TOWN OF SARATOGA 1120 HWY 73 S WI RAPIDS, WI 54494 715-325-5204	TOWN OF SARATOGA PERMIT FOR **DECK**	Application No. Parcel No.

Owner's Name:	Mailing Address:		Tel.
Contractor's Name: ☑Con☐Elec☐HVAC☐Plbg	Lic/Cert#	Mailing Address	Tel. FAX
Contractor's Name: ☐Con☑Elec☐HVAC☐Plbg	Lic/Cert#	Mailing Address	Tel. FAX

PROJECT LOCATION	Lot area Sq. ft.	1/4, 1/4, of Section ,T N,R E(or)W
Building Address:	Lot No.	Block No.

Zoning District(s)	Zoning Permit No.	Setbacks:	Front ft.	Rear ft.	Left ft.	Right ft.

PROJECT DESCRIPTION

OVER 100 SQ FT (.12 SQ FT)
$50.00 Minimum

PROJECT COST:

I agree to comply with all applicable codes, statutes and ordinances and with the conditions of this permit; understand that the issuance of the permit creates no legal liability, express or implied, on the state or municipality; and certify that all the above information is accurate. I expressly grant the building inspector, or the inspector's authorized agent, and the assessor permission to enter the premises for which this permit is sought at all reasonable hours and for any proper purpose to inspect the work which is being done.

APPLICANT'S SIGNATURE_____ **DATE SIGNED**

APPROVAL CONDITIONS: This permit is issued pursuant to the following conditions. Failure to comply may result in suspension or revocation of this permit or other penalty.

ISSUING JURISDICTION	X Town ☐ Village ☐City ☐State of: SARATOGA	Municipality Number of Dwelling Location

FEES:	PERMIT(S) ISSUED	WIS PERMIT SEAL #	PERMIT ISSUED BY:
Plan Review $_____ Inspection $_____ Wis. Permit Seal $_____ Other $_____ Total $	☑ Construction ☐ HVAC ☐ Electrical ☐ Plumbing ☐ Erosion _____		NAME DATE_____TELEPHONE NO: 715-459-8650 Cert. No.

DECK INFORMATION NEEDED

PLEASE SUBMIT WITH DECK PLAN FOR REVIEW/APPROVAL

WHAT SIZE IS YOUR DECK? _____ X _____

WHAT TYPE OF WOOD? _____TREATED WOOD _____REDWOOD _____CEDAR _____OTHER

HOW HIGH OFF THE GROUND IS THE FLOOR OF DECK? _____LESS THAN 24" _____MORE THAN 24"

WHAT SIZE IS THE FLOOR JOIST? _____2"X6" _____2"X8" _____2"X10" _____2"X12" _____OTHER

WHAT IS THE LENGTH OF THE FLOOR JOISTS? _____

WHAT IS THE SPACING OF THE FLOOR JOISTS? _____

WHAT IS THE SIZE OF THE SUPPORT BEAM? _____2-2"X6" _____2-2"X8" _____2-2"X10" _____2-2"X12" OTHER_____

HOW FAR APART ARE BEAM SUPPORTS? ____4' ___5' ___6' ___7' ___8' ____9' ____10' ____OTHER

IS YOUR DECK ATTACHED TO THE HOUSE? _____

IF YES, HOW IS LEDGER BOARD FASTENED TO HOUSE? _____3/8" LAG BOLTS _____1/2" LAG BOLTS

SPACING OF LAG BOLTS (ON CENTER) OTHER_____

WHAT SIZE DECK BOARDS ARE GOING TO BE USED? ____5/4 DECK BOARDS ____2"X4"S ____2"X6"S OTHER_____

WHAT IS THE HEIGHT OF DECK RAIL AND WHAT IS THE SPINDLE SPACING?
_____HEIGHT OF DECK RAILING _____SPINDLE SPACING

WHAT IS THE HEIGHT OF HANDRAIL ON STEPS? (REQUIRED WHEN MORE THAN 3 RISERS) _____

WHAT ARE YOUR RISER HEIGHT AND STEP WIDTHS? _____RISER HEIGHT _____STEP DEPTH (FRONT TO BACK) _____STEP WIDTH (SIDE TO SIDE)

WHAT METHOD IS GOING TO BE USED TO SECURE DECK FROM WIND UPLIFT? ____TRUSS CLIPS _____OTHER

NATIONAL ELECTRIC CODE REQUIRES MINIMUM CLEARANCES FOR ELECTRIC METERS AND OVERHEAD SERVICE WIRES (CHECK WITH ELECTRICAL INSPECTOR)

DECK INFORMATION AND REQUIREMENTS

1. HEIGHT OF DECK: All decks with height of more than 24" above grade are required to have guardrails with height of not lower than 36".

2. STAIR DETAILS: (a) Width. Stairs shall measure at least 36" in width. Handrails and associated trim may project no more than 4-½" into the required width at each side of the stairs. (b) Treads and Risers. Except for spiral stairs and winders, risers may not exceed 8" in height measured vertically from tread to tread. Treads shall be at least 9" measured horizontally from nosing to nosing. Note: This means the first tread stepping down from deck and the last tread stepping down to the ground must be uniform with other steps. Beware of the pre-cut stringers & steps that you can purchase from your local retail centers as they might not meet code on the bottom step. Within individual stairways, tread depths and riser heights may vary in uniformity by a maximum of 3/8". Variations in uniformity may not cause either dimension to be exceeded.

3. SPINDLES: Spindles are also required with a spacing of not more than 4 3/8" between spindles. If adding on to existing deck guardrails and spindle spacing must meet existing code requirements.

4. HANDRAILS AND GUARDRAILS: Handrails and guardrails shall be designed and constructed to withstand a 200 lb. load applied in any direction. Exterior handrails and guardrails shall be constructed of metal; decay resistant or pressure treated wood or shall be protected from the weather.

5. HANDRAILS: A handrail on at least one side shall be provided for a flight of stairs with more than three risers. The handrail height shall be between 30" & 38" above the nosing of the treads, measurements shall be taken from the hard-structural surface, beneath any finish material, to the top of the rail. Variations in uniformity are allowed only when a rail contacts a wall or newel post or where a turnout or volute is provided at the bottom step. Contact building inspector for requirements of angled or curved stairs.

6. GUARDRAILS: Guardrails shall be provided on all open sides of stairs consisting of more than three risers and on all open sides of decks that are more than 24" above the floor or exterior grade. Guardrails shall be constructed to prevent the through passage of a sphere with a diameter of 4 3/8" or larger. If using rope, cable or similar materials the infill shall be strung with maximum openings of 3 ½" with vertical supports a maximum of 4' apart. Infill components, balusters, and panel fillers shall withstand a horizontally applied perpendicular load of 50 lbs. on any one-foot-square area.

7. FLASHING: Decks are fastened to the house with a ledger board and using an approved flashing.

8. FOOTING: Footing must be 48” in depth and can be round or of a block design. Design footing for anticipated load, such as future roof. Decks that are free standing and do not serve an exit may set on concrete piers and must be properly cross-braced. Concrete piers shall be located on undisturbed or compacted soil, free of organic material (black dirt).

9. PROTECTION: ***ANY*** structural part of an outdoor deck including the decking needs to be decay and wood termite resistant.

10. BUILDING PERMIT REQUIRED!

RESIDENTIAL DECK CONSTRUCTION

The following excerpts from the Uniform Dwelling code (UDC) and Wisconsin Public Service (WPS) manual are provided to assist property owners and contractors in their deck construction projects. Permits and inspections are required. Please call 715-345-5312.

Decks.

SPS 321.225

Decks attached to dwellings and detached decks which serve an exit shall comply with the applicable provisions of this chapter, including but not limited to:

(1) Excavation requirements of s. SPS 321.14;
(2) Footing requirements of s. SPS 321.15 (2) (f);
(3) Frost penetration requirements of s. SPS 321.16;
(4) Load requirements of s. SPS 321.02;
(5) Stair, handrail and guardrail requirements of s. SPS 321.04; and
(6) Decay protection requirements of s. SPS 321.10.

Loads and materials

SPS 321.02

Every dwelling shall be designed and constructed in accordance with the requirements of this section.

(1) DESIGN LOADS. Every dwelling shall be designed and constructed to support the actual dead load, live loads and wind loads acting upon it without exceeding the allowable stresses of the material. The construction of buildings and structures shall result in a system that provides a complete load path capable of transferring all loads from point of origin through the load-resisting elements to the foundation.

(a) Dead Loads. Every dwelling shall be designed and constructed to support the actual weight of all components and materials.

(b) Live loads. 1. Exterior balconies, decks and porch floors shall be designed and constructed to support a 40 pound per square foot minimum live load.

For floor joist and beam calculations, see SPS 321.22 and code appendix. If you need help in calculating joist and beam sizes, consult a lumber supplier.

Footings.

SPS 321.15

(2) Size and type. Unless designed by structural analysis, unreinforced concrete footings shall comply with the following requirements:

(f) Deck footings. Decks attached to dwellings and detached decks which serve an exit shall be supported on a structural system designed to transmit and safely distribute the loads to the soil. Footings shall be sized to not exceed the allowable material stresses. The bearing area shall be at least equal to the area required to transfer the loads to the supporting soil without exceeding the bearing values of the soil.

(3) Soil-bearing capacity. No footing or foundation shall be placed on soil with a bearing capacity of less than 2,000 pounds per square foot unless the footing or foundation has been designed through structural analysis. The soil-bearing values of common soils may be determined through soil identification.

Frost protection.

SPS 321.16

(1) General.

(a) Except as allowed under sub. (2), footings and foundations, including those for ramps and stoops, shall be placed below the frost penetration level or at least 48 inches below adjacent grade, whichever is deeper.

(b) Footings may not be placed on frozen material.

(2) Exceptions.

(a) Frost protected shallow foundations shall be designed in accordance with ASCE–32 as adopted in Table 320.24-5.

(b) Portions of footings or foundations located directly under window areaways do not require frost protection provided the rest of the foundation is protected in accordance with this section.

(c) Footings and foundations may bear directly on bedrock less than 48 inches below adjacent grade provided all of the following conditions are met.

1. The rock shall be cleaned of all earth prior to placement.

2. All clay in crevices of the rock shall be removed to the level of frost penetration or to 1.5 times the width of the rock crevice, whichever is less.

3. Provisions shall be taken to prevent water from collecting anywhere along the foundation.

Stairways and elevated areas.

SPS 321.04

(1) Scope.

(a) General. Except as provided under par. (b), the following stairways shall conform to the requirements of this section.

1. Every interior and exterior stairway attached to or supported by any part of the structure covered under this code.

2. Tub access steps, unless they are an integral part of an approved plumbing product.

(b) Exceptions. The following stairways are not required to comply with the requirements of this section:

1. Stairways leading to non-habitable attics or crawl spaces.

2. Non-required stairways connecting the basement directly to the exterior of the structure without communicating with any other part of the structure.

(2) Details.

(a) Width.

1. Except for spiral staircases under subd. 2., stairways shall measure at least 36 inches in width. Handrails and associated trim may project a maximum of 4.5 inches into the required width at each side of the stairway.

2. Spiral staircases shall be at least 26 inches wide measured from the outer edge of the supporting column to the inner edge of the handrail.

(b) Riser height.

1. a. Except for spiral staircases under subd. 2., risers may not exceed 8 inches in height measured vertically from tread to tread.

b. At the top and bottom of a flight, measurement shall be taken from the top of the nosing to the finished floor surface unless the finished surface is carpeting, in which case measurement shall be made to the hard surface below the carpeting.

2. Risers in spiral staircases may not exceed 9.5 inches in height measured vertically from tread to tread.

(c) Tread depth.
1. `Rectangular treads.' Rectangular treads shall have minimum tread depth of 9 inches measured horizontally from nosing to nosing.
2. `Spiral staircase treads.' Spiral staircase treads shall have a minimum tread depth of 7 inches from nosing to nosing measured at a point 12 inches from the outer edge of the center column.
3. `Winder treads in series.' Two or more winder treads may be placed immediately adjacent to each other anywhere in a stairway provided both of the following conditions are met:
a. The winder treads shall have a minimum tread depth of 7 inches measured at a point 12 inches from the narrow end of the tread.
b. The depth of the immediately adjoining winder treads shall be equal at a point 12 inches from the narrow end of the tread or inside face of spindles or balusters.
c. Winder treads may not be used on a straight stairway.
4. `Individual winder treads.'
a. An individual winder tread may be placed between rectangular treads or at the end of a flight of rectangular treads provided the tread depth, measured at a point 12 inches from the narrow end, is equal to the tread depth of the rectangular steps in the flight.
b. There may be more than one individual winder tread in a stairway or in a flight of stairs.
c. Winder treads may not be used on a straight stairway.

(d) Headroom.
1. Stairways shall be provided with a minimum headroom clearance of 76 inches measured vertically from a line parallel to the nosing of the treads to the ceiling, soffit or any overhead obstruction directly above that line.
2. The headroom clearance shall be maintained over an intermediate landing.
3. The headroom clearance shall be maintained over a landing that is at the top or bottom of a stairway for a minimum distance of 36 inches in the direction of travel of the stairway.
(e) Uniformity.
1. Within a stairway flight, the greatest tread depth may not exceed the smallest tread depth by more than 3/8 inch and the greatest riser height may not exceed the smallest riser height by more than 3/8 inch.
2. The allowed variation in uniformity under subd. 1. may not be used to exceed the maximum riser height under par. (b) or to decrease the minimum tread depth under par. (c).
(f) Open risers. Stairways with open risers shall be constructed to prevent the through-passage of a sphere with a diameter of 4 3/8 inches or larger between any 2 adjacent treads.
(g) Walking surface. The walking surface of stair treads and landings shall be a planar surface that is free of lips or protrusions that could present a tripping hazard.
(3) Handrails and guardrails.
(a) General.
1. Stair flights with more than 3 risers shall be provided with at least one handrail for the full length of the stair flight.
2. Handrails or guardrails shall be provided on all open sides of stair flights consisting of more than 3 risers and on all open sides of areas that are elevated more than 24 inches above the floor or exterior grade.
Note: A handrail provided at 30 to 38 inches above the tread nosing meets the height requirement for a guardrail on a stairway.

3. a. Except as provided in subd. 3. b., handrails and guardrails shall be constructed to prevent the through-passage of a sphere with a diameter of 4 inches or larger.

b. The triangular area formed by the tread, riser and bottom rail shall have an opening size that prevents the through-passage of a sphere with a diameter of 6 inches or larger.

c. Rope, cable or similar materials used in handrail or guardrail infill shall be strung with maximum openings of 3½ inches with vertical supports a maximum of 4 feet apart.

Note: In some cases, the vertical supports could be simple cable stays that offer vertical support to the rope or cable span. Structural posts must be supplied to provide the rail with the minimum 200-pound load resistance, as well as to resist the tensile loads exerted by the tightened rope or cable.

4. a. Handrails and guardrails shall be designed and constructed to withstand a 200-pound load applied in any direction.

b. Handrail or guardrail infill components, balusters and panel fillers shall withstand a horizontally applied perpendicular load of 50 pounds on any one-foot-square area.

c. Glazing used in handrail or guardrail assemblies shall be safety glazing.

5. Exterior handrails and guardrails shall be constructed of metal, decay resistant or pressure-treated wood, or shall be protected from the weather.

(b) Handrails.

1. `Height.' Handrails shall be located at least 30 inches, but no more than 38 inches above the nosing of the treads. Measurement shall be taken from the hard-structural surface beneath any finish material to the top of the rail. Variations in uniformity are allowed only when a rail contacts a wall or newel post or where a turnout or volute is provided at the bottom step.

2. `Clearance.' The clearance between a handrail and the wall surface shall be at least 1½ inches.

3. `Winders.'

a. Except as provided under subd. 3. b., the required handrail on winder steps shall be placed on the side where the treads are wider.

b. Where all winder steps in a flight have a tread depth of at least 9 inches from nosing to nosing measured at a point 12 inches from the narrow end of the tread, the required handrail may be located on either side of the stairway.

4. `Projection.' Handrails and associated trim may project into the required width of stairs and landings a maximum of 4½ inches on each side.

5. `Size and configuration.' Handrails shall be symmetrical about the vertical centerline to allow for equal wraparound of the thumb and fingers.

a. Handrails with a round or truncated round cross-sectional gripping surface shall have a maximum whole diameter of 2 inches.

b. Handrails with a rectangular cross-sectional gripping surface shall have a maximum perimeter of 6¼ inches with a maximum cross-sectional dimension of 27/8 inches.

c. Handrails with other cross sections shall have a maximum cross-sectional dimension of the gripping surface of 27 /8 inches with a maximum linear gripping surface measurement of 6¼ inches and a minimum linear gripping surface of 4 inches.

Note: See appendix for further information on handrail measurement.

6. `Continuity.' Handrails shall be continuous for the entire length of the stairs except in any one of the following cases:

a. A handrail may be discontinuous at an intermediate landing.

b. A handrail may have newel posts.

c. A handrail may terminate at an intermediate wall provided the lower end of the upper rail is returned to the wall or provided with a flared end, the horizontal offset between the 2 rails is no more than 12 inches measured from the center of the rails, and both the upper and lower rails can be reached from the same tread without taking a step.

(c) Guardrails.

1. `Application.'

a. All openings between floors, and open sides of landings, platforms, balconies or porches that are more than 24 inches above grade or a floor shall be protected with guardrails.

b. The requirements under subd. 1. a. apply where insect screens are the only means of enclosure or protection for a surface that is more than 24 inches above grade or a floor.

c. For exterior applications, the 24-inch vertical measurement shall be taken from the lowest point within 3 feet horizontally from the edge of the deck, landing, porch or similar structure.

2. `Height.' Guardrails shall be located at least 36 inches above the floor. Measurement shall be taken from the hard-structural surface beneath any finish material to the top of the rail.

3. `Opening size.' Guardrails shall be constructed to prevent the through-passage of a sphere with a diameter of 4 inches or larger.

(4) Landings.

(a) Intermediate landings.

1. A level intermediate landing shall be provided in any stairway with a height of 12 feet or more.

2. Intermediate landings that connect 2 or more straight flights of stairs, or 2 flights of stairs at a right angle, shall be at least as wide as the stairway and shall measure at least 36 inches in the direction of travel.

3. Curved or irregular landing shall have a radius of at least 36 inches.

4. Curved or irregular landings shall have a minimum straight line measurement of 26 inches between the nosing of the 2 connecting treads measured at a point 18 inches from the narrow end of the landing measured along the nosing of the 2 treads.

(b) Landings at the top and base of stairs. A level landing shall be provided at the top and base of every stairs. The landing shall be at least as wide as the stairs and shall measure at least 3 feet in the direction of travel.

(c) Doors at landings.

1. Except as provided in subd. 1. a. to c., level landings shall be provided on each side of any door located at the top or base of a stairs, regardless of the direction of swing. In the following exceptions, stairways to attached garages, carports or porches are considered interior stairs:

a. A landing is not required between the door and the top of interior stairs if the door does not swing over the stairs.

b. A landing is not required between the door and the top of an interior stairs of 1 or 2 risers regardless of the direction of swing.

c. A landing is not required between a sliding glass door and the top of an exterior stairway of 3 or fewer risers.

2. The exterior landing, platform or sidewalk at an exterior doorway shall be located a maximum of 8 inches below the interior floor elevation and shall have a length of at least 36 inches in the direction of travel out of the dwelling.

Protection against decay and termites.

SPS 321.10

(1) Wood used in any of the applications under this section shall meet all of the following requirements:

(a) The wood shall be labeled, and pressure treated with preservative in accordance with an AWPA standard or shall be naturally durable and decay-resistant or shall be engineered to be decay resistant.

(b) The wood shall be pressure treated with preservative or shall be naturally termite-resistant unless additional steps are taken to make the wood termite-resistant.

(2) Wood used in the following locations shall be as required under sub. (1):

(a) Resting directly upon or embedded in earth.
(b) Floor joists or sleepers that meet all of the following conditions:
1. The joists or sleepers are protected from the weather.
2. The joists or sleepers are within 18 inches above a lower floor surface, deck or soil.
3. There is no vapor retarder that meets the requirements under s. SPS 322.38 (1) (a) between the joists or sleepers and the soil below.
Note: This situation could occur with a floor over a crawl space or when a floor is added over a patio deck or a garage slab.
(c) Floor joists exterior to the dwelling that are within 18 inches above exterior grade, unless protected with a moisture barrier.
Note: Acceptable moisture barriers for this application include ¾ -inch exterior preservative-treated plywood, or ice dam protection material listed as meeting the requirements of ASTM D 1970 or vapor retarder material, provided they are protected from physical and UV light damage.
(d) Girders that span directly over and within 12 inches of earth.
(e) Sills and rim joists that rest on concrete or masonry and are also below grade or within 8 inches above final exterior grade.
(f) Siding and sheathing in contact with concrete, masonry or earth and within 6 inches above final exterior grade.
(g) Ends of wood structural members and their shims resting on or supported in masonry or concrete walls and having clearances of less than ½ inch on the top, sides and ends.
(h) Bottom plates or sole plates of walls that rest on concrete or masonry and that are below exterior grade or less than 8 inches above final exterior grade.
(i) Columns in direct contact with concrete or masonry unless supported by a structural pedestal or plinth block at least one inch above the floor.
(j) Any structural part of an outdoor deck, including the decking.
(k) Permanent wood foundations.
(3) Wood girders that rest directly on exterior concrete or masonry shall be protected by one of the following methods:
(a) The wood shall be pressure treated with preservative or shall be a naturally durable and decay-resistant species.
(b) Material, such as pressure-treated plywood, flashing material, steel shims, or water-resistant membrane material shall be placed between the wood and the concrete or masonry.
(4) All pressure-treated wood and plywood shall be identified by a quality mark or certificate of inspection of an approved inspection agency which maintains continued supervision, testing and inspection over the quality of the product.
Note: Heartwood of redwood, cypress, black walnut, catalpa, chestnut, sage orange, red mulberry, white oak, or cedar lumber are considered by the department to be naturally decay-resistant. Heartwood of bald cypress, redwood, and eastern red cedar are considered by the department to be naturally termite resistant.
(5) Fasteners.
(a) Fasteners for pressure-preservative treated wood and fire-retardant-treated wood shall meet one of the following requirements:
1. The fastener is a steel bolt with a diameter of 0.5 inch or greater.
2. The fastener is made of stainless steel.
3. The fastener is made of hot-dipped, zinc-galvanized steel with the coating weight and thickness labeled as complying with ASTM A 153.

4. The fastener is made of steel with a mechanically-deposited zinc coating labeled as complying with ASTM B 695, Class 55 or greater.
5. The fastener has coating types and weights in accordance with the fastener manufacturer's recommendations. In the absence of the manufacturer's recommendations subd. 1., 2., 3., or 4. shall apply.
Note: "Zinc plated," "zinc coated," "chrome plated," etc., fasteners do not necessarily comply with either of these standards.
(b) When a fastener is used with a hanger or other metal fixture, the fastener shall be of the same material as the hanger or metal fixture.
Note: When separate pieces are in close contact, zinc corrodes rapidly in the presence of plain steel. Zinc corrodes much more rapidly in the presence of stainless steel.
(c) For the purposes of this section, a fastener includes nails, screws and bolts, along with nuts and washers.

Ramps.

SPS 321.045

(1) General. Every exterior or interior ramp which leads to or from an exit shall comply with the requirements of this section.

Note: See ICC/ANSI A117.1 chapter 5 for more guidelines relating to the design and construction of an accessible ramp. Under that standard, ramps along an accessible route for people with disabilities should have a slope of not more than 1-foot of rise in 12-feet of run and should have handrails on both sides of the ramp.

(2) Slope. Ramps shall not have a gradient greater than 1 in 8 or one foot of rise in 8 feet of run. Walkways with gradients less than 1 in 20 or one foot of rise in 20 feet of run are not considered to be ramps.

(3) Surface and width. Ramps shall have a slip resistant surface and shall have a minimum width of 36 inches measured between handrails.

(4) Handrails. Handrails shall be provided on all open sides of ramps. Every ramp that overcomes a change in elevation of more than 8 inches shall be provided with at least one handrail.

(a) Ramps which have a gradient greater than 8.33% or 1:12 or one foot rise in 12 feet of run and which overcome a change in elevation of more than 24 inches, shall be provided with handrails on both sides.

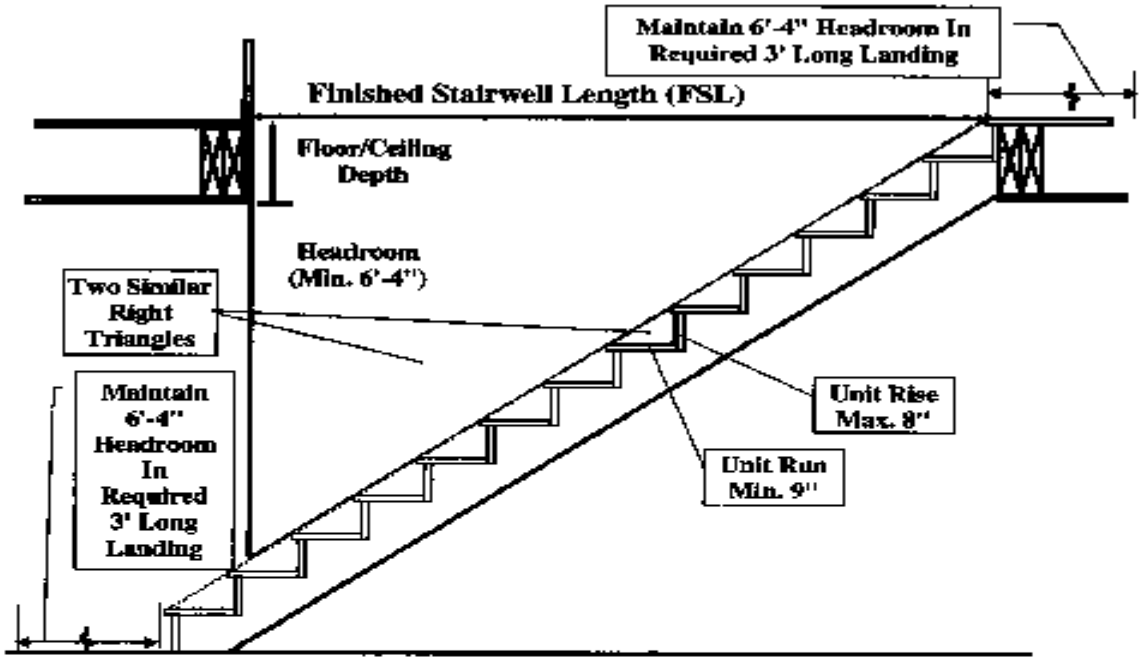
(b) Handrails shall be located so the top of the handrail is at least 30 inches, but not more than 38 inches above the ramp surface.

(c) Open-sided ramps shall have the area below the handrail protected by intermediate rails or an ornamental pattern to prevent the passage of a sphere with a diameter of 4 inches or larger.

(d) The clear space between the handrail and any adjoining wall shall be at least 1½ inches.

(5) Landings. A level landing shall be provided at the top, at the foot and at any change in direction of the ramp. The landing shall be at least as wide as the ramp and shall measure at least 3 feet in the direction of travel.

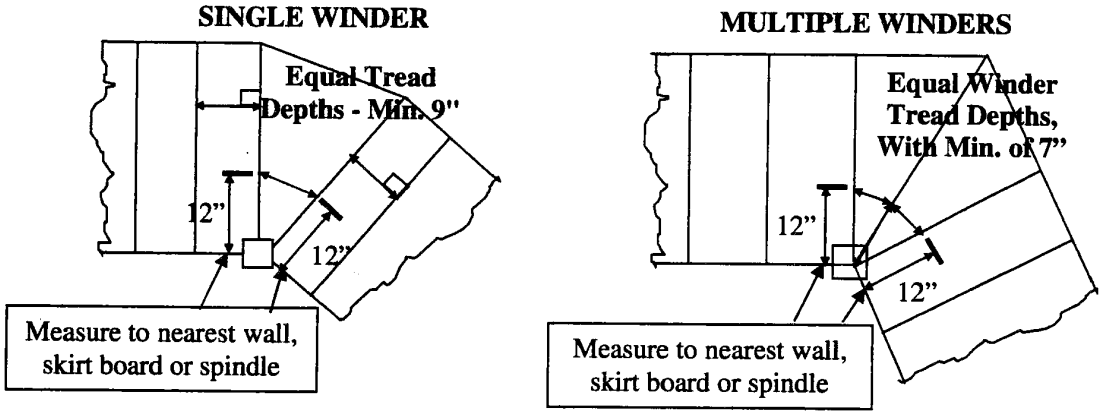
21.04(2)(d)3.&4. Planning for Stair Headroom



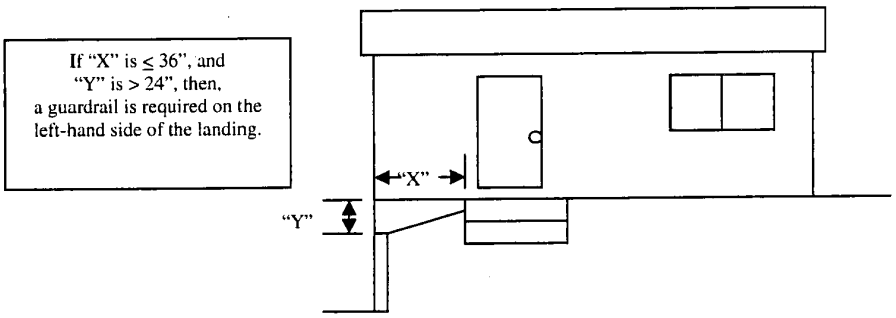
$$\frac{\text{Headroom + Floor/Ceiling Depth (HFCD)}}{\text{Unit Rise}} = \frac{\text{Finished Stairwell Length (FSL)}}{\text{Unit Run}}$$

$$\text{So to solve for FSL, FSL} = \frac{\text{Unit Run x HFCD}}{\text{Unit Rise}}$$

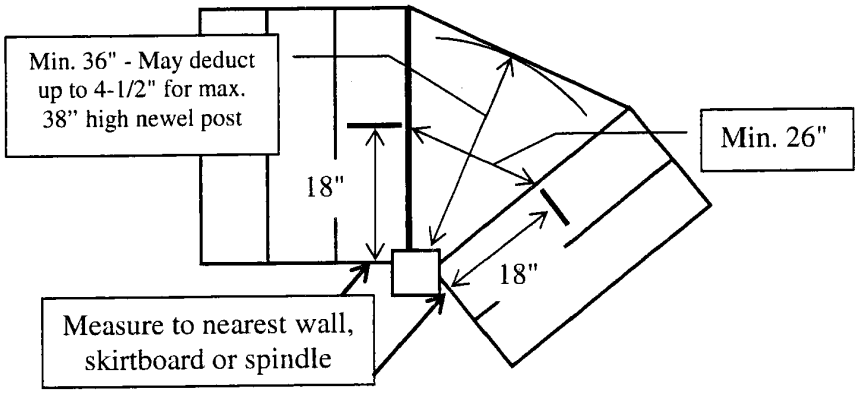
21.04(2)(c)3.&4. Winder Steps

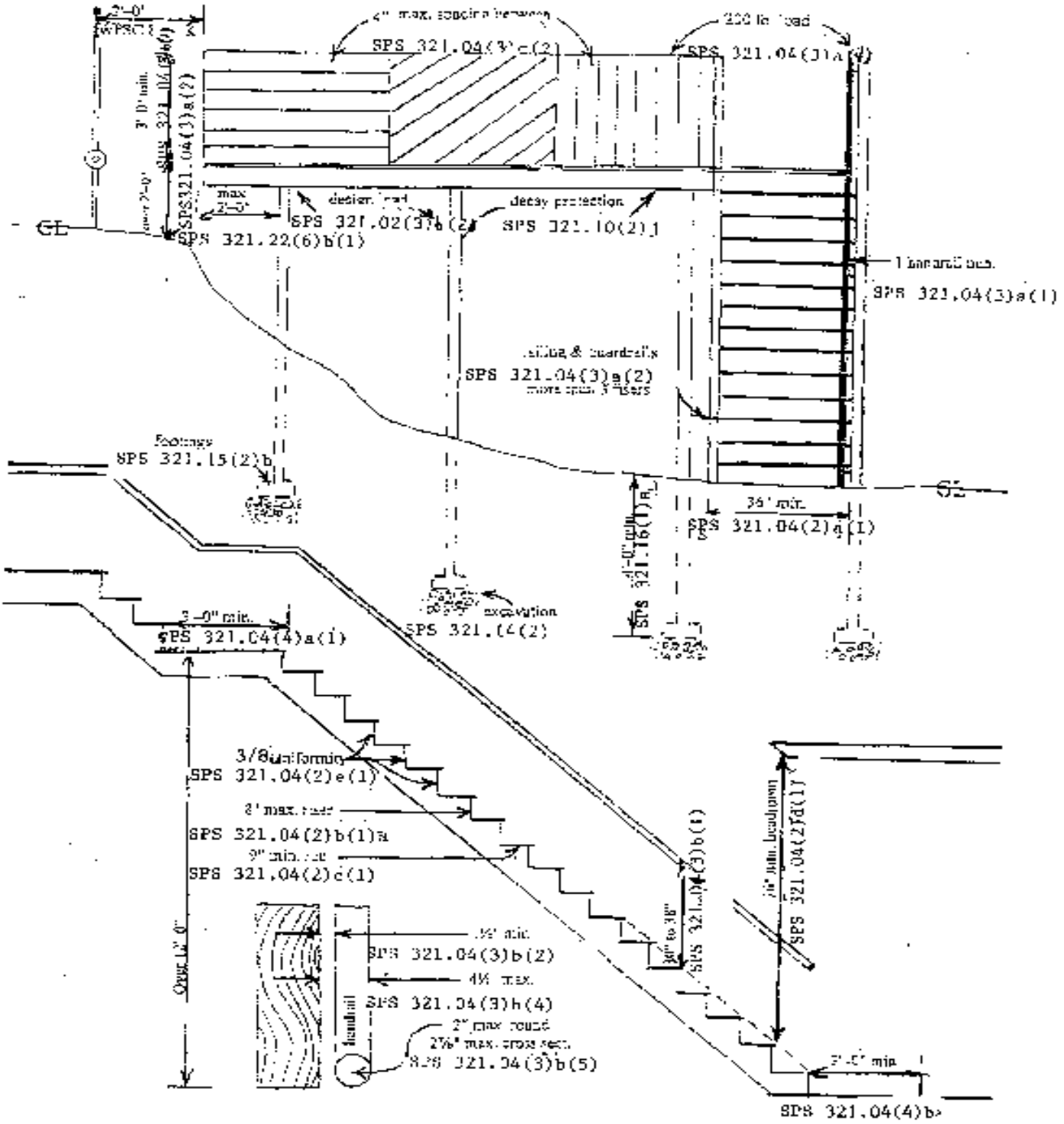


21.04(3)(c) Measurement of Grade Differences for Guardrails



21.04(4)(a) Irregular Landings




SPS 321.04(3)c(2)
SPS 321.04(3)a(2)
SPS 321.22(6)b(1)
SPS 321.02(3)b(2)
SPS 321.10(2)j
SPS 321.04(3)a(1)
SPS 321.04(3)a(2)
SPS 321.15(2)b
SPS 321.16(1)a
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SPS 321.04(3)b(1)
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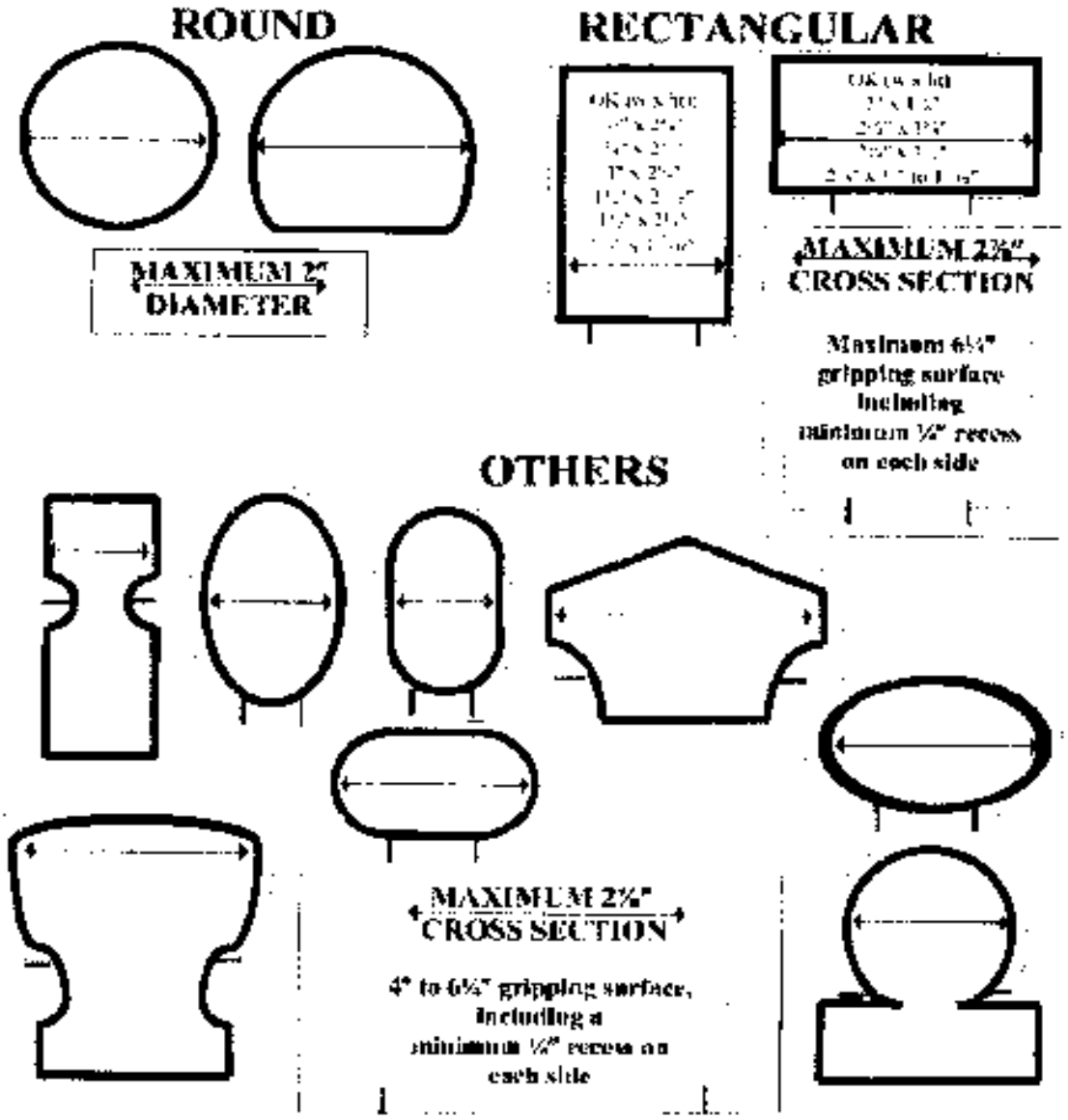
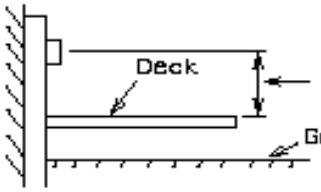
GL
footing
excavation
handrail

21.04 (3) (b) 5.
HANDRAIL SHAPES



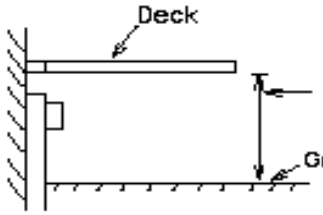
The first priority is to avoid decks when installing new underground or overhead services. This procedure is on how to deal with problems once decks are built around meters.

OPTION #1

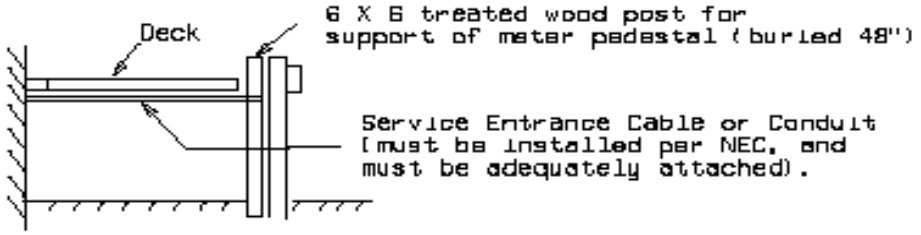


Use pedestal extensions to get the above minimum dimension. The lower dimension is critical for safety reasons when pulling or plugging in a meter in the event that a fault occurs. The connections in the pedestal must be accessible (cover able to come off). A possible solution is to design the deck so that one or two boards can be easily unscrewed to provide access to the connections.

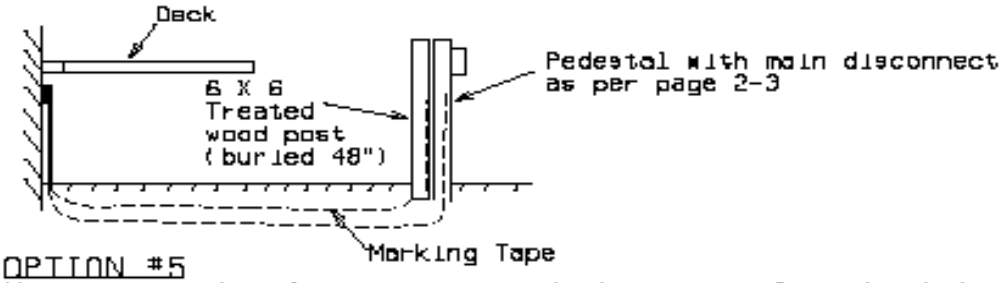
OPTION #2



OPTION #3



OPTION #4



OPTION #5

Move meter pedestal to an area on the house away from the deck. The service entrance conduit or cable can then go around the house to the old service pedestal site. Marking tape is required in Michigan for cable protection [NEC 300.5(D)] but not required for Wisconsin per COMM 16.300(2).

Revised 03/10