

***Maxillary RPD Design:  
TSA Practice***

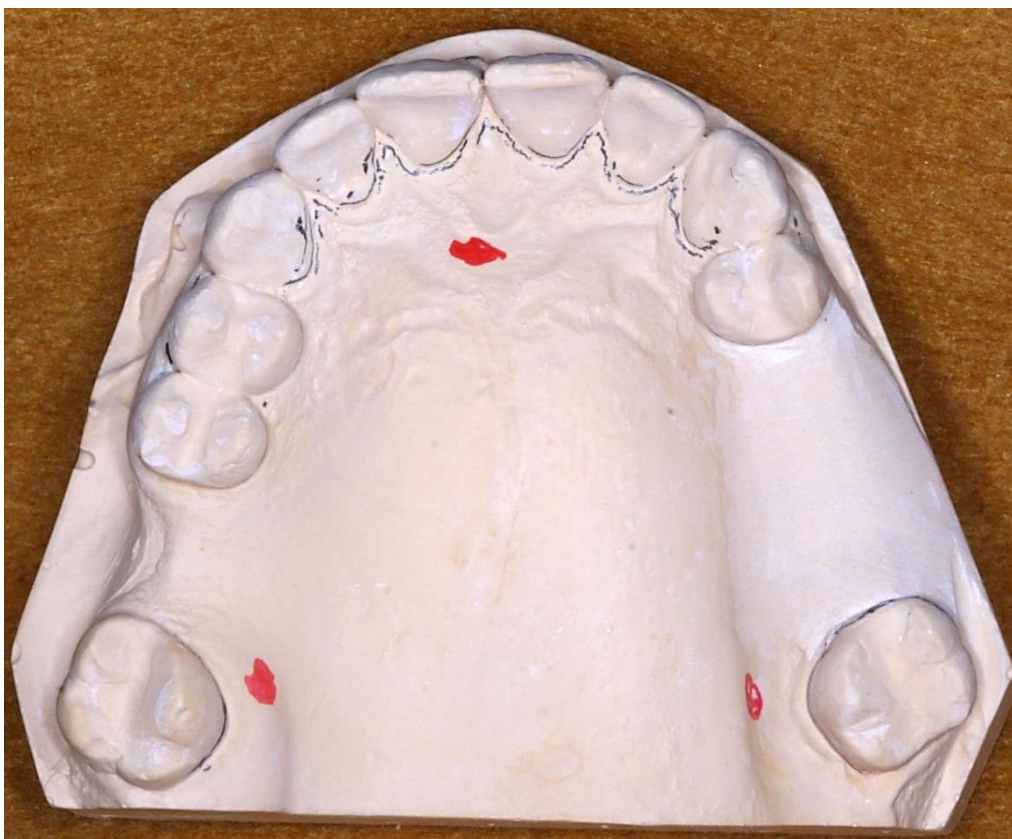
**CLINICAL SCENARIO:**

- Patient has lost 3, 13, and 14 due to fractures as a result of parafunctional bruxism. Since identification of this problem, the patient has modified this behavior and wears an occlusal guard at night.
- 12 has a large DO alloy and a mesial fracture is evident at the marginal ridge. However, the tooth is asymptomatic and responds normally to all endodontic tests.
- 4 has a small, very conservative DO composite.
- All other teeth in the arch are caries free, have no existing restorations, and are periodontally sound.
- There are no high frenal attachments.
- The patient would like to consider implant options in the future, but due to finances cannot pursue such treatment at this time. Patient does have financial resources to cover routine restorative procedures. To maintain the integrity of the arch and restore better function and esthetics, an RPD is the chosen treatment for the time being.
- Third molars are missing- do not replace.

**General instructions:**

- Use the illustrations on benchtop monitors to determine best design for cases.
- Areas of 0.010" undercut are marked in red, areas of 0.020" undercut are marked in blue. If an area has no red or blue mark, you may assume no such undercut exists.
- Survey lines are marked in black graphite.
- Use worksheets to formulate designs. Then transfer finished designs onto RPD Design Treatment Plan Form, fill out tables and answer questions. Turn in Treatment Plan form and critique sheets with self evaluation completed (both maxillary and mandibular).
- Neatness counts! Be sure to use correct color conventions.

## MX CASE



**MX CASE**

**RIGHT  
BUCCAL**



**RIGHT  
LINGUAL**





## MX CASE

LEFT  
BUCCAL



LEFT  
LINGUAL



ID # \_\_\_\_\_

DATE: \_\_\_\_\_

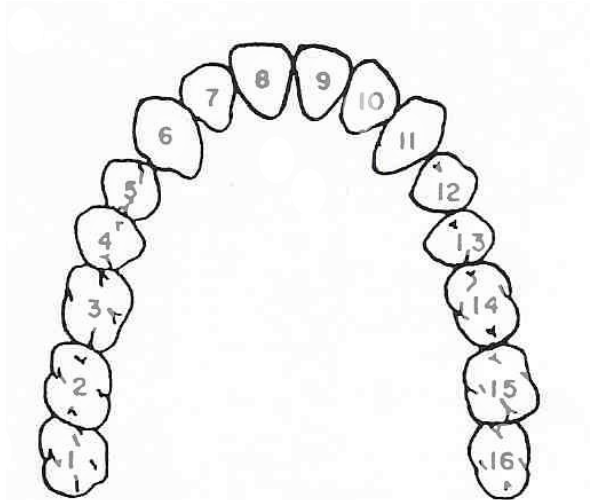
**MAXILLARY RPD DESIGN: TIMED SKILL ASSESSMENT PRACTICE**Student Self-Assessment: Circle appropriate box with **BLUE** pencil.Faculty Assessment: Circle appropriate box in **RED** and fill in the points column

STEPS	EXCELLENT (3)	ACCEPTABLE (2)	STANDARD NOT MET (0)	Points
1. Color conventions and drawing of design.	Appropriate colors used; design neatly drawn.	Some minor mistakes in component color coding; design messy but legible.	Color coding not followed; design messy to the extent that it is indiscernible.	
2. Kennedy classification.	Proper Kennedy class including modification(s) if present.	Minor omissions of modification spaces.	Kennedy class incorrectly identified.	
3. Axis of rotation.	Axis correctly identified (if present).	Partially wrong.	Axis of rotation incorrectly identified.	
4. Number and position of clasp assemblies correct for given Kennedy classification.	Correct number and position of clasp assemblies.	Correct number but minor placement errors.	Incorrect number of class assemblies or grossly incorrect placement.	
5. Appropriate choice of major connector.	Ideal major connector chosen.	Choice of major connector correct but not ideal.	Wrong choice of major connector.	
6. Indirect retention drawn where indicated.	Need for direct retention correctly identified and IR placement correct.	Not ideally placed but acceptable where indicated.	Need for IR not identified or incorrectly placed where it was indicated.	
7. Appropriate choice of retentive arms for all class assemblies.	All retentive arms chosen correctly.	Some retentive arms chosen not ideal but acceptable.	One or more inappropriate retentive arm chosen for a given scenario.	
8. Proper choice of reciprocation for all clasp assemblies.	All necessary reciprocating elements present.	Some reciprocating elements according to survey line not ideal but acceptable.	Wrong choice of reciprocation for one or more class assemblies (ei I-bar clasp assembly with reciprocation) or lack of reciprocation for other clasp assemblies.	
9. Proper choice of rest position for all clasp assemblies.	All rests appropriately chosen.	Some rests not ideal but acceptable.	Wrong rest choices for one or more class assemblies.	
10. Denture base retention correctly drawn.	Proper drawing of all denture base retention.	Minor mistakes or omissions in drawing.	Poorly drawn or absent in one or more places.	
11. Denture base drawn appropriately.	Denture base drawn where necessary.	Part of denture base drawing missing.	Lack of denture base drawing.	
12. Appropriate modifications to survey lines identified and marked in the table.	All areas requiring modifications noted and marked in the table.	Some areas not marked and listed in the table.	Major omissions of modifications of survey lines.	
13. Position and amount of undercut for each retentive arm correct and marked in the table.	All positions and amount of undercut properly entered into the table.	Some areas (position or amount of undercut) wrongly marked in the table.	Multiple areas wrongly marked in the table.	
14. All necessary guide planes identified and marked in the table.	All guide planes identified and marked in the table (anterior as ML or DL; posterior as either M or D)	Minor mistakes (ei M instead of ML on an anterior tooth) but all guide planes identified and marked in the table.	Some guide planes omitted and not marked in the table.	
15. All necessary rest preparations identified and marked in the table.	All rest preps correctly marked in the table.	Minor mistakes (ei M instead of MO for a posterior tooth) but all rests marked in the table.	Some rests omitted and not marked in the table.	
16. Identify other treatment needs such as surveyed crowns and pre-prosthetic surgery if present.	Correctly planned all other needs.	Some needs not planned but favorable outcome still expected.	Key needs necessary for prescribed design omitted.	
17. Self-evaluation reflects ability to critically assess.	Completed and accurate.	Minor discrepancies.	Inability to critically self-assess.	
<b>TOTAL POINTS:</b>				

# REMOVABLE PARTIAL DENTURE TREATMENT PLAN FORM

Bench # \_\_\_\_\_

Case \_\_\_\_\_



Comments:

## Guide plane locations

tooth	surfaces	tooth	surfaces

## Survey line modifications

tooth	surfaces	tooth	surfaces

## Rest preparation locations

tooth	surfaces	tooth	surfaces

## Opposing tooth modifications

tooth	surfaces	tooth	surfaces

## Retainers

tooth	retentive point	clasp type	undercut

## Planned Operative/Fixed Prosth Procedure

tooth	restoration

## Other planned treatment

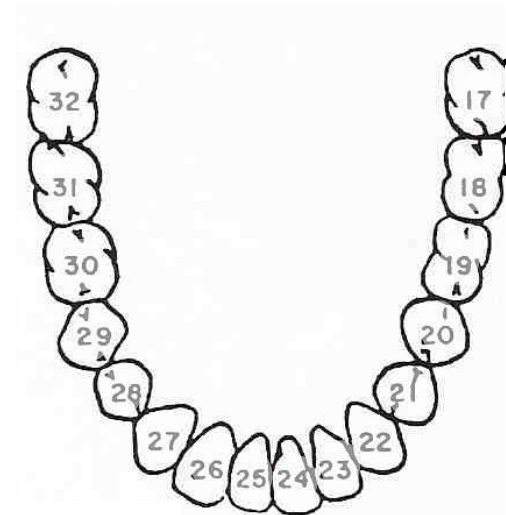

Kennedy class      Axis of rotation

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# REMOVABLE PARTIAL DENTURE TREATMENT PLAN FORM

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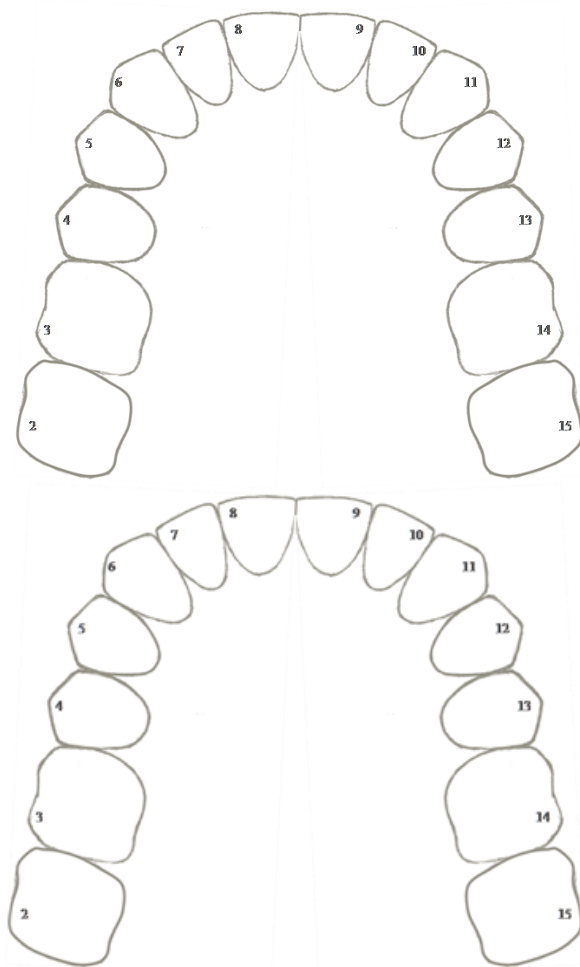
Work through steps in order suggested.

Refer to accompanying instruction for treatment of each topic.

Use first diagram to sketch, second diagram to organize design for cast and TP.

\* refers to retentive clasp assembly.

## MX RPD Design Worksheet



### Distal Extension RCA choices for posterior teeth

Clasp assemblies by:

	SUPRABULGE	INFRABULGE
Retentive clasp	May need to adjust survey line for shoulder. Unesthetic	Esthetic... But, cannot be used if: High frena attachment Bony buccal undercut Mucogingival defect CI V restoration
Rest location		
DISTAL REST	<p>WW</p> <p>More stress to tissue, less stress to tooth. More esthetic than cast circlet because larger undercut places it more apically.</p> <p>Buccal View</p>	<p>MOD T BAR</p> <p>WW and infrabulge retainers originate from the denture base retention element, away from the proximal plate. May not be enough room in short edentulous spaces.</p> <p>Buccal View</p>
MESIAL REST	<p>REVERSE CIRCLET</p> <p>May have difficulty with occlusal clearance.</p> <p>Buccal View</p>	<p>I BAR</p> <p>Special requirements for reciprocation elements and distal guiding plane. Requires physiologic adjustment</p> <p>Buccal View</p>

Clinical information:

Survey:

>Flat with floor.

>Adjust tilt to best position for proximal surfaces of abutments.

>Lightly mark survey lines.

Plan Design:

1.

>Lightly block out missing teeth.

>Proximal plates.

2.

Classification:

>III or IV: quadrilateral RCA\* distribution.

>I: bilateral RCA distribution } *rotational axis &*

>II: tripodal RCA distribution } *indirect retention rest*

3.

Clasp selection (with survey & cast):

>Existing restorations.

>Esthetics.

>Undercut location.

>Mechanics of DE.

4.

Major connector:

>MX: Strap, AP strap, full palate, horseshoe

5.

Complete framework.

6.

Tooth and soft tissue replacement:

>Denture base retention

>Tube tooth, RAP

>Denture base outline

Preliminary Design:

>Tripod study model.

>Resurvey.

>Design in brown on study model.

>Mark adjustment areas in red on study model.

>Complete TP form.