PERFORMANCE WORK STATEMENT

I. DEFINITIONS

1. VAMC: VA Maine Healthcare System, Togus and Bangor Campuses

2. Special Handling: Unusual circumstance may dictate the need for a dental order to be picked up, specially shipped and returned overnight, or processed within a shorter time frame.

3. Routine Handling: A dental laboratory work authorization that is usually performed and returned within a specified time frame.

4. Turn Around Time (TAT): The length of elapsed time between pickup of the dental lab order by the contractor until the receipt of the complete order by VA Dental Service.

5. COR: Contracting Officer's Representative.

6. SAD: Standards of Acceptable Deliverables.

7. Dental Laboratory Services: Those laboratory procedures that is required for the treatment of dental patients. These would include, but not be limited to, all laboratory fabrication aspects of complete dentures, removable partial dentures, fixed partial dentures and crowns, and dental implant prosthesis.

8. Working Day: Any twenty-four hour period of the typical administrative work week, i.e. Monday through Friday (M-F). For example, if the contractor is allowed 5 working days for a prosthesis and he picks it up on a Monday, it would be due back to VA the following Monday. Federal holidays occurring M-F are not considered a working day.

II. TERM OF CONTRACT

The proposed interim IDIQ contract period of performance is for up to (7) months with a start date of 09/01/2015.

III. SCOPE

The Contractor shall provide all resources necessary to accomplish the requirements described in the Performance Work Statement (PWS). The Contractor shall provide dental laboratory services outlined in this PWS. The contractor shall provide dental laboratory services Monday through Friday between the hours of 8:00 a.m. and 4:00 p.m. local time, all labor, transportation, materials, general dental laboratory tools, equipment and supervision required to provide Dental Prostheses to the VA Maine Healthcare System, Togus Campus: 1 VA Center, Augusta, ME 04330 and Bangor Campus: 35 State Hospital Drive, Bangor, ME 04401.

The dental laboratory services that may be authorized under this contract include, but are not limited to:

- Fabrication of porcelain fused to metal crowns and fixed partial dentures
- Fabrication of custom trays, wax rims and processing of complete dentures
- Fabrication of Full gold crowns and fixed partial dentures
- Implant supported crowns and fixed partial dentures

- Abutments
- Resin-bonded bridges
- Removable partial denture frameworks
- Diagnostic wax-ups for crown and bridge (C&B) cases
- Custom provisional C&B prostheses
- All-ceramic C&B prostheses
- Implant connecting bars (precious metal/titanium)
- C&B metal/titanium/zirconium substructures
- Application of veneering porcelain to existing/VAMC submitted metal or ceramic C&B copings and fixed partial denture (FPD) substructures.

The Contractor shall provide sufficient management to ensure that the work specified in this contract is performed efficiently, accurately, on time, and in compliance with the terms and conditions of the contract. The Government reserves the right to add additional dental products and/or services, within the scope of the original contract, via a dually signed modification.

IV. GENERAL REQUIREMENTS

The Contractor shall provide services and support to VAMC Maine as defined herein.

1. The Contractor shall fabricate dental prosthetic items in strict accordance with the dental laboratory order for the fabrication of dental prostheses, which shall include but not be limited to the following; all laboratory fabrication aspects of complete dentures, removable partial dentures, fixed partial dentures and crowns, and dental implant prosthesis.
2. Special handling may be required on specific orders and will be authorized on a case by case basis by the VAMC.
3. If local pickup is available at both the Togus and Bangor, Maine Campuses from the contractor or shipping service as part of the contract, rather than the VAMC shipping all cases to the contractor's facility, this would preferable.
4. Special/customized fabrication standards may be required on specific orders and will be authorized on a case by case basis by the VAMC.
5. The contractor will be a full service dental laboratory that could integrate the combined treatment needs of the prosthetic patient requiring simultaneous fixed, removable and implant prosthetics.
6. The normal turnaround time (in working days as defined) for dental prosthetic items shall be as outlined in the following table. In case of longer turn-around times, the Contractor must notify the COR of the delay, in writing, as soon as the delay becomes known and before the maximum number of days has expired. This notification must include the reason for delay and the requested amount of additional time.

24 Hours	**48 Hours**	**3 Days**	**5 Days**
Complete and Removable Partial Denture acrylic resin repairs	Custom impression trays	Diagnostic wax-up, (4teeth or less)	Record base and occlusal rims
Complete and Removable Partial Denture, tooth	Custom impression trays, altered cast impression	Heat cured provisional restorations (4 teeth or less)	Complete and Removable partial Denture, tooth set-up

additions/repair			
Articulation of cast	Occlusal guard, vaccuuform	Tooth Rearrangements, complete and removable partial dentures	Complete and removable partial Denture, Process and Finish
Cast duplications	Complete and Removable Partial Denture, relines	Articulation with model and die work	Valplast partial Denture, process and finish
Solder/Laser Weld	Complete and Removable Partial Denture, rebase		Valplast partial Denture, tooth set-up
	Transitional Removable Partial Denture, processed (3 teeth or less)		Processed surgical templates
			Transitional partial set-up and process
			Cast Post and Core restorations
10 Days			
Milled crowns (Zirconium, e-max)			
Custom abutments			
PFM crowns and bridges			
Cast gold crowns			
Cast partial Denture framework			
Diagnostic wax-up (4 or more teeth)			
Heat cured provisional restorations (4 or more teeth)			

7. The contractor certifies that all alloys, metals, and components of dental prostheses are in compliance with and meet FDA, ANSI and American Dental Association department standards. The Contractor must assure that dental prostheses or appliances assembled or created under the contract will not be manufactured outside of the United States.
    i. American National Standards Institute (ANSI) Requirements
    Standards by the ANSI in cooperation with the American Dental Association Department of Standards require that all materials used for fabrication of dental prostheses meet the Standard Practices for Biological Evaluation of Dental Materials.
    ii. Food and Drug Administration (FDA) Requirements

Contractor must comply with the regulations governing FDA Quality System/Good Manufacturing Practices for products distributed in the United States dental laboratories. FDA regulations prohibit the use of lead in the surface material used to fabricate dental prostheses.

8. Contractor shall provide the following services at VA Maine Healthcare System, Togus and Bangor Campuses:
    a. Forms for the authorization of work at their facility.
    b. Once daily shipping or pick-up and delivery by the contractor Monday through Friday in the Dental Clinic, to include but not limited to:
        i. All impression pouring/handling.
        ii. All necessary procedures relating to Dental Laboratory Services.
9. Contractor shall consult with the appropriate Using Service at the VAMC regarding any specific dental laboratory order.
10. Dental Laboratory will allow for dental staff and residents to arrange visits to the laboratory to demonstrate all processes and techniques. This is to be arranged on a mutually agreeable schedule.
11. Consideration will be given to include dental staff and residents in any available continuing education courses (CE course) held at the laboratory, space permitting.
12. **BUSINESS ASSOCIATE AGREEMENT (BAA):** For your information, please find the attached Business Associate Agreement (BAA) template included as part of the solicitation. The attached BAA will be requested and shall be filled out in its entirety, signed and submitted upon award. If your company has already has an active National BAA, you may include a copy of your current National BAA in place of completing the attached BAA document.

V. MATERIAL REQUIREMENTS

1. Noble Alloys (Noble Metal Content must be > 25% Gold + Platinum Group) shall be used in the fabrication of full gold crowns and fixed partial dentures (bridges) and in porcelain fused to metal crowns and fixed partial dentures. As per the American Dental Association "Revised Classification System for Alloys for Fixed Prosthodontics," www.ada.org/2190.aspx for Noble Alloys. The combined total of the metals (gold plus the platinum group) must be greater or equal to 25%). Metals of the platinum group are platinum, palladium, rhodium, iridium, osmium and ruthenium.

   The contractor shall provide porcelain fused to metal crowns and fixed partial dentures with options of metal occlusal surfaces, crown (survey) under partial denture, porcelain labial butt margin and implant crown and abutments. The contract laboratory shall identify by affixing the most recent manufacturer label to provide a description of the metal alloy components and percentages used in the fabrication of each of the requested dental prostheses. The contract laboratory shall identify in writing (per case) the type of porcelain used in the fabrication of the porcelain fused to metal dental restorations and in instances where porcelain application only is requested. The alloy used for PFM restorations shall contain less than 30% silver.

   Non-precious alloys (nickel and beryllium free) shall be used for resin-bonded fixed partial dentures.

Cast metal partial denture frameworks shall be fabricated of a cobalt chromium metal alloy; free of nickel and beryllium.

The VA system uses multiple implant systems. The contractor will provide all parts for fabrication.

VI. ORDERING

1. Ordering Procedures - Task orders against this contract will be placed in accordance with this section. All task orders placed incorporate all terms and conditions of the contract.
2. Ordering Officials - Task orders will be placed by ordering officials designated by the Contracting Officer (CO). Ordering officials will be from the Togus and Bangor facilities VA Medical Center. The ordering facility will issue a prescription to a contractor. Prescriptions constitute binding orders under this contract.

VII. SHIPPING/DELIVERY

1. Government Packaging – Orders sent to contractors will include the following information:
   (i) Date of order.
   (ii) VAMC Case Number
   (ii) Contract number and order number.
   (iii) For supplies and services, description and quantity as per prescription.
   (iv) Place of delivery or performance (including consignee).
   - A copy of the Manifest listing all of the cases being shipped will also be included.

   (v) Accounting and Appropriation data

2. Shipping Method - Contractor shall either hand deliver or use "Next Day" mail or equivalent overnight express delivery service for all products. Return shipping costs shall be the responsibility of the Contractor. Signature confirmation is required.

   All shipping and handling charges, if applicable, are required to be included as part of the line item pricing. The Government will not pay the shipping and handling charges separately and if invoiced, the shipping charges will be rejected.

3. Pick-Up and Shipping Locations:
   1. VA Maine Healthcare System,
      Togus Campus
      1 VA Center
      Augusta, ME 04330

   2. Bangor Campus
      35 State Hospital Drive
      Bangor, ME 04401

4. Contractor Packaging - Contractor shall adhere to the following guidelines when packaging products for return to VA:

    - Remove dies from models, wrap in cotton and place in plastic containers.
    - Wrap all components individually in bubble wrap and secure.
    - Pack items securely in shipping box with sufficient bubble wrap to avoid movement during shipment.
    - All completed cases shall be disinfected and returned to the authorizing VAMC via shipping methods defined above in Section VI (2).
    - Contractor must identify the specific type of metal used in each prosthesis with the shipment.

5. Contents - Contractor shall include the following items in each returned product to VA:

    - All original materials supplied by VA
    - Chain of custody from receipt of items to packaging for shipment
    - Itemized non-payable invoice or packing list as detailed in Section IX.
    - A copy or original of the manufacturer label, to provide a description of the metal alloy components and percentages used in the fabrication of each of the requested dental products. Contractor shall identify in writing (per case), the type of porcelain used in the fabrication of the porcelain fused to metal dental restorations
    - A copy of the original lab prescription from the authorizing VAMC

6. Delinquency - Delinquent delivery shall not exceed 5% of the number of orders placed per batch, per quarter, and/or the total number of orders placed for this contract period (year).

VIII. QUALIFICATIONS, LICENSES AND INSPECTION OF CONTRACTOR

1. The VISN 1 contracting officer reserves the right to thoroughly inspect and investigate the contractor's and subcontractor's facilities and other qualifications.
2. The contractor and all sub-contractor's facilities shall have all licenses, permits and certifications as required by local and state authorities. Current copies of these must be provided to the contracting officer upon request.

IX. QUALITY

All dental prostheses returned from the contracted laboratory will be evaluated by the authorizing VAMC. Returned prostheses that fail to meet patient requirements will be returned to the contractor for correction, adjustment, or remake. All dental prostheses returned to the contractor for correction, adjustment, or remake shall be delivered to the authorizing VAMC within three (3) business days of date received. Communication back and forth between the VA and the Vendor is important to maintain and coordinate the quality assurance aspects of this contract.

1. The contractor will follow the Standards of Acceptable Deliverables (SAD), which is attached. Dental Laboratory procedures and products will be assessed by the COR by using the SAD of

Dental Laboratory procedures. Prostheses delivered to VA also must adhere to the following standards:

- Marginal integrity – crown and bridge prosthetic margins are complete and closed to the marked die margins
- Occlusal relationship – the prosthesis contacts the opposing teeth positively and lightly when biting
- Esthetics/anatomic contours – the prosthesis matches the shape and contour of the surrounding teeth, as well as the prescribed shade/color

Products not conforming to the stated requirements will require rework. Financial responsibility for rework is defined in paragraph IX. (2). Acceptable quantities of rework are defined in paragraph IX. (3).

2. Financial Responsibility - Prostheses returned to Contractor for rework due to Contractor error shall have necessary corrections, adjustments, or remakes performed no cost to VA. Prostheses returned to Contractor for rework due to VA error will have necessary corrections, adjustments, or remakes performed at contract rates – payable by VA. The Contractor must provide proof that the error was due to VA error for consideration of payment under the contract.
3. Frequency of Rework - Rework due to contractor error shall not exceed 5% of the number of orders placed per batch, per quarter, and/or the total number of orders placed for this contract period (year).
4. The COTR will notify the vendor in writing on a monthly basis any issues concerning quality complaints of dental laboratory items providing detailed information for the vendor to correct identified discrepancies.
5. Cleanliness - Contractor shall adhere to OSHA standards and disinfect all dental impressions and prostheses.
6. The contractor service requirements are summarized into Performance Standards that relate directly to mission-essential items. The Performance Standard briefly describes the minimum acceptable levels of service required for each requirement.

Task #	Required Service	Performance Standard	Monitoring Method	Incentive/ Disincentive
1	Provide Dental Laboratory Services as outlined in the SOW and SAD	100% Perform services in accordance with Joint Commission on the Accreditation on Healthcare Organizations (JCACO) standards, federal regulations or accreditation regulatory entities, including, but not limited to, the American Dental Association (ADA) and the Contractor's respective state, requirements for operation as a dental laboratory.	Periodic Inspection	Positive/Negative Past Performance
2	Practice quality control and safety measures, including Universal Precautions for Infectious Disease Control.	100% Perform services in accordance with Joint Commission on the Accreditation on Healthcare Organizations (JCACO) standards and Safe Workplace Regulations.	Random Inspection	Positive/Negative Past Performance
3	Provide quality and appropriate documentation regarding the services provided.	95% Perform services in accordance with the Performance Work Statement.	Customer Complaints	Poor performance may result in re-performance at Contractor's expense or termination of the contract.

X. SPECIAL REQUIREMENTS

1. The contractor shall notify the contracting officer of any proposed changes in subcontracted dental laboratories and have prior written approval (by the contracting officer) before any changes are implemented. The contractor agrees to absorb any increase in charges as a result of any changes in subcontracted laboratories.

2. Quality Control: Dental Laboratory procedures and products will be assessed by the COR by using the SAD of Dental Laboratory procedures (copy attached). Contractor shall provide with upon request a detailed description of quality control procedures. Contractor shall provide with upon request a detailed description of quality control policies and procedures followed by the contractor in the fabrication of dental prostheses.
3. The contractor will provide the following, upon request, as well as provide copies during the term of the contract to the CO and COR upon request.
    - A mutually agreeable time for pickup and delivery.
    - Telephone numbers and contact persons to be used by the using service at the VAMC to inquire about specific dental laboratory orders.
    - A narrative description of the laboratory's quality control program.
4. The contractor shall maintain acceptable services, reporting systems and quality controls as specified herein. Failure to comply with the specified terms and conditions and/or failure to perform satisfactorily may be grounds for pursuing termination of the contract.

XI. STANDARDS FOR ACCEPTABLE DELIVERABLES (SAD)

*** All standards should be in agreement with the VA Central Dental Laboratory case requirements at http://www.va.gov/ntxcdl.**

1. **Complete Dentures**
    a. Master Casts
        i. Base is 10mm thick at the thinnest portion of the cast
        ii. 3mm wide land area throughout the circumference of the cast
        iii. Sulcular depth 3mm on buccal, to follow the contour of the buccal vestibule
        iv. Sulcular depth 3mm on lingual to follow the contour of the vestibule
        v. Free of bubbles and defects
        vi. All anatomic areas of impression included on cast
        vii. Tongue area, flat across the arch
        viii. Base is parallel to the plane of occlusion or residual ridge
    b. B. Impression Trays
        i. Rigid and fabricated from the appropriate material
        ii. Covers all indicated anatomy
        iii. Handles do not interfere with border molding movements, formed as prescribed, so as not to displace facial musculature
        iv. Impression material retentive features included in the tray as prescribed
    c. Record Base
        i. Is well adapted to the residual ridge
        ii. Covers all indicated anatomy
        iii. Is extended to the land area

iv. Is adequately thick for rigidity
v. Is smooth and free of sharp area

d. Occlusion Rim, Maxillary
    i. Is fabricated from the prescribed baseplate wax
    ii. Is 10mm wide in the posterior section
    iii. The posterior sections are placed over the crest of the residual ridges
    iv. Is straight from the buccal aspect of the record base border to the buccal aspect of the occlusion rim
    v. Taper in width to 3mm in the anterior section
    vi. Anterior section angles 5 degrees anteriorly from the horizontal
    vii. Anterior is 22mm long from the extent of the labial flange
    viii. Posterior is 18mm long from the extent of the buccal flange
    ix. All wax is smooth, without voids
    x. Adheres well to the record base
    xi. The occlusal plane is flat, generally parallel to the residual ridge
e. Occlusion Rim, Mandibular
    i. Is fabricated from the prescribed baseplate wax
    ii. Is 10mm wide in the posterior section
    iii. The posterior sections are placed over the crest of the residual ridges
    iv. The posterior sections stop at the beginning of the upward incline of the residual ridges
    v. Is straight from the buccal aspect of the record base border to the buccal aspect of the occlusion rim
    vi. Tapers in width to 3mm in the anterior section
    vii. Anterior section angles 5 degrees anteriorly from the horizontal
    viii. Anterior is 18mm long from the extent of the labial flange
    ix. Posterior extends to the top of the retro-molar pad
    x. All wax is smooth, without voids
    xi. Adheres well to the record base
    xii. The occlusal plane is flat, ideally parallel to residual ridge
f. Wax Trial Dentures, Maxillary
    i. The denture teeth will be supplied by the lab, after given the shade and mould.
    ii. The midline of the arranged teeth matches the marked midline of the occlusion rims

iii. The incisal edges of the anterior teeth are placed in the same plane as the incisal surface of the occlusion rim

iv. The occlusal scheme by default is to a Class I occlusion with a balanced set-up, unless otherwise specified.

v. The inter-dental wax fills the embrasures up to the contact points.

vi. Adequate inter-dental wax fills the embrasures to allow for finishing of the acrylic resin

vii. A 4mm band of simulated attached gingiva is present, elevated to simulate buccal bone

viii. The palatal area is 2mm thick

ix. A 1mm band of wax is palatal to the posterior teeth to allow for finishing of the acrylic resin

x. Wax does not overlap onto the beginning/palatal of the ridge-lap area of the anterior teeth

xi. The opposing occlusion contacts into proper interdigitation at the established vertical dimension of occlusion

g. Wax Trial Dentures, Mandibular

i. The denture teeth will be supplied by the lab, after given the shade and mould.

ii. The midline of the arranged teeth matches the marked midline of the occlusion rims

iii. The facial surfaces of the anterior teeth are placed in the same plane as the contoured facial surface of the occlusion rims

iv. The incisal edges of the anterior teeth are placed to develop the horizontal and vertical overlap necessary for the individual clinical requirements

v. The occlusal plane of the mandibular posterior teeth is at the appropriately indicated superior aspect of the pear shaped pad.

vi. The central groove line of the mandibular posterior teeth is placed over the crest of the residual ridge

vii. The number and size of posterior teeth are in harmony with space available from the distal of canine to the beginning of the ascending ramus

viii. The inter-dental wax fills the embrasures up to the contact points

ix. Adequate inter-dental wax fills the embrasures to allow for finishing of the acrylic resin

x. A 4mm band of simulated attached gingiva is present, elevated to simulate buccal bone

xi. A 1mm band of wax is lingual to the posterior teeth to allow for finishing of the acrylic resin

xii. Wax does not overlap onto the beginning/lingual of the ridge-lap of the anterior teeth

xiii. The buccal shelf area is concave, of adequate thickness

h. Processed and Polished Prosthesis

i. The acrylic resin free of pits, fissures, and porosity

ii. The acrylic resin is polished on all non-tissue bearing areas

iii. The denture borders are anatomically complete

iv. No evidence of flash remains on the denture borders

v. The denture bases remain adequately thick for rigidity

i. Remount Casts (if required)

i. The denture borders are well supported around the buccal periphery

ii. Base is 10mm thick at the thinnest portion of the cast

iii. 4rnm wide land area throughout the circumference of the cast

2. **Removable Partial Dentures**

a. Custom Impression Trays

i. Rigid and fabricated from the appropriate material

ii. Covers all indicated anatomy

iii. Handles do not interfere with border molding movements, formed as prescribed

iv. Impression material retentive features included in the tray as prescribed

b. Rests

i. Follow the dimensions and location of the design

ii. Fill the prepared rest seats completely

iii. Are minimally 1.5mm thick

iv. Are no greater in contour than the original marginal ridge/buccal cusp ridge/fossae area

c. Minor Connector

i. Follow the dimensions and location of the design

ii. Are broad and fan shaped at the junction with the major connecter

iii. Are minimally 1.5mm thick

iv. Crosses the gingival margin at 90 degrees

d. Proximal Plates

i. Follow the dimensions and location of the design

ii. Are thinned and tapered only at the marginal ridge areas, when no rest is present

e. Major Connectors
    i. Follow the dimensions and location of the design
    ii. Have definitive external finish lines
    iii. Have definitive internal finish lines
f. Denture Base Retention
    i. Follow the dimensions and location of the design
    ii. Show a broad connection to the major connector
    iii. Are not extended more than 2mm buccal to the crest of the residual ridge
    iv. Contains a tissue-stop that contacts the residual ridge of the master cast
g. Retainers, Indirect
    i. Follow the dimensions and location of the design
    ii. Are broad and fan shaped at the junction with the major connector
    iii. Are minimally 1.5mm thick
    iv. Crosses the gingival margin at 90 degrees
h. Retainers, Direct
    i. Follow the dimensions and location of the design
    ii. Are uniformly tapered to the retentive tip
    iii. Are minimally 1.5mm wide
i. Wax Trial Removable Partial Dentures, Maxillary
    i. The midline of the arranged teeth matches the marked midline of the occlusion rim
    ii. The facial surfaces of the anterior teeth are placed in the same plane as the contoured facial surface of the occlusion rims
    iii. The incisal edges of the anterior teeth are placed in the same plane as the incisal surface of the occlusion rim
    iv. The inter-dental wax fills the embrasures up to the contact points
    v. Adequate inter-dental wax fills the embrasures to allow for finishing of the acrylic
    vi. A 4mm band of simulated attached gingiva is present to simulate buccal bone
    vii. A 1mm band of wax is palatal to the posterior teeth to allow for finishing of the acrylic resin
    viii. Wax does not overlap onto the beginning/palatal of the ridge-lap area of the anterior teeth
    ix. The opposing occlusion contacts into proper interdigitation at the established vertical dimension of occlusion

j. Wax Trial Removable Partial Dentures,
    i. The midline of the a teeth matches the marked midline of the occlusion rims.
    ii. The facial surfaces of the a teeth are placed in the same plane as the contoured facial surfaces of the occlusion rims.
    iii. The incisal edges of the anterior teeth are placed in the same plane as the incisal surface of the occlusion rim.
    iv. The occlusal plane of the mandibular posterior teeth is at the appropriately indicated superior aspect of the pear shaped pad.
    v. The central groove line of the mandibular posterior teeth is placed over the crest of the residual ridge
    vi. The number and size of posterior teeth is in harmony with space available from the distal of the canine to the beginning of the ascending ramus
    vii. The inter-dental wax fills the embrasures up to the contact points
    viii. Adequate inter-dental wax fills the embrasures to allow for finishing of the acrylic resin
    ix. A 4mm band of simulated attached gingiva is present, elevated to simulate buccal bone
    x. A 1mm band of wax is lingual to the posterior teeth to allow for finishing of the acrylic resin
    xi. Wax does not overlap onto the beginning of the ridge-lap area of the anterior teeth
    xii. The buccal shelf area is concave, of adequate thickness
k. Processed and Polished Prosthesis
    i. The acrylic resin is free of pits, fissures, and porosity
    ii. A smooth junction exists between the acrylic resin and external finish lines
    iii. The acrylic resin is polished an all non tissue bearing areas
    iv. The denture borders are anatomically complete
    v. No evidence of flash remains on the denture borders
    vi. The denture bases remain adequately thick for rigidity

3. **Fixed Partial Dentures (FPD)/Crown**
    a. Custom Trays
        i. Indicated relief has been well adapted
        ii. Is well adapted to the teeth and residual ridge Covers all indicated anatomy
        iii. Completely fills the vestibule Is extended to the beginning of the land area when indicated
        iv. Is adequate for rigidity

v. Is smooth and free of sharp areas

b. Working Casts/Dies
    i. All necessary anatomic landmarks are included
    ii. Dies are stable, retentive, and do not rotate
    iii. No bubbles or defects present in the cast
    iv. Dies are properly trimmed, retaining as much root structure as possible
    v. Die spacer is applied to prepared surfaces leaving 1 mm free at margin
    vi. All dies are numbered.

c. Cut-Back Design for Veneer Application
    i. Coping/wax crown cut-back design allows for a uniform 2mm thickness of veneer
    ii. Proximal cut-back design allows for marginal ridge veneer support
    iii. Rigid connector size is maximized, within the constraints, for periodontal health and esthetics
    iv. A uniform transition exists between metal and veneer material

d. Veneer Application
    i. Axial contours are within normal limits for the particular tooth and/or arch form
    ii. Applied veneer shade matches the requested shade per shade guide submitted or universal (Vita, Trubyte, Ivoclar, etc.) system

e. Finish/Polish of FPD/Crown
    i. Axial contours are within normal limits for the particular tooth and/or arch form
    ii. A uniform transition exists between metal and veneer material
    iii. No unsupported veneer material remains on the allow substructure
    iv. All margins are closed on the die
    v. The established vertical dimension of occlusion is maintained when the FPD/crown is articulated
    vi. The veneer material is appropriately finished (glazed, polished, etc.)
    vii. The substructure metal is highly polished

f. Surveyed Crowns for Removable Partial Denture Abutments
    i. All aspects of FPD/crown fabrication are employed
    ii. Posterior occlusal rests:
        1. are ½ the width of the buccal-lingual cusp tip width
        2. are spoon-shaped, deepest toward the center of the tooth
        3. form an acute angle with the guide at the most axial point

4. re-establish original marginal ridge contours
5. maintain occlusal contours

iii. Cingulum rests:

1. are placed in the gingival 1/3 of the crown to avoid occlusal interferences
2. provide a positive stop for the removable partial denture

iv. Guide planes:

1. include a 1mm wide band of surface parallel to the established path of withdrawal from the facial line-angle to the lingual/palatal line-angle
2. relief provided at the gingival 1/3 of the axial surface

v. Survey lines, circumferential direct retainers:

1. begin in the gingival one-third of the abutment adjacent to the rest
2. end in the occlusal 1/3 of the abutment to establish the desired undercut
3. allow for the terminal one-third of the retainer to be placed into the undercut

vi. Survey lines, bar direct retainers:

1. a "U" shaped survey line established the desired undercut

4. **Implant supported Crowns and fixed partial dentures.**

a. Laboratory able to provide <u>at cost</u> any necessary components, including:

i. Lab analogs
ii. Lab screws
iii. Temporary or permanent abutments
iv. UCLA style abutments

b. Laboratory to follow Rx indicating cemented or screw retained prosthesis fabrication.

i. Screw retained prosthesis will have a metal chimney screw hole
ii. Cemented prosthesis to follow Rx for either milled custom abutment fabrication or utilization of standard abutment, as indicated.

c. Occlusal contacts for implant supported prosthesis will be "light" by default, unless Rx indicates otherwise.