PREPARATION GUIDELINES

ANTERIOR CROWNS

**The amount of tooth preparation is based on the degree and location of discoloration, expectation of the outcome and the space requirements of the restorative material*

MINIMAL CROWNS (normal prep color = no mask of prep is required): Monolithic or Layered Restoration)
- e.max (bonded) and Translucent Zirconia

- 0.8 to 1.0 mm flat shoulder with round internal round angle
- 1.2 mm in the incisal 1/3rd facially
- 1.0 to 1.2 mm palatal

CONVENTIONAL CROWNS (significant prep discoloration = some masking of prep is required): Layered Restoration - e.max (cemented or bonded), and Translucent Zirconia

- 1.0 mm flat shoulder with round internal round angle
- 1.5 mm in the incisal 1/3rd facially
- 1.0 to 1.2 mm palatal

EXTENSIVE CROWNS (severe prep discoloration = total masking of prep is required): Layered Restoration is required - e.max (HO), PFM, PFZr

- 1.2 mm flat shoulder with round internal round angle
- 1.7 mm in the incisal 1/3rd facially
- 1.0 to 1.2 mm palatal

ANTERIOR VENEERS

**The amount of tooth preparation is based on the degree and location of discoloration, expectation of the outcome and the space requirements of the restorative material.*

MINIMAL VENEER – Indicated for 0-1 shade changes
Monolithic (possible micro-layer lamination): e.max

- 0.3 mm gingival 1/3rd
- 0.5 mm middle 1/3rd
- 0.7 mm incisal 1/3rd
- 2.0 mm incisal edge

CONVENTIONAL VENEER - Indicated for 1-2 shade changes (Monolithic or Laminated): e.max

- 0.5 mm gingival 1/3rd
- 0.7 mm middle 1/3rd
- 0.9 mm incisal 1/3rd
- 2.5 mm incisal edge

EXTENSIVE VENEER - Indicated for 2-3 shade changes. (Laminated veneer required - Monolithic is not recommended): e.max

- 0.8 mm gingival 1/3rd
- 1.0 mm middle 1/3rd
- 1.2 mm incisal 1/3rd
- 2.5 mm incisal edge

POSTERIOR CROWNS

ALL LAYERED RESTORATIONS - PFM, PFZr and Cemented Monolithic e.max

- 1.5 mm minimum (material thickness) cusp reduction and the central groove (occlusal reduction)
- 1.0 mm flat shoulder margin with round internal line angle (if ceramic margins are planed for PFM and PFZr)
- 1.0 to 1.5 mm axial wall reduction with 6-8 degree taper

BONDED MONOLITHIC E.MAX

- 1.0 mm minimum (material thickness) cusp reduction and central groove
- 1.0 mm flat shoulder with round internal line angle
- 1.0 mm axial wall reduction with 6-8 degree taper

HIGH STRENGTH MONOLITHIC ZIRCONIA (800-1200 Mpa)

- 1.0 mm minimum (material thickness) cusp tips and the central groove
- 0.3 to 0.5 mm gingival chamfer margin
- 1.0 mm axial wall reduction with 6-8 degree tapered for the axial walls

LOW STRENGTH MONOLITHIC ZIRCONIA (500-800 Mpa)

- 1.2 to 1.5 mm (material thickness) cusp tips and the central groove
- 0.8 to 1.0 mm flat shoulder with round internal line angle
- 1.2 to 1.5 mm axial wall reduction with 6-8 degree taper

MARYLAND BRIDGE

- 1 pontic -1 wing (abutment)
- Try to stay in enamel
- 0.5 mm chamfer
- Slight mesial and distal grooves
- Occlusion will impact the location of the finish line on the lingual

GENERAL CONCEPTS

To close the interdental spaces:

- The gingival interproximal finish line must be 0.5 to 1.0 mm sub-gingival, depending on the size of the space.
    - The finish line is never deeper than ½ the depth of the sulcus to avoid impinging on the biologic width.
- The axial interproximal finish line for veneer restorations must be 1.0 to 2.0 mm lingual to the tip of the papilla (interproximal contact), depending on the size of the space.

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