

00:29:08 Laura Pederzani: Laura Pederzani- North Topeka West

00:29:23 Michael Bell: Mike Bell, CAC at-large present.

00:29:54 Michael Bell: Can barely hear Cheryl.

00:29:56 LATOYA BURNETT: Please enter name and neighborhood in chat for attendance.  
Thanks

00:31:06 ShaMecha Simms: ShaMecha Simms -- Historic Old Town NIA

00:39:28 Michael Bell: Having problems hearing members.

00:41:57 ShaMecha Simms: Hey LaToya...could we get a copy of what he's presenting at your convenience?

00:42:14 LATOYA BURNETT: Sorry Michael. I tested the speakers prior to the meeting and all of the mics are working and the volume is up as loud as we can comfortably manage it. I will do what I can, but it may be that some speakers voices project a little better than others.

00:42:52 Michael Bell: OK. I know you all try. :-)

00:43:17 LATOYA BURNETT: Yes, ShaMecha. All handouts will be uploaded to the website and linked with the recorded meeting.

00:43:56 Michael Bell: LaToya, is the chat included in the recorded meetings?

00:44:04 ShaMecha Simms: Preciate it! I apologize if that was a redundant request. 😊

00:45:22 LATOYA BURNETT: Yes, the chat is usually saved with the recorded meetings.

00:45:34 Michael Bell: OK.

01:04:24 LATOYA BURNETT: I have checked with City 4 staff and the wireless mic is missing. I will find out if they have plans to replace it.

01:05:06 ShaMecha Simms: 🙌

01:25:34 Michael Bell: ShaMecha, would love to follow up with you on your question/concerns.

01:25:58 ShaMecha Simms: I appreciate that Michael! I'll e-mail you!

01:28:22 Michael Bell: OK.

01:38:27 Michael Bell: So I don't get to ask my question?

01:57:45 LATOYA BURNETT: While those in the room are working on work groups, does anyone have any questions about the work groups or anything else that you would like to discuss in the next 10 minutes with me?

01:57:58 Michael Bell: Affordable Housing, Food Desert/Insecurity Work Group: Our discussions so far have been related to research and policy recommendations including programs,

guidelines/rules and regulations and funding, including finding ways that we all can be innovative with our approaches.

01:59:12 Michael Bell: Is Jill Rice in attendance at the meeting?

01:59:24 LATOYA BURNETT: Yes. She is.

02:00:39 LATOYA BURNETT: Michael is there anything that you feel your group needs assistance with? How are meetings going?

02:04:37 LATOYA BURNETT: As the committees continue working, we will assist as needed with connecting you with resources (City, County, local institutions, etc. if needed)

02:06:52 ShaMecha Simms: Kinda of a personal question for my Zoom Crew...what is the likelihood that you'll resume attending CAC meetings in person in the next 3-6 months?

02:07:35 LATOYA BURNETT: 1 minutes left for discussion

02:07:36 ShaMecha Simms: I ask because I'm wondering if we may need a work around for times like this.

It's much more convenient for me to Zoom on a Wednesday night.

02:08:27 Michael Bell: I don't know. I'm on physical disability. The Zoom option makes it easier for me to attend meetings.

02:09:02 ShaMecha Simms: I'll give it some further thought. Zooming is just way more convenient.

02:09:18 Michael Bell: I agree. :-)

02:12:26 ShaMecha Simms: Wait! I have a comment about the meeting.

02:13:41 ShaMecha Simms: Oh. Can someone please let the in-person attendees know that maybe we could give Zoomers a chance to ask questions first. It seems like in-person attendees can take more time than Zoomers.

02:14:03 ShaMecha Simms: I know that's not intentional. It's just human nature.

02:14:35 Michael Bell: Agree. And remind those attending in person to speak up.

02:15:06 LATOYA BURNETT: Michael - you are correct. There are close similarities to those programs with some improvements per the recommendations

02:16:07 ShaMecha Simms: Okay. Well thank you LaToya and Monique for your hard work. Enjoy your evening!

02:16:18 LATOYA BURNETT: We will provide much more detail at the workshop and you can always contact me with questions. Good night everyone!

02:16:21 ShaMecha Simms: Night everybody!



## 2022 Tentative KAB Calendar

January 11	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m.-- Perkins Restaurant &amp; Bakery, 1720 SW Wanamaker</b> Topic will be: New 2022 calendar
February 5	<b>Household Hazardous Waste Facility, 131 NE 46<sup>th</sup> 9 a.m. – noon.</b> The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
February 8	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m.</b> Topic will be: Bill Sutton, Recycling
March 1-May 31	<b>Great American Cleanup</b>
March 1-April 30	<b>Campus Pride Winner's Circle</b>
March 5	<b>Household Hazardous Waste Facility, 131 NE 46<sup>th</sup> 9 a.m. – noon.</b> The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
March 8	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant &amp; Bakery, 1720 SW Wanamaker</b> Topic will be: Traci Podlana, Ted Ensley Gardens
April 2	<b>Household Hazardous Waste Facility, 131 NE 46<sup>th</sup> 9 a.m. – noon.</b> The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
April 12	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant &amp; Bakery, 1720 SW Wanamaker</b> Topic will be: Ken Carlat, History of Tulips
April 16	<b>Free Yard Waste Disposal, 8:00am – 12:00 p.m.-Garick Yard Waste Facility, I-70 and Mac Vicar</b>
April 17	<b>Easter</b>
April 20	<b>Friends of Reinisch work day (volunteers needed)</b>
April 23	<b>Get Down and Get Dirty—10 am – 12 pm (volunteers needed)</b>
April 27	<b>Friends of Reinisch work day (volunteers needed)</b>
April 29	<b>Arbor Day</b>
May 4	<b>Friends of Reinisch work day (volunteers needed)</b>
May 7	<b>Household Hazardous Waste Facility, 131 NE 46<sup>th</sup> 9 a.m. – noon.</b> The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
May 7	<b>World Naked Gardening Day at Ted Ensley Gardens 9 am – noon (volunteers needed—no we will not be naked)</b>
May 10	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant &amp; Bakery, 1720 SW Wanamaker</b> Topic will be: Donna Coffland: growing roses
May 11	<b>Friends of Reinisch work day (volunteers needed)</b>
May 18	<b>Friends of Reinisch work day (volunteers needed)</b>
May 21	<b>Topeka Cemetery 9 a.m. to 12:00 p.m. lunch afterwards-mowing/cleaning stones (volunteers needed)</b>
May 25	<b>Friends of Reinisch work day (volunteers needed)</b>
May 30	<b>Memorial Day</b>
June 1	<b>Friends of Reinisch work day (volunteers needed)</b>
June 4	<b>Waterfront Warriors 9-11 a.m. at Central Park (volunteers needed)</b>
June 4	<b>Household Hazardous Waste Facility, 131 NE 46<sup>th</sup> 9 a.m. – noon.</b> The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
June 8	<b>Friends of Reinisch work day (volunteers needed)</b>
June 14	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m. Ward Meade, 124 NW Fillmore</b> Topic will be: Tour Ward Meade Gardens: National Conifer Reference Garden, American Hosta Society National Display Garden and American Daylily Society National Display Garden.
June 15	<b>Friends of Reinisch work day (volunteers needed)</b>
June 19	<b>Father's Day</b>
June 22	<b>Friends of Reinisch work day (volunteers needed)</b>
June 18	<b>Free Landfill Day 7:00 A.M. – 12:00 p.m. Rolling Meadows Landfill-1 load per household</b>
June 25	<b>The KAB X-Treme Team will cleanup extremely littered areas 9-11 a.m. (volunteers needed)</b>
June 29	<b>Friends of Reinisch work day (volunteers needed)</b>
July 6	<b>Friends of Reinisch work day (volunteers needed)</b>
July 9	<b>Tentative date for Community Appearance Index</b>
July 12	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant &amp; Bakery, 1720 SW Wanamaker</b> Topic will be: Carol Bragdon, Herbs
July 13	<b>Friends of Reinisch work day (volunteers needed)</b>
July 16	<b>Free yard waste disposal-Forestry Products Recycling-3431 SE 21-8 a.m. – 5 p.m.</b>
July 20	<b>Friends of Reinisch work day (volunteers needed)</b>
July 27	<b>Friends of Reinisch work day (volunteers needed)</b>
July 30	<b>The KAB X-Treme Team will cleanup extremely littered areas 9-11 a.m. (volunteers needed)</b>
August 3	<b>Friends of Reinisch work day (volunteers needed)</b>
August 6	<b>Household Hazardous Waste Facility, 131 NE 46<sup>th</sup> 9 a.m. – noon.</b> The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
August 9	<b>KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant &amp; Bakery, 1720 SW Wanamaker</b>

August 10	Topic will be: Planning 2023—Start, Stop, Keep
August 17	Friends of Reinisch work day (volunteers needed)
August 24	Friends of Reinisch work day (volunteers needed)
August 27	Friends of Reinisch work day (volunteers needed)
August 31	The KAB X-Treme Team will cleanup extremely littered areas 9-11 a.m. (volunteers needed)
September 3	Friends of Reinisch work day (volunteers needed)
September 5	Household Hazardous Waste Facility, 131 NE 46 <sup>th</sup> 9 a.m. – noon.
September 7	The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
September 13	Labor Day
September 14	Friends of Reinisch work day (volunteers needed)
September 21	Friends of Reinisch work day (volunteers needed)
September 24	Friends of Reinisch work day (volunteers needed)
September 28	The KAB X-Treme Team will cleanup extremely littered areas 9-11 a.m. (volunteers needed)
October 1	Friends of Reinisch work day (volunteers needed)
October 11	Household Hazardous Waste Facility, 131 NE 46 <sup>th</sup> 9 a.m. – noon.
October 29	The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
November 5	KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant & Bakery, 1720 SW Wanamaker
November 8	Topic will be: Randy Sandingwater, Urban Rez
November 15	Topic will be: Elections for 2023. Cheryl Wright Kunard, ID Fraud and Other Consumer Issues
December 3	Zombie Litter Blast-costumed litter cleanup on Wanamaker-11 a.m. – 1 p.m.(volunteers needed)
December 13	Household Hazardous Waste Facility, 131 NE 46 <sup>th</sup> 9 a.m. – noon.
	The HHW is also open M-Th 7 am – 5 pm and Friday from 7 am – 3 pm
	KAB Monthly Meeting, 12: 00 – 1:00 p.m. Perkins Restaurant & Bakery, 1720 SW Wanamaker
	Topic will be: Christmas Social

If you desire any further information on the events listed above, please contact Keep America Beautiful-Topeka/Shawnee County at 785-224-0446 –or- email: [kab@kabtopsh.org](mailto:kab@kabtopsh.org) Check out our new website at [www.kabtopsh.org](http://www.kabtopsh.org)



*In Executive Partnership with Shawnee County*

*KEEP AMERICA BEAUTIFUL-  
TOPEKA/SHAWNEE COUNTY  
and  
GARICK YARD WASTE FACILITY*

*are excited to announce a  
\*\*\*free yard waste day\*\*\*  
on Saturday, April 16, 2022*

*8:00 a.m. to Noon*

*Garick Yard Waste Facility*

*I-70 and MacVicar*

*Topeka, KS*

*KEEP AMERICA BEAUTIFUL-  
TOPEKA/SHAWNEE COUNTY  
and  
ROLLING MEADOWS LANDFILL*

*are excited to announce a  
\*\*\*free landfill day\*\*\*  
(one load per household)  
on Saturday, June 18, 2022*

*7:00 a.m. to Noon  
Rolling Meadows Landfill*

*7351 NW Highway 75  
Topeka, KS 66618*

# 2022 Get Down and Get Dirty

KEEP AMERICA BEAUTIFUL  
TOPEKA/SHAWNEE COUNTY  
WASTE MANAGEMENT DISTRICT

With Keep America Beautiful – Topeka/Shawnee County

**HUNDREDS WILL COME!!!**

Friends, schools, clubs, civic groups, corporations,  
citizens of Topeka and Shawnee County ...

**DON'T MISS THE OPPORTUNITY**

the opportunity to be a part of the this community Earth Day cleanup.

**Join us Saturday, April 23, 2022 from 10 a.m. – noon.**

Free lunch, free t-shirts\* and prizes, prizes, prizes provided to volunteers at Noon.

For more information: [kab@kabtopsh.org](mailto:kab@kabtopsh.org) – or - call 785.224.0446

(\*while supplies last.)

**TEAMS ARE FORMING NOW!**

*Get Down and Get Dirty*

PEPSI  
WMM WASTE MANAGEMENT  
FritoLay Good fun!  
Walmart  
TARGET  
CoreFirst Bank & Trust  
Strathman Sales  
TOPEKA AUDUBON SOCIETY  
Edward Jones  
BIMBO BakeriesUSA  
Community Resources Council  
Davita  
Walmart  
BRB CONTRACTORS, INC.  
MARS WRIGLEY  
FREE LUNCH  
FREE T-SHIRTS  
DOOR PRIZES  
United Healthcare Community Plan  
my 107.7  
Majic 107.7 Today's Hits Yesterday's Favorites  
STOP TRASHING OUR TOWN

In Executive Partnership with Shawnee County







## **Shawnee County Parks + Recreation Strategic Plan 2022 - 2026**

Shawnee County Parks + Recreation is a combined city and county park system that was developed to service the needs of the City of Topeka and Shawnee County residents in 2012. A Department-wide Master Plan was adopted in 2014. The guiding principles and objectives that developed this Master Plan include:

- Sustainably grow the best practices and quality services of the Department.
- Serve the relevant park and recreational needs of the City of Topeka and Shawnee County residents who help support the Shawnee County Parks + Recreation Department in meeting those needs.
- Further position the county as a regional and statewide destination, while protecting the accessibility of city and county facilities for residents.
- Support the county to qualify for enhanced partnerships and funding opportunities in both the public and private sectors.
- Leave a positive legacy for current and future generations of Shawnee County.

In 2018, Shawnee County Parks + Recreation earned accreditation by the Council on Accreditation of Park and Recreation Agencies, a distinction held by fewer than 2 percent of park and recreation agencies nationally. CAPRA accreditation is a valuable measure of an agency's overall operation, management, and service to the community. It demonstrates that an agency complies with national standards of excellence and is delivering the best services to the community.

The following broad-based strategic planning tool should be used in conjunction with the Master Plan to help guide the future of Shawnee County parks, facilities, and recreation programs and provide direction to the Department for redevelopment, growth and enhancement of its park and open-space system over the next five years.

**Vision**

To provide an innovative parks and recreation system that consistently exceeds community expectations.

**Mission Statement**

Inspire active and healthy lifestyles through a diverse system of parks, facilities, programs and people.

**Core Values**

- **Take Initiative**  
Be proactive, motivate each other and adapt to changing situations.
- **Be Passionate**  
Care about your work and take pride in what you do.
- **Have Fun**  
Create a positive workspace and build strong relationships.
- **Value Teamwork**  
Approach problems with a "we over me" mentality.
- **Foster Growth**  
Learn and evolve personally, professionally, as a team and as an organization.
- **Act with Integrity**  
Be honest, transparent and committed to doing what is best for our community and our department.

### **Goal One - Parks, Greenspace and Natural Areas**

Parklands should serve as a source of civic pride that supports a healthy and active lifestyle for people of all ages. The goal of SCP + R is to maintain a diverse and balanced park and open space system, including trails, natural areas, and neighborhood, community and regional parks, to benefit all residents of Shawnee County.

#### **Strategies**

1. In existing parks, upgrade aging amenities, add new improvements, and provide quality maintenance based on community expectations, departmental maintenance standards, national standards, budget parameters, and available park capital improvement funding.
2. Where possible, connect trail systems to community and regional parks to support a network of trails throughout the county. Continue to work toward the established goal of 150 miles of trails throughout Topeka and Shawnee County.
3. Draw on community input and national best practices to create master plans for Gage and Family Parks. Both parks are considered regional parks and have a significant impact on the quality of life for Shawnee County residents.
4. Evaluate existing park inventory to determine each parcel's impact on the surrounding neighborhood and the community as a whole.
5. Protect and expand natural areas through acquisition, restoration, and/or conservation.
6. Develop and implement a preventative maintenance program and procedures to prolong the life of facilities, equipment, and other assets.

### **Goal Two - Indoor and Outdoor Recreation Facilities**

Provide accessible indoor and outdoor recreation spaces for people of all income levels, ethnicity, gender, ability, or age. Update existing facilities and, where possible, add new facilities in underserved areas of the county to create a balance of recreational opportunities for all residents.

#### **Strategies**

1. Continue to improve existing recreation centers to address community needs in the areas of health and wellness, youth services, arts, adaptive recreation, after-school programs, and youth sports opportunities.

2. Update the amenities of Lake Shawnee campground to offer a higher quality experience.
3. Develop an ADA Transition Plan for all SCP+R facilities to ensure access for everyone.

### **Goal Three - Programs and Services**

Develop and maintain a variety of quality programs and services for all ages, abilities, and interests. Continue to offer existing programs while working to increase offerings in programs areas such as adaptive recreation, senior programs, and health and wellness.

#### **Strategies**

1. Ensure that all existing and new programs are responsive to changing demographics and support accreditation standards.
2. Work to improve the process of evaluating programs, facilities, and services for operational efficiency and effectiveness.
3. Update a marketing strategy to increase resident awareness of departmental programs and services and overall appreciation for the value of Parks + Recreation services.
4. Create partnerships and collaborations with other agencies, organizations, or individuals using processes that are transparent and easy to follow.
5. Determine existing cost recovery levels by determining the direct and indirect cost of providing services to the community.

### **Goal Four – Staff Training and Development**

Hire, train and develop a dynamic, professional staff that exemplify our core values: service, integrity, vision and teamwork.

#### **Strategies**

1. Create an environment that encourages staff to share innovative ideas and recognize each other's contributions
2. Establish internal customer service standards and establish methods to monitor and track customer satisfaction.

3. Develop updated performance measures to help the Department move from an effort-based culture to an outcome-based culture.
4. Access staffing levels based on current and future workload, national standards and community expectations.
5. Reinforce the Department's commitment to public safety at parks and facilities through Park Police visibility and public interaction.

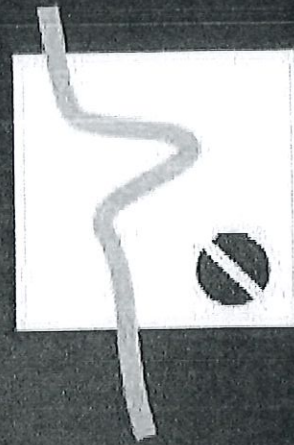
### **Goal Five – Fiscal Responsibly**

Seek a balance between tax and earned-income support that meets the expectations of the community, department, and county leadership. Employ best practices aimed at keeping the Department financially sustainable. Seek adequate funding to meet the community's expectations for providing parks, recreation facilities, and program services that make the county a desirable place to live, work, and visit.

### **Strategies**

1. Work within the annually adopted budget and comply with recognized policies and procedures.
2. Establish principles and processes to ensure the budget is fully utilized throughout the fiscal year in a planned, thorough and thoughtful manner.
3. Utilizing input from Shawnee County Residents and the Shawnee County Board of County Commissioners create an acceptable amount of tax-dollar support to maintain a city/county system of parks, recreation facilities, and programs.
4. Follow the adopted pricing plan and policy designed to help offset operational and capital costs.

Building Pathology and Rehabilitation

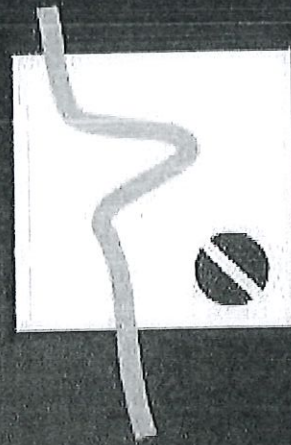


Aníbal Costa  
João Miranda Guedes  
Humberto Varum *Editors*

# Structural Rehabilitation of Old Buildings


 Springer

Building Pathology and Rehabilitation

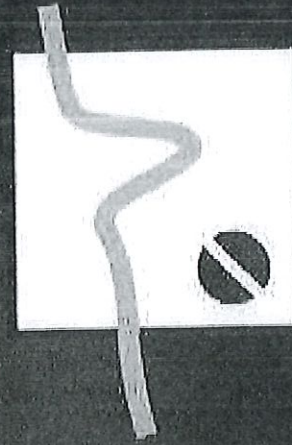


J. M. P. Q. Delgado *Editor*

# Drying and Wetting of Building Materials and Components

 Springer

Building Pathology and Rehabilitation



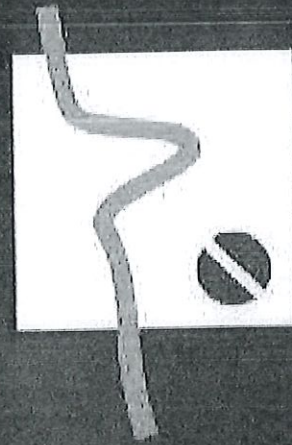
João M.P.Q. Delgado *Editor*

# Recent Developments in Building Diagnosis Techniques

 Springer



Building Pathology and Rehabilitation

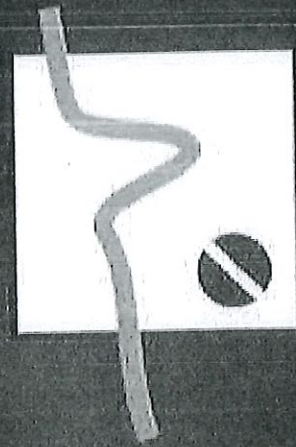


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# Strengthening and Retrofitting of Existing Structures

 Springer

Building Pathology and Rehabilitation

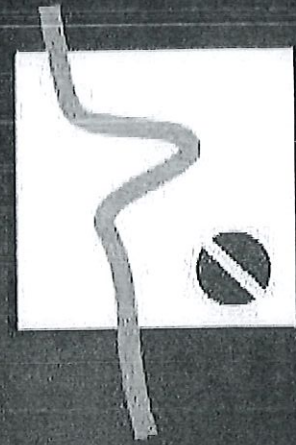


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# Building Pathology, Durability and Service Life

 Springer

Building Pathology and Rehabilitation



João M. P. Q. Delgado *Editor*

# Efficient and Suitable Construction

 Springer



PICTURES  
of HOUSES  
with WATER  
DAMAGE

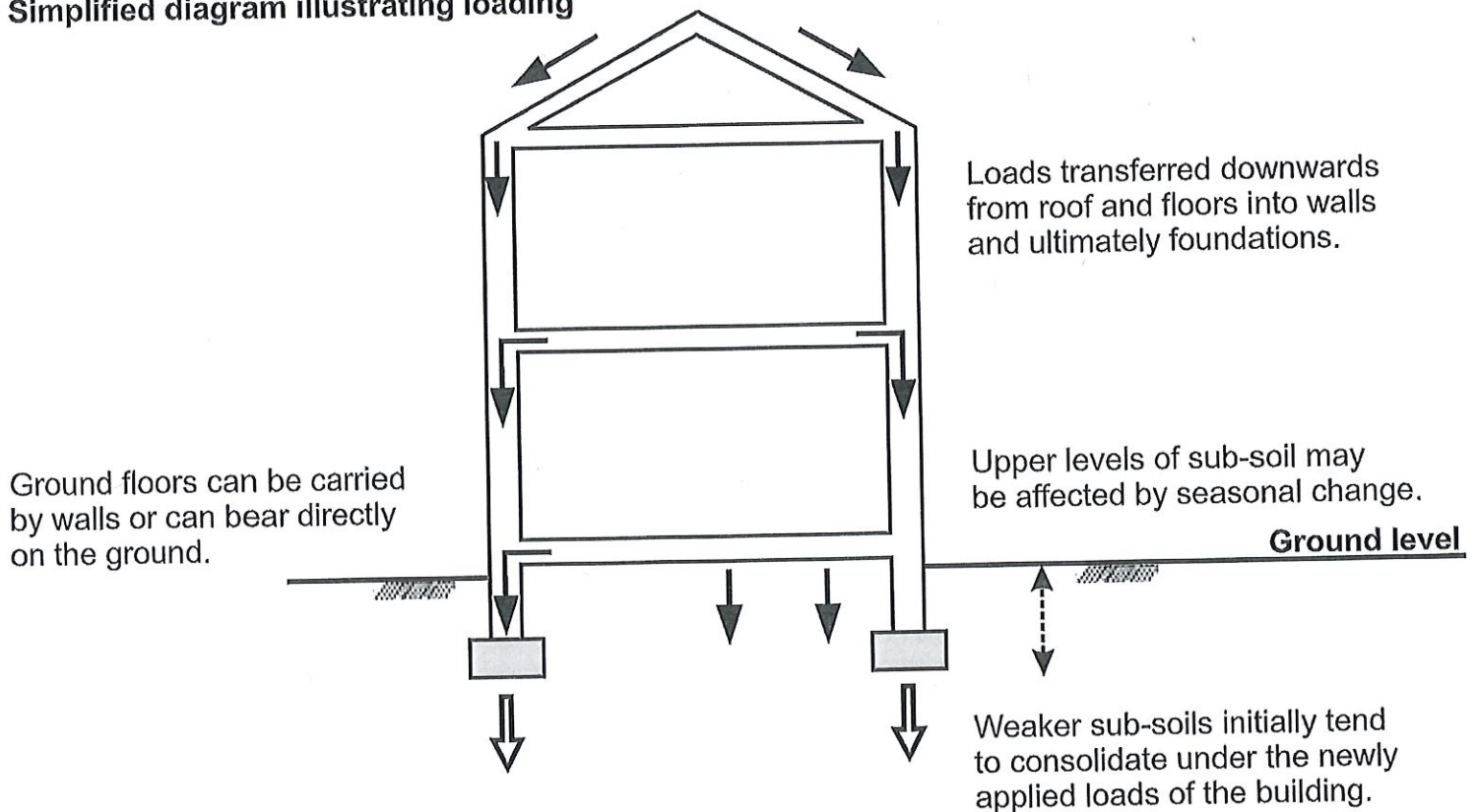
Michael  
Hemmingson



All buildings move. In the majority of cases this will be for quite acceptable reasons and the amount of movement will not adversely affect the building's performance.

Initially, when a building is constructed, movement downwards will be caused by the new loads imposed on the sub-soil beneath. Unless that sub-soil is particularly dense and strong (eg a rock such as granite), a newly constructed building will suffer from initial settlement as the sub-soil beneath is consolidated. Normally, the downward movement of the sub-soil and any resultant cracking of the building are both of a minor nature. With non-cohesive granular sub-soils, such as sand, this initial settlement occurs quickly and has often ceased by the time the construction has been completed. However, in cohesive clay sub-soils, settlement may occur over quite a long period, perhaps lasting 20 years or more from construction until the sub-soil is fully consolidated.

### Simplified diagram illustrating loading

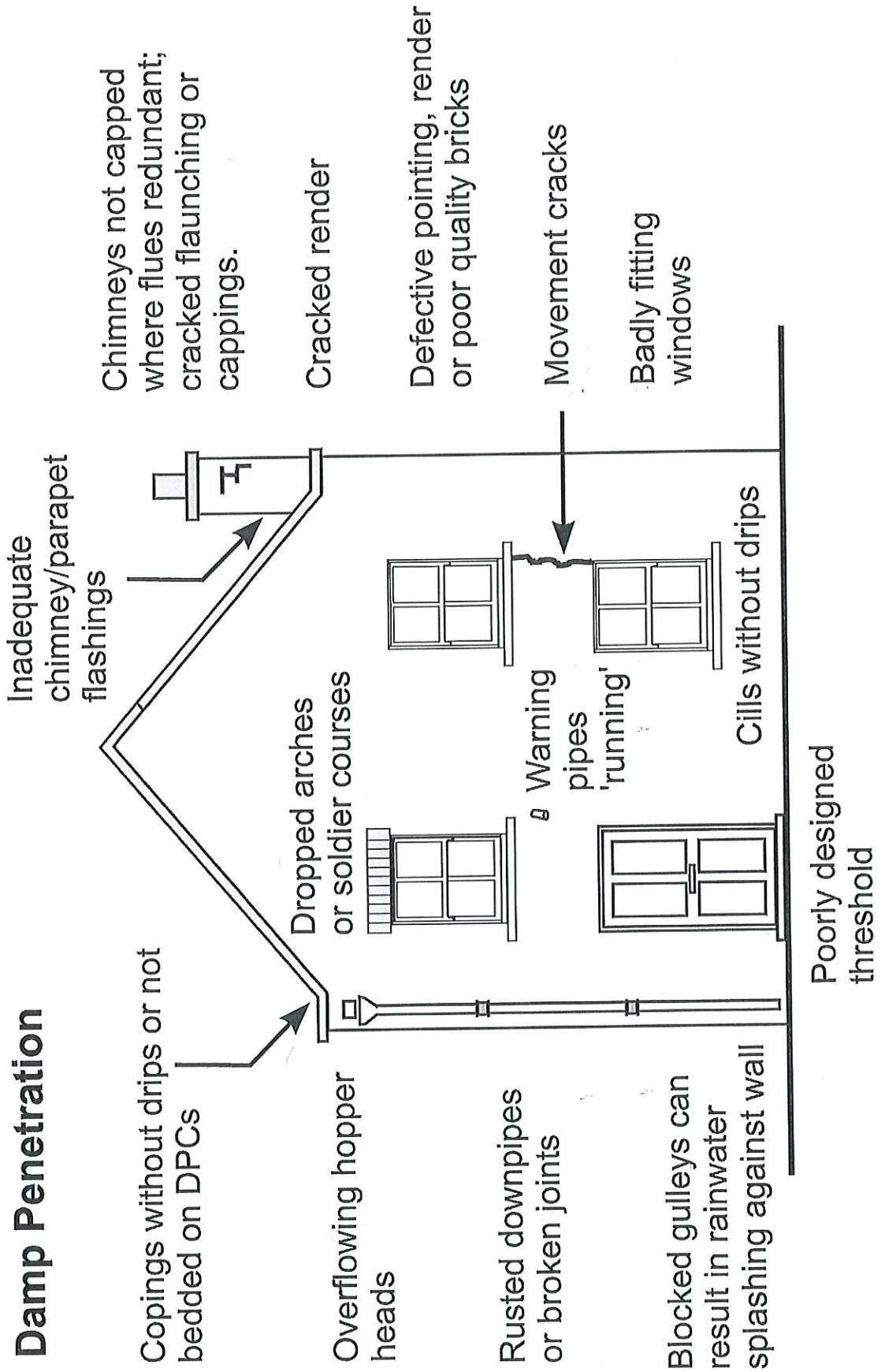


Buildings are also subject to seasonal movement and this will continue throughout the building's life. This is a result of certain sub-soils, in particular clay, being affected by climatic changes as summer changes to winter and back again. Expansion of these sub-soils occurs in winter as water content increases and, conversely, contraction occurs as they dry out in summer.

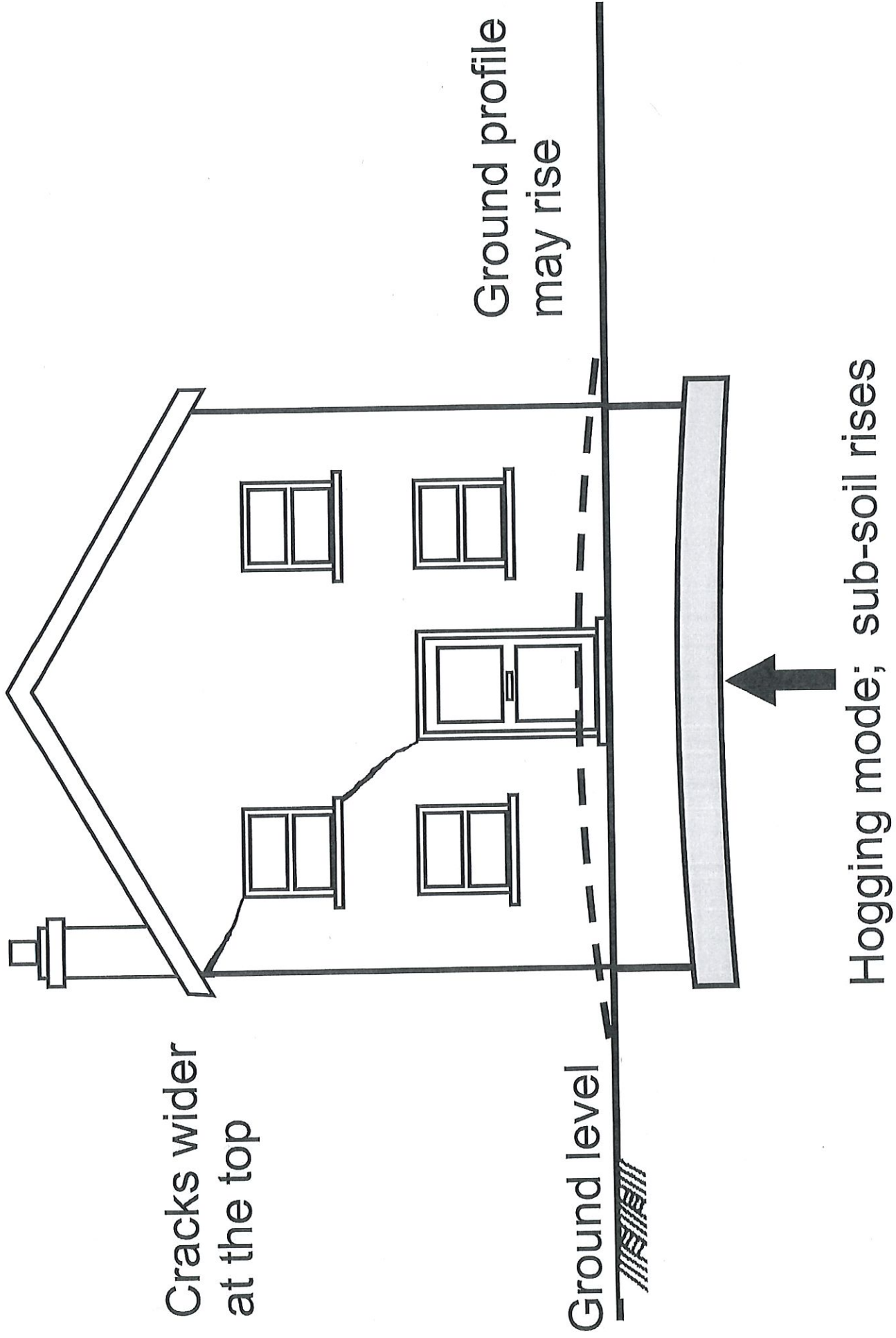
## General defects

The diagram below shows some of the common routes for damp penetration in houses with solid walls, in some cases, cavity walls.

### Damp Penetration

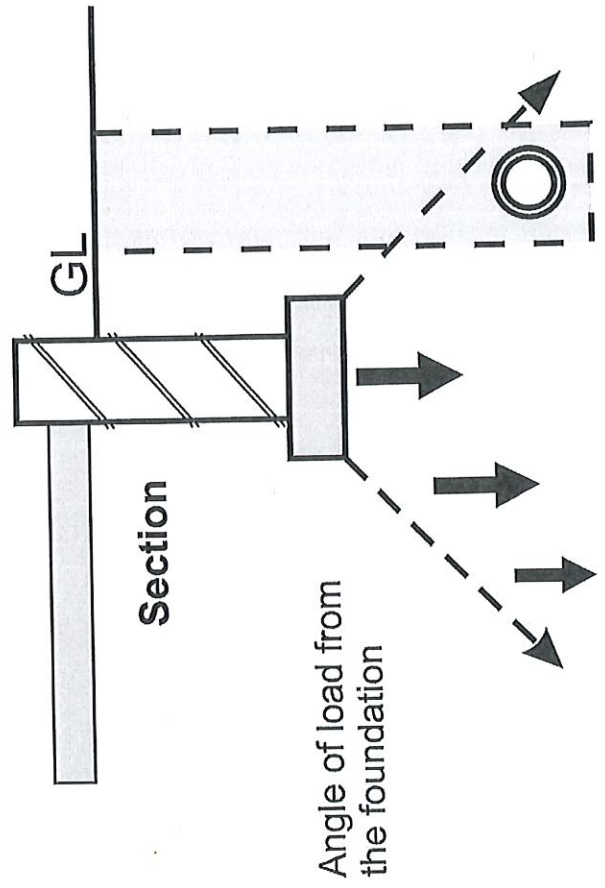
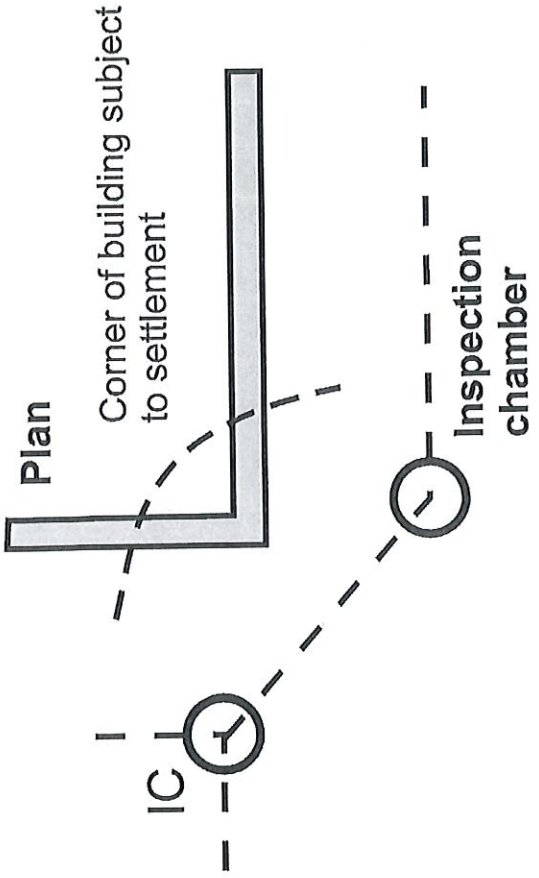


# Hogging or rising of a foundation due to heave (sub-soil expansion)



## Drainage problems

Corners of buildings are often subject to the effects of drain problems as builders take the shortest route to save time and cost.



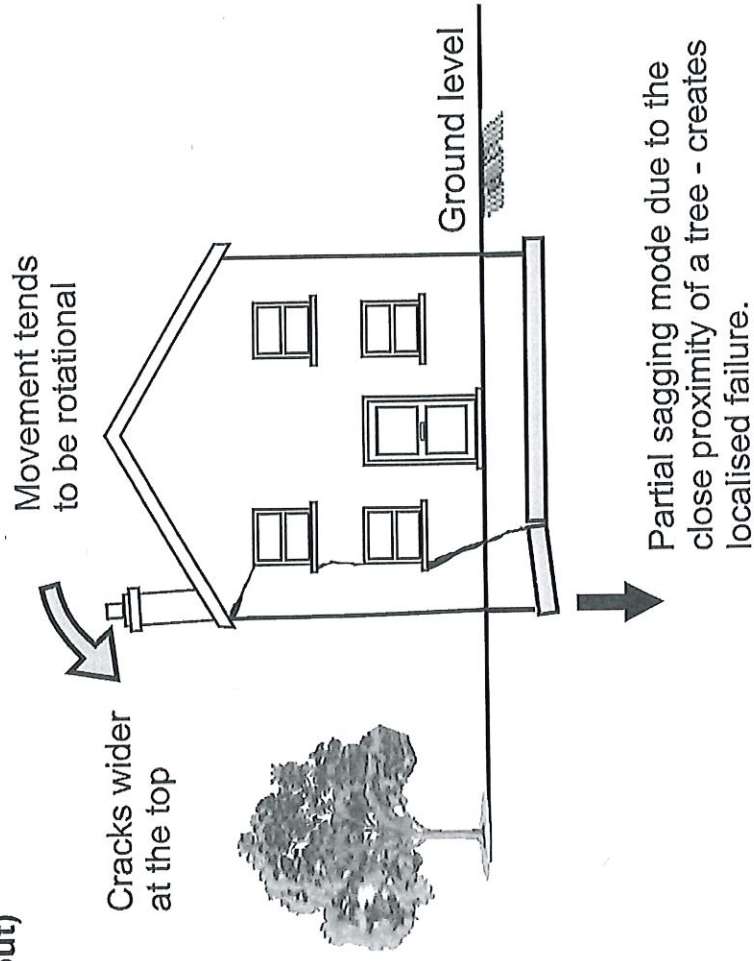
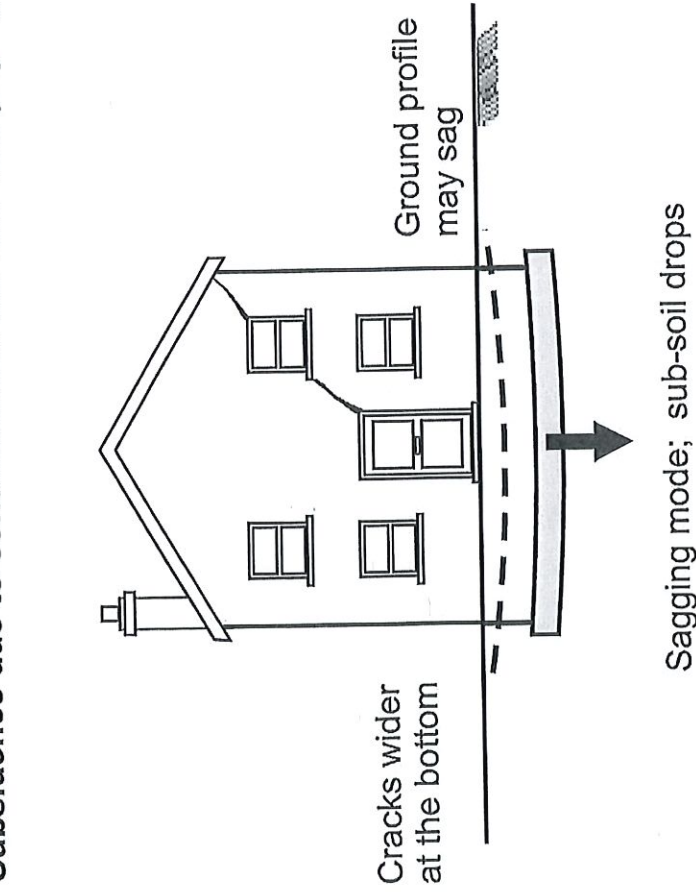
Softer/less compact soil in backfilled trench can cause instability.  
 Drain breaks under building pressure.  
 Displacement/crushing of drain alone may be sufficient to cause subsidence.  
 Drain breaks and/or leaks. Water adversely affects sub-soil and causes subsidence.

break into drain runs at weeping or defective joints to obtain moisture, especially in dry climatic conditions. Tree roots may also exploit the situation where a drain has already been damaged by building settlement. The leaking drain results in increased root growth of nearby trees and this can lead to more extensive drain problems and soil, especially if of a sandy nature, being washed away creating increased building movement.



In summer, shrinkable clay sub-soils will normally tend to contract due to reduction of their water content. This reduction of the soil moisture content is known as 'desiccation'. It can be made worse by the presence of trees and shrubs that take up moisture through their roots. The resultant contraction of the sub-soil can lead to 'subsidence' – the building above will sag/move downwards. In such circumstances cracking will tend to be wider at the bottom rather than the top. However, the presence and effect of trees may confuse the damage pattern.

### Subsidence due to contraction of the sub-soil (drying out)



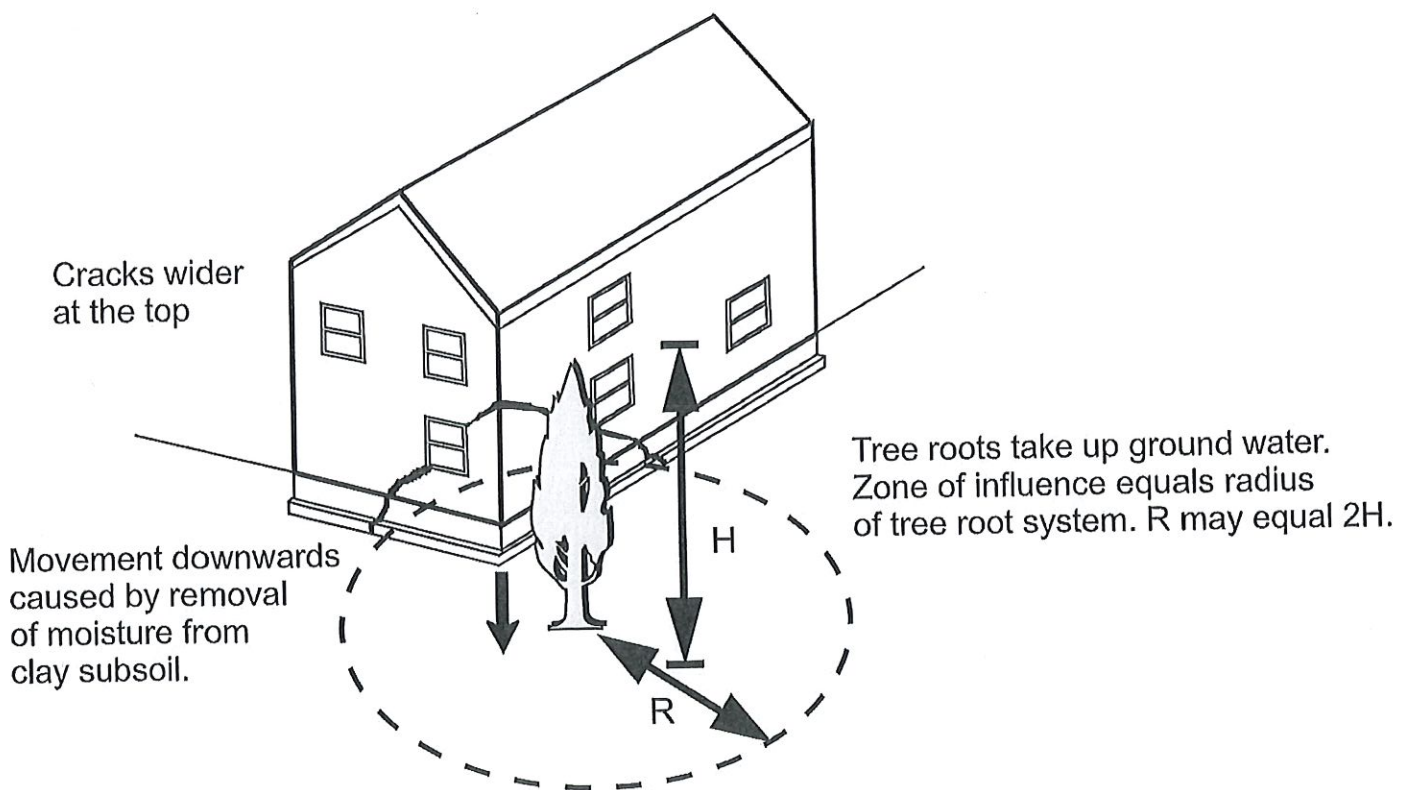
Conversely, in winter and in periods of excessive rainfall, shrinkable clays will tend to expand as water content increases. The increase in volume of the clay leads to an effect known as 'heave' – the building above will rise upwards (known as 'hogging'). The effect is rather similar to frost heave (as described previously) in which the cracks tend to be wider at the top and narrower at the bottom.

## TREES AND SHRUBS – PROXIMITY TO BUILDINGS

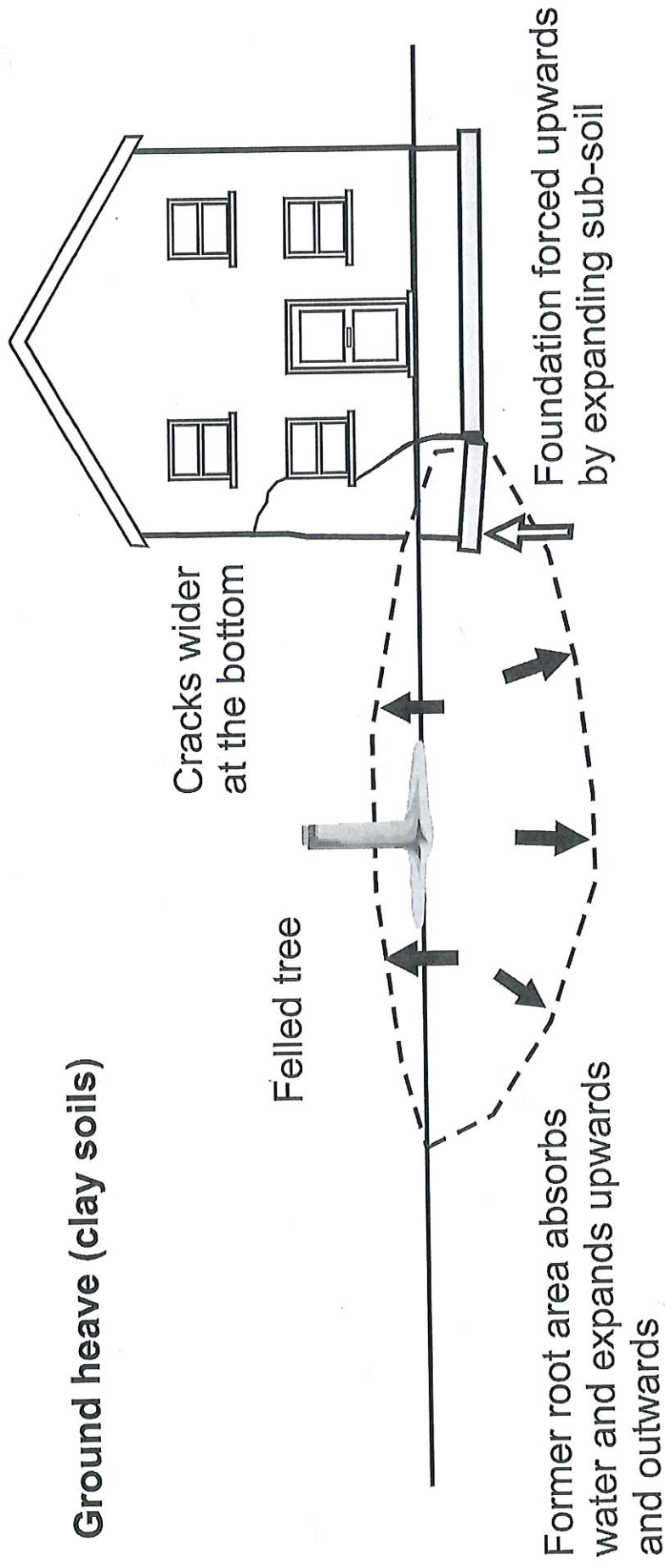
Movement due to the close proximity of trees to a building is a common problem. This is due to the effect of the tree on the water content of any sub-soil that it is growing in. Trees require water to survive and grow. Much of this is taken up through the root system. A mature poplar can take up to 50,000 litres of water from the sub-soil each year. Other trees including oak can have a similar effect and the more mature a tree the greater the amount of water it requires.

The root radius of a tree is often equal to or greater than its height above ground level. In some cases, eg willow, poplar, elm, the radius can be up to twice the height. Also, the older the tree the greater the radius and the greater its effect upon the sub-soil.

Sub-soils containing trees are affected to a varying degree by the type, age and size of the trees and, in some cases, by the number of trees growing. Gravels, firm clays and, to some extent, sandy sub-soils will be less affected than shrinkable clays and other water sensitive sub-soils. The effect of any tree growing in one of the latter types of sub-soil will be to reduce the volume of the sub-soil as it takes up ground water. This will be on top of any drying out due to seasonal change (see *previous sub-section*). This leads to contraction of the clay and the downward movement of any foundation



The effect upon any building within the radius of the former root system is an upward movement of the foundation or footing. Cracking in walls above will tend to be wider at the bottom than the top. The movement may affect part or all of a building and may continue over several years.

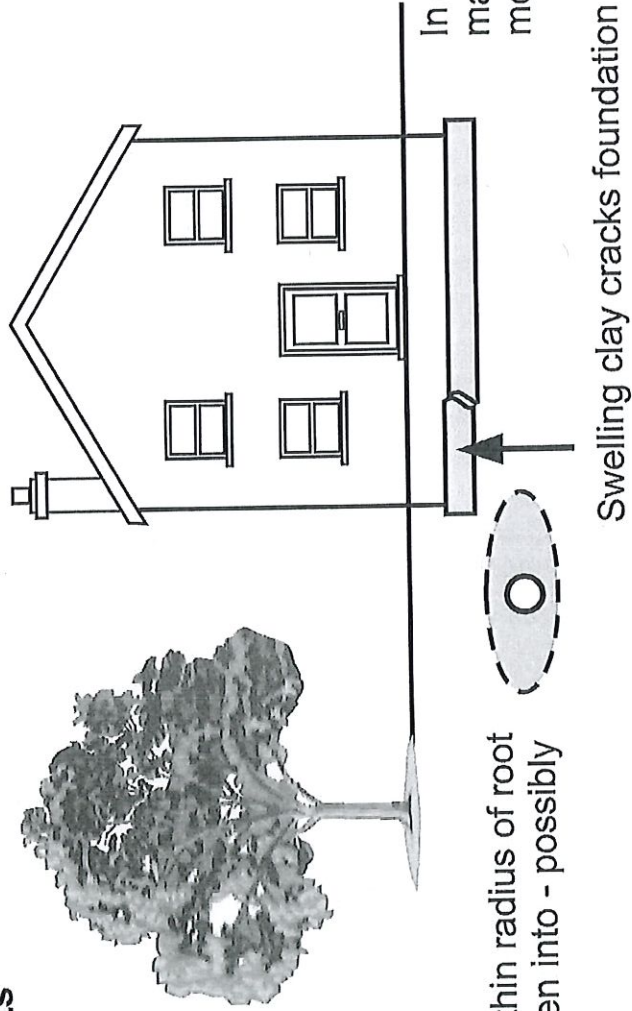


### ***Shrubs, hedges, etc.***

The close proximity of shrubs to a building, especially if mature or in large numbers, can have the same effect as trees – sub-soil shrinkage and building movement. Conversely, the removal of plants, particularly dense hedges and mature species, can lead to ground-heave problems.

Greenfield developments on shrinkable sub-soils can be adversely affected by ground heave because they often involve the removal of hedgerows as well as associated ditches.

**Flooded sub-soil caused by physical damage from tree roots**



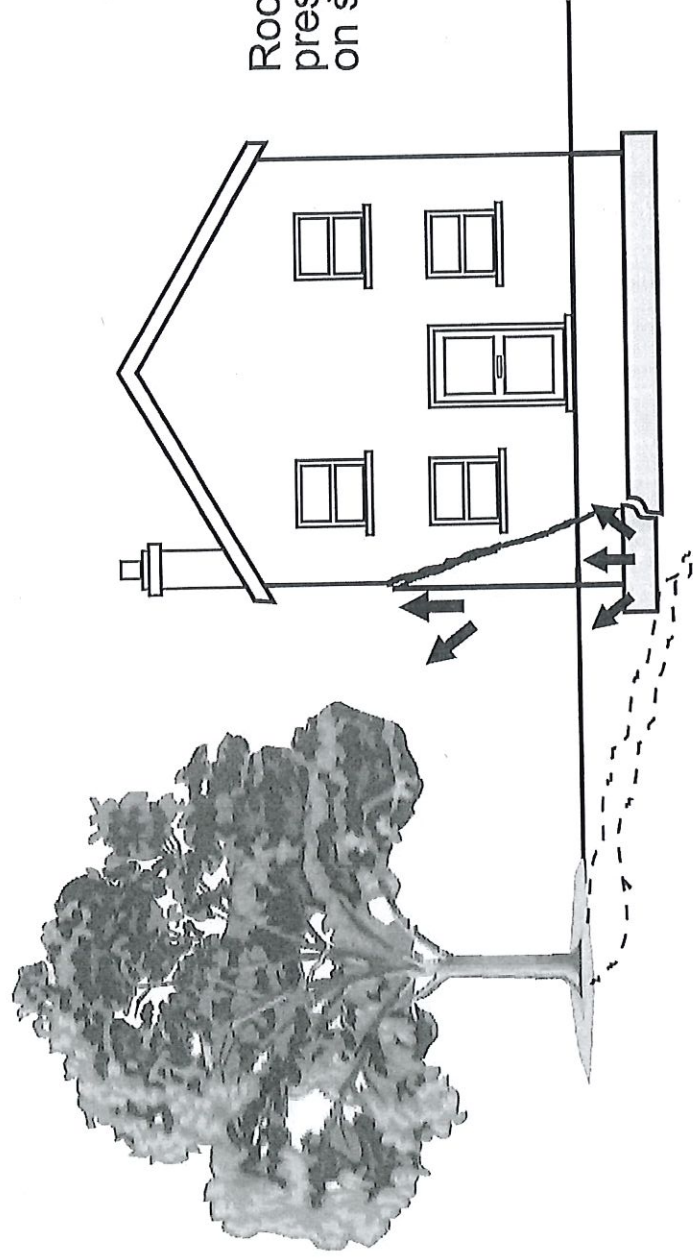
Drain-run within radius of root system broken into - possibly at joint.

Water leaking out of broken drain will affect sub-soil. Sandy sub-soil may be washed away. This may cause part of the foundation to drop.

In shrinkable clays increased water content may make sub-soil more susceptible to movement. It may swell as it absorbs moisture.

Swelling clay cracks foundation

Further problems can be caused by tree roots due to their physical presence and strength. As the tree grows the radius of the root system increases and the individual roots grow in size. This, in time, can lead to the displacement of the surrounding sub-soil, upwards and outwards pressure on foundations and walls in the vicinity of the root and even growth through underground walls of softer/weaker materials.



Root growth expands. It applies pressure upwards and outwards on sub-soil and building.

Life cycle cost assessment {*general methodology - ISO 15686-5: 2008*} involves expanding horizons in quantifying the costs of a building. Instead of sticking to the construction phase, a building's life cycle begins with design and ends with either restoration or demolition. This time span encompasses operation, maintenance, repair or replacement of elements, and cleaning costs.

a) **Operational** costs refer to the supply of electricity, water (drinking water and purification), and liquefied gases.

b) **Maintenance** includes a large number of periodic tasks such as predictive, preventive and corrective, which are the basis for extending the service life of buildings before rehabilitation is needed, and once that point has been reached, decrease requisite restoration/demolition investment.

Life cycle cost analysis has been a part of good architectural design for many years. It has received even greater attention as the energy crisis makes it more clear that architects and owners must plan with greater emphasis on life cycle cost (LCC) versus initial construction cost. This thesis investigates the formulas and procedures currently used and illustrates life cycle cost analysis as applied to building operating cost savings, maintenance cost savings, and savings on replacement of building components and systems. Included is a discussion of the Eccentric Building Performance Model now used by the Western Division Naval Facilities Engineering Command, and current federal agency efforts to apply LCC concepts to building design.

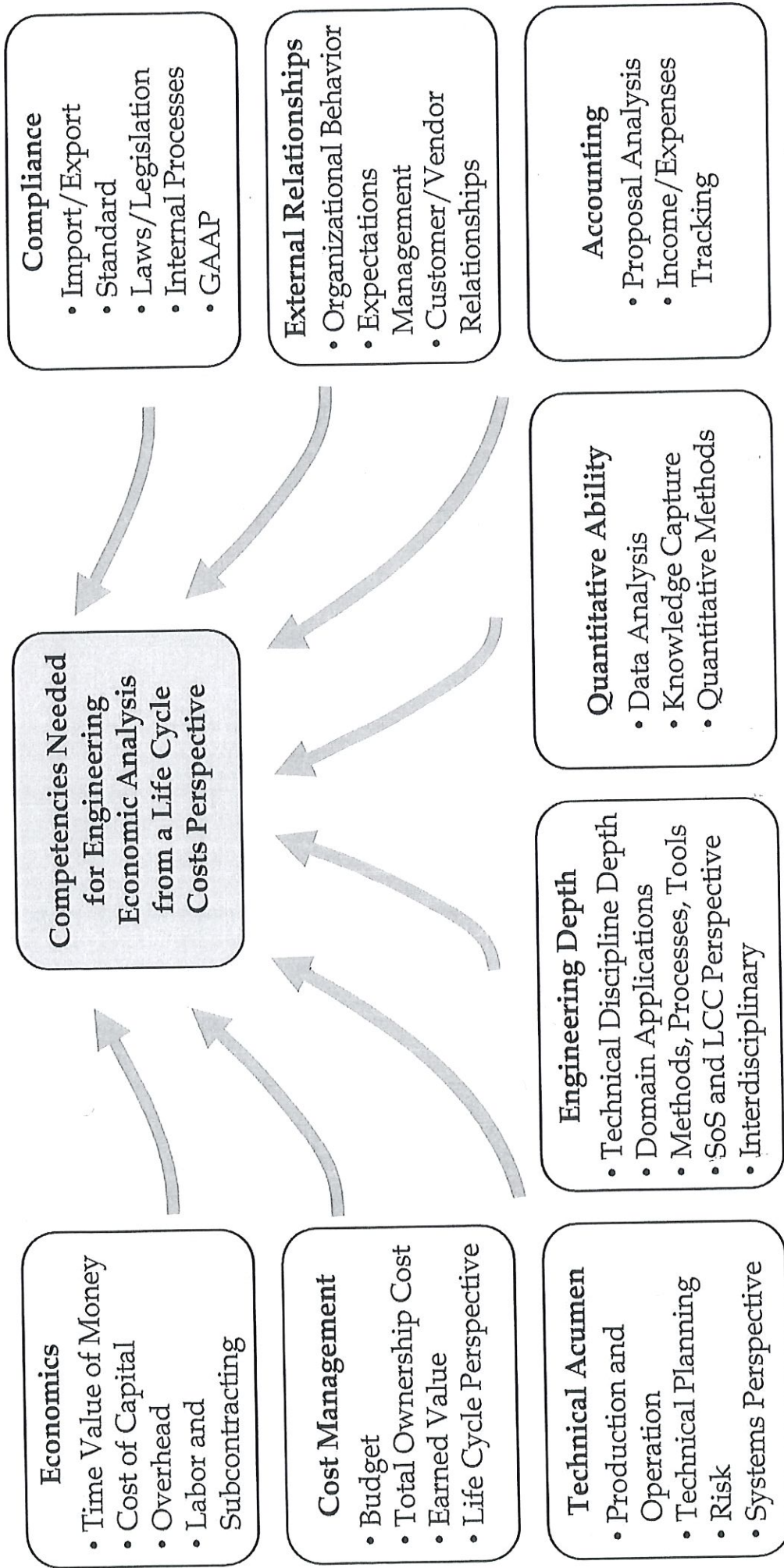
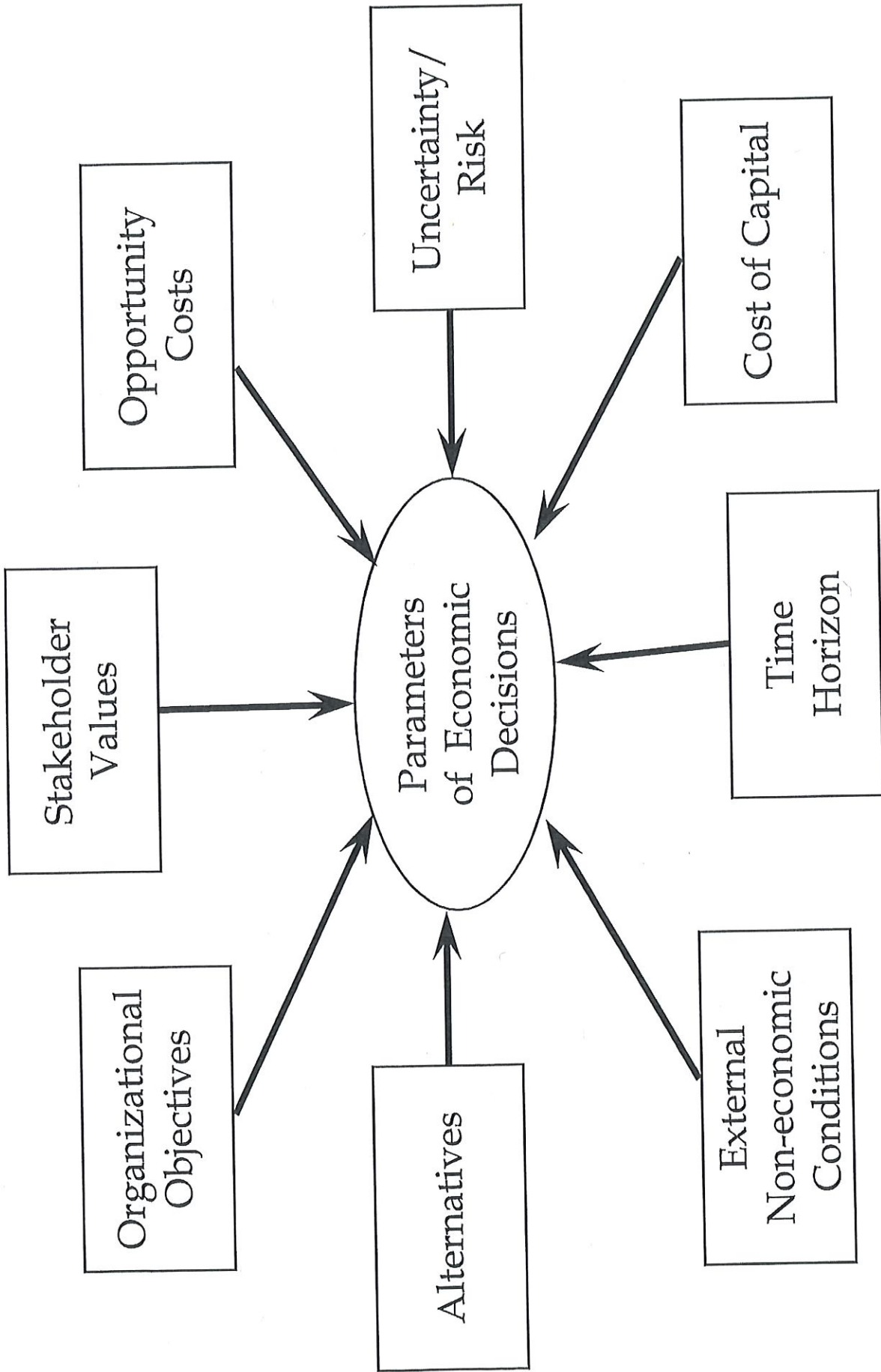


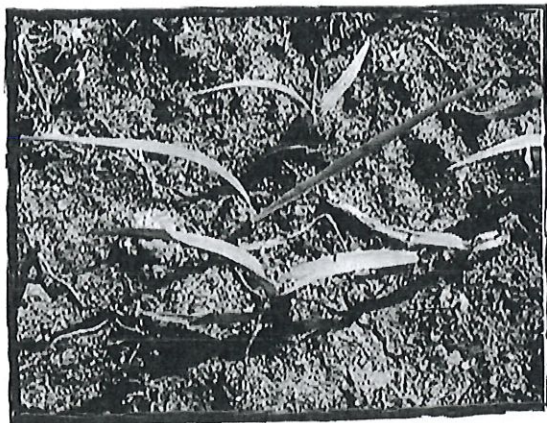
Figure 1.2 Competency model for costing





Parameters of economic decisions

"How do I kill my stickers?" is one of the most popular questions asked by homeowners. Once the plants are correctly identified then we can work on ways to control them. Many times it is the grassy sandbur (*Cenchrus* sp.) that is the culprit of many of these questions. Sandburs have small, needle-like seeds with hooks or barbs that allow them to stick to shoestrings, clothing and pet hair. Always determine the type of weed you are trying to control, so that proper herbicides can be applied and corrective measures can be taken to ensure that the problem does not reoccur. Grassy sandburs are classified as an annual grassy weed and can be somewhat difficult to control in these situations.



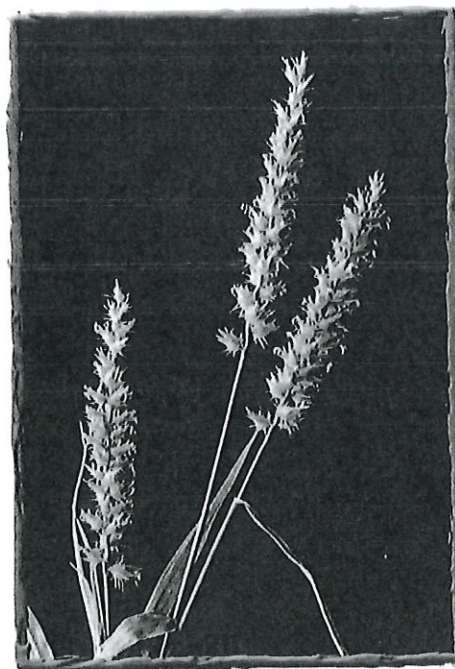
Late in the season (late summer, early fall) homeowners do not have many choices for control as the plants are already mature. Mature plants are difficult to control with products that will not hurt or damage the lawn. Glyphosate (Roundup, Killzall, and others) work well for sandbur control, but kill whatever it comes in contact with.

The best control for any weed is a good, thick lawn. Overseeding a thin lawn this fall can prevent grassy sandbur next year as it

must come from seed. If overseeding, use a glyphosate product to kill the grassy sandbur. Wait two weeks after spraying to allow the grassy sandbur to die before overseeding.

If the lawn is still thin next spring, use a preemergent herbicide before the sandbur comes up. However, not all preemergent herbicides are effective. The three products that can help minimize grassy sandbur are oryzalin, pendimethalin and prodiamine. A sandbur behaves similar to crabgrass and can be treated the same way.

On lawns planted with tall fescue and warmseason grasses (Bermuda grass, buffalo grass and zoysia), use oryzalin (sold under the trade names of Surflan and Weed Impede). Apply around April 15th when redbud trees approach full bloom.



# JOHNSONGRASS CONTROL

## MECHANICAL:

Mow every two weeks during the growing season, deep cultivation exposing roots and crop rotation.

## HERBICIDES:

2 – 8 oz Oust per acre

1 – 3 qts Glyphosate per acre

2 ½ - 6 pts MSMA per acre

8 – 12 oz Plateau per acre

32 oz Journey per acre

5 ½ - 8 oz Assure under 10 inches/10 – 12 oz over 10 inches

¾ - 2 oz Outrider per acre

## CORN:

Accent .67 oz per acre

Eradicane 4 – 7 ½ pt per acre

.76 oz Beacon per acre

¾ - 1 pt Trifluralin per acre

## SOYBEANS:

6 – 12 oz Fusilade per acre

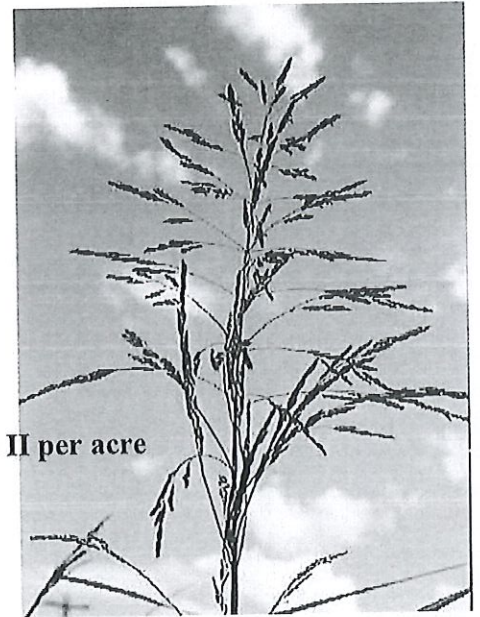
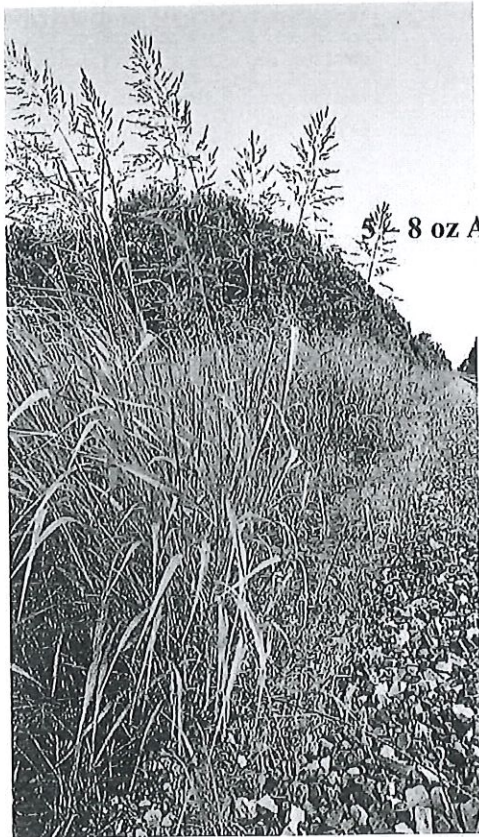
18 oz Assure per acre maximum // 5 – 12 oz Assure II per acre

4 – 16 oz Select per acre

2 ½ pts Poast per acre maximum

Glyphosate if Round Up Ready beans

1 – 2 pts Trifluralin per acre incorporated



\*Rates may vary by region. Always read and follow label directions. Consult your local weed director for additional information.

# FIELD BINDWEED CONTROL

## NON-CROPLAND/ESTABLISHED GRASSES:

2 - 4 pts Picloram per acre

1 pt Picloram + 1 qt 2,4-D per acre

1 pt Dicamba + 1 qt 2,4-D per acre

1 gal Glyphosate per acre spot treatment

4 - 5 qts Glyphosate per acre

1 pt Arsenal per acre

1.5 - 6 gal Krenite per 100 gal water

8 - 12 oz Plateau per acre

### CROPLAND:

#### CORN:

½ - 1pt Dicamba per acre

½ - 1lb 2,4-D per acre

#### MILO:

½ pt Dicamba per acre

½ - 1 pt 2,4-D per acre

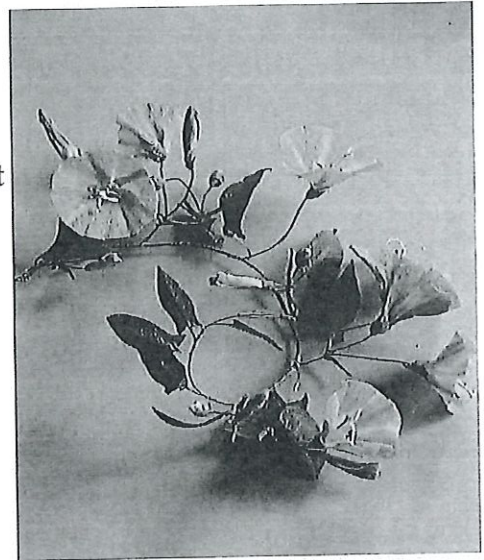
#### WHEAT (POST HARVEST):

½ pt Dicamba + 1 qt 2,4-D per acre

1 pt Picloram+ 1 qt 2,4-D per acre

1 - 2 qt 2,4-D per acre

1 gal Glyphosate per acre



\*Rates may vary by region. Always read and follow all label directions. Consult your local weed director for additional information.

# SERICA LESPEDEZA CONTROL

(Control means preventing the production of viable seed.)

## MECHANICAL:

Mowing in the late bud stage for 2 – 3 consecutive years from mid-July to late summer should reduce the vigor of the stand.

Burning at the proper time (late spring) followed by intensive early stocking (double stock until July 15<sup>th</sup> and then remove the cattle) may reduce the occurrence.

Grazing infested areas with sheep and goats will provide effective control of sericea lespedeza.

Tame pastures - Proper fertilization and grazing during April and May may reduce the occurrence. Late grazing or no grazing will increase sericea lespedeza.



## HERBICIDES:

### *Spring & Summer Treatments*

1 -2 pts Remedy per acre

2 pts Garlon per acre

32 oz PastureGard per acre

### *Early Bud & Fall Treatments*

1 -1 1/2 oz Escort per acre



## BIOLOGICAL:

There are no biological controls approved for sericea lespedeza at this time.

\*Rates may vary by region. Always read and follow label directions. Contact your local county weed director for additional information.

# MUSK THISTLE CONTROL

## MECHANICAL:

Mowing prior to bloom stage - remove heads and dig roots two inches below ground

## HERBICIDES:

### Spring Applied (Rosette):

½ - ¾ pt Picloram + 1 qt 2,4-D per acre

1 pt Dicamba + 1 qt 2,4-D per acre

1/3 - 1 oz Escort per acre

1 qt 2,4-D per acre

4 to 7 oz Milestone per acre

### Bloom Stage:

½ - 1 pt Picloram + 1 qt 2,4-D per acre

1 oz Escort per acre

1 qt 2,4-D per acre

4 -7 oz Milestone per acre

8 - 12 oz Plateau per acre

### Fall Applied (prior to soil freezing):

½ - ¾ pt Picloram per acre

1/3 - 1 oz Escort per acre

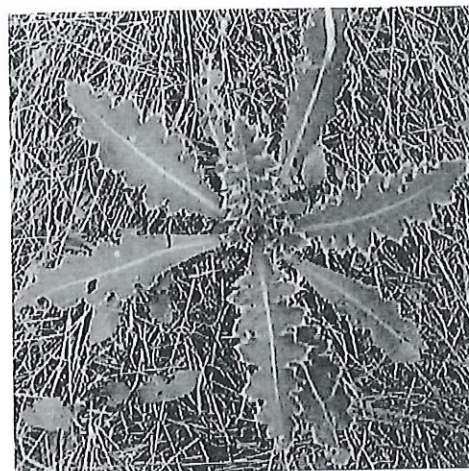
1 pt Dicamba per acre

4 - 7 oz Milestone per acre

## BIOLOGICAL:

Head Weevil & Rosette Weevil

\*Rates may vary by region. Always read and follow label directions. Contact your local county weed director for additional information.





It was a pleasure talking with you today.

KACPZO was founded in 1989 by a small group of planning professionals interested in promoting the educating, training and networking of individuals involved in county planning and zoning within the State of Kansas. The purposes of the organization are:

- To help encourage the process of county planning and zoning throughout Kansas;
- To help strengthen the relationship between county planners, zoning administrators and other county officials;
- To provide a forum and communications through which members may exchange ideas and experiences related to county planning and zoning, through meetings, publications and correspondence;
- To provide a method of voicing common problems;
- To provide a means of addressing enabling legislation for County Planning and Zoning.

KACPZO typically holds two conferences a year with one in the spring and one in the fall. A wide range of topics are discussed, including planning fundamentals, writing or interpreting zoning and subdivision regulations, planning law, controversial developmental requests, legislative updates, etc. Conferences customarily include informative, professional speakers, field trips and tremendous networking opportunities.

Thank you for stopping by today.

We hope to have made a connection and have open communication in the future.

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