/8" GALVANIZED AIRCRAFT CABLE SHALL HAVE A NOMINAL STRENGTH OF 7,000 LBS.




| STRUCTURE | FABRIC LINE HGT. | COLUMN SIZE | FRAME TUBE SIZE | STRUT SIZE | FOOTING SIZE | FOOTING REINFORCEMENT |
|---|---|---|---|---|---|---|
| 14'-0"X14'-0" UMBRELLA | 7'-6" EVE HEIGHT | PIPS 40 (4"OD) | PIPS 20 (2.5"OD) | PIPS20 (2.5"OD) | 24" x 24" x 48" Deep | 2', 1/2" dia. rebar |

NOTES:
1. THE STRUCTURE TO BE INSTALLED AT CATHEDRAL PUBLIC SCHOOL, 50 PRINCE OF WALES DR., MARKHAM ONTARIO.
2. THE STRUCTURE IS SEASONAL. FABRIC MEMBRANE MUST BE REMOVED BETWEEN DECEMBER AND MARCH. IF SNOW IS FORECAST BEFORE DECEMBER OR AFTER MARCH, THEN FABRIC MEMBRANE MUST BE REMOVED AND REINSTALLED AT A LATER DATE.
3. THE STRUCTURE TO BE INSPECTED AFTER EACH MAJOR WIND AND RAIN STORM TO ENSURE THAT THE INTEGRITY OF THE STRUCTURE IS MAINTAINED. REPAIRS TO BE UNDERTAKEN, AS NEEDED. IT IS THE OWNERS RESPONSIBILITY TO REMOVE, MAINTAIN THE STRUCTURE, AND CONDUCT INSPECTIONS.
4. STRUCTURE TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.

NOTES BY LKS CONSULTING INC., RR3, PUSLINCH, ONTARIO, CANADA, PH: 905-923-7932
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LICENSED PROFESSIONAL ENGINEER
L. P. SHAW
JUNE 13
6098
PROVINCE OF ONTARIO


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14x14 Single Umbrella

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