Amend **Section 312 - Plant Mix Glassphalt Concrete Base Course** to read as follows:

"SECTION 312 - PLANT MIX GLASSPHALT CONCRETE BASE COURSE

312.01 Description. This section is for one or more courses of plant mix glassphalt concrete base (GCB) course on a prepared subgrade according to the contract.

312.02 Materials. The GCB course includes a uniform mixture of aggregate, cullet (crushed glass), and asphalt binder conforming to the contract.

The asphalt cement, aggregate, and cullet materials shall conform to:

Asphalt Cement	702.01
Aggregate for Plant Mix Asphalt Concrete Base Course	703.03
Cullet and Cullet-Aggregate Mixtures on Construction Materials	717.01

Process cullet (crushed glass) to provide a uniform gradation from fine to coarse with 100% of the material passing the 3/8-inch sieve.

Produce a combined mixture of the construction-grade cullet and natural aggregate conforming with the cullet content and debris level in Table 717-I.

Submit for acceptance, a glassphalt job-mix formula to be supplied. The job-mix formula shall show the source of aggregate, grade of bituminous material, and the proportion of crushed glass used in the mixture. Furnish only one grade of bituminous material and one crushed glass proportion for the product. Make grade or proportion changes only upon written acceptance by the Engineer.

Design the asphaltic concrete job mix formula using the procedures contained in the current edition of the Asphalt Institute's Manual Series No. 2 (MS-2):

(1) Chapter III, Marshall Method of Mix Design or

(2) Chapter IV, HVEEM Method of Mix Design.

Submit test data used to develop the job-mix formula.

The total amount of bituminous binder in the GCB course mixture shall be between 4% and 6%.

The Contractor and the Engineer may determine the asphalt content of the GCB course mixture by the nuclear gage according to Hawaii Test Method 25.

Do not start GCB course work until the Contractor submits samples of the materials intended for use and the Engineer accepts the mixture. Submit the samples at least 15 working days before the GCB course work begins.

TABLE 312-IA - JOB MIX FORMULA DESIGN CRITERIA	
HVEEM Method Mix Criteria	Binder And Surface Course
Stability, minimum	37
Swell, maximum (inch)	0.030
Percent air voids	3 - 8
Marshall Method Mix Criteria	Binder And Surface Course
Compaction, number of blows each end of specimen	75
Stability, minimum pounds	2,000
Flow, 0.01 inch	8 - 16
Percent air voids	4 - 8

TABLE 312-IB - MINIMUM PERCENT VOIDS IN MINERAL AGGREGATES			
Nominal Maximum Particle size, Inches	1.5	1.0	0.75
VMA, Percent HVEEM Method	11	12	13
VMA, Percent Marshall Method	12	13	14

312.03 Construction Requirements. Work in this section shall conform to Subsection 301.03 - Construction Requirements except as modified herein.

Upon completion of spreading operation, immediately compact the GCB course material according to Subsection 401.05(E) - Compaction.

The equipment shall conform to Subsection 401.05 - Construction Requirements except as modified herein:

(1) Use an appropriate method to add the crushed glass to the virgin material. The method shall provide a positive control on proportioning of

the crushed glass material into the mixture. The Contractor may use the same system to add crushed glass for plants equipped to add crushed reclaimed asphaltic concrete pavement. The finished mix temperature shall be at least 280 °F.

(2) Equip the paver with an electronic screed control device accepted by the Engineer. The electronic device shall include a grade controlling sensor mounted on each side of the paver. Each sensor shall take its grade reference from a 30-foot ski for the first pass. The Contractor may substitute one ski with a joint shoe riding on the finished adjacent pavement for subsequent passes.

The criteria on mat thickness shall be as follows:

(1) Contractor may spread and compact the mixture in one layer where the required thickness of GCB course is 6 inches or less.

(2) The Contractor shall spread and compact the mixture in two or more layers of approximately equal thickness where the required thickness of GCB course is more than 6 inches. The maximum compacted thickness of a layer shall not exceed 6 inches.

When crushed glass is not produced on that island, replace the GCB course with plant mix asphalt concrete base or recycled plant mix asphalt concrete according to Section 301 - Plant Mix Asphalt Concrete Base Course or Section 302 - Recycled Plant Mix Asphalt Concrete Base Course, respectively.

When the material price of the equivalent aggregate is less than the material price of the crushed glass, replace the GCB course with plant mix asphalt concrete base or recycled plant mix asphalt concrete according to Section 301 - Plant Mix Asphalt Concrete Base Course or Section 302 - Recycled Plant Mix Asphalt Concrete Base Course, respectively.

Cut samples from the compacted pavement for testing within 24 hours of lay down. The core's diameter of the cut pavement shall have a minimum of four inches. Take samples of the mixture for the full depth of the course at the location specified by the Engineer. Place and compact new material to conform to the surrounding area where samples were taken.

Apply tack coat to layers of GCB course for multiple lift construction. Tack coat shall conform to Section 407 - Bituminous Tack Coat.

312.04 Method of Measurement. The Engineer will measure the GCB course per ton according to Section 109 - Measurement and Payment, except as modified herein. The Engineer will not require conversion to tonnage based on bulk (dry) specific gravity.

312.05 Basis of Payment. The Engineer will pay for the accepted GCB course at the contract unit price per ton.

The price includes full compensation for furnishing, spreading, and compacting the GCB; sampling; restoring the area; and furnishing materials, equipment, tools, labors, and incidentals necessary to complete the work.

The Engineer will make payment under:

Pay Item	Pay Unit
Plant Mix Glassphalt Concrete Base Course	Ton"

END OF SECTION