ACTIVE WINTER PLACES
WINTER AS AN AMENITY
Professor John Kraus

“Father of Electromagnetics”
1910-2004
Image Credit: North American AstroPhysical Observatory
STUDY: ENVIRONMENTAL PSYCHOLOGIST ROGER ULRICH, SCIENCE, 1984

© Hazel Borys, Caen, Normandy
<table>
<thead>
<tr>
<th>Nature and Green Spaces Enhance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• concentration</td>
</tr>
<tr>
<td>• mood</td>
</tr>
<tr>
<td>• immunity</td>
</tr>
<tr>
<td>• longevity</td>
</tr>
<tr>
<td>• recovery rate</td>
</tr>
<tr>
<td>• psychological well-being</td>
</tr>
<tr>
<td>• self-reported general health</td>
</tr>
<tr>
<td>• satisfaction</td>
</tr>
<tr>
<td>• social interactions</td>
</tr>
<tr>
<td>• property values</td>
</tr>
</tbody>
</table>

*Study Compilation: Danish Researchers for the International Federation of Parks and Recreation Administration, 2013*
DIRECT HEALTH BENEFITS OF GREEN PLACES

• increased physical activity
• better cardio health
• less depression, anxiety, stress
• increased attention and memory

• decreased obesity and diabetes
• increased social capital
• reduction in violent crime
• improved air and water quality

STUDY COMPILATION: PROJECT FOR PUBLIC SPACES
THE CASE FOR HEALTHY PLACES, 2016
“We humans have an intrinsic emotional need to connect with the natural world. The eminent biologist E. O. Wilson first called this affinity ‘biophilia,’ and the term has stuck. It is critical that we incorporate nature into cities, but we must do so in a way that supports urbanity rather than replaces it.”

~ Kaid Benfield
People Habitat, 2014
STUDY: NATURE EXPERIENCE REDUCES RUMINATION AND SUBGENUAL PREFRONTAL CORTEX ACTIVATION, 2015

© Hazel Borys, Winnipeg
STUDY COMPILATION: THE CASE FOR HEALTHY PLACES
PROJECT FOR PUBLIC SPACES, 2016

Credit: National Institute for the Clinical Application of Behavioral Medicine
A COUNTRY OF SUBURBS

IMAGE CREDIT: DR. DAVID GORDON, PROFESSOR; SOURCE: STATISTICS CANADA, 2011 AND 2006 CENSUS TRACT DATA

75% AUTO ‘BURB

12% ACTIVE CORE
GOT WALKABILITY?

MEASURING THE WINTER CITY

IMAGE CREDIT: WALKSCORE.COM
GOT WALKABILITY?

IMAGE CREDIT: WALKSCORE.COM
MEASURING THE WINTER CITY

DOWNTOWN IS A WALKER’S PARADISE

IMAGE CREDIT: WALKSCORE.COM
MEASURING THE WINTER CITY

HOUSING + TRANSPORTATION COST

IMAGE CREDIT: HTAINDEX.CNT.ORG

H+T Costs % Income: 44%
Housing: 26% Transportation: 18%
MEASURING THE WINTER CITY

GHG EMISSIONS / HOUSEHOLD

IMAGE CREDIT: HTAINDEX.CNT.ORG
MEASURING THE WINTER CITY

TRANSIT TRIPS PER WEEK

IMAGE CREDIT: HTAINDEX.CNT.ORG

Available Transit Trips per Week

<table>
<thead>
<tr>
<th>Population</th>
<th>Household</th>
<th>Neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>% of Population</td>
<td></td>
</tr>
<tr>
<td>&lt; 10</td>
<td>59,461</td>
<td>5%</td>
</tr>
<tr>
<td>10 - 100</td>
<td>130,176</td>
<td>10.9%</td>
</tr>
<tr>
<td>100 - 1000</td>
<td>461,674</td>
<td>38.5%</td>
</tr>
<tr>
<td>1000 - 10,000</td>
<td>488,674</td>
<td>40.8%</td>
</tr>
<tr>
<td>10,000 +</td>
<td>57,781</td>
<td>4.8%</td>
</tr>
<tr>
<td>Total</td>
<td>1,197,776</td>
<td>100%</td>
</tr>
</tbody>
</table>
# Measuring the Winter City

## Highest Walk Scores in Hennepin County Per Walkscore.com and Cnt.org

<table>
<thead>
<tr>
<th>Location</th>
<th>Walk Score</th>
<th>Transit Score</th>
<th>Bike Score</th>
<th>H+T Costs % Income</th>
<th>Housing %</th>
<th>Transportation %</th>
<th>Annual GHG per Household Block Group</th>
<th>Annual GHG per Household Block Group</th>
<th>Employment Access Index Block Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyn Lakes</td>
<td>96</td>
<td>66</td>
<td>96</td>
<td>37%</td>
<td>24%</td>
<td>13%</td>
<td>4.42 Tonne</td>
<td>95,874 Jobs/mi^2</td>
<td>95,874 Jobs/mi^2</td>
</tr>
<tr>
<td>Uptown</td>
<td>93</td>
<td>61</td>
<td>98</td>
<td>31%</td>
<td>18%</td>
<td>13%</td>
<td>4.55 Tonne</td>
<td>81,922 Jobs/mi^2</td>
<td>81,922 Jobs/mi^2</td>
</tr>
<tr>
<td>Downtown West Minneapolis</td>
<td>92</td>
<td>95</td>
<td>93</td>
<td>36%</td>
<td>24%</td>
<td>13%</td>
<td>5.28 Tonne</td>
<td>227,351 Jobs/mi^2</td>
<td>227,351 Jobs/mi^2</td>
</tr>
<tr>
<td>Lowry Hill East</td>
<td>92</td>
<td>63</td>
<td>90</td>
<td>37%</td>
<td>22%</td>
<td>14%</td>
<td>4.86 Tonne</td>
<td>112,359 Jobs/mi^2</td>
<td>112,359 Jobs/mi^2</td>
</tr>
<tr>
<td>Loring Park</td>
<td>90</td>
<td>85</td>
<td>93</td>
<td>31%</td>
<td>20%</td>
<td>11%</td>
<td>4.10 Tonne</td>
<td>206,364 Jobs/mi^2</td>
<td>206,364 Jobs/mi^2</td>
</tr>
</tbody>
</table>
MEASURING THE WINTER CITY

HIGHEST WALK SCORES
IN HENNEPIN COUNTY PER WALKSCORE.COM AND CNT.ORG

<table>
<thead>
<tr>
<th>BANK STREET SOUTHEAST</th>
<th>WHITTIER</th>
<th>STEVENS SQUARE</th>
<th>EAST ISLES</th>
<th>NORTH LOOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk Score: 90</td>
<td>Walk Score: 90</td>
<td>Walk Score: 88</td>
<td>Walk Score: 86</td>
<td>Walk Score: 79</td>
</tr>
<tr>
<td>Transit Score: 80</td>
<td>Transit Score: 67</td>
<td>Transit Score: 77</td>
<td>Transit Score: 60</td>
<td>Transit Score: 87</td>
</tr>
<tr>
<td>Bike Score: 94</td>
<td>Bike Score: 93</td>
<td>Bike Score: 91</td>
<td>Bike Score: 96</td>
<td>Bike Score: 95</td>
</tr>
</tbody>
</table>

SOURCE: WALKSCORE.COM

H+T Costs % Income: 50%
Housing: 36% Transportation: 14%
Annual GHG per Household Block Group: 5.55 Tonnes
Employment Access Index Block Group: 210,548 Jobs/mi²
SOURCE: HTAINDEX.CNT.ORG

H+T Costs % Income: 29%
Housing: 16% Transportation: 13%
Annual GHG per Household Block Group: 4.56 Tonnes
Employment Access Index Block Group: 141,142 Jobs/mi²
SOURCE: HTAINDEX.CNT.ORG

H+T Costs % Income: 23%
Housing: 12% Transportation: 11%
Annual GHG per Household Block Group: 3.75 Tonnes
Employment Access Index Block Group: 218,332 Jobs/mi²
SOURCE: HTAINDEX.CNT.ORG

H+T Costs % Income: 75%
Housing: 58% Transportation: 17%
Annual GHG per Household Block Group: 6.47 Tonnes
Employment Access Index Block Group: 93,164 Jobs/mi²
SOURCE: HTAINDEX.CNT.ORG

H+T Costs % Income: 45%
Housing: 31% Transportation: 14%
Annual GHG per Household Block Group: 5.61 Tonnes
Employment Access Index Block Group: 206,613 Jobs/mi²
SOURCE: HTAINDEX.CNT.ORG
WINNIPEG, MANITOBA

DESIGN

IMAGE CREDIT: ROBERT GALSTON, 2015
The Forks, Winnipeg
image credit: Hazel Borys @hborys
RAW ALMOND, WINNIPEG, MANITOBA

BUSINESS

IMAGE CREDIT: RAW-ALMOND.COM, 2015
SNOWGA, FARGO, NORTH DAKOTA

WELLNESS + FUN

IMAGE CREDIT: FARGOMOORHEAD.ORG
Regional Centres

culture | history | active lifestyles
Neighborhood Centers

connection | conviviality | active lifestyles
CHARLOTTETOWN, PEI

COMPLETE

IMAGE CREDIT: STEVE MOUZON, @STEVEMOUZON
DESIGNING FOR WINTER CITIES

WALK :: CYCLE :: TRANSIT :: SKI :: SKATE :: SLED
SPECTRUM OF LIFE

TRANSECT

IMAGE CREDIT: TRANSECT.ORG
SPECTRUM OF URBAN CHARACTER

TRANSECT

IMAGE CREDIT: TRANSECT.ORG
The Transect of the Sunday Comics
EXTRACTING THE DNA FROM WINNIPEG

© 2010 HAZEL BORYS
THE TRANSECT AND COMMUNITY

IMAGE CREDIT: TRANSECT.ORG
THE WALKABLE WINTER CITY

1. Street Character
2. The Useful Walk
3. Fine-Grained Grid
4. Civic at Heart
5. Human Scale
1. Stay Alive

Designing for Walkable Winters:

Street Character

© 2014 Hazel Borys, Québec City
CHARACTER: A REFLECTION OF PRIORITIES

LINK OR PLACE?
ADAPTED FROM COMPLETE MOBILITY @DEWANMKARIM. FLICKR IMAGES: (L) COUNTRY LEMONADE; (R) LA CITTA VITA

LINK:
STREET AS MOVEMENT CORRIDOR

DESIGN PRIORITY:
SAVE TIME

PLACE:
STREET AS DESTINATION

DESIGN PRIORITY:
SPEND TIME
AUTO-PEDESTRIAN COLLISIONS

SPEED & PHYSICAL INJURY: LIKELIHOOD & OUTCOMES

ADAPTED FROM COMPLETE MOBILITY @DEWANMKARIM
Hit by a vehicle traveling at

SPEED 20 MPH
9 out of 10 pedestrians survive

SPEED 30 MPH
5 out of 10 pedestrians survive

SPEED 40 MPH
1 out of 10 pedestrians survive
FROM 2005-2014 SPEEDING-RELATED CRASHES IN THE U.S.

KILLED 112,500 PEOPLE

SOURCE: NHTSA AND STREETSBLOG
2. THE USEFUL WALK

DESIGNING FOR WALKABLE WINTERS:

RAISON D’ETRE

© 2012 HAZEL BORYS, OTTAWA
Connected Block Structure

Mixture of Uses

Image Credit: City of Sarasota, Florida

Compliance with Allocation of Land Outside Pedestrian Sheds as set forth in Section 2.1.B

Transact Zones outside shed: T1, T3

Compliance with Pedestrian Shed requirements as set forth in Section 2.3.2.b

Transact Zones within shed: T3, T4, T5

T1 - Natural Zone
T3 - Sub-Urban Zone
T4 - General Urban Zone
T5 - Urban Center Zone
CS - Civic Space
CB - Civic Building Reserve
1/4 Mile Pedestrian Shed
3. SHELTER FROM THE ELEMENTS

DESIGNING FOR WALKABLE WINTERS:

FINE-GRAINED GRID

© 2014 SUSAN HENDERSON, VENICE
FINE-GRAINED STREET GRID

MAXIMUM BLOCK SIZE

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA

Compliance with Maximum Block Size requirements as set forth in Table 14-C

Variance request:
1. Block size exceeding by 32.16 linear feet for interior parking while maintaining attached green
2. Block size exceeding by 221.02 linear feet. T5 designation is anchoring an important termination.
3. Block size exceeding by 236.99 linear feet. Block is outside of Pedestrian Shed

Legend:
- T1 - NO MAXIMUM
- T3 - 3,000 feet max
- T4 - 2,400 feet max
- T5 - 2,000 feet max
- CS - CIVIC SPACE
- CB - CIVIC BUILDING RESERVE
4. Neighbourhood Anchors

Designing for Walkable Winters:

Civic At Heart

Image Credit: Stephen Borys, Ottawa
NEIGHBOURHOOD ANCHORS

CIVIC AT HEART

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA

CIVIC FUNCTION PLAYGROUNDS

1000' PEDESTRIAN SHED

Compliance with Civic Function Allocation as set forth in Section 2.7.2.c.

Nine Playgrounds
5. HUMAN SCALE

DESIGNING FOR WALKABLE WINTERS:

ALLEY-LOADED

© 2014 HAZEL BORYS, TORONTO
HUMAN SCALE

ALLEY LOADED

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA

Compliance with Allocation of Land Outside Pedestrian Sheds as set forth in Section 2.1.B

Transsect Zones outside shed: T1, T3

Compliance with Pedestrian Shed requirements as set forth in Section 2.3.2.b

Transsect Zones within shed: T3, T4, T5

T1 - NATURAL ZONE
T3 - SUB-URBAN ZONE
T4 - GENERAL URBAN ZONE
T5 - URBAN CENTER ZONE
CS - CIVIC SPACE
CB - CIVIC BUILDING RESERVE
1/4 MILE PEDESTRIAN SHED
Schererville, Indiana

image credit: John Delano of Hammond, Indiana
DESIGNING FOR WALKABLE WINTERS

1. **Street Character** Link or Place
2. **The Useful Walk** Mixture of Uses
3. **Fine-Grained Grid** Shelter from Elements
4. **Civic at Heart** Anchors
5. **Human Scale** Alley Loaded
### Aldaling of Zones per Community Unit, Applicable to Article 4 Only

<table>
<thead>
<tr>
<th></th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T40 GENERAL URBAN ZONE - OPEN</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T1 NATURAL ZONE</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>T2 RURAL ZONE</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td><strong>T3 SUB-URBAN ZONE</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>not permitted</td>
<td>20 - 40%</td>
<td>20% max.</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>T4 GENERAL URBAN ZONE</strong></td>
<td>no minimum</td>
<td>50% min.</td>
<td>10 - 30%</td>
<td>20 - 40%</td>
<td>20% max.</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>T40 GENERAL URBAN ZONE - OPEN</strong></td>
<td>no minimum</td>
<td>no minimum</td>
<td>10 - 30%</td>
<td>30 - 60%</td>
<td>10 - 20%</td>
<td>10 - 30%</td>
</tr>
<tr>
<td><strong>T5 URBAN CENTER ZONE</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
</tbody>
</table>

### Block Size

<table>
<thead>
<tr>
<th>Variable</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T40 GENERAL URBAN ZONE - OPEN</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block Perimeter</strong></td>
<td>no maximum</td>
<td>no maximum</td>
<td>2400 ft. max.</td>
<td>2000 ft. max.</td>
<td>2000 ft. max.</td>
<td>1600 ft. max.</td>
</tr>
</tbody>
</table>

### Thoroughfares (see Table 5 and Table 6)

<table>
<thead>
<tr>
<th>Variable</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T40 GENERAL URBAN ZONE - OPEN</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HW</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>BV</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td><strong>AV</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td><strong>CS</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td><strong>DR</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td><strong>ST</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td><strong>RD</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>Rear Lane</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>Rear Alley</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>required</td>
<td>required</td>
<td>required</td>
</tr>
<tr>
<td><strong>Path</strong></td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>not permitted</td>
</tr>
<tr>
<td><strong>Passage</strong></td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
</tbody>
</table>
### e. LOT OCCUPATION

<table>
<thead>
<tr>
<th>Lot Width - SF Detached</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td>by Warrant</td>
<td>70 ft. min. 120 ft. max.</td>
<td>30 ft. min. 60 ft. max.</td>
<td>30 ft. min. 50 ft. max.</td>
<td>30 ft. min. 50 ft. max.</td>
</tr>
<tr>
<td>Lot Width - Duplex</td>
<td>not applicable</td>
<td>90 ft. min. 120 ft. max.</td>
<td>50 ft. min. 80 ft. max.</td>
<td>50 ft. min. 70 ft. max.</td>
<td>50 ft. min. 70 ft. max.</td>
</tr>
<tr>
<td>Lot Width - Townhouse</td>
<td>not applicable</td>
<td>by Warrant</td>
<td>18 ft. min. 36 ft. max.</td>
<td>18 ft. min. 36 ft. max.</td>
<td>18 ft. min. 36 ft. max.</td>
</tr>
<tr>
<td>Lot Width - Multifamily</td>
<td>not applicable</td>
<td>by Warrant</td>
<td>60 ft. min. 96 ft. max.</td>
<td>72 ft. min. 180 ft. max.</td>
<td>72 ft. min. 180 ft. max.</td>
</tr>
<tr>
<td>Lot Width - Mixed Use</td>
<td>not applicable</td>
<td>by Warrant</td>
<td>18 ft. min. 96 ft. max.</td>
<td>18 ft. min. 180 ft. max.</td>
<td>18 ft. min. 180 ft. max.</td>
</tr>
<tr>
<td>Lot Coverage - Building</td>
<td>not applicable</td>
<td>by Warrant</td>
<td>60% max.</td>
<td>70% max.</td>
<td>80% max.</td>
</tr>
</tbody>
</table>

### f. SETBACKS - PRINCIPAL BUILDING

<table>
<thead>
<tr>
<th>(g.1) Front Setback (Principal)</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td>48 ft. min</td>
<td>20 ft. min</td>
<td>10 ft. min 18 ft. max</td>
<td>2 ft. min 18 ft. max</td>
<td>2 ft. min 12 ft. max</td>
</tr>
<tr>
<td>(g.2) Front Setback (Secondary)</td>
<td>not applicable</td>
<td>48 ft. min</td>
<td>12 ft. min</td>
<td>10 ft. min 18 ft. max</td>
<td>2 ft. min 18 ft. max</td>
</tr>
<tr>
<td>(g.3) Side Setback</td>
<td>not applicable</td>
<td>96 ft. min</td>
<td>10 ft. min</td>
<td>0 ft. min or 6 ft. total</td>
<td>0 ft. min 24 ft. max</td>
</tr>
<tr>
<td>(g.4) Rear Setback</td>
<td>not applicable</td>
<td>96 ft. min</td>
<td>12 ft. min</td>
<td>3 ft. min *</td>
<td>3 ft. min *</td>
</tr>
</tbody>
</table>

### g. SETBACKS - OUTBUILDING

<table>
<thead>
<tr>
<th>(h.1) Front Setback</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td>20 ft. min +bldg setback</td>
<td>20 ft. min +bldg setback</td>
<td>20 ft. min +bldg setback</td>
<td>40 ft. max from rear prop</td>
<td>40 ft. max from rear prop</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(h.2) Side Setback</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td>3 ft. or 6 ft.</td>
<td>3 ft. or 6 ft.</td>
<td>0 ft. min or 3 ft.</td>
<td>0 ft min</td>
<td>0 ft min</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(h.3) Rear Setback</th>
<th>T1 NATURAL ZONE</th>
<th>T2 RURAL ZONE</th>
<th>T3 SUB-URBAN ZONE</th>
<th>T4 GENERAL URBAN ZONE</th>
<th>T5 URBAN CENTER ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>not applicable</td>
<td>3 ft. min</td>
<td>3 ft. min</td>
<td>3 ft.</td>
<td>3 ft. max</td>
<td>3 ft. max</td>
</tr>
</tbody>
</table>

### h. BUILDING DISPOSITION (see Table 16)

<table>
<thead>
<tr>
<th>Edgeway</th>
<th>permitted</th>
<th>permitted</th>
<th>permitted</th>
<th>permitted</th>
<th>by Warrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sideyard</td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td>Rearyard</td>
<td>not permitted</td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
</tbody>
</table>

### i. PRIVATE FRONTAGES (see Table 18)

<table>
<thead>
<tr>
<th>Common Yard</th>
<th>not applicable</th>
<th>permitted</th>
<th>permitted</th>
<th>permitted</th>
<th>by Warrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porch &amp; Fence</td>
<td>not applicable</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td>Terrace</td>
<td>not applicable</td>
<td>permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td>Forecourt</td>
<td>not applicable</td>
<td>permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td>Stoop</td>
<td>not applicable</td>
<td>permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td>Shopfront</td>
<td>not applicable</td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
<tr>
<td>Gallery</td>
<td>not applicable</td>
<td>not permitted</td>
<td>not permitted</td>
<td>permitted</td>
<td>permitted</td>
</tr>
</tbody>
</table>
For the Love of Winter
Strategy for Transforming Edmonton into a World-Leading Winter City
Make It Easier To ‘Go Play Outside’:
Provide More Opportunities For Outdoor Activity

During the WinterCity consultations, a common theme was make it easier to ‘play’ outside: downtown, in the river valley and in all other parts of our city.

‘Playing outside’ means different things for different people – for some it might be knowing they can take a short walk through the river valley’s winter beauty to a tea house for a cup of hot cider. Others would love to cross-country ski from one end of the river valley to the other. Others would like to enjoy a neighbourhood winter celebration with games for kids and socializing for adults, perhaps at their community league. We can do more in Edmonton to help rekindle this childlike joy, so people of all ages can take advantage of everything winter has to offer.
Edmonton #WinterCity

• **Sunshine**: Buildings and city blocks should be arranged to maintain exposure to direct sun, especially from the south.

• **Shelter from the wind**: Short blocks, with staggered corners and mid-block courtyards, reduce the impact of wind.

• **Overhead shelters**: Awnings, canopies and colonnades all help create welcoming microclimates.

• **Colour and light**: Architecture, as well as public art, should use bright colours to provide visual interest.

• **Fire**: Open fires – as in gas-fed fire pits – can psychologically and physically warm a place up.
What’s standing in our way?

The law.
GETTING WALKABLE IN WINTER WITH LAND USE LAW

FORM-BASED CODE
INSIDE OUT

USE BASED :: FORM BASED

IMAGE CREDIT: MARINA KHOURY @MARINARKHOURY
NEIGHBOURHOOD UNITS

ZONES V. COMMUNITY

IMAGE CREDIT: LÉON KRIER, THE ARCHITECTURE OF COMMUNITY
Suburban v. Sustainable

Image Credit: Prince’s Foundation for the Built Environment

Use-based

Form-based

Transit-Impervious Pods

Traditional main/high street incorporating:
- mixed use office & retail
- residential areas of flats & houses
- secondary school
Use-Based Zones do not reflect neighborhood character painted in broad brush

Image: City of Las Cruces, NM
Form-Based Illustrative plan tests out market based urban design ideas

Image credit: City of Las Cruces, NM and PlaceMakers
Zoning Map

Allows character-based urban design to be enabled by right

Image:
City of Las Cruces and PlaceMakers
TABLE 6. PRIVATE FRONTAGES

FIRST LOT LAYER REGULATIONS

COMMON LAW

<table>
<thead>
<tr>
<th>Transect District</th>
<th>T2, T2O, T3, T4, SDB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted Elements</td>
<td>porch no less than 6 feet deep</td>
</tr>
<tr>
<td>Encroachments into setback</td>
<td>Grass, groundcover, continuing without interruption, except sidewalks or driveways.</td>
</tr>
<tr>
<td>Surface Treatment</td>
<td>Special Requirements</td>
</tr>
</tbody>
</table>

FENCED LAWN

<table>
<thead>
<tr>
<th>Transect District</th>
<th>T2O, T3, T4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted Elements</td>
<td>Fences, hedges and walls</td>
</tr>
<tr>
<td>Encroachments into setback</td>
<td>80% of setback</td>
</tr>
<tr>
<td>Surface Treatment</td>
<td>Grass, groundcover</td>
</tr>
<tr>
<td>Special Requirements</td>
<td>Fences, hedges and walls shall be along frontage lines or parallel with the facade of the principal building</td>
</tr>
</tbody>
</table>

TERRACE

<table>
<thead>
<tr>
<th>Transect District</th>
<th>T2O, T4, T4O, T5L, T5, SDB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted Elements</td>
<td>May be combined with step</td>
</tr>
<tr>
<td>Encroachments into setback</td>
<td>Terraces may encroach 100% of setback, no less than 6 ft. Terraces shall be raised a minimum of 12” from average sidewalk grade.</td>
</tr>
<tr>
<td>Surface Treatment</td>
<td>Paved, terraces may be landscaped</td>
</tr>
<tr>
<td>Special Requirements</td>
<td>Ramps for wheelchair access may be located within first layer</td>
</tr>
</tbody>
</table>

FORECOURT

<table>
<thead>
<tr>
<th>Transect District</th>
<th>T4O, T5, SDB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted Elements</td>
<td>May be combined with terrace, stoop, shopfront, or gallery</td>
</tr>
<tr>
<td>Encroachments into setback</td>
<td>May recede from the frontage line a maximum of 20 feet for pedestrian entries or a maximum of 30 feet for vehicular access</td>
</tr>
<tr>
<td>Surface Treatment</td>
<td>Paved in coordination with the public frontage or with pervious materials</td>
</tr>
<tr>
<td>Special Requirements</td>
<td>Shall provide access to the main building entrance. Driveways within forecourts are limited to 20 feet in width. Portions of the driveway in the public frontage shall be limited to 12 feet in width and shall be paved in coordination with the adjacent public frontage</td>
</tr>
</tbody>
</table>
Image: City of Phoenix, AZ, DPZ, and PlaceMakers
The Codes Study is a collaborative effort led by Hazel Borys, Emily Talen, and Matthew Lambert, and contributed to by many public and private planners, tracking the prevalence of form-based codes worldwide. As of February 2017, we’ve tracked 654 codes that meet criteria established by the Form-Based Codes Institute (FBCI), as well as an additional 16 form-based guidelines. 387 of these are adopted, with others in progress. Even though form-based codes are 36 years old, 88% have been adopted since 2003.
While FBCs are 36 years old, 88% of the adopted codes were 2003 to now.

387 form-based codes were adopted from 1981 to now.
Repair, Regenerate, Restore

Walkable, Runnable, Bikeable Places

Image: Galina Tachieva and Hazel Borys
Repair, Regenerate, Restore

Sledable, Skiable, Skateable Places

Image: Galina Tachieva and Hazel Borys
PAYBACKS TO PEOPLE, PLANET, PROFIT

WALKABLE WINTER CITIES PAY
WALKABLE PLACES ARE EQUITABLE PLACES

EQUITY

IMAGE: ALBUQUERQUE © 2016 HAZEL BORYS
Walkable Urbanism & Social Equity of the 30 Largest U.S. Metros:

Scatterplot Showing the Relationship Between
Current Rankings vs. Social Equity Rankings

This scatterplot of the relative Current Walkable Urban Rankings and the Social Equity Rankings shows the desired direction any metropolitan area would want to go—toward the upper right hand corner of the chart where a metro area has both high walkable urbanism and high social equity.
EVERY 10 MINUTES OF COMMUTING REDUCES SOCIAL CAPITAL BY 10%

IMAGE: ALBUQUERQUE © 2016 HAZEL BORYS
WALKABLE NEIGHBORHOODS ARE RESILIENT

ECONOMY

IMAGE: ALBUQUERQUE © 2016 HAZEL BORYS
HOME PRICE PREMIUM AND WALKSCORE

1 POINT = $3,000 HOME VALUE

REDFIN, HOW MUCH IS A POINT OF WALK SCORE WORTH? 2016
## Home Price Premiums for Increases in Walk Score from 60 to 80

<table>
<thead>
<tr>
<th>Metro</th>
<th>Home Price Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoenix</td>
<td>$16K</td>
</tr>
<tr>
<td>Baltimore</td>
<td>$33K</td>
</tr>
<tr>
<td>Orange City</td>
<td>$41K</td>
</tr>
<tr>
<td>Portland</td>
<td>$53K</td>
</tr>
<tr>
<td>San Diego</td>
<td>$68K</td>
</tr>
<tr>
<td>Chicago</td>
<td>$78K</td>
</tr>
<tr>
<td>Atlanta</td>
<td>$84K</td>
</tr>
<tr>
<td>Denver</td>
<td>$84K</td>
</tr>
<tr>
<td>Oakland</td>
<td>$86K</td>
</tr>
<tr>
<td>National</td>
<td>$106K</td>
</tr>
<tr>
<td>Seattle</td>
<td>$116K</td>
</tr>
<tr>
<td>Boston</td>
<td>$129K</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>$129K</td>
</tr>
<tr>
<td>Washington DC</td>
<td>$133K</td>
</tr>
<tr>
<td>San Francisco</td>
<td>$188K</td>
</tr>
</tbody>
</table>
HOMES IN WALKABLE NEIGHBORHOODS

<1/2 DECLINE OF RECESSION

BROOKINGS INSTITUTION, 2011. IMAGE CREDIT: HAZEL BORYS, 2015, QUEBEC CITY.
SAVINGS ON DENSE INFRASTRUCTURE

38%

IMAGE: ALBUQUERQUE © 2016 HAZEL BORYS

Building Better Budgets, Smart Growth America, 2013
Morris Beacon for US EPA, 2010
CALGARY SAVES 33% OF COSTS

2009 CITY OF CALGARY

Compact development estimated to save Calgary $11 billion over 60 years:

Roads :: Transit :: Water :: Recreation :: Fire :: Schools
SAVINGS ON DENSE SERVICES 10%

POLICE, AMBULANCE, FIRE
SMART GROWTH DEVELOPMENT

10X MORE TAX REVENUE PER ACRE

© 2016 HAZEL BORYS
SUBURBAN SPRAWL

NOT AS CHEAP AS YOU THINK.
The hidden costs of sprawling development are paid by all Canadians

81% of Canadians live in the suburbs

New suburbs cost cities more than denser urban developments

But most cities charge developers a flat rate regardless.

HALIFAX’S POTENTIAL SAVINGS, 2010-2011

10% current income

16% current income

35%

40%

45%

50%

55%

% OF HOMES BUILT IN SUBURBS

Savings (billions)

$13.3

$17.7

$1.15

$1.475

$2.80

$5.475

$10.387

$15.867

$21.507

$6.473

$1.180

$5.475

$10.387

$15.867

$21.507

ROADS, TRANSIT, PIPES, WASTE PICKUP, POLICING, AND INFRASTRUCTURE COST MORE IN THE SUBURBS

SOLUTIONS

Making new developments pay their real costs can balance municipal finances and create more liveable communities.

Kitchens does it.

SPRAWL DWELLERS PAY ONLY HALF THE COST OF ROADS.

Suburban residents drive 3X as much as urban drivers.

81% of those 81% live in the suburbs.

If urban core growth were encouraged, big savings could be had...

CITIES = TAXPAYERS COULD SAVE MILLIONS WITH HIGHER DENSITY DEVELOPMENT

Hidden costs of automobile use

Emissions

Traffic congestion

Noise

Case studies

SMART PROSPERITY INSTITUTE, 2013

For more data and research visit sustainableprosperity.ca
GRAND FORKS, NORTH DAKOTA

DOWNTOWN DRIVES VALUE

SOURCE: WALKSCORE.COM
DOWNTOWN CASH COW

IMAGE CREDIT: CITY OF GRAND FORKS
NASHVILLE, TENNESSEE

1,150X INCOME PER ACRE

© 2013 BUILDING BETTER BUDGETS, SMART GROWTH AMERICA
## Property Values Up 3.5x Region

**Nashville, Tennessee**

2013, Richard Bernhardt, Planning Director, City of Nashville

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Davidson County</td>
<td>$49,699</td>
<td>$63,492</td>
<td>$66,270</td>
<td>33%</td>
</tr>
<tr>
<td>Form Based Code</td>
<td>$918</td>
<td>$1,553</td>
<td>$1,977</td>
<td>115%</td>
</tr>
</tbody>
</table>
EVERY $1 INVESTED IN BICYCLE OR PEDESTRIAN INFRASTRUCTURE SAVES $1.20 - $3.80 IN HEALTH CARE

CENTER FOR DISEASE CONTROL AND PREVENTION. IMAGE CREDIT: HAZEL BORYS, 2016, MONTREAL.
Family Case Study

economic and health impacts of personal choices
Walk Score

6
Out of 100

Car-Dependent
7527 Camden Harbour Dr Brantford

Overview More Amenities Your Commute

Restaurants
Cracker Barrel Old 0.97mi

Coffee
Dunkin' Donuts 1.46mi

Groceries
Walmart Supercenter 1.37mi

Shopping
Ace Hardware 2.44mi

Schools
Carlos E. Haile Mid 1.30mi

Parks
None found Add place

Books
Manatee County Libr 3.06mi

Bars
Ellenton Suds LLC 3.95mi

Entertainment
Manatee Village Hls 5.37mi

Banking
Orion Bank 2.12mi

View more amenities

Real Estate Professionals: Print a neighborhood flyer for this property

Public Transportation

Why isn’t public transit showing? About transit data

Street Smart Walk Score

Calculates your score using walking routes.
Check out your new score, we’d love your feedback.

Try Street Smart
Walk Score

**100**
Out of 100

Walker’s Paradise
181 Bannatyne Ave Winnipeg

---

**Restaurants**
- Johnny G’s Restaura 0.07km

**Coffee**
- Fyxx Espresso Bar T 0.12km

**Groceries**
- Tropica General Foo 0.31km

**Shopping**
- katch22 0.09km

**Schools**
- CAPELLI ACADEMY 0.14km

**Parks**
- Old Market Square 0.19km

**Books**
- Ragpickers Antifash 0.12km

**Pubs**
- King's Head Pub 0.22km

**Entertainment**
- Original Pictures 0.11km

**Banking**
- Crosstown Civic Cre 0.02km

---

**Public Transportation**

**Transit Score:** 89
Excellent Transit
61 nearby routes: 61 bus, 0 rail, 0 other

- .06 km - 2 Downtown Spirit (Counter-Clockwise)
- .06 km - 1 Downtown Spirit (Clockwise)
- .06 km - 15 Sargent-Mountain
- .06 km - 16 Selkirk-Osborne
- .06 km - 11 Portage-
FAMILY CASE STUDY: FLORIDA -> WINNIPEG

• 90% less carbon emissions

• $17,206 car savings

• 700 hours

• 10 pounds weight loss

• $30,000 house savings

• Real Community: PRICELESS.
Live in Season
Winnipeg

Image credit: Hazel Borys @hborys
Winnipeg
image credit: Hazel Borys @hborys
Winter is a state of mind. Get into it.

~Stephen Borys @stephenborys

Image: Raw Almond, Winnipeg
Thank you!
Hazel@PlaceMakers.com
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