PLANNING COMMISSION AGENDA
CITY OF PRAIRIE VILLAGE
TUESDAY, APRIL 4, 2017
7700 MISSION ROAD
7:00 P.M.

I. ROLL CALL

II. APPROVAL OF PLANNING COMMISSION MINUTES – MARCH 7, 2017

III. PUBLIC HEARINGS

IV. NON-PUBLIC HEARINGS

PC2017-102 Site Plan Approval for a shade structure
Asbury United Church/Children's Center
5400 West 75th Street
Zoning: R-1a
Applicant: Adam Winzenried for Asbury Children's Center

PC2017-103 Temporary Use Permit – Summer Treatment Program
4801 West 79th Street
Zoning: R-1a
Applicant: Children's Mercy Hospital

V. OTHER BUSINESS
Staff Interpretation on Solar Panels

VI. ADJOURNMENT

Plans available at City Hall if applicable
If you cannot be present, comments can be made by e-mail to
Cityclerk@Pvkansas.com

*Any Commission members having a conflict of interest, shall acknowledge that conflict prior to the hearing of an application, shall not participate in the hearing or discussion, shall not vote on the issue and shall vacate their position at the table until the conclusion of the hearing.

PLANNING COMMISSION MINUTES
March 7, 2017

ROLL CALL

The Planning Commission of the City of Prairie Village met in regular session on Tuesday, March 7, 2017 in the Municipal Building Council Chambers at 7700 Mission Road. Chairman Nancy Wallerstein called the meeting to order at 7:00 p.m. with the following members present: Melissa Brown, Patrick Lenahan, Gregory Wolf, Jeffrey Valentino and Jonathan Birkel.

The following persons were present in their advisory capacity to the Planning Commission: Chris Brewster, City Planning Consultant; Wes Jordan, Assistant City Administrator; Serena Schermoly, Council liaison and Joyce Hagen Mundy, Commission Secretary.

APPROVAL OF MINUTES

Mr. Birkel noted his comments on page 7 of the minutes referenced 71st Terrace, not 71st Street as recorded. Gregory Wolf moved for the approval of the minutes of the February 7, 2017 regular Planning Commission meeting with the corrected noted by Mr. Birkel. The motion was seconded by Patrick Lenahan and passed by a majority with Mrs. Brown abstaining.

PUBLIC HEARINGS

PC2017-01 Amendment to Prairie Village Zoning Regulations repealing Design Guidelines for Countryside East Homes Association PVMC 19.25.010

Chairman Nancy Wallerstein announced that this is a public hearing on a proposed ordinance revision which will begin with a presentation by city staff of the proposed changes. This will be followed with questions from the Commission. Then the public hearing will be opened with individuals coming to the podium and providing their name and address for the record.

Wes Jordan, Assistant City Administrator, stated that in 2013 the Prairie Village City Council approved the establishment of the Countryside East Neighborhood Overlay District and adopted the associated Design Guidelines to address remodeling and/or re-building of homes within the Countryside East Homes Association. This effort was a partnership between residents and City Staff to focus on “big ticket” items affecting the character of the neighborhood such as overall height of structures, side yard setbacks, etc.

Since the enactment of the Overlay District in 2013, there have been challenges administering the Overlay which will be addressed at the Public Hearing. And, with the successful adoption of the new city-wide building height and side set back zoning

restrictions that went into effect in July 2016, City Staff and the Countryside East HOA Board recommend the Overlay be discontinued.

City Staff and the Planning Commission have engaged in ongoing discussions about the mechanics of the Overlay that led to the Planning Commission suggesting that City Staff reach out to the HOA Board to discuss the current challenges and recommendation of the Commission to have a unified acceptance of the new building standards. In discussion with the HOA President, Leslie Darrington, we believed that it was important to communicate with the residents and also explain the challenges of the Overlay District.

On November 14th, 2016, Wes Jordan (Assistant City Administrator) and Chris Brewster (contracted City Planner) attended the annual Countryside East HOA meeting and discussed the following challenges with the enforcement of the Overlay District. :

Mr. Jordan stated that since the presentation on November 14th, 2016, the HOA Board has formally voted to discontinue the Overlay. Mr. Jordan acknowledged the considerable work that went into the development of the Overlay by residents and City Staff. Those efforts were not in vain; rather, are a part of the foundation of the new building standard restrictions that were recently enacted city-wide by the City Council.

Chris Brewster with Gould Evans, contracted City Planning Consultant, stated a "Neighborhood Conservation Overlay District" is defined as a carved out area for distinct treatment. This was done in 2013 for the Countryside East Homes Association with specific guidelines that are only applied to this area. This is the only Neighborhood Conservation Overlay in Prairie Village.

Mr. Brewster reviewed the following challenges with the district as presented to the homes association in November:
Overlay

1. Four appeals of City Staff findings to date – all overturned by the appeals board.
2. Struggles with the structure of the appeals board and being placed in a quasi-judicial role with neighbors.
3. Appeals have no outline for process or decision criteria.
4. Two sets of zoning standards are confusing to residents and more difficult to administrator.
5. Concerns over vagueness and legal enforcement of some guidelines.
6. Inconsistency…..
    a. Between the Overlay and Private Covenants
    b. Between Overlay and Design Guidelines
    c. Between Overlay and City-wide Zoning (some duplication/some conflicts)
    d. Some Overlay Design Guidelines illustrations/comments are confusing.

The Countryside East Neighborhood Conservation Overlay District establishes the following additional standards and guidelines:

1. Upper story limits of 1 ½ story

2. Eave line relationships of the existing home to the adjacent property
3. Façade design – windows, dormers/roof slopes, garage off-sets, porch/stoop encroachment
4. Accessory unit prohibition; outbuilding limits
5. Side setbacks of 12.5% of lot width on each side
6. Minimum square footage

Mr. Brewster reviewed the following zoning changes that were adopted by the City in June, 2016:

1. Change in height interpretation reducing height limit
    a. Change from measurement at mid-point to measurement at highest point
    b. R-la maximum height is 35 feet
    c. R-lb maximum height is 29 feet
2. Change in side setbacks
    a. 4' minimum to 6' minimum in R-lb
    b. 5' minimum to 7' minimum in R-la
    c. At least 20% of lot width (can be allocated between both sides)
3. Addresses first-floor elevation problems with top of foundation allowances
4. Retained maximum lot coverage restriction of 30%

Mr. Brewster reviewed graphic representations of the impact of the adopted revisions to code.

Gregory Wolf asked if the overlay was repealed would restrictions be addressed through the covenants. Mr. Brewster replied if they are stated in the covenants they would be enforceable that way. If they are not currently included in the covenants, they would be difficult to add at this point.

Mr. Brewster noted as an ordinance change the Planning Commission will be making a recommendation to the Governing Body who will take the final action. The options before the Planning Commission are to recommend to the Governing Body

- That the Overlay District be repealed
- That no action be taken
- That the Overlay District be modified. Mr. Brewster noted that this action would require the direction of the Council for staff to spend the additional time required to amend the overlay guidelines.

Wes Jordan added that when the Overlay District was enacted there was no indication of the city revising its zoning regulations to address the issues addressed by the Overlay District. He believes the enactment of the Overlay District served as a catalyst to the City Council to proceed with amendments to the zoning regulations to restrict the size of buildings. The formation of the Overlay District was an important first step in addressing residents' concerns with overbuilding. Mr. Jordan added that on March 20th staff will make a presentation to the City Council on potential additional revisions to the city's zoning regulations.

Mr. Jordan noted that the building official has been working with an individual who is caught between the inconsistencies between the overlay district and city code that may be bringing legal action against the city.

Nancy Wallerstein asked Mr. Jordan to explain how the city came from the enactment of the overlay to its position today.

Mr. Jordan replied that the Planning Commission directed staff to reach out to the Homes Association Board regarding the challenges it was experiencing enforcing the overlay district guidelines and to present the new zoning guidelines that were adopted and how they address the concerns with building height and setbacks. Staff talked with members of the Board and discovered that the Board was also experiencing challenges with the overlay guidelines. Staff was invited by the Board to speak at the annual meeting of the homes association and did so in November. At that meeting the challenges were presented. No action was taken at the meeting. Its purpose was to educate the residents. Following the meeting, staff stayed in contact with the Board. In January, the Homes Association Board voted to support the repeal of the overlay district. Staff prepared the letter to announce the public hearing on the proposed repeal, which was reviewed by the Board. Per statute, this notification was sent to all residents of the Countryside East Homes Association and all property owners within 200' by certified mail. The Board sent out the same notification through their e-mail listing to ensure members that may not pick up their certified letter received notice of the hearing.

Gregory Wolf confirmed that no legal action has been filed at this point in time.

Leslie Darrington, 5120 West 66th Terrace, is the current Vice President of the Countryside East HOA Board and has also served previously as the President of the Board. Mrs. Darrington verified the accuracy of Mr. Jordan's statement of actions. She noted that there has been significant communication between the Board and city staff. She stated that Board has also experienced problems with the appeal process and that the Homes Association does not have the resources to uphold the Overlay Design Guidelines on its own.

Chairman Nancy Wallerstein opened the public hearing on PC2017-01.

Melissa Rawe, 4816 West 65th Terrace, stated that at the November 14th annual meeting of the Homes Association the members agreed that they did not have enough information to take action and felt that others not in attendance needed to receive the information as well. Then she received a letter from the Board stating that they had voted to support the repeal of the Overlay Guidelines. She asked what happened between that meeting and the Board's vote. Mr. Jordan stated city staff remained in contact with the Board and noted that this public hearing is the formal opportunity for the members to make comments, ask questions and voice concerns and/or support. There was no second public information meeting of the homes association held.

Dan Blom, 5408 West 64th Terrace, noted the annual meeting notice did not indicate any discussion of "repealing" the overlay district. As a member of the initial committee

working on the Overlay Guidelines and former board member, Mr. Blom provided background on the formation of the Overlay Guidelines and District. He stated the concept originated with the City. At a meeting of area homes association presidents, concern was expressed with deed restrictions being challenged and not enforced. The particular challenge was in the Prairie Village Homes Association to their one and a half story regulations.

One year later, with the support and encouragement of city staff, Countryside East entered into a partnership with the city to become a beta test of Overlay Design Guidelines. The guidelines/district was discussed over a three year period at annual meetings and in neighborhood meetings. In 2010, the entire association was surveyed by mail regarding the initiation of the Overlay District with 92% of the residents in support. There were at least three different presentations made by then Assistant City Administrator Dennis Enslinger on the formation of the Overlay District. Both the Planning Commission and the City Council voted unanimously in support of the Overlay District. This document was not cast in stone and they were advised adjustments could be made and even that other neighborhoods may adopt similar guidelines using theirs as a template. For that reason the appeals process was designed to be universal in nature.

Mr. Blom asked for respect for the intense participation that went into the creation of the Overlay District. He noted it is possible in the past four years, individuals may have changed their opinion on the value and need for the Overlay District, however, it is critical that be confirmed before any action is taken to repeal the District. Before that decision is made he believes the following should occur. The residents need to also be informed of the consequences of the repeal, of the objectives of the Overlay District and of alternative plans to enforce the restrictions. What are the consequences of the city and staff backing away from a substantial commitment made to the homes association to implement and enforce these guidelines? What attempts have been made to modify the guidelines to address the challenges. Mr. Blom stated the ramifications of the repeal are consequential. He added that a public hearing is not good public engagement. A vote by the City to repeal the Overlay District would be an extreme disservice to its creation.

Mr. Blom stated he does not believe this recommendation has been completely thought through in terms of the neighborhood and the residents. Statements were made about the difficulty interpreting the drawings in the guidelines; however, the architect who drew the drawings has never been asked for clarification. This action is a complete reversal of the commitment made by the city in 2013 to the Countryside East Homes Association.

Nancy Wallerstein responded that in 2013 when the Planning Commission was asked to approve the Overlay District to restrict rebuilding size, the city's zoning regulations did not appropriately address this concern. Since that time, new zoning regulations have been adopted citywide that do address building height, mass and setback.

Mr. Blom noted the appeal process was created because Board members did not want to put in an adversarial position with its members.

Melissa Brown questioned how the neighbors could not be aware of the new guidelines. Mr. Jordan replied he could not speak for the Board, but noted the city attempted to do its due diligence in attending the homes association meeting.

Jim Nass, 5101 West 64th Terrace, asked for clarification of his deed restrictions and if the City could issue a building permit that violated those deed restrictions. Chris Brewster replied that if the plans meet city codes a building permit can be issued. Deed restrictions are a private contract between the home owner and association that are not enforceable by the City. The city can only enforce its regulations. Jeffrey Valentino added that deed restrictions are enforceable, but by private entity, not the city. Mr. Brewster added that the City does not have copies of all the deed restrictions within the City.

Councilmember Jori Nelson wanted to address the Commission. Chairman Nancy Wallerstein advised Ms Nelson that as a member of the Governing Body which would be taking final action on this application, she should not speak at this time. By doing so, she would need to recuse herself from taking action when the item came before the Governing Body. Ms. Nelson advised those present that she was their representative and encouraged them to contact her.

Todd Wetherilt, 6344 Ash, stated he came prepared to discuss the consequences of the repeal. However, there appears to be a much bigger issue. He was part of the committee creating the overlay design guidelines and architect who drew the illustrations. He feels the larger issue is the partnership that was formed between the City and the homes association to develop design standards that would be enforceable, recognizing that the city cannot enforce deed restrictions and covenants and homes associations often do not have the resources to enforce them. With the city now saying that it is not willing to enforce the design guideline it now falls back on the homes association to enforce their deed restrictions and covenants. With the city unwilling to enforce them, the only enforceable regulations are the city's zoning regulations.

Wes Jordan responded that the City does want to work with the community. He stated that after this Overlay District was enacted, the Prairie Village Homes Association approached the city for assistance in creating an overlay. Staff believes that the city cannot become a city of multiple overlay districts. At this same time residents were expressing concern with the growing number of larger homes being rebuilt on existing lots starting the city on the path towards stronger zoning regulations regarding height, mass and setbacks. Discussed at the same time was the creation of design standards. There was significant pushback. Focus was placed on zoning regulation to create guidelines that could be enforced throughout the city. Mr. Jordan added that already in the city's code is a restriction that the footprint of a home cannot exceed 30% of the lot. This together with the new regulations has placed the city in a much better position to regulate new construction and remodel construction.

Nancy Wallerstein responded to the question regarding the enforcement of covenants and deed restriction stating that this is the responsibility of the Homes Association. She

noted that some homes associations require all building plans to be reviewed and approved by them before they are submitted to the city for a building permit.

Mr. Nass expressed concern that if the city would not enforce covenants and deeds restrictions that homes associations did not have the resources to do so that nothing would be done.

Jeffrey Valentino noted the Overlay District applies to a specific area of the city. The City is trying to address these concerns throughout the city with revisions to zoning regulations that apply to all properties. There may be a gap between the Overlay District Guidelines and the new zoning regulations; however, he feels it has gotten smaller on major items.

Jim Nass questioned how a single guideline or regulation can be applied effectively to all homes within the City. He does not feel the same standards can be applied to vastly different neighborhoods. He would like to see the current Overlay Design Guidelines amended to preserve the integrity of his neighborhood.

David Davis, 4800 West 65th Street, lives in a 1200 square foot home with a single garage and was one of the appeals to the Overlay District Board to expand his home. He came to speak in support of the repeal; however, noted that maybe there were ways to make changes that would give property owners the ability to grow into their homes and still maintain the character of the neighborhood. He feels options must be available to residents. He noted there is variety within the association and feels this conversation is an opportunity to think about how to address the challenges being faced both by the city and by residents of Countryside East. People are concerned that they have not been heard and it makes sense to stop and talk more.

Michael Pate, 5006 West 63rd Terrace, stated deed restrictions and covenants can only be enforced by the homes association. The city's enforcement capability applies only to its zoning and building codes. The City can backup its requirements, as a legal document deed restrictions must be backed up by the courts.

Peter Gogol, 5019 West 65th Terrace, has spent 9 years on the homes association board and was president in 2013 when the Overlay District was enacted. The first two years the Board was pleased with how it was functioning and several building permits were issued. He thanked the current board for their service and city staff. He understands the challenges. The first notice he received on this was the certified letter from the city. There was no mention of a possible repeal of the Overlay District in the annual meeting notice. There was also nothing on the homes association website hosted by the City.

Mr. Gogol noted that although the new city guidelines may address some of the issues addressed by the Overlay District, it does not address them all. The Overlay District specifically addresses front porch dimensions, which are not addressed by code, as well as other issues. The results of the survey (92%) overwhelmingly endorsed the Overlay District. Opinions may have changed, but before action is taken, it needs to be

presented to the Homes Association. At this point in time, he recommends that no action be taken or a recommendation to Council for modification of the document. He stated that from its creation, it was anticipated that at some point in time the guidelines would need to be modified.

Greg Wolf asked what the consequence would be of continuing this application. At this point in time, it is clear that some residents have not had the opportunity to discuss this amongst themselves and with the Board. Mr. Jordan replied "none". He added that one of the things that have yet to be revisited is Phase II of the recently adopted code revisions. The City Council decided to wait to see the impact on the Phase I on building before proceeding with any further restrictions. Mr. Jordan stressed the City cannot become a city of multiple overlay districts. He feels the challenges with the existing Overlay District will continue to be discussed. The responsibility for the discussion between the Board and its members rests with the Board. He noted that at the homes association meeting several in attendance indicated that they were not aware of the Overlay District Design Guidelines. Mr. Jordan confirmed with the Secretary that no new notice would be required if the public hearing were to be continued. He noted that the city sent out over 500 certified letters of notification for this hearing. Mr. Wolf stated that he is not comfortable with the Commission moving forward until the residents have had an opportunity to talk with their Homes Association Board and suggested that the application be continued. Mr. Valentino agreed with Mr. Wolf, however, he felt there needed to be specific information to be brought back to the Commission when the hearing was reconvened.

Mr. Wolf asked what type of notification was given by the Board. Leslie Darrington replied that e-mails and a post card were mailed to all residents prior to the annual meeting. Mrs. Darrington noted that she had two calls since the annual meeting regarding the Overlay District. She acknowledged that the post card stated there would be "discussion of the Overlay District, not Repeal", since the Board had not made any decision at that point. She agrees that many of the residents have no knowledge of the Overlay District Design Guidelines. She acknowledged there are inconsistencies and problems with the covenants vs. the design guidelines vs. city code. Mr. Wolf confirmed that the homes association could hold a special meeting.

Mrs. Darrington asked if the city has the resources to back the Overlay District and work to make modifications and if it was worth going down that path. She feels there needs to be more than conversation. There needs to be a solution. Mr. Wolf responded that his concern at this time is the process. The Commission will be in a better position to take up the merits of the application, after everyone has had due process regarding the application.

Nancy Wallerstein asked how many of the individuals present were at the annual meeting and had heard the presentation by city staff. Approximately half of those in attendance indicated they attended the annual meeting.

Leslie Darrington asked if it would be possible for the City to notify the Homes Association if a building permit request came in for a large home.

Jonathan Birkel noted that some of the Phase II design guidelines take the same ideas that are expressed in the Countryside East Design Guidelines and asked if it would be helpful to discuss those. Mr. Jordan replied that staff would need the City Council to weigh in. He would have a better idea of Council's position after March 20th. Mr. Birkel felt that Phase II covered 90-95% of the items in the Overlay District and he feels these residents would be supportive of those actions. Mr. Jordan stressed that the direction for Phase II must come from the City Council and there is no push for immediate action. He would anticipate this process would take several months to complete and would be an even longer process than Phase I.

Gregory Wolf stated that he voted in support of the Overlay District in 2013 because there was an obvious consensus between the homes association board and the residents. He does not see that consensus existing at this time and moved the Planning Commission continue PC2017–01 to its May 2nd meeting to allow for continued discussion between the Board and the residents with the goal being consensus on the action to be taken. The motion was seconded by Jeffrey Valentino.

Nancy Wallerstein noted that this would provide sufficient time for additional meetings. Also, the city staff will have more direction from the City Council after their March 20th meeting on how to proceed with Phase II. However, she agreed with Mr. Jordan that the development and approval of Phase II will take significant time.

Wes Jordan asked what the Commission's expectations were for the continuation.

Jeffrey Valentino stated he saw the continuance as an opportunity for the homes association board and the residents to engage in dialogue regarding the proposed repeal, to define the differences between what is addressed by their overlay design guidelines and the newly adopted city code and to determine what restrictions from the established overlay design guidelines they feel must remain in place. They need to come to a better understanding of what the Overlay District provides and what the city regulations provide. This communication needs to be driven by the homes association board.

Melissa Brown encouraged the residents to evaluate the recently adopted city regulations and to look at what they have in the overlay district guidelines. She does not feel that there are a lot of issues uncovered when you look at the overlay district guidelines and the city regulations side by side. The City is seeking to retain and allow beautiful homes with the potential for growth to meet the needs of its owners.

Patrick Lenahan echoed Mr. Birkel's thoughts that a consensus could be influenced by what direction changes to the zoning code takes. He would suggest that the approach should be for the Commission to take no action at this time. Continuing for 60 days may not result in a solution. Mrs. Brown agreed, but feels the first step is to get the residents engaged. Mr. Wolf replied that the Commission may after 60 days decide to take no action, but he wants to ensure that the residents have the opportunity to fully engage prior to the Commission taking any action.

Jonathan Birkel asked if the draft documents regarding potential design standards could be given to the homes association. Mr. Jordan replied that they are public documents; however, noted that when presented to the City Council, the Council's direction was not to approve them at that time because of the strong pushback. He felt he would have a better idea of the direction of the Council after the meeting on March 20th.

Chairman Nancy Wallerstein stated she would take comments from the gentleman who was at the podium and the woman who at the beginning of the meeting wanted to address the Commission.

Chris Lipp, 4805 West 66th Street and current President of the Homes Association stated that he gets calls from residents frequently. He has received one call regarding the proposed repeal of the Overlay District and has received several from residents questioning the restrictions in place by the Overlay District from members who want to make changes to their homes. He requested direction from the Commission on its expectations of the Homes Association Board when it returned in May. He noted that as a Board they are concerned with potential litigation and are sometimes unable to give complete feedback because of potential litigation. While he has only been president for two months, he has served on the Board for 3 years and stated that the Overlay District has been a constant challenge for them.

Jeffrey Valentino summarized his expectations for the Board as follows:

- To Engage residents
- To define the differences between what is provided by the Overlay District and what is provided by the City code
- Determination of what restrictions, not provided by city code, must be retained.

Gregory Wolf stated what he wants during this time is for education to take place and for residents to be heard. He does not feel this has occurred and is not comfortable taking any action until it does.

Jeannine Mattoon, 4801 West 65th Terrace, thanked Mr. Wolf for his comments. She stated that when she arrived at the meeting, she felt she had been duped and had not been given enough information. Residents did not understand the implications of the letter and the proposed action. People do not understand what the Overlay District is. She wants time to learn more and to react to the information acquired. She asked how residents will be notified of the new meeting date. Chairman Nancy Wallerstein stated no new notices will be sent by the City. The meeting will be Tuesday, May 2nd at 7 p.m. It will be reflected on the city's website and she would anticipate that the homes association would ensure that its members get word of the continued meeting. It is their responsibility to communicate with their members.

The motion to continue the public hearing for PC2017-01 to the May 2nd meeting of the Planning Commission was voted on and passed by a vote of 6 to 0.

NON PUBLIC HEARINGS

There were no Non-Public Hearing applications to come before the Commission.

OTHER BUSINESS

None

NEXT MEETING

The secretary confirmed both an application before the Board of Zoning Appeals and the Planning Commission have been submitted for April 4th.

ADJOURNMENT

With no further business to come before the Commission, Chairman Nancy Wallerstein adjourned the meeting at 9 p.m.

Nancy Wallerstein
Chairman

STAFF REPORT

TO: Prairie Village Planning Commission
FROM: Chris Brewster, AICP, Gould Evans, Planning Consultant
DATE: April 4, 2017, Planning Commission Meeting

Application:	PC 2017-102
Request:	Site Plan Approval – Accessory Shade Structure
Property Address:	5400 W. 75th Street
Applicant:	Asbury United Church / Children's Center, Adam Winzenried
Current Zoning and Land Use:	R-1B Single-Family District- Church
Surrounding Zoning and Land Use:	**North:** R-1B Single-Family District - Single-Family Dwellings **East:** R-1B Single-Family District - Single-Family Dwellings **South:** R-1A Single-Family District, C-O Office Building District – Office and Institutional buildings **West:** Residential and Planned Residential (Overland Park, KS) – Johnson County Wastewater and Williamsbrook Condominiums
Legal Description:	PRAIRIE FOREST LOT 17 PVC 2088 BOTA 93 834 TX [Note, the applicant also owns Lots 10-12, 15, 16, 18, and 19 related to this subject lot]
Property Area:	0.29 Acres (12,499 s.f.) – subject lot; approximately 4.19 Acres (182, 516 s.f.) – entire property / campus.
Related Case Files:	None
Attachments:	Application, site plan, accessory structure specifications, concept images

General Location Map

Aerial Map

COMMENTS:

Asbury United Church owns several lots on the northeast corner of 75th Street and Nall Avenue in Prairie Village. Collectively this campus makes up approximately 4.2 acres. The properties are all zoned R-1B Single Family Residential. The campus is used for a church and other associated accessory uses, including a Children's Center that runs infant care, pre-school, and after care services related to the church's overall mission. All of these uses are permitted in the R-1B zoning district and the site is otherwise compliant with all zoning and development standards.

There is currently a playground located on Lot 17, that fronts on 75th Street just to the east of the main church building and parking area, on the southwest corner of 75th and Ash Street (Ash is a dead end stub that ends at the drainage way along Tomahawk Road, which forms the rear boundary of the campus property). The applicant is proposing to construct a shade structure over a portion of the play area. All new structures, including accessory structures (except for limited specific exceptions) require a site plan review and approval by the Planning Commission.

The proposed shade structure will be approximately 30' x 30', and have a maximum height of 14.' It is proposed to be located over the existing play equipment on the east side of the play area. The structure will be at least 20' back from the 75th street lot boundary and approximately 40' + from the Ash street lot boundary. This would meet all required setbacks in R-1B for the subject lot (Lot 17 orienting towards Ash Street) and if the campus were treated as a whole (4.19 acres orienting to 75th street – unenclosed structures can encroach up to 12' into the front setback, or up to 18' (required 30' setback). Further, this property is planned and designed as a campus, so despite meeting the all of the above standards applicable primarily to single-family homes, the proposed location is consistent with the overall campus layout of the property. The applicant owns all lots directly abutting the subject lot to the west, south and east.

The applicant gave notice and held a neighborhood meeting according to the Citizen Participation Policy, and will be able to provide a summary of this meeting for the Planning Commission.

Since the short-term use is for more than 30 days, it requires Planning Commission approval.

The Planning Commission may approve **a site plan for an accessory structure provided** the application meets the following **criteria**:

A. The site is capable of accommodating the buildings, parking areas, and drives with the appropriate open space and landscape.

The site is an existing church / campus that has been functioning at the same level of activity for several years. The site meets all applicable standards, and the proposed accessory structure will not cause any increase in activity on the site.

B. Utilities are available with adequate capacity to serve the proposed development.

This site is currently served by utilities and they should be adequate to serve the proposed use.

C. The plan provides for adequate management of stormwater runoff.

No changes in the existing site are proposed and therefore storm water runoff will not be affected.

D. The plan provides for safe ingress/egress and internal traffic circulation.

The existing parking area on the west side will provide adequate ingress/egress for the current uses of the site and campus. Additionally, Ash Street provides secondary access to the church and campus on the east side of the existing play area. Ash Street also has a pedestrian bridge and passage on the north end that provides access to the church/campus and the play area via Tomahawk. These existing conditions have served this site well and there is no anticipated increase in activity from the proposed accessory structure.

E. The plan is consistent with good land planning and site engineering design principles.

The proposed accessory structure is serving an existing play area within the campus. Design concepts from similar structures are provided and specifications for this specific structure are included with the application.

F. An appropriate degree of compatibility will prevail between the architectural quality of the proposed building and the surrounding neighborhood.

The proposed structure is compatible with the design and use of the overall play area. It is located to meet all applicable setbacks. There is some existing vegetation associated with the play area, and located along the 75th Street frontage, so the applicant should clarify the intent of the overall landscape / streetscape in this area with regard to the design and function of the shade structure.

G. The plan represents an overall development pattern that is consistent with Village Vision and other adopted planning policies.

One of the primary objectives of Village Vision is to encourage reinvestment in the community to maintain the quality of life in Prairie Village. The existing use and campus design is consistent with this component of Village Vision and the proposed accessory structure will assist the Church and Children's Center in its mission.

RECOMMENDATION:

It is the recommendation of Staff that the Planning Commission approve the Site Plan subject to the following conditions:

1. That the structure be constructed per the attached site plan and specifications, and at the time of building permit, all other building code and safety aspects applicable to the structure be verified through staff permit reviews.
2. That the applicant confirm any immediate or longer-term landscape elements with regard to the play area and the shade structure, and further the Planning Commission consider if any of these activities would trigger any streetscape / landscape improvements along 75th Street.

2017-102

Application 0014120

SPECIAL USE PERMIT APPLICATION

CITY OF PRAIRIE VILLAGE, KANSAS

For Office Use Only
Case No.: PC2017-102
Filing Fees: _____
Deposit: _____

Date Advertised: _____
Date Notices Sent: _____
Public Hearing Date: 4/4/17

Asbury United Methodist Church / Asbury Children's Center

APPLICANT: Ann Porter, Director PHONE: 913-677-5008

ADDRESS: 5400 W 75th St E-MAIL: annp@visitasbury.com

OWNER: Same as above PHONE: _____

ADDRESS: Same as above ZIP: _____

LOCATION OF PROPERTY: Northeast corner of 75th and Nall

LEGAL DESCRIPTION: PRAIRIE FOREST LOT 17

ADJACENT LAND USE AND ZONING:

	Land Use	Zoning
North	Church / place of worship	R-1B
South	General office buildings	C-O
East	Residential	R-1B
West	Church / place of worship	R-1B

Present Use of Property: Children's Playground

Please complete both pages of the form and return to:
Planning Commission Secretary
City of Prairie Village
7700 Mission Road
Prairie Village, KS 66208

Does the proposed special use meet the following standards? If yes, attach a separate Sheet explaining why.

	Yes	No
1. Is deemed necessary for the public convenience at that location.	X	
2. Is so designed, located and proposed to be operated that the public health, safety, and welfare will be protected.	X	
3. Is found to be generally compatible with the neighborhood in which it is proposed.	X	
4. Will comply with the height and area regulations of the district in which it is proposed.	X	
5. Off-street parking and loading areas will be provided in accordance with the standards set forth in the zoning regulations, and such areas will be screened from adjoining residential uses and located so as to protect such residential use from any injurious effect.	X	
6. Adequate utility, drainage, and other such necessary facilities have been or will be provided.	X	

Should this special use be valid only for a specific time period? Yes____ No X

If Yes, what length of time? _____

SIGNATURE: _____ DATE: 3/2/17

BY: Ann Porter

TITLE: Director

Attachments Required:

- Site plan showing existing and proposed structures on the property in questions, and adjacent property, off-street parking, driveways, and other information.
- Certified list of property owners


2014 Photo
Tomahawk Rd
Birch St
5400
75th St
Ash St
Asbury Children's Center-
Proposed Shade Structure


ACC Playground
Proposed 30'x30'x14' temporary shade structure
20' Set back
Ash St
75th St

Notes about adjacent parcels

- All adjacent parcels on the north side of 75th Street are owned by Asbury United Methodist Church
- One parcel within 200 feet to the northeast is residential use
- Three parcels across 75th Street within 200 feet are non-residential use

Property Owners within 200 feet of parcel

- 7421 Ash (Residential), Zoned R1B
- 5301 W 75th, (Office) zoned R1A
- 5225 W 75th (Office) zoned C-O Business
- 5201 W 75th (Fraternal Institution) zoned C-O Business

Structural Calculations

for

Asbury Children's Center 26'X27' (4)-Pole Single-Canopy
Shawnee Mission, KS 66208

March 10, 2017

Structural Calculations and Design Details Applicable to Installation of One - 26'X27' (4)-Pole Single-Canopy at the Subject Site

AMMTEC CONSULTANTS, PLLC

CONSULTING ENGINEERING SERVICES

2447 W 12th Street, Suite 1 Tempe, AZ 85281 Phone: (480) 927-9696 Fax: (480) 927-9797

GENERAL NOTES & BASIS OF DESIGN

AMMTEC CONSULTANTS

1. BUILDING CODE ..... **IBC 2012 ASCE 07-10**
2. GRAVITY DESIGN: Sail / Roof — Sail Cloth Ventilation Reduction: N/A
   EXPOSURE ..... C — Seismic Design Category = D
   OCCUPANCY CLASS ..... E — Risk Category = II
   3 SECOND WIND GUST ..... 115 (mph)

Live Load:	5 (psf)	Dead Load:	0.50 (psf)	Snow Load:	0 (psf)

3. SOILS:
   Soil bearing pressure ..... 1,000 psf — Soil lateral bearing pressure ..... 100 psf
   Minimum footing depth..... 42 (inches) Unless local conditions are greater

CONCRETE

1. CODES AND STANDARDS. Comply with the following Codes:
   A. ACI 318, "Building Code Requirements for Reinforced Concrete".
   B. ACI 347, "Recommended Practice for Concrete Form Work".

2. MATERIALS shall conform to the following:
   A. Cement; ASTM C150, Type V, Portland Cement.
   B. Hard rock aggregates: ASTM C33
      Lightweight aggregates: ASTM C330
   C. Water shall be potable.
   D. Air entrainment: ASTM C260
   E. Fly ash: ASTM C618
   F. Calcium chloride SHALL NOT be used.

3. MIX DESIGNS:
   A. The maximum slump shall be 4" w/o plasticizer added.
   B. Use pea gravel and/or plasticizer in congested areas.
   C. Limit fly ash to 20% of the total cement.
   D. Concrete mixes shall conform to the following:

Type of Concrete Member	28 Day Design Strength (psi)*	W/C Ratio	Dry Weight (pcf)	Max Aggregate Size (inches)	Entrained Air (%)	Min Cement Per CY (lbs)
Footings & Slabs on Grade	2500*	0.45	150	3/4	3 ±1	517

*(Special Inspection not required - increase as required by local code for sulphate resistance)

4. CONSTRUCTION: A. Mechanically vibrate concrete during placement.

5. FOOTINGS: B. Center footings on structure above, UNO.
   C. Exterior footings to be embedded a minimum depth.

STEEL 1. CODES AND STANDARDS. Comply with: A. CRSI "Manual of Standard Practice".
B. ACI "Detailing Manual", ACI 315 (or SP-66).

Reinforcing:	60 ksi	A-615 - Grade 60	HSS Tube:	46 ksi	A -500
Roof Decking:	50 ksi	A-792 - Grade 50	Pipe:	36 ksi	A-501

Bolts ASTM A36, ASTM A307 as specified on details

2. CONSTRUCTION: A. Detail, bolster, and support all rebar. Tie bars securely with proper clearances before casting concrete.
   B. Use rebar free flaky rust, grease, dirt, and other materials, which affect bond.
   C. Minimum lap splices (inches):

Bar #	#3	#4	#5	#6
Inches	16	20	24	33

   D. Make cold bends. DO NOT use heat. DO NOT re-bend a previously bent bar.

   E. Minimum concrete cover: (securely position and anchor rebar prior to pour)
      Cast against and permanently exposed to earth ..... 3 (inches)
      Slabs-On-Grade (SOG) ..... Center of slab, UNO
   F. DO NOT weld reinforcing unless specifically noted.

CLIENT:	Custom Canopies -	
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy	Prepared By: MJK
	Shawnee Mission, KS 66208	Date: 03/10/17

AMMTEC CONSULTANTS

		Member Weights		
		psf	Area	Ttl Wt (lbs)
Roof Type & Guage:	Comm 95 or Equal	0.5	702	351
Misc Appurtenances & Mats.		0	702	0

FS	Column / Member	(in)	Wall "t" (in)	plf	L (ft)	Ttl Wt (lbs)	Bolt Dia / Grade		
FS@=2.24	Vertical Column A	4	Schd 40 Pipe t=0.12	9.6	26.0	249.7	5/8	A36	OK
FS@=2.44	Ridge -	3" x 11 Gauge HSS Tube		2.3	40.0	92.2	1/2	A307 Bolt	OK
FS@=1.01	Rafter Beam Sizing	3" x 11 Gauge HSS Tube		2.3	64.6	148.9	1/2	A307 Bolt	OK
FS@=1.02	Ridge/Rafter/Column Spigot	2.5" x HSS Tube, t=0.188"		2.3	12.0	27.7	1/2	A307 Bolt	OK
					Total	870			
					Total/Column	217			

Roof Snow Load [IBC 1608, ASCE 7]

(Eq 7-1) $p_f=0.7*C_e*C_t*I*p_g$

p_g=Ground Snow Load= 0 psf p_f= 0 psf

C_e=Exposure Factor= 1.0 [ASCE T 7-2]

C_t*= Thermal Factor= 1.2 [ASCE T 7-3]

I= Impoortance Factor= 1.0 [ASCE T 7-4]

C_s= Sloped Roof Coeff= 1.00 [ASCE F 7-2]

(Eq 7-2) $p_s=C_s*p_f$ p_s= 0.0 psf

Areas: C_{NW} =	351	SF	C_{NL} =	351	SF
Areas: C_{NW} =	351	SF	C_{NL} =	351	SF

Canopy Dimensions

Width	26	(ft)	Length	27 (ft)
Column A Height	13	(ft)	Columns:	4 (Ttl)
Column B Height	0	(ft)		
Roof Pitch	2	(in) V	12	(in) H
Rafter Length (horz)	15.5	(ft) horz rafter length		
Canopy Height	4.4	(ft) (above frame)		
Eave Overhang:	0.0	(ft)		
Total Hip Length	16.1	(ft)		
Ridge Beam Length	10.0	(ft)		
Ridge Beam Trib Width	13.0	(ft)		
Strut/Brace Length (Horz)	0.0	(ft)		

Calculaton of Design Wind Loads - Main Force Resisting Systems | ASCE 7-10 | Exposure: c | Risk Category: 2 | 3s Wind Gust (mph): 115 | Canopy Fabric Design Wind Speed (mph): 115

Eq: $p=q_h*G*C_N$ (Eq 6-25) [29]

z	Exp
ft	C
15	0.85
20	0.9
25	0.94
30	0.98
35	*1.01*
40	1.04
45	*1.065*
50	1.09
60	1.13

Where: $q_h = 0.00256*k_z*k_{zt}*k_D*V^2*I$ (Eq 27.3-1) [260]

z= 15 k_z= 0.85 (T 27.3-1) [261]

$k_{zt} = (1+k_1*k2*k_3)^2$ (F 26.8-1) [253]

k_1= 0.29 H/L_H=0 (F 26.8-1) [253]

k_2= 1.0 X/L_H=0 (F 26.8-1) [253]

k_3= 0.0 Z/h_H=Z/0 (F 26.8-1) [253]

(T6-1)

Category	I
I	0.87
II	1.00
III	1.15
IV	1.15

→ k_{zt}= 1.0

k_D= 0.85 (T 26.6-1) [250]

V= 115 mph (F 26.5-1A) [247a]

I= 1.0 (T 6-1) [77]

→ $q_h = 0.00256*0.85*1*0.85*115^2*1$ = **24.46** psf

V= **0.1** G= **0.85** (S 6.5.8.1) [26]

$q_h*G*(1-V)$ = **18.71** psf

C_N = (F6-18A) [66] Load Case A/B α = **15**

Case A - Clear/Unobstructed Wind Flow: γ=0°, 180° C_{NW} = 1.1 C_{NL} = -0.4 ΔC_N = 1.5 $C_{N(Avg)}$ = 0.35

Case B - Clear/Unobstructed Wind Flow: γ=0°, 180° C_{NW} = 0.1 C_{NL} = -1.1 ΔC_N = 1.2 $C_{N(Avg)}$ = -0.50

Rise	Run
2	12

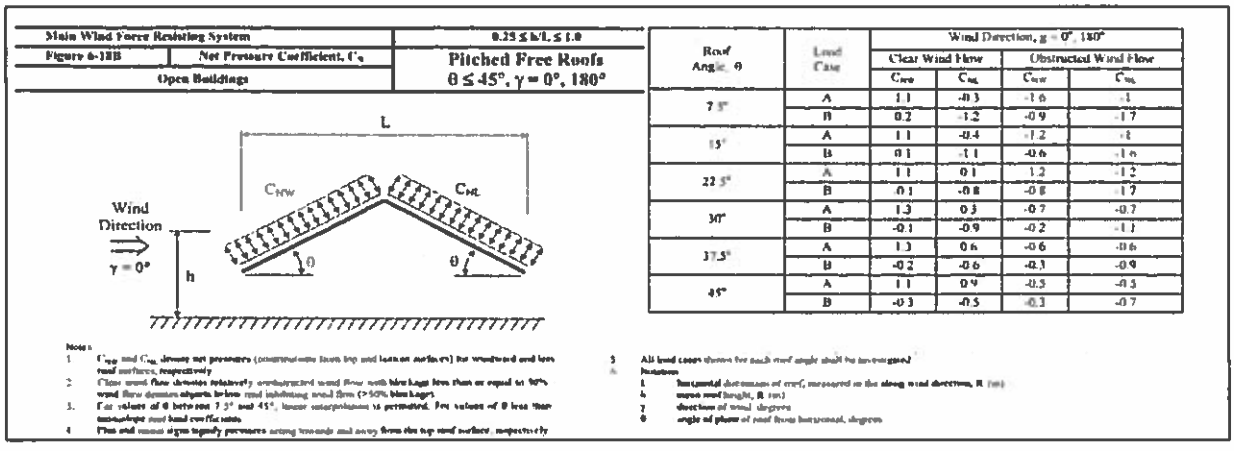
Gable Roof Pitch = α= 9.5 Degrees

CN Values interpolated to 9.5 degrees C_{NW} = p (psf) C_{NL} = p (psf) α = **9.5**

Case A - Clear/Unobstructed Wind Flow: γ=0°, 180°	1.10	20.58	-0.33	-6.11	ΔC_N =	1.43	$C_{N(Avg)}$ = 0.39
Case B - Clear/Unobstructed Wind Flow: γ=0°, 180°	0.17	3.24	-1.17	-21.96	ΔC_N =	1.35	$C_{N(Avg)}$ = -0.50

CN Values interpolated to 9.5 degrees C_{NW} = p (psf) C_{NL} = p (psf) α = **9.5**

Case A - Obstructed Wind Flow: γ=0°, 180°	-1.49	-27.94	-1.00	-18.71	ΔC_N =	-0.49	$C_{N(Avg)}$ = -1.25
Case B - Obstructed Wind Flow: γ=0°, 180°	0.50	9.36	-0.94	-17.59	ΔC_N =	1.44	$C_{N(Avg)}$ = -0.22



Main Wind Force Resisting System		0.25 ≤ h/L ≤ 1.0
Figure 6-18B	Net Pressure Coefficient, C_N	Pitched Free Roofs
Open Buildings		θ ≤ 45°, γ = 0°, 180°

Roof Angle, θ	Load Case	Wind Direction, γ = 0°, 180°			
		Clear Wind Flow		Obstructed Wind Flow	
		C_{NW}	C_{NL}	C_{NW}	C_{NL}
7.5°	A	1.1	-0.3	-1.6	-1
	B	0.2	-1.2	-0.9	-1.7
15°	A	1.1	-0.4	-1.2	-1
	B	0.1	-1.1	-0.6	-1.6
22.5°	A	1.1	0.1	-1.2	-1.2
	B	-0.1	-0.8	-0.8	-1.7
30°	A	1.3	0.3	-0.7	-0.7
	B	-0.1	-0.9	-0.2	-1.1
37.5°	A	1.3	0.6	-0.6	-0.6
	B	-0.2	-0.6	-0.3	-0.9
45°	A	1.1	0.9	-0.5	-0.5
	B	-0.3	-0.5	-0.3	-0.7

Notes:
1. C_{NW} and C_{NL} denote net pressures (combinations of top and bottom surfaces) for windward and lee roof surfaces, respectively.
2. Clear wind flow denotes relatively unobstructed wind flow, with blockage less than or equal to 50% wind flow domain airparts below roof (sheltering wind flow (>50% blockage).
3. For values of θ between 7.5° and 45°, linear interpolation is permitted. For values of θ less than [illegible] roof load combinations.
4. Plus and minus signs signify pressures acting toward and away from the top roof surface, respectively.
5. All load cases shown for each roof angle shall be investigated.

Notations:
L = horizontal dimension of roof, measured in the along wind direction, ft (m)
h = mean roof height, ft (m)
γ = direction of wind, degrees
θ = angle of plane of roof from horizontal, degrees

CLIENT:	Custom Canopies -	
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy	Prepared By: MJK
	Shawnee Mission, KS 66208	Date: 03/10/17

Calculaton of Design Wind Loads - Main Force Resisting Systems

AMMTY CONSULTANTS

CN Values interpolated to 9.5 degrees

	C_{NW} = p (psf)		C_{NL} = p (psf)		α =
Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$, 180°	1.10	20.58	-0.33	-6.11	9.5

ΔC_N = $C_{N(Avg)}$ = 0.39

Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$, 180°

W = 20.6 psf S = 0.0 psf
L = 5 psf D = 0.5 psf
C_{NW} = 1.10 p= 20.58 psf

W = -6.1 psf S = 0.0 psf
L = 5 psf D = 0.5 psf
C_{NL} = -0.33 p= -6.1 psf

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8])
Note: Negative value = upward vertical force

[Eq 1]	D=	0.5	psf	
[Eq 2]	D+L=	5.5	psf	
[Eq 3]	D+(Lr or S or R)=	5.5	psf	
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3	psf	
[Eq 5]	D+(0.6*W or 0.7E)=	12.9	psf	
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	13.5	psf	
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5	psf	
[Eq 7]	0.6D+0.6W=	12.7	psf	
[Eq 8]	0.6D+0.7E =	0.3	psf	

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8])
Note: Negative value = upward vertical force

[Eq 1]	D=	0.5	psf	
[Eq 2]	D+L=	5.5	psf	
[Eq 3]	D+(Lr or S or R)=	5.5	psf	
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3	psf	
[Eq 5]	D+(0.6*W or 0.7E)=	-3.2	psf	
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	1.5	psf	
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5	psf	
[Eq 7]	0.6D+0.6W=	-3.4	psf	
[Eq 8]	0.6D+0.7E =	0.3	psf	

[Y] Vertical Forces — Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$, 180°

	C_{NW} = 1.10 w (psf)	C_{NL} = -0.33 w (psf)	C_{NW} Area (sf)	C_{NL} Area (sf)	C_{NW} V. Force (lbs)	C_{NL} V. Force (lbs)	Net Uplift (lbs)
[Eq 1]	0.5	0.5	351	351	176	176	N/A
[Eq 2]	5.5	5.5	351	351	1931	1931	N/A
[Eq 3]	5.5	5.5	351	351	1931	1931	N/A
[Eq 4]	4.3	4.3	351	351	1492	1492	N/A
[Eq 5]	12.9	-3.2	351	351	4510	-1112	N/A
[Eq 6a]	13.5	1.5	351	351	4743	526	N/A
[Eq 6b]	0.5	0.5	351	351	176	176	N/A
[Eq 7]	12.7	-3.4	351	351	4440	-1182	N/A
[Eq 8]	0.3	0.3	351	351	105	105	N/A

Max Bearing (this page)= 4743 Max Uplift (this page)= (1,182) [Per Side]

Unbalanced Verticle Load Moments "T" Arms

	M Arm C_{NW} (ft)	M Arm C_{NL} (ft)	C_{NW} Moment (kip-ft)	C_{NL} Moment (kip-ft)	Vert Net Moment (kip-ft)	
[Eq 1]	0	0	-	-	-	(+) CW
[Eq 2]	0	0	-	-	-	(+) CW
[Eq 3]	0	0	-	-	-	(+) CW
[Eq 4]	0	0	-	-	-	(+) CW
[Eq 5]	0	0	-	-	-	(+) CW
[Eq 6a]	0	0	-	-	-	(+) CW
[Eq 6b]	0	0	-	-	-	(+) CW
[Eq 7]	0	0	-	-	-	(+) CW
[Eq 8]	0	0	-	-	-	(+) CW

Max Vert Moment = 0.00

Horizontal Forces [-X+]

	C_{NW} = 1.10 w (psf)	C_{NL} = -0.33 w (psf)	C_{NW} H. Force (lbs)	C_{NL} H. Force (lbs)	Net H. Force (lbs)
[Eq 5]	12.4	-3.7	715	-212	503
[Eq 6a]	9.3	-2.8	537	-159	377
[Eq 7]	12.4	-3.7	715	-212	503

Base Moment Calculation - Vertical Column

Vert Column (ft)	C_{NW} Moment (kip-ft)	C_{NL} Moment (kip-ft)	Horz Net Moment (kip-ft)	
13.00	9.30	-2.76	6.54	CW
13.00	6.98	-2.07	4.90	CW
13.00	9.30	-2.76	6.54	CW

Max Horz Moment (this page)= 6.54

Determine Hip and Ridge Vertical Forces
α= 9.5 degrees (Vertical forces control)
Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$

	C_{NW} = 1.10 w (psf)	C_{NL} = -0.33 w (psf)	C_{NW} V. Force (psf)	C_{NL} V. Force (psf)	[$C_{N(avg)}$] V. Force (psf)
[Eq 1]	0.5	0.5	0.50	0.50	0.50
[Eq 2]	5.5	5.5	5.50	5.50	5.50
[Eq 3]	5.5	5.5	5.50	5.50	5.50
[Eq 4]	4.3	4.3	4.25	4.25	4.25
[Eq 5]	12.9	-3.2	12.85	-3.17	4.84
[Eq 6a]	13.5	1.5	13.51	1.50	7.51
[Eq 6b]	0.5	0.5	0.50	0.50	0.50
[Eq 7]	0.3	0.3	0.30	0.30	0.30

Max Vertical Loading (this page) = 13.51
Max Uplift Loading (this page) = -3.17

CLIENT:	Custom Canopies -		
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy		Prepared By: MJK
	Shawnee Mission, KS 66208 Page 4 of 19		Date: 03/10/17

AMMTEC CONSULTANTS

Calculaton of Design Wind Loads - Main Force Resisting Systems

CN Values interpolated to 9.5 degrees

Case B - Clear/Unobstructed Wind Flow: γ=0°, 180°	C_{NW} = p (psf)		C_{NL} = p (psf)		ΔC_N =	α = 9.5
	0.17	3.24	-1.17	-21.96		$C_{N(Avg)}$ = -0.50

Case B - Clear/Unobstructed Wind Flow: γ=0°, 180°

W =	3.2	psf	S =	0.0	psf	W =	-22.0	psf	S =	0.0	psf
L =	5	psf	D =	0.5	psf	L =	5	psf	D =	0.5	psf
C_{NW} =	0.17		p=	3.24	psf	C_{NL} =	-1.17		p=	-21.96	psf

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8]

Note: Negative value = upward vertical force

[Eq 1]	D=	0.5	psf	[Eq 1]	D=	0.5	psf
[Eq 2]	D+L=	5.5	psf	[Eq 2]	D+L=	5.5	psf
[Eq 3]	D+(Lr or S or R)=	5.5	psf	[Eq 3]	D+(Lr or S or R)=	5.5	psf
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3	psf	[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3	psf
[Eq 5]	D+(0.6*W or 0.7E)=	2.4	psf	[Eq 5]	D+(0.6*W or 0.7E)=	-12.7	psf
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	5.7	psf	[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	-5.6	psf
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5	psf	[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5	psf
[Eq 7]	0.6D+0.6W=	2.2	psf	[Eq 7]	0.6D+0.6W=	-12.9	psf
[Eq 8]	0.6D+0.7E =	0.3	psf	[Eq 8]	0.6D+0.7E =	0.3	psf

[Y] Vertical Forces — Case A - Clear/Unobstructed Wind Flow: γ=0°, 180°

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	C_{NW}	C_{NL}	Net
	0.17	-1.17	Area	Area	V. Force	V. Force	Uplift
	w (psf)	w (psf)	(sf)	(sf)	(lbs)	(lbs)	(lbs)
[Eq 1]	0.5	0.5	351	351	176	176	N/A
[Eq 2]	5.5	5.5	351	351	1931	1931	N/A
[Eq 3]	5.5	5.5	351	351	1931	1931	N/A
[Eq 4]	4.3	4.3	351	351	1492	1492	N/A
[Eq 5]	2.4	-12.7	351	351	859	-4448	-3590
[Eq 6a]	5.7	-5.6	351	351	2004	-1976	N/A
[Eq 6b]	0.5	0.5	351	351	176	176	N/A
[Eq 7]	2.2	-12.9	351	351	788	-4519	-3730
[Eq 8]	0.3	0.3	351	351	105	105	N/A

Max Bearing (this page)= 2004 Max Uplift (this page)= (4,519) [Per Side]

Unbalanced Verticle Load Moments "T" Arms

	M Arm C_{NW}	M Arm C_{NL}	C_{NW}	C_{NL}	Vert Net	
			Moment	Moment	Moment	
	(ft)	(ft)	(kip-ft)	(kip-ft)	(kip-ft)	
[Eq 1]	0	0	-	-	-	(+) CW
[Eq 2]	0	0	-	-	-	(+) CW
[Eq 3]	0	0	-	-	-	(+) CW
[Eq 4]	0	0	-	-	-	(+) CW
[Eq 5]	0	0	-	-	-	(+) CW
[Eq 6a]	0	0	-	-	-	(+) CW
[Eq 6b]	0	0	-	-	-	(+) CW
[Eq 7]	0	0	-	-	-	(+) CW
[Eq 8]	0	0	-	-	-	(+) CW

Max Vert Moment = 0.00

Horizontal Forces [-X+]

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	Net
	0.17	-1.17	H. Force	H. Force	H. Force
	w (psf)	w (psf)	(lbs)	(lbs)	(lbs)
[Eq 5]	1.9	-13.2	113	-763	-650
[Eq 6a]	1.5	-9.9	85	-572	-488
[Eq 7]	1.9	-13.2	113	-763	-650

Base Moment Calculation - Vertical Column

Vert	C_{NW}	C_{NL}	Horz Net	
Column	Moment	Moment	Moment	
(ft)	(kip-ft)	(kip-ft)	(kip-ft)	
13.00	1.47	-9.92	-8.46	CCW
13.00	1.10	-7.44	-6.34	CCW
13.00	1.47	-9.92	-8.46	CCW

Max Horz Moment (this page)= 8.46

Determine Hip and Ridge Vertical Forces

α= 9.5 degrees (Vertical forces control)

Case A - Clear/Unobstructed Wind Flow: γ=0°

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	$[C_{N(avg)}]$
	0.17	-1.17	V. Force	V. Force	V. Force
	w (psf)	w (psf)	(psf)	(psf)	(psf)
[Eq 1]	0.5	0.5	0.50	0.50	0.50
[Eq 2]	5.5	5.5	5.50	5.50	5.50
[Eq 3]	5.5	5.5	5.50	5.50	5.50
[Eq 4]	4.3	4.3	4.25	4.25	4.25
[Eq 5]	2.4	-12.7	2.45	-12.67	5.11
[Eq 6a]	5.7	-5.6	5.71	-5.63	0.04
[Eq 6b]	0.5	0.5	0.50	0.50	0.50
[Eq 7]	0.3	0.3	0.30	0.30	0.30
Max Vertical Loading (this page) =					5.71
Max Uplift Loading (this page) =					-12.67

	Horz Net	Vert Net	Ttl Base
	Moment	Moment	Moment
	(kip-ft)	(kip-ft)	(kip-ft)
Case A - γ=0	6.54	0.00	0.00
Case B - γ=0°	8.46	0.00	0.00

Note: Use maximum moment values for determination of cantilever hips at Canopy and Vertical Columns (following pages)

CLIENT:	Custom Canopies -	
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy	Prepared By: MJK
	Shawnee Mission, KS 66208	Date: 03/10/17

Calculaton of Design Wind Loads - Main Force Resisting Systems

AMMTEC CONSULTANTS

CN Values interpolated to 9.5 degrees

	C_{NW} = p (psf)		C_{NL} = p (psf)			
Case A - Obstructed Wind Flow: $\gamma=0^0$, 180^0	-1.49	-27.94	-1.00	-18.71	ΔC_N =	$C_{N(Avg)}$ = -1.25

α= 9.5

Case A - Obstructed Wind Flow: $\gamma=0^0$, 180^0

W = -27.9 psf S = 0.0 psf
L = 5 psf D = 0.5 psf
C_{NW} = -1.49 p= -27.94 psf

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8])
Note: Negative value = upward vertical force

[Eq 1]	D=	0.5 psf
[Eq 2]	D+L=	5.5 psf
[Eq 3]	D+(Lr or S or R)=	5.5 psf
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3 psf
[Eq 5]	D+(0.6*W or 0.7E)=	-16.3 psf
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	-8.3 psf
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5 psf
[Eq 7]	0.6D+0.6W=	-16.5 psf
[Eq 8]	0.6D+0.7E =	0.3 psf

W = -18.7 psf S = 0.0 psf
L = 5 psf D = 0.5 psf
C_{NL} = -1.00 p= -18.7 psf

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8])
Note: Negative value = upward vertical force

[Eq 1]	D=	0.5 psf
[Eq 2]	D+L=	5.5 psf
[Eq 3]	D+(Lr or S or R)=	5.5 psf
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3 psf
[Eq 5]	D+(0.6*W or 0.7E)=	-10.7 psf
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	-4.2 psf
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5 psf
[Eq 7]	0.6D+0.6W=	-10.9 psf
[Eq 8]	0.6D+0.7E =	0.3 psf

[Y] +

Vertical Forces Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$, 180^0

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	C_{NW}	C_{NL}	Net
	-1.49	-1.00	Area	Area	V. Force	V. Force	Uplift
	w (psf)	w (psf)	(sf)	(sf)	(lbs)	(lbs)	(lbs)
[Eq 1]	0.5	0.5	351	351	176	176	N/A
[Eq 2]	5.5	5.5	351	351	1931	1931	N/A
[Eq 3]	5.5	5.5	351	351	1931	1931	N/A
[Eq 4]	4.3	4.3	351	351	1492	1492	N/A
[Eq 5]	-16.3	-10.7	351	351	-5710	-3765	-9475
[Eq 6a]	-8.3	-4.2	351	351	-2922	-1464	-4386
[Eq 6b]	0.5	0.5	351	351	176	176	N/A
[Eq 7]	-16.5	-10.9	351	351	-5780	-3836	-9615
[Eq 8]	0.3	0.3	351	351	105	105	N/A

Max Bearing (this page)= 1931 Max Uplift (this page)= (5,780) [Per Side]

Unbalanced Verticle Load Moments "T" Arms

	M Arm C_{NW}	M Arm C_{NL}	C_{NW}	C_{NL}	Vert Net	
			Moment	Moment	Moment	
	(ft)	(ft)	(kip-ft)	(kip-ft)	(kip-ft)	
[Eq 1]	0	0	-	-	-	(+) CW
[Eq 2]	0	0	-	-	-	(+) CW
[Eq 3]	0	0	-	-	-	(+) CW
[Eq 4]	0	0	-	-	-	(+) CW
[Eq 5]	0	0	-	-	-	(+) CW
[Eq 6a]	0	0	-	-	-	(+) CW
[Eq 6b]	0	0	-	-	-	(+) CW
[Eq 7]	0	0	-	-	-	(+) CW
[Eq 8]	0	0	-	-	-	(+) CW

Max Vert Moment = 0.00

Horizontal Forces [- X +]

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	Net
	-1.49	-1.00	H. Force	H. Force	H. Force
	w (psf)	w (psf)	(lbs)	(lbs)	(lbs)
[Eq 5]	-16.8	-11.2	-971	650	-321
[Eq 6a]	-12.6	-8.4	-728	488	-241
[Eq 7]	-16.8	-11.2	-971	650	-321

Base Moment Calculation - Vertical Column

Vert	C_{NW}	C_{NL}	Horz Net	
Column	Moment	Moment	Moment	
(ft)	(kip-ft)	(kip-ft)	(kip-ft)	
13.00	-12.63	8.46	-4.17	CCW
13.00	-9.47	6.34	-3.13	CCW
13.00	-12.63	8.46	-4.17	CCW

Max Horz Moment (this page)= 4.17

Determine Hip and Ridge Vertical Forces

α= 9.5 degrees (Vertical forces control)

Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	$[C_{N(avg)}]$
	-1.49	-1.00	V. Force	V. Force	V. Force
	w (psf)	w (psf)	(psf)	(psf)	(psf)
[Eq 1]	0.5	0.5	0.50	0.50	0.50
[Eq 2]	5.5	5.5	5.50	5.50	5.50
[Eq 3]	5.5	5.5	5.50	5.50	5.50
[Eq 4]	4.3	4.3	4.25	4.25	4.25
[Eq 5]	-16.3	-10.7	-16.27	-10.73	13.50
[Eq 6a]	-8.3	-4.2	-8.32	-4.17	6.25
[Eq 6b]	0.5	0.5	0.50	0.50	0.50
[Eq 7]	0.3	0.3	0.30	0.30	0.30

Max Vertical Loading (this page) = 13.50
Max Uplift Loading (this page) = -16.27

CLIENT:	Custom Canopies -		
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy		Prepared By: MJK
	Shawnee Mission, KS 66208		Date: 03/10/17

Calculaton of Design Wind Loads - Main Force Resisting Systems

AMMTEC CONSULTANTS

CN Values interpolated to 9.5 degrees

	C_{NW} = p (psf)	C_{NL} = p (psf)		α=
Case B - Obstructed Wind Flow: $\gamma=0^0$, 180^0	0.50	-27.94	-1.00	-18.71	ΔC_N =	$C_{N(Avg)}$ = -0.25	9.5

Case B - Obstructed Wind Flow: $\gamma=0^0$, 180^0

W = -27.9 psf S = 0.0 psf
L = 5 psf D = 0.5 psf
C_{NW} = 0.50 p= -27.94 psf

W = -18.7 psf S = 0.0 psf
L = 5 psf D = 0.5 psf
C_{NL} = -1.00 p= -18.7 psf

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8])

Note: Negative value = upward vertical force

[Eq 1]	D=	0.5 psf
[Eq 2]	D+L=	5.5 psf
[Eq 3]	D+(Lr or S or R)=	5.5 psf
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3 psf
[Eq 5]	D+(0.6*W or 0.7E)=	-16.3 psf
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	-8.3 psf
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5 psf
[Eq 7]	0.6D+0.6W=	-16.5 psf
[Eq 8]	0.6D+0.7E =	0.3 psf

ASD Load Combinatons: (IBC 2012 ASCE 7-10 S2.4.1 [8])

Note: Negative value = upward vertical force

[Eq 1]	D=	0.5 psf
[Eq 2]	D+L=	5.5 psf
[Eq 3]	D+(Lr or S or R)=	5.5 psf
[Eq 4]	D+0.75L+0.75(Lr or S or r)=	4.3 psf
[Eq 5]	D+(0.6*W or 0.7E)=	-10.7 psf
[Eq 6a]	D+0.75L+0.75(0.6W or 0.7E)+0.75(Lr or S or R)=	-4.2 psf
[Eq 6b]	D+0.75*L+0.75(0.7E)+0.75S =	0.5 psf
[Eq 7]	0.6D+0.6W=	-10.9 psf
[Eq 8]	0.6D+0.7E =	0.3 psf

[Y] Vertical Forces Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$, 180^0

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	C_{NW}	C_{NL}	Net
	0.50	-1.00	Area	Area	V. Force	V. Force	Uplift
	w (psf)	w (psf)	(sf)	(sf)	(lbs)	(lbs)	(lbs)
[Eq 1]	0.5	0.5	351	351	176	176	N/A
[Eq 2]	5.5	5.5	351	351	1931	1931	N/A
[Eq 3]	5.5	5.5	351	351	1931	1931	N/A
[Eq 4]	4.3	4.3	351	351	1492	1492	N/A
[Eq 5]	-16.3	-10.7	351	351	-5710	-3765	-9475
[Eq 6a]	-8.3	-4.2	351	351	-2922	-1464	-4386
[Eq 6b]	0.5	0.5	351	351	176	176	N/A
[Eq 7]	-16.5	-10.9	351	351	-5780	-3836	-9615
[Eq 8]	0.3	0.3	351	351	105	105	N/A

Max Bearing (this page)= 1931 Max Uplift (this page)= (5,780) [Per Side]
Max Bearing (all pages)= 4743 Max Uplift (all pages)= -5780 [Per Side]

Unbalanced Verticle Load Moments "T" Arms

	M Arm C_{NW}	M Arm C_{NL}	C_{NW}	C_{NL}	Vert Net	
			Moment	Moment	Moment	
	(ft)	(ft)	(kip-ft)	(kip-ft)	(kip-ft)	
[Eq 1]	0	0	-	-	-	(+) CW
[Eq 2]	0	0	-	-	-	(+) CW
[Eq 3]	0	0	-	-	-	(+) CW
[Eq 4]	0	0	-	-	-	(+) CW
[Eq 5]	0	0	-	-	-	(+) CW
[Eq 6a]	0	0	-	-	-	(+) CW
[Eq 6b]	0	0	-	-	-	(+) CW
[Eq 7]	0	0	-	-	-	(+) CW
[Eq 8]	0	0	-	-	-	(+) CW

Max Vert Moment = 0.00

Horizontal Forces [- X +]

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	Net
	0.50	-1.00	H. Force	H. Force	H. Force
	w (psf)	w (psf)	(lbs)	(lbs)	(lbs)
[Eq 5]	-16.8	-11.2	-971	650	-321
[Eq 6a]	-12.6	-8.4	-728	488	-241
[Eq 7]	-16.8	-11.2	-971	650	-321

Base Moment Calculation - Vertical Column

Vert	C_{NW}	C_{NL}	Horz Net	
Column	Moment	Moment	Moment	
(ft)	(kip-ft)	(kip-ft)	(kip-ft)	
13.00	-12.63	8.46	-4.17	CCW
13.00	-9.47	6.34	-3.13	CCW
13.00	-12.63	8.46	-4.17	CCW

Max Horz Moment (this page)= 4.17
Max Horz Moment (All Pages)= 8.46

Determine Hip and Ridge Vertical Forces

α= 9.5 degrees (Vertical forces control)

Case A - Clear/Unobstructed Wind Flow: $\gamma=0^0$

	C_{NW} =	C_{NL} =	C_{NW}	C_{NL}	$[C_{N(avg)}]$
	0.50	-1.00	V. Force	V. Force	V. Force
	w (psf)	w (psf)	(psf)	(psf)	(psf)
[Eq 1]	0.5	0.5	0.50	0.50	0.50
[Eq 2]	5.5	5.5	5.50	5.50	5.50
[Eq 3]	5.5	5.5	5.50	5.50	5.50
[Eq 4]	4.3	4.3	4.25	4.25	4.25
[Eq 5]	-16.3	-10.7	-16.27	-10.73	13.50
[Eq 6a]	-8.3	-4.2	-8.32	-4.17	6.25
[Eq 6b]	0.5	0.5	0.50	0.50	0.50
[Eq 7]	0.3	0.3	0.30	0.30	0.30

Max Vertical Loading (this page) = 13.50
Max Uplift Loading (this page) = -16.27

	Horz Net	Vert Net	Tll Base
	Moment	Moment	Moment
	(kip-ft)	(kip-ft)	(kip-ft)
Case A - $\gamma=0$	6.54	0.00	0.00
Case B - $\gamma=0^0$	8.46	0.00	0.00
Case A - 180^0	4.17	0.00	0.00
Case B - 180^0	4.17	0.00	0.00

Note: Use maximum moment values for determination of cantilever hips at Canopy and Vertical Columns (following pages)

Max Vertical (all pages)= 13.51 Note: Use 10 psf min per IBC/ASCE
Max Uplift (all pages)= -16.27 Note: Use -10 psf min per IBC/ASCE

CLIENT:	Custom Canopies -	
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy	Prepared By: MJK
	Shawnee Mission, KS 66208	Date: 03/10/17

Vertical Column

AMMTEC CONSULTANTS

Max combined loads:	13.51 psf		
Note - Use 10 psf min combined loads:	13.51 psf		
	α= 9.5	Fixed Base:	N
Trib Area Vertical Columns=	2	Hip Moment =	2 kip-ft
Max Moment at Column (Wind) =	2.11 kip-ft		
Equivalent Force at Top of Column=	163 lbs		
Max Vert / Column =	4,743 lbs	Total Pole Uplift at Base =	(2,890) lbs
Cantiler Beam Moment =	- kip-ft		
Total Column Moment =	2.11 kip-ft		

Heavy Hex A-B	Dia (in)	Embed (in)	Vx Max (lbs)	Nz Max (lbs)	A-B Check
Check Anchor Bolt:	5/8	8	2,500	6,000	OK

Vertical Column A — Combined Columns= 1

Total H_{pole} =	13.0 ft	Tube Type Schd 40 Pipe			
Fy =	36.0 ksi	Nom Tube=	4.0 inches	Width (Rect HSS Only)=	8.0 in^3
Es=	30000 ksi	t(nom) =	0.120 inches		
ΩMu= Fy*Z/(Ω*12) =	4.745	I.D. =	4.000 inches		
Ω=1.67		Zx=	2.64 in3		
$Z_{(min)}$=	1.18 in^3	$M_{R(resultant)}$ =	2.11 ft-kips		
FS =	1 FS©=2.24	OK			

Soil / Foundation (Spread) — With CMU Surround: N

kp =	100 psf/ft	Allowable Bearing Capacity=B =		1,000 psf	
Ms =	$(w*L^2/2*h_3*150)+P*L/2+F*w*h_3*L$=	Skin Friction= F =		- psf	
Ms =	33.12 kip-ft	h_3 =	3.50 feet		
Min Side = w =	60 inches	Length = L =	60 inches	Fndt Mono w/ Slab	N
$M_{resultant}$ =	2.11 kip-ft	FS_{uplift} =	1.50 [FS Actual =4.62]		
$FS_{overturning}$ =	1.00 [FS Actual =15.67]	Pole Uplift =	2,890		
Fnd Wt =	13,125 lbs	Friction Resistance=	-	Fnd Uplift Resistance=	13,342
Column Wt =	217 lbs			Check	OK
CMU Clmn Wt =	- lbs	Fnd Bearing =	715 psf		
Ttl =	13,342 lbs				

Soil / Foundation - Pier

h_3 =	4.5 feet (=54")	Fnd Wt =	2,121 lbs	h_1= Height of Applied Force=	13.0 ft
Min Diameter = b =	24 inches	Column Wt =	217 lbs	Soil Lateral Bearing Pressure=	100 psf
$M_{resultant}$ =	2.1 kip-ft	Ttl =	2,338	Increase Wind/Seismic Loading=	1.333
				Soil Lateral Bearing Pressure=	133 psf
Constrained Lateral Resistance	[IBC Eq 18-3]			Estimated Depth=	4.50 ft
d=sqrt(4.25*(Mg/(S_3*b))	=sqrt(4.25*(2110/1200*2))=	1.94 ft	Check Depth: OK	S_3=	1199.70

Unconstrained Lateral Resistance [IBC Eq 18-1] — A=2.34*P/S1*b= 0.48 — P=M/h_1= 163 lbs

d= 0.5A*{1+[1+(4.36*h_1/A)]^1/2] — S_1=Allowable Lateral Soil Pressure=2*1.33*k_p*1/3*d= 399 lbs

d=0.5*0.48*{1+[1+(4.36*13/0.48)]^1/2]}= 2.85 ft

		(in^2)	Reinf. Bar#	Quant	Spacing
Spread Foundation Cross Section Area:	2520	0.0020	N/A	N/A	N/A
Vertical Reinforcement Area As(min):	5.0	0.0015	5	7.0	9.0
Horizontal Reinforcement Area As(min):	3.8				
		(in^2)	Bar#	Quant	Spacing
Pier Foundation Cross Section Area:	452	0.0020	4	5	7.5
Vertical Reinforcement Area As(min):	0.9	0.0015	3	4.0	13.5
Horizontal Reinforcement Area As(min):	0.7				

CLIENT:	Custom Canopies -	
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy	Prepared By: MJK
	Shawnee Mission, KS 66208	Date: 03/10/17

Ridge

Max combined loads:	13.51	psf
Note - Use 10 psf min combined loads:	13.51	psf
α=	**9.5**	

Ridge Sizing

Ridge Beam Length:	10.00 (ft)	Ridge Beam Loading:	1,757 (lbs)
Ridge Beam Unbraced Length:	10.00 (ft)	Ridge Beam Loading:	175.67 (plf)
Ridge Beam Trib Width	13.00 (ft)	Ridge Beam Moment:	
Ridge Beam Trib Area:	130.0 (sf)	= M = w*L^2/(20*1000)=	0.9 ft-kips

$Mu_{(resultant)}$ =	0.88 ft-kips	**$Z_{(min)}$=**	0.38 in3		
Tube Type	HSS Tube	**Nom Tube=**	3 inches		
		Width (Rect HSS Only)=	inches		
Fy =	46.0 ksi	**Thickness =**	11 Gauge		
Es=	30000 ksi	**t" =**	0.1196 inches		
I=	1.909 in4	**O.D. =**	3.000 inches		
Z=	0.935 in3	**I.D. =**	2.761 inches		
ΩMu=	Fy*Z/(Ω*12) = 2.15	OK	**FS =** 1	FS©=2.44	
Ω=1.67	**Ridge - 3" x 11 Gauge HSS Tube**				

Moment Couple at Ridge Beam Connection

$Mu_{(resultant)}$ =	0.88 ft-kips		
d =	2 1/2 inches	Beam End Loading=	0.88 kips
Top Bolt Force =	4.2 kips	**(2) 0.5 A307 Bolts**	**OK**
Bolt Dia (in): 1/2	**A307 Bolt** N/A	Bolt Rn/Ωv=	4 kips
Rv/Ω =	3.9 kips		
Alternate Welded Connection:	Use 3/16" weld all around.		

Check Ridge Bracing Strut

Strut Length:	0.00 ft	**Nom Tube=**	2 3/4 (in)
Strut End Load:	439.2 lbs	Width (Rect HSS Only)=	2 3/4 (in)
		t(nom) =	0.128 (in)
		rx=	2.630 (in)
Width to Thickness Ratio = b/t =	21.5	**ry=**	1.230 (in)
Limiting Thickness Ratio (190/Sqrt(Fy)	28.0 OK	**Min [r] =**	1.230 (in)
l=	0.0		
k=	1.0	**A=**	1.342 (in^2)
kl/rx=	0.0	F_u=	327
kl/ry=	0.0		

Eq: (E2.2) $F_a=12\pi^2*E/(23*(kl/r)^2)$

F_a= N/A (psi)

OK

Rafter Beam

Max combined loads: 13.51 psf

Note - Use 10 psf min combined loads: 13.51 psf

α= 9.5

Rafter Beam Sizing

Rafter Length:	15.5 (ft)				
Rafter Unbraced Length:	15.5 (ft)	Check Dist Traingular Loading:			
Rafter Trib Width:	13.0 (ft)	Total Rafter Load:	1,364 lbs		
RafterTrib Area:	101.0 (sf)	Equiv Dist Load:	176 plf		
Rafter Load at Column Spigot:	3,121 lbs	= M = w*L^2/(20*1000)=	2.12 ft-kips		

$Mu_{(resultant)}$ = 2.12 ft-kips — $Z_{(min)}$= 0.92 in3

Tube Type HSS Tube — Nom Tube= 3 inches

Width (Rect HSS Only)= inches

Fy = 46.0 ksi — Thickness = 11 Gauge

Es= 30000 ksi — t" = 0.1196 inches

I= 1.909 in4 — O.D. = 3.000 inches

Z= 0.935 in3 — I.D. = 2.761 inches

ΩMu= Fy*Z/(Ω*12) = 2.15 — OK — FS = 1.0 — FS©=1.01

Ω=1.67

Canopy Rafter - 3" x 11 Gauge HSS Tube

Moment Couple at Bolted Rafter Connection

$Mu_{(resultant)}$ = 2.12 ft-kips

d = 2.54 inches — Beam End Loading= 1.12 kips

Bolt Couple Quant = 1.00 — (2) Top Bolt Force = 10s

Top Bolt Force = 10.00 kips

Bolt Dia (in): 1/2 A307 Bolt — N/A — Bolt Rn/Ωv= 4 kips

Rv/Ω = 8.6 kips — OK

Alternate Welded Connection: Use 1/8" weld all around.

Check Ridge/Rafter/Column Spigot

Max Moment= 2.12 ft-kips

$Mu_{(resultant)}$ = 2.12 ft-kips — $Z_{(min)}$= 0.92 in3

Tube Type HSS Tube — Nom Tube= 2 1/2 inches

Width (Rect HSS Only)= inches

Fy = 46.0 ksi — t(nom) = 0.188 inches

Es= 30000 ksi — t" = 0.188 inches

I= 1.559 in4 — O.D. = 2.500 inches

Z= 0.943 in3 — I.D. = 2.124 inches

ΩMu= Fy*Z/(Ω*12) = 2.16 — OK — FS = 1 — FS©=1.02

Ω=1.67

Ridge/Rafter/Column Spigot 2.5" x HSS Tube, t=0.188"

Check Rafter Bracing Strut

Strut Length:	0.00 ft	Nom Tube=	2 1/2 (in)
Strut End Load:	682.1 lbs	Width (Rect HSS Only)=	2 1/2 (in)
		t(nom) =	0.120 (in)
		rx=	2.630 (in)
		ry=	1.230 (in)
Width to Thickness Ratio = b/t =	20.8	Min [r] =	1.230 (in)
Limiting Thickness Ratio (190/Sqrt(Fy)	28.0 OK	A=	1.142 (in^2)
l=	0.0	F_u=	597
k=	1.0	Eq: (E2.2)	$F_e=12\pi^2*E/(23*(kl/r)^2)$
kl/rx=	0.0	F_e=	N/A (psi)
kl/ry=	0.0		OK

CLIENT:	Custom Canopies -		
PROJECT:	Asbury Children's Center 26'X27' (4)-Pole Single-Canopy	Prepared By:	MJK
	Shawnee Mission, KS 66208	Date:	03/10/17

AMMTEC CONSULTANTS

IBC 2012 ASCE 07-10 Seismic Design Requirements - Equivalent Lateral Force Proced

USGS–Provided Output

Shawnee Mission, KS 66208

S_s =	0.112	S_{MS} =	0.179	S_{DS} =	0.119
S_1 =	0.063	S_{M1} =	0.151	S_{D1} =	0.101

IBC/CBC Section 1613 Earthquake Loads

				REFERENCE
Risk Category:	II			
Seismic Importance Factor=	1.000			ASCE 7-05 Table 11.5-1
Site Classification				
Soil Site Class =	D			IBC/CBC Table 1613.5.2/1613A.5.2
Site Coefficients				
S_S =	0.112	Mapped Spectral Accelerations: Short Period		ASCE 7-05 Table 11.4-1;
S_1 =	0.063	Mapped Sectral Accelerations: 1 sec Period		IBC/CBC Table 1613.5.3(1)/1613A.5.3(1)
F_a =	1.6	Site Coefficient		ASCE 7-05 Table 11.4-2; IBC/CBC Table 1613.5.3(2)/1613A.5.3(2)
F_v =	2.4	Site Coefficient		ASCE 7-05 Eqn. 11.4-1; IBC/CBC Eqn. 16-37/16A-37
S_{MS} =	0.179	Max Spectral Accelerations: Short Periods		ASCE 7-05 Eqn. 11.4-2; IBC/CBC Eqn. 16-38/16A-38
S_{M1} =	0.151	Max Spectral Accelerations: 1sec Period		

Design Spectral Response Acceleration Parameters — ASCE 7-05 11.4.4; IBC/CBC 1613.5.4/1613A.5.4

S_{DS} =	0.119	5% Damped Spectral Acceleration: Short Period	ASCE 7-05 Eqn. 11.4-3; IBC/CBC Eqn. 16-39/16A-39
S_{D1} =	0.101	5% Damped Spectral Acceleration: 1 sec Period	ASCE 7-05 Eqn. 11.4-4; IBC/CBC Eqn. 16-40/16A-40
SDC =	D	Seismic Design Category	ASCE 7-05 Tables 11.6-1 & 11.6-2 IBC/CBC Table 1613.5.6(1) & 1613A.5.6(2)

Equivalent Lateral Force Procedure

T =	$C_t h_n^x$ =	0.170	Fundamental Period	ASCE 7-05 Eqn. 12.8-7
	C_t =	0.020	Period Parameter	ASCE 7-05 Table 12.8-2
	x =	0.750	Period Parameter	ASCE 7-05 Table 12.8-2
	h_n =	17.389	Structure Height	
R =		1.250	Response Modification Factor	ASCE 7-05 Table 15.4-2
T_L =		12.000	Long-Period Transition Period	ASCE 7-05 Figure 22-15
C_s =	$S_{DS}/[R/I]$ =	0.095	Seismic Response Coefficient	ASCE 7-05 Eqn. 12.8-2
where;				
$C_s >$		0.030	Lower Limit	ASCE 7-05 Eqn. 15.4-1
$C_s >$	$0.8\ S_1/[R/I]$ =	0.040	Lower Limit for $S_1 > 0.6g$	ASCE 7-05 Eqn. 15.4-2
$C_s <$	$S_{D1}/T[R/I]$ =	0.473	Upper Limit for $T \leq T_L$	ASCE 7-05 Eqn. 12.8-3
$C_s <$	$S_{D1}T_L/T2[R/I]$ =	33.319	Upper Limit for $T > T_L$	ASCE 7-05 Eqn. 12.8-4
	Design Value C_s =	0.095		
W =		0.217	Per Column Dead Weight + Appurtenances Weight (kips)	
V =	C_sW =	0.021	Equivalent Seismic Base Shear (kips)	ASCE 7-05 Eqn. 12.8-1
	F_{wind} =	0.163	Wind Base Shear (kips) :	

Lateral Wind Shear > Seismic Base Shear : Wind Controls Design

USGS Design Maps Summary Report

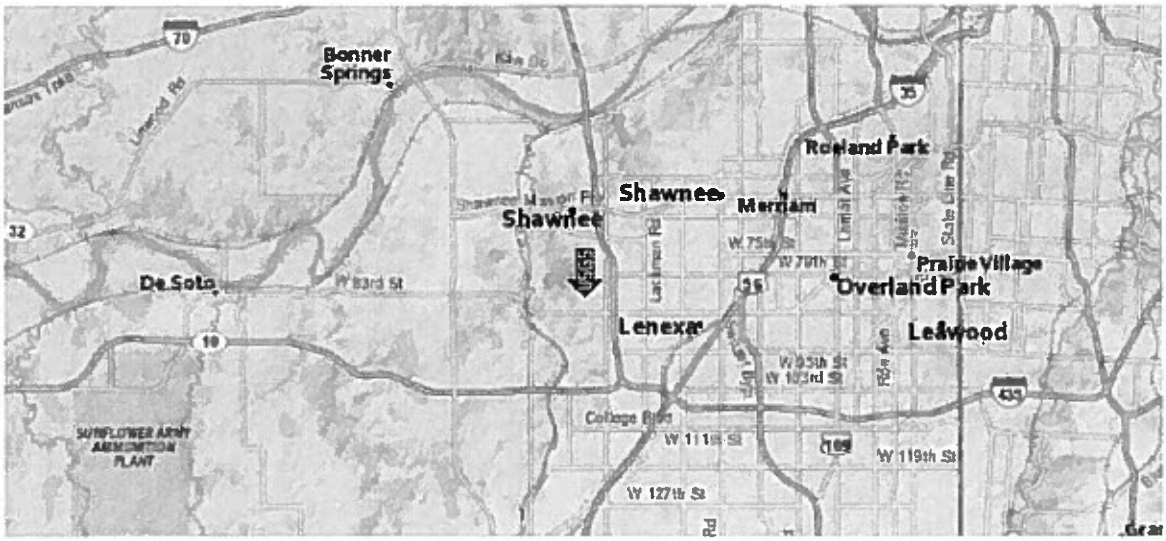
User-Specified Input

Building Code Reference Document 2012/2015 International Building Code
(which utilizes USGS hazard data available in 2008)

Site Coordinates 38.98703°N, 94.79054°W

Site Soil Classification Site Class D – "Stiff Soil"

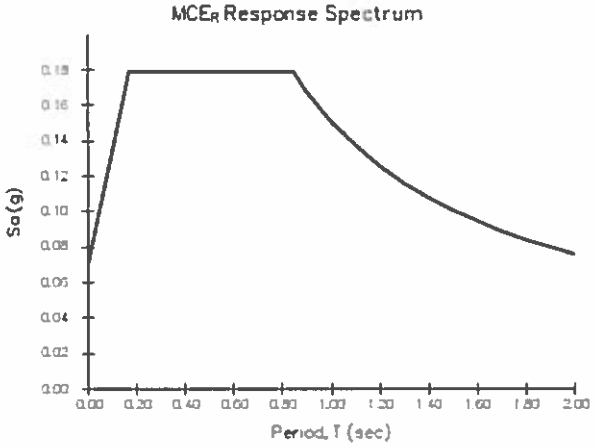
Risk Category I/II/III

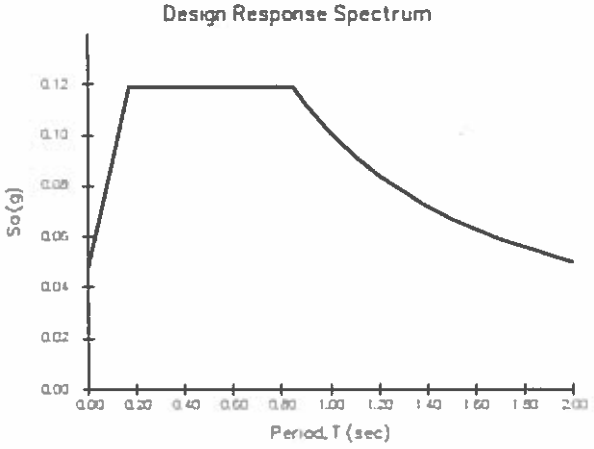


USGS-Provided Output

S_S =	0.112 g	S_{MS} =	0.179 g	S_{DS} =	0.119 g
S_1 =	0.063 g	S_{M1} =	0.151 g	S_{D1} =	0.101 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.

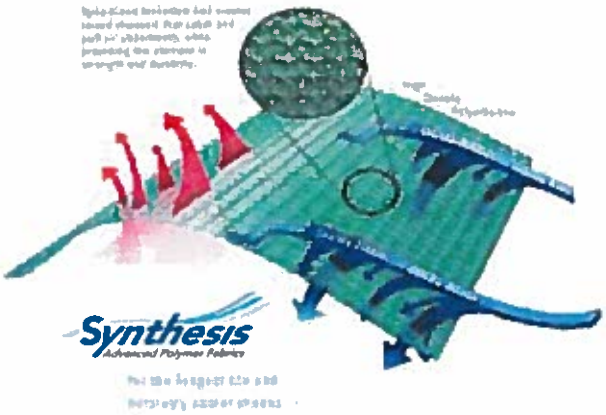




Commercial 95™

Architectural Shade Cloth

- Heavy duty, professional grade architectural shade fabric for tensioned structures and other shade applications.
- Made from UV stabilized HDPE monofilament and tape yarns.
- Specialized lock stitch knit for more air movement and better channeling of cooling breezeways.
- Constructed to block up to 98.8% of harmful UV sun rays.
- Heat set for ease of fabrication and to limit shrinkage.
- Tear resistant and will not crack, rot or fade.
- 10 year manufacturer's warranty against UV degradation.
- Recyclable.



Fabric Color Options

Natural #445003	Desert Sand #444983	Yellow #445072	Terracotta #445058	Deep Ochre #444990
Cherry Red #444976	Charcoal #444969	Steel Grey #445041	Navy Blue #445010	Turquoise #445065
Aquatic Blue #444938	Sky Blue #445034	Rivergum #445027	Brunswick Green #444952	Black #444945

Colors are representative only. Small variations in color should be anticipated and are within commercial tolerances.

Synthesis
Advanced Polymer Fabrics

Commercial 95™

Architectural Shade Cloth

Physical Properties

Property	Test Method	US	Metric
Weight	ASTM D-3776	10.0 oz	340 gsm
Thickness	ASTM D-5199	61 mils	1.6 mm
Tensile Strength	ASTM D-5034 (grab test)	Warp: 208 lbs Weft: 486 lbs	Warp: 925 N Weft: 2161 N
Elongation	ASTM D-5034 (grab test)	Warp: 134% Weft: 94%	Warp: 134% Weft: 94%
Tear Strength	ASTM D-2261 (tongue test)	Warp: 51 lbs Weft: 52 lbs	Warp: 227 N Weft: 231 N
Burst Pressure(Mullen)	ASTM D-3786 (diaphragm test)	487 psi	3358 kPa
Burst Strength	ASTM D-3787 (ball burst test)	353 lbs	1570 N
Temperature Range		-22°F to +167°F	-30°C to +75°C

Flammability Tests	Result
ASTM E84, Class A -Flame spread index -Smoke developed index	PASS 25 105

Specification	US	Metric
Width*	9 ft 10 in	3 m
Length	131 ft	40 m
Roll Weight	97 lbs	44 kg
Roll Diameter	14 in	0.35 m
Core Diameter	1.4 in	35 mm

* Note product is center folded when packaged.

Shade and UVR Properties

Color	Code	Cover Factor	Avg % Transmission	Shade Factor	Avg. UVR Transmission	Avg PAR Transmission	%UVR Block
Aquatic Blue	444938	96.7%	11.9%	88.2	5.8%	13.8%	94.2%
Black	444945	95.9%	5.1%	94.9	4.9%	5.1%	95.1%
Brunswick Green	444952	97.4%	4.4%	95.6	3.1%	4.8%	96.9%
Charcoal	444969	94.7%	5.8%	94.2	5.3%	5.8%	94.7%
Cherry Red	444976	94.9%	19.0%	81.0	9.0%	21.9%	91.0%
Deep Ochre	444990	95.4%	5.6%	94.4	3.3%	6.2%	96.7%
Desert Sand	444983	96.5%	15.8%	84.2	5.2%	19.0%	94.8%
Natural	445003	94.5%	21.1%	78.9	4.9%	25.9%	95.1%
Navy Blue	445010	96.4%	4.3%	95.7	3.2%	4.7%	98.8%
Rivergum	445027	95.7%	14.2%	85.8	7.0%	16.3%	93.0%
Sky Blue	445034	95.2%	5.3%	94.7	3.2%	5.9%	96.8%
Steel Grey	445041	97.3%	8.1%	91.9	3.3%	9.5%	96.7%
Terracotta	445058	93.51%	9.88%	90.12%	8.04%	10.52%	91.96%
Turquoise	445065	97.6%	10.4%	89.6	4.6%	12.2%	95.4%
Yellow	445072	94.6%	23.0%	77.0	6.7%	27.7%	93.2%

Tested according to AS 4174 synthetic shadecloth:
Avg. % transmission = Average % transmission within the 290-770nm spectrum.
Avg. UVR transmission = Average % transmission within the 290-400nm spectrum.
Avg. PAR transmission = Average % transmission within the 408-770nm spectrum.

Usage Instructions

Do not use against flames.

Contact with organic solvents, halogens or highly acidic substances may reduce the service life of the fabric and void the warranty.

Biaxial elastic material properties available on request.

Specification Instructions

Shade cloth fabric shall be Synthesis Commercial 95™ knitted HDPE monofilament and tape shade fabric offering a UV block up to 98.8%.

Gale Pacific USA Inc, 285 West Central Parkway, Suite 1704, Altamonte Springs, FL 32714, USA Tel: 1 407 772-7979 website: www.synthesisfabrics.com

SGS

TEST REPORT

CLIENT: Gale Pacific USA, Inc.
285 W. Central Pkwy, Suite 1704
Altamonte Springs, FL 32714

Attn: Susan Yuskaitis

Test Report No:	**654:030608**	**Date:**	**February 22, 2010**

SUBJECT: Testing to ASTM E-84

SAMPLE ID: Sample identified as **"Commercial 95"** was received from the client on 2/19/10 in good condition. The sample was described by the manufacturer of containing the following items:

- **Sample Description: Commercial 95**
- **Sample / Style Number: Commercial 95**
- **Material Content: Knitted HDPE**
- **Client PO: SY021609**

TEST REQUESTED: Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with ASTM Designation E84-09a, "Standard Method of Test for Surface Burning Characteristics of Building Materials". The test procedure is equivalent to UL 723, ANSI/NFPA No. 255, and UBC No. 8-1.

PREPARATION: The sample material was submitted in one roll and trimmed to fit dimensions of tunnel, measuring 21" by 24'. The sample was supported using rods and wire.

TEST DATE: 2/22/10

RESULTS: Results can be found on the following pages and apply only to the sample tested.

CLASSIFICATION: The sample received a **'Class A'** rating in accordance with the NFPA and IBC classification chart on page two of this report.

SIGNED FOR AND ON BEHALF OF
SGS U.S. TESTING COMPANY INC.

Gregory D Ertel

Greg Ertel
Engineering Technician

J. Brian McDonald
Fire Technology Department Manager

RESULTS:

SAMPLE: **Commercial 95**

TEST DATE: 2/22/09

DATA:

Ignition (minutes: seconds)	00:06
Flame Front (feet)	4.0
Time to Maximum Spread (minutes: seconds)	7:00
Flame Spread	15
Smoke Developed	50

NFPA Class	IBC Class	Flame Spread	Smoke Developed
A	A	0 through 25	≤ 450
B	B	26 through 75	≤ 450
C	C	76 through 200	≤ 450

Total Test Time, (hr:min:sec): 0:10:00

Building Codes Cited:
1. National Fire Protection Association, ANSI/NFPA No. 101, "Life Safety Code", 2006 Edition.

2. International Building Code, 2006 Edition, Chapter 8, Interior Finishes, Section 803

Observations:

- Floor Burning
- Flaming / Dripping
- Melting

GRAPHICAL RESULTS:

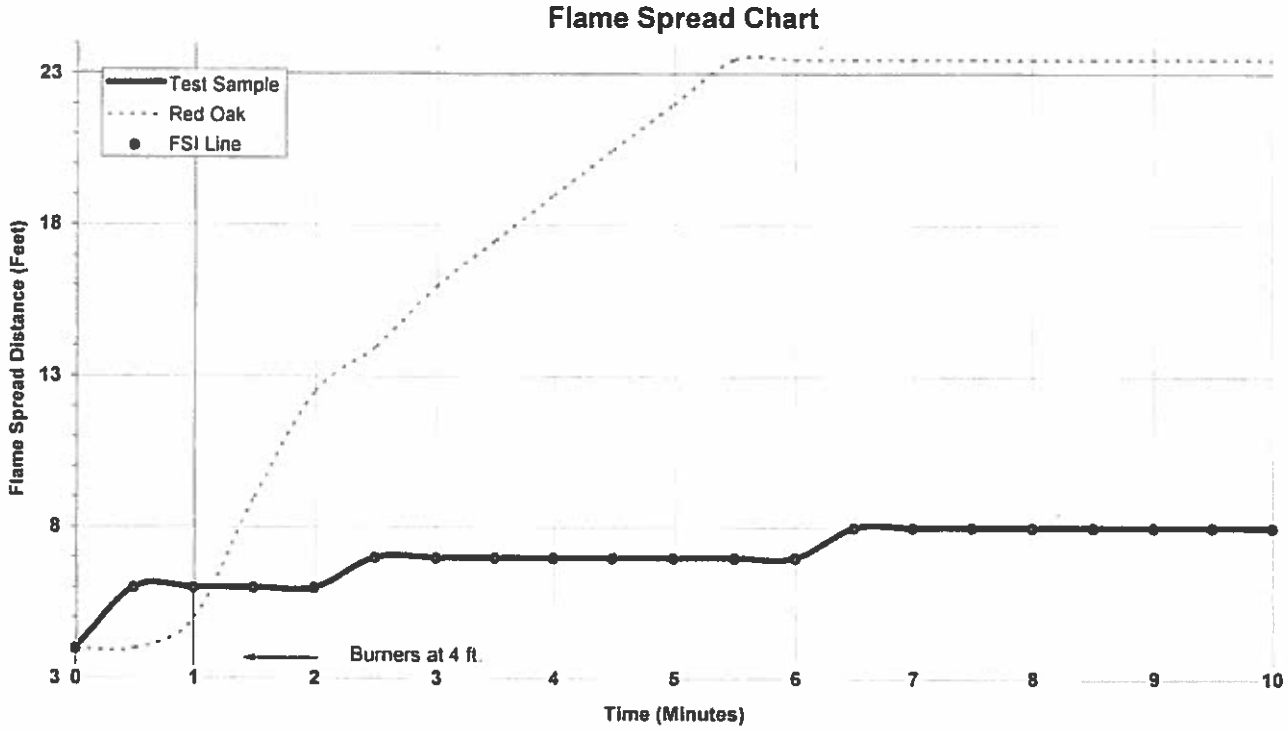


FIGURE 1. Flame Spread

GRAPHICAL RESULTS: (Cont.)

Smoke Developed Chart

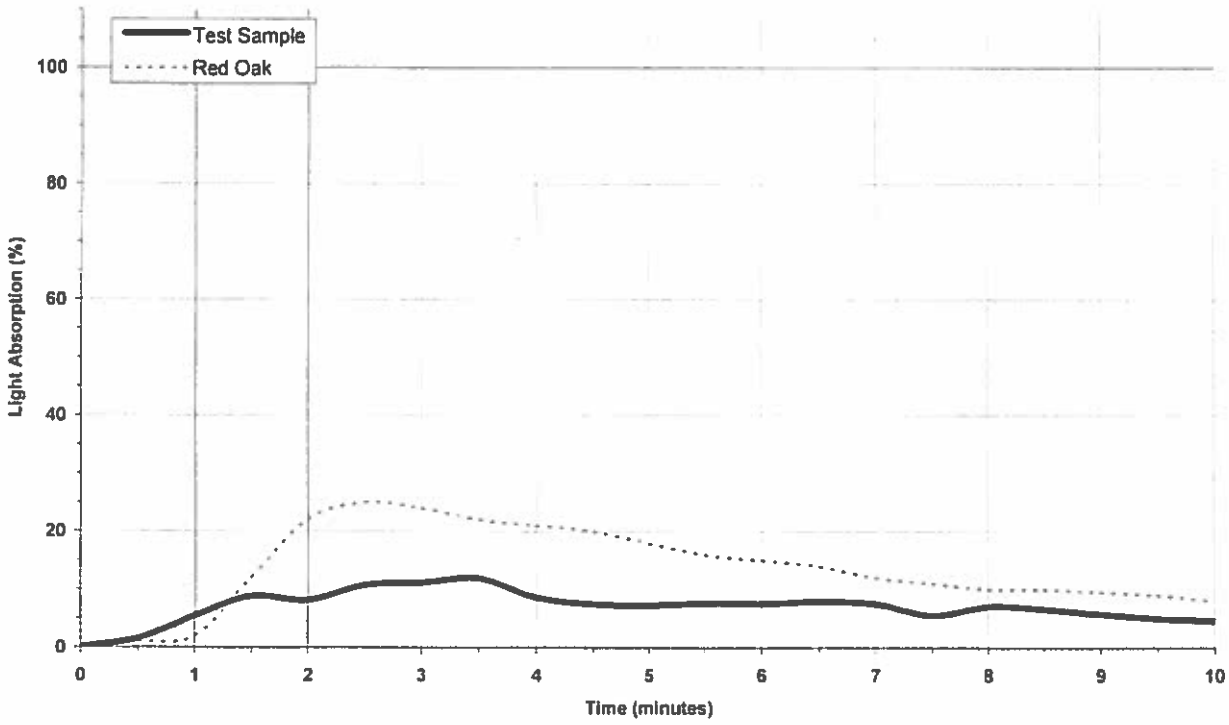


FIGURE 2. Smoke Developed

GRAPHICAL RESULTS: (Cont.)

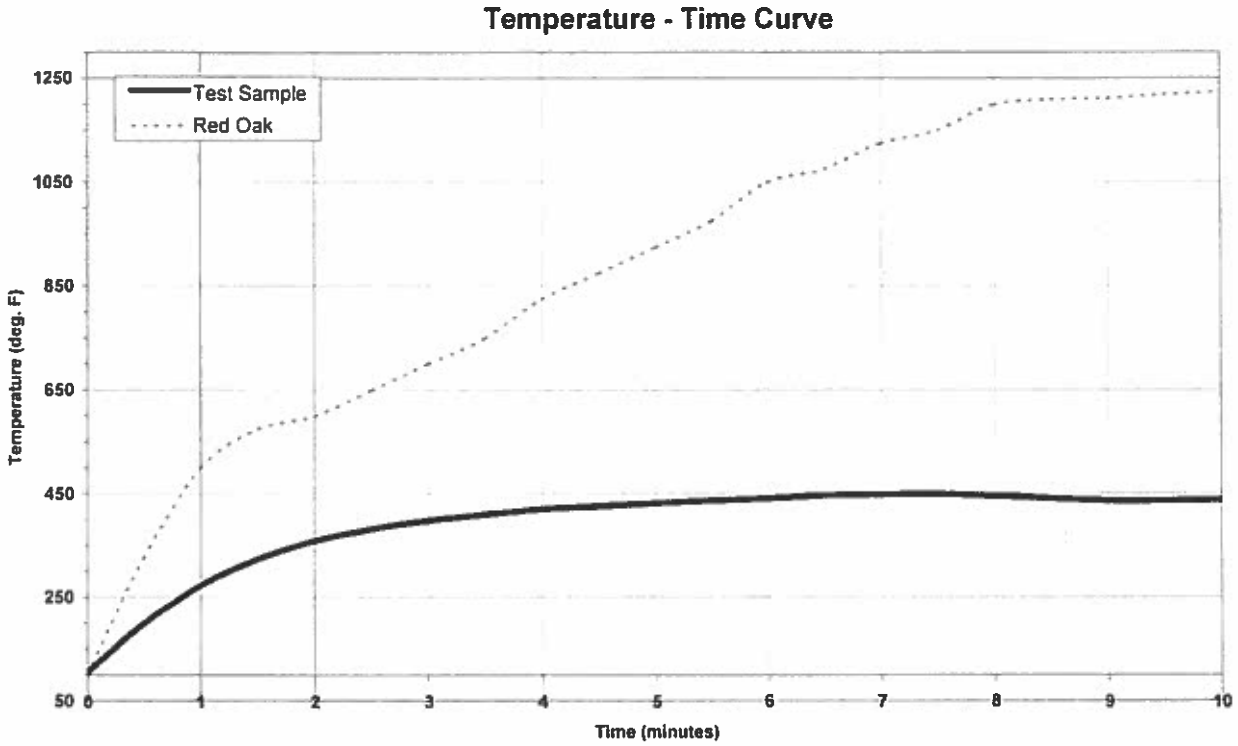
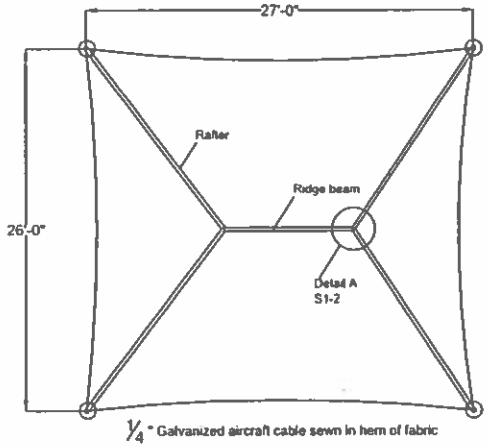


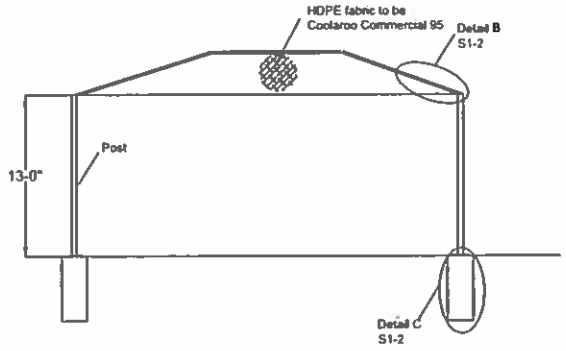
FIGURE 3. Temperature – 24 ft. Air Stream Thermocouple

****

End of Report



PLAN VIEW



MATERIALS LIST	
Post	4" Schedule 40 pipe
Rafter	3" x 11ga Round Tube
Ridge beam	3" x 11ga Round Tube
Ridge/Post beam spigots	2.5" x.188 Round Tube
Rafter bolts	⅜" A307 S/S Bolts

ALAN E. ADAMS
LICENSED
22471
Mar 10 2017
KANSAS
PROFESSIONAL ENGINEER

DESIGN CRITERIA
Designed to conform to IBC 2010
Exposure: C
Wind speed: 115MPH

STEEL
Structural steel shall conform to ASTM A-36
Machine bolts shall confom to ASTM A-307
Pipe columns shall conform to ASTM A-53 Grade B

WELDING
Welding shall be done by AWS D1.1 Structural certified welders.

REINFORCEMENT
Rebar shall conform to ASTM A 615 Grade 60
Clearance from soil shall be a minimum of 3"

SOIL CAPACITY
Allowable bearing pressure 1000psf
Allowable lateral bearing pressure 100psf

FOOTINGS
Square footing can be substituted for round with a min. width equal to diameter measurement.
Concrete F'c = 2500 psi (Min.)
Course agregate - ¾" (Max.)
Slump 4.0" +/- 1"
W/C ratio = .54 (Max.)

FABRIC
HDPE Stentered to reduce shrinkage.
Nominal farbric mass 9.38 to 10.32 oz. sq, yard.

CLEARANCE FROM OTHER STRUCTURES
Canopies shall be at least 6" away from any other structure which may be damaged due to deflection.

General Notes

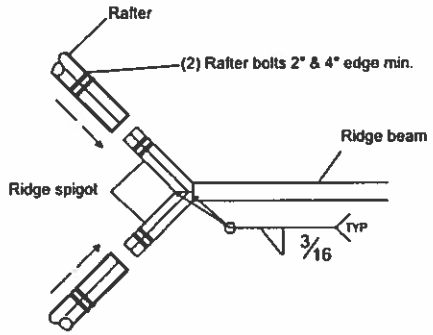
27x26x13 HIP CANOPY
Asbury Children's Center
5400 W. 75th Street
Shawnee Mission, KS 66208

No.	Revision/Issue	Date

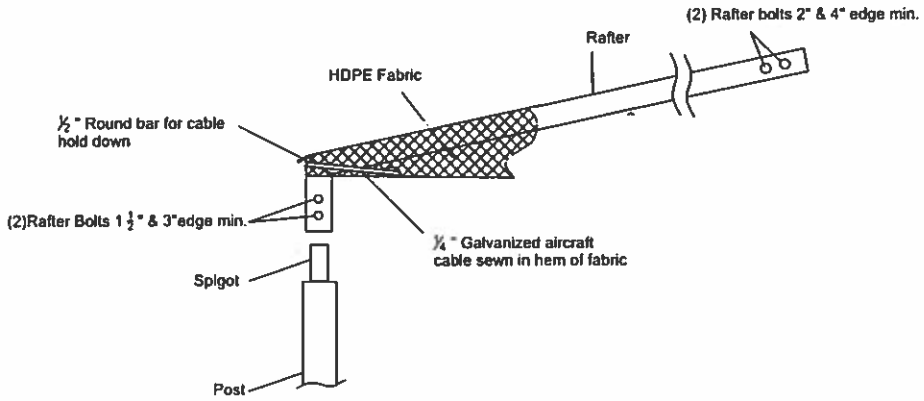
Name and Address
AB CREATIVE

Project name and Address

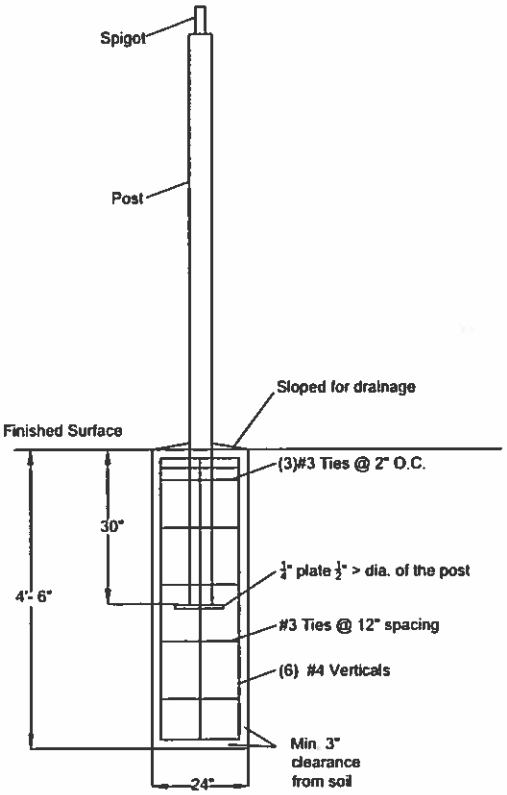
Project | Sheet
Date | S1-1
Scale NTS



Detail A



Detail B



Detail C

NOT FOR CONSTRUCTION

ALEX R. NOVY
LICENSED
22471
Mar 10 2017
KANSAS
PROFESSIONAL ENGINEER

27x26x13 HIP CANOPY
Asbury Children's Center
5400 W. 75th Street
Shawnee Mission, KS 66208

AB CREATIVE

S1-2

STAFF REPORT

TO: Prairie Village Planning Commission
FROM: Chris Brewster, AICP, Gould Evans, Planning Consultant
DATE: April 4, 2017, Planning Commission Meeting

Application:	PC 2017-103
Request:	Temporary Use Permit for ADHD Summer Treatment Program
Property Address:	4801 W. 79th Street
Applicant:	Children's Mercy Hospital
Current Zoning and Land Use:	R-1A Single-Family District- Kansas City Christian School
Surrounding Zoning and Land Use:	**North:** R-1B Single-Family District - Single-Family Dwellings **East:** R-1A Single-Family District - Single-Family Dwellings **South:** R-1A Single-Family District - Single-Family Dwellings **West:** R-1B Single-Family District - Single-Family Dwellings
Legal Description:	Metes & Bounds Abbreviation (28-12-25 E 826.75' OF W 1159' OF N 421.50' NE 1/4 NW 1/4 EX N 30' 7.43 ACRES PVC 624A BOTA #0708-87-TX)
Property Area:	7.44 Acres (55,557 s.f.)
Related Case Files:	PC 2016-108 Temporary Use Permit for ADHD Summer Treatment Program PC 2015-105 Temporary Use Permit for ADHD Summer Treatment Program PC 2014-110 Temporary Use Permit for ADHD Summer Treatment Program PC 2008-08 Amendment to SUP PC 98-07 Original SUP for Private School
Attachments:	Application

General Location Map

Aerial Map

COMMENTS:

Children's Mercy South is proposing to provide an eight-week Summer Treatment Program for approximately 50 children with ADHD. The program is proposed at the Kansas City Christian School from June 12, 2017 through July 28, 2017. The hours of operation will be 7:30 am to 5:30 pm; Monday, Tuesday, Wednesday, and Friday; and 7:30 am to 8:00 pm on Thursday. Staff will train the previous week, June 5th through June 9th. The program will use several classrooms, the lunch room, the gymnasium, and the outdoor playgrounds. The proposed Summer Treatment Program will use the existing building, parking lots, and outdoor areas and there will be no changes made to the property. Therefore, no site plan was required.

The Planning Commission approved the same Summer Treatment Program in 2014, 2015 and 2016. Kansas City Christian School and the City did not receive any complaints about the use.

Since the short-term use is for more than 30 days, it requires Planning Commission approval.

The Planning Commission may approve the temporary use permit provided that the application meets the following:

1. **The applicant shall submit in written form a complete description of the proposed use, including drawings of proposed physical improvements, estimated accumulation of automobiles and persons, hours of operation, length of time requested, and other characteristics and effects on the neighborhood.**

   The applicant has provided a detailed description of the proposed operation, as follows:

   The applicant has submitted a description of the program, floor plans of the area to be used. The applicant stated on the application that the program will be provided from 7:30 am to 5:30 pm; Monday, Tuesday, Wednesday, and Friday; and from 7:30 am to 8:00 pm on Thursday from June 12th until July 28th . Staff training will occur from June 5th through June 9th . There will be approximately 50 children and 27 staff (20 counselors, 2 teachers, and 5 psychologists). There will be no external changes to the facility or grounds so it should have no adverse effects on the neighborhood. The program will use approximately 50 parking spaces for either drop of or day parking. The site is more than adequate to accommodate them. This provides a needed service for the community and is a good use of a facility that would remain unused for the summer.

2. **If approved, a specific time period shall be determined and a short-term permit shall not be operated longer than the period stipulated in the permit.**

   The applicant has requested that the short-term use be approved for the period from June 12, 2017 through July 28, 2017, with staff training June 5 through June 9, and that would be the maximum time of operation that would be permitted.

3. **Upon cessation of the short-term permit, all materials and equipment shall be promptly removed and the property restored to its normal condition. If after giving full consideration to the effect of the requested short-term permit on the neighborhood and the community, the Planning Commission deems the request reasonable, the permit for the short-term use may be approved. Conditions of operations, provision for surety bond, and other reasonable safeguards may be written into the permit. Such permit may be approved in any zoning district.**

   There will be no external changes to the building and grounds; therefore, no adverse effects on the adjacent neighborhood.

RECOMMENDATION:

It is the recommendation of Staff that the Planning Commission approve the temporary use permit for an ADHD Summer Treatment Program at 4801 W. 79th Street subject to the following conditions:

1. That the temporary use permit for the ADHD Summer Treatment Program be approved for a period from June 12, 2017 through July 28, 2017, with staff training June 5 through June 9.
2. That the hours of operation shall be from 7:30 am to 5:30 pm on Monday, Tuesday, Wednesday, and Friday, and 7:30 am to 8:00 pm on Thursday.
3. That the Summer Treatment Program use the existing building, parking, driveways, and playgrounds and will make no external changes to the property.

4. That the applicant properly maintain the exterior area of the property and will leave it in an acceptable condition when the program ends on July 28th, 2017.

TEMPORARY USE PERMIT APPLICATION
City of Prairie Village, Kansas

Date: 3/22/17

Name Childrens Mercy Hospital Summer Treatment Program for ADHD

Organization Children's Mercy Hospital Phone 913-696-5740

Address 5520 College Blvd, Suite 365 City / State / Zip Overland Park, KS 66211

Is the organization (check all that apply):
✓ Non-profit _____ Civic _____ Incorporated
_____ Authorized to do business in the State of Kansas

USE: _____ Sale / activity _____ Trade show _____ Street Fair
_____ Exposition _____ Promotional venture / entertainment

Please give a complete description of proposed use: 7-week summer day treatment program for children with ADHD.

Location: 4801 W 79th St Prairie Village, KS 66208

Attach any descriptive materials such as plans, maps or size dimensions, etc. to better illustrate the proposed use.

Please indicate what types of signs, flags or other devices will be used to attract attention:
None

Hours of Operation: 7:30A-5:30p Mon, Tues, Wed, Fri
7:30A-8:00p Thurs.

Estimated accumulation of automobiles 50 and persons 50 campers 2 teachers 30 counselors 5 psychologists

Other characteristics and effects on neighborhood: _____

Period requested from: June 12 to July 28
Training week for staff June 5-June 9

Submitted by: _____
(signature of applicant)

See reverse for conditions of approval

Amount received _____ Date _____ Rec'd by _____

As outlined in Chapter 19.34.040 (E) of the Prairie Village Municipal Code, the Planning Commission may, upon application by the proponent, issue a Temporary Use Permit for a period of more than thirty days for the use of a specific parcel of land for such temporary uses as charitable, civic, or sales and activities, trade shows, street fairs, expositions, promotional ventures and entertainment, without publication or posted notice, provided the following conditions are met:

1. The applicant shall submit in written form a complete description of the proposed use, including drawings of proposed physical improvements, estimated accumulation of automobiles and persons, hours of operation, length of time requested, and other characteristics and effects on the neighborhood;

2. If approved, a specific time period shall be determined and the Temporary Use Permit shall not be operated longer than the period stipulated in the permit;

3. Upon the cessation of the Temporary Use Permit, all materials and equipment shall be promptly removed and the property restored to its normal condition. If, after giving full consideration to the effect of the requested short-term permit on the neighborhood and the community, the Planning Commission deems the request is reasonable, the permit for Temporary Use may be approved. Conditions of operation, provision for surety bond, and other reasonable safeguards may be written into the permit. Such permit may be approved in any zoning district.

4. If the applicant is not the property owner, a letter shall be supplied to the City from the Owner, and the tenant, if applicable; stating that the activity meets their approval.

Date application approved: _____

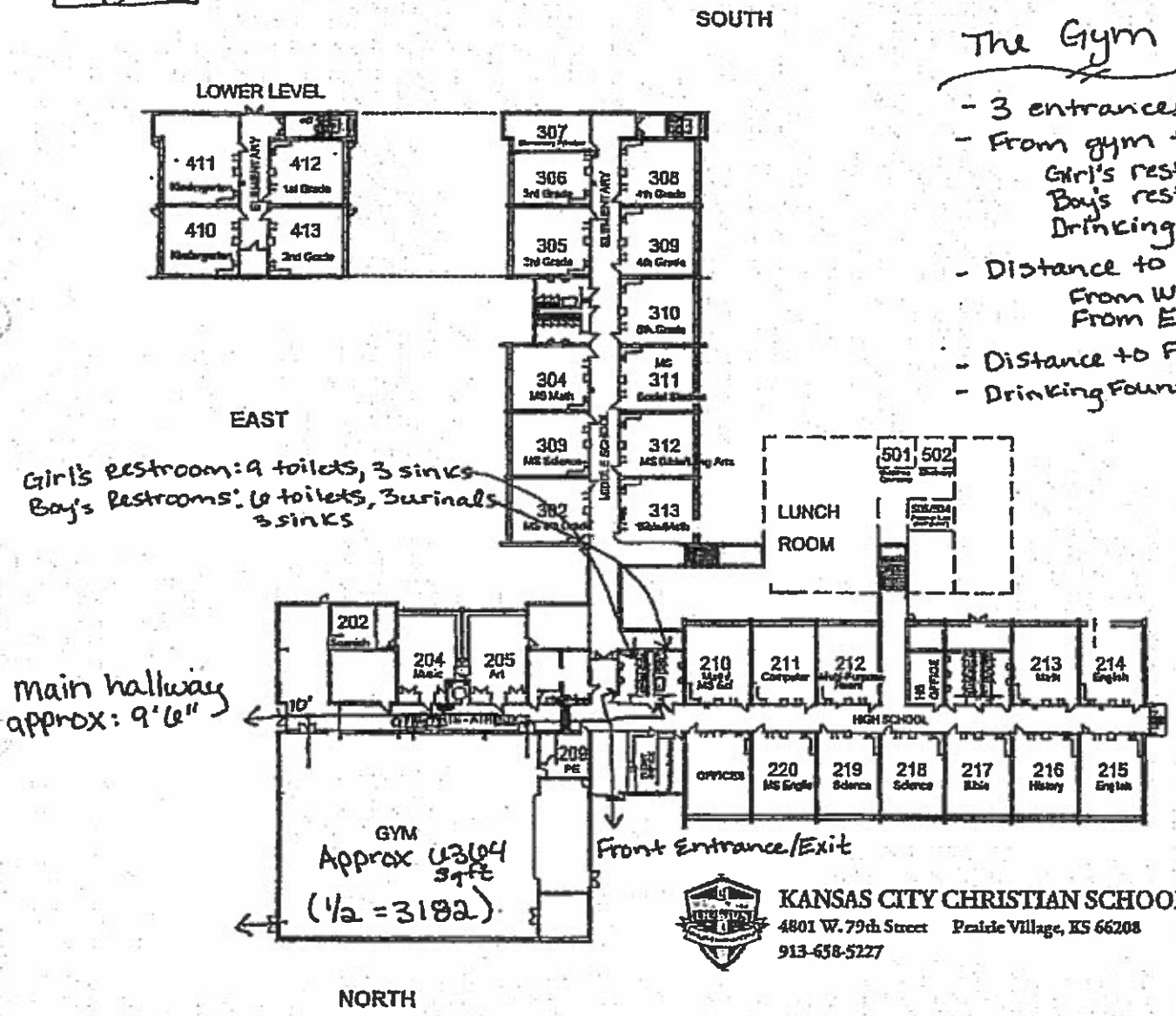
Conditions of approval:

_____

Planning Commission Chair

Date _____

Gym

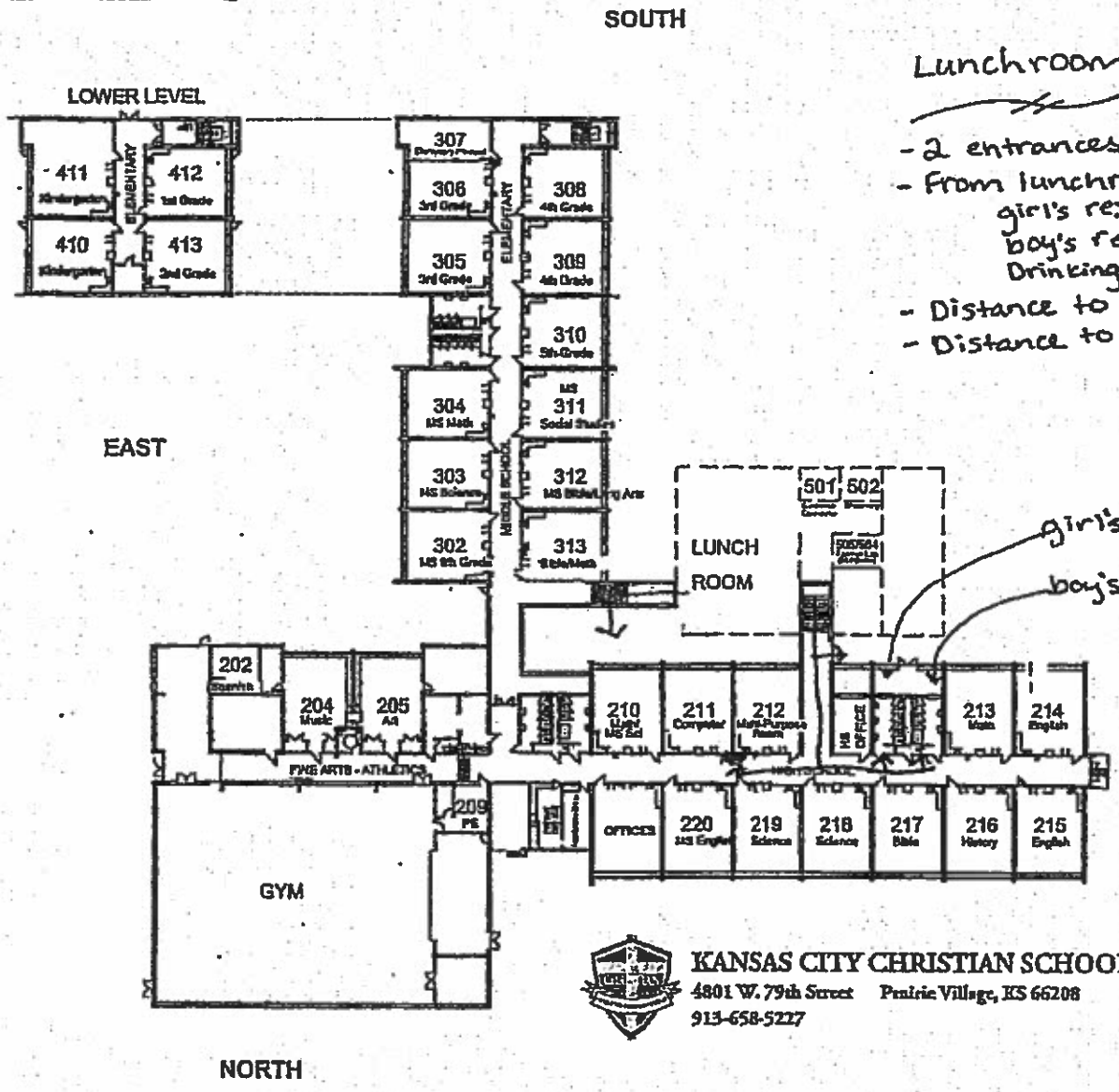


The Gym

- 3 entrances/exits
- From gym to the
  Girl's restroom: 34' 10"
  Boy's restroom: 55' 8"
  Drinking Fountain: 33' 3"
- Distance to E. exit
  From W. Gym entrance: 96'
  From E Gym entrance: 10'
- Distance to Front Entrance: 57'
- Drinking Fountain -

KANSAS CITY CHRISTIAN SCHOOL 2014/2015
4801 W. 79th Street Prairie Village, KS 66208
913-658-5227

Lunch ROOM



Lunchroom

- 2 entrances & exits
- From lunchroom to the
  girl's restroom: 118'
  boy's restroom: 132' 6"
  Drinking fountain: 112'
- Distance to W. exit: 48'
- Distance to E. exit: 110'

girl's restroom: 7 toilets
3 sinks

boy's restroom: 4 toilets
3 urinals
3 sinks

KANSAS CITY CHRISTIAN SCHOOL 2014/2015
4801 W. 79th Street Prairie Village, KS 66208
913-658-5227

WHAT DOES A TYPICAL DAY AT STP LOOK LIKE?

Each group spends two hours daily in classrooms conducted by special educators. These specialists carry out behavior modification programs designed to treat children's problems in a classroom context. The remainder of each day consists of recreational group activities that implement a variety of treatment components.

QUESTIONS?

For more information regarding Children's Mercy Summer Treatment Program please visit www.childrensmercy.org/adhdstp

Children's Mercy

BEST CHILDREN'S HOSPITALS U.S.News 2013-14

FOR MORE INFORMATION CALL:

The Children's Mercy Summer Treatment Program
Phone: (913) 696-3746

CLASSES HELD AT:

Kansas City Christian School
Prairie Village Campus
3601 West 79th Street
Prairie Village, KS 66208

CARLA ALLAN, PhD
Director

TRISTA PEREZ, PhD
Co-Director

SIMONE MOODY, PhD
Co-Director

ChildrensMercy.org/adhdstp

Children's Mercy

Children's Mercy is a special employment/affirmative action employer and is an Equal Opportunity employer.

SUMMER TREATMENT PROGRAM

for children with ADHD

JUNE 1 - JULY 24
8 a.m. - 5 p.m.

Kansas City Christian School
Prairie Village Campus, Prairie Village, Kan.

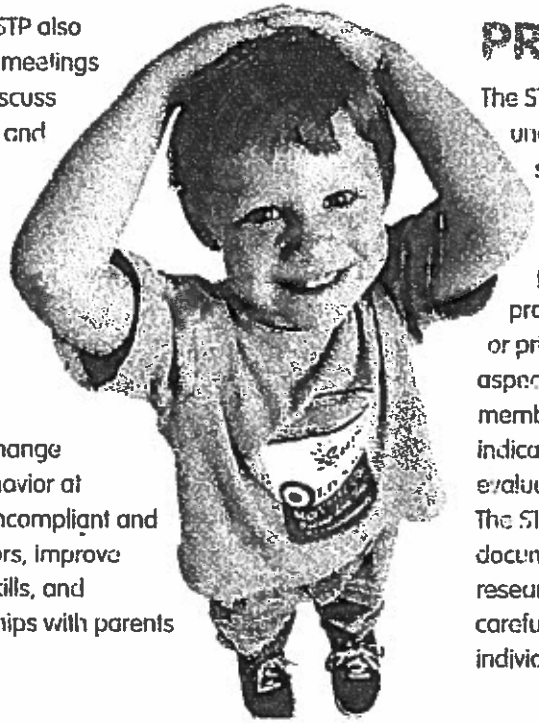
WHAT IS THE SUMMER TREATMENT PROGRAM (STP)?

For Kids

Something more than medication to help improve an ADHD child's behavior. Children's Mercy Summer Treatment Program (STP) is an eight-week, therapeutic day camp designed for children with Attention Deficit Hyperactivity Disorder and related problems. STP offers an award-winning comprehensive treatment that is tailored to each child's behavioral, emotional and learning difficulties. While the Children's Mercy STP is highly structured and emphasizes treatment, most children enjoy the program tremendously, as they would any summer camp.

For Parents

Children's Mercy STP also provides evening meetings with parents to discuss ADHD treatments and give parents the tools to extend the gains from STP to the child's natural environment. The sessions help parents work with their children to change unacceptable behavior at home, reduce noncompliant and disruptive behaviors, improve homework task skills, and improve relationships with parents and siblings.



HOW WILL STP HELP?

STP will help to develop the child's problem-solving and social skills, and help the child gain the social awareness necessary to enable him or her to get along better with other children. The camp will develop the child's abilities to follow through with instructions and complete tasks. STP will also improve the child's learning skills and academic performance as well as the child's self-esteem. STP will help to teach parents how to develop, reinforce, and maintain these positive changes.

WHO IS ELIGIBLE?

Children ages 6-14 are eligible to participate in the program with enrollment limited to those who meet certain criteria. Referrals can be made by school personnel, mental health professionals, physicians or parents.

PROGRAM STAFF

The STP is implemented by highly-trained, undergraduate paraprofessional therapists, students pursuing advanced degrees in psychology, and educational specialists. Doctoral level psychologists supervise the psychosocial and behavioral aspects of the program, while developmental pediatricians and/or primary care physicians supervise the medical aspects of the program. In general, there are five staff members for every group of 15 children. If medically indicated, the Children's Mercy STP staff will also evaluate the effectiveness of the child's medication. The STP uses only treatments that have been well-documented and shown to be effective through research. However, our program staff continues to carefully evaluate treatment effectiveness, both at the individual level and for the program as a whole.

HOW DO I SIGN UP?

To initiate the application and screening process, interested parents or professionals should call Children's Mercy at (913) 696-5748.

STAFF MEMO

TO: Planning Commission
FROM: Chris Brewster, AICP, Gould Evans, Planning Consultant
DATE: April 4, 2017, Planning Commission Meeting

Issue: Interpretation – Solar Panels

Staff has received an application for solar panels on a single-family home, which has raised an interpretation issue. This issue has been encountered by staff in other recent applications, and also impacts past applications that pre-date current staff. Staff would like the Planning Commission to consider staff's interpretation to provide direction for future applications.

Current Regulations

Section 19.50 of the Prairie Village Zoning Ordinance addresses alternative energy systems, and expresses the intent to encourage the use of alternative energy systems and that "the use of alternative energy systems is in the general welfare of its residents." [19.50.005]

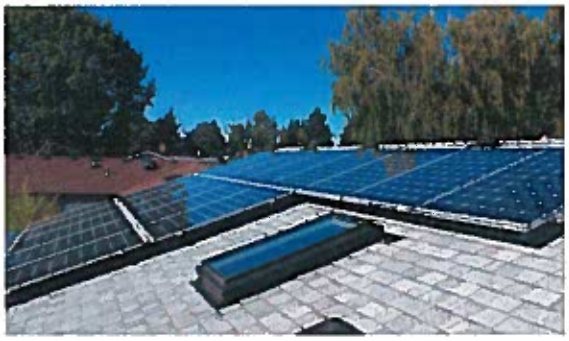
This section of the ordinance also establishes compatibility standards to protect neighborhood character, that if met are intended to encourage the appropriate design, location and placement of solar energy systems, and allow administrative permits for all applications that meet the standards. Specifically, the ordinance establishes a preference for the following:

1. Panels on sloped roofs should be concealed from view at the street level.
2. Panels on sloped roofs should be either directly mounted on the roof or integrated into the roof so they form part of the roof itself.

The elements of directly mounted and integrated are not adequately defined.

General research of typical industry applications reveals the following differing degrees of what this standard could be getting at:

What the ordinance says	Example
1. Rack mounted; Projects off roof ☒ not allowed	

2. Roof mounted – Directly on roof but with low-profile, and rack not visible, and does not "project" off roof [??] Not allowed, OR only PC reviews with site plan, OR allowed as directly mounted with limitations.	
3. Roof mounted – directly on roof (fasteners but not on a rack) ☑Permitted	
4. Integrated (panels integrated into the roof structure but surface and appearance is different than roof tiles) ☑Permitted	
5. Integrated / "stealth" (panels disguised as roof tiles, and/or roof tile is the solar panel) ☑ Permitted	

Types 3, 4 and 5 are clearly enabled by the regulations. Type 1 is clearly prohibited. Type 2 is the most common application of solar panels. However one particular section of the standards has competing or conflicting interpretations.

19.50.010 D.. Compatibility

1. *Any solar energy system incorporated into residential facility shall be integrated into the basic form and main structure of the residence. All active systems shall be roof mounted with the collector panels integrated into the roof either directly mounted against the roof or integrated into the roof so that they form pa part of the roof itself. Mounting arrangements, which allow the collectors to project above the roof line, such as "standoff" or "rack" mounting arrangements are not allowed.*

The Type 2 installation above appears to be consistent with many aspects of the above – it is "directly mounted" on the roof since it is flush with the roof plane and the mounting mechanism is not visible. However it may also conflict with a literal interpretation since there technically is a "rack" and it does slightly "project above the roof." The difficulty with this literal interpretation is that Types 3 and 4 also share these same attributes, even though they are clearly enabled. Further, using the literal interpretation would seem to negate some of the other compatibility standards that deal with the appearance and screening of mounting mechanisms (i.e. all panels need to be mounted with some type of system). The ordinance assumes this and has performance criteria dealing with the visibility and profile of the mounting mechanism; this would seem to indicate that Type 2 should be permitted. Additionally, staff was made aware of several applications of Type 2 installations that were approved at the staff level over the past several years.

Type 2 installations are also the most common installation, and industry best practices suggest that although these panels could be mounted flush on the roof surface (similar to the Type 3 example), this is not recommended. To function at peak efficiency, these panels need small amounts of ventilation below them and if not the panels become quite hot and can damage surfaces below.

With these considerations, and reading the ordinance as a whole – particularly with the intent of the ordinance, staff suggests that a proper interpretation is that Type 2 installations should be allowed through an administrative permit provided the following are met:

1. It is located on a non-street facing roof plane. [This meets the 19.15.010D.2 performance criteria of "concealed from view at street level"]
2. The mounting brackets either are concealed under the framing or are otherwise colored consistent with the roof structure so as not to be visible from adjacent property. [this reinforces the prohibiting of "standoff or "rack" mounting]
3. The panels be mounted along the same plan and parallel with the roof pitch. [this reinforces the prohibiting of "standoff or "rack" mounting]
4. The entire system not rise above the roof plane more than 5" [this would be consistent with the profile of other "directly mounted" applications which are allowed, it would allow the best industry practice for efficient performance with some ventilation, and also reinforces the prohibition of "standoff" or "rack" mounting]

Action

If the Planning Commission concurs with this interpretation, no action is necessary other than to give staff direction by consensus vote. Staff believes this is a reasonable interpretation of the current ordinance as written, even though there are some literal interpretations that suggest conflicts. Further, the City is currently embarking on an overall review of the Zoning Ordinance intended to clear up the ordinance and potential interpretation issues such as this. As part of that practice staff can more directly incorporate any amendments or rewording that can best reflect the intent of the ordinance against evolving and current industry "best practices." If the Planning Commission does not agree with this interpretation, the ordinance does provide a path for each specific application to come before the Commission for review and potential approval.