



U.S. Department  
Of Transportation  
**Federal Highway  
Administration**

400 Seventh St., S.W.  
Washington, D.C. 20590

October 7, 1997

Refer to: HNG-14/SS-68B

Mr. Lawrence E. Leahy  
President  
Xcessories Squared  
P.O. Box 135  
Auburn, IL 62615

Dear Mr. Leahy:

This is in response to your August 8 letter to Mr. Nicholas Artimovich requesting that your company's Xcessories Squared slip-base components be found acceptable when used with an existing three-bolt triangular slip base anchor plate.

Our acceptance letter SS-68, dated September 18, 1996, found your company's slip base acceptable for use on the National Highway System (NHS) when used with a single 63.5 mm square, 12 gage perforated steel tube sign support and a foundation tube with a soil plate or a concrete foundation.

We concur with your assessment that the components of the system can be expect to perform in an acceptable manner when used with an existing compatible triangular slip base. Therefore, they will e acceptable for use on existing foundation slip plates on the NHS, subject to the following conditions.

1. The foundation slip plate and the support mass are similar to those crash tested. (A drawing of the tested system is enclosed for reference. Critical components of crashworthy slip bases are the clamping force in the splice bolts, the size (angle) of the notch to receive the splice bolts, the thickness and material properties of the slip plates, and the finish of the surfaces, both those of the throats of the notches and those of the parallel slip surfaces. Care must be exercised to ensure that Xcessories Squared components used with an existing foundation slip plate are compatible and create a slip base comparable to that tested.)
2. The foundation anchor is at least as firm as the crash-tested installation covered in our acceptance letter SS-68. (In that installation the stub in strong soil was affixed with a soil plate, as in the enclosure. Your standard concrete foundation would, of course, also be acceptable.)

3. All hardware in the slip base except the foundation slip plate is replaced by the Xcessories Squared hardware kit, including a Teflon bolt retainer gasket and two stainless steel release bushings on each splice bolt.

Should you have any questions, please do not hesitate to call Mr. Artimovich at (202) 366-1331.

Sincerely yours,

Dwight A. Horne, Chief  
Federal-Aid and Design Division

Enclosure

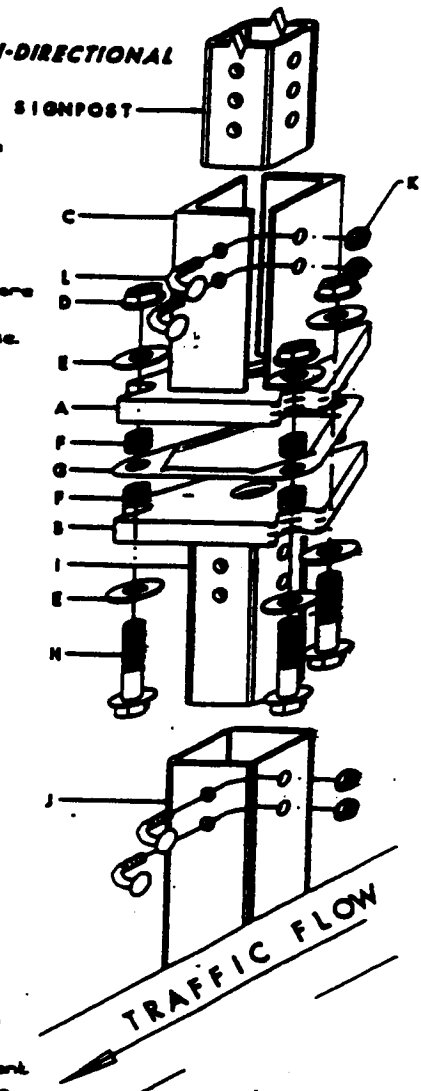
Supplemental Geometric and Roadside Design Acceptance Letter SS-68B

**INSTALLATION INSTRUCTIONS 102**  
**XCESSORIES SQUARED TRIANGULAR MULTI-DIRECTIONAL**  
**SLIP BASE ASSEMBLY**

1. 3" X 3" heavy duty 3/16" anchor LB to be buried plumb at proper distance from road and square with the road surface.
- NOTE:** Slip base may be pre-assembled and bolted into anchor prior to installing anchor in concrete (leave bottom hole in anchor 1/2" above the concrete).
2. Assemble top and bottom portions of slip base together placing belt retainers between opposing surfaces.
    - A. Be sure the closed corners of the angled post receivers (C) are near corner to traffic flow and opposite corner away from traffic flow, while point of triangle is facing oncoming traffic.
    - B. Place steel washer (E) under head of securing bolt (H), then slide bushing (F) against washer.
    - C. Insert inverted bolt (H) from the bottom up through corresponding hole in belt retainer (G) with threads up.
    - D. Slide another bushing (F) down over threads. Be sure to have a bushing on either side of belt retainer.
    - E. Add steel washer (E) and flanged nut (I) to bolt (H) with washer and nut resting on top of top plate (A). Secure finger tight.
    - F. Repeat steps B, C, D, & E for the other two belts.
    - G. Place 8" bottom stud (J) into 3" x 3" H.D. ground anchor (L) and secure with 2 large 5/16" corner bolts (M) and flanged lock nut (K).
    - H. Torque all 3 flanged nuts (I) to 48 Ft.lbs. by tightening each nut slightly until all belts approach the recommended 48 Ft.lbs. Then finish each nut to recommended torque. **NOTE: Do not tighten any single bolt to recommended torque before tightening other belts.**

- Place upright square signpost (with sign attached) completely into vertical angle receivers until holes in receivers and post line up.
- A. Secure post into receiver by placing 4 large 5/16" corner bolts (N) across both open corners of receiver inserting through receiver and upright post and exiting through 90 degree adjacent wall. Secure with 5/16" flanged locking nuts (K). Peening of extra threads may deter theft. Removal of bolts after peening requires a hammer and cold chisel.
  - B. Loosening of corner bolts and tightening of opposite side bolts (before peening) may allow for manual plumb adjustment.

**NOTE: Top of triangle plate (B) shall never exceed 4° above ground level.**



**XCESSORIES SQUARED**  
 P.O. Box 135, Auburn, IL 62615  
 Ph.(217)438-3535 • Fax (217)438-3917

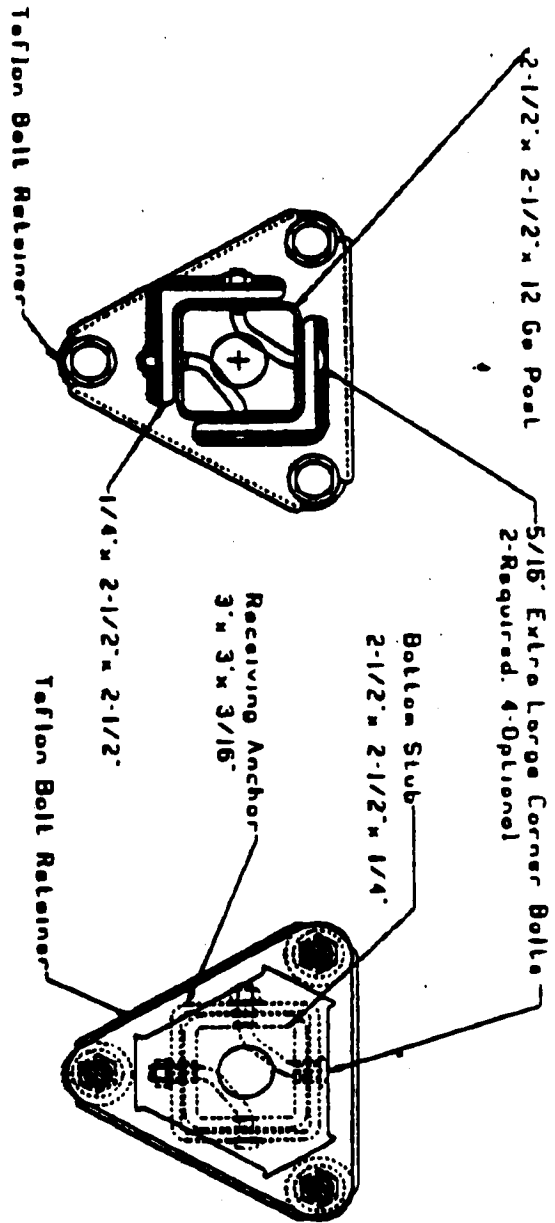
Drawn: Shears Scale 1" = 1'

Date 21 Feb. 1996

Name: Slip Base Assembly

Part No. S88-258GI A E1

Figure 3. Details of the triangular multi-directional slip base assembly.



**TOP SECTION**

P/N SBB-250GA

0" x 0" x 3/4"

**BOTTOM SECTION**

P/N SBB-250GB

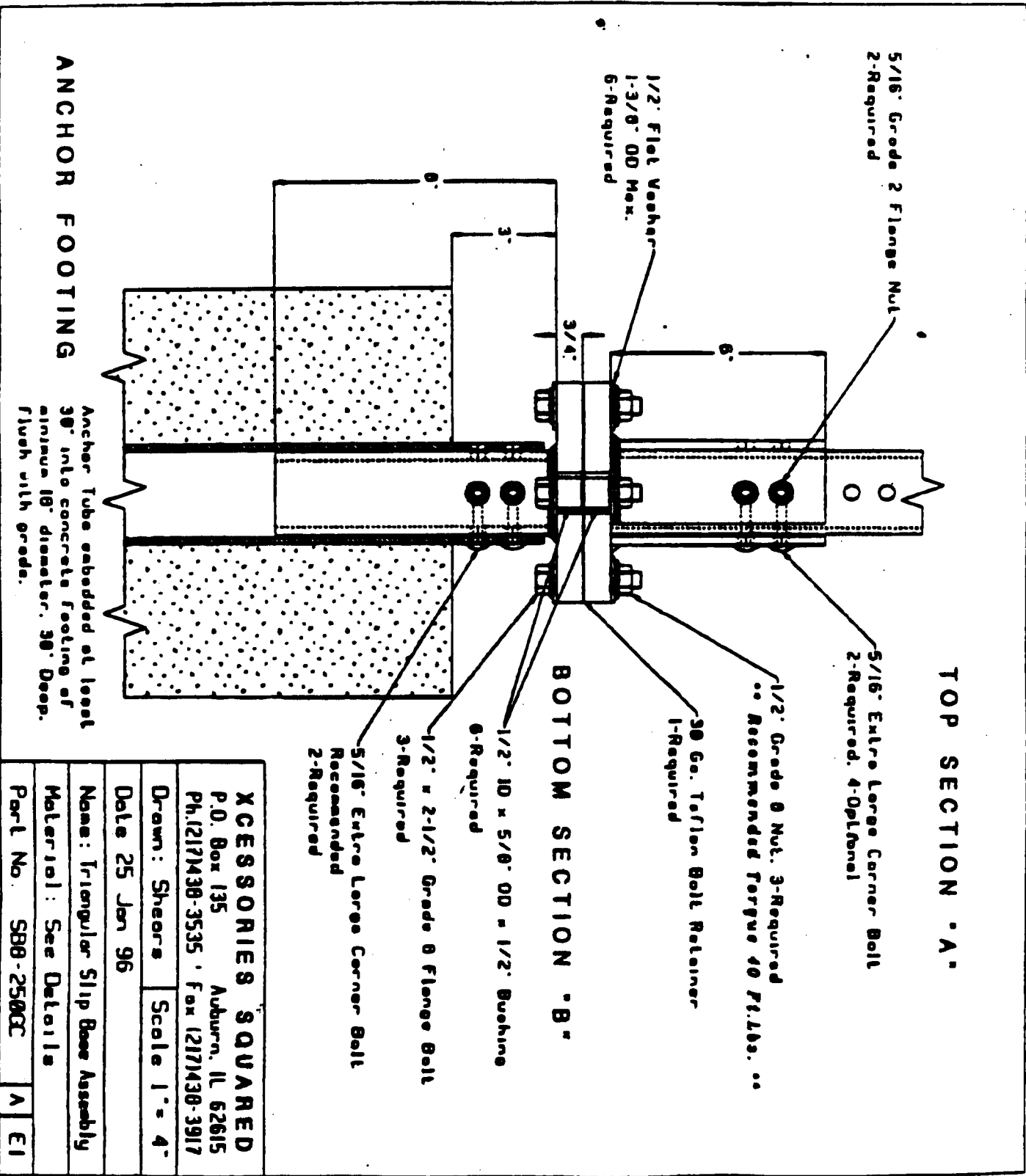
0" x 0" x 3/4"

**SLIP BASE MATERIAL SPECIFICATIONS**

1. MATCH PLATES-0" x 0" x 3/4" ASTM A36/ASME SA-36 .40-50 Carbon
2. TOP PLATE ANGLE RECEIVER-2-1/2" x 2-1/2" x 1/4" HR-P30 ASTM A-36/ASME-SA-36
3. BOTTOM PLATE ANCHOR STEM-2-1/2" x 2-1/2" x 1/4" Sq. Structural Velded Tube ASTM A500 Gr. B
4. BOLT RETAINER-.035 Teflon Coated Plastic
5. CONNECTING BOLTS-1/2" x 2-1/2" Grade 8 Flanged Bolt. UNC
6. FLANGE WASHER NUT-Grade 8, 1/2" UNC
7. FLAT STEEL WASHER-1/2" x 1-3/8"
8. RELEASE BUSHING-17/32" I.D. x 1/2" SS

STEEL PARTS GALVANIZED TO ASTM 123  
 HARDWARE PLATE TO ASTM-0633. TYPE 3 SSI

<b>XCESSORIES SQUARED</b>	
P.O. Box 135 Auburn, IL 62615	
Ph.(217)438-3535 · Fax (217)438-3917	
Drawn: Shears	Scale 1" = 4"
Date 25 Jan96	
Name: Irregular Slip Base Assembly	
Material: See Details	
Part No. SBB-250GC	A E1



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 P.O. Box 135 Auburn, IL 62615  
 Ph.(217)438-3535 Fax (217)438-3917

Drawn: Shears Scale 1" = 4"

Date 25 Jan 96

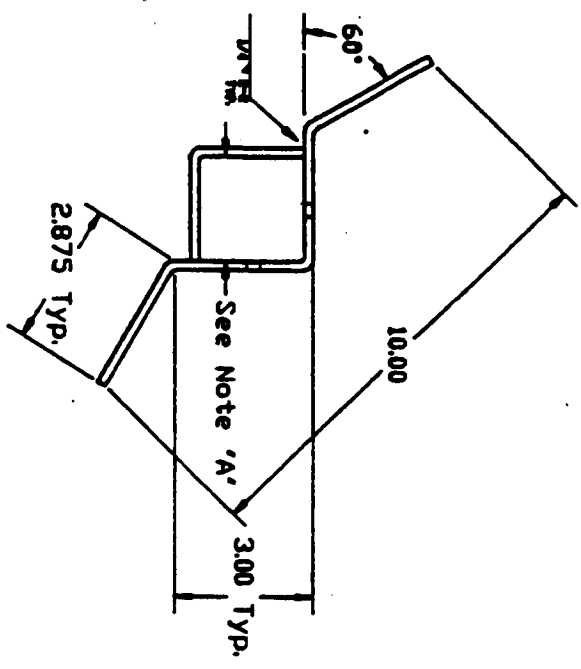
Name: Triangular Slip Base Assembly

Material: See Details

Part No. S88-2500C A EI

Direction Of Traffic

Top View



Front View

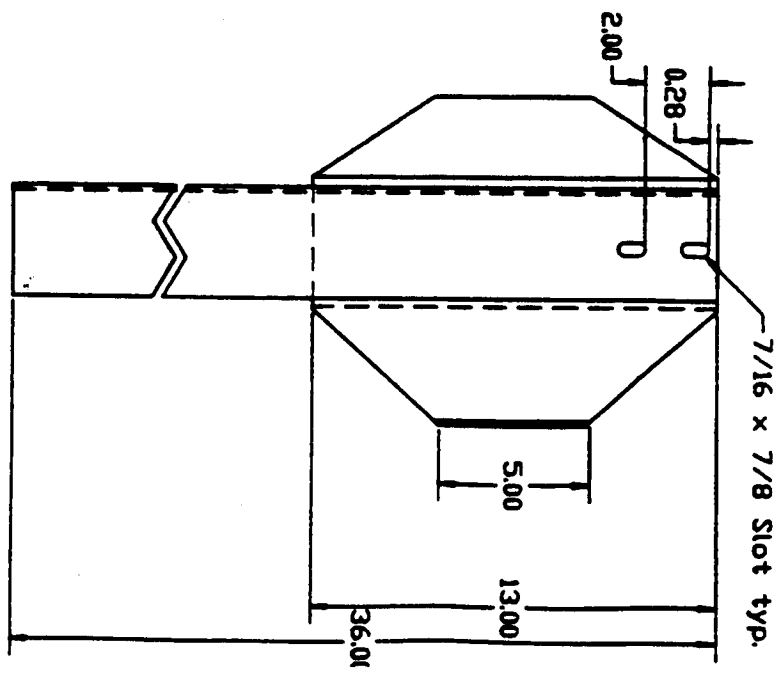


Figure 4. Details of winged anchor.

these materials must occur in the United States.

(2) The State has standard contract provisions that require the use of domestic materials and products, including steel materials, to the name or greater extent as the provisions set forth in this section.

(3) The State elects to include alternate bid provisions for foreign and domestic steel materials which comply with the following requirements. Any procedure for obtaining alternate bids based on furnishing foreign steel materials which is acceptable to the Division Administrator may be used. The contract provisions must (i) require all bidders to submit a bid based on furnishing domestic steel materials, and (ii) clearly state that the contract will be awarded to the bidder who submits the lowest total bid based on furnishing domestic steel materials unless such total bid exceeds the lowest total bid based off furnishing foreign steel materials by more than 25 percent.

(4) When steel materials are used in a project, the requirements of this section do not prevent a minimal use of foreign steel materials, if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the steel products as they are delivered to the project.

(X11) A State may request a waiver of the provisions of this section if:

(1) The application of those provisions would be inconsistent with the public interest; or

(2) Steel materials/products are not produced in the United States in sufficient and reasonably available quantities which are of satisfactory quality.

(3) A request for waiver, accompanied by supporting information, must be submitted in writing to the Regional Federal Highway Administrator (RFTA) through the FHWA Division Administrator. A request must be substantiated sufficiently in advance of the need for the waiver in order to allow time for proper review and action on the request. The RFTA will have approval authority on the request.

(3) Requests for waivers may be made for specific projects, or for certain materials or products in specific geographic areas, or for combinations of both, depending on the circumstances.

(4) The denial of the request by the RFTA may be appealed by the State to the Federal Highway Administrator (Administrator), whose action on the request shall be considered administratively final.

(5) A request for a waiver which involves nationwide public interest or availability issues or more than one FHWA region may be submitted by the RFTA to the Administrator for action.

(6) A request for waiver and an appeal from a denial of a request must include facts and justification to support the granting of the waiver. The FHWA response to a request or appeal will be in writing and made available to the public upon request. Any request for a nationwide waiver and FHWA's action on such a request may be published in the *Federal Register* for public comment.

(7) In determining whether the waivers described in paragraph (X11) of this section will be granted, the FHWA will consider all appropriate factors including, but not limited to, cost, administrative burden, and delay that would be imposed if the provision were not waived.

(d) Standard State and Federal-aid contract procedures may be used to assure compliance with the requirements of this section.

(23 U.S.C. 315, sec. 10 of Pub. L. 96-329, 96 Stat. 50, sec. 106 of Pub. L. 97-424, 98 Stat. 2120 and 49 CFR 1.140(b))

(49 FR 83164, Nov. 26, 1984, as amended at 49 FR 10821, May 3, 1984)

§ 635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

(1) Such patented or proprietary item is purchased or obtained through

Federal Highway Administration, DOT

competitive bidding with equally suitable unpatedented items; or

(2) The State highway agency certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternate exists; or

(3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material, semifinished or finished article or product that will fulfill the requirements for an item of materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are called to be approximately the same. The FRM for the project shall either contain or include by reference the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State highway agency wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bid as the lowest alternate, and such substitution results in an increase in cost, there will not be Federal-aid participation in any increase in cost.

(c) A State highway agency may require a specific material or product when there are other acceptable materials and products, when such specific choice is approved by the Division Administrator as being in the public interest. When the Division Administrator's approval is not obtained, the item will be nonparticipating unless bidding procedures are used that establish the unit price of each acceptable alternative. In this case Federal-aid participation will be based on the lowest price so established.

(d) Appendix A sets forth the FHWA requirements regarding (1) the specification of alternate types of culvert pipes, and (2) the number and types of such alternatives which must

be set forth in the specifications for various types of drainage installations.

(e) Reference in specifications and on plans to single trade name materials will not be approved on Federal-aid contracts.

§ 635.413 Guaranty and warranty clauses.

(a) Except as provided in paragraph (b) of this section, clauses that require the contractor to guarantee or warrant materials and workmanship or to otherwise maintain the work for a specified period after its satisfactory completion by the contractor and its final acceptance by the State, will not be approved for use in Federal-aid contracts. Work performed and materials replaced under such guaranty or warranty clauses after final acceptance of work are not eligible for Federal participation.

(b) Contracts which involve furnishing and/or installing electrical or mechanical equipment should generally include contract clauses that require:

(1) Manufacturer's warranties or guarantees on all electrical and mechanical equipment consistent with those provided as customary trade practice; or

(2) Contractors' warranties or guarantees providing for satisfactory in-service operation of the mechanical and electrical equipment and related components for a period not to exceed 6 months following project acceptance.

§ 635.417 Contract produced materials.

(a) Materials produced by convict labor may only be incorporated in a Federal-aid highway construction project if such materials have been:

(1) Produced by convicts who are on parole, supervised release, or probation from a prison or

(2) Produced in a qualified prison facility and the cumulative annual production amount of such materials for use in Federal-aid highway construction does not exceed the amount of such materials produced in such facility for use in Federal-aid highway construction during the 12-month period ending July 1, 1987.

(b) *Qualified prison facility* means any prison facility in which convicts,