



**STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
HONOLULU, HAWAII**

**SPECIAL PROVISIONS  
PROPOSAL  
CONTRACT, AND BOND**

**FOR**

**KUAMOO ROAD RESURFACING**

**VICINITY OF UH AGRICULTURAL EXPERIMENT  
STATION TO END OF KUAMOO ROAD**

**PROJECT NO. 580A-01-22M**

**DISTRICT OF KAWAIHAU**

**ISLAND OF KAUAI**

**FY 2023**

## **NOTICE TO BIDDERS**

(Chapter 103D, HRS)

The receiving of SEALED BIDS for KUAMOO ROAD RESURFACING, VICINITY OF UH AGRICULTURAL EXPERIMENT STATION TO END OF KUAMOO ROAD, ISLAND OF KAUAI, Project No. 580A-01-22M, will begin as advertised on April 20, 2023, in HiePRO. Bidders are to register and submit bids through HiePRO only. See the following HiePRO link for important information on registering: <https://hiepro.ehawaii.gov/welcome.html>.

Deadline to submit bids is – Thursday, May 18, 2023, at 2:00 P.M. Hawaii Standard Time (HST).

Bids received after said due date and time shall not be considered.

The scope of work consists of shoulder widening, reconstructing weakened pavement areas; cold planing; resurfacing; removing existing pavement markers, traffic signs and guardrails ; installing new pavement markers, traffic signs and guardrails, concrete gutter, hydro-mulch seeding, cleaning existing culvert and drainage structures; and dressing of shoulders. The estimated construction cost is between \$1,000,000.00 and \$5,000,000.00.

To be eligible for award, bidders must possess a valid State of Hawaii General Engineering Contractor's "A" , license at the time of bidding.

In accordance with ACT 174, SLH 2022, effective June 27, 2022, Hawaii Products Preference shall not apply to solicitations for public works construction. Therefore, the Hawaii Products Preference shall not apply to this project.

A 5% bid adjustment for bidders that are parties to apprenticeship agreements pursuant to Section 103-55.6, Hawaii Revised Statutes (HRS), is applicable to this project.

Compliance with Act 192, SLH 2011 is a requirement for this project whereby a minimum of 80% of the bidder's work force on this project **must** consist of Hawaii residents.

A pre-bid conference is scheduled for Thursday, April 27, 2023, at 10:00 A.M. HST. All prospective bidders or their representatives (employees) are encouraged to attend, but attendance is not mandatory. **Due to the impacts of COVID 19, the pre-bid meeting will be conducted virtually**. Anything said at the conference is for clarification purposes and any changes to the bid documents will be made by addendum and posted in HIePRO.

Contact Eric Fujikawa, Project Manager, by phone, at (808) 241-3015, by facsimile at (808) 241-3011 or email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov) to obtain the venue for the pre-bid meeting.

ALL requests for information (RFI) shall be received in writing via HIePRO no less than fourteen (14) calendar days before bid opening. Questions received after the deadline will not be addressed. Verbal requests for information will not receive a response.

Any protest of this solicitation shall be submitted in writing to the Director of Transportation, in accordance with §103D-701, HRS and §3-126, HAR.

Campaign contributions by State and County Contractors. Contractors are hereby notified of the applicability of Section 11-355, HRS, which states that campaign contributions are prohibited from specified State or county government contractors during the term of the contract if the contractors are paid with funds appropriated by a legislative body. For more information, contact the Campaign Spending Commission at (808) 586-0285.

The Equal Employment Opportunity Regulations of the Secretary of Labor implementing Executive Order 11246, as amended, shall be complied with on this project.

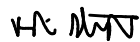
Driving While Impaired (DWI) Education. HDOT encourages all organizations contracted

with the DOT to have an employee education program preventing DWI. DWI is defined as operating a motor vehicle while impaired by alcohol or other legal or illegal substances. HDOT promotes this type of program to accomplish our mission to provide a safe environment for motorists, bicyclists and pedestrians utilizing our State highways, and expects its contractors to do so as well.

The U.S. Department of Transportation Regulation entitled “Nondiscrimination in Federally-Assisted Programs of the U.S. Department of Transportation,” Title 49, Code of Federal Regulations (CFR), Part 21 is applicable to this project. Bidders are hereby notified that the Department of Transportation will affirmatively ensure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the grounds of race, color, national origin or sex (as directed by 23 CFR Part 200).

For additional information, contact Eric Fujikawa, Project Manager, by phone at (808) 241-3015, by fax at (808) 241-3011 or email at [eric.i.fujikawa@hawaii.gov](mailto:eric.i.fujikawa@hawaii.gov)

The State reserves the right to reject any or all proposals and to waive any defects in said proposals for the best interest of the public.



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ROBIN K. SHISHIDO  
Highways Deputy Director

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## INSTRUCTIONS FOR CONTRACTOR'S LICENSING

"A" general engineering contractors and "B" general building contractors are reminded that due to the Hawaii Supreme Court's January 28, 2002 decision in Okada Trucking Co., Ltd. v. Board of Water Supply, et al., 97 Haw. 450 (2002), they are prohibited from undertaking any work, solely or as part of a larger project, which would require the general contractor to act as a specialty contractor in any area where the general contractor has no license. Although the "A" and "B" contractor may still bid on and act as the "prime" contractor on an "A" or "B" project (*See, HRS § 444-7 for the definitions of an "A" and "B" project.*), respectively, the "A" and "B" contractor may only perform work in the areas in which they have the appropriate contractor's license (*An "A" or "B" contractor obtains "C" specialty contractor's licenses either on its own, or automatically under HAR § 16-77-32.*). The remaining work must be performed by appropriately licensed entities. It is the sole responsibility of the contractor to review the requirements of this project and determine the appropriate licenses that are required to complete the project.

**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
**HIGHWAYS DIVISION**  
**HONOLULU, HAWAII**

**SPECIAL PROVISIONS**

These Special Provisions shall supplement and/or amend the applicable provisions of the Hawaii Standard Specifications for Road and Bridge Construction, 2005, hereinafter referred to as the "Standard Specifications".

1 Amend **Section 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS** to read as  
2 follows:

3  
4 **“DIVISION 100 - GENERAL PROVISIONS**

5  
6  
7 **SECTION 101 - TERMS, ABBREVIATIONS, AND DEFINITIONS**

8  
9 **101.01 Meaning of Terms.** The specifications are generally written in the  
10 imperative mood. In sentences using the imperative mood, the subject, “the  
11 Contractor shall”, is implied. In the material specifications, the subject may also  
12 be the supplier, fabricator, or manufacturer supplying material, products, or  
13 equipment for use on the project. The word “will” generally pertains to decisions  
14 or actions of the State.

15  
16 When a publication is specified, it refers to the most recent date of issue,  
17 including interim publications, before the bid opening date for the project, unless a  
18 specific date or year of issue is provided.

19  
20 **101.02 Abbreviations.** Meanings of abbreviations used in the specifications,  
21 on the plans, or in other contract documents are as follows:

22

23	AAN	American Association of Nurserymen
24		
25	AASHTO	American Association of State Highway and 26 Transportation Officials
27		
28	ACI	American Concrete Institute
29		
30	ADA	Americans with Disabilities Act
31		
32	ADAAG	Americans with Disabilities Act Accessibility Guidelines
33		
34	AGC	Associated General Contractors of America
35		
36	AIA	American Institute of Architects
37		
38	AISC	American Institute of Steel Construction
39		
40	AISI	American Iron and Steel Institute
41		
42	ANSI	American National Standards Institute
43		
44	APA	American Plywood Association
45		

46	ARA	American Railway Association
47		
48	AREA	American Railway Engineering Association
49		
50	ASA	American Standards Association
51		
52	ASCE	American Society of Civil Engineers
53		
54	ASLA	American Society of Landscape Architects
55		
56	ASTM	American Society for Testing and Materials
57		
58	AWG	American Wire Gauge
59		
60	AWPA	American Wood Preserver's Association
61		
62	AWS	American Welding Society
63		
64	AWWA	American Water Works Association
65		
66	BMP	Best Management Practice
67		
68	CCO	Contract Change Order
69		
70	CFR	Code of Federal Regulations
71		
72	CRSI	Concrete Reinforcing Steel Institute
73		
74	DCAB	Disability and Communication Access Board, Department of Health, State of Hawaii
75		
76		
77	DOTAX	Department of Taxation, State of Hawaii
78		
79	EPA	U.S. Environmental Protection Agency
80		
81	FHWA	Federal Highway Administration, U.S. Department of Transportation
82		
83		
84	FSS	Federal Specifications and Standards, General Services Administration, U.S. Department of Defense
85		
86		
87	HAR	Hawaii Administrative Rules
88		
89	HDOT	Department of Transportation, State of Hawaii
90		

91	HIOSH	Occupational Safety and Health, Department of Labor and Industrial Relations, State of Hawaii
92		
93		
94	HMA	Hot Mix Asphalt
95		
96	HRS	Hawaii Revised Statutes
97		
98	ICEA	Insulated Cable Engineers Association (formerly IPCEA)
99		
100	IMSA	International Municipal Signal Association
101		
102	IRS	Internal Revenue Service
103		
104	ITE	Institute of Transportation Engineers
105		
106	MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways, FHWA, U.S. Department of Transportation
107		
108		
109	NCHRP	National Cooperative Highway Research Program
110		
111	NEC	National Electric Code
112		
113	NEMA	National Electrical Manufacturers Association
114		
115	NFPA	National Forest Products Association
116		
117	NPDES	National Pollutant Discharge Elimination System
118		
119	OSHA	Occupational Safety and Health Administration/Act, U.S. Department of Labor
120		
121		
122	SAE	Society of Automotive Engineers
123		
124	SI	International Systems of Units
125		
126	UFAS	Uniform Federal Accessibility Standards
127		
128	UL	Underwriter's Laboratory
129		
130	USGS	U.S. Geological Survey
131		
132	VECP	Value Engineering Cost Proposal
133		
134		

135 **101.03 Definitions.** Whenever the following words, terms, or pronouns are  
136 used in the contract documents, unless otherwise prescribed therein and without  
137 regards to the use or omission of uppercase letters, the intent and meaning shall  
138 be interpreted as follows:

139  
140 **Addendum (plural - Addenda)** - A written or graphic document, including  
141 drawings and specifications, issued by the Director during the bidding period. This  
142 document modifies or interprets the bidding documents by additions, deletions,  
143 clarifications or corrections.

144  
145 **Addition** (to the contract sum) - Amount added to the contract sum by change  
146 order.

147  
148 **Advertisement** - A public announcement inviting bids for work to be performed or  
149 materials to be furnished.

150  
151 **Amendment** - A written document issued to amend the existing contract between  
152 the State and Contractor and properly executed by the Contractor and Director.

153  
154 **Award** - Written notification to the bidder that the bidder has been awarded a  
155 contract.

156  
157 **Bad Weather Day (or Unworkable Day)** - A day when weather or other conditions  
158 prevent a minimum of four hours of work with the Contractor's normal work force  
159 on critical path activities at the site.

160  
161 **Bag** - 94 pounds of cement.

162  
163 **Barrel** - 376 pounds of cement.

164  
165 **Base Course** - The layer or layers of specified material or selected material of a  
166 designed thickness placed on a subbase or subgrade to support a surface course.

167  
168 **Basement Material** - The material in excavation or embankments underlying the  
169 lowest layer of subbase, base, pavement, surfacing or other specified layer.

170  
171 **Bid** - See Proposal.

172  
173 **Bidder** - An individual, partnership, corporation, joint venture or other legal entity  
174 submitting, directly or through a duly authorized representative or agent, a  
175 proposal for the work or construction contemplated.

176  
177 **Bidding Documents (or Solicitation Documents)** - The published solicitation  
178 notice, bid requirements, bid forms and the proposed contract documents including  
179 all addenda and clarifications issued prior to receipt of the bid.

180

181 **Bid Security** - The security furnished by the bidder from which the State may  
182 recover its damages in the event the bidder breaches its promise to enter into a  
183 contract with the State, or fails to execute the required bonds covering the work  
184 contemplated, if its proposal is accepted.

185  
186 **Blue Book** - EquipmentWatch Cost Recovery (formerly known as  
187 EquipmentWatch Rental Rate Blue Book), available from EquipmentWatch, a  
188 division of Penton, Inc.

189  
190 **Calendar Day** - See Day.

191  
192 **Change Order (or Contract Change Order)** - A written order signed by the  
193 Engineer issued with or without the consent of the Contractor directing changes in  
194 the work, contract time or contract price. The purposes of a change order include,  
195 but are not limited to (1) establishing a price or time adjustment for changes in the  
196 work; (2) establishing full payment for direct, indirect, and consequential costs,  
197 including costs of delay; (3) establishing price adjustment or time adjustment for  
198 work covered and affected by one or more field orders; or (4) settling Contractor's  
199 claims for direct, indirect, and consequential costs, or for additional contract time,  
200 in whole or in part.

201  
202 **Completion** - See Substantial Completion and Final Completion.

203  
204 **Completion Date** - The date specified by the contract for the completion of all  
205 work on the project or of a designated portion of the project.

206  
207 **Comptroller** - the Comptroller of the State of Hawaii, Department of Accounting  
208 and General Services.

209  
210 **Contract** - The written agreement between the Contractor and the State, by which  
211 the Contractor shall provide all labor, equipment, and materials and perform the  
212 specified work within the contract time stipulated, and by which the State of Hawaii  
213 is obligated to compensate the Contractor at the prices set forth in the contract  
214 documents.

215  
216 **Contract Certification Date** - The Date on which the Deputy Comptroller for the  
217 State of Hawaii (or authorized representative) signs the Contract Certification.

218  
219 **Contract Completion Date** - The calendar day on which all work on the project,  
220 required by the contract, must be completed. See CONTRACT TIME.

221

222 **Contract Documents** - The contract, solicitation, addenda, notice to bidders,  
223 Contractor's bid proposal (including wage schedule, list of subcontractors and  
224 other documentations accompanying the bid), notice to proceed, bonds, general  
225 provisions, special provisions, specifications, drawings, all modifications, all written  
226 amendments, change orders, field orders, orders for minor changes in the work,  
227 the Engineer's written interpretations and clarifications issued on or after the  
228 effective date of the contract.

229  
230 **Contract Item (Pay Item)** - A specific unit of work for which there is a price in the  
231 contract.

232  
233 **Contract Modification (Modification)** - A change order that is mutually agreed to  
234 and signed by the parties to the contract.

235  
236 **Contract Price** - The amount designated on the face of the contract for the  
237 performance of work.

238  
239 **Contract Time (or Contract Duration)** - The number of calendar or working days  
240 provided for completion of the contract, inclusive of authorized time extensions.  
241 Contract time shall commence on the Start Work Date and end on the Substantial  
242 Completion Date. If in lieu of providing a number of calendar or working days, the  
243 contract requires completion by a certain date, the work shall be completed by that  
244 date.

245  
246 **Contracting Officer** - See Engineer.

247  
248 **Contractor** - Any individual, partnership, firm, corporation, joint venture, or other  
249 legal entity undertaking the execution of the work under the terms of the contract  
250 with the State.

251  
252 **Critical Path** - Longest logical sequence of activities that must be completed on  
253 schedule for the entire project to be completed on schedule.

254  
255 **Day** - Any day shown on the calendar, beginning at midnight and proceeding up  
256 to, but not including, midnight the following day. If no designation of calendar or  
257 working day is made, "day" shall mean calendar day.

258  
259 **Department** - The Department of Transportation of the State of Hawaii  
260 (abbreviated HDOT).

261  
262 **Director** - The Director of the HDOT acting directly or through duly authorized  
263 representatives.

264  
265 **Plans (or Drawings)** - The contract drawings in graphic or pictorial form including  
266 the notes, tables and other notations thereon indicating the design, location,  
267 character, dimensions, and details of the work.

268  
269 **Engineer** - The Highway Administrator, Highways Division, HDOT, or the  
270 authorized person delegated to act on the Administrator's behalf.  
271  
272 **Equipment** - All machinery, tools, and apparatus needed to complete the contract.  
273  
274 **Field Order** - A written order issued by the Engineer or the Engineer's authorized  
275 representative to the Contractor requiring a change or changes to the contract  
276 work. A field order may (1) establish a price adjustment or time adjustment; or (2)  
277 may declare that no adjustment will be made to contract price or contract time; or  
278 (3) may request the Contractor to submit a proposal for an adjustment to the  
279 contract price or contract time.  
280  
281 **Final Acceptance** - The Status of the project when the Engineer finds that the  
282 Contractor has satisfactorily completed all contract work in compliance with the  
283 contract including all plant establishment requirements, and all the materials have  
284 been accepted by the State.  
285  
286 **Final Completion** - The date set by the Director that all work required by the  
287 contract has been completed in full compliance with the contract documents.  
288  
289 **Final Inspection** - Inspection where all contract items (with the exception of  
290 Planting Period and Plant Establishment Period) are accepted by the Engineer.  
291 Substantial Completion will be issued by the Engineer based on the satisfactory  
292 results of the Final Inspection.  
293  
294 **Float** - The amount of time between when an activity can start and when an activity  
295 must start, i.e., the time available to complete non-critical activities required for the  
296 performance of the work without affecting the critical path.  
297  
298 **Guarantee** - Legally enforceable assurance of the duration of satisfactory  
299 performance of quality of a product or work.  
300  
301 **Hawaii Administrative Rules** - Rules adopted by the State in accordance with  
302 Chapter 91 of the Hawaii Revised Statutes, as amended.  
303  
304 **Highway (Street, Road, or Roadway)** - A public way within a right-of-way  
305 designed, intended, and set aside for use by vehicles, bicyclists, or pedestrians.  
306  
307 **Highways Division** - The Highways Division of the Hawaii Department of  
308 Transportation constituted under the laws of Hawaii for the administration of  
309 highway work.  
310  
311 **Holidays** - The days of each year which are set apart and established as State  
312 holidays pursuant to Chapter 8 of the Hawaii Revised Statutes, as amended.  
313

314 **Inspector** - The Engineer's authorized representative assigned to make detailed  
315 inspections of contract performance, prescribed work, and materials supplied.  
316  
317 **Laboratory** - The testing laboratory of the Highways Division or other testing  
318 laboratories that may be designated by the Engineer.  
319  
320 **Laws** - All Federal, State, and local laws, executive orders and regulations having  
321 the force of law.  
322  
323 **Leveling Course** - An aggregate mixture course of variable thickness used to  
324 restore horizontal and vertical uniformity to existing pavements or shoulders.  
325  
326 **Liquidated Damages** - The amount prescribed in Subsection 108.08 - Liquidated  
327 Damages for Failure to Complete the Work or Portions of the Work on Time, to be  
328 paid to the State or to be deducted from any payments payable to or, which may  
329 become payable to the Contractor.  
330  
331 **Lump Sum (LS)** - When used as a payment method means complete payment  
332 for the item of work described in the contract documents.  
333  
334 **Material** - Any natural or manmade substance or item specified in the contract to  
335 be incorporated in the work.  
336  
337 **Notice to Bidders** - The advertisement for proposals for all work or materials on  
338 which bids are required. Such advertisement will indicate the location of the work  
339 to be done or the character of the material to be furnished and the time and place  
340 for the opening of proposals.  
341  
342 **Notice to Proceed** - Written notice from the Engineer to the Contractor identifying  
343 the date on which the Contractor is to begin procuring materials and required  
344 permits and adjusting work forces, equipment, schedules, etc. prior to beginning  
345 physical work.  
346  
347 **Pavement** - The uppermost layer of material placed on the traveled way or  
348 shoulders or both. Pavement and surfacing may be interchangeable.  
349  
350 **Pavement Structure** - The combination of subbase, base, pavement, surfacing or  
351 other specified layer of a roadway constructed on a subgrade to support the traffic  
352 load.  
353  
354 **Payment Bond** - The security executed by the Contractor and surety or sureties  
355 furnished to the Department to guarantee payment by the Contractor to laborers,  
356 material suppliers and subcontractors in accordance with the terms of the contract.  
357

358 **Physical Work** - Physical construction activities on the project site or at  
359 appurtenant facilities including staging areas. It includes; (i) building or installing  
360 any structures or facilities including, but not limited to sign erection; BMP  
361 installation; field office site grading and building; (ii) removal, adjustment, or  
362 demolition of physical obstructions on site; (iii) any ground breaking activities; and  
363 (iv) any utility work. It does not include pre-construction environmental testing  
364 (such as water quality baseline measurements) that may be required as part of  
365 contract.

366  
367 **Pre-Final Inspection** - Inspection scheduled when Contractor notifies Engineer  
368 that all physical work on the project, with the exception of planting period and plant  
369 establishment period, has been completed. Notice from Contractor of substantial  
370 completion will suspend contract time until Contractor receives punchlist from  
371 Engineer.

372  
373 **Profile Grade** - The elevation or gradient of a vertical plane intersecting the top  
374 surface of the proposed pavement.

375  
376 **Project Acceptance Date** - The calendar day on which the Engineer accepts the  
377 project as completed. See Final Completion.

378  
379 **Proposal (Bid)** - The executed document submitted by a Bidder in response to a  
380 solicitation request, to perform the work required by the proposed contract  
381 documents, for the price quoted and within the time allotted.

382  
383 **Public Traffic** - Vehicular or pedestrian movement on a public way.

384  
385 **Punchlist** - A list compiled by the Engineer specifying work yet to be completed or  
386 corrected by the Contractor in order to substantially complete the contract.

387  
388 **Questionnaire** - The specified forms on which the bidder shall furnish required  
389 information as to its ability to perform and finance the work.

390  
391 **Request for Change Proposal** - A written notice from the Engineer to the  
392 Contractor requesting that the Contractor provide a price and/or time proposal for  
393 contemplated changes preparatory to the issuance of a field order or change order.

394  
395 **Right-of-Way** - Land, property, or property interests acquired by a government  
396 agency for, or devoted to transportation purposes.

397  
398 **Roadbed** - The graded portion of a highway within top and side slopes, prepared  
399 as a foundation for the pavement structure and shoulders.

400  
401 **Roadside** - The area between the outside edges of the shoulders and the right-of-  
402 way boundaries. Unpaved median areas between inside shoulders of divided  
403 highways and infield areas of interchanges are included.

404 **Section and Subsection** - Section or subsection shall be understood to refer to  
405 these specifications unless otherwise specified.

406  
407 **Shop Drawings** - All drawings, diagrams, illustrations, schedules and other data  
408 or information which are specifically prepared or assembled by or for the  
409 Contractor and submitted by the Contractor to illustrate some portion of the work.

410  
411 **Shoulder** - The portion of the roadway next to the traveled way for:  
412 accommodation of stopped vehicles, placement of underground facilities,  
413 emergency use, and lateral support of base and surface courses.

414  
415 **Sidewalk** - That portion of the roadway primarily constructed for use by  
416 pedestrians.

417  
418 **Solicitation** - An invitation to bid or request for proposals or any other document  
419 issued by the Department to solicit bids or offers to perform a contract. The  
420 solicitation may indicate the time and place to receive the bids or offers and the  
421 location, nature and character of the work, construction or materials to be provided.

422  
423 **Specifications** - Compilation of provisions and requirements to perform  
424 prescribed work.

425  
426 **(A) Standard Specifications.** Specifications by the State intended for  
427 general application and repetitive use.

428  
429 **(B) Special Provisions.** Revisions and additions to the standard  
430 specifications applicable to an individual project.

431  
432 **Standard Plans** - Drawings provided by the State for specific items of work  
433 approved for repetitive use.

434  
435 **State** - The State of Hawaii, its Departments and agencies, acting through its  
436 authorized representative(s).

437  
438 **State Waters** – All waters, fresh, brackish, or salt, around and within the State,  
439 including, but not limited to, coastal waters, streams, rivers, drainage ditches,  
440 ponds, reservoirs, canals, ground waters, and lakes; provided that drainage  
441 ditches, ponds, and reservoirs required as a part of a water pollution control system  
442 are excluded.

443  
444 **Start Work Date** - Date on which Contractor begins physical work on the contract.  
445 This date shall also be the beginning of Contract Time.

446  
447 **Structures** - Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing,  
448 manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation  
449 drains, and other such features that may be encountered in the work.

450

451 **Subbase** - A layer of specified material of specified thickness between the  
452 subgrade and a base.

453  
454 **Subcontract** - Any written agreement between the Contractor and its  
455 subcontractors which contains the conditions under which the subcontractor is to  
456 perform a portion of the work for the Contractor.

457  
458 **Subcontractor** - An individual, partnership, firm, corporation, joint venture or other  
459 legal entity, as licensed or required to be licensed under Chapter 444, Hawaii  
460 Revised Statutes, as amended, which enters into an agreement with the  
461 Contractor to perform a portion of the work.

462  
463 **Subgrade** - The top surface of completed earthwork on which subbase, base,  
464 surfacing, pavement, or a course of other material is to be placed.

465  
466 **Substantial Completion** - The Status of the project when the Contractor has  
467 completed the work, except for the planting period and plant establishment period,  
468 and each of the following requirements are met:

469  
470 (1) All traffic lanes (including shoulders, ramps, sidewalks and bike  
471 paths) are in their final configuration as designed and the final  
472 wearing surface has been installed;

473  
474 (2) All operational and safety devices have been installed in accordance  
475 with the contract documents including guardrails, end treatments,  
476 traffic barriers, required signs and pavement markings, drainage,  
477 parapet, and bridge and pavement structures;

478  
479 (3) All required illumination and lighting for normal and safe use and  
480 operation is installed and functional in accordance with the contract  
481 documents;

482  
483 (4) All utilities and services are connected and working;

484  
485 (5) The need for temporary traffic controls or lane closures at any time  
486 has ceased, except for lane closures required for routine  
487 maintenance;

488  
489 (6) The building, structure, improvement or facility can be used for its  
490 intended purpose.

491  
492 **Substantial Completion Date** - The date the Substantial Completion is granted  
493 by the Engineer in Writing and Contract Time stops.

494  
495 **Superintendent** - The employee of the Contractor who is responsible for all the  
496 work and is a Contractor's agent for communications to and from the State.

497

498 **Surety** - The qualified individual, firm or corporation other than the Contractor,  
499 which executes a bond with and for the Contractor to insure its acceptable  
500 performance of the contract.

501  
502 **Surfacing** - The uppermost layer of material placed on the traveled way or  
503 shoulders. This term is used interchangeably with pavement.

504  
505 **Traveled Way** - The portion of the roadway for the movement of vehicles,  
506 exclusive of shoulders.

507  
508 **Unsuitable Material** - Materials that contain organic matter, muck, humus, peat,  
509 sticks, debris, chemicals, toxic matter, or other deleterious materials not suitable  
510 for use in earthwork.

511  
512 **Utility** - A line, facility, or system for producing, transmitting, or distributing  
513 communications, power, electricity, heat, gas, oil, water, steam, waste, or storm  
514 water.

515  
516 **Utility Owner** - The entity, whether private or owned by a State, Federal, or County  
517 governmental body, that has the power and responsibility to grant approval for, or  
518 undertake construction work involving a particular utility.

519  
520 **Water Pollutant** - Dredged spoil, solid refuse, incinerator residue, sewage,  
521 garbage, sewage sludge, munitions, chemical waste, biological materials,  
522 radioactive materials, heat, wrecked or discarded equipment, rock, sand, soil,  
523 sediment, cellar dirt and industrial, municipal, and agricultural waste.

524  
525 **Water Pollution** - (1) Such contamination or other alteration of the physical,  
526 chemical, or biological properties of any state waters, including change in  
527 temperature, taste, color, turbidity, or odor of the waters, or (2) Such discharge of  
528 any liquid, gaseous, solid, radioactive, or other substances into any state waters,  
529 as will or is likely to create a nuisance or render such waters unreasonably harmful,  
530 detrimental, or injurious to public health, safety, or welfare, including harm,  
531 detriment, or injury to public water supplies, fish and aquatic life and wildlife,  
532 recreational purposes and agricultural and industrial research and scientific uses  
533 of such waters or as will or is likely to violate any water quality standards, effluent  
534 standards, treatment and pretreatment standards, or standards of performance for  
535 new sources adopted by the Department of Health.

536  
537 **Work** - The furnishing of all labor, material, equipment, and other incidentals  
538 necessary or convenient for the successful execution of all the duties and  
539 obligations imposed by the contract.

540  
541 **Working Day** - A calendar day in which a Contractor is capable of working four or  
542 more hours with its normal work force, exclusive of:  
543

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(1) Saturdays, Sundays, and recognized legal State holidays and such other days specified by the contract documents as non-working days,

(2) Day in which the Engineer suspends work for four or more hours through no fault of the Contractor.”

**END OF SECTION 101**

1 Make this section a part of the Standard Specifications:  
2

3 **“SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS**  
4  
5

6 **102.01 Prequalification of Bidders.** Prospective bidders shall be capable of  
7 performing the work for which they are bidding.  
8

9 In accordance with HRS Chapter 103D-310, the Department may require  
10 any prospective bidder to submit answers to questions contained in the 'Standard  
11 Qualification Questionnaire For Prospective Bidders On Public Works Contracts'  
12 furnished by the Department, properly executed and notarized, setting forth a  
13 complete statement of the experience of such prospective bidder and its  
14 organization in performing similar work and a statement of the equipment  
15 proposed to be used, together with adequate proof of the availability of such  
16 equipment. Whenever it appears to the Department, from answers to the  
17 questionnaire or otherwise, that the prospective bidder is not fully qualified and  
18 able to perform the intended work, the Department will, after affording the  
19 prospective bidder an opportunity to be heard and if still of the opinion that the  
20 bidder is not fully qualified to perform the work, refuse to receive or consider any  
21 bid offered by the prospective bidder. All information contained in the answers to  
22 the questionnaire shall be kept confidential. Questionnaire so submitted shall be  
23 returned to the bidders after serving their purpose.  
24

25 No person, firm or corporation may bid where (1) the person, firm, or  
26 corporation, or (2) a corporation owned substantially by the person, firm, or  
27 corporation, or (3) a substantial stockholder or an officer of the corporation, or (4)  
28 a partner or substantial investor in the firm is in arrears in payments owed to the  
29 State or its political subdivisions or is in default as a surety or failure to do  
30 faithfully and diligently previous contracts with the State.  
31

32 **102.02 Contents of Proposal Forms.** The Department will furnish  
33 prospective bidders with proposal forms posted in HlePRO stating:  
34

- 35 (1) The location,
- 36
- 37 (2) Description of the proposed work,
- 38
- 39 (3) The approximate quantities,
- 40
- 41 (4) Items of work to be done or materials to be furnished,
- 42
- 43 (5) A schedule of items, and
- 44
- 45 (6) The time in which the work shall be completed.  
46

47 Papers bound with or attached to the proposal form are part of the  
48 proposal. The bidder shall not detach or alter the papers bound with or attached  
49 to the proposal when the bidder submits its proposal through HlePRO.  
50

51 Also, the bidder shall consider other documents including the plans and  
52 specifications a part of the proposal form whether attached or not.  
53

54 **102.03 (Unassigned)**  
55

56 **102.04 Estimated Quantities.** The quantities shown in the contract are  
57 approximate and are for the comparison of bids only. The actual quantity of work  
58 may not correspond with the quantities shown in the contract. The Department  
59 will make payment to the Contractor for unit price items in accordance with the  
60 contract for only the following:  
61

62 (1) Actual quantities of work done and accepted, not the estimated  
63 quantities; or  
64

65 (2) Actual quantities of materials furnished, not the estimated  
66 quantities.  
67

68 The Department may increase, decrease, or omit each scheduled  
69 quantities of work to be done and materials to be furnished. When the  
70 Department increases or decreases the estimated quantity of a contract item by  
71 more than 15% the Department will make payment for such items in accordance  
72 with Subsection 104.06 - Methods of Price Adjustment.  
73

74 **102.05 Examination of Contract and Site of Work.** The bidder shall  
75 examine carefully the site of the proposed work and contract before submitting a  
76 proposal.  
77

78 By the act of submitting a bid for the proposed contract, the bidder  
79 warrants that:  
80

81 (1) The bidder and its Subcontractors have reviewed the contract  
82 documents and found them free from ambiguities and sufficient for the  
83 purpose intended;  
84

85 (2) The bidder and its workers, employees and subcontractors have  
86 the skills and experience in the type of work required by the contract  
87 documents bid upon;  
88

89 (3) Neither the bidder nor its employees, agents, suppliers or  
90 subcontractors have relied upon verbal representations from the  
91 Department, its employees or agents, including architects, engineers or  
92 consultants, in assembling the bid figure; and

93 (4) The basis for the bid figure is solely on the construction contract  
94 documents.

95  
96 Also, the bidder warrants that the bidder has examined the site of the  
97 work. From its investigations, the bidder acknowledges satisfaction on:  
98

- 99 (1) The nature and location of the work;  
100  
101 (2) The character, quality, and quantity of materials;  
102  
103 (3) The difficulties to be encountered; and  
104  
105 (4) The kind and amount of equipment and other facilities needed.  
106

107 Subsurface information or hydrographic survey data furnished are for the  
108 bidders' convenience only. The data and information furnished are the product of  
109 the Department's interpretation gathered in investigations made at the specific  
110 locations. These conditions may not be typical of conditions at other locations  
111 within the project area or that such conditions remain unchanged. Also,  
112 conditions found at the time of the subsurface explorations may not be the same  
113 conditions when work starts. The bidder shall be solely responsible for  
114 assumptions, deductions, or conclusions the bidder may derive from the  
115 subsurface information or data furnished.  
116

117 If the Engineer determines that the natural conditions differ from that  
118 originally anticipated or contemplated by the Contractor in the items of  
119 excavation, the State may treat the difference in natural conditions, as falling  
120 within the meaning of Subsection 104.02 – Changes.  
121

122 **102.06 Preparation of Proposal.** The submittal of its proposal shall be on  
123 forms furnished by the Department. The bidder shall specify in words or figures:  
124

- 125 (1) A unit price for each pay item with a quantity given;  
126  
127 (2) The products of the respective unit prices and quantities;  
128  
129 (3) The lump sum amount; and  
130  
131 (4) The total amount of the proposal obtained by adding the amounts  
132 of the several items.  
133

134 The words and figures shall be in ink or typed. If a discrepancy occurs  
135 between the prices written in words and those written in figures, the prices written  
136 in words shall govern.  
137

138 When an item in the proposal contains an option to be made, the bidder  
139 shall choose in accordance with the contract for that particular item.  
140 Determination of an option will not permit the Contractor to choose again.

141  
142 The bidder shall sign the proposal properly in ink. A duly authorized  
143 representatives of the bidder or by an agent of the bidder legally qualified and  
144 acceptable to the Department shall sign, including one or more partners of the  
145 bidder and one or more representatives of each entity comprising a joint venture.

146  
147 When an agent, other than the officer(s) of a corporation authorized to  
148 sign contracts for the corporation or a partner of a partnership, signs the  
149 proposals, a 'Power of Attorney' shall be on file with the Department or submitted  
150 with the proposal. Otherwise, the Department will reject the proposal as irregular  
151 and unauthorized.

152  
153 The bidder shall submit acceptable evidence of the authority of the  
154 partner, member(s) or officer(s) to sign for the partnership, joint venture, or  
155 corporation respectively with the proposal. Otherwise, the Department will reject  
156 the proposal as irregular and unauthorized.

157  
158 **102.07 Irregular Proposals.** The Department may consider proposals  
159 irregular and may reject the proposals for the following reasons:

- 160  
161 (1) The proposal is a form not furnished by the Department, altered,  
162 or detached;  
163  
164 (2) The proposal contains unauthorized additions, conditions, or  
165 alternates. Also, the proposal contains irregularities that may tend to  
166 make the proposal incomplete, indefinite, or ambiguous to its meaning;  
167  
168 (3) The bidder adds provisions reserving the right to accept or reject an  
169 award. Also, the bidder adds provisions into a contract before an award;  
170  
171 (4) The proposal does not contain a unit price for each pay item listed  
172 except authorized optional pay items; and  
173  
174 (5) Prices for some items are out of proportion to the prices for other  
175 items.  
176  
177 (6) If in the opinion of the Director, the bidder and its listed  
178 subcontractors do not have the Contractor's licenses or combination of  
179 Contractor's licenses necessary to complete the work.  
180

181 Where the prospective bidder is bidding on multiple projects  
182 simultaneously and the proposal limits the maximum gross amount of awards  
183 that the bidder can accept at one bid letting, the proposal is not irregular if the  
184 limit on the gross amount of awards is clear, and the Department selects the  
185 awards that can be given.

186  
187 **102.08 Proposal Guaranty.** The Department will not consider a proposal of  
188 \$25,000 or more unless accompanied by:

189  
190 (1) A deposit of legal tender; or

191  
192 (2) A valid surety bid bond, underwritten by a company licensed to  
193 issue bonds in the State of Hawaii, in the form and composed,  
194 substantially, with the same language as provided herewith and signed by  
195 both parties; or

196  
197 (3) A certificate of deposit, share certificate, cashier's check,  
198 treasurer's check, teller's check, or official check drawn by, or a certified  
199 check accepted by and payable on demand to the State by a bank,  
200 savings institution, or credit union insured by the Federal Deposit  
201 Insurance Corporation (FDIC) or the National Credit Union Administration  
202 (NCUA).

203  
204 (a) The bidder may use these instruments only to a maximum of  
205 \$100,000.

206  
207 (b) If the required security or bond amount totals over \$100,000  
208 more than one instrument not exceeding \$100,000 each and issued  
209 by different financial institutions shall be acceptable.

210  
211 (c) The instrument shall be made payable at sight to the  
212 Department.

213  
214 (d) Proposal Guaranty listed in (1) and (3) shall be in its original  
215 form, and shall be received at the Contracts Office, Department of  
216 Transportation, 869 Punchbowl Street, Honolulu, Hawaii 96813  
217 before the bid deadline.

218  
219 In accordance with HRS Chapter 103D-323, the above shall be in a sum  
220 not less than 5% of the amount bid.

221  
222 **102.09 Delivery of Proposal.** The bidder shall submit the proposal in  
223 HlePRO. Bids received after said due date and time shall not be considered.  
224 Original bid documents do not have to be submitted. The Proposal shall be  
225 uploaded to HlePRO. Award will be made based on proposals submitted in  
226 HlePRO.

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**102.10 Withdrawal or Revision of Proposals.** A bidder may withdraw or revise a proposal after the bidder submits the proposal in HlePRO. Withdrawal or revision of proposal must be completed before the time set for the receiving of bids.

**102.11 Public Opening of Proposals.** Not applicable.

**102.12 Disqualification of Bidders.** The Department may disqualify a bidder and reject its proposal for the following reasons:

- (1) Submittal of more than one proposal whether under the same or different name.
- (2) Evidence of collusion among bidders. The Department will not recognize participants in collusion as bidders for any future work of the Department until such participants are reinstated as qualified bidders.
- (3) Lack of proposal guaranty.
- (4) Submittal of an unsigned or improperly signed proposal.
- (5) Submittal of a proposal without a listing of subcontractors or containing only a partial or incomplete listing of subcontractors.
- (6) Submittal of an irregular proposal in accordance with Subsection 102.07 - Irregular Proposals.
- (7) Evidence of assistance from a person who has been an employee of the agency within the preceding two (2) years and who participated while in State office or employment in the matter with which the contract is directly concerned, pursuant to HRS Chapter 84-15.
- (8) Suspended or debarred in accordance with HRS Chapter 104-25.
- (9) Failure to complete the prequalification questionnaire, if applicable.
- (10) Failure to attend the mandatory pre-bid meeting, if applicable.

**102.13 Material Guaranty.** The successful bidder may be required to furnish a statement of the composition, origin, manufacture of materials, and samples.

**102.14 Substitution of Materials and Equipment Before Bid Opening.** See Subsection 106.13 for Substitution Of Materials and Equipment After Bid Opening.

272 **(A) General.** When brand names of materials or equipment are  
273 specified in the contract documents, they are to indicate a quality, style,  
274 appearance, or performance and not to limit competition. The bidder shall  
275 base its bid on one of the specified brand names unless alternate brands  
276 are qualified as equal or better in an addendum. Qualification of such  
277 proposed alternate brands shall be submitted via email to the Contact  
278 person listed in HlePRO for the solicitation and also post a question in  
279 HlePRO under the question/answer tab referencing the email with the  
280 request. The request must be posted in HlePRO no later than fourteen  
281 (14) calendar days before the bid opening date, not including the bid  
282 opening date  
283

284 An addendum will be issued to inform all prospective bidders of any  
285 accepted substitution in accordance with Subsection 102.17 – Addenda .  
286

287 **(B) Statement of Variances.** The statement of variances must list all  
288 features of the proposed substitution that differ from the contract  
289 documents and must further certify that the substitution has no other  
290 variant features. The brochure and information submitted shall be clearly  
291 marked showing make, model, size, options, and any other features  
292 requested by the Engineer and must include sufficient evidence to  
293 evaluate each feature listed as a variance. A request will be denied if  
294 submitted without sufficient evidence. If after installing the substituted  
295 product, an unlisted variance is discovered, the Contractor shall  
296 immediately replace the product with a specified product at no increase in  
297 contract price and contract time.  
298

299 **(C) Substitution Denial.** Any substitution request not complying with  
300 the above requirements will be denied.  
301

## 302 **102.15 Preferences.**

303  
304 **(A) Preference for Hawaii Products.** In accordance with ACT 174,  
305 SLH 2022, effective June 27, 2022, Hawaii Products Preference shall not  
306 apply to solicitations for public works construction. Therefore, the Hawaii  
307 Products Preference shall not apply to this project.  
308

309 **(B) Preferences for Apprenticeship Programs.** In accordance with  
310 ACT 17, SLH 2009 – Apprenticeship Program, a 5% bid adjustment for  
311 bidders that are parties to apprenticeship agreements pursuant to Hawaii  
312 Revised Statutes (HRS) Section 103-55.6 may be applied to the bidder's  
313 price for evaluation purposes. These procedures apply to public works  
314 projects with estimated cost of \$250,000 or more and entered into under  
315 the provisions of HRS Chapter 103.  
316

317 The following provisions apply to this Apprenticeship Program.  
318

319 **(1)** Definitions  
320

321 **(a)** “Apprenticeable trade”, HRS Section 103-55.6 (c),  
322 shall have the same meaning as ‘apprenticeable occupation’  
323 pursuant to Hawaii Administrative Rules ( HAR) Section 30-  
324 1-5.  
325

326 **(b)** “Department” means the department of labor and  
327 industrial relations.  
328

329 **(c)** “Director” means the director of labor and industrial  
330 relations.  
331

332 **(d)** “Employ” means the employment of a person in an  
333 employer-employee relations.  
334

335 **(e)** “Governmental body” means as defined in HRS  
336 Section 103D-104.  
337

338 **(f)** “Party to an apprenticeship agreement” means party  
339 to a registered apprenticeship program with the department  
340 of labor and industrial relations.  
341

342 **(g)** “Preference” means the 5% by which the qualified  
343 bidder's offer amount would be decreased for evaluation  
344 purposes.  
345

346 **(h)** “Public work” shall be as defined in HRS Section 104-  
347 2 and HAR Section 12-22-1.  
348

349 **(i)** “Registered apprenticeship program” means a  
350 construction trade program approved by the department  
351 pursuant to HAR Section 12-30-1 and Section 12-30-4.  
352

353 **(j)** “Sponsor” means an operator of an apprenticeship  
354 program and in whose name the program is approved and  
355 registered with the department of labor and industrial  
356 relations pursuant to HAR Section 12-30-1.  
357

358 **(k)** Offeror – Entity/bidder submitting a proposal to  
359 undertake a project.  
360

361 **(l)** Procurement Officer – Director of Transportation or  
his authorized representative.

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**(2) Qualification Procedures**

**(a)** Any bidder seeking the preference must be a party to an apprenticeship agreement registered with the department at the time the offer is made for each apprenticeable trade the bidder will employ to construct the public works projects for which the offer is being made.

1. The apprenticeship agreement shall be registered and conform to the requirements of HRS Chapter 372.

2. Subcontractors do not have to be a party to an apprenticeship agreement for the bidder to obtain the preference.

3. The bidder is not required to have apprentices in its employ at the time of submittal of an offer to qualify for the preference.

**(b)** The department shall:

1. Develop and maintain a list of construction trades in registered apprenticeship programs which conform to HRS Chapter 372; and

2. Electronically post the list, including any amendments, on the department website (<http://labor.hawaii.gov>).

**(c)** Bidder is responsible to comply with all submission requirements for registration of its apprenticeship program before requesting a preference.

**(d)** Bidder shall provide a certification by the sponsor of the respective registered apprenticeship programs covering the relevant trade(s) for the public works project.

**(e)** *Certification Form 1* issued by the department shall include:

1. Contractor information;

2. Solicitation reference;

3. Trade(s);

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4. Date and name of apprenticeship program;
5. Signature of authorized training coordinator or training trust fund administrator certifying that the contractor is a participant in the program, and that the program is registered with the department;
6. Contract information for sponsor's authorized representative signing the form;
7. Number of apprentices enrolled in the program, number who successfully completed the apprenticeship program in the past twelve (12) months, including whether the contractor is signatory to a collective bargaining agreement for that trade, or if not, provide for attachment of a copy of the agreement between the contractor and the program.

**(3) Solicitation Procedures.**

**(a)** If the NTB indicates that this project is covered by this preference, and the offer is less than \$250,000 this preference will still be applicable in determining the lowest bidder.

**(b)** A claim for this preference must include the following:

1. Allow bidder seeking to claim the preference to state the trades the bidder will employ to perform the work;
2. For each trade to be employed to perform the work, the bidder shall submit a completed signed original *Certification Form 1* verifying participation in an apprenticeship program registered with the department;
3. The *Certification Form 1* shall be authorized by an apprenticeship sponsor of the department's list of registered apprenticeship programs. The authorization shall be an original signature by an authorized official of the apprenticeship sponsor; and

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**4.** The completed *Certification Form 1* for each trade must be submitted by the bidder with the offer. Previous certifications shall not apply unless allowed by the solicitation.

**(c)** Upon receiving *Certification Form 1*, the procurement officer will verify with the department that the apprenticeship program is on the list of apprenticeship programs registered with the department. If the programs are not confirmed by the department, the bidder will not qualify for the preference.

**(4)** Evaluation and Contract Award

**(a)** If the bidder certifies participation in an apprenticeship program for each trade which will be employed by the bidder for the project, the procurement officer shall apply the preference and decrease the bidder's total bid amount by five per cent (5%) for evaluation purposes.

**(b)** Should the bidder qualify for other statutory preferences, all applicable preferences shall be applied to the bidder's price.

**(c)** The contract amount shall be the original offer amount, exclusive of any preference; the preference is only for evaluation purposes.

**(d)** Any claims challenging a bidder's representation that the bidder is a participant in an apprenticeship program(s) as claimed, shall be submitted to the procurement officer. The procurement officer will refer the challenge to the department of labor and industrial relations who shall investigate any such claims and shall make a determination.

**(5)** Contract Administration

**(a)** For the duration of a contract awarded utilizing the apprenticeship preference, the contractor shall certify each month that work is being conducted on the project, that it continues to be a participant in the relevant apprenticeship program for each trade it employs.

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(b) Monthly certification shall be made on *Monthly Certification Form 2* prepared and made available by the department, be a signed original by the respective apprenticeship program sponsors authorized official, and submitted by the contractor with its monthly payment requests.

(c) Should the contractor fail or refuse to submit its monthly certification forms, or at any time during the construction of the project, cease to be a part to a registered apprenticeship agreement for each apprenticeable trades the contractor employs, or will employ, the contractor will be subject to the following sanctions:

1. Withholding of the requested payment until the required form(s) are submitted;
2. Temporary or permanent cessation of work on the project , without recourse to breach of contract claims by the contractor; provided the agency shall be entitled to restitution for nonperformance or liquidated damages claims; or
3. Proceed to debar or suspend pursuant to HRS Section 103D-702.

(d) If events such as “acts of God,” acts of a public enemy, acts of the State or any other governmental body in its sovereign or contractual capacity, fires, floods, epidemics, freight embargoes, unusually severe weather, or strikes or other labor disputes prevent the contractor from submitting the certification forms, the contractor shall not be penalized as provided herein, provided the contractor completely and expeditiously complies with the certification process when the event is over.

This subsection shall not apply when its application will disqualify the State from receiving federal funds or aid.

**(C) Preference for Recycled Products.** Recycled Products shall not apply to this project.

535 **(D) Evaluation Procedures and Contract Award.** For bid evaluation,  
536 the Engineer will evaluate the bids by applying the applicable preferences  
537 selected by the bidders according to the contract. The Engineer will base  
538 the calculations for adjustments upon the original bid prices offered. If  
539 more than one preference applies, the evaluated bid price shall be the  
540 sum of the original bid price plus applicable preference adjustments.

541  
542 If a bidder has designated use of a Hawaii Product and fails to  
543 provide the product, the contract will become void, and no payments will  
544 be made.

545  
546 The Engineer will award the contract to the responsible bidder  
547 submitting the responsive bid with the lowest evaluated bid price. The  
548 contract amount of the contract awarded shall be the original bid price  
549 offered exclusive of any preference.

550  
551 **102.16 Certification for Safety and Health Program for Bids in excess of**  
552 **\$100,000.** In accordance with HRS Chapter 396-18, the bidder or offeror, by  
553 signing and submitting this proposal, certifies that a written safety and health plan  
554 for this project will be available and implemented by the notice to proceed date  
555 for this project. Details of the requirements of this plan may be obtained from the  
556 State Department of Labor and Industrial Relations, Occupational Safety and  
557 Health Division (HIOSH).

558  
559 **102.17 Addenda.** Addenda issued shall become part of the contract  
560 documents. Addenda to the bid documents will be provided to all prospective  
561 bidders via HlePRO. Each addendum shall be an addition to the contract  
562 documents. The terms and requirements of the bid documents (i.e., drawings,  
563 specifications and other bid and contract documents) cannot be changed prior to  
564 the bid opening except by a duly issued addendum.”

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**END OF SECTION 102**

1 Make this section a part of the Standard Specifications:  
2

3 **“SECTION 103 - AWARD AND EXECUTION OF CONTRACT**  
4

5  
6 **103.01 Consideration of Proposals.** The Department will compare the  
7 proposals in terms of the summation of the products of the approximate quantities  
8 and the unit bid prices after the submittal date and time established in HlePRO. If  
9 a discrepancy occurs between the unit bid price and the bid price, the unit bid price  
10 shall govern.

11  
12 The Department reserves the right to reject proposals, waive technicalities  
13 or advertise for new proposals, if the rejection, waiver, or new advertisement favors  
14 the Department.

15  
16 **103.02 Award of Contract.** The award of contract, if it be awarded, will be  
17 made within sixty (60) calendar days after the opening of bids, to the lowest  
18 responsible and responsive bidder whose bid meets all the requirements and  
19 criteria set forth in the invitation for bids. (Through HlePRO). The successful  
20 bidder will be notified by letter mailed to the address shown in its proposal, that  
21 its proposal has been accepted, and that it has been awarded the contract.

22  
23  
24 **(1) Requirement for Award.** To be eligible for award, the  
25 apparent low bidder will be contacted to submit copies of the  
26 documents listed below to demonstrate compliance with HRS  
27 Section 103D-310(c). The documents shall be submitted to the  
28 Department within fourteen (14) days after bid opening unless  
29 otherwise specified in the invitation for bids or an extension is  
30 granted in writing by the Department. If a valid certificate/clearance  
31 is not submitted on a timely basis for award of a contract, a bidder  
32 otherwise responsive and responsible may not receive the award.  
33 See also Subsection 108.03 – Preconstruction Data Submittal.

34  
35 The Department may request the bidders to allow the Department  
36 to consider the bids for the issuance of an award beyond the sixty (60)  
37 calendar day period. Agreement to such an extension must be made by  
38 a bidder in writing. Only bidders who have agreed to such an extension  
39 will be eligible for the award.  
40

41 **(A) Tax Clearance.** Pursuant to HRS Sections 103D-310(c), 103-53  
42 and 103D-328, the successful bidder shall be required to submit a certified  
43 copy of its tax clearance issued by the Hawaii State Department of Taxation  
44 (DOTAX) and the Internal Revenue Service (IRS) to demonstrate its  
45 compliance with HRS Chapter 237. A tax clearance is valid for six (6)  
46 months from the most recent approval stamp date on the tax clearance and  
47 must be valid on the bid's first legal advertisement date or any date  
48 thereafter up to the bid opening date.

49  
50 FORM A6, TAX CLEARANCE CERTIFICATE, is available at  
51 the following website:

52  
53 <https://tax.hawaii.gov/>

54  
55 To receive DOTAX Forms by fax or mail, phone  
56 (808) 587-7572 or 1-800-222-7572.

57  
58 The application for the Tax Clearance Certificate is the responsibility  
59 of the bidder and must be submitted directly to the DOTAX or IRS. The  
60 approved certificate may then be submitted to the Department.

61  
62 **(B) DLIR Certificate of Compliance.** Pursuant to HRS Section 103D-  
63 310(c), the successful bidder shall be required to submit a copy (faxed  
64 copies are acceptable) of its approved certificate of compliance issued by  
65 the Hawaii State Department of Labor and Industrial Relations (DLIR) to  
66 demonstrate its compliance with unemployment insurance (HRS Chapter  
67 383), workers' compensation (HRS Chapter 386), temporary disability  
68 insurance (HRS Chapter 392), and prepaid health care (HRS Chapter 393).  
69 The certificate is valid for six (6) months from the most recent approval  
70 stamp date on the certificate and must be valid on the bid's first legal  
71 advertisement date or any date thereafter up to the bid opening date. For  
72 certificates which receive a "pending" approval stamp, a DLIR approval  
73 stamp is required prior to the issuance of the Notice to Proceed.

74  
75 FORM LIR#27, APPLICATION FOR CERTIFICATE OF  
76 COMPLIANCE WITH SECTION 3-122-112, HAR, is available at the  
77 following website:

78  
79 <http://labor.hawaii.gov/>

80  
81 More information is available by calling the DLIR Unemployment Insurance  
82 Division at (808) 586-8926.

83  
84 Inquiries regarding the status of a LIR#27 Form may be made by  
85 calling the DLIR Disability Compensation Division at (808) 586-9200.

87 The application for the Certificate of Compliance is the responsibility  
88 of the bidder and must be submitted directly to the DLIR. The approved  
89 certificate may then be submitted to the Department.  
90

91 **(C) DCCA Certificate of Good Standing.** Pursuant to HRS Section  
92 103D-310(c), the successful bidder shall be required to submit a copy  
93 (faxed copies are acceptable) of its approved Certificate of Good Standing  
94 issued by the Hawaii State Department of Commerce and Consumer Affairs  
95 (DCCA), Business Registration Division (BREG) to demonstrate that it is  
96 either:

97  
98 **(1)** Incorporated or organized under the laws of the State; or  
99

100 **(2)** Registered to do business in the State as a separate branch  
101 or division that is capable of fully performing under the contract.  
102

103 The Certificate of Good Standing is valid for six (6) months from the  
104 approval date on the certificate and must be valid on the bid's first legal  
105 advertisement date or any date thereafter up to the bid opening date. A  
106 Hawaii business that is a sole proprietorship, however, is not required to  
107 register with the BREG, and therefore not required to submit a Certificate of  
108 Good Standing. Bidders are advised that there are costs associated with  
109 registering and obtaining a Certificate of Good Standing from the DCCA.  
110

111 To purchase a CERTIFICATE OF GOOD STANDING, go to On-Line  
112 Services at the following website:

113  
114 <http://cca.hawaii.gov/>  
115

116 The application for the Certificate of Good Standing is the  
117 responsibility of the bidder and must be submitted directly to the DCCA.  
118 The approved certificate may then be submitted to the Department.  
119

120 **(D) Hawaii Compliance Express (HCE).** In lieu of the certificates  
121 referenced above, the bidder may make available proof of compliance  
122 through the Hawaii Compliance Express or any other designated  
123 certification process. Bidders may apply and register at the "Hawaii  
124 Compliance Express" website:

125  
126 <https://vendors.ehawaii.gov/hce/>  
127

128 **103.03 Cancellation of Award.** The Department reserves the right to cancel  
129 the award of contracts before the execution of said contract by the parties. There  
130 will be no liability to the awardee and to other bidders.  
131

132 **103.04 Return of Proposal Guaranty.** The Department will return the proposal  
133 guaranties, except those of the three lowest bidders, after the Department checks  
134 the proposals. The Department will return the proposal guaranties of the remaining  
135 two lowest bidders, not awarded the contract, within five (5) working days following  
136 the execution of the contract. The Department will return the successful bidder's  
137 proposal guaranty after the successful bidder furnishes a bond and executes the  
138 contract.

139  
140 **103.05 Requirement of Contract Bond.** At the time of execution of the  
141 contract, the successful bidder shall file a good and sufficient performance bond  
142 and a payment bond on the forms furnished by the Department conditioned for  
143 the full and faithful performance of the contract in accordance with the terms and  
144 intent thereof and for the prompt payment to all others for all labor and material  
145 furnished by them to the bidder and used in the prosecution of the work provided  
146 for in the contract. The bonds shall be of an amount equal to 100 percent of the  
147 amount of the contract price and include 5 percent of the contract amount  
148 estimated to be required for extra work. The bidder shall limit the acceptable  
149 performance and payment bonds to the following:

- 150  
151 (a) Legal tender;  
152  
153 (b) Surety bond underwritten by a company licensed to issue bonds in  
154 the State of Hawaii; or  
155  
156 (c) A certificate of deposit; share certificate; cashier's check; treasurer's  
157 check, teller's check drawn by or a certified check accepted by and payable  
158 on demand to the State by a bank savings institution or credit union insured  
159 by the Federal Deposit Insurance Corporation (FDIC) or the National Credit  
160 Union Administration (NCUA).  
161  
162 1. The bidder may use these instruments only to a maximum of  
163 \$100,000.  
164  
165 2. If the required security or bond amount totals over \$100,000  
166 more than one instrument not exceeding \$100,000 each and issued  
167 by different financial institutions shall be acceptable.

168  
169 Such bonds shall also by the terms inure to the benefit of any and all  
170 persons entitled to file claims for labor done or material furnished in the work so as  
171 to give them a right of action as contemplated by HRS Section 103D-324.  
172

173 **103.06 Execution of the Contract.** The contract bond and HRS Chapter 104  
174 - Compliance Certificate, similar to a copy of the same annexed hereto, shall be  
175 executed by the successful bidder and returned within ten (10) days after the  
176 award of the contract or within such further time as the Director may allow after the  
177 bidder has received the contract for execution.

178           The contract shall not bind the Department unless said parties execute the  
179 contract and the Director of Finance endorses the bidder's certificate in  
180 accordance with HRS Section 103-39.

181

182 **103.07 Failure to Execute Contract.** Failure to execute the contract and file  
183 acceptable bonds shall be cause for the cancellation of the award in accordance  
184 with Subsection 103.06 - Execution of the Contract. Also, the Contractor forfeits  
185 the proposal guaranty which becomes the property of the Department. This is not  
186 a penalty, but liquidated damages sustained by the State. The Department may  
187 then make award to the next lowest responsible and responsive bidder or the  
188 Department may readvertise and construct the work under contract.”

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**END OF SECTION 103**



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submission by the contractor of proper documentation of completed force account work, whether periodic (conforming to the applicable billing cycle) or final. The Engineer shall return any documentation that is defective, to the contractor within fifteen (15) days after receipt, with a statement identifying the defect; or

**(B)** For change orders with value exceeding \$50,000 by a unilateral determination by the Engineer of the costs attributable to the events or situations with adjustment of profit and fee, all as computed by the Engineer in accordance with applicable sections of HAR Chapters 3-123 and 3-126, and Section 109.05 - Allowances for Overhead and Profit. When a unilateral determination has been made, a unilateral change order shall be issued within ten (10) days. Upon receipt of the unilateral change order, if the contractor does not agree with any of the terms or conditions, or the adjustment or nonadjustment of the contract time or contract price, the contractor shall file a notice of intent to claim within thirty (30) days after the receipt of the written unilateral change order. Failure to file a protest within the time specified shall constitute agreement on the part of the contractor with the terms, conditions, amounts, and adjustment or nonadjustment of the contract time or the contract price set forth in the unilateral change order.

A contractor shall be required to submit cost or pricing data if any adjustment in contract price is subject to the provisions of HAR Chapter 3-122, Subchapter 15. A fully executed change order or other document permitting billing for the adjustment in price under any method listed in Subsections 104.06(1) through 104.06(7) shall be issued within ten (10) days after agreement on the method of adjustment."

**END OF SECTION 104**



47           **(C) Authority of the Consultant and Construction Management.**  
48           The State may engage consultants and construction managements to  
49           perform duties in connection with the work. Unless otherwise specified in  
50           writing to the Contractor, such retained consultants and construction  
51           managements shall have no greater authority than an Inspector.”  
52

53           **(II) Amend Subsection 105.02 - Submittals** by revising the first paragraph  
54           from lines 52 to 61 to read as follows:  
55

56           **“105.02 Submittals.** The contract contains the description of various items  
57           that the Contractor must submit to the Engineer for review and acceptance. The  
58           Contractor shall review all submittals for correctness, conformance with the  
59           requirements of the contract documents and completeness before submitting  
60           them to the Engineer. The submittal shall indicate the contract items and  
61           specifications subsections for which the submittal is provided. The submittal  
62           shall be legible and clearly indicate what portion of the submittal is being  
63           submitted for review. The Contractor shall provide six copies of the required  
64           submissions at the earliest possible date.”  
65

66           **(III) Amend Subsection 105.08 (A) - Furnishing Drawings and Special**  
67           **Provisions** to read as follows:  
68

69           **“(A) Furnishing Drawings and Special Provisions.** The State will  
70           furnish the Contractor an electronic set of the special provisions and  
71           plans.” The Contractor shall have and maintain at least one set of plans  
72           and specifications on the work site, at all times.  
73

74           **(IV) Amend Subsection 105.14(D) – No Designated Storage Area** from lines  
75           421 to 432 to read as follows:  
76

77           **“(D) No Designated Storage Area.** If no storage area is designated  
78           within the contract documents, materials and equipment may be stored  
79           anywhere within the State highway right-of-way, provided such storage  
80           and access to and from such site, within the sole discretion of the  
81           Engineer, does not create a public or traffic hazard or an impediment to  
82           the movement of traffic.”  
83

84           **(V) Amend 105.16(A) – Subcontract Requirements** by adding the following  
85           paragraph after line 483:  
86

87           The 'Specialty Items' of work for this project are as follows:  
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<b>Section No.</b>	<b>Description</b>
201	Contract Item No. 201.0100 under Section 201 – Clearing and Grubbing
203	All Contract Items under Section 203 – Excavation and Embankment
301	Contract Item No. 301.0100 under Section 301 – Hot Mix Asphalt Base Course
304	Contract Item No. 304.0100 under Section 304 – Aggregate Base Course
305	Contract Item No. 305.0100 under Section 305 – Aggregate Subbase
401	Contract Item No. 401.0410 under Section 401 – Hot Mix Asphalt (HMA) Pavement
503	All Contract Items under Section 503 – Concrete Structures
606	All Contract Items under Section 606 - Guardrail
629	All Contract Items under Section 629 - Pavement Markings
631	All Contract Items under Section 631 - Traffic Control Regulatory, Warning, and Miscellaneous Signs
632	All Contract Items under Section 632 - Markers
641	Contract Item No. 641.0100 under Section 641 – Hydro-Mulch Seeding
645	Contract Item No. 645.1000 under Section 645 – Work Zone Traffic Control”

**(VI)** Amend **Subsection 105.16(B) – Substituting Subcontractors** from line 487 to line 494 to read:

**(B) Substituting Subcontractors.** Under HRS Chapter 103D-302, the Contractor is required to list the names of persons or firms to be engaged by the Contractor as a subcontractor or joint contractor in the performance of the contract. No subcontractor may be added or deleted, unless

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authorized by the Engineer. Substitutions will be allowed only if the subcontractor:

**END OF SECTION 105**

1           **SECTION 106 – MATERIAL RESTRICTIONS AND REQUIREMENTS**

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Make the following amendment to said Section:

(I) Amend **106.05(B) – Deviation** by revising the third sentence from line 106 to 108 to read as follows:

“Any deviations will be subject to Subsection 102.14 – Substitution of Materials and Equipment Before Bid Opening.

(II) Amend **106.11 Steel and Iron Construction Material** from line 238 to line 277 to read as follows

**“106.11 Steel and Iron Construction Material. (Not Applicable)”**

**END OF SECTION 106**

1           **SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

2  
3           Make the following amendments to said Section:

4  
5  
6           **(I)**           Amend **Section 107.01 Insurance Requirements** from lines 5 to 81 to  
7           read as follows:

8  
9           **“(A) Obligation of Contractor.** Contractor shall not commence any  
10           work until it obtains, at its own expense, all required insurance described  
11           herein. Such insurance shall be provided by an insurance company  
12           authorized by the laws of the State to issue such insurance in the State of  
13           Hawaii. Coverage by a “Non-Admitted” carrier is permissible provided the  
14           carrier has a Best’s Rating of “A-VII” or better. The Contractor shall  
15           maintain and ensure all insurance policies are current for the full period of  
16           the contract until final acceptance of the work by the State.

17  
18                       The Certificate of Insurance shall contain: a clause that it is agreed  
19           that any insurance maintained by the State of Hawaii will apply in excess  
20           of, and not contribute with, insurance provided by this policy; and shall be  
21           accompanied by endorsement form CG2010 or equivalent naming the  
22           State as an additional insured to the policy which status shall be  
23           maintained for the full period of the contract until final acceptance of the  
24           work by State.

25  
26                       The Contractor shall obtain all required insurance as part of the  
27           contract price. Where there is a requirement for the State of Hawaii and  
28           its officers and employees to be named as additional insureds under any  
29           Contractor’s insurance policy, before the State of Hawaii issues the Notice  
30           to Proceed, the Contractor shall obtain and submit to the Engineer a  
31           Certificate of Insurance and a written policy endorsement that confirms the  
32           State of Hawaii and its officers and employees are additional insureds for  
33           the specific State project number and project title under such insurance  
34           policies. The written policy endorsement must be issued by the insurance  
35           company insuring the Contractor for the specified policy type or by an  
36           agent of such insurance company who is vested with the authority to issue  
37           a written policy endorsement. The insurer’s agent shall also submit  
38           written confirmation of such authority to bind the insurer. Any delays in  
39           the issuance of the Notice to Proceed attributed to the failure to obtain the  
40           proof of the State of Hawaii and its officers and employees’ additional  
41           insured status shall be charged to the Contractor.  
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A mere Certificate of Insurance issued by a broker who represents the Contractor (but not the Contractor's insurer), or by any other party who is not authorized to contractually name the State as an additional insured under the Contractor's insurance policy, is not sufficient to meet the Contractor's insurance obligations.

Certificates shall contain a provision that coverages being certified will not be cancelled or materially changed without giving the Engineer at least thirty (30) days prior written notice. Contractor will immediately provide written notice to the Director should any of the insurance policies evidenced on its Certificate of Insurance form be cancelled, reduced in scope or coverage, or not renewed upon expiration. Should any policy be canceled before final acceptance of the work by the State, and the Contractor fails to immediately procure replacement insurance as specified, the State, in addition to all other remedies it may have for such breach, reserves the right to procure such insurance and deduct the cost thereof from any money due or to become due to the Contractor.

Nothing contained in these insurance requirements is to be construed as limiting the extent of Contractor's responsibility for payment of damages resulting from its operations under this contract, including the Contractor's obligation to pay liquidated damages, nor shall it affect the Contractor's separate and independent duty to defend, indemnify and hold the State harmless pursuant to other provisions of this contract. In no instance will the State's exercise of an option to occupy and use completed portions of the work relieve the Contractor of its obligation to maintain the required insurance until the date of final acceptance of the work.

All insurance described herein shall be primary and cover the insured for all work to be performed under the contract, all work performed incidental thereto or directly or indirectly connected therewith, including but not limited to traffic detour work, barricades, warnings, diversions, lane closures, and other work performed outside the work area and all change order work.

The Contractor shall, from time to time, furnish the Engineer, when requested, satisfactory proof of coverage of each type of insurance required covering the work. Failure to comply with the Engineer's request may result in suspension of the work, and shall be sufficient grounds to withhold future payments due the Contractor and to terminate the contract for Contractor's default.

**(B) Types of Insurance.** Contractor shall purchase and maintain insurance described below which shall provide coverage

89 against claims arising out of the Contractor's operations under the  
90 contract, whether such operations be by the Contractor itself or by any  
91 subcontractor or by anyone directly or indirectly employed by any of  
92 them or by anyone for whose acts any of them may be liable.

93  
94 **(1) Workers' Compensation.** The Contractor shall obtain  
95 worker's compensation insurance for all persons whom they  
96 employ in carrying out the work under this contract. This insurance  
97 shall be in strict conformity with the requirements of the most  
98 current and applicable State of Hawaii Worker's Compensation  
99 Insurance laws in effect on the date of the execution of this contract  
100 and as modified during the duration of the contract.

101  
102 **(2) Auto Liability.** The Contractor shall obtain Auto Liability  
103 Insurance covering all owned, non-owned and hired autos with a  
104 Combined single Limit of not less than \$1,000,000 per occurrence  
105 for bodily injury and property damage with the State of Hawaii  
106 named as additional insured. Refer to SPECIAL CONDITIONS for  
107 any additional requirements.

108  
109 **(3) General Liability.** The Contractor shall obtain General  
110 Liability insurance with a limit of not less than \$2,000,000 per  
111 occurrence and in the Aggregates for each of the following:

- 112 **(a)** Products - Completed/Operations Aggregate,
- 113
- 114 **(b)** Personal & Advertising Injury, and
- 115
- 116 **(c)** Bodily Injury & Property Damage
- 117
- 118

119 The General Liability insurance shall include the State as an  
120 Additional Insured. The required limit of insurance may be provided  
121 by a single policy or with a combination of primary and excess  
122 policies. Refer to SPECIAL CONDITIONS for any additional  
123 requirements.

124  
125 **(4) Builders Risk For All Work.** The Contractor shall take out  
126 a policy of builder's risk insurance for the full replacement value of  
127 the project work; from a company licensed or otherwise authorized  
128 to do business in the State of Hawaii; naming the State as an  
129 additional insured under each policy; and covering all work, labor,  
130 and materials furnished by such Contractor and all its  
131 subcontractors against loss by fire, windstorm, tsunamis,  
132 earthquakes, lightning, explosion, other perils covered by the  
133 standard Extended Coverage Endorsement, vandalism, and

134 malicious mischief. Refer to SPECIAL CONDITIONS for any  
135 additional requirements.”

136

137 **(II)** Add **Section 107.18 Citizen and Residential Labor Force** after line 745  
138 to read as follows:

139

140 **“107.18 Citizen and Residential Labor Force.**

141

142 **(A) Citizen Labor.** No person shall be employed as a laborer or  
143 mechanic unless such person is a citizen of the United States or eligible to  
144 become one; provided that persons without such qualifications may be  
145 employed with the approval of the Governor until persons who are citizens  
146 and are competent for such services are available for hire.

147

148 **(B) Residential Labor Force.** In accordance with Act 192; SLH 2011,  
149 no less than eighty (80) percent of the bidder's labor force working on the  
150 contract shall be provided by Hawaii residents. This act applies to all  
151 construction procurements under HRS Chapter 103D; however this act  
152 does not apply to procurements for professional services under Section  
153 103D-304 and small purchases under Section 103D-305. This act is also  
154 applicable to any subcontract of \$50,000.00 or more in connection with  
155 this contract.

156

157 Resident means a person who is physically present in the State of  
158 Hawaii at the time the person claims to have established the person's  
159 domicile in the State of Hawaii and shows the person's intent is to make  
160 Hawaii the person's primary residence.

161

162 **(C)** Percentage of workforce shall be determined by dividing the labor  
163 hours (including subcontractors) provided by residents working on the  
164 project divided by the total number of hours worked by all employees of  
165 the contractor in the performance of the contract. Hours worked by  
166 employees within shortage trades as determined by the Department of  
167 Labor and Industrial Relations shall not be included in the calculation of  
168 this percentage.

169

170 **(D)** Certification of compliance with the forgoing provisions shall be  
171 made by the contractor in the form of a written oath submitted to the  
172 Procurement Officer on a monthly basis for the duration of the contract.

173

174 **(E)** Sanctions for non compliance with these provisions are as follows:

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176 **(1)** With respect to the General Contractor, withholding of  
177 payment on the contract until the Contractor or its Subcontractor  
178 complies with HRS Chapter 103B as amended by Act 192, SLH  
179 2011.

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(2) Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawaii Revised Statutes § 103D-702.

This Section shall not apply when its application will disqualify the State from receiving federal funds or aid.”

**END OF SECTION 107**

1 Amend **Section 108 – PROSECUTION AND PROGRESS** to read as follows:  
2

3 **“SECTION 108 – PROSECUTION AND PROGRESS**  
4

5  
6 **108.01 Notice to Proceed (NTP).** A Notice To Proceed will be issued to the  
7 Contractor not more thirty (30) calendar days after the contract certification date.  
8 The Engineer may suspend the contract before issuing the Notice To Proceed, in  
9 which case the Contractor’s remedies are exclusively those set forth in Subsection  
10 108.10 – Suspension of Work.  
11

12 The Contractor shall be allowed up to fourteen (14) calendar days after the  
13 Notice to Proceed to begin physical work. The Start Work Date will be established  
14 when this period ends or on the actual day that physical work begins, whichever is  
15 first. Charging of Contract Time will begin on the Start Work Date. The Contractor  
16 shall notify the Engineer, in writing, at least five (5) working days before beginning  
17 physical work.  
18

19 In the event that the Contractor fails to start physical work within the time  
20 specified, the Engineer may terminate the contract in accordance with Subsection  
21 108.11 – Termination of Contract for Cause.  
22

23 During the period between the Notice to Proceed and the Start Work Date  
24 the Contractor should adjust work forces, equipment, schedules, and procure  
25 materials and required permits, prior to beginning physical work.  
26

27 Any physical work done prior to the Start Work Date will be considered  
28 unauthorized work. If the Engineer does not direct that the unauthorized work be  
29 removed, it shall be paid for after the Start Work Date and only if it is acceptable.  
30

31 In the event that the Engineer establishes, in writing, a Start Work Date that  
32 is beyond sixty (60) calendar days from the Notice to Proceed date, the Contractor  
33 may submit a claim in accordance with, Subsection 107.15 – Disputes and Claims  
34 for increased labor and material costs which are directly attributable to the delay  
35 beyond the first sixty (60) calendar days after the Notice to Proceed date.  
36

37 The Contractor shall notify the Engineer at least 24 hours before restarting  
38 physical work after a suspension of work pursuant to Subsection 108.10 –  
39 Suspension of Work.  
40

41 Once physical work has begun, the Contractor shall work expeditiously and  
42 pursue the work diligently to completion with the contract time. If a portion of the  
43 work is to be done in stages, the Contractor shall leave the area safe and usable  
44 for the user agency and the public at the end of each stage.  
45

46 **108.02 Prosecution of Work.** Unless otherwise permitted by the Engineer, in  
47 writing, the Contractor shall not commence with physical construction unless  
48 sufficient materials and equipment are available for either continuous construction  
49 or completion of a specified portion of the work.

50  
51 **108.03 Preconstruction Submittals.** The awardee shall submit to the  
52 Engineer for information and review the pre-construction submittals within twenty  
53 one (21) calendar days from award. Until the items listed below are received and  
54 found acceptable by the Engineer, the Contractor shall not start physical work  
55 unless otherwise authorized to do so in writing and subject to such conditions set  
56 by the Engineer. Charging of Contract Time will not be delayed, and additional  
57 contract time will not be granted due to Contractor delay in submitting acceptable  
58 preconstruction submittals. No progress payment will be made to the Contractor  
59 until the Engineer acknowledges, in writing, receipt of the following  
60 preconstruction submittals acceptable to the Engineer:

- 61  
62 (1) List of the Superintendent and other Supervisory Personnel, and  
63 their contact information.
- 64  
65 (2) Name of person(s) authorized to sign for the Contractor.
- 66  
67 (3) Work Schedule including hours of operation.
- 68  
69 (4) Initial Progress Schedule (See Subsection 108.06 – Progress  
70 Schedule).
- 71  
72 (5) Water Pollution and Siltation Control Submittals, including Site-  
73 Specific Best Management Practice Plan.
- 74  
75 (6) Solid Waste Disposal form.
- 76  
77 (7) Tax Rates.
- 78  
79 (8) Insurance Rates.
- 80  
81 (9) Certificate of Insurance, satisfactory to the Engineer, indicating that  
82 the Contractor has in place all insurance coverage required by the contract  
83 documents.
- 84  
85 (10) Schedule of agreed prices.
- 86  
87 (11) List of suppliers.
- 88  
89 (12) Traffic Control Plan, if applicable.

90 **108.04 Character and Proficiency of Workers.** The Contractor shall at all  
91 times provide adequate supervision and sufficient labor and equipment for  
92 prosecuting the work to full completion in the manner and within the time required  
93 by the contract. The superintendent and all other representatives of the  
94 Contractor shall act in a civil and honest manner in all dealings with the Engineer,  
95 all other State officials and representatives, and the public, in connection with the  
96 work.

97  
98 All workers shall possess the proper license, certification, job classification,  
99 skill, training, and experience necessary to properly perform the work assigned to  
100 them.

101  
102 The Engineer may direct the removal of any worker(s) who does not carry  
103 out the assigned work in a proper and skillful manner or who is disrespectful,  
104 intemperate, violent, or disorderly. The worker shall be removed forthwith by the  
105 Contractor and will not work again without the written permission of the Engineer.

106  
107 **108.05 Contract Time.**

108  
109 **(A) Calculation of Contract Time.** When the contract time is on a  
110 working day basis, the total contract time allowed for the performance of  
111 the work will be the number of working days shown in the contract plus any  
112 additional working days authorized in writing as provided hereinafter. The  
113 count of elapsed working days to be charged against contract time, will  
114 begin from the Start Work Date and will continue consecutively to the date  
115 of Substantial Completion. When multiple shifts are used to perform the  
116 work, the State will not consider the hours worked over the normal eight (8)  
117 working hours per day or night as an additional working day.

118  
119 When the contract is on a calendar day basis, the total contract time  
120 allowed for the performance of the work will be the number of days shown  
121 in the contract plus any additional days authorized in writing as provided  
122 hereinafter. The count of elapsed days to be charged against contract time  
123 will begin from the Start Work Date and will continue consecutively to the  
124 date of Substantial Completion. The Engineer will exclude days elapsing  
125 between the orders of the Engineer to suspend work and resume work for  
126 suspensions not the fault of the Contractor.

127  
128 **(B) Modifications of Contract Time.** Whenever the Contractor  
129 believes that an extension of contract time is justified, the Contractor shall  
130 serve written notice on the Engineer not more than five working days after  
131 the occurrence of the event that causes a delay or justifies a contract time  
132 extension. Contract time may be adjusted for the following reasons or  
133 events, but only if and to the extent the critical path has been affected:  
134

135 **(1) Changes in the Work, Additional Work, and Delays**  
136 **Caused by the State.** If the Contractor believes that an extension of  
137 time is justified on account of any act or omission by the State, and is  
138 not adequately provided for in a field order or change order, it must  
139 request the additional time as provided above. At the request of the  
140 Engineer, the Contractor must show how the critical path will be  
141 affected and must also support the time extension request with  
142 schedules, as well as statements from its subcontractors, suppliers,  
143 or manufacturers, as necessary. Claims for compensation for any  
144 altered or additional work will be determined pursuant to Subsection  
145 104.02 – Changes.

146  
147 Additional time to perform the extra work will be added to the  
148 time allowed in the contract without regard to the date the change  
149 directive was issued, even if the contract completion date has  
150 passed. A change requiring time issued after contract time has  
151 expired will not constitute an excusal or waiver of pre-existing  
152 Contractor delay.

153  
154 **(2) Delay for Permits.** For delays in the routine application and  
155 processing time required to obtain necessary permits, including  
156 permits to be obtained from State agencies, the Engineer may grant  
157 an extension provided that the permit takes longer than thirty (30)  
158 days to acquire and the delay is not caused by the Contractor, and  
159 provided that as soon as the delay occurs, the Contractor notifies the  
160 Engineer in writing that the permits are not available. Permits  
161 required by the contract that take less than thirty (30) days to acquire  
162 from the time which the appropriate documents are granted shall be  
163 acquired between Notice to Proceed and Start Work Date or  
164 accounted for in the contractor's progress schedule. Time  
165 extensions will be the exclusive relief granted on account of such  
166 delays.

167  
168 **(3) Delays Beyond Contractor's Control.** For delays caused by  
169 acts of God, a public enemy, fire, inclement weather days or  
170 adverse conditions resulting therefrom, earthquakes, floods,  
171 epidemics, quarantine restrictions, labor disputes impacting the  
172 Contractor or the State, freight embargoes and other reasons  
173 beyond the Contractor's control, the Contractor may be granted an  
174 extension of time provided that:

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176 **(a)** In the written notice of delay to the Engineer, the  
177 Contractor describes possible effects on the completion date  
178 of the contract. The description of delays shall:  
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1. State specifically the reason or reasons for the delay and fully explain in a detailed chronology how the delay affects the critical path.
2. Include copies of pertinent documentation to support the time extension request.
3. Cite the anticipated period of delay and the time extension requested.
4. State either that the above circumstances have been cleared and normal working conditions restored as of a certain day or that the above circumstances will continue to prevent completion of the project.

**(b)** The Contractor shall notify the Engineer in writing when the delay ends. Time extensions will be the exclusive relief granted and no additional compensation will be paid the Contractor for such delays.

**(4) Delays in Delivery of Materials or Equipment.** For delays in delivery of materials or equipment, which occur as a result of unforeseeable causes beyond the control and without fault of the Contractor, its subcontractor(s) or supplier(s), time extensions shall be the exclusive relief granted and no additional compensation will be paid the Contractor on account of such delay. The delay shall not exceed the difference between the originally scheduled delivery date and the actual delivery date. The Contractor may be granted an extension of time provided that it complies with the following procedures:

**(a)** The Contractor's written notice to the Engineer must describe the delays and state the effect such delays may have on the critical path.

**(b)** The Contractor, if requested, must submit to the Engineer within five (5) days after a firm delivery date for the material and equipment is established, a written statement regarding the delay. The Contractor must justify the delay as follows:

1. State specifically all reasons for the delay. Explain in a detailed chronology the effect of the delay on the critical path.

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2. Submit copies of purchase order(s), factory invoice(s), bill(s) of lading, shipping manifest(s), delivery tag(s), and any other documents to support the time extension request.

3. Cite the start and end date of the delay and the time extension requested.

**(5) Delays for Suspension of Work.** When the performance of the work is totally suspended for one (1) or more days (calendar or working days, as appropriate) by order of the Engineer in accordance with Subsections 108.10(A)(1), 108.10(A)(2), or 108.10(A)(5) the number of days from the effective date of the Engineer's order to suspend operations to the effective date of the Engineer's order to resume operations shall not be counted as contract time and the contract completion date will be adjusted. During periods of partial suspensions of the work, the Contractor will be granted a time extension only if the partial suspension affects the critical path. If the Contractor believes that an extension of time is justified for a partial suspension of work, it must request the extension in writing at least five (5) working days before the partial suspension will affect the critical operation(s) in progress. The Contractor must show how the critical path was increased based on the status of the work and must also support its claim if requested, with statements from its subcontractors. A suspension of work will not constitute a waiver of pre-existing Contractor delay.

**(6) Contractor Caused Delays.** No time extension will be granted under the following circumstances:

**(a)** Delays within the Contractor's control in performing the work caused by the Contractor, subcontractor, supplier, or any combination thereof.

**(b)** Delays within the Contractor's control in arrival of materials and equipment caused by the Contractor, subcontractor, supplier, or any combination thereof, in ordering, fabricating, and delivery.

**(c)** Delays requested for changes which do not affect the critical path.

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(d) Delays caused by the failure of the Contractor to make submittals in a timely manner for review and acceptance by the Engineer, such as but not limited to shop drawings, descriptive sheets, material samples, and color samples except as covered in Subsection 108.05(B)(3) – Delays Beyond Contractor’s Control and 108.05(B)(4) – Delays in Delivery of Materials or Equipment.

(e) Delays caused by the failure to submit sufficient information and data in a timely manner in the proper form in order to obtain necessary permits related to the work.

(f) Failure to follow the procedure within the time allowed by contract to request a time extension.

(g) Failure of the Contractor to provide evidence sufficient to support the time extension request.

(7) **Reduction in Time.** If the State deletes or modifies any portion of the work, an appropriate reduction of contract time may be made in accordance with Subsection 104.02 - Changes.

**108.06 Progress Schedules.**

(A) **Forms of Schedule.** All schedules shall be submitted using the specific computer program designated in the bid documents. If no such scheduling software program is designated, then all schedules shall be submitted using the latest version of Microsoft Project by Microsoft or approved equivalent software program.

Schedule submittals shall be as follows:

(1) **For Contracts \$2,000,000 or less or For Contract Time one hundred (100) Working Days or 140 Calendar Days or Less.** For contracts of \$2,000,000 or less or for contract time of hundred (100) working days or one hundred forty (140) calendar days or less, the progress schedule will be a Time Scaled Logic Diagram (TSLD). The Contractor shall submit a TSLD submittal package meeting the following requirements and having these essential and distinctive elements:

(a) The major features of work, such as but not limited to BMP installation, grubbing, roadway excavation, structure excavation, structure construction, shown in the chronological order in which the Contractor proposes to work that feature or work and its location on the project. The schedule shall

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account for normal inclement weather, unusual soil or other conditions that may influence the progress of the work, schedules, and coordination required by any utility, off or on site fabrications, and other pertinent factors that relate to progress;

**(b)** All features listed or not listed in the contract documents that the Contractor considers a controlling factor for the timely completion of the contract work.

**(c)** The time span and sequence of the activities or events for each feature, and its interrelationship and interdependencies in time and logic to other features in order to complete the project.

**(d)** The total anticipated time necessary to complete work required by the contract.

**(e)** A chronological listing of critical intermediate dates or time periods for features or milestones or phases that can affect timely completion of the project.

**(f)** Major activities related to the location on the project.

**(g)** Non-construction activities, such as submittal and acceptance periods for shop drawings and material, procurement, testing, fabrication, mobilization, and demobilization or order dates of long lead material.

**(h)** Set schedule logic for out of sequence activities to retain logic. In addition, open ends shall be non-critical.

**(i)** Show target bars for all activities.

**(j)** Vertical and horizontal sight lines both major and minor shall be used as well as a separator line between groups. The Engineer will determine frequency and style.

**(k)** The file name, print date, revision number, data and project title and number shall be included in the title block.

**(l)** Have columns with the appropriate data in them for activity ID, description, original duration, remaining duration, early start, early finish, total float, percent complete, resources. The resource column shall list who is responsible

357 for the work to be done in the activity. These columns shall  
358 be to the left of the bar chart.

359  
360 **(2) For Contracts Which Have A Contract Amount More Than**  
361 **\$2,000,000 Or Having A Contract Time Of More Than one**  
362 **hundred (100) Working Days Or one hundred forty (140)**  
363 **Calendar Days.** For contracts which have a contract amount more  
364 than \$2,000,000 or contract time of more than one hundred (100)  
365 working days or one hundred forty (140) calendar days, the  
366 Contractor shall submit a Timed-Scaled Logic Diagram (TSLD)  
367 meeting the following requirements and having these essential and  
368 distinctive elements:

369  
370 **(a)** The information and requirements listed in Subsection  
371 108.06(A)(1) – For Contracts \$2,000,000 or Less or For  
372 Contract Time one hundred (100) Working Days or one  
373 hundred forty (140) Calendar Days or Less.

374  
375 **(b)** Additional reports and graphics available from the  
376 software as requested by the Engineer.

377  
378 **(c)** Sufficient detail to allow at least weekly monitoring of  
379 the Contractor and subcontractor's operations.

380  
381 **(d)** The time scaled schematic shall be on a calendar or  
382 working days basis. What will be used shall be determined by  
383 how the contract keeps track of time. It will be the same. Plot  
384 the critical calendar dates anticipated.

385  
386 **(e)** Breakdown of activity, such as forming, placing  
387 reinforcing steel, concrete pouring and curing, and stripping  
388 in concrete construction. Indicate location of work to be done  
389 in such detail that it would be easily determined where work  
390 would be occurring within approximately 200 feet.

391  
392 **(f)** Latest start and finish dates for critical path activities.

393  
394 **(g)** Identify responsible subcontractor, supplier, and others  
395 for their respective activity.

396  
397 **(h)** No individual activity shall have duration of more than  
398 twenty (20) calendar days unless requested and approved by  
399 the Engineer.

400  
401 **(i)** All activities shall have work breakdown structure  
402 codes and activity codes. The activity codes shall have

403 coding that incorporates information for phase, location, who  
404 is responsible for doing work and type of operation and  
405 activity description.

406  
407 (j) Incorporate all physical access and availability  
408 restraints.

409  
410 **(B) Inspection and Testing.** All schedules shall provide reasonable  
411 time and opportunity for the Engineer to inspect and test each work activity.

412  
413 **(C) Engineer's Acceptance of Progress Schedule.** The submittal of,  
414 and the Engineer's receipt of any progress schedule, shall not be deemed  
415 an agreement to modify any terms or conditions of the contract. Any  
416 modifications to the contract terms and conditions that appear in or may be  
417 inferred from an acceptable schedule will not be valid or enforceable unless  
418 and until the Engineer exercises discretion to issue an appropriate change  
419 order. Nor shall any submittal or receipt imply the Engineer's approval of  
420 the schedule's breakdown, its individual elements, any critical path that may  
421 be shown, nor shall it obligate the State to make its personnel available  
422 outside normal working hours or the working hours established by the  
423 Contract in order to accommodate such schedule. The Contractor has the  
424 risk of all elements (whether or not shown) of the schedule and its  
425 execution. No claim for additional compensation, time, or both, shall be  
426 made by the Contractor or recognized by the Engineer for delays during  
427 any period for which an acceptable progress schedule or an updated  
428 progress schedule as required by Subsection 108.06(E) – Contractor's  
429 Continuing Schedule Submittal Requirements had not been submitted. Any  
430 acceptance or approval of the schedule shall be for general format only and  
431 shall not be deemed an agreement by the State that the construction  
432 means, methods, and resources shown on the schedule will result in work  
433 that conforms to the contract requirements or that the sequences or  
434 durations indicated are feasible.

435  
436 **(D) Initial Progress Schedule.** The Contractor shall submit an initial  
437 progress schedule. The initial progress schedule shall consist of the  
438 following:

439  
440 (1) Four sets of the TSLD schedule.

441  
442 (2) All the software files and data to re-create the TSLD in a  
443 computerized software format as specified by the Engineer.

444  
445 (3) A listing of equipment that is anticipated to be used on the  
446 project. Including the type, size, make, year of manufacture, and all  
447 information necessary to identify the equipment in the Rental Rate  
448 Blue Book for Construction Equipment.

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(4) An anticipated manpower requirement graph plotting contract time and total manpower requirement. This may be superimposed over the payment graph.

(5) A Method Statement that is a detailed narrative describing the work to be done and the method by which the work shall be accomplished for each major activity. A major activity is an activity that:

- (a) Has a duration longer than five (5) days.
- (b) Is a milestone activity.
- (c) Is a contract item that exceeds \$10,000 on the contract cost proposal.
- (d) Is a critical path activity.
- (e) Is an activity designated as such by the Engineer.

Each Method Statement shall include the following items needed to fulfill the schedule:

- (a) Quantity, type, make, and model of equipment.
- (b) The manpower to do the work, specifying worker classification.
- (c) The production rate per eight (8) hour day, or the working hours established by the contract documents needed to meet the time indicated on the schedule. If the production rate is not for eight hours, the number of working hours shall be indicated.

(6) Two sets of color time-scaled project evaluation and review technique charts (“PERT”) using the activity box template of Logic – Early Start or such other template designated by the Engineer.

If the contract documents establish a sequence or order for the work, the initial progress schedule shall conform to such sequence or order.

**(E) Contractor’s Continuing Schedule Submittal Requirements.** After the acceptance of the initial TSLD and when construction starts, the Contractor shall submit four plotted progress schedules, two PERT charts, and reports on all construction activities every two (2) weeks (bi-weekly). This scheduled bi-weekly submittal shall also include an updated version of

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the project schedule in a computerized software format as specified by the Engineer. The submittal shall have all the information needed to re-create that time period's TSLD plot and reports. The bi-weekly submittal shall include, but not limited to, an update of activities based on actual durations, all new activities and any changes in duration or start or finish dates of any activity.

The Contractor shall submit with every update, in report form acceptable to the Engineer, a list of changes to the progress schedule since the previous schedule submittal. The Engineer may change the frequency of the submittal requirements but may not require a submittal of the schedule to be more than once a week. The Engineer may decrease the frequency of the submittal of the bi-weekly schedule.

The Contractor shall submit updates of the anticipated work completion graph, equipment listing, manpower requirement graph or method statement when requested by the Engineer. The Contractor shall submit such updates within four (4) calendar days from the date of the request by the Engineer.

The Engineer may withhold progress payment until the Contractor is in compliance with all schedule update requirements

**(F) Float.** All float appearing on a schedule is a shared commodity. Float does not belong to or exist for the exclusive use or benefit of either the State or the Contractor. The State or the Contractor has the opportunity to use available float until it is depleted. Float has no monetary value.

**(G) Scheduled Meetings.** The Contractor shall meet on a bi-weekly basis with the Engineer to review the progress schedule. The Contractor shall have someone attending the meeting that can answer all questions on the TSLD and other schedule related submittals.

**(H) Accelerated Schedule; Early Completion.** If the Contractor submits an accelerated schedule (shorter than the contract time), the Engineer's review and acceptance of an accelerated schedule does not constitute an agreement or obligation by the State to modify the contract time or completion date. The Contractor is solely responsible for and shall accept all risks and any delays, other than those that can be directly and solely attributable to the State, that may occur during the work, until the contract completion date. The contract time or completion date is established for the benefit of the State and cannot be changed without an appropriate change order or Substantial Completion granted by the State. The State may accept the work before the completion date is established, but is not obligated to do so.

540 If the TSLD indicates an early completion of the project, the  
541 Contractor shall, upon submittal of the schedule, cooperate with the  
542 Engineer in explaining how it will be achieved. In addition, the Contractor  
543 shall submit the above explanation in writing which shall include the State's  
544 part, if any, in achieving the early completion date. Early completion of the  
545 project shall not rely on changes to the Contract Documents unless  
546 approved by the Engineer.

547  
548 **(l) Contractor Responsibilities.** The Contractor shall promptly  
549 respond to any inquiries from the Engineer regarding any schedule  
550 submission. The Contractor shall adjust the schedule to address directives  
551 from the Engineer and shall resubmit the TSLD package to the Engineer  
552 until the Engineer finds it acceptable.  
553

554 The Contractor shall perform the work in accordance with the  
555 submitted TSLD. The Engineer may require the Contractor to provide  
556 additional work forces and equipment to bring the progress of the work into  
557 conformance with the TSLD at no increase in contract price or contract time  
558 whenever the Engineer determines that the progress of the work does not  
559 insure completion within the specified contract time.  
560

561 **108.07 Weekly Meeting.** In addition to the bi-weekly schedule meetings, the  
562 Contractor shall be available to meet once a week with the Engineer at the time  
563 and place as determined by the Engineer to discuss the work and its progress  
564 including but not limited to, the progress of the project, potential problems,  
565 coordination of work, submittals, erosion control reports, etc. The Contractor's  
566 personnel attending shall have the authority to make decisions and answer  
567 questions.  
568

569 The Contractor shall bring to weekly meetings a detailed work schedule  
570 showing the next three (3) weeks' work. Number of copies of the detailed work  
571 schedule to be submitted will be determined by the Engineer. The three (3)-week  
572 schedule is in addition to the TSLD and shall in no way be considered as a  
573 substitute for the TSLD or vice versa. The three (3)-week schedule shall show:  
574

575 **(a)** All construction events, traffic control and BMP related activities in  
576 such detail that the Engineer will be able to determine at what location and  
577 type of work will be done for any day for the next three (3) weeks. This is  
578 for the State to use to plan its manpower requirements for that time period.  
579

580 **(b)** The duration of all events and delays.  
581

582 **(c)** The critical path clearly marked in red or marked in a manner that  
583 makes it clearly distinguishable from other paths and is acceptable to the  
584 Engineer.  
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(d) Critical submittals and requests for information (RFI's).

(e) The project title, project number, date created, period the schedule covers, Contractor's name and creator of the schedule on each page.

Two (2) days prior to each weekly meeting, the Contractor shall submit a list of outstanding submittals, RFIs and issues that require discussion.

**108.08 Liquidated Damages for Failure to Complete the Work or Portions of the Work on Time.** The actual amount of damages resulting from the Contractor's failure to complete the contract in a timely manner is difficult to accurately determine. Therefore, the amount of such damages shall be liquidated damages as set forth herein and in the special provisions. The State may, at its discretion, deduct the amount from monies due or that may become due under the contract.

When the Contractor fails to reach substantial completion of the work for which liquidated damages are specified, within the time or times fixed in the contract or any extension thereof, in addition to all other remedies for breach that may be available to the State, the Contractor shall pay liquidated damages to the State, in the amount of \$ 5,000 per working day.

**(A) Liquidated Damages Upon Termination.** If the State terminates on account of Contractor's default, liquidated damages may be charged against the defaulting Contractor and its surety until final completion of work.

**(B) Liquidated Damages for Failure to Complete the Punchlist.** The Contractor shall complete the work on any punchlist created after the pre-final inspection, within the contract time or any extension thereof.

When the Contractor fails to complete the work on such punchlist within the contract time or any extension thereof, the Contractor shall pay liquidated damages to the State of 20 percent of the amount of liquidated damages established for failure to substantially complete the work within contract time. Liquidated damages shall not be assessed for the period between:

(1) Notice from the Contractor that the project is substantially complete and the time the punchlist is delivered to the Contractor.

(2) The date of the completion of punchlist as determined by the Engineer and the date of the successful final inspection, and

631 (3) The date of the Final Inspection that results in Substantial  
632 Completion and the receipt by the Contractor of the written notice of  
633 Substantial Completion.

634  
635 (C) **Actual Damages Recoverable If Liquidated Damages Deemed**  
636 **Unenforceable.** In the event a court of competent jurisdiction holds that  
637 any liquidated damages assessed pursuant to this contract are  
638 unenforceable, the State will be entitled to recover its actual damages for  
639 Contractor's failure to complete the work, or any designated portion of the  
640 work within the time set by the contract.

641  
642 **108.09 Rental Fees for Unauthorized Lane Closure or Occupancy.** In  
643 addition to all other remedies available to the State for Contractor's breach of the  
644 terms of the contract, the Engineer will assess the rental fees in the amount of  
645 \$2,500 for every fifteen (15)-minute increment for each roadway lane closed to  
646 public use or occupied beyond the time periods authorized in the contract or by the  
647 Engineer. The State may, at its discretion, deduct the amount from monies due or  
648 that may become due under the contract. The rental fee may be waived in whole  
649 or part if the Engineer determines that the unauthorized period of lane closure or  
650 occupancy was due to factors beyond the control of the Contractor. Equipment  
651 breakdown is not a cause to waive liquidated damages.

652  
653 **108.10 Suspension of Work.**

654  
655 (A) **Suspension of Work.** The Engineer may, by written order, suspend  
656 the performance of the work, either in whole or in part, for such periods as  
657 the Engineer may deem necessary, for any cause, including but not limited  
658 to:

659  
660 (1) Weather or soil conditions considered unsuitable for  
661 prosecution of the work.

662  
663 (2) Whenever a redesign that may affect the work is deemed  
664 necessary by the Engineer.

665  
666 (3) Unacceptable noise or dust arising from the construction even  
667 if it does not violate any law or regulation.

668  
669 (4) Failure on the part of the Contractor to:

670  
671 (a) Correct conditions unsafe for the general public or for  
672 the workers.

673  
674 (b) Carry out orders given by the Engineer.

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(c) Perform the work in strict compliance with the provisions of the contract.

(d) Provide adequate supervision on the jobsite.

(5) The convenience of the State.

**(B) Partial and Total Suspension.** Suspension of work on some but not all items of work shall be considered a “partial suspension”. Suspension of work on all items shall be considered “total suspension”. The period of suspension shall be computed from the date set out in the written order for work to cease until the date of the order for work to resume.

**(C) Reimbursement to Contractor.** In the event that the Contractor is ordered by the Engineer in writing as provided herein to suspend all work under the contract for the reasons specified in Subsections 108.10(A)(2), 108.10(A)(3), or 108.10(A)(5) of the “Suspension of Work” paragraph, the Contractor may be reimbursed for actual direct costs incurred on work at the jobsite, as authorized in writing by the Engineer, including costs expended for the protection of the work. An allowance of 5 percent for indirect categories of delay costs will be paid on any reimbursed direct costs, including extended branch and home-office overhead and delay impact costs. No allowance will be made for anticipated profits. Payment for equipment which is ordered to standby during such suspension of work shall be made as described in Subsection 109.06(H) - Idle and Standby Equipment.

**(D) Cost Adjustment.** If the performance of all or part of the work is suspended for reasons beyond the control of the Contractor except an adjustment shall be made for any increase in cost of performance of this contract (excluding profit) necessarily caused by such suspension, and the contract modified in writing accordingly.

However, no adjustment to the contract price shall be made for any suspension, delay, or interruption:

(1) For weather related conditions.

(2) To the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor.

(3) Or, for which an adjustment is provided for or excluded under any other provision of this Contract.

720 **(E) Claims for Adjustment.** Any adjustment in contract price made  
721 shall be determined in accordance with Subsections 104.02 – Changes and  
722 104.06 – Methods of Price Adjustment.  
723

724 Any claims for such compensation shall be filed in writing with the  
725 Engineer within thirty (30) days after the date of the order to resume work or  
726 the claim will not be considered. The claim shall conform to the  
727 requirements of Subsection 107.15(D) – Making of a Claim. The Engineer  
728 will take the claim under consideration, may make such investigations as  
729 are deemed necessary and will be the sole judge as to the equitability of the  
730 claim. The Engineer’s decision will be final.  
731

732 **(F) No Adjustment.** No provision of this clause shall entitle the  
733 Contractor to any adjustments for delays due to failure of its surety, the  
734 cancellation or expiration of any insurance coverage required by the  
735 contract documents, for suspensions made at the request of the Contractor,  
736 for any delay required under the contract, for suspensions, either partial or  
737 whole, made by the Engineer under Subsection 108.10(A)(4) of the  
738 “Suspension of work” paragraph.  
739

740 **108.11 Termination of Contract for Cause.**  
741

742 **(A) Default.** If the Contractor refuses or fails to perform the work, or any  
743 separable part thereof, with such diligence as will assure its completion  
744 within the time specified in this contract, or any extension thereof, or  
745 commits any other material breach of this contract, and further fails within  
746 seven (7) days after receipt of written notice from the Engineer to  
747 commence and continue correction of the refusal or failure with diligence  
748 and promptness, the Engineer may, by written notice to the Contractor,  
749 declare the Contractor in breach and terminate the Contractor’s right to  
750 proceed with the work or the part of the work as to which there has been  
751 delay or other breach of contract. In such event, the State may take over  
752 the work, perform the same to completion, by contract or otherwise, and  
753 may take possession of, and utilize in completing the work, the materials,  
754 appliances, and plants as may be on the site of the work and necessary  
755 therefore. Whether or not the Contractor’s right to proceed with the work is  
756 terminated, the Contractor and the Contractor’s sureties shall be liable for  
757 any damage to the State resulting from the Contractor’s refusal or failure to  
758 complete the work within the specified time.  
759

760 **(B) Additional Rights and Remedies.** The rights and remedies of the  
761 State provided in this contract are in addition to any other rights and  
762 remedies provided by law.  
763

764 **(C) Costs and Charges.** All costs and charges incurred by the State,  
765 together with the cost of completing the work under contract, will be

766 deducted from any monies due or which would or might have become due  
767 to the Contractor had it been allowed to complete the work under the  
768 contract. If such expense exceeds the sum which would have been  
769 payable under the contract, then the Contractor and the surety shall be  
770 liable and shall pay the State the amount of the excess.

771  
772 In case of termination, the Engineer will limit any payment to the  
773 Contractor to the part of the contract satisfactorily completed at the time of  
774 termination. Payment will not be made until the work has satisfactorily been  
775 completed and all required documents, including the tax clearance required  
776 by Subsection 109.11 – Final Payment are submitted by the Contractor.  
777 Termination shall not relieve the Contractor or Surety from liability for  
778 liquidated damages.

779  
780 **(D) Erroneous Termination for Cause.** If, after notice of termination of  
781 the Contractor's right to proceed under this section, it is determined for any  
782 reason that good cause did not exist to allow the State to terminate as  
783 provided herein, the rights and obligations of the parties shall be the same  
784 as, and the relief afforded the Contractor shall be limited to, the provisions  
785 contained in Subsection 108.12 – Termination for Convenience.

786  
787 **108.12 Termination For Convenience.**

788  
789 **(A) Terminations.** The Director may, when the interests of the State so  
790 require, terminate this contract in whole or in part, for the convenience of  
791 the State. The Director will give written notice of the termination to the  
792 Contractor specifying the part of the contract terminated and when  
793 termination becomes effective.

794  
795 **(B) Contractor's Obligations.** The Contractor shall incur no further  
796 obligations in connection with the terminated work and on the date set in  
797 the notice of termination the Contractor shall stop work to the extent  
798 specified. The Contractor shall also terminate outstanding orders and  
799 subcontracts as they relate to the terminated work. The Contractor shall  
800 settle the liabilities and claims arising out of the termination of subcontracts  
801 and orders connected with the terminated work subject to the State's  
802 approval. The Engineer may direct the Contractor to assign the  
803 Contractor's right, title, and interest under terminated orders or subcontracts  
804 to the State. The Contractor must still complete the work not terminated by  
805 the notice of termination and may incur obligations as necessary to do so.

806  
807 **(C) Right to Construction and Goods.** The Engineer may require the  
808 Contractor to transfer title and to deliver to the State in the manner and to  
809 the extent directed by the Engineer, the following:

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- (1) Any completed work.
- (2) Any partially completed construction, goods, materials, parts, tools, dies, jigs, fixtures, drawings, information, and contract rights (hereinafter called "construction material") that the Contractor has specifically produced or specially acquired for the performance of the terminated part of this contract.
- (3) The Contractor shall protect and preserve all property in the possession of the Contractor in which the State has an interest. If the Engineer does not elect to retain any such property, the Contractor shall use its best efforts to sell such property and construction materials for the State's account in accordance with the standards of HRS Chapter 490:2-706.

**(D) Compensation.**

- (1) The Contractor shall submit a termination claim specifying the amounts due because of the termination for convenience together with cost or pricing data, submitted to the extent required by HAR Subchapter 15, Chapter 3-122. If the Contractor fails to file a termination claim within one (1) year from the effective date of termination, the Engineer may pay the Contractor, if at all, an amount set in accordance with Subsection 108.12(D)(3).
- (2) The Engineer and the Contractor may agree to a settlement provided the Contractor has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total contract price plus settlement costs reduced by payments previously made by the State, the proceeds of any sales of construction, supplies, and construction materials under Subsection 108.12(C)(3), and the proportionate contract price of the work not terminated.
- (3) Absent complete agreement, the Engineer will pay the Contractor the following amounts less any payments previously made under the contract:
  - (a) The cost of all contract work performed prior to the effective date of the notice of termination work plus a 5 percent markup on the actual direct costs, including amounts paid to subcontractor, less amounts paid or to be paid for completed portions of such work; provided, however, that if it appears that the Contractor would have sustained a loss if the entire contract would have been completed, no markup shall be allowed or included and the amount of compensation shall

856 be reduced to reflect the anticipated rate of loss. No  
857 anticipated profit or consequential damage will be due or paid.

858  
859 **(b)** Subcontractors shall be paid a markup of 10 percent on  
860 their direct job costs incurred to the date of termination. No  
861 anticipated profit or consequential damage will be due or paid  
862 to any subcontractor. These costs must not include payments  
863 made to the Contractor for subcontract work during the  
864 contract period.

865  
866 **(c)** The total sum to be paid the Contractor shall not  
867 exceed the total contract price reduced by the amount of any  
868 sales of construction supplies, and construction materials.

869  
870 **(4)** Cost claimed, agreed to, or established by the State shall be  
871 in accordance with HAR Chapter 3-123.

872  
873 **108.13 Pre-Final and Final Inspections.**

874  
875 **(A) Inspection Requirements.** Before the Engineer undertakes a final  
876 inspection of any work, a pre-final inspection must first be conducted. The  
877 Contractor shall notify the Engineer that the work has reached substantial  
878 completion and is ready for pre-final inspection.

879  
880 **(B) Pre-Final Inspection.** Before notifying the Engineer that the work  
881 has reached substantial completion, the Contractor shall inspect the project  
882 and test all installed items with all of its subcontractors as appropriate. The  
883 Contractor shall also submit the following documents as applicable to the  
884 work:

- 885  
886 **(1)** All written guarantees required by the contract.  
887  
888 **(2)** Two accepted final field-posted drawings as specified in  
889 Section 648 – Field-Posted Drawings;  
890  
891 **(3)** Complete weekly certified payroll records for the Contractor  
892 and Subcontractors.  
893  
894 **(4)** Certificate of Plumbing and Electrical Inspection.  
895  
896 **(5)** Certificate of building occupancy as required.  
897  
898 **(6)** Certificate of Soil and Wood Treatments.  
899  
900 **(7)** Certificate of Water System Chlorination.  
901

902 (8) Certificate of Elevator Inspection, Boiler and Pressure Pipe  
903 Inspection.

904  
905 (9) Maintenance Service Contract and two copies of a list of all  
906 equipment installed.

907  
908 (10) Current Tax clearance. The contractor will be required to  
909 submit an additional tax clearance certificate when the final payment  
910 is made.

911  
912 (11) And any other final items and submittals required by the  
913 contract documents.

914  
915 (C) **Procedure.** When in compliance with the above requirements, the  
916 Contractor shall notify the Engineer in writing that the project has reached  
917 substantial completion and is ready for pre-final inspection.

918  
919 The Engineer will then make a preliminary determination as to  
920 whether or not the project is substantially complete and ready for pre-final  
921 inspection. The Engineer may, in writing, postpone until after the pre-final  
922 inspection the Contractor's submittal of any of the items listed in Subsection  
923 108.13(B) – Pre-Final Inspection, herein, if in the Engineer's discretion it is  
924 in the interest of the State to do so.

925  
926 If, in the opinion of the Engineer, the project is not substantially  
927 complete, the Engineer will provide the Contractor a punchlist of specific  
928 deficiencies in writing which must be corrected or finished before the work  
929 will be ready for a pre-final inspection. The Engineer may add to or  
930 otherwise modify this punchlist from time to time. The Contractor shall take  
931 immediate action to correct the deficiencies and must repeat all steps  
932 described above including written notification that the work is ready for pre-  
933 final inspection.

934  
935 After the Engineer is satisfied that the project appears substantially  
936 complete a final inspection shall be scheduled within ten (10) working days  
937 after receipt of the Contractor's latest letter of notification that the project is  
938 ready for final inspection.

939  
940 If, as a result of the pre-final inspection, the Engineer determines the  
941 work is not substantially complete, the Engineer will inform the Contractor in  
942 writing as to specific deficiencies which must be corrected before the work  
943 will be ready for another pre-final inspection. If the Engineer finds the work  
944 is substantially complete but finds deficiencies that must be corrected  
945 before the work is ready for final inspection, the Engineer will prepare in  
946 writing and deliver to the Contractor a punchlist describing such  
947 deficiencies.

948 At any time before final acceptance, the Engineer may revoke the  
949 determination of substantial completion if the Engineer finds that it was not  
950 warranted and will notify the Contractor in writing the reasons therefore  
951 together with a description of the deficiencies negating the declaration.  
952

953 When the date of substantial completion has been determined by the  
954 State, liquidated damages for the failure to complete the punchlist, if due to  
955 the State will be assessed in pursuant to Subsection 108.08(B) - Liquidated  
956 Damages for Failure to Complete the Punchlist.  
957

958 **(D) Punchlist; Clean Up and Final Inspection.** Upon receiving a  
959 punchlist after pre-final inspection, the Contractor shall promptly devote all  
960 required time, labor, equipment, materials and incidentals to correct and  
961 remedy all punchlist deficiencies. The Engineer may add to or otherwise  
962 modify this punchlist until substantial completion of the project.  
963

964 Before final inspection of the work, the Contractor shall clean all  
965 ground occupied by the Contractor in connection with the work of all  
966 rubbish, excess materials temporary structures and equipment, shall  
967 remove all graffiti and defacement of the work and all parts of the work and  
968 the worksite must be left in a neat and presentable condition to the  
969 satisfaction of the Engineer.  
970

971 Final inspection will occur within ten (10) working days after the  
972 Contractor notifies the Engineer in writing that all punchlist deficiencies  
973 remaining after the pre-final inspection have been completed and the  
974 Engineer concurs. If the Engineer determines that deficiencies still remain  
975 at the final inspection, the work will not be accepted and the Engineer will  
976 notify the Contractor, in writing, of the deficiencies which shall be corrected  
977 and the steps above repeated.  
978

979 If the Contractor fails to correct the deficiencies and complete the  
980 work by the established or agreed date, the State may correct the  
981 deficiencies by whatever method it deems appropriate and deduct the cost  
982 from any payments due the Contractor.  
983

#### 984 **108.14 Substantial Completion and Final Acceptance.**

985  
986 **(A) Substantial Completion.** When the Engineer finds that the  
987 Contractor has satisfactorily completed all work for the project in  
988 compliance with the contract, with the exception of the planting period and  
989 the plant establishment period, the Engineer will notify the Contractor, in  
990 writing, of the project's substantial completion, effective as of the date of the  
991 final inspection. The substantial completion date shall determine end of  
992 contract time and relieve contractor of any additional accumulation of  
993 liquidated damages for failure to complete the punchlist.

994 **(B) Final Acceptance.** When the Engineer finds that the Contractor has  
995 satisfactorily completed all contract work in compliance with the contract  
996 including all plant establishment requirements, and all the materials have  
997 been accepted by the State, the Engineer will issue a Final Acceptance  
998 Letter. The Final Acceptance date shall determine the commencement of  
999 all guaranty periods subject to Subsection 108.16 – Contractor’s  
1000 Responsibility for Work; Risk of Loss or Damage.

1001  
1002 **108.15 Use of Structure or Improvement.** The State has the right to use the  
1003 structure, equipment, improvement, or any part thereof, at any time after it is  
1004 considered by the Engineer as available. In the event that the structure,  
1005 equipment or any part thereof is used by the State before final acceptance, the  
1006 Contractor is not relieved of its responsibility to protect and preserve all the work  
1007 until final acceptance.

1008  
1009 **108.16 Contractor’s Responsibility for Work; Risk of Loss or Damage.**  
1010 Until the written notice of final acceptance has been received, the Contractor shall  
1011 take every precaution against loss or damage to any part of the work by the action  
1012 of the elements or from any other cause whatsoever, whether arising from the  
1013 performance or from the non-performance of the work. The Contractor shall  
1014 rebuild, repair, restore and make good all loss or damage to any portion of the  
1015 work resulting from any cause before its receipt of the written notice of final  
1016 acceptance and shall bear the risk and expense thereof.

1017  
1018 The risk of loss or damage to the work from any hazard or occurrence that  
1019 may or may not be covered by a builder’s risk policy is that of the Contractor and  
1020 Surety, unless such risk of loss is placed elsewhere by express language in the  
1021 contract documents.

1022  
1023 **108.17 Guarantee of Work.**

1024  
1025 **(1)** Regardless of, and in addition to, any manufacturers’ warranties, all  
1026 work and equipment shall be guaranteed by the Contractor against defects  
1027 in materials, equipment or workmanship for one (1) year from the date of  
1028 final acceptance or as otherwise specified in the contract documents.

1029  
1030 **(2)** When the Engineer determines that repairs or replacements of any  
1031 guaranteed work and equipment is necessary due to materials, equipment,  
1032 or workmanship which are inferior, defective, or not in accordance with the  
1033 terms of the contract, the Contractor shall, at no increase in contract price  
1034 or contract time, and within five (5) working days of receipt of written notice  
1035 from the State, commence to all of the following:

1036  
1037 **(a)** Correct all noted defects and make replacements, as directed  
1038 by the Engineer, in the equipment and work.

1039

1040 (b) Repair or replace to new or pre-existing condition any  
1041 damages resulting from such defective materials, equipment or  
1042 installation thereof.

1043  
1044 (3) The State will be entitled to the benefit of all manufacturers and  
1045 installers warranties that extend beyond the terms of the Contractor's  
1046 guaranty regardless of whether or not such extended warranty is required  
1047 by the contract documents. The Contractor shall prepare and submit all  
1048 documents required by the providers of such warranties to make them  
1049 effective, and submit copies of such documents to the Engineer. If an  
1050 available extended warranty cannot be transferred or assigned to the State  
1051 as the ultimate user, the Contractor shall notify the Engineer who may direct  
1052 that the warranted items be acquired in the name of the State as purchaser.

1053  
1054 (4) If a defect is discovered during a guarantee period, all repairs and  
1055 corrections to the defective items when corrected shall be guaranteed for a  
1056 new duration equal to the original full guarantee period. The running of the  
1057 guarantee period shall be suspended for all other work affected by any  
1058 defect. The guarantee period for all other work affected by any such defect  
1059 shall restart for its remaining duration upon confirmation by the Engineer  
1060 that the deficiencies have been repaired or remedied.

1061  
1062 (5) Nothing in this section is intended to limit or affect the State's rights  
1063 and remedies arising from the discovery of latent defects in the work after  
1064 the expiration of any guarantee period.

1065  
1066 **108.18 No Waiver of Legal Rights.** The following will not operate or be  
1067 considered as a waiver of any portion of the contract, or any power herein  
1068 reserved, or any right to damages provided herein or by law:

1069  
1070 (1) Any payment for, or acceptance of, the whole or any part of the work.

1071  
1072 (2) Any extension of time.

1073  
1074 (3) Any possession taken by the Engineer.

1075  
1076 A waiver of any notice requirement or of any noncompliance with the  
1077 contract will not be held to be a waiver of any other notice requirement or any  
1078 other noncompliance with the contract.

1079  
1080 **108.19 Final Settlement of Contract.**

1081  
1082 (A) **Closing Requirements.** The contract will be considered settled  
1083 after the project acceptance date and when the following items have been  
1084 satisfactorily submitted, where applicable:

- 1085 (1) All written guarantees required by the contract.
- 1086
- 1087 (2) Complete and certified weekly payrolls for the Contractor and
- 1088 its subcontractor's.
- 1089
- 1090 (3) Certificate of plumbing and electrical inspection.
- 1091
- 1092 (4) Certificate of building occupancy.
- 1093
- 1094 (5) Certificate for soil treatment and wood treatment.
- 1095
- 1096 (6) Certificate of water system chlorination.
- 1097
- 1098 (7) Certificate of elevator inspection, boiler and pressure pipe
- 1099 installation.
- 1100
- 1101 (8) Tax clearance.
- 1102
- 1103 (9) All other documents required by the Contract or by law.
- 1104

1105 **(B) Failure to Meet Closing Requirements.** The Contractor shall meet  
1106 the applicable closing requirements within sixty (60) days from the date of  
1107 Project Acceptance or the agreed to Punchlist complete date. Should the  
1108 Contractor fail to comply with these requirements, the Engineer may  
1109 terminate the contract for cause.”

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**END OF SECTION 108**



47 **(IV)** Amend **Subsection 109.11 Final Payment** by revising lines 568 to 576  
48 to read as follows:

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**(3)** A current “Certificate of Vendor Compliance” issued by the Hawaii Compliance Express (HCE). The Certificate of Vendor Compliance is used to certify the Contractor’s compliance with

**(a)** Section 103D-328, HRS (for all contracts \$25,000 or more) which requires a current tax clearance certificate issued by the Hawaii State Department of Taxation and the Internal Revenue Service;

**(b)** Chapters 383, 386, 392, and 393, HRS; and

**(c)** Subsection 103D-310(c), HRS. The State reserves the right to verify that compliance is current prior to the issuance of final payment. Contractors are advised that non-compliance status will result in final payment being withheld until compliance is attained.

Sums necessary to meet the claims of any governmental agencies may be withheld from the sums due the Contractor until said claims have been fully and completely discharged or otherwise satisfied.”

**END OF SECTION 109**



1                                   **SECTION 203 – EXCAVATION AND EMBANKMENT**  
2

3       Make the following amendments to said Section:  
4

5       **(I)**     Amend **203.03(C)(2)(a) – Maximum Dry Unit Weight** from line 245 to line  
6       255 to read as follows:  
7

8                                   **“(a) Maximum Dry Unit Weight.**     Test for maximum dry  
9                                   unit weight according to AASHTO T 180, and apply the  
10                                   correction for fraction larger than 3/4 inch.     Use Hawaii  
11                                   Test Method HDOT TM 5 for sample preparation of sensitive  
12                                   soils when so designated by the Engineer.”  
13

14       **(II)**     Amend **203.04 – Measurement** by revising lines 345 to 366 to read as  
15       follows:  
16

17       **“203.04 Measurement.**

18  
19                                   **(A)**     The Engineer will measure roadway excavation per cubic yard.  
20                                   The Engineer will compute quantities of roadway excavation by average  
21                                   end area method and centerline distances. Curvature correction will not  
22                                   be applied to quantities within roadway prism, as indicated in the contract  
23                                   documents. In computing excavation quantities from outside the roadway  
24                                   prism, where roadway centerline is used as a base, curvature correction  
25                                   will be applied when centerline radius is 1,000 feet or less.  
26

27                                   When roadway excavation quantities by average end area method  
28                                   cannot be computed due to the nature of a particular operation or changed  
29                                   conditions, the Engineer will determine and use computation method that  
30                                   will produce an accurate quantity estimate.  
31

32                                   **(B)**     The Engineer will measure borrow excavated material per cubic  
33                                   yard. The Engineer will compute quantities of borrow material  
34                                   incorporated into the work on a volume basis, using average end area  
35                                   method in place at work site.”  
36

37       **(III)**     Amend **203.05 – Payment** by revising lines 368 to 457 to read as follows:  
38

39       **“203.05 Payment.**     The Engineer will pay for the accepted pay items listed  
40       below at the contract price per pay unit, as shown in the proposal schedule.  
41       Payment will be full compensation for the work prescribed in this section and the  
42       contract documents.  
43

44                                   The Engineer will pay for each of the following pay items when included in  
45       the proposal schedule:  
46

47	<b>Pay Item</b>	<b>Pay Unit</b>
48		
49	<b>(A) Roadway Excavation</b>	Cubic Yard
50		
51	The Engineer will pay for:	
52		
53	<b>(1)</b> 15 percent of the contract bid price upon completion of	
54	obliterating old roadways and hauling.	
55		
56	<b>(2)</b> 30 percent of the contract bid price upon completion of	
57	preparing subgrade.	
58		
59	<b>(3)</b> 40 percent of the contract bid price upon completion of placing	
60	selected material in final position, rounding of slopes, and using water	
61	for compaction.	
62		
63	<b>(4)</b> 15 percent of the contract bid price upon completion of	
64	disposing of surplus excavation material.	
65		
66	<b>(B) Borrow Excavated Material</b>	Cubic Yard
67		
68	The Engineer will pay for:	
69		
70	<b>(1)</b> 10 percent of the contract bid price upon completion of staking	
71	out and cross sectioning existing condition at borrow excavated and in-	
72	place sites and establishing borrow area.	
73		
74	<b>(2)</b> 5 percent of the contract bid price upon completion of providing,	
75	replacing, and maintaining temporary and permanent fencing, and	
76	confining livestock.	
77		
78	<b>(3)</b> 15 percent of the contract bid price upon completion of all	
79	necessary storing and processing of borrow material.	
80		
81	<b>(4)</b> 15 percent of the contract bid price upon completion of watering	
82	and hauling material to work site.	
83		
84	<b>(5)</b> 20 percent of the contract bid price upon completion of placing,	
85	grading, and compacting material in accordance with contract	
86	requirements at work site.	
87		
88	<b>(6)</b> 15 percent of the contract bid price upon completion of restoring	
89	and regrading borrow area.	
90		

91 (7) 10 percent of the contract bid price upon completion of staking  
92 out and cross sectioning final condition at borrow excavated and in-  
93 place sites.

94  
95 (8) 10 percent of the contract bid price upon completion of  
96 removing and disposing of excess and unsuitable material from work  
97 site.

98  
99 The Engineer will pay for accepted quantities of subexcavation, as  
100 roadway excavation at the contract unit price per cubic yard, when ordered by  
101 the Engineer, for work prescribed in Subsection 203.03(A)(4) – Subexcavation.  
102 Payment will be full compensation for the work prescribed therein and in the  
103 contract documents.

104  
105 The Engineer will pay for accepted quantities of unlined gutter excavation  
106 as roadway excavation at the contract unit price per cubic yard, when gutter is  
107 located as follows: within median area of a divided highway; and between  
108 roadbed shoulder and adjacent cut slope. Payment will be full compensation for  
109 removing and disposing of excavated material; backfilling and compacting; and  
110 for the work prescribed in the contract documents.

111  
112 The Engineer will not pay for stockpiling selected material, placing  
113 selected material in final position, or placing selected material in windrows along  
114 tops of roadway slopes for erosion control work, separately and will consider the  
115 cost as included in the unit prices for the various excavation contract pay items.  
116 The cost is for work prescribed in this section and the contract documents.

117  
118 The Engineer will not pay for overhaul separately and will consider the  
119 cost as included in the unit prices for the various excavation contract pay items.  
120 The cost is for work prescribed in this section and the contract documents.

121  
122 The Engineer will not pay for embankment separately and will consider the  
123 cost as included in the unit price for roadway excavation. The cost is for work  
124 prescribed in this section and the contract documents.”

125  
126  
127  
128

**END OF SECTION 203**

1 Amend **Section 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION**  
2 **CONTROL** to read as follows:

3  
4  
5 **“SECTION 209 - TEMPORARY WATER POLLUTION, DUST, AND EROSION**  
6 **CONTROL**

7  
8  
9 **209.01 Description.** This section describes the following:

10  
11 **(A)** Including detailed plans, diagrams, and written Site-Specific Best  
12 Management Practices (BMP); constructing, maintaining, and repairing  
13 temporary water pollution, dust, and erosion control measures at the project  
14 site, including local material sources, work areas and haul roads; removing  
15 and disposing hazardous wastes; control of fugitive dust (defined as  
16 uncontrolled emission of solid airborne particulate matter from any source  
17 other than combustion); and complying with applicable State and Federal  
18 permit conditions.

19  
20 **(B)** Work associated with construction stormwater, dewatering, and  
21 hydrotesting activities and complying with conditions of the National Pollutant  
22 Discharge Elimination System (NPDES) permit(s) authorizing discharges  
23 associated with construction stormwater, dewatering, and hydrotesting  
24 activities.

25  
26 **(C)** Potential pollutant identification and mitigation measures are listed in  
27 Appendix A for use in the development of the Contractor’s Site-Specific BMP.

28  
29 Requirements of this section also apply to construction support  
30 activities including concrete or asphalt batch plants, rock crushing plants,  
31 equipment staging yards/areas, material storage areas, excavated material  
32 disposal areas, and borrow areas located outside the State Right-of-Way.  
33 For areas serving multiple construction projects, or operating beyond the  
34 completion of the construction project in which it supports, the Contractor  
35 shall be responsible for securing the necessary permits, clearances, and  
36 documents, and following the conditions of the permits and clearances, at no  
37 cost to the State.

38  
39 **209.02 Materials.** Comply with applicable materials described in Chapters 2 and  
40 3 of the current HDOT “Construction Best Management Practices Field Manual”. In  
41 addition, the materials shall comply with the following:

42  
43 **(A) Grass.** Grass shall be a quick growing species such as rye grass,  
44 Italian rye grass, or cereal grasses. Grass shall be suitable to the area and  
45 provide a temporary cover that will not compete later with permanent cover.  
46 Alternative grasses are allowable if acceptable to the Engineer.

47 **(B) Fertilizer and Soil Conditioners.** Fertilizer and soil conditioners shall  
48 be a standard commercial grade acceptable to the Engineer. Fertilizer shall  
49 conform to Subsection 619.02(H)(1) - Commercial Fertilizer.  
50

51 **(C) Hydro-mulching.** Hydro-mulching used as a temporary vegetative  
52 stabilization measure shall consist of materials in Subsections 209.02(A) -  
53 Grass, and 209.02(B) – Fertilizer and Soil Conditioners. Mulches shall be  
54 recycled materials including bagasse, hay, straw, wood cellulose bark, wood  
55 chips, or other material acceptable to the Engineer. Mulches shall be clean  
56 and free of noxious weeds and deleterious materials. Potable water shall  
57 meet the requirements of Subsection 712.01 - Water. Submit alternate  
58 sources of irrigation water for the Engineer’s acceptance if deviating from  
59 712.01 - Water. Installation and other requirements shall be in accordance  
60 with portions of Section 641- Hydro-Mulch Seeding including 641.02(D) - Soil  
61 and Mulch Tackifier, 641.03(A) – Seeding, and 641.03(B) - Planting Period.  
62 Install non-vegetative controls including mulch or rolled erosion control  
63 products while the vegetation is being established. Water and fertilize grass.  
64 Apply fertilizer as recommended by the manufacturer. Replace grass the  
65 Engineer considers unsuitable or sick. Remove and dispose of trash and  
66 debris. Remove invasive species. Mow as needed to prevent site or signage  
67 obstructions, fire hazard, or nuisance to the public. Do not remove down  
68 stream sediment control measures until the vegetation is uniformly  
69 established, including no large bare areas, and provides 70 percent of the  
70 density of pre-disturbance vegetation. Temporary vegetative stabilization  
71 shall not be used longer than one (1) year.  
72

73 **(D) Silt Fences.** Comply with ASTM D6462, Standard Practice for Silt  
74 Fence Installation.  
75

76 Alternative materials or methods to control, prevent, remove and dispose  
77 pollution are allowable if acceptable to the Engineer.  
78

79 **209.03 Construction.**  
80

81 **(A) Preconstruction Requirements.**  
82

83 **(1) Water Pollution, Dust, and Erosion Control Meeting.**  
84 Schedule a water pollution, dust, and erosion control meeting with the  
85 Engineer after Site-Specific BMP is accepted in writing by the  
86 Engineer. Meeting shall be scheduled a minimum of 7 calendar days  
87 prior to the Start Work Date. Discuss sequence of work, plans and  
88 proposals for water pollution, dust, and erosion control.  
89

90 **(2) Water Pollution, Dust, and Erosion Control Submittals.**

91 Submit a Site-Specific BMP Plan within twenty one (21) calendar days  
92 of date of award. Submission of complete and acceptable Site-  
93 Specific BMP Plan is the sole responsibility of the Contractor and  
94 additional contract time will not be issued for delays due to  
95 incompleteness. Include the following:

96  
97 **(a)** Written description of activities to minimize water  
98 pollution and soil erosion into State waters, drainage or sewer  
99 systems. BMP shall include the following:

- 100  
101 1. An identification of potential pollutants and their  
102 sources.
- 103  
104 2. A list of all materials and heavy equipment to be  
105 used during construction.
- 106  
107 3. Descriptions of the methods and devices used to  
108 minimize the discharge of pollutants into State waters,  
109 drainage or sewer systems.
- 110  
111 4. Details of the procedures used for the  
112 maintenance and subsequent removal of any erosion or  
113 siltation control devices.
- 114  
115 5. Methods of removing and disposing hazardous  
116 wastes encountered or generated during construction.
- 117  
118 6. Methods of removing and disposing concrete and  
119 asphalt pavement cutting slurry, concrete curing water,  
120 and hydrodemolition water.
- 121  
122 7. Spill Control and Prevention and Emergency Spill  
123 Response Plan.
- 124  
125 8. Fugitive dust control, including dust from grinding,  
126 sweeping, or brooming off operations or combination  
127 thereof.
- 128  
129 9. Methods of storing and handling of oils, paints  
130 and other products used for the project.
- 131  
132 10. Material storage and handling areas, and other  
133 staging areas.
- 134  
135 11. Concrete truck washouts.

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- 12.** Concrete waste control.
- 13.** Fueling and maintenance of vehicles and other equipment.
- 14.** Tracking of sediment offsite from project entries and exits.
- 15.** Litter management.
- 16.** Toilet facilities.
- 17.** Other factors that may cause water pollution, dust and erosion control.

**(b)** Provide plans indicating location of water pollution, dust and erosion control devices; provide plans and details of BMPs to be installed or utilized; show areas of soil disturbance in cut and fill, indicate areas used for construction staging and storage including items (1) through (17) above, storage of aggregate (indicate type of aggregate), asphalt cold mix, soil or solid waste, equipment and vehicle parking, and show areas where vegetative practices are to be implemented. Indicate intended drainage pattern on plans. Include flow arrows. Include separate drawing for each phase of construction that alters drainage patterns. Indicate approximate date when device will be installed and removed.

**(c)** Construction schedule.

**(d)** Name(s) of specific individual(s) designated responsible for water pollution, dust, and erosion controls on the project site. Include home, cellular, and business telephone numbers, fax numbers, and e-mail addresses.

**(e)** Description of fill material to be used.

**(f)** For projects with an NPDES Permit for Construction Activities, submit information to address all sections in the Storm Water Pollution Prevention Plan (SWPPP).

**(g)** For projects with an NPDES Permit, information required for compliance with the conditions of the Notice of General Permit Coverage (NGPC)/NPDES Permit.

181 (h) Site-Specific BMP Review Checklist. The checklist may  
182 be downloaded from HDOT's Stormwater Management  
183 website at <http://stormwaterhawaii.com>.  
184

185 Date and sign Site-Specific BMP Plan. Keep accepted  
186 copy on site or at an accessible location so that it can be made  
187 available at the time of an on-site inspection or upon request by  
188 the Engineer, HDOT Third-Party Inspector, and/or DOH/EPA  
189 Representative. Amendments to the Site-Specific BMP Plan  
190 shall be included with original Site-Specific BMP Plan. Modify  
191 SWPPP if necessary to conform to revisions. Include date of  
192 installation and removal of Site-Specific BMP measures.  
193 Obtain written acceptance by the Engineer before  
194 implementing revised Site-Specific BMPs in the field.  
195

196 Follow the guidelines in the current HDOT "Construction  
197 Best Management Practices Field Manual", in developing,  
198 installing, and maintaining Site-Specific BMPs for all projects.  
199 For any conflicting requirements between the Manual and  
200 applicable bid documents, the applicable bid documents will  
201 govern. Should a requirement not be clearly described within  
202 the applicable bid documents, notify the Engineer immediately  
203 for interpretation. For the purposes of clarification "applicable  
204 bid documents" include the construction plans, standard  
205 specifications, special provisions, Permits, and the SWPPP  
206 when applicable.  
207

208 Follow Honolulu's City and County "Rules for Soil  
209 Erosion Standards and Guidelines" for all projects on Oahu.  
210 Use respective Soil Erosion Guidelines for Maui, Kauai and  
211 Hawaii projects.  
212

213 **(B) Construction Requirements.** Do not begin work until submittals  
214 detailed in Subsection 209.03(A)(2) - Water Pollution, Dust, and Erosion  
215 Control Submittals are completed and accepted in writing by the Engineer.  
216

217 Install, maintain, monitor, repair and replace site-specific BMP  
218 measures, such as for water pollution, dust and erosion control; installation,  
219 monitoring, and operation of hydrotesting activities; removal and disposal of  
220 hazardous waste indicated on plans, concrete cutting slurry, concrete curing  
221 water; or hydrodemolition water. Site-Specific BMP measures shall be in  
222 place, functional and accepted by HDOT personnel prior to initiating any  
223 ground disturbing activities.  
224

225 If necessary, furnish and install rain gage in a secure location prior to  
226 field work including installation of site-specific BMP. Provide rain gage with  
227 a tolerance of at least 0.05 inches of rainfall. Install rain gage on project site  
228 in an area that will not deter rainfall from entering the gate opening. Do not  
229 install in a location where rain water may splash into rain gage. The rain  
230 gage installation shall be stable and plumbed. Maintain rain gage and  
231 replace rain gage that is stolen, does not function properly or accurately, is  
232 worn out, or needs to be relocated. Do not begin field work until rain gage is  
233 installed and Site-Specific BMPs are in place. Rain gage data logs shall be  
234 readily available. Submit rain gage data logs weekly to the Engineer.  
235

236 Address all comments received from the Engineer.  
237

238 Modify and resubmit plans and construction schedules to correct  
239 conditions that develop during construction which were unforeseen during  
240 the design and pre-construction stages.  
241

242 Coordinate temporary control provisions with permanent control  
243 features throughout the construction and post-construction period.  
244

245 Limit maximum surface area of earth material exposed at any time to  
246 300,000 square feet. Do not expose or disturb surface area of earth material  
247 (including clearing and grubbing) until BMP measures are installed and  
248 accepted in writing by the Engineer. Protect temporarily or permanently  
249 disturbed soil surface from rainfall impact, runoff and wind before end of the  
250 work day.  
251

252 Immediately initiate stabilizing exposed soil areas upon completion of  
253 earth disturbing activities for areas permanently or temporarily ceased on any  
254 portion of the site. Earth-disturbing activities have permanently ceased when  
255 clearing and excavation within any area of the construction site that will not  
256 include permanent structures has been completed. Earth-disturbing  
257 activities have temporarily ceased when clearing, grading, and excavation  
258 within any area of the site that will not include permanent structures will not  
259 resume for a period of fourteen (14) or more calendar days, but such activities  
260 will resume in the future. The term "immediately" is used in this section to  
261 define the deadline for initiating stabilization measures. "Immediately" means  
262 as soon as practicable, but no later than the end of the next work day,  
263 following the day when the earth-disturbing activities have temporarily or  
264 permanently ceased.  
265

266 For projects with an NPDES Permit for Construction activities:  
267

268 (1) For construction areas discharging into waters not impaired for  
269 nutrients or sediments, complete initial stabilization within fourteen  
270 (14) calendar days after the temporary or permanent cessation of  
271 earth-disturbing activities.

272  
273 (2) For construction areas discharging into nutrient or sediment  
274 impaired waters, complete initial stabilization within seven (7) calendar  
275 days after the temporary or permanent cessation of earth-disturbing  
276 activities.

277  
278 For projects without an NPDES Permit for Construction activities,  
279 complete initial stabilization within fourteen (14) calendar days after the  
280 temporary or permanent cessation of earth-disturbing activities.

281  
282 Any of the following types of activities constitutes initiation of  
283 stabilization:

- 284  
285 (1) Prepping the soil for vegetative or non-vegetative stabilization;  
286  
287 (2) Applying mulch or other non-vegetative product to the exposed  
288 area;  
289  
290 (3) Seeding or planting the exposed area;  
291  
292 (4) Starting any of the activities in items (1) – (3) above on a portion  
293 of the area to be stabilized, but not on the entire area; and  
294  
295 (5) Finalizing arrangements to have stabilization product fully  
296 installed in compliance with the deadline for completing initial  
297 stabilization activities.

298  
299 Any of the following types of activities constitutes completion of initial  
300 stabilization activities:

- 301  
302 (1) For vegetative stabilization, all activities necessary to initially  
303 seed or plant the area to be stabilized; and/or  
304  
305 (2) For non-vegetative stabilization, the installation or application  
306 of all such non-vegetative measures.

307  
308 If the Contractor is unable to meet the deadlines above due to  
309 circumstances beyond the Contractor's control, and the Contractor is using  
310 vegetative cover for temporary or permanent stabilization, the Contractor  
311 may comply with the following stabilization deadlines instead as agreed to by  
312 the Engineer:

313

314 (1) Immediately initiate, and complete within the timeframe shown  
315 above, the installation of temporary non-vegetative stabilization  
316 measures to prevent erosion;

317  
318 (2) Complete all soil conditioning, seeding, watering or irrigation  
319 installation, mulching, and other required activities related to the  
320 planting and initial establishment of vegetation as soon as conditions  
321 or circumstances allow it on the site; and

322  
323 (3) Notify and provide documentation to the Engineer the  
324 circumstances that prevent the Contractor from meeting the deadlines  
325 above for stabilization and the schedule the Contractor will follow for  
326 initiating and completing initial stabilization and as agreed to by the  
327 Engineer.

328  
329 Follow the applicable requirements of the specifications and special  
330 provisions including Section 619 - Planting and Section 641 - Hydro-Mulch  
331 Seeding.

332  
333 Immediately after seeding or planting the area to be vegetatively  
334 stabilized, to the extent necessary to prevent erosion on the seeded or  
335 planted area, select, design, and install non-vegetative erosion controls that  
336 provide cover (e.g., mulch, rolled erosion control products) to the area while  
337 vegetation is becoming established.

338  
339 Protect exposed or disturbed surface area with mulches, grass seeds  
340 or hydro-mulch. Spray mulches at a rate of 2,000 pounds per acre. Add  
341 tackifier to mix at a rate of 85 pounds per acre. Apply grass seeds at a rate  
342 of 125 pounds per acre. For hydromulch, use the ingredients and rates  
343 required for mulches and grass seeds. Submit recommendations from a  
344 licensed Landscape Architect when deviating from the application rates  
345 above.

346  
347 Apply fertilizer to mulches, grass seed or hydromulch per  
348 manufacturer's recommendations. Submit recommendations from a licensed  
349 Landscape Architect when deviating from the manufacturer's  
350 recommendations.

351  
352 Install velocity dissipation measures when exposing erodible surfaces  
353 greater than 15 feet in height.

354  
355 BMP measures shall be in place and operational at the end of work  
356 day or as required by Section 209.03(B) - Construction Requirements.

357

358 Install and maintain either or both stabilized construction entrances  
359 and wheel washes to minimize tracking of dirt and mud onto roadways.  
360 Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other  
361 material tracked onto the road, sidewalk, or other paved area by the end of  
362 the same day in which the track-out occurs. Modify stabilized construction  
363 entrances to prevent mud from being tracked onto road. Stabilize entire  
364 access roads if necessary.

365  
366 Chemicals may be used as soil stabilizers for either or both erosion  
367 and dust control if acceptable to the Engineer.

368  
369 Provide temporary slope drains of rigid or flexible conduits to carry  
370 runoff from cuts and embankments. Provide portable flume at the entrance.  
371 Shorten or extend temporary slope drains to ensure proper function.

372  
373 Protect ditches, channels, and other drainageways leading away from  
374 cuts and fills at all times by either:

- 375  
376 (1) Hydro-mulching the lower region of embankments in the  
377 immediate area.  
378  
379 (2) Installing check dams and siltation control devices.  
380  
381 (3) Other methods acceptable to the Engineer.

382  
383 Provide for controlled discharge of waters impounded, directed, or  
384 controlled by project activities or erosion control measures.

385  
386 Cover exposed surface of materials completely with tarpaulin or  
387 similar device when transporting aggregate, soil, excavated material or  
388 material that may be source of fugitive dust.

389  
390 Cleanup and remove any pollutant that can be attributed to the  
391 Contractor.

392  
393 Install or modify Site-Specific BMP measures due to change in the  
394 Contractor's means and methods, or for omitted condition that should have  
395 been allowed for in the accepted Site-Specific BMP or a Site-Specific BMP  
396 that replaces an accepted Site-Specific BMP that is not satisfactorily  
397 performing. Modifications to Site-Specific BMP measures shall be accepted  
398 in writing by the Engineer prior to implementation.

399  
400 Properly maintain all Site-Specific BMP measures.

401  
402 For projects with an NPDES Permit for Construction Activities:  
403

404 (1) For construction areas discharging into nutrient or sediment  
405 impaired waters, inspect, prepare a written report, and make repairs  
406 to BMP measures at the following intervals:

- 407
- 408 (a) Weekly.
  - 409
  - 410 (b) Within 24 hours of any rainfall of 0.25 inch or greater  
411 which occurs in a 24-hour period.
  - 412
  - 413 (c) When existing erosion control measures are damaged  
414 or not operating properly as required by Site-Specific BMP.
  - 415

416 (2) For construction areas discharging to waters not impaired for  
417 nutrients or sediments, inspect, prepare a written report, and make  
418 repairs to BMP measures at the following intervals:

- 419
- 420 (a) Weekly.
  - 421
  - 422 (b) When existing erosion control measures are damaged  
423 or not operating properly as required by Site-Specific BMP.
  - 424

425 For projects without an NPDES Permit for Construction activities,  
426 inspect, prepare a written report, and make repairs to BMP measures at the  
427 following intervals:

- 428
- 429 (a) Weekly.
  - 430
  - 431 (b) When existing erosion control measures are damaged  
432 or not operating properly as required by Site-Specific BMP.
  - 433

434 Temporarily remove, replace or relocate any Site-Specific BMP that  
435 must be removed, replaced or relocated due to potential or actual flooding,  
436 or potential danger or damage to project or public.

437

438 Maintain records of inspections of Site-Specific BMP work. Keep  
439 continuous records for duration of the project. Submit copy of Inspection  
440 Report to the Engineer within 24 hours after each inspection.

441

442 The Contractor's designated representative specified in Subsection  
443 209.03(A)(2)(d) shall address any Site-Specific BMP deficiencies brought up  
444 by the Engineer immediately, including weekends and holidays, and  
445 complete work to fix the deficiencies by the close of the next work day if the  
446 problem does not require significant repair or replacement, or if the problem  
447 can be corrected through routine maintenance. Address any Site-Specific  
448 BMP deficiencies brought up by the State's Third-Party Inspector in the  
449 timeframe above or as specified in the Consent Decree or MS4 NPDES

450 Permit, whichever is more stringent. The Consent Decree timeframe  
451 requirement applies statewide. The MS4 NPDES Permit only applies to  
452 Oahu. In this section, "immediately" means the Contractor shall take all  
453 reasonable measures to minimize or prevent discharge of pollutants until a  
454 permanent solution is installed and made operational. If a problem is  
455 identified at a time in the day in which it is too late to initiate repair, initiation  
456 of repair shall begin on the following work day. When installation of a new  
457 pollution prevention control or a significant repair is needed, complete  
458 installation or repair no later than seven (7) calendar days from the time of  
459 notification/Contractor discovery. Notify the Engineer and document why it  
460 is infeasible to complete the installation or repair within seven (7) calendar  
461 days and complete the work as soon as practicable and as agreed to by the  
462 Engineer. Address Site-Specific BMP deficiencies discovered by the  
463 Contractor within the timeframe above. The Contractor's failure to  
464 satisfactorily address these Site-Specific BMP deficiencies, the Engineer  
465 reserves the right to employ outside assistance or use the Engineer's own  
466 labor forces to provide necessary corrective measures. The Engineer will  
467 charge the Contractor such incurred costs plus any associated project  
468 engineering costs. The Engineer will make appropriate deductions from the  
469 Contractor's monthly progress estimate. Failure to apply Site-Specific BMP  
470 measures may result in one or more of the following: assessment of  
471 liquidated damages, suspension, or cancellation of Contract with the  
472 Contractor being fully responsible for all additional costs incurred by the  
473 State.

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475 **(C) Discharges of Storm Water Associated with Construction**  
476 **Activities.** If work includes disturbance of one acre or more, an NPDES  
477 Permit authorizing Discharges of Storm Water Associated with Construction  
478 Activity (CWB-NOI Form C) or Individual Permit authorizing storm water  
479 discharges associated with construction activity is required from the  
480 Department of Health Clean Water Branch (DOH-CWB).

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482 Do not begin construction activities until all required conditions of the  
483 permit are met and submittals detailed in Subsection 209.03(A)(2) – Water  
484 Pollution, Dust, and Erosion Control Submittals are completed and accepted  
485 in writing by the Engineer.

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487 **(D) Discharges Associated with Hydrotesting Activities.** If  
488 hydrotesting activities require effluent discharge into State waters or drainage  
489 systems, an NPDES Hydrotesting Waters Permit (CWB-NOI Form F) or  
490 Individual Permit authorizing discharges associated with hydrotesting from  
491 DOH-CWB is required from the DOH-CWB.

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493 Do not begin hydrotesting activities until the DOH-CWB has issued an  
494 Individual NPDES Permit or Notice of General Permit Coverage (NGPC).  
495 Conduct Hydrotesting operations in accordance with the conditions of the

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permit or NGPC.

**(E) Discharges Associated with Dewatering Activities.** If dewatering activities require effluent discharge into State waters or drainage systems, an NPDES Dewatering Permit (CWB-NOI Form G) or Individual Permit authorizing discharges associated with dewatering from DOH-CWB is required from the DOH-CWB.

Do not begin dewatering activities until the DOH-CWB has issued an Individual NPDES Permit or Notice of General Permit Coverage (NGPC). Conduct dewatering operations in accordance with the conditions of the permit or NGPC.

**(F) Solid Waste.** Submit the Solid Waste Disclosure Form for Construction Sites to the Engineer within twenty one (21) calendar days of date of award. Provide a copy of all the disposal receipts from the facility permitted by the Department of Health to receive solid waste to the Engineer monthly. This should also include documentation from any intermediary facility where solid waste is handled or processed, or as directed by the Engineer.

**(G) Construction BMP Training.** The Contractor’s representative responsible for development of the Site-Specific BMP Plan and implementation of Site-Specific BMPs in the field shall attend the State’s Construction Best Management Practices Training. The Contractor shall keep training logs updated and readily available.

**209.04 Measurement.**

**(A)** Installation, maintenance, monitoring, and removal of BMP will be paid on a lump sum basis. Measurement for payment will not apply.

**(B)** The Engineer will only measure additional water pollution, dust and erosion control required and requested by the Engineer on a force account basis in accordance with Subsection 109.06 – Force Account Provisions and Compensation.

**209.05 Payment.** The Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposal schedule. Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will pay for each of the following pay items when included in proposal schedule:

<b>Pay Item</b>	<b>Pay Unit</b>
Installation, Maintenance, Monitoring, and Removal of BMP	Lump Sum

542 Additional Water Pollution, Dust, and Erosion Control Force Account

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544 An estimated amount for force account is allocated in proposal schedule  
545 under 'Additional Water Pollution, Dust, and Erosion Control', but actual amount to  
546 be paid will be the sum shown on accepted force account records, whether this sum  
547 be more or less than estimated amount allocated in proposal schedule. The  
548 Engineer will pay for BMP measures requested by the Engineer that are beyond  
549 scope of accepted Site-Specific BMP on a force account basis.

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551 No progress payment will be authorized until the Engineer accepts in writing  
552 Site-Specific BMP or when the Contractor fails to maintain project site in accordance  
553 with accepted BMP.

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555 For all citations or fines received by the Department for non-compliance,  
556 including compliance with NPDES Permit conditions, the Contractor shall reimburse  
557 State within thirty (30) calendar days for full amount of outstanding cost State has  
558 incurred, or the Engineer will deduct cost from progress payment.

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560 The Engineer will assess liquidated damages up to \$27,500 per day for non-  
561 compliance of each BMP requirement and all other requirements in this section.

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563 **Appendix A**

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565 The following list identifies potential pollutant sources and corresponding  
566 BMPs used to mitigate the pollutants. Each BMP is referenced to the corresponding  
567 section of the current HDOT Construction Best Management Practices Field Manual  
568 or appropriate Supplemental Sheets. The Manual may be obtained from the HDOT  
569 Statewide Stormwater Management Program Website at  
570 <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/> under  
571 Construction Best Management Practices Field Manual. Supplemental BMP sheets  
572 are located at <http://www.stormwaterhawaii.com/resources/contractors-and-consultants/storm-water-pollution-prevention-plan-swppp/> under Concrete Curing  
573 and Irrigation Water.  
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<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<p><i>Construction debris, green waste, general litter</i></p>	<ul style="list-style-type: none"> <li>• <i>Separate contaminated clean up materials from construction and demolition (C&amp;D) wastes.</i></li> <li>• <i>Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes.</i></li> <li>• <i>Inspect construction waste and recycling areas regularly.</i></li> <li>• <i>Schedule solid waste collection regularly.</i></li> <li>• <i>Schedule recycling activities based on construction/demolition phases.</i></li> <li>• <i>Empty waste containers weekly or when they are two-thirds full, whichever is sooner.</i></li> <li>• <i>Do not allow containers to overflow. Clean up immediately if they do.</i></li> <li>• <i>On work days, clean up and dispose of waste in designated waste containers.</i></li> <li>• <i>See Solid Waste Management Section SM-6 for additional requirements.</i></li> <li>• <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i></li> <li>• <i>Collect and dispose of all waste materials in trash dumpsters. Place dumpsters, with secure watertight lids, away from storm water conveyances and drains, in a covered materials storage area.</i></li> <li>• <i>Dispose of construction and non- construction solid waste in accordance with State DOH regs.</i></li> <li>• <i>Load removed non- recyclable vegetation directly onto trucks; cover and transport to a licensed facility</i></li> </ul>	<p><i>See Solid Waste Management Section SM-6. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i></p>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<p><i>Materials associated with the operation and maintenance of equipment, such as oil, fuel, and hydraulic fluid leakage</i></p>	<ul style="list-style-type: none"> <li>• <i>Use off-site wash racks, repair and maintenance facilities, and fueling sites when practical.</i></li> <li>• <i>Designate bermed wash area if cleaning on site is necessary.</i></li> <li>• <i>Place drip pans or drop cloths under vehicles and equipment to absorb spills or leaks.</i></li> <li>• <i>Provide an ample supply of readily available spill cleanup materials.</i></li> <li>• <i>Clean up spills immediately, using dry cleanup methods where possible, and dispose of used materials properly.</i></li> <li>• <i>Do not clean surfaces or spills by hosing the area down.</i></li> <li>• <i>Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.</i></li> <li>• <i>Inspect on-site vehicles and equipment regularly and immediately repair leaks.</i></li> <li>• <i>Regularly inspect fueling areas and storage tanks.</i></li> <li>• <i>Train employees on proper maintenance and spill practices and procedures and fueling and cleanup procedures.</i></li> <li>• <i>Store diesel fuel, oil, hydraulic fluid, or other petroleum products or other chemicals in water-tight containers and provide cover or secondary containment.</i></li> <li>• <i>Do not remove original product labels and comply with manufacturer's labels for proper disposal.</i></li> <li>• <i>Dispose of containers only after all the product has been used.</i></li> <li>• <i>Dispose of or recycle oil or oily wastes according to Federal, State, and Local requirements.</i></li> <li>• <i>Store soaps, detergents, or solvents under cover or other means to prevent contact with rainwater.</i></li> <li>• <i>See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13 and Material Storage and Handling Section SM-2 for additional requirements.</i></li> </ul>	<p><i>See Vehicle and Equipment Cleaning, Maintenance, and Refueling, Sections SM-11, SM-12, and SM-13, and Material Storage and Handling, Section SM-2, and Spill Prevention and Control SM-10.</i></p>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
Soil erosion from the disturbed areas	<ul style="list-style-type: none"> <li>• Provide Soil Stabilization, Slope Protection, Storm Drain Inlet Protection SC-1, Perimeter Controls and Sediment Barriers, Sediment Basins and Detention Ponds, Check Dams SC-3 ,Level Spreader EC-6, Paving Operations SM-20, Construction Roads and Parking Area Stabilization SC-10, Controlling Storm Water Flowing Onto and Through the Project, Post-Construction BMPs, and Non-Structural BMPs (Construction BMP Training SM-1, Scheduling SM-14, Location of Potential Sources of Sediment SM-15, Preservation of Existing Vegetation SM-17).</li> <li>• Delineate, and clearly mark off, with flags, tape, or other similar marking device all natural buffer areas defined in the SWPPP.</li> <li>• Preserve native topsoil where practicable.</li> <li>• In areas where vegetative stabilization will occur, restrict vehicle/equipment use in areas to avoid soil compaction or condition soil to promote vegetative growth.</li> <li>• For Storm Drain Inlet Protection, clean, or remove and replace, the protection measures as sediment accumulates, the filter becomes clogged, and/or performance is compromised.</li> <li>• Where there is evidence of sediment accumulation adjacent to the inlet protection measure, remove the deposited sediment by the end of the same day in which it is found or by the end of the following work day if removal by the same day is not feasible.</li> <li>• Sediment basins shall be designed and maintained in accordance with HAR Chapter 11-55.</li> <li>• Minimize disturbance on steep slopes (Greater than 15% in grade).</li> <li>• If disturbance of steep slopes are unavoidable, phase disturbances and use stabilization techniques designed for steep grades.</li> <li>• For temporary drains and swales use velocity dissipation devices within and at the outlet to minimize erosive flow velocities.</li> </ul>	<p>Soil Stabilization</p> <ol style="list-style-type: none"> <li>1. SM-22 Topsoil Management</li> <li>2. EC-12 Seeding and Planting</li> <li>3. EC-14 Mulching</li> <li>4. EC-11 Geotextiles and Mats</li> </ol> <p>Slope Protection</p> <ol style="list-style-type: none"> <li>1. EC-12 Seeding and Planting</li> <li>2. EC-14 Mulching</li> <li>3. EC-11 Geotextiles and Mats</li> <li>4. EC-4 Slope Roughening, Terracing, and Rounding</li> <li>5. EC-7 Slope Drains and Subsurface Drains</li> <li>6. EC-9 Slope Interceptor or Diversion Ditches/Berms</li> </ol> <p>SC-1 Storm Drain Inlet Protection</p>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
		<p><i>Perimeter Controls and Sediment Barriers</i></p> <ol style="list-style-type: none"> <li>1. SC-7 Silt Fence or Filter Fabric Fence</li> <li>2. SC-2 Vegetated Filter Strips and Buffers</li> <li>3. SC-6 Compost Filter Berm/Sock</li> <li>4. SC-8 Sandbag Barrier</li> <li>5. SC-9 Brush or Rock Filter</li> </ol> <p><i>Sediment Basins and Detention Ponds</i></p> <ol style="list-style-type: none"> <li>1. SC-4 Sediment Trap</li> <li>2. SC-5 Sediment Basin</li> </ol> <p><i>SC-3 Check Dams</i></p> <p><i>EC-6 Level Spreader</i>  <i>SM-20 Paving Operations</i>  <i>SC-10 Construction Roads and Parking Area Stabilization</i></p>

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<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
		<p><i>Controlling Storm Water Flowing onto and Through the Project</i></p> <ol style="list-style-type: none"> <li>1. <i>EC-3 Run-On Diversion</i></li> <li>2. <i>EC-5 Earth Dike, Swales and Ditches</i></li> </ol> <p><i>Post Construction BMPs</i></p> <ol style="list-style-type: none"> <li>1. <i>EC-2 Flared Culvert End Sections</i></li> <li>2. <i>EC-10 Rip-Rap and Gabion Inflow Protection</i></li> <li>3. <i>EC-8 Outlet Protection and Velocity Dissipation Devices</i></li> <li>4. <i>SM-22 Topsoil Management</i></li> </ol> <p><i>Non-Structural BMPs</i></p> <ol style="list-style-type: none"> <li>1. <i>SM-1 Construction BMP Training</i></li> <li>2. <i>SM-14 Scheduling</i></li> <li>3. <i>SM-15 Location of Potential Sources of Sediment</i></li> <li>4. <i>SM-17 Preservation of Existing Vegetation</i></li> </ol>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
Sediment from soil stockpiles	<ul style="list-style-type: none"> <li>• Locate stockpiles a minimum of 50 feet or as far as practicable from concentrated runoff or outside of any natural buffers identified on the SWPPP.</li> <li>• Place bagged materials on pallets and under cover.</li> <li>• Provide physical diversion to protect stockpiles from concentrated runoff.</li> <li>• Cover stockpiles with plastic or comparable material when practicable.</li> <li>• Place silt fence, fiber filtration tubes, or straw wattles around stockpiles.</li> <li>• Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any storm water conveyance (unless connected to a sediment basin, sediment trap, or similarly effective control), storm drain inlet, or state water.</li> <li>• Unless infeasible, contain and securely protect stockpiles from the wind.</li> <li>• Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable. See Stockpile Management Section SM-3 for additional requirements.</li> </ul>	See Stockpile Management Section SM-3. Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.
Emulsified asphalt or prime/tack coat	<ul style="list-style-type: none"> <li>• Provide training for employees and contractors on proper material delivery and storage practices and procedures.</li> <li>• Restrict paving operations during wet weather to prevent paving materials from being discharged.</li> <li>• Use asphalt emulsions such as prime coat when possible.</li> <li>• Protect drain inlet structures and manholes during application of tack coat, seal coat, slurry seal, and fog seal.</li> <li>• Keep ample supplies of drip pans and absorbent materials on site.</li> <li>• Inspect inlet protection devices.</li> <li>• See Material Storage and Handling Section SM-2 and Paving Operations Section SM-20 for additional requirements.</li> <li>• Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</li> </ul>	See Material Storage and Handling Section SM-2, and Stockpile Management Section SM-3, Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<p><i>Materials associated with painting, such as paint and paint wash solvent</i></p>	<ul style="list-style-type: none"> <li>• <i>Hazardous chemicals shall be well-labeled and stored in original containers.</i></li> <li>• <i>Keep ample supply of cleanup materials on site.</i></li> <li>• <i>Dispose container only after all of the product has been used.</i></li> <li>• <i>Remove as much paint from brushes on painted surface.</i></li> <li>• <i>Rinse from water-based paints shall be discharged into the sanitary sewer system where possible. If not, direct all washwater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.</i></li> <li>• <i>Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.</i></li> <li>• <i>Do not dump liquid wastes into the storm drainage system.</i></li> <li>• <i>Filter and re-use solvents and thinners.</i></li> <li>• <i>Dispose of oil-based paints and residue as a hazardous waste.</i></li> <li>• <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations.</i></li> <li>• <i>Immediately clean up spills and leaks.</i></li> <li>• <i>Properly store paints, solvents, and epoxy compounds.</i></li> <li>• <i>Properly store and dispose waste materials generated from painting and structure repair and construction activities.</i></li> <li>• <i>Mix paints in a covered and contained area, when possible, to minimize adverse impacts from spills.</i></li> <li>• <i>Do not apply traffic paint or thermoplastic if rain is forecasted.</i></li> <li>• <i>See Material Storage and Handling Use SM-2, Hazardous Materials and Waste Management Section SM-9, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21 for additional requirements.</i></li> </ul> <p><i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i></p>	<p><i>See Material Storage and Handling Use Section SM-2, Stockpile Management Section SM-3, Hazardous Materials and Waste Management Section SM-9, Waste Management, Spill Prevention and Control Section SM-10, and Structure Construction and Painting Section SM-21, Storm Drain Inlet Protection SC-1, and Perimeter Sediment Controls where applicable.</i></p>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<p><i>Industrial chemicals, fertilizers, and/or pesticides</i></p>	<ul style="list-style-type: none"> <li>• <i>Hazardous chemicals shall be well-labeled and stored in original containers.</i></li> <li>• <i>Keep ample supply of cleanup materials on site.</i></li> <li>• <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i></li> <li>• <i>Do not clean surfaces or spills by hosing the area down.</i></li> <li>• <i>Eliminate the source of the spill to prevent a discharge or a furtherance of an ongoing discharge.</i></li> <li>• <i>Dispose container only after all of the product has been used.</i></li> <li>• <i>Retain a complete set of safety data sheets (formerly MSDS) on site.</i></li> <li>• <i>Store industrial chemicals in water-tight containers and provide either cover or secondary containment.</i></li> <li>• <i>Provide cover when storing fertilizers or pesticides to prevent these chemicals from coming into contact with rainwater.</i></li> <li>• <i>Restrict amount of pesticide prepared to quantity necessary for the current application.</i></li> <li>• <i>Do not apply fertilizers or pesticides during or just before a rain event.</i></li> <li>• <i>Do not apply to stormwater conveyance channels with flowing water.</i></li> <li>• <i>Comply with fertilizer and pesticide manufacturer's recommended usage and disposal instructions. Document departures from manufacturer's specifications in Attachment J.</i></li> <li>• <i>Apply fertilizers at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth.</i></li> <li>• <i>Follow federal, state, and local laws regarding fertilizer application.</i></li> <li>• <i>Do not dispose of toxic liquid wastes (solvents, used oils, and paints) or chemicals (additives, acids, and curing compounds) in dumpsters allocated for construction debris.</i></li> </ul>	<p><i>See Material Storage and Handling Use Section SM-2, Stockpile Management Section SM-3, and Hazardous Materials and Waste Management Section SM-9, and Spill Prevention and Control SM-10</i></p>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
	<ul style="list-style-type: none"> <li>• <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations. Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.</i></li> <li>• <i>See Material Storage and Handling Use SM-2, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.</i></li> </ul>	
<p><i>Hazardous waste (Batteries, Solvents, Treated Lumber, etc.)</i></p>	<ul style="list-style-type: none"> <li>• <i>Do not dispose of toxic materials in dumpsters allocated for construction debris.</i></li> <li>• <i>Ensure collection, removal, and disposal of hazardous waste complies with regulations.</i></li> <li>• <i>Hazardous waste that cannot be reused or recycled shall be disposed of by a licensed hazardous waste hauler.</i></li> <li>• <i>Segregate and recycle wastes from vehicle/equipment maintenance activities such as used oil or oil filters, greases, cleaning solutions, antifreeze, automotive batteries, and hydraulic and transmission fluids.</i></li> <li>• <i>Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, and local requirements.</i></li> <li>• <i>All containers stored outside shall be kept away from surface waters and within appropriately sized secondary containment (e.g., spill berms, decks, spill containment pallets). Provide cover if possible.</i></li> <li>• <i>Clean up spills immediately, using dry clean-up methods where possible, and dispose of used materials properly.</i></li> <li>• <i>Do not clean surfaces or spills by hosing the area down.</i></li> <li>• <i>Eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge.</i></li> </ul>	<p><i>See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Maintenance SM-12</i></p>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
	<ul style="list-style-type: none"> <li>• <i>Ensure collection, removal, and disposal of hazardous waste complies with manufacturer's recommendations and is in compliance with federal, state, and local requirements.</i></li> <li>• <i>See Hazardous Materials and Waste Management Section SM-9 and Vehicle and Equipment Management, Vehicle and Equipment Maintenance SM-12 for additional requirements.</i></li> </ul>	
<i>Metals and Building Materials</i>	<ul style="list-style-type: none"> <li>• <i>Inspect construction waste and recycling areas regularly.</i></li> <li>• <i>Schedule solid waste collection regularly.</i></li> <li>• <i>If building materials or metals are stored on site (such as rebar or galvanized poles) store under cover under tarps or in containers.</i></li> <li>• <i>Minimize the amount of material stored on site.</i></li> <li>• <i>Do not stockpile uncovered metals or other building materials in close proximity to discharge points.</i></li> <li>• <i>See Solid Waste Management Section SM-6 for additional requirements.</i></li> </ul>	<i>See Solid Waste Management Section SM-6</i>
<i>Contaminated Soil</i>	<ul style="list-style-type: none"> <li>• <i>See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9 for additional requirements.</i></li> <li>• <i>At minimum contain contaminated material soil by surrounding with impermeable lined berms or cover exposed contaminated material with plastic sheets.</i></li> </ul>	<i>See Waste Management, Contaminated Soil Management Section SM-8 and/or Hazardous Materials and Waste Management Section SM-9</i>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<i>Fugitive Dust Control and Dust Control Water</i>	<ul style="list-style-type: none"> <li>• <i>Do not over spray water for dust control purposes which will result in runoff from the area.</i></li> <li>• <i>Apply water as conditions require.</i></li> <li>• <i>Washing down of debris or dirt into drainage, sewage systems, or State waters is not allowed.</i></li> <li>• <i>Minimize exposed areas through the schedule of construction activities.</i></li> <li>• <i>Utilize vegetation, mulching, sprinkling, and stone/gravel layering to quickly stabilize exposed soil.</i></li> <li>• <i>Direct construction vehicle traffic to stabilized roadways.</i></li> <li>• <i>Cover dump trucks hauling material from the site with a tarpaulin.</i></li> </ul> <p><i>See Dust Control Section SM-19 for additional requirements.</i></p>	<i>See Dust Control Section SM-19</i>
<i>Concrete Truck Wash Water</i>	<ul style="list-style-type: none"> <li>• <i>Disposal of concrete truck wash water via percolation is prohibited.</i></li> <li>• <i>Wash concrete-coated vehicles or equipment off-site or in the designated wash area.</i></li> <li>• <i>Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.</i></li> <li>• <i>Runoff from the on-site concrete wash area shall be contained in a temporary pit or level bermed area where the concrete can set.</i></li> <li>• <i>Design the area so that no overflow can occur due to inadequate wash area sizing or precipitation.</i></li> <li>• <i>The temporary pit shall be lined with plastic to prevent seepage of wash water into the ground.</i></li> <li>• <i>Allow wash water to evaporate or collect wash water and all concrete debris in a concrete washout system bin.</i></li> <li>• <i>Do not dump liquid wastes into storm drainage system.</i></li> <li>• <i>Dispose of liquid and solid concrete wastes in compliance with federal, state, and local standards.</i></li> <li>• <i>See Waste Management, Concrete Wash and Waste Management Section SM-4 for additional requirements.</i></li> </ul>	<i>See Waste Management, Concrete Wash and Waste Management Section SM-4</i>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<i>Sediment Track-Out</i>	<ul style="list-style-type: none"> <li>• <i>Include Stabilized Construction Entrance at all points that exit onto paved roads.</i></li> <li>• <i>A sediment trapping device is required if a wash rack is used in conjunction with the stabilized construction entrance/exit.</i></li> <li>• <i>The pavement shall not be cleaned by washing down the street.</i></li> <li>• <i>If sweeping is ineffective or it is necessary to wash the streets, wash water must be contained either by construction of a sump, diverting the water to an acceptable disposal area, or vacuuming the wash water.</i></li> <li>• <i>Use BMPs for adjacent drainage structures.</i></li> <li>• <i>Remove sediment tracked onto the street by the end of the day in which the track-out occurs.</i></li> <li>• <i>Restrict vehicle use to properly designated exit points.</i></li> <li>• <i>Include additional BMPs that remove sediment prior to exit when minimum dimensions cannot be met.</i></li> </ul> <p><i>See Stabilized Construction Entrance/Exit Section SC-11 for additional requirements.</i></p>	<i>See Stabilized Construction Entrance/Exit Section SC-11</i>
<i>Irrigation Water</i>	<ul style="list-style-type: none"> <li>• <i>Consider irrigation requirements.</i></li> <li>• <i>Where possible, avoid species which require irrigation.</i></li> <li>• <i>Design, timing and application methods of irrigation water to eliminate the runoff of excess irrigation water into the storm water drainage system.</i></li> </ul> <p><i>See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation included in SWPPP Attachment A for additional requirements.</i></p>	<i>See Seeding and Planting Section EC-12 and California Stormwater BMP Handbook SD-12 Efficient Irrigation</i>
<i>Hydrotesting Effluent</i>	<ul style="list-style-type: none"> <li>• <i>If work includes removing, relocation or installing waterlines, and Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, the Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form F application for HDOT submittal to DOH CWB at least thirty (30) calendar days prior to the start of Hydrotesting Activities if necessary. Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.</i></li> </ul>	<i>Site specific BMPs will be included in the NOI/NPDES Permit Form F submittal.</i>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<i>Dewatering Effluent</i>	<i>If excavation or backfilling operations require dewatering, and Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, Contractor shall prepare and obtain HDOT acceptance of a NOI/NPDES Permit Form G application for HDOT submittal to DOH CWB at least thirty (30) calendar days prior to the start of Dewatering Activities if necessary. See Site Planning and General Practices, Dewatering Operations Section SM-18 for additional requirements.</i>	<i>See Dewatering Operations SM-18. Site specific BMPs will be included in the NOI/NPDES Permit Form G submittal.</i>
<i>Saw-cutting Slurry</i>	<ul style="list-style-type: none"> <li>• <i>Saw cut slurry shall be removed from the site by vacuuming.</i></li> <li>• <i>Provide storm drain protection during saw cutting. See Paving Operations Section SM-20 for additional requirements.</i></li> </ul> <i>Provide Storm Drain Inlet Protection and/or Perimeter Sediment Controls as applicable.</i>	<i>See Paving Operations Section SM-20, Storm Drain Inlet Protection SC-1, Perimeter sediment controls where applicable</i>
<i>Concrete Curing Water</i>	<ul style="list-style-type: none"> <li>• <i>Avoid overspraying of curing compounds.</i></li> <li>• <i>Apply an amount of compound that covers the surface, but does not allow any runoff of the compound.</i></li> </ul> <i>See California Stormwater BMP Handbook NS-12 Concrete Curing included in SWPPP Attachment A for additional requirements.</i>	<i>See California Stormwater BMP Handbook NS-12 Concrete Curing</i>

<b>Pollutant Source</b>	<b>Appropriate Site-Specific BMP to be Implemented</b>	<b>BMP Requirements</b>
<i>Plaster Waste Water</i>	<ul style="list-style-type: none"> <li>• <i>Direct all wastewater into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation.</i></li> <li>• <i>Locate on-site wash area a minimum of 50 feet away or as far as practicable from storm drain inlets, open drainage facilities, or water bodies.</i></li> <li>• <i>Any significant residual materials remaining on the ground after the completion of construction shall be removed and properly disposed. If the residual materials contaminate the soil, then the contaminated soil shall also be removed and properly disposed of.</i></li> <li>• <i>Plaster waste water shall not be allowed to flow into drainage structures or State waters. See Material, Storage and Handling Use SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9 for additional requirements.</i></li> </ul>	<i>See Material, Storage and Handling Use Section SM-2, Stockpile Management Use Section SM-3, and Hazardous Materials and Waste Management Section SM-9</i>
<i>Water-Jet Wash Water</i>	<ul style="list-style-type: none"> <li>• <i>For Water-Jet Wash Water used to clean vehicles, use off site wash racks or commercial washing facilities when practical.</i></li> <li>• <i>See Vehicle and Equipment Cleaning Section SM-11 for additional information.</i></li> <li>• <i>For Water-Jet Wash Water used to clean impervious surfaces, the runoff shall not be allowed to flow into drainage structures or State Waters.</i></li> </ul>	<i>See Vehicle and Equipment Cleaning Section SM-11</i>
<i>Sanitary/Septic Waste</i>	<ul style="list-style-type: none"> <li>• <i>Locate Sanitary facilities in a convenient place away from drainage facilities.</i></li> <li>• <i>Position sanitary facilities so they are secure and will not be tipped over or knocked down.</i></li> <li>• <i>Wastewater shall not be discharged to the ground or buried.</i></li> <li>• <i>A licensed service provider shall maintain sanitary/septic facilities in good working order.</i></li> <li>• <i>Schedule regular waste collection by a licensed transporter.</i></li> <li>• <i>See Sanitary Waste Section SM-7 for additional requirements.</i></li> </ul>	<i>See Sanitary Waste Section SM-7.</i>

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**END OF SECTION 209**



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The Engineer may, in lieu of requiring removal and replacement, use the sliding scale factor to accept HMAB compacted below 92.0 percent. The Engineer will make payment for the material in that production day at a reduced price arrived at by multiplying the contract unit price by the pay factor shown in Table 301.05-1.

<b>Table 301.05-1 – Sliding Scale Pay Factor</b>	
<b>Percent Compaction</b>	<b>Percent Payment</b>
92.0 or greater	100
90.0 – 91.9	80
<90.0	Removal

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**END OF SECTION 301**



1                                   **SECTION 305 – AGGREGATE SUBBASE COURSE**

2  
3    Make the following amendments to said Sections:

4  
5    **(I)**    Amend **Section 305.04 Measurement**, from line 54 to 55 to read as  
6 follows:

7  
8    **“305.04 Measurement.** The Engineer will measure aggregate subbase  
9 course per cubic yard in accordance with the contract documents.”

10  
11 **(II)**    Amend **Section 305.05 Payment**, from line 57 to 66 to read as follows:

12  
13 **“305.05 Payment.** The Engineer will pay for the accepted aggregate  
14 subbase course at the contract price per cubic yard. Payment will be full  
15 compensation for the work prescribed in this section and the contract documents.

16  
17            The Engineer will pay for the following pay item when included in the  
18 proposal schedule:

19

<b>Pay Item</b>	<b>Pay Unit</b>
Aggregate Subbase Course	Cubic Yard”

20  
21  
22  
23  
24  
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27

28                                   **END OF SECTION 305**

1 **Amend Section 401- HOT MIX ASPHALT (HMA) PAVEMENT to read as follows:**

2  
3 **“SECTION 401 – HOT MIX ASPHALT (HMA) PAVEMENT**

4  
5 **401.01 Description.** This section describes furnishing and placing dense graded  
6 HMA pavement (herein referred to as HMA) on a prepared surface.

7  
8 **401.02 Materials.**

9  
10 Asphalt Cement (PG 64-16) 702.01(A)

11  
12 Use for non-surface mixes, unless otherwise specified in the project documents.

13  
14 Asphalt Cement (PG 64E-22) 702.01(B)

15  
16 Use for all surface mixes, except for on Lanai and Molokai, and unless otherwise  
17 specified in the project documents. Polymer modified asphalt (PMA) pavement  
18 refers to asphalt mix using PG 64E-22, unless otherwise indicated.

19  
20 Emulsified Asphalt 702.04

21  
22 Warm Mix Asphalt Additive 702.06

23  
24 Aggregate for Hot Mix Asphalt Pavement 703.09

25  
26 Filler 703.15

27  
28 Hydrated Lime or a liquid anti-strip approved by the engineer 712.03

29  
30 **(A) General.** HMA pavement shall be plant mixed and shall include  
31 mixture of aggregate and asphalt binder and may include reclaimed asphalt  
32 pavement (RAP) or filler, or both.

33  
34 The manufacture of HMA may include warm mix asphalt (WMA)  
35 processes in accordance with these specifications. WMA processes include  
36 combinations of organic additives, chemical additives, and foaming.

37  
38 HMA pavement shall include surface course and may include one or  
39 more binder courses, depending on HMA pavement thickness indicated in  
40 the contract documents.

41  
42 RAP is defined as removed or reprocessed pavement materials  
43 containing asphalt and aggregates. Process RAP by crushing until 100  
44 percent of RAP passes 3/4-inch sieve. Size, grade uniformly, and combine  
45 materials such that blend of RAP and aggregate material conforms to grading  
46 requirements of Subsection 703.09 - Aggregate for Hot Mix Asphalt

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Pavement.

In surface and binder courses, aggregate for HMA may include RAP quantities up to 20 percent of total mix weight.

Quantity of filler material to correct deficiencies in aggregate gradation passing the No. 200 sieve shall not exceed 3 percent by weight of fine aggregates.

**(B) Job-Mix Formula and Tests.** Design job-mix formula in accordance with procedures contained in current edition of Asphalt Institute's *Mix Design Methods for Asphalt Concrete and Other Hot Mix Types*, Manual Series No. 2 (MS-2) for either Marshall Method or Hveem Method of Mix Design.

Limit compacted lift thickness and asphalt content of job-mix formula as specified in Table 401.02-1 - Limits of Compacted Lift Thickness and Asphalt Content.

<b>TABLE 401.02-1 - LIMITS OF COMPACTED LIFT THICKNESS AND ASPHALT CONTENT</b>				
<b>MIX NO.</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
Minimum to Maximum Compacted Thickness for Individual Lifts (Inches)	2-1/4 to 3	2 to 3	1-1/2 to 3	1-1/4 to 3
Asphalt Content Limits (Percent of Total Weight of Mix)	3.8 to 6.1	4.3 to 6.1	4.3 to 6.5	4.8 to 7.0

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Asphalt content limits for porous aggregate may be exceeded only if it is requested ahead of placement and is reviewed then accepted in writing by the Engineer.

Meet job-mix formula design criteria specified in Table 401.02-2 - Job-Mix Formula Design Criteria.

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<b>TABLE 401.02-2 - JOB-MIX FORMULA DESIGN CRITERIA</b>	
<b>Hveem Method Mix Criteria (AASHTO T 246 and AASHTO T 247)</b>	
Stability, minimum	37
Air Voids (percent) <sup>1</sup>	3 - 5
<b>Marshall Method Mix Criteria (AASHTO T 245)</b>	
Compaction (number of blows each end of specimen)	75
Stability, minimum (pounds)	1,800
Flow (x 0.01 inch)	8 - 16
Air Voids (percent) <sup>1</sup>	3 - 5
<b>Notes:</b>	
1. Air Voids: AASHTO T 166 or AASHTO T 275; AASHTO T 209, AASHTO T 269.	

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Minimum percent voids in mineral aggregates (VMA) of job-mix formula shall be as specified in Table 401.02-3 - Minimum Percent Voids in Mineral Aggregates (VMA).

<b>TABLE 401.02-3 - MINIMUM PERCENT VOIDS IN MINERAL AGGREGATES (VMA)</b>					
Nominal Maximum Particle Size, (Inches)	1-1/2	1	3/4	1/2	3/8
VMA, (percent) <sup>1</sup>	11.0	12.0	13.0	14.0	15.0
<b>Notes:</b>					
1. VMA: See Asphalt Institute Manual MS-2					

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**(C) Submittals.** Establish and submit job-mix formula for each type of HMA pavement mix indicated in the contract documents a minimum of thirty (30) days before paving production. Job mix shall include the following applicable information:

- (1) Design percent of aggregate passing each required sieve size.
- (2) Design percent of asphalt binder material (type determined by type of mix) added to the aggregate (expressed as % by weight of total mix),
- (3) Design proportion of processed RAP.
- (4) Design temperature of mixture at point of discharge at paver.

- 96 (5) Source of aggregate.  
 97  
 98 (6) Grade of asphalt binder.  
 99  
 100 (7) Test data used to develop job-mix formula.  
 101

102 Except for item (4) in this subsection, if design requirements are  
 103 modified after the Engineer accepts job-mix formula, submit new job-mix  
 104 formula before using HMA produced from modified mix design. Submit any  
 105 changes to the design temperature of mixture at point of discharge for  
 106 acceptance by the Engineer.  
 107

108 Submit a certificate of compliance for the asphalt binder, accompanied  
 109 by substantiating test data from a certified testing laboratory.  
 110

111 **(D) Range of Tolerances for HMA.** Provide HMA within allowable  
 112 tolerances of accepted job mix formula as specified in Table 401.02-4 -  
 113 Range of Tolerances HMA. These tolerances are not to be used for the  
 114 design of the job mix, they are solely to be used during the testing of the  
 115 production field sample of the HMA mix.  
 116

Passing No. 4 and larger sieves (percent)	± 7.0
Passing No. 8 to No. 100 sieves (inclusive) (percent)	± 4.0
Passing No. 200 sieve (percent)	± 3.0
Asphalt Content (percent)	± 0.4
Mixture Temperature (degrees F)	± 20

117 The tolerances shown are the allowable variance between the physical  
 118 characteristics of laboratory job mix submitted mix design and the production  
 119 or operational mix, i.e., field samples.  
 120  
 121

### 122 **401.03 Construction.**

123  
 124 **(A) Weather Limitations.** Placement of HMA shall not be allowed under  
 125 the following conditions:  
 126

- 127 (1) On wet surfaces, e.g., surface with ponding or running water,  
 128 surface that has aggregate or surface that appears beyond surface  
 129 saturated dry, as determined by the Engineer.  
 130

131 (2) When air temperature is below 50 degrees F and falling. HMA  
132 may be applied when air temperature is above 40 degrees F and  
133 rising. Air temperature will be measured in shade and away from  
134 artificial heat.

135  
136 (3) When weather conditions prevent proper method of  
137 construction.

138  
139 **(B) Equipment.**

140  
141 **(1) Mixing Plant.** Use mixing plants that conform to AASHTO M  
142 156, supplemented as follows:

143  
144 **(a) All Plants.**

145  
146 **1. Automated Controls.** Control proportioning,  
147 mixing, and mix discharging automatically. When RAP  
148 is incorporated into mixture, provide positive controls for  
149 proportioning processed RAP.

150  
151 **2. Dust Collector.** AASHTO M 156, Requirements  
152 for All Plants, Emission Controls is amended as follows:

153  
154 Equip plant with dust collector. Dispose of  
155 collected material. In the case of baghouse dust  
156 collectors, dispose of collected material or return  
157 collected material uniformly.

158  
159 **3. Modifications for Processing RAP.** When RAP  
160 is incorporated into mixture, modify mixing plant in  
161 accordance with plant manufacturer's recommendations  
162 to process RAP.

163  
164 **(b) Drum Dryer-Mixer Plants.**

165  
166 **1. Bins.** Provide separate bin in cold aggregate  
167 feeder for each individual aggregate stockpile in mix.  
168 Use bins of sufficient size to keep plant in continuous  
169 operation and of proper design to prevent overflow of  
170 material from one bin to another.

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**2. Stockpiling Procedures.** Separate aggregate for Mix II, Mix III and Mix IV into at least three stockpiles with different gradations as follows: coarse, intermediate, and fine. Separate aggregates for Mix V into at least two stockpiles. Stockpile RAP separately from virgin aggregates.

**3. Checking Aggregate Stockpile.** Check condition of the aggregate stockpile often enough to ensure that the aggregate is in optimal condition.

**(c) Batch and Continuous Mix Plants.**

**1. Hot Aggregate Bin.** Provide bin with three or more separate compartments for storage of screened aggregate fractions to be combined for mix. Make partitions between compartments tight and of sufficient height to prevent spillage of aggregate from one compartment into another.

**2. Load Cells.** Calibrated load cells may be used in batch plants instead of scales.

**(2) Hauling Equipment.** Use trucks that have tight, clean, smooth metal beds for hauling HMA.

Thinly coat truck beds with a minimum quantity of non-stripping release agent to prevent mixture from adhering to beds. Diesel or petroleum-based liquid release agents, except for paraffin oil, shall not be used. Drain excess release agent from truck bed before loading with HMA.

Provide a designated clean up area for the haul trucks.

Equip each truck with a tarpaulin conforming to the following:

**(a)** In good condition, without tears and holes.

**(b)** Large enough to be stretched tightly over truck bed, completely covering mix. The tarpaulin shall be secured in such a manner that it remains stretched tightly over truck bed and HMA mix until the bed is about to be raised up in preparation for discharge.

**(3) Asphalt Pavers.** Use asphalt pavers that are:

- 218 (a) Self-contained, power-propelled units.  
 219  
 220 (b) Equipped with activated screed or strike-off assembly,  
 221 heated if necessary.  
 222  
 223 (c) Capable of spreading and finishing courses of HMA  
 224 mixtures in lane widths applicable to typical section and  
 225 thicknesses indicated in the contract documents.  
 226  
 227 (d) Equipped with receiving hopper having sufficient  
 228 capacity for uniform spreading operation.  
 229  
 230 (e) Equipped with automatic feed controls to maintain  
 231 uniform depth of material ahead of screed.  
 232  
 233 (f) Equipped with automatic screed controls with sensors  
 234 capable of sensing grade from outside reference line, sensing  
 235 transverse slope of screed, and providing automatic signals to  
 236 control screed grade and transverse slope.  
 237  
 238 (g) Capable of operating at constant forward speeds  
 239 consistent with satisfactory laying of mixture.  
 240  
 241 (h) Equipped with a means of preventing the segregation of  
 242 the coarse aggregate particles from the remainder of the  
 243 bituminous plant mix when that mix is carried from the paver  
 244 hopper back to the paver augers. The means and methods  
 245 used shall be approved by the paver manufacturer and may  
 246 consist of chain curtains, deflector plates, or other such devices  
 247 and any combination of these.

248  
 249 The following specific requirements shall apply to the  
 250 identified bituminous pavers:

- 251  
 252 1. **Blaw-Knox Bituminous Pavers.** Blaw-Knox  
 253 bituminous pavers shall be equipped with the  
 254 Blaw-Knox Materials Management Kit (MMK).  
 255  
 256 2. **Cedarapids Bituminous Pavers.** Cedarapids  
 257 bituminous pavers shall be those that were  
 258 manufactured in 1989 or later.  
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**3. Barber-Green/Caterpillar Bituminous Pavers.**  
Barber-Green/Caterpillar bituminous pavers shall be equipped with deflector plates as identified in the December 2000 Service Magazine entitled “New Asphalt Deflector Kit {6630, 6631, 6640}”.

Bituminous pavers not listed above shall have similar attachments or designs that shall make them equivalent to the bituminous pavers listed above. The Engineer will solely decide if it is equal to or better than the setups described for the equipment listed above.

Submit for review and acceptance, prior to the start of using the paver for the placing of plant mix, a full description in writing of the means and methods that will be used to prevent the bituminous paver from having both aggregate and temperature segregation. Use of any paver that has not been accepted is prohibited until acceptance of the paver is received from the Engineer. Any pavement placed with an unaccepted paver will be regarded as not compliant work and may not be paid for and may require removal.

Supply a Certificate of Compliance that verifies that the manufacturer’s approved means and methods used to prevent bituminous paver from having both aggregate and temperature segregation have been implemented on all pavers used on the project and are working in accordance with the manufacturer’s requirements and Contract Documents.

**(4) Rollers.** Rollers shall be self-propelled, steel-tired tandem, pneumatic-tired, or vibratory-type rollers capable of reversing without shoving or tearing the just placed HMA mixture. Provide sufficient number, sequencing, type, and rollers of sufficient weight to compact the mixture to required density while mixture is still in workable condition. Equipment shall not excessively crush aggregate. Operate rollers in accordance with manufacturer's recommendations and Contract Documents. The use of intelligent compaction is encouraged and may be required elsewhere in the Contract Documents.

**(a) Steel-Tired Tandem Rollers.** Steel-tired tandem rollers used for initial breakdown or intermediate roller passes shall have minimum gross weight of 12 tons and shall provide minimum 250-pound weight per linear inch of width on drive wheel.

Steel-tired tandem rollers used for finish roller passes

306 shall have minimum total gross weight of 3 tons.

307  
308 Do not use roller with grooved or pitted rolling drum or  
309 worn scrapers or wetting pads. Replace excessively worn  
310 scrapers and wetting pads before use.

311  
312 **(b) Pneumatic-Tired Rollers.** Pneumatic-tired rollers shall  
313 be oscillating-type, equipped with smooth-tread pneumatic tires  
314 of equal size and diameter. Maintain tire pressure within 5  
315 pounds per square inch of designated operational pressure  
316 when hot. Space tires so that gaps between adjacent tires are  
317 covered by following set of tires.

318  
319 Pneumatic-tired rollers used for breakdown or  
320 intermediate roller passes shall have a ballast capable of  
321 establishing an operating weight per tire of not less than 3,000  
322 pounds. Equip rollers with tires having minimum 20-inch wheel  
323 diameter with tires inflated to 70 to 75 pounds per square inch  
324 pressure when cold and 90 pounds per square inch when hot.  
325 Equip rollers with skirt-type devices to maintain temperature of  
326 tires during rolling operations.

327  
328 Pneumatic-tired rollers used for kneading finished  
329 asphalt surfaces shall have a ballast capable of establishing an  
330 operating weight per tire of not less than 1,500 pounds. Equip  
331 rollers with tires having minimum 15-inch wheel diameter with  
332 tires inflated to 50 to 60 pounds per square inch pressure. If  
333 required, equip rollers with skirt-type devices to maintain  
334 temperature of tires during rolling operations.

335  
336 **(c) Vibratory Rollers.** Vibratory rollers shall be steel-tired  
337 tandem rollers having minimum total weight of 3 tons. Equip  
338 vibratory rollers with amplitude and frequency controls and  
339 speedometer. Operate vibratory roller in accordance with  
340 manufacturer's recommendations. For very thin lifts, 1 inch or  
341 less in thickness, vibratory rollers shall not be used in the  
342 vibratory mode. Instead, operate the unit in the static mode.

343  
344 **(5) Hand Tools.** Keep hand tools used in production, hauling, and  
345 placement of HMA clean and free of contaminants. Diesel or mineral  
346 spirits or other cleaning material that is potentially deleterious to HMA  
347 may be used to clean hand tools providing:

- 348  
349 **(a)** It does not contaminate HMA with cleaning material.  
350  
351 **(b)** Clean hand tools over catch pan with capacity to hold all

352 the cleaning material.

353

354 **(c)** Remove all diesel or mineral spirits or other cleaning  
355 material that is potentially deleterious to HMA from hand tools  
356 before using with HMA.

357

358 **(d)** Hand tools used shall be in a condition such that it meets  
359 the requirements that it was manufactured for, e.g., a  
360 straightedge shall meet the straightness requirement of the  
361 manufacturer.

362

363

**(6) Material Transfer Vehicle (MTV).**

364

365 **(a) Usage.** MTV usage applies to surface courses of paving  
366 projects on all Islands except Lanai, unless otherwise indicated.  
367 When placing HMA surface course use MTV to independently  
368 deliver mixtures from hauling equipment to paving equipment.  
369 MTV usage will not be required for the following:

370

1. Projects with less than 1,000 tons of HMA.

371

372

2. Temporary pavements.

373

374

3. Bridge deck approaches.

375

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4. Shoulders.

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5. Tapers.

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6. Turning lanes.

381

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7. Driveways.

383

384

8. Areas with low overhead clearances.

385

386

387 **(b) Equipment.** When using MTV, install minimum 10-ton-  
388 capacity hopper insert in conventional paver hopper. Provide  
389 the following equipment:

390

1. High-capacity truck unloading system in MTV  
capable of receiving HMA from hauling equipment.

391

392

2. MTV storage bin with minimum 15-ton capacity.

393

394

3. An auger mixing system in one of the following:  
the MTV storage bin, or paver hopper insert, or paver

395

396

397

398 hopper to continuously mix HMA prior to discharging to  
399 the paver's conveyor system.

400  
401 Avoid stop-and-go operations by coordinating plant  
402 production rate, number of haul units, and MTV and paver  
403 speeds to provide a continuous, uniform, segregation-free  
404 material flow and smooth HMA pavement. Maintain uniform  
405 paver speed to produce smooth pavements.

406  
407 **(c) Performance Evaluation.** Evaluate the performance  
408 of MTV and mixing equipment by measuring mat temperature  
409 profile immediately behind paver screed on first day of paving  
410 and when it feels the need to do so due to perceived changes  
411 in performance or as directed by the Engineer.

412  
413 Use a hand-held temperature device that has been  
414 calibrated within the past twelve (12) months. It shall be an  
415 infrared temperature gun is capable of measuring in one  
416 degree or finer increments between the temperatures of 80  
417 degrees to 400 degrees F with a laser to indicate where the  
418 temperature reading is being taken. Six temperature profile  
419 measurements shall be taken of mat surface using infrared  
420 temperature gun at 50-foot intervals behind paver. Each  
421 temperature profile shall consist of three surface temperature  
422 measurements taken transversely across the mat in  
423 approximately a straight line from screed while paver is  
424 operating. For each profile, temperatures shall be measured  
425 approximately 1 foot from each edge and in middle of mat. The  
426 difference between maximum and minimum temperature  
427 measurements for each temperature profile shall not exceed 10  
428 degrees F. If any two or more temperature profiles exceeds the  
429 allowable 10-degree F temperature differential, halt paving  
430 operation and adjust MTV or mixing equipment to ensure that  
431 material placed by paver meets specified temperature  
432 requirements. Redo the measuring of mat temperature profile  
433 until adjustment of the MTV or mixing equipment is adequate.  
434 Submit all temperature profiles to the Engineer by next  
435 business day. Information on the report shall show location and  
436 temperature readings and time test was performed. Enough  
437 information shall be given, so the Engineer will be able to easily  
438 locate the test site of the individual measurement.

439  
440 When requested temperature profile measurements  
441 shall be done in the presence of the Engineer.

442 Once adjustments are made, repeat measurement  
443 procedure for the next two placements to verify that material

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placed by paver meets specified temperature requirements. Terminate paving if temperature profile requirements are not met during repeated measurement procedure. If equipment fails to meet requirements after measurement procedure is repeated once, replace equipment before conducting any further temperature profile measurements

The Engineer may perform surface temperature profile measurements at any time during project. The Engineer may in lieu of a hand-held infrared temperature device use an infrared camera or device that is capable of measuring temperatures to locate cold spots. If such cold spots exist, the Engineer may require adjustments to the MTV.

If bleeding or fat spots occur in the pavement adjust means and methods to eliminate such pavement defects and perform remedial repair to pavement acceptable to the Engineer. Bleeding is defined as excess binder occurring on the surface of the pavement. It may create a shiny, glass-like, reflective appearance and may be tacky to the touch. Fat spots are localized bleeding.

**(d) Transport.**

**1. Trailered MTV.** Transport MTV by means of truck-tractor/trailer combination in accordance with Chapter 104 of Title 19, Department of Transportation, entitled "The Movement by Permit of Oversize and Overweight Vehicles on State Highways".

**2. Crossing Bridges for Self-Powered MTV.** When self-powered MTV exceeds legal axle or total weight limits for vehicles under the HRS, Chapter 291, conform to the following when crossing bridges within project limits unless otherwise indicated in the Contract Documents:

- a. Completely remove mix from MTV.
- b. Move MTV at relatively constant speed not exceeding 5 miles per hour. MTV will not be allowed to stop on bridge.

487 c. No other vehicle or equipment will be  
488 allowed on bridge.

489  
490 d. The MTV shall not attempt to cross a  
491 bridge where the posted load limit is less than or  
492 equal to the weight of the MTV empty.  
493 Permission to cross the bridge shall be obtained  
494 from the Engineer and HWY-DB in writing.  
495

496 **(C) Preparation of Surface.** Clean existing pavement in accordance with  
497 Section 310 - Brooming Off. Apply tack coat in accordance with Section 407  
498 - Tack Coat. Tack coat shall not be applied to surfaces to receive an  
499 application of joint adhesive.  
500

501 Where indicated in the Contract Documents, bring irregular surfaces  
502 to uniform grade and cross section by furnishing and placing one or more  
503 leveling courses of HMA Mix V. Spread leveling course in variable  
504 thicknesses to eliminate irregularities in existing surface. Place leveling  
505 course such that maximum depth of each course, when thoroughly  
506 compacted, does not exceed 3 inches.  
507

508 In multiple-lift leveling course construction, spread subsequent lifts  
509 beyond edges of previously spread lifts in accordance with procedures  
510 contained in current edition of the Asphalt Institute's *Construction of Hot Mix*  
511 *Asphalt Pavements*, Manual Series No. 22 (MS-22) for leveling wedges.  
512

513 Notify the Engineer of existing surfaces that may not be in a condition  
514 that will have enough strength to be a good bonding surface or foundation  
515 and should be removed or have remedial repairs done before new pavement  
516 placement.  
517

518 **(D) Plant Operation.**  
519

520 **(1) Preparation of Asphalt Binder.** Uniformly heat asphalt binder  
521 and provide continuous supply of heated asphalt cement from storage  
522 to mixer. Do not heat asphalt binder above the recommendation of  
523 the supplier for modified binders or above 350 degrees F for neat  
524 binders.  
525

526 **(2) Preparation of Aggregate.** Dry and heat aggregate material  
527 at temperature sufficient to produce design temperature of job-mix  
528 formula. Do not exceed 350 degrees F. Adjust heat source used for  
529 drying and heating to avoid damage to and contamination of  
530 aggregate. When dry, aggregate shall not contain more than 1  
531 percent moisture by weight.

532 For batch plants, screen aggregates immediately after heating

533 and drying into three or more fractions. Convey aggregates into  
534 separate compartments ready for batching and mixing with asphalt  
535 binder.

536  
537 **(3) Mixing.** Measure aggregate and asphalt; or aggregate, RAP,  
538 and asphalt into mixer in accordance with an accepted job-mix  
539 formula. Mix until components are completely mixed and adequately  
540 coated with asphalt binder in accordance with AASHTO M 156.  
541 Percent of coated particles shall be 95 percent when tested in  
542 accordance with AASHTO T 195.

543  
544 **(4) Plant Inspection.** For control and acceptance testing during  
545 periods of production, provide a testing laboratory that meets the  
546 requirements of AASHTO M 156. Provide space, utilities, and  
547 equipment required for performing specified tests.

548  
549 **(E) Spreading and Finishing.** Prior to each day's paving operation,  
550 check screed or strike-off assembly surface with straight edge to ensure  
551 straight alignment and there is no damage or wear to the machine that will  
552 affect performance. Provide screed or strike-off assembly that produces  
553 finished surface without tearing, shoving, and gouging HMA. Discontinue  
554 using spreading equipment that leaves ridges, indentations, or other marks,  
555 or combination thereof in surface that cannot be eliminated by rolling or  
556 affects the final smoothness of the pavement or be prevented by adjustment  
557 in operation.

558  
559 Maintain HMA at minimum 250 degrees F temperature at discharge to  
560 paver. The Engineer shall observe the contractor measuring the temperature  
561 of mix in hauling vehicle just before depositing into spreader or paver or MTV.

562  
563 Deposit HMA in a manner that minimizes segregation. Raise truck  
564 beds with tailgates closed before discharging HMA.

565  
566 Lay, spread, and strike off HMA upon prepared surface. Where  
567 practical, use asphalt pavers to distribute mixture.

568  
569 Where practical, control horizontal alignment using automatic grade  
570 and slope controls from reference line, slope control device. Existing  
571 pavements or features shall not be used for grade control alone.

572  
573 Obtain sensor grade reference, horizontal alignment by using  
574 established grade and slope controls. For subsequent passes, substitution  
575 of one ski with joint-matching shoe riding on finished adjacent pavement is  
576 acceptable. Use of a comparable non-contact mobile reference system and  
577 joint matching shoe is acceptable.

578 Avoid stop-and-go operation. Maintain a constant forward speed of

579 paver during paving operation and minimize other methods that impact  
580 smoothness.

581  
582       Offset longitudinal joint in successive lifts by approximately 6 inches.  
583 Incorporate into paving method an overlap of material of 1-inch +/- 0.5 inches  
584 at the longitudinal joint. The HMA overlap material shall be left alone when  
585 initially placed and shall not be bumped back or pushed back with a lute or  
586 any other hand-held device. If the overlap exceeds the maximum amount,  
587 remove the excess with a flat shovel, allowing recommended amount of  
588 overlap HMA material to remain in place to be compacted. Do not throw the  
589 removed excess HMA material on to the paving mat. The longitudinal joint  
590 in a surface course when total roadway width is comprised of two lanes shall  
591 be near the centerline of pavement or near lane lines when roadway is more  
592 than two lanes in width. The longitudinal joint shall not be constructed in the  
593 wheel path or under the longitudinal lane lines. Make a paving plan drawing  
594 showing how the longitudinal joint will not be located in these areas.

595  
596       Control the horizontal alignment of the longitudinal edge of the HMA  
597 mat being installed so that the edge is parallel to the centerline or has a  
598 uniform alignment, e.g., the edge of the mat is straight line or uniform curve,  
599 no wavy edge, etc. to have a consistent amount of HMA material at the joint.

600  
601       Check the compaction of the longitudinal joint during paving often  
602 enough to ensure that it will meet the compaction requirements.

603  
604       If nuclear gauges and ground penetrating radar are used as the  
605 contractor's quality control method, they shall be properly calibrated and  
606 periodically checked by comparison to cores taken from the pavement. The  
607 use of sand as an aid in properly seating the gauge may also be considered  
608 for improving the accuracy of the gauge.

609  
610       In areas where irregularities or unavoidable obstacles make use of  
611 mechanical spreading and finishing equipment impracticable, spread, rake,  
612 and lute mixture by hand tools. For such areas, deposit, spread evenly, and  
613 screed mixture to required compacted thickness.

614  
615       Demonstrate competence of personnel operating grade and crown  
616 control device before placing surface courses. If automatic control system  
617 becomes inoperative during the day's work, the Engineer will permit the  
618 Contractor to finish day's work using manual controls. The Engineer may  
619 also allow additional HMA to be ordered and placed using manual controls if  
620 it will provide a safer work site for the public to travel through. Do not resume  
621 work until automatic control system is made operative. The Engineer may  
622 waive requirement for electronic screed control device when paving gores,  
623 shoulders, transitions, and miscellaneous reconstruction areas where the  
624 use of the devices is not practical.

## 401.05

625                   When production of HMA can be maintained and when practicable,  
626 use pavers in echelon shall be used to place surface course in adjacent  
627 lanes.

628  
629                   At the end of each workday, HMA pavement that is open to traffic shall  
630 not extend beyond the panel of the adjacent new lane pavement by more  
631 than the distance normally placed in one (1) work day. At end of each day's  
632 production, construct tapered transitions along all longitudinal and transverse  
633 pavement drop-offs; this shall apply to areas where existing pavement is to  
634 meet newly placed pavement. Use slopes of 6:1 for longitudinal taper  
635 transitions and 48:1 for transverse tapered transitions. Maximum drop-off  
636 height along the joints shall be 2 inches. Also, using a 48:1 slope provides a  
637 taper around any protruding object, e.g., manholes, drain boxes, survey  
638 monuments, inlets, etc., that may be above pavement surface when opened  
639 to the public. If the object is below the surface of the pavement then fill the  
640 depression until it is level with the surrounding pavement or raise depressed  
641 objects to the finish grade of the placed pavement. Remove and dispose of  
642 all transition tapers before placing adjoining panel or next layer of HMA.  
643 Notify traveling public of pavement drop-offs or raised objects with signs  
644 placed in every direction of traffic that may use and encounter pavement  
645 drop-offs or protruding objects or holes.

646  
647                   Use the same taper rates for areas where there is a difference in  
648 elevation due to construction work.

649  
650                   At end of each workweek, complete full width of the roadway's  
651 pavement, including shoulders, to same elevation with no drop-offs.

652  
653 **(F)    Compaction.** Immediately after spreading and striking off HMA and  
654 adjusting surface irregularities, uniformly compact mixture by rolling.

655  
656                   Initiate compaction at highest mix temperature allowing compaction  
657 without excessive horizontal movement. Temperature shall not be less than  
658 220 degrees F.

659  
660                   Finish rolling using tandem roller while HMA temperature is at or  
661 above 175 degrees F.

662  
663                   On superelevated curves, begin rolling at lower edge and progress to  
664 higher edge by overlapping of longitudinal trips parallel to centerline.

665  
666                   If necessary, repair damage immediately using rakes and fresh mix.  
667 Do not displace line and grade of HMA edges during rolling.

668  
669                   Keep roller wheels properly moistened with water or water mixed with  
670 small quantities of detergent. Use of excess liquid, diesel, and petroleum-

671 based liquids will not be allowed on rollers.

672

673 Along forms, curbs, headers, walls and other places not accessible to  
674 rollers, compact mixture with hot hand tampers, smoothing irons, or  
675 mechanical tampers. On depressed areas, trench roller or cleated  
676 compression strips under roller may be used to transmit compression.

677

678 Before the start of compaction or during compaction or both remove  
679 pavement that is loose, broken, or contaminated, or combination thereof;  
680 pavement that shows an excess or deficiency in asphalt binder content; and  
681 pavement that is defective in any way. Replace with fresh HMA pavement of  
682 same type, and compact. Remove and replace defective pavement and  
683 compact at no increase in contract price or contract time.

684

685 Operate rollers at slow and uniform speed with no sudden stops. The  
686 drive wheels shall be nearest to the paver. Continue rolling to attain specified  
687 density and until roller marks are eliminated.

688

689 Rollers shall not be parked on the pavement placed that day or shift.

690

691 **(1) HMA Pavement Courses One and a Half Inches Thick or**  
692 **Greater.** Where HMA pavement compacted thickness indicated in the  
693 Contract Documents is 1-1/2 inches or greater, compact to not less  
694 than 93.0 percent nor greater than 97.0 percent of the maximum  
695 specific gravity determined in accordance with AASHTO T 209,  
696 modified by deletion of Supplemental Procedure for Mixtures  
697 Containing Porous Aggregate.

698

699 Place HMA pavement in individual lifts that are within minimum  
700 and maximum allowable compacted thickness for various types of  
701 mixture as specified in Table 401.02-1 - Limits of Compacted Lift  
702 Thickness and Asphalt Content.

703

704 **(2) HMA Pavement Courses Less Than One and a Half Inches**  
705 **Thick.** Where HMA pavement compacted thickness indicated in the  
706 contract documents is less than 1-1/2 inches, compaction to a  
707 specified density will not be required.

708

709 Use only non-vibratory, steel-tired, tandem roller. Roll entire  
710 surface with minimum of two roller passes. A roller pass is defined as  
711 one trip of the roller in one direction over any one spot.

712

713 For intermediate rolling, roll entire surface with minimum of four  
714 passes of roller.

715

716 Finish rolling using steel-tired, tandem roller. Continue rolling

717 until entire surface has been compacted with minimum of three passes  
718 of roller, and roller marks have been eliminated.

719  
720 Do not use rollers that will excessively crush aggregate.

721  
722 **(3) HMA Pavement Courses One and a Half Inches Thick or**  
723 **Greater In Special Areas Not Designated For Vehicular Traffic.**  
724 For areas such as bikeways that are not part of roadway and other  
725 areas not subjected to vehicular traffic, compact to not less than 90.0  
726 percent of maximum specific gravity determined in accordance with  
727 AASHTO T 209, modified by deletion of Supplemental Procedure for  
728 Mixtures Containing Porous Aggregate. Increase asphalt content by  
729 at least 0.5 percent above that used for HMA pavements designed for  
730 vehicular traffic. Paved shoulders shall be compacted in the same  
731 manner as pavements designed for vehicular traffic.

732  
733 **(G) Joints, Trimming Edges and Utility Marking.** At HMA pavement  
734 connections to existing pavements, make joints vertical to depth of new  
735 pavement. Saw cut existing pavement and cold plane in accordance with  
736 Section 415 - Cold Planing of Existing Pavement to depth equal to thickness  
737 of surface course or as indicated in the Contract Documents.

738  
739 At HMA connections to previously placed lifts, form transverse joints  
740 by cutting back on previous run to expose full depth of course. Dispose of  
741 material trimmed from edges. Protect end of freshly laid mixture from rollers.

742  
743 Before and after paving, identify and mark location of existing utility  
744 manholes, valves, and handholes on finished surface. Adjust existing frames  
745 and covers and valve boxes to final pavement finish grade in accordance with  
746 Section 604 - Manholes, Inlets and Catch Basins and Section 626 - Manholes  
747 and Valve Boxes for Water and Sewer Systems.

748  
749 **(1) Longitudinal joints.** Submit for review the means and methods  
750 that will be used to install longitudinal joints at the required compaction  
751 and density. Compact longitudinal joints to be not less than 91.0  
752 percent of the maximum specific gravity determined in accordance  
753 with AASHTO T 209, modified by deletion of Supplemental Procedure  
754 for Mixtures Containing Porous Aggregate. Verify the compaction of  
755 the longitudinal joints meets requirements by using non-destructive  
756 testing methods during paving and submit the results on the daily  
757 quality control test reports.

758  
759 Test for compaction and density regardless of layer thickness.  
760 Compaction and density of the longitudinal joint shall be determined by using  
761 six-inch diameter cores. For longitudinal joints made using butt joints cores  
762 shall be taken over the joint with half of the core being on each side of the

763 joint. For longitudinal joints using butt wedge joints, center core over the  
764 center of the wedge so that 50 percent of the material is from the most  
765 recently paved material and the remaining 50 percent of the core is from the  
766 material used to pave the previous layer. One core shall be taken at a  
767 maximum of every 250 tons of longitudinal joint and any fraction of that length  
768 for each day of paving with a minimum of one core taken for each longitudinal  
769 joint per day. Cores taken for the testing of the longitudinal joint may be used  
770 to determine pavement thickness.

771  
772 When the longitudinal joints are found to have less than 91.0 percent  
773 of the maximum specific gravity, overband all longitudinal joints within the  
774 entire lot represented by the non-compliant core, PG binder seal coat, or  
775 other type of joint enrichment accepted by the Engineer. The overband shall  
776 not decrease the skid resistance of the pavement under any ambient weather  
777 condition. Submit overband material's catalog cuts, test results and  
778 application procedure for review and acceptance by the Engineer before use.  
779 Center the overband over the longitudinal joint. The overband shall be placed  
780 in a uniform width and horizontal alignment. The overband shall have no  
781 holidays or streaking in its placement. The width of the overband shall be  
782 based on how the longitudinal joint was constructed or as directed by the  
783 Engineer. If a butt joint is used, the overband width shall be a minimum of  
784 12-inches. For butt wedge or wedge joints the overband width shall be the  
785 width of the wedge plus an additional six-inches minimum. Replace any  
786 pavement markings damaged or soiled by the overband remedial repair  
787 process.

788  
789 For longitudinal joints that have a compaction of less than 89 percent  
790 of the maximum specific gravity; removal may be required by the Engineer  
791 instead of overbanding the non-compliant joint.

792  
793 Persistent low compaction results may be cause to suspend work and  
794 remove non-conforming work. During the suspension of paving, revise  
795 means and methods used in constructing longitudinal joints and submit to the  
796 Engineer for review and acceptance. Suspension may occur when:

- 797  
798 (1) Two or more longitudinal joints tests fail to meet the minimum  
799 compaction  
800 (2) One sample reveals that the joint compaction is 89 percent or  
801 less.  
802

803           **(H) HMA Pavement Samples.** Obtain test samples from compacted  
804 HMA pavement within 72 hours of lay down. Provide minimum 4-inch  
805 diameter cores consisting of undisturbed, full-depth portion of compacted  
806 mixture taken at locations designated by the Engineer in accordance with the  
807 “Sampling and Testing Guide for Acceptance and Verification” in Hawaii DOT  
808 Highways Division, *Quality Assurance Manual for Materials*, Appendix 3.  
809 Cores shall be taken in the presence of the Engineer. Turn cores over to  
810 Engineer immediately after cores have been taken.

811  
812           For pavement samples for longitudinal joints provide 6-inch diameter  
813 cores minimum. For pavement samples for other than longitudinal joints  
814 4-inch diameter cores minimum shall be taken. All cores shall consist of  
815 undisturbed, full-depth of the lift of the compacted mixture taken at locations  
816 designated by the Engineer in accordance with the “Sampling and Testing  
817 Guide for Acceptance and Verification” in Hawaii DOT Highways Division,  
818 *Quality Assurance Manual for Materials*, appendix 3. Coring of longitudinal  
819 joints shall use a modified HDOT Sampling and Testing Guide as required  
820 by the Contract Documents.

821  
822           Cores that separate shall indicate to the Engineer that there is  
823 insufficient bonding of layers. Modify the previously used paving means and  
824 methods to prevent future debonding of layers. Debonding of a core sample  
825 after adjustment of the Contractor’s methods will be an indication of  
826 continued non-conforming work and the Engineer may direct removal of the  
827 layer at no additional cost or contract time.

828  
829           Restore HMA pavement immediately after obtaining samples. Clean core  
830 hole and walls of all deleterious material that will prevent the complete filling  
831 of the core hole and the bonding of the new HMA to the existing. Apply tack  
832 coat to vertical faces of sample holes. Fill sampled area with new HMA  
833 pavement of same type as that removed. If hand compaction is used; fill in  
834 layers not exceeding the minimum thickness stated in Table 401.02-1 - Limits  
835 of Compacted Lift Thickness And Asphalt Content. Compact each layer to  
836 compaction requirements. If Mechanical Compaction methods are used, then  
837 layers may be the maximum layer thickness stated in Table 401.02-1 - Limits  
838 of Compacted Lift Thickness And Asphalt Content. Using tires or hand  
839 tamping to compact the HMA material to restore the pavement shall not be  
840 considered as mechanical compaction.

841  
842           Only sample and test leveling course if 1-1/2 inches or greater. No  
843 compaction requirements for less than 1-1/2 inches.

844  
845           **(I) HMA Pavement Thickness Tolerances.**  
846  
847           The Engineer will measure thickness of pavement by cores obtained  
848 by the Contractor in accordance with HDOT TM 09-19 Field Sampling

849 Bituminous Material after Compaction (Obtaining Cores). The Engineer will  
850 measure cores in accordance with HDOT TM 09-19, except that  
851 measurement will be taken to nearest one thousandth of an inch; and  
852 average of such measurements will be taken to nearest one hundredth of an  
853 inch.

854  
855 Thickness of finished HMA pavement shall be within 0.25 inch of  
856 thickness indicated in the Contract Documents. Pavement not meeting the  
857 thickness requirements of the Contract Documents may be required by the  
858 Engineer to be removed and replaced.

859  
860 Corrective methods taken on pavement exceeding specified  
861 tolerances, e.g., insufficient thickness by methods accepted by the Engineer,  
862 including removal and replacement, shall be at no increase in contract price  
863 or contract time.

864  
865 The checking of pavement thickness shall be done after all remedial  
866 repairs, e.g., smoothness compliance repairs, compaction, have been  
867 completed, reviewed, and accepted by the Engineer.

868  
869 **(J) Quality Control Using New Technology.** The Engineer and MTRB  
870 reserves the right to utilize new technology and methods to improve the  
871 detection of noncompliant work on the project. The technology or method  
872 may be used to locate defects in the work, e.g., ground penetrating radar to  
873 locate delaminations, moisture damage, thin sections, voids, non-compliant  
874 compaction, other non-destructive testing to locate flaws. The defect will be  
875 verified by the methods stated in the Contract Documents or by other  
876 established conventional means. If the technology or method has already  
877 been accepted elsewhere or has standardized testing procedures the results  
878 may be judged acceptable by the Engineer and no further testing will be  
879 required. These new technologies and methods may be used for the  
880 selection of sampling locations.

881  
882 **(K) Protection of HMA Pavement.** Except for construction equipment  
883 directly connected with paving operations, keep traffic off HMA pavement.

884  
885 Protect HMA pavement from damage until it has cooled and set.

886  
887 Do not refuel equipment or clean equipment or hand tools over paved  
888 surfaces unless catch pan or device that will contain spilled fuel and other  
889 products is provided. After completion of refueling or cleaning, remove catch  
890 pan or device without spilling any of the collected content.

891  
892 Do not park roller or other paving equipment on HMA pavement paved  
893 within 24 hours of laydown.

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**(L) Pavement Joint Adhesive**

**(1) Pavement Joint Adhesive on Joints.** Use on all asphalt pavement construction where joints are formed at such locations but not limited to the following:

**(a)** Adjacent asphalt pavements, e.g., trafficked lanes, shoulders, etc.

**(b)** Asphalt pavement and adjacent concrete pavement or curb and gutter or any other surface where the bonding of the asphalt pavement and concrete surface is desired,

**(c)** Transverse joints between asphalt pavements not placed at the same time or if the pavement's temperature on one side of the joint is below the minimum temperature the mix can be at, during asphalt pavement compaction or installation.

**(d)** Cut face of an existing pavement where it will have new HMA pavement placed against it, e.g., utility trenches, partial or full depth repairs, etc.

Pavement joint adhesive is not required on a longitudinal construction joint between adjacent hot mix asphalt pavements formed by echelon paving. Echelon paving is defined as paving multiple lanes side-by-side with adjacent pavers slightly offset at the same time.

A longitudinal construction joint between one shift's work and another shall have pavement joint adhesive applied at the joint. Any longitudinal construction joint formed, with the temperature on one side of the joint that is below the minimum temperature the mix can be when compacted to contract requirements during asphalt pavement installation, shall have pavement joint adhesive applied at the joint.

**(2) Material requirements.** Asphalt joint adhesive shall meet requirements as specified in Table 401.03-1 - Asphalt Joint Adhesive Specifications.

TABLE 401.03-1 – ASPHALT JOINT ADHESIVE SPECIFICATIONS		
TEST		SPECIFICATION
Brookfield Viscosity, 204 °C [400 °F]	ASTM D 3236	4,000-10,000 cp
Cone Penetration, 25 °C [77 °F]	ASTM D 5329	60-100 dmm
Resilience, 25 °C [77 °F]	ASTM D 5329	30% minimum
Ductility, 25 °C [77 °F]	ASTM D 113	30 cm minimum
Ductility, 4 °C [39.2 °F]	ASTM D 113	30 cm minimum
Tensile Adhesion, 25 °C [77 °F]	ASTM D 5329	500% minimum
Softening Point	ASTM D 36	77 °C [170 °F] min.
Asphalt Compatibility	ASTM D 5329	Pass

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### (3) Construction Requirements for Asphalt Joint Adhesive

(a) **Equipment Requirements.** Use a jacketed double boiler type melting unit, with both agitation and recirculation systems. Provide a pressure feed wand application system.

(b) **Material Handling.** Submit a copy of the manufacturer's recommendations for heating, re-heating, and applying the joint adhesive material. Follow manufacturer's recommendations. Do not remove the joint adhesive from the package until immediately before it is placed in the melter. Joint adhesive boxes must be clearly marked with the name of the manufacturer, the trade name of the adhesive, the manufacturer's batch and lot number, the application/pour temperature, and the safe heating temperature. Feed additional material into the melter at a rate equal to the rate of material used.

Verify the pouring temperature of the joint adhesive at least once per hour at the point of discharge. Stop production if the adhesive falls below the recommended application/pour temperature. When the temperature of the adhesive exceeds the maximum safe heating temperature, stop production, empty the melter, and dispose of that adhesive in an environmentally safe method. No payment will be made for this material or its disposal.

Do not blend or mix different manufacturer's brands or different types of adhesives.

(c) **Joint Adhesive Application:** The face of the joint that the new asphalt pavement will bind to shall be clean and dry

967 before the joint adhesive is applied. Apply the pavement joint  
968 adhesive material to the entire face of the surface where HMA  
969 pavement shall be installed. The thickness of the asphalt  
970 adhesive application shall be approximately 1/8 inch. Use an  
971 application shoe attached to the end of application wand. Do  
972 not overlap the joint by greater than 1/2-inch at the top of the  
973 joint or two-inches at the bottom of the joint. Apply the joint  
974 adhesive immediately in front of the paving operation. If the  
975 adhesive is tracked by construction vehicles, repair the  
976 damaged area, and restrict traffic from driving on the adhesive.  
977

978 **(d) Field Sampling.** Take a sample from the application  
979 wand during the first twenty (20) minutes of placing sealant.  
980 One sample should be taken per manufacturer's batch or  
981 minimum of every six (6) months on the Project in the presence  
982 of the Engineer.  
983

984 Each sample shall consist of one quart in an aluminum or steel  
985 sample container. The sampling container shall be labeled with  
986 Contractor's name; project name and number; date and time  
987 sample taken; location of where material was used at, e.g., from  
988 where to where it was used at in stations; manufacturer and lot  
989 number of the sealant. Turn over samples to Engineer without  
990 Engineer losing sight of the sample. The Engineer reserves the  
991 right to conduct supplementary sampling and testing of the  
992 sealant material.  
993

994 **(M) Pavement Smoothness Rideability Test.** Perform surface profile  
995 tests frequently to ensure that the means and methods being used produces  
996 pavement that is compliant with the surface profile smoothness requirement.  
997 Test the pavement surface for smoothness with High-Speed Inertial Profiler  
998 to determine the International Roughness Index (IRI) of the pavement. For  
999 the locations determined by the Engineer, a 10-foot straightedge shall be  
1000 used to measure smoothness.  
1001

1002 All smoothness testing must be performed with the presence of the  
1003 Engineer. The High-Speed Inertial Profiler operator shall be a certified  
1004 operator by MTRB or the manufacturer.  
1005

1006 The High-Speed Inertial Profiler operator's certification shall be no  
1007 older than five (5) years old at the date of the Notice to Proceed and at the  
1008 day of the pavement profile measurement.  
1009

1010 The finished pavement shall comply to all the following requirements:  
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**(a) Smoothness Test using 10-Foot Straightedge (Manual or rolling)** The 10-foot straightedge is used to identify the locations that vary more than 3/16 inch from the lower edge when the 10-foot straightedge is laid on finished pavement on the direction parallel with the centerline or perpendicular to centerline. Remove the high points that cause the surface to exceed that 3/16 inch tolerance by grinding.

The Contractor shall use a 10-foot straightedge for the following locations:

1. Longitudinal profiling parallel to centerline, when within 15 feet of a bridge approach or existing pavement which is being joined.
2. Transverse profiling of cross slopes, approaches, and as otherwise directed. Lay the straightedge in a direction perpendicular to the centerline.
3. When pavement abuts bridge approaches or pavement not under this Contract, ensure that the longitudinal slope deviations of the finished pavement comply with Contract Document's requirements.
4. Short pavement sections up to 600 feet long, including both mainline and non-mainline sections on tangent sections and on horizontal curves with a centerline radius of curve less than 1,000 feet.
5. Within a superelevation transition on horizontal curves having centerline curve radius less than 1,000 feet, e.g., curves, turn lanes, ramps, tapers, and other non-mainline pavements.
6. Within 15 feet of transverse joint that separates pavement from existing pavement not constructed under the contract, or from bridge deck or approach slab for longitudinal profiling.
7. At miscellaneous areas of improvement where width is less than 11 feet, such as medians, gore areas, and shoulders.
8. As otherwise directed by the Engineer. The Engineer may confine the checking of through traffic lanes with the straightedge to joints and obvious irregularities or choose to use it at locations not specifically stated in this Section.

**(b) High-Speed Inertial Profiler**

There shall be a minimum 3 profile runs per lane, for each wheel path (left and right) which is approximately three feet from edge lane line. The segment length shall be 0.1 mi. The final segments in a lane that are less than 0.1 mi shall be evaluated as an independent segment and pay adjustments will be prorated for length. The profiles shall be taken in the direction of traffic only.

The latest version of FHWA ProVAL software shall be used to conduct profile analysis to determine IRI and areas of localized roughness. The IRI values shall be reported in units of in/mi.

Areas of localized roughness will be identified by using ProVAL’s “Smoothness Assurance” analysis, calculating IRI with a continuous short interval of 25 feet and the 250-mm filter applied.

Additional runs may be required by the Engineer if the data indicate a lack of repeatability of results. A 92% agreement is required for repeatability and IRI values shall have at minimum a 95% confidence level.

**(N) Required Pavement Smoothness**

The IRI for the left and right wheel paths in an individual lane will be computed and then averaged to determine the Mean Roughness Index (MRI) values. The MRI will be used to determine acceptance and pay adjustment. Each lane shall be tested and evaluated separately.

There are three (3) categories of target MRI values:

<b>TABLE 401.03-2 – PAVEMENT SMOOTHNESS CATEGORIES</b>		
Category	Description	MRI
Type A	Three or more opportunities for improving ride	Shall not exceed 60 in/mi
Type B	Two opportunities for improving ride	Shall not exceed 70 in/mi
Type C	One opportunity for improving ride	Shall not exceed 75 in/mi

An opportunity for improving ride is considered as one (1) lift of asphalt pavement, including but not limited to HMAB, HMA, PMA, and SMA.

For the location where a 10-foot manual straightedge is required, the surface shall not vary more than 3/16 inch from the lower edge of a straightedge.

1096 No pre-final inspection, final inspection, and substantial completion  
1097 granted will be made until the pavement meets smoothness requirement and  
1098 all required profile reports are submitted to the Engineer and MTRB and are  
1099 accepted.

1100

1101

**(O) Request for Profile Testing by the Department.**

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1103

1104

For Type C, prior to pavement activities, the Engineer will measure the smoothness of the existing pavement.

1105

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The Contractor shall submit a written request to the Engineer to perform all required profile tests.

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The request shall be made at least thirty (30) days before desired testing date and shall include an approximate acceptance profile testing date, a plan view drawing of the area to be tested with the limits of the test area highlighted.

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The Contractor shall reimburse HDOT for any incurred cost related to any Contractor-caused cancellation or a deduction to the monthly payment will be made.

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**(P) Department Requirements for Profile Testing.** When a request for testing is made, the requested area to be tested shall be 100% of the total area indicated to be paved in the Contract Documents unless the requirement is waived by the Engineer and MTRB.

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1124

Department acceptance surface tests will not be performed earlier than fourteen (14) days after HMA placement.

1125

1126

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1128

Clean debris and clear obstructions from area to be tested, as well as a minimum of 100 feet before and beyond the area to be tested before testing starts for use as staging areas. Provide traffic control for all profile testing.

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The Engineer or MTRB or both may cancel the profile testing if the test area is not sufficiently clean, traffic control is unsatisfactory, or the area is not a safe work environment or test area does not meet Contract Document requirements. This canceled profile test will count as one profile test.

1135

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1138

**(Q) Cost of Acceptance Profile Testing by The Department.** The Engineer, MTRB, or State's Third-Party Consultant will perform one initial profile test, at no cost to the Contractor for each area to be tested.

1139

1140

1141

The Department's High-Speed Inertial Profiler pavement profile will be used to determine if the pavement's profile, i.e., smoothness is acceptable.

1142 If the profile of the pavement does not meet the requirements of the  
1143 Contract Documents, the Contractor shall perform remedial work, i.e.  
1144 corrective work then retest the area to ensure that the area has the required  
1145 MRI, i.e., smoothness, before requesting another profile test by the Engineer.  
1146

1147 **(1) Additional testing.** Additional testing, by the Department  
1148 beyond the initial test will be performed at cost to the Contractor as  
1149 follows:  
1150

1151 **(a)** \$2,500 per test will be required when Department  
1152 personnel or State’s Third-Party Consultant is used.  
1153

1154 **(R) Remedial Work for Pavements.**  
1155

1156 **(1)** Corrective work shall be required for any 25 ft interval with a  
1157 localized roughness in excess of 160 in/ mi. The Engineer may waive  
1158 localized roughness requirements for deficiencies resulting from  
1159 manholes or other similar appurtenances. Adjust manholes or other  
1160 similar appurtenances so that using a 10-ft. straightedge the area  
1161 around that manhole or other similar appurtenance shall not have  
1162 more than 3/16-in. variation between any 2 contacts on the  
1163 straightedge.  
1164

1165 If corrective action is not successful, the Engineer may require  
1166 continued corrective action, or apply a payment adjustment of \$250  
1167 per occurrence.  
1168

1169 **(2)** Corrective work shall also be required for any 0.1 mile interval  
1170 with an average MRI above 95.0 in/mi for Types A and B. For Type A,  
1171 correct the deficient section to an MRI of 60 in/mi or less. For Type B,  
1172 correct the deficient section to an MRI of 70 in/mi or less. For Type C,  
1173 corrective work may be required by the Engineer for 0.1 mile intervals  
1174 that have an average MRI above the threshold shown in Tables  
1175 401.03-4 – Smoothness Pay Disincentives With MRI and 401.03-5 -  
1176 Smoothness Pay Disincentives For Percent Improvements as  
1177 applicable.  
1178

1179 If corrective action does not produce the required improvement, the  
1180 Engineer may require continued corrective action, or apply payment  
1181 adjustment as shown in Tables 401.03-4 - Smoothness Pay  
1182 Disincentives With MRI and 401.03-5 - Smoothness Pay Disincentives  
1183 For Percent Improvements.  
1184

1185 **(3)** The Contractor shall notify the Engineer at least 24 hours prior  
1186 to commencement of the corrective work. The Contractor shall not

- 1187 commence corrective work until the methods and procedure have  
1188 been approved in writing by the Engineer.  
1189
- 1190 **(4)** All smoothness corrective work for areas of localized  
1191 roughness shall be for the entire lane width. Pavement cross slope  
1192 shall be maintained through corrective areas.  
1193
- 1194 **(5)** The remedial repair areas shall be neat, rectangular areas  
1195 having a uniform surface appearance.  
1196
- 1197 **(6)** If grinding is used on HMA pavement, the surface shall have  
1198 nearly invisible grinding marks to passing motorist.  
1199
- 1200 **(7)** Other methods may include milling and overlaying HMA  
1201 pavement. The length, depth of the milling and the replacement  
1202 material will be solely decided by the Engineer.  
1203
- 1204 **(8)** The finished repaired pavement surface shall leave no ridges  
1205 or valleys or fins of pavement other than those allowed below.  
1206
- 1207 **(9)** Remedial repairs shall not leave any drainage structures' inlets  
1208 higher than the surrounding pavement or alter the Contract  
1209 Document's drainage pattern.  
1210
- 1211 **(10)** For items in the pavement other than drainage structures, e.g.,  
1212 manhole frame and covers, survey monuments, expansion joints etc.,  
1213 the finish pavement, ground or not, shall not be more than 1/4 inch in  
1214 elevation difference. Submit to the Engineer remedial repair method  
1215 to correct these conditions for acceptance.  
1216
- 1217 **(11)** Pick up immediately grinding operation residue by using a  
1218 vacuum attached to grinding machine or other method acceptable to  
1219 the Engineer.  
1220
- 1221 **(a)** Any remaining residue shall be picked up before the end  
1222 of shift or before the area is open to traffic, whichever is earlier.  
1223
- 1224 **(b)** Prevent residue from flowing across pavement or from  
1225 being left on pavement surface or both.  
1226
- 1227 **(c)** Residue shall not be allowed to enter the drainage  
1228 system.  
1229
- 1230 **(d)** The residue shall not be allowed to dry or remain on the  
1231 pavement.  
1232

## 401.05

1233 (e) Dispose of all material that is the result of the remedial  
1234 repair operation, e.g., HMA residue, wastewater, and dust at a  
1235 legal facility.  
1236

1237 (12) Complete corrective work before determining pavement  
1238 thickness for HMA pavements in accordance with Subsection  
1239 401.03(I) – HMA Pavement Thickness Tolerances.  
1240

1241 (13) All HMA wearing surface areas that have been ground shall  
1242 receive a coating, e.g., a coating material that will restore any lost  
1243 impermeability of the HMA due to the grinding of the surface. The  
1244 coating used shall not be picked up or tracked by passing vehicles or  
1245 be degraded after a short period of time has passed, i.e., it shall have  
1246 a service life equal to or greater than the HMA pavement. The coating  
1247 shall not decrease the pavement's friction value. The coating's limits  
1248 shall be the full width of the lane regardless how small. If the remedial  
1249 repair area extends into the next lane, then the repair area will be full  
1250 lane width also. Extend the length of coating areas in order for the  
1251 coating area to look like the rest of the road and does not have patches  
1252 on it, i.e., make the road look uniform in color. The coating shall be of  
1253 a color that matches the surrounding pavement. The areas receiving  
1254 the coating shall not be open to traffic until it has cured enough so that  
1255 it cannot be picked up or tracked by passing vehicles or degrade.  
1256 Submit means and methods of the coating and type of coating to the  
1257 Engineer or MTRB for review and acceptance. Do not proceed with  
1258 the coating without acceptance from the Engineer.  
1259

1260 (14) Recompact cold HMA, i.e., HMA that has reached ambient  
1261 temperature is not an acceptable remedial repair method.  
1262

1263 (15) Replace all pavement markings damaged or discolored by  
1264 remedial repairs.  
1265

1266 (16) Reprofile the corrected area and provide the Engineer the  
1267 results that show the corrective action, i.e., remedial repairs were  
1268 successful.  
1269

### 1270 (S) Pavement Smoothness and Acceptance.

1271

1272 (1) Price and payment in various paving sections, e.g., 401 (Hot  
1273 Mix Asphalt Pavement), shall be full compensation for all work and  
1274 materials specified in the various paving sections and this section,  
1275 including but not limited to furnishing all labor, materials, tools,  
1276 equipment, testing, incidentals and for doing all work involved in micro  
1277 milling, milling (cold planing), grinding existing or new pavement,  
1278 removing residue, cleaning the pavement, necessary disposal of

1279 residue, furnishing of any water or air used in cleaning the pavement  
1280 and any other related ancillary work or material or services. Also, it  
1281 includes any remedial work, e.g., re-paving, surface grinding,  
1282 application of a coating, curing compound, and replacement of  
1283 damaged pavement markings.

1284  
1285 **(2)** The contract price in those sections may be adjusted for  
1286 pavement smoothness by the Engineer. The pavement smoothness  
1287 contract unit price adjustments and work acceptance will be made in  
1288 accordance with the following schedules.

1289

<b>TABLE 401.03-3 –SMOOTHNESS PAY INCENTIVES</b>		
<b>Category</b>	<b>MRI (in/mi)</b>	<b>Pay Adjustment \$ per 0.1 mi</b>
Type A	<30.0	\$580
	30.0- less than 35.0	\$480
	35.0- less than 40.0	\$380
	40.0- less than 45.0	\$280
	45.0- less than 50.0	\$180
	50.0- less than 55.0	\$80
	55.0- less than 60.0	\$0
Type B	<35.0	\$420
	35.0- less than 40.0	\$360
	40.0- less than 45.0	\$300
	45.0- less than 50.0	\$240
	50.0- less than 55.0	\$180
	55.0- less than 60.0	\$120
	60.0- less than 65.0	\$60
	65.0- less than 70.0	\$0
Type C	<40.0	\$280
	40.0- less than 45.0	\$240
	45.0- less than 50.0	\$200
	50.0- less than 55.0	\$160
	55.0- less than 60.0	\$120
	60.0- less than 65.0	\$80
	65.0- less than 70.0	\$40
	70.0- less than 75.0	\$0

1290  
1291

1292 (3) Pay Pavement Smoothness Adjustment will be based on the  
 1293 initial measured MRI for both left and right wheel path, prior to any  
 1294 corrective work for the 0.10-mile section, except for sections that the  
 1295 Contractor has chosen to remove and replace. For sections that are  
 1296 replaced, assessments will be based on the MRI determined after  
 1297 replacement.

1298  
 1299 (a) The Pavement Smoothness Adjustment will be  
 1300 computed using the plan surface area of pavement shown in  
 1301 the Contract Documents. This Pavement Smoothness  
 1302 Adjustment will apply to the total area of the 0.10-mile section  
 1303 for the lane width represented by MRI for the same lane. It  
 1304 does not include any other price adjustments specified in the  
 1305 Contract Documents. Those price adjustments will be, for each  
 1306 adjustment, calculated separately using the original contract  
 1307 price to determine the amount of adjustment to be made to the  
 1308 contract price. Sections shorter than 0.1 mile and longer than  
 1309 50 feet shall be prorated.

1310  
 1311 (b) For 0.1 mile intervals with an average MRI above the  
 1312 threshold shown in Table 401.03-3 – Smoothens Pay  
 1313 Incentives, the Engineer shall apply a disincentive payment  
 1314 adjustment up to the limit shown.

1315  
 1316 i. For Types A and B, payment adjustments shall be  
 1317 applied up to an MRI of 95.0 per Table 401.03-4 -  
 1318 Smoothness pay Disincentives With MRI.

1319  
 1320 ii. For Type C, the payment adjustment shall be  
 1321 dependent on the average MRI of the pavement prior  
 1322 to paving activities

1323 1. If the MRI of the pavement prior to paving  
 1324 activities is 125.0 in/mi or less, the payment  
 1325 adjustment shall be per Table 401.03-4 -  
 1326 Smoothness pay Disincentives With MRI .

1327 2. If the MRI of the pavement prior to paving  
 1328 activities is more than 125.0 in/mi, the  
 1329 disincentive payment adjustment shall be per  
 1330 Table 401.03-5 - Smoothness Pay  
 1331 Disincentives For Percent Improvements, and  
 1332 based on the percent improvement using the  
 1333 following formula:

1334  
 1335 % Improvement = (Initial segment MRI – Final segment  
 1336 MRI) x 100 / (Initial Segment MRI)

1337

<b>TABLE 401.03-4 –SMOOTHNESS PAY DISINCENTIVES WITH MRI</b>		
<b>Category</b>	<b>MRI (in/mi)</b>	<b>Pay Adjustment \$ per 0.1 mi</b>
Type A	60.0- less than 70.0	-\$100
	70.0- less than 75.0	-\$250
	75.0- less than 80.0	-\$350
	80.0- less than 85.0	-\$450
	85.0- less than 95.0	-\$550
	> 95.0	Corrective Work
Type B	70.0- less than 75.0	-\$100
	75.0- less than 80.0	-\$200
	80.0- less than 85.0	-\$300
	85.0- less than 95.0	-\$400
	> 95.0	Corrective Work
Type C (pre-paving MRI < 125)	75.0- less than 80.0	-\$50
	80.0- less than 85.0	-\$100
	85.0- less than 90.0	-\$150
	90.0- less than 100.0	-\$200
	>100.0	-\$250

1338

<b>TABLE 401.03-5 –SMOOTHNESS PAY DISINCENTIVES FOR PERCENT IMPROVEMENT</b>		
<b>Category</b>	<b>Percent Improvement %</b>	<b>Pay Adjustment \$ per 0.1 mi</b>
Type C	≥ 40	\$0
(pre-paving MRI > 125)	20.0- less than 40.0	-\$100
	< 20	-\$200

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(c) Incentives will not apply to areas where payment deductions or remedial repairs has been made for non-compliant work, e.g., low compaction, thin pavement, thermal segregation, low compressive or flexural strength, non-compliant alignment. Incentives will also not apply to areas where corrective work was required to meet contract smoothness requirements, unless the pavement section was replaced. All areas where corrective work was performed shall

1348 be tested again to ensure the smoothness requirements are  
1349 met.

1350  
1351 (d) There will be no incentive price adjustments to the  
1352 contract prices regardless of the pavement meeting the  
1353 Contract Documents' requirements for incentive contract price  
1354 adjustment, when 25% of the total area paved of that particular  
1355 type of pavement on the project has failed to meet any of the  
1356 Contract document requirements, e.g., smoothness, thickness,  
1357 unit weight, asphalt content, pavement defects, compaction,  
1358 flexural or compressive strength. Areas exempt from the  
1359 smoothness requirements may not be included in the total area  
1360 calculation unless it is non-compliant.

1361  
1362 (e) For contracts using lump sum the method described in  
1363 Subsection 104.06 Methods of Price Adjustment paragraph (3),  
1364 will be used to calculate proportionate unit price, i.e., the  
1365 Engineer's calculated theoretical unit price. This calculated  
1366 proportionate unit price will be used to calculate the unit price  
1367 adjustment.

1368

1369 **401.04 Measurement.**

1370

1371 (A) The Engineer will measure PMA pavement per ton in accordance with  
1372 the Contract Documents.

1373

1374 (B) Engineer will measure additional State pavement profiling work when  
1375 applicable on a cost-plus basis as specified in this section and as ordered by  
1376 Engineer. The Engineer will issue a billing for the pavement profile work done  
1377 for the time period with the invoices and receipts that the billing was based  
1378 on attached to the Contractor for each contract item. The Contractor's  
1379 pavement profile work required in this section will not be measured and will  
1380 be considered incidental to the various paving items unless stated otherwise.

1381

1382 **401.05 Payment.** The Engineer will pay for the accepted PMA pavement at the  
1383 contract price per pay unit, as shown in the proposal schedule. Payment will be full  
1384 compensation for the work prescribed in this section and the contract documents.

1385

1386 (A) Price and payment in Section 401 – PMA Pavement will be full  
1387 compensation for all work and materials specified in this Section including  
1388 furnishing all labor, materials, tools, equipment, testing, pavement profiles  
1389 and incidentals and for doing all work involved in grinding existing or new  
1390 pavement, removing residue, and cleaning the pavement, including  
1391 necessary disposal of residue and furnishing any water or air used in  
1392 cleaning the pavement and remedial work needed to conform to the  
1393 requirements of the Contract Documents.

**401.05**

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**(B)** No payment for the Contractor’s pavement profile work required in this section will be made. The Contractor’s pavement profile work shall be considered incidental to the various paving items unless stated otherwise.

**(C)** Engineer will pay or deduct for the following pay items when included in proposal schedule:

<b>Pay Item</b>	<b>Pay Unit</b>
Pavement Smoothness Incentive	Allowance
PMA Pavement, Mix No. _____	Ton

**(1)** 70% of the contract unit price or the theoretical calculated unit price upon completion of submitting a job-mix formula acceptable to the Engineer; preparing the surface, spreading, and finishing the mixture; and compacting the mixture.

**(2)** 20% of the contract unit price or the theoretical calculated unit price upon completion of cutting samples from the compacted pavement for testing; placing and compacting the sampled area with new material conforming to the surrounding area; protecting the pavement; and compaction acceptance. Maintain temporary pavement markings and other temporary work zone items, maintain a clean work site.

**(3)** 10% of the contract unit price or calculate the unit price when the final configuration of the pavement markings is in place.

The Engineer will pay for adjusting existing frames and covers and valve boxes in accordance with and under Section 604 – Manholes, Inlets and Catch Basins. Adjustments for existing street survey monument frames and covers will be paid for as if each were a valve box frame and cover.

The Engineer may, at his sole discretion, use the sliding scale factor as specified in Table 401.05-1 – Sliding Scale Pay Factor for Compaction to accept HMA pavements compacted between 90.0 percent and 98.0 percent. If the sliding scale factor is used, the Engineer will make payment for the material in that production day at a reduced price by multiplying the contract unit price by the pay factor. The Engineer is not obligated to allow non-compliant work to remain in place and may choose to require removal of the pavement that is less than 93.0 percent or greater than 97.0 percent.

Removal of non-compliant pavement shall be in accordance with Subsection 105.12 Removal of Non-Conforming and Unauthorized Work.

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1441

<b>Table 401.05-1 – Sliding Scale Pay Factor for Compaction</b>	
<b>Percent Compaction</b>	<b>Percent of Quantity Paid</b>
> 98.0	Removal
>97.0 - 98.0	95
93.0- 97.0	100
90.0 - <93.0	80
<90.0	Removal

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**END OF SECTION 401”**



1                   **SECTION 415 – COLD PLANING OF EXISTING PAVEMENT**

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3    Make the following amendments to said Sections:

4  
5    **(I)**    Amend **Section 415.04 Measurement**, from line 67 to 68 to read as  
6            follows:

7  
8    **“415.04 Measurement.** The Engineer will measure cold planing per square  
9    yard in accordance with the contract documents.”

10  
11   **(II)**    Amend **Section 415.05 Payment**, from line 70 to 79 to read as follows:

12  
13   **“415.05 Payment.** The Engineer will pay for the accepted pay items  
14    listed below at the contract price per pay unit, as shown in the proposal schedule.  
15    Payment will be full compensation for the work prescribed in this section and the  
16    contract documents.

17  
18            The Engineer will pay for one of the following pay items when included in  
19    the proposal schedule:

<b>Pay Item</b>	<b>Pay Unit</b>
Cold Planing of Existing Pavement	Square Yard
(1) 80 percent of the contract bid price upon completion of removing the indicated thickness and clean and sweep before opening to public traffic;	
(2) 20 percent of the contract bid price upon completion of removing the material and disposing of the removed material.”	

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35  
36                   **END OF SECTION 415**

1 Amend **Section 601 - STRUCTURAL CONCRETE** to read as follows:  
 2  
 3  
 4

5 **“SECTION 601 - STRUCTURAL CONCRETE**  
 6

7 **601.01 Description.** This section describes structural concrete, which consists of  
 8 Portland Cement, fine aggregate, coarse aggregate, and water. It may also include  
 9 adding admixtures for the purpose of entraining air, retarding or accelerating set, tinting,  
 10 and other purposes as required or permitted. All concrete designs for structural concrete  
 11 to be placed on HDOT Highway projects must use technology to reduce the embodied  
 12 carbon footprint of concrete used in the highway infrastructure. e.g., carbon dioxide  
 13 mineralization or equivalent technology such as C-S-H nanoparticle-based strength-  
 14 enhancing admixture (CSH-SEA), or technology or material that allows the reduction in  
 15 the size of the carbon footprint of the mix, e.g., strength improving admixtures,  
 16 supplementary cementitious materials (SCMs), or other Engineer accepted methods that  
 17 can reduce the embodied carbon footprint of the concrete.  
 18

19 **601.02 Materials.**

20		
21	Portland Cement	701.01
22		
23	Fine Aggregate for Concrete	703.01
24		
25	Coarse Aggregate for Portland Cement Concrete	703.02
26		
27	Admixtures	711.03
28		
29	Water	712.01
30		

31 Use coarse aggregate for lightweight concrete conforming to ASTM C330 except  
 32 for Sections 5, 7, and 9.  
 33

34 **601.03 Construction.**  
 35

36 **(A) Quality Control.** Portland Cement concrete production requires the  
 37 Contractor's responsibility for quality control of materials during handling, blending,  
 38 mixing, placement, and curing operations.  
 39

40 Sample, test, and inspect concrete to ensure the quality of the components,  
 41 materials, and concrete using quality control methods and testing. Sampling and  
 42 testing for quality control must be performed by certified ACI Concrete Field  
 43 Technician Grade I following the requirements of the standard test methods.  
 44 Perform quality control tests for the slump, air content, temperature, unit weight, a  
 45 Box Test for slip form concrete, or other required properties during the production  
 46 of structural concrete other than concrete for incidental construction. Submit

## 601.03

47 quality control test results.

48

49 **(B) Design and Designation of Concrete.** Design concrete mixture for  
50 concrete work specified. Submit mix design using State Highways Division form  
51 DOT 4-151 or an equivalent form accepted by the Engineer. Do not start work  
52 until the Engineer accepts the mix design. The Engineer will accept a concrete  
53 mix design complying with the information given in Table 601.03-1 - Design of  
54 Concrete, and other pertinent requirements.

55 Whenever the concrete's 28-day compressive strength,  $f'_c$ , is 4,000 psi or  
56 greater, designate concrete by the required minimum 28-day compressive  
57 strength.

58

59 The concrete's 28-day compressive strength,  $f'_c$ , which is less than 4,000  
60 psi listed in Table 601.03-1 – Design of Concrete, is for design information and  
61 designation of a class.

62

63 Proportion concrete that is designated by a compressive strength so that  
64 the concrete conforms to the required strength.

65

66 Design concrete placed in bridge decks and pavements exposed to traffic  
67 wear, with air content of 3 percent, unless otherwise specified, including entrapped  
68 and entrained air. Maintain air content for plastic concrete within a tolerance of 1  
69 percent, plus or minus, during the work.

70

71 Use Class BD concrete in the bridge deck unless the concrete is designated  
72 by compressive strength. Incorporate into the bridge deck concrete: water-  
73 reducing, shrinkage-reducing, and migrating corrosion-inhibiting admixtures.  
74 Allow also, set-retarding admixtures in the concrete with the capability to vary the  
75 degree of retardation without adversely affecting other characteristics of concrete.  
76 Submit all the design admixture dosages.

77

78 Class A concrete must be used when the type of concrete is not indicated  
79 in the contract documents.

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Design concrete as specified in Table 601.03-1 – Design of Concrete.

<b>TABLE 601.03-1 - DESIGN OF CONCRETE</b>							
<b>(800 Maximum Cement Content lbs. /c.y.)</b>							
<b>Class of Concrete</b>	<b>28-Day Strength <math>f'_c</math>, psi.</b>	<b>Minimum Cement Content lbs. /c.y.</b>	<b>Maximum Water-Cement Ratio, lb./lb.</b>	<b>Minimum Cement Content with Mineralized CO<sub>2</sub> lbs./c.y.</b>	<b>Maximum Water-Cement Ratio with Mineralized CO<sub>2</sub> lb./lb.</b>	<b>Minimum Cement Content with SCM lbs. /c.y.</b>	<b>Maximum Water-Cement Ratio with SCM lb./lb.</b>
A	3000	532	0.59	504	0.62	NA	NA
B	2500	475	0.66	450	0.70		
C	2000	418	0.75	396	0.79		
D	1500	380	0.85	360	0.87		
BD	3750	610	0.49	NA	NA		
SEAL	3000	610	0.55	NA	NA		
Designated by Strength $f'_c$ or $*f_r$	As Specified	610	0.49	NA	NA	NA	NA
$*f_r$ = Specified Modulus of Rupture							

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Structural Concrete Design – The Carbon Dioxide mineralization process is our preferred method for CO<sub>2</sub> footprint reduction for structural concrete. Other Carbon Dioxide reduction options, materials, or technologies may be considered for structural concrete mix designs if a Carbon Dioxide mineralization system on the island is unavailable, or Carbon Dioxide is in short supply. Other options to reduce concrete's Carbon Dioxide footprint includes but are not limited to adding Supplementary Cementitious Materials, admixtures, blended hydraulic cements, or a combination thereof. Additional means and methods of CO<sub>2</sub> footprint reduction not listed herein may be used if their use can be justified and accepted by the Engineer.

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The reduced carbon footprint concrete mix design for all islands must have a reduction of Portland Cement content and still comply with the concrete design strength and other durability requirements as specified. See Table 601.03-1 Design of Concrete's specified limits for cement content, water cement ratio, and other properties when using CO<sub>2</sub> mineralization.

111

112

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114

It should be noted that in some cases the use of SCMs in mixes may not result in it having the same strength curve as their cement counterpart and more curing time will be needed to meet and exceed the design strength. In such cases, the Contractor may request a waiver from the 28-day limit. Submit laboratory test data

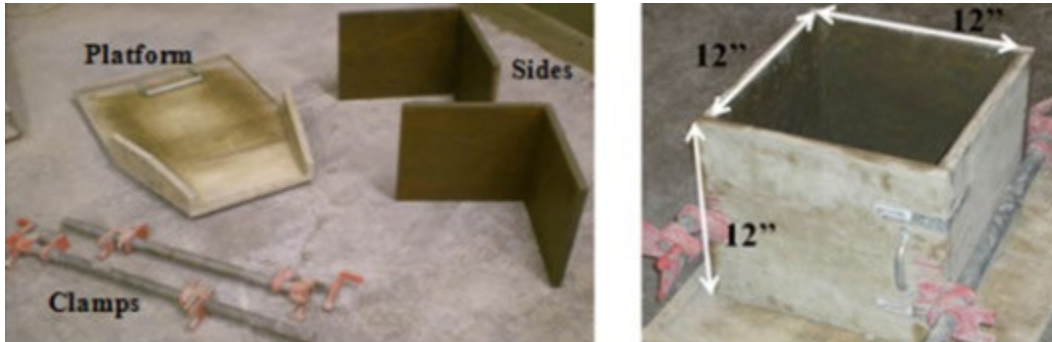
## 601.03

115 with the request to the Engineer. The waiver may be granted on a case-by-case  
116 basis, e.g., mass concrete. The Engineer reserves the right to limit the amount of  
117 SCMs in the mix or reject the mix design.

118 Slipform Concrete Design – The Box Test method measures the response of a  
119 slip form concrete mixture to vibration and the ability of the concrete to hold a  
120 vertical edge, thus determining the workability and suitability of the concrete  
121 mixture for slip-formed paving applications

122  
123

### Dimensions of the Box Test



124

125 The Figure above shows the components and the constructed inside dimensions.  
126 The Box Test used:

127

128 4 pcs - 1/2" nominal thickness or greater HDO Plyform with a hard, semi-opaque  
129 surface of thermosetting phenolic resin-impregnated material for the Test Box  
130 form, with a length, width, and height such that when the Test Box is constructed  
131 must have internal dimensions of 12" X12" X 12".

132 1 pc - 1/2" nominal thickness or greater HDO Plyform with a hard, semi-opaque  
133 surface of thermosetting phenolic resin-impregnated material approximately 24" X  
134 24" or greater for the platform. It is optional that the platform is constructed as  
135 shown in the photos.

136 4 pcs- 2" X 2" L-brackets to be attached at two opposite external corners to hold  
137 the two Plyform pieces in an L-shape. (More brackets may be used if determined  
138 it is needed to keep the Test Box forms square, ridged, and in an L-shape.)  
139 Screws, glue, etc. if used must not cause bulges or protrude into the interior of the  
140 form.

141 Two each - 1.5ft pipe clamps

142 1 each - hand scoop

143 1 each - 1" square head pencil vibrator that must be able to vibrate at a minimum  
144 of 12,500 vibrations per minute. Provide a power source for the vibrator. Round-  
145 headed or larger vibrators must not be used.

146 1 each - ruler

147 1 each – 16-inch by 24-inch L-shaped steel framing square.

148 1 each – 18 or 24-inch I-Beam Level Spirit Level Tool

580A-01-22M

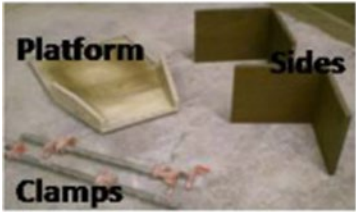



601-4a

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**149 The Box Test Steps**

150 Sample concrete according to AASHTO R 60 Standard Practice for Sampling  
151 Freshly Mixed Concrete.

152 Dampen the forms and platform with form oil and assemble the Box Test  
153 components (forms, platform, and clamps) on a flat and level surface. The  
154 assembled 1 ft<sup>3</sup> Test Box is held together by the pipe clamps and L-brackets on  
155 the platform. Scoop into the box the fresh concrete, each scoop must be uniformly  
156 distributed in the box, so each layer is approximately uniformly level. Stop the  
157 concrete placement when it reaches a height of approximately 9.5". Do not do any  
158 compaction during the placement of the concrete except for the dropping of  
159 concrete in the Test Box. With the vibrator at 12,500 vibrations per minute and  
160 keeping the head of the vibrator perpendicular to the platform and centered in the  
161 box, consolidate the concrete by inserting the 1" square head pencil vibrator. Take  
162 three (3) seconds to lower the vibrator into the concrete until it almost reaches the  
163 bottom of the box. Do not touch the platform with the vibrator. Upon reaching the  
164 proximity of the bottom of the box immediately start raising the vibrator upward  
165 taking three (3) seconds to remove the vibrator from the concrete. Do not do any  
166 further compaction or finishing of the concrete. Immediately, and carefully remove  
167 the pipe clamps from the side of the box, and then carefully with minimal  
168 disturbance of the concrete, remove the Box Test forms in an ascending vertical  
169 direction. Care must be taken to ensure the concrete will not stick to the L-shaped  
170 side wall forms. Immediately do a surface void evaluation and edge slump  
171 measurement of the concrete sample.

	<b>Step 1</b>	<p><b>Gather the different components of the Box Test.</b></p>
	<b>Step 2</b>	<p><b>Construct box and place clamps tightly around box. Hand scoop mixture into box until the concrete height is 9.5" (241.3 mm).</b></p>
	<b>Step 3</b>	<p><b>Insert vibrator downward for 3 seconds and upward for 3 seconds. Remove vibrator.</b></p>
	<b>Step 4</b>	<p><b>After removing clamps and the forms, inspect the sides for surface voids and edge slumping.</b></p>

172

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174

### Surface Void Evaluations

175

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The grading of the response of a mixture to vibration must be assessed by comparing the surface voids observed on the sides of the box using Figure 3.

177

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The void area for any of the four sides must not exceed what is shown in photo 2 of Figure 3, i.e., the void area must not be similar to the void areas shown in photos 3 and 4 or exceed them, to be considered an acceptable mix design for slip form pavement concrete.

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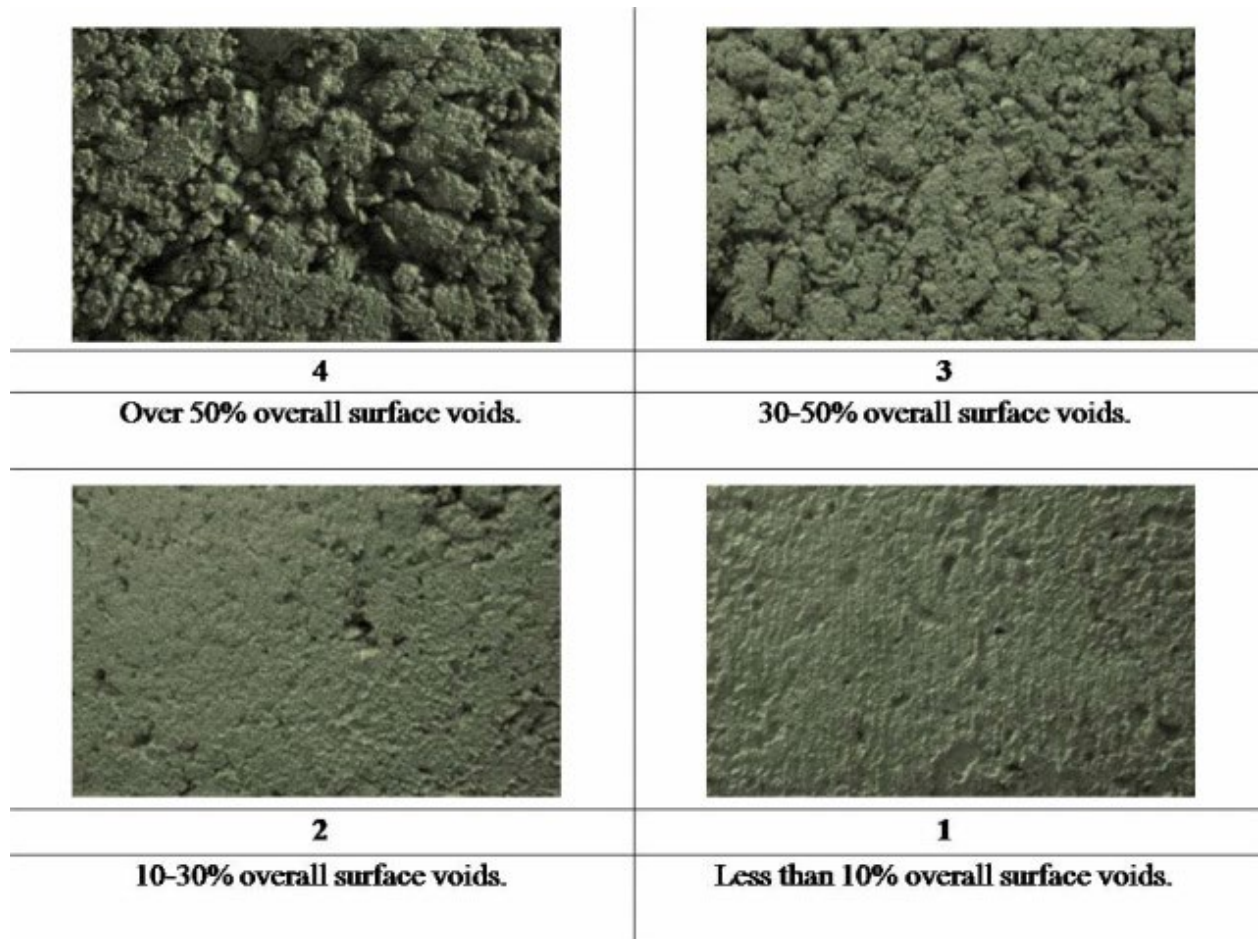
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If a mixture responded well to vibration, the overall surface voids should be minimal because the mortar was able to flow and fill these voids, hence the surface would have a small total void area. However, if the sides of the concrete formed by the box test had large amounts of surface voids, the mixture did not acceptably respond to the vibration. If the concrete did not respond acceptably to the vibration the mix design must be adjusted until the voids do not exceed the voids shown in photo 2 of Figure 3.



188  
189

Figure 3 shows the estimated surface voids.

190

### Top or Bottom Edge Slumping

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The top or bottom edge slumping must be measured by placing an L-shaped steel framing square straightedge at the point the concrete sample protrudes at each face the most. Use the I-Beam Spirit Level and a tape measure or ruler with the L-shaped steel framing square to measure the distance between the I-Beam Level Spirit Level and the upper surface of the concrete sample along its edge. That is not protruding and is vertical to find the length of the longest extruding point for each face. Do a measurement on each of the four sides, measuring the top and bottom slump of the test sample.

199  
200  
201

If no vertical face can be found on a side the concrete mix design is not suitable for use in slip forming. If the top or bottom edge slumping exceeds  $\frac{1}{4}$ " for any side, the concrete mix design is not suitable for use in slip forming.

202

### Videos of Box Test

203

<https://youtu.be/XnKbxs3bAoQ>

204

<https://youtu.be/P6MKXItCiU8>

205

**601.03**

206 Verify that the concrete is an acceptable concrete mix design by performing a  
207 minimum of two more acceptable consecutive Box Tests that did not exceed the  
208 maximum void area and edge slump requirements. If the two acceptable  
209 consecutive Box Tests cannot be accomplished, then adjust the concrete mix  
210 design and start the testing process over again.

211 In addition to the Box Test performed during the testing of the mix design in the  
212 Contractor's material testing laboratory perform additional Box Tests on production  
213 concrete in the field during the test strip or first production pour whichever is  
214 earliest. Adjust the mix if the results indicate the concrete does not meet the above  
215 requirements. Perform Box Test in the field once a month if pouring is continuous  
216 or when the Engineer requests it to be performed.

217  
218 Use the absolute volume method to proportion concrete materials in  
219 accordance with requirements of concrete designated by class, cement content in  
220 pounds per cubic yards, or specified 28-day compressive strength. Use absolute  
221 volumetric proportioning methods as outlined in the American Concrete Institute  
222 (ACI) Standard 211.1, "Recommended Practices for Selecting Proportions for  
223 Normal and Heavyweight Concrete".  
224

225 Use coarse aggregate size No. 57 (one inch to No. 4) or No. 67 (3/4 inch to  
226 No. 4) for concrete. For concrete placed in bottom slabs and stems of box girders,  
227 use No. 67 size aggregate. Smaller size aggregates may be permitted when  
228 encountering limited space between forms and reinforcement or between  
229 reinforcement when accepted by the Engineer in writing. Maximum aggregate size  
230 must not be greater than 1/3 of the space between reinforcing steel bars or  
231 reinforcing steel and the form.  
232

233 Use the following standard methods in Table 601.03-2 – Standard Methods  
234 for determining compliance with requirements indicated in this subsection:  
235

<b>TABLE 601.03-2 – STANDARD METHODS</b>	
Sampling Fresh Mixed Concrete	AASHTO T 141
Mass Per Cubic Meter (Cubic Foot) Yield and Air Content (Gravimetric) of Concrete	AASHTO T 121
Slump of Hydraulic Cement Concrete	AASHTO T 119
Air Content of Freshly Mixed Concrete by the Pressure Method	AASHTO T 152
Specific Gravity and Absorption of Fine Aggregate	AASHTO T 84
Specific Gravity and Absorption of Coarse	AASHTO T 85

Aggregate	
Temperature of Freshly Mixed Portland Cement Concrete	ASTM C1064
Making and Curing Concrete Test Specimens in the Field	AASHTO T 23
Compressive Strength of Molded Concrete Cylindrical Specimens	AASHTO T 22 (4-inch by 8-inch or 6-inch by 12-inch cylinders)
Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)	AASHTO T 97

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When concrete is designated by compressive strength,  $f'_c$ , or flexural strength,  $f'_r$ , or includes CO<sub>2</sub> Mineralization technology, CSH-SEA, or SCMs, prequalification of materials and mix proportions proposed for use before placing such concrete is mandatory. The Engineer will prequalify concrete based when data is available based on past performance records using statistical computations of population sizes and (n-1) weighting, or trial batch test reports in compliance with computed minimum average strength for material and mix proportions. The Engineer will determine the minimum average strength on the probability of not more than one in 20 tests falling below the specified strength for the following conditions:

(1) When past performance records are available, furnish the following documented performance records:

(a) Minimum of 15 consecutive 28-day strength tests from projects having the same materials and mix proportions.

(b) Two groups totaling 30 or more test results representing similar materials in which mix proportion strengths are within 20 percent of specified strength, from data obtained within one (1) year of the proposed use.

The Engineer will analyze performance records to establish the standard deviation.

(2) When sufficient past performance records are not provided, the Engineer will assume the current standard deviation to be 500 psi for compressive strength,  $f'_c$ , and 50 psi for flexural strength,  $f'_r$ .

Unless sufficient performance records are available from other projects at DOT Materials Testing and Research Branch (MTRB), submit test performance records or trial test reports for prequalifications, based on data of the most recent

268 tests made on the concrete of the proposed mix design. The data must be from  
269 tests that have been performed within one (1) year of the proposed use and done  
270 at an accredited material testing laboratory by certified material testing personnel.  
271

272 Include the following information in test data and trial batch test reports:  
273 date of mixing; mixing equipment and procedures used; the size of batch in cubic  
274 yards and weight, type, and source of ingredients used; slump of concrete; air  
275 content of concrete when using an air-entraining agent; the age of the sample at  
276 the time of testing; and strength of concrete cylinders or beams tested.  
277

278 Show that concrete strength tests equal or exceed minimum average  
279 strength in trial test reports. The test is an average of 28-day test results of five  
280 consecutive concrete cylinders or concrete beams taken from a single batch. No  
281 cylinder or beam must have a strength less than 85 percent of the minimum  
282 average strength.  
283

284 Submit test data and trial test reports signed by an official of an accredited  
285 laboratory that performed tests.  
286

287 The Engineer reserves the right to stop work when a series of low-strength  
288 tests occur. Do not continue concrete work until the cause is established and the  
289 Engineer is informed of and accepts, the necessary corrective action to be taken.  
290

291 **(C) Batching.** Measure and batch materials in accordance with the following  
292 provisions:  
293

294 **(1) Portland Cement.** Either sacked or bulk cement may be used. Do  
295 not use a fraction of the sack of cement in the concrete batch unless cement  
296 is weighed.

297 Weigh bulk cement on weighing device accepted by the Engineer. Seal  
298 and vent bulk cement-weighing hopper properly to preclude dusting during  
299 operation. Do not suspend the discharge chute from the weighing hopper.  
300 Arrange the discharge chute so that cement will not lodge in the hopper or  
301 leak from the hopper.  
302

303 Batching accuracy must be within 1 percent, plus or minus, of the  
304 required weight.  
305

306 **(2) Water.** Measure water by volume or by weight. Use a readily  
307 adjustable device for measurement of water, with accuracy within 1 percent,  
308 plus or minus, of the quantity of water required for a batch. Arrange the  
309 device so that variable pressure in the water supply line does not affect  
310 measurements. Equip measuring tanks with outside taps and valves or  
311 other accepted means to allow for checking calibration.  
312

313 **(3) Aggregates.** When storing and stockpiling aggregates, avoid

314 separation of coarse and fine particles within each size, and do not intermix  
315 various sizes before proportioning. Protect stored or stockpiled aggregates  
316 from dust or other foreign matter. Do not stockpile together, aggregates  
317 from different sources and of different gradations.  
318

319 When transporting aggregates from stockpiles or other sources to  
320 batching plant, ensure uniform grading of material is maintained. Do not  
321 use aggregates that have become segregated or mixed with earth or foreign  
322 matter. Stockpile or bin aggregates at least 12 hours before batching.  
323 Produce or handle aggregates by hydraulic methods and wash and drain  
324 aggregates. If aggregates exhibit high or non-uniform moisture content, the  
325 Engineer may order storage or stockpiling for more than 12 hours or  
326 remixing of the stockpile, or other remedial methods. Keep using remedial  
327 methods until moisture content problems are resolved. When there is clay  
328 or dirt on the aggregate wash the aggregate until they are in a quantity that  
329 no longer affects the concrete mix and is accepted by the Engineer.  
330

331 Proportion aggregates by weight, with an exception being that  
332 aggregates in concrete for minor structures, curbs, and sidewalks may be  
333 proportioned by either volume or weight. For volumetric proportioning, use  
334 measuring boxes of known capacity to measure the quantity of each  
335 aggregate size.  
336

337 Use batch weight based on dry materials plus the total weight of  
338 moisture (both absorbed and surface) contained in aggregate. Measure  
339 individual aggregates to within 2 percent, plus or minus, of required weight,  
340 and the total weight of aggregates to within 1 percent, plus or minus, of the  
341 required weight.  
342

343 **(4) Admixtures.** Ensure that all admixtures used are compatible with  
344 all the other admixtures used in the concrete mix. Store, proportion, and  
345 dispense admixtures in accordance with the following provisions:  
346

347 **(a) Liquid Admixtures.** Dispense chemical admixtures, in liquid  
348 form, e.g., air-entraining admixtures, and corrosion inhibiting  
349 admixtures. Use mechanical dispensers for liquid admixtures with  
350 sufficient capacity to measure the prescribed quantity for each batch  
351 of concrete. Include a graduated measuring unit in each dispenser  
352 to measure liquid admixtures to within 5 percent, plus or minus, of  
353 the prescribed quantity for each batch. Read graduations accurately  
354 from point of measuring unit, and control proportioning operations to  
355 permit a visual check of batch accuracy before discharging. Mark  
356 each measuring unit clearly for type and quantity of admixture.  
357

358 Arrange with the supplier to provide a sampling device  
359 consisting of a valve located in a safe and accessible location for

360 sampling admixtures. Sampling is not required if not otherwise  
361 provided.

362  
363 When using more than one liquid admixture for concrete mix,  
364 use a separate measuring unit for each liquid admixture and  
365 dispense separately to avoid interaction that may interfere with  
366 admixture efficiency and adversely affect concrete. Dispense liquid  
367 admixture by injecting so as not to mix admixture at high  
368 concentrations.

369  
370 When using liquid admixtures in concrete that are completely  
371 mixed in paving or continuous mixers, operate dispensers  
372 automatically with batching control equipment. Equip such  
373 dispensers with an automatic warning system that will provide visible  
374 or audible signals at the point where proportioning operations are  
375 controlled, when the following occurs: quantity of admixture  
376 measured for each batch of concrete varies from pre-selected  
377 dosage by more than 5 percent, or the entire contents of measuring  
378 unit from the dispenser are not emptied into each batch of concrete.

379  
380 Unless liquid admixtures are added to the batch with pre-  
381 measured water, discharge liquid admixtures into the stream of water  
382 that disperses admixtures uniformly throughout the batch. An  
383 exception is that air-entraining admixtures may be dispensed directly  
384 into moist sand in batching bins, provided adequate control of  
385 concrete air content can be maintained.

386  
387 Measure and disperse special admixtures, as recommended  
388 by the admixture manufacturer, and as accepted by the Engineer.  
389 Special admixtures include high-range water reducers requiring  
390 dosages greater than the capacity of conventional dispensing  
391 equipment. For site added, high-range water reducers, use  
392 calibrated, portable dispenser supplied by the manufacturer.

393  
394 **(b) Mineral Admixtures.** Protect mineral admixtures from  
395 exposure to moisture or other deleterious conditions until used. Pile  
396 sacked material of each shipment to permit access for tally,  
397 inspection, and identification.

398 Provide adequate facilities to ensure that mineral admixtures  
399 meeting specified requirements are kept separate from other mineral  
400 admixtures and that only specified mineral admixtures can enter the  
401 work's concrete mix. Provide safe and suitable facilities for sampling  
402 mineral admixtures at weigh hopper or in the feed line immediately  
403 in advance of the hopper.

404  
405 Incorporate mineral admixtures into the concrete using

406 equipment complying with the requirements for Portland Cement  
407 weigh hoppers and charging and discharging mechanisms specified  
408 in ASTM C94 and Subsection 601.03(C) - Batching.

409  
410 When concrete is completely mixed in stationary paving or  
411 continuous mixers, weigh mineral admixture in a separate weigh  
412 hopper. Introduce mineral admixture and cement simultaneously  
413 into the mixer, proportionately with aggregate.

414  
415 When interlocks are required for cement-charging  
416 mechanisms, and cement and mineral admixtures are weighed  
417 cumulatively, interlock their charging mechanisms to prevent the  
418 introduction of mineral admixture until the mass of cement in the  
419 weighing hopper is within tolerances specified in Subsection  
420 601.03(C)(1) - Portland Cement.

421  
422 In determining the maximum quantity of free water that may  
423 be used in concrete, consider mineral admixture to be cement.

424  
425 **(5) Bins and Scales.** At the batching plant, use individual bins,  
426 hoppers, and scales for each aggregate size. Include a separate bin,  
427 hopper, and scale for bulk cement and fly ash.

428  
429 Except when proportioning bulk cement for pavement or structures,  
430 the cement weigh hopper may be attached to a separate scale for individual  
431 weighing or to an aggregate scale for cumulative weighing. If cement is  
432 weighed cumulatively, weigh cement before other ingredients.

433  
434 When proportioning for pavement or structures, keep bulk cement  
435 scale and weigh hopper separate and distinct from aggregate weighing  
436 equipment.

437  
438 Use a springless-dial or beam-type batching scales. When using  
439 beam-type scales, make provisions to show the operator that the required  
440 load in the weighing hopper is approaching. Use devices that show  
441 conditions within the last 200 pounds of load and within 50 pounds of  
442 overload.

443 Maintain scale accuracy to 0.5 percent throughout the range of use.  
444 Design poises to lock to prevent an unauthorized change of position. Use  
445 scales inspected by the State Measurement Standards Branch of the  
446 Department of Agriculture to ensure their continued accuracy. Provide not  
447 less than ten 50-pound weights for testing scales.

448  
449 Batching plants may be equipped to proportion aggregates and bulk  
450 cement by automatic weighing devices.

451

452                   **(6)    Batching and Hauling.** When mixing is to be performed at the work  
453 site, transport aggregates from batching plant to the mixer in batch boxes,  
454 vehicle bodies, or other containers of adequate capacity and construction.  
455 Use partitions to separate batches and prevent spilling from one  
456 compartment to another while in transit or during dumping.

457  
458                   Transport bulk cement to the mixer in tight compartments carrying  
459 the full quantity of cement required for the batch. Once the cement is placed  
460 in contact with aggregates, batches must be mixed and placed within 1-1/2  
461 hours of contact. Cement in original shipping packages may be transported  
462 on top of aggregates. Ensure that each batch contains the number of sacks  
463 required by the job mix.

464  
465                   Deliver batches to mixer intact. Charge each batch into the mixer  
466 without loss of cement. When carrying more than one batch on a truck,  
467 charge the batch into the mixer without spilling material from one batch  
468 compartment into another.

469  
470                   **(D)    Mixing.** Mix concrete in mechanically operated mixers. When accepted by  
471 the Engineer, batches that do not exceed 1/3 cubic yard may be hand-mixed in  
472 accordance with methods described at end of this subsection.

473  
474                   Use stationary or truck mixers that distribute materials thoroughly and  
475 produce concrete uniform in color and appearance. When there is variation in  
476 mixed concrete attributable to worn pickup or throw-over blades, the Engineer will  
477 inspect the mixer. If the inspection reveals that blades are worn more than one  
478 inch below the original height of the manufacturer's design, or are damaged repair  
479 or replace blades. Upon request, make a copy of the manufacturer's design,  
480 showing the dimensions and arrangement of blades.

481  
482                   Charge batches into central or truck mixers so that portion of mixing water  
483 enters ahead of cement and aggregates. Deliver a uniform flow of water. Place  
484 the entire amount of batch water in the mixer by end of the first quarter of the  
485 mixing period. When mixers with multiple compartment drums are used, the time  
486 required to transfer material between compartments will be included as mixing  
487 time. Use drum rotation speed as designated by the manufacturer. If mixing does  
488 not produce concrete of uniform and smooth texture, provide additional revolutions  
489 at the same speed until thorough mixing of each concrete batch is attained. Begin  
490 measuring mixing time from the time cement, aggregates, and 60 percent of water  
491 are in the drum. Do not exceed the manufacturer's rated capacity for the volume  
492 of concrete mixed in each batch.

493  
494                   Equip central or truck mixers with an attachment for automatically timing the  
495 mixing of each concrete batch. The timing device must include an automatic  
496 feature for locking the discharge chute and a device for warning the operator when  
497 the required mixing duration has been met. If the timing or locking device fails to

498 operate, immediately furnish a clock or watch that indicates seconds, to the mixer  
499 operator. If the timing device is not repaired within three (3) days after becoming  
500 inoperative, shut down batching operation until the timing device is repaired.  
501

502 For stationary mixers, use mixing time between fifty (50) seconds and five  
503 (5) minutes. Select mixing time, as necessary, to produce concrete that meets  
504 uniformity criteria when tested in accordance with Section 11.3.3 of ASTM C94.  
505 The Contractor may designate mixing time for which uniformity tests are to be  
506 performed, provided mixing time is not less than fifty (50) seconds or more than  
507 five (5) minutes. Before using concrete for pavements or structures, mix concrete  
508 to meet specified uniformity requirements. The Contractor must furnish labor,  
509 sampling equipment, and materials required for conducting uniformity tests,  
510 including the Box Test, and the Contractor's quality control for the concrete  
511 mixture. The Engineer will not furnish for the Contractor's quality control, testing  
512 equipment, e.g., scales, cubic measure, and air meter; and will not perform the  
513 Contractor's quality control tests. The Engineer will not pay separately for the  
514 Contractor's quality control, e.g., labor, equipment, materials, or testing, but will  
515 consider the costs incidental to concrete. After batching and mixing operational  
516 procedures are established, the Engineer will not allow changes in procedures  
517 without the Contractor re-establishing procedures by conducting uniformity tests.  
518 Repeat mixer performance tests whenever the appearance of concrete or coarse  
519 aggregate content of samples is not complying with the requirements of ASTM  
520 C94. For truck mixers, add four (4) seconds to the specified mixing time if timing  
521 starts as soon as the skip reaches its maximum raised position.  
522

523 Unless otherwise indicated in the Contract Documents or accepted by the  
524 Engineer, concrete must be mixed at proportioning plant. Operate mixer at  
525 agitating speed while in transit. Concrete may be truck-mixed only when cement  
526 or cement and mixing water are added at the point of delivery. Begin mixing truck-  
527 mixed concrete immediately after the introduction of mixing water to cement and  
528 aggregates, or introduction of cement to aggregates.  
529

530 Inclined-axis, revolving drum truck mixers must comply with Truck Mixer,  
531 Agitator and Front Discharge Concrete Carrier Standards TMMB 100-01, 15th  
532 Revision, or later published by Truck Mixer Manufacturers Bureau. Truck mixers  
533 must produce a thoroughly mixed and uniform mass of concrete and must  
534 discharge concrete without segregation.  
535

536 The manufacturer's standard metal rating plate must be attached to each  
537 truck mixer, stating maximum rating capacity in terms of volume of mixed concrete  
538 for various uses, and maximum and minimum mixing speeds. When using truck  
539 mixers for mixing, adhere to the maximum capacity shown on the metal rating plate  
540 for the volume of concrete in each batch.  
541

542 Operate truck mixers at the mixing speed designated by the manufacturer,  
543 but at not less than 6 or more than 18 revolutions per minute. Mix truck-mixed

## 601.03

544 concrete initially between 70 and 100 revolutions at manufacturer-designated  
545 mixing speed, after ingredients, including water, are in the mixer. Water may be  
546 added to the mixture not more than two times after the initial mixing is completed.  
547 The addition of water at the project site must comply with the requirements of  
548 Subsection 503.03. Each time that water is added, turn the drum an additional 30  
549 revolutions or more at mixing speed until the concrete is mixed uniformly.  
550

551 When furnishing shrink-mixed concrete, transfer partially mixed concrete at  
552 the central plant to a truck mixer. Apply requirements for truck-mixed concrete.  
553 The Engineer will not credit the number of revolutions at mixing speed for partial  
554 mixing in the central plant.  
555

556 When accepted by the Engineer, concrete batches not exceeding 1/3 cubic  
557 yard may be hand-mixed on a watertight, level platform. Measure the proper  
558 amount of coarse aggregate in measuring boxes and spread it on the platform.  
559 Spread fine aggregate on that coarse aggregate layer. Limit coarse and fine  
560 aggregate layers to a total depth of one foot. Spread dry cement on this  
561 mixture. Turn whole mass not less than two times dry. Add sufficient clean  
562 water, and distributed it evenly. Turn whole mass again, not less than three  
563 times, not including placing in carriers or forms. Mortar mixers of appropriate  
564 size may be used when accepted by the Engineer.  
565

566 **(E) Transporting Mixed Concrete.** Transport central-mixed concrete to the  
567 delivery point in truck agitators or truck mixers operating at speed designated by  
568 the equipment manufacturer as agitating speed; or in non-agitating hauling  
569 equipment, provided consistency and workability of mixed concrete upon  
570 discharge at the delivery point suitable for placement and consolidation in place.  
571 The mixed concrete after hauling to the delivery point must comply with the  
572 uniformity criteria when tested as specified in Section 12.5 of ASTM C94.  
573

574 For revolving drum truck mixers transporting central-mixed concrete, limit  
575 concrete volume to the manufacturer's rated capacity for agitator operation.  
576 Maintain agitating speed for both revolving drum mixers and revolving blade type  
577 agitators as designated on the manufacturer's metal data plate. Equip truck mixers  
578 or truck agitators with electrically or mechanically actuated counters. Activate  
579 counters after introducing cement to aggregates.  
580

581 Bodies of non-agitating hauling equipment must be smooth, watertight,  
582 metal containers equipped with gates to permit control of concrete discharge.  
583 Protect open-topped haul vehicle against the weather and wind with cover  
584 accepted by the Engineer.  
585

586 When hauling concrete in non-agitating trucks, complete discharge within  
587 thirty (30) minutes after introducing mixing water to cement and aggregates.  
588

589 When a truck mixer or agitator is used for transporting central-mixed

590 concrete to the delivery point, complete discharge within 1-1/2 hours, after the  
591 introduction of mixing water to cement and aggregates, or cement to aggregates.  
592 For truck-mixed concrete, complete concrete discharge within 1-1/2 hours. This  
593 time limitation is permitted to be waived by the Engineer if after the 1-1/2-hour time  
594 limit has been reached, the concrete has a slump that it can be placed, without the  
595 addition of water to the batch and hydration of the concrete has not started, i.e.,  
596 the temperature of the concrete is less than 90 degrees F or the required maximum  
597 temperature of the concrete. Also, the set time is increased by the use of a retarder  
598 in the mix design and acceptance of the increased set time is obtained before use  
599 from the Engineer.

600

601 Submit delivery tickets from manufacturers of truck-mixed concrete and  
602 central-mixed concrete with each truckload of concrete before unloading at the  
603 jobsite. Printed, stamped, or written delivery ticket must include the following  
604 information:

605

- 606 (1) Name of concrete plants.
- 607
- 608 (2) Serial number of the ticket.
- 609
- 610 (3) Date and truck number.
- 611
- 612 (4) Name of Contractor.
- 613
- 614 (5) Specific project, route, or designation of job (name and location).
- 615
- 616 (6) Specific class or designation of concrete in accordance with Contract  
617 Documents.
- 618
- 619 (7) Quantity of concrete in cubic yards.
- 620
- 621 (8) Time of loading batch or mixing of cement and aggregates.
- 622
- 623 (9) Water added by the receiver of concrete and receiver's initials.
- 624
- 625 (10) Information that is necessary to calculate the total mixing water  
626 added by the producer. Total mixing water includes free water on  
627 aggregates, water, and water added by the truck operator from the mixer  
628 tank at the project site.
- 629
- 630 (11) The amount of water held back from the batched concrete mix that  
631 can be added to the concrete mix at the project and still not cause the mix  
632 to exceed the accepted mix design water to cement ratio.
- 633
- 634 (12) Readings of non-resettable revolution counters of truck mixers after  
635 the introduction of cement to aggregates, or introduction of mixing water to

**601.03**

636 cement aggregates

637  
638 **(13)** Supplier's mix number or code and include the mix design name.

639  
640 Furnish additional information designated by the Engineer and required by  
641 job specifications upon request.

642  
643 **(F) Consistency.** Regulate the quantity of water and admixtures used in  
644 concrete mixes so that concrete consistency, as determined by the AASHTO T  
645 119 test method, is within the nominal slump range specified in Table 601.03-3 -  
646 Slump for Concrete. If the concrete slump exceeds the nominal slump, adjust  
647 subsequent batches of the mixture. If slump exceeds maximum slump, the  
648 Engineer will reject concrete unless it is solely deemed by the Engineer as  
649 satisfactory for use.

650  
651 The Engineer will also reject harsh or unworkable concrete that cannot be  
652 properly placed. Remove rejected concrete at no increase in the contract price or  
653 contract time.

654  
655 Slump for concrete must be as specified in "Table 601.03-3 – Slump for  
656 Concrete".

657

<b>TABLE 601.03-3 - SLUMP FOR CONCRETE</b>		
<b>Type of Work</b>	<b>Nominal Slump Inches</b>	<b>*Maximum Slump Inches</b>
Concrete Pavements	0 – 3	3-1/2
Reinforced Concrete Structures:		
Sections Over 12 Inches	0 – 4	5
Sections 12 Inches Thick or Less	2 – 5	6
Non-Reinforced Concrete Facilities	1 – 3	4
Concrete Placed Underwater	6 – 8	9
Bridge Decks	0 – 3	3-1/2

658 \*A waiver to the maximum slump requirement may be requested from the Engineer.  
659 Submit justification for the granting of the waiver request along with how the mix design's  
660 components ensure that the mix will not segregate.

661  
662 In adverse or difficult conditions that may affect the placement of concrete, the above  
663 slump limitations may be exceeded for placement workability, with the addition of  
664 admixture conforming to Subsection "711.03 – Admixtures", if the design mix redesign is  
665 accepted by the Engineer in writing and the water-cement ratio is complies with Contract  
666 Documents requirements. Provide additional cement and water, or admixture at no  
667 increase in the contract price or contract time.

668

- 669           **(G) Forms.** Construct forms in accordance with applicable sections.
- 670
- 671           **(H) Placing Concrete.** Place concrete in accordance with applicable sections.
- 672
- 673           **(I) Finishing Concrete Surfaces.** Finish concrete surfaces in accordance
- 674 with applicable sections.
- 675
- 676           **(J) Curing Concrete.** Cure concrete in accordance with applicable sections.
- 677

678 **601.04 Measurement.** The Engineer will measure concrete in accordance with the  
679 applicable sections.

680  
681 **601.05 Payment.** The Engineer will pay for the accepted concrete under the  
682 applicable sections.”

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687

**END OF SECTION 601**





**SECTION 629 - PAVEMENT MARKINGS**

Make the following amendments to said Section:

**(I)** Amend **Subsection 629.03(B) – Temporary Pavement Markings** by revising the third paragraph from line 62 to 63 to read:

“Maintain and replace temporary pavement markings, flexible delineators, and barricades. ”

**(II)** Amend **Table 629.03 – 1 – Temporary Pavement Markings** to read as follows:

“TABLE 629.03-1 TEMPORARY PAVEMENT MARKINGS	
TYPE	PAVEMENT MARKINGS
Passing Permitted - Both Sides	Single 4-inch yellow stripe 5 feet in length spaced 20 feet on center with Type D markers spaced 40 feet on center and located on center of 5-foot length of stripe.
Passing Prohibited - Both Sides	Double solid 4-inch yellow stripes with Type D markers placed 20 feet on center on one of 4-inch yellow stripes selected by the Engineer.
Passing Permitted - One Side Only	Single continuous 4-inch yellow stripe with Type D markers placed on stripe 20 feet on center on no-passing side and single 4-inch yellow stripes 5 feet in length spaced 20 feet on center on passing side.
Lane Lines - Lane Changing Permitted	Single 4-inch yellow or white stripe 5 feet in length spaced 20 feet on center with Type C or Type D markers spaced 40 feet on center.
Lane Lines - Lane Changing Prohibited	Double solid 4-inch white stripes with Type C markers placed 20 feet on center on one of the 4-inch white stripes selected by the Engineer.
Crosswalk	Two 12-inch white transverse lines spaced 8 feet on center or as ordered by the Engineer.
Stop Line	Single 12-inch white transverse line.
<b>Note:</b> Paint may be used for temporary markings in areas where final paving is not complete.”	

**(III)** “**629.04** Amend **606.04 - Measurement** by revising lines 292 to 294 to read as follows:

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62

(A) The Engineer will measure thermoplastic and preformed pavement marking tape per linear foot in accordance with the contract documents. The longitudinal pavement markings will be measured per linear foot as a single stripe for the width specified in the contract and in the proposal.

The Engineer will measure the painted stripes that are twelve (12) inches wide or less as a single stripe. The Engineer will measure the painted stripes over twelve (12) inches wide as two (2) stripes. The Engineer will measure the double stripes that are twelve (12) inches or less in total width including the transverse space between the stripes as a single stripe.

The Engineer will measure the transverse markings by the linear foot according to the contract.

The Engineer will not measure temporary pavement markings including flexible delineator posts with reflector markers or Type I Barricades and temporary signs installed for the longitudinal guidance of public traffic over reconstructed areas, cold planed surfaces, newly paved surfaces or other unmarked or scarified areas for payment.

The Engineer will measure the temporary pavement markings and temporary signs installed as ordered by the Engineer for special temporary traffic patterns on a force account basis, if the contract specifies payment in the proposal.

The Contractor shall consider the work required for the removal of pavement markings incidental to the various contract items, except as provided in the proposal or elsewhere in the contract. If the contract stipulates that the Engineer will make payment for the removal of pavement markings, the Engineer will measure the removal of pavement markings.

The Engineer will measure the longitudinal pavement markings by the linear foot according to the contract. Longitudinal gaps for skip striping will not be included in the measurement.

The Engineer will measure the pavement markers per each for the types shown in the proposal.”

(IV) Amend **629.05 – Payment** by revising lines 296 to 330 to read as follows:

**“629.05 Payment.**

63 (A) The Engineer will pay for thermoplastic and preformed pavement  
64 marking tape at the contract price per linear foot according to the  
65 contract, complete in place, including primers.  
66

67 The Engineer will pay for double four (4) inch striping with a four (4)  
68 inch space between stripes at the contract price per linear foot  
69 according to the contract.  
70

71 The contract unit price paid shall be full compensation for furnishing  
72 labors, materials, tools, equipment and incidentals and for doing the  
73 work involved in furnishing and installing pavement markings complete  
74 in place according to the contract.  
75

76 The Engineer will not pay for the temporary pavement markings  
77 including flexible delineator posts with reflector markers or Type I  
78 Barricades and temporary signs installed for the longitudinal guidance  
79 of public traffic over reconstructed areas, cold planed surfaces, newly  
80 paved surfaces or other unmarked or scarified areas for payment if not  
81 shown in the proposal separately. The Engineer will consider them  
82 incidental to the various contract items.  
83

84 If the contract specifies payment for temporary pavement markings  
85 installed as ordered by the Engineer for special temporary traffic  
86 patterns, the Engineer will pay from an allowance for "Temporary  
87 Construction Zone Markings".  
88

89 The Engineer will compute the actual amount paid to the Contractor  
90 for force account work according to Subsection 109.06 – Force  
91 Account Provisions and Compensation.  
92

93 If the contact specifies payment for removal of pavement markings  
94 under unit price pay items, the Engineer will pay for the accepted  
95 quantities at the contract unit prices bid. The prices shall be full  
96 compensation for removing such items according to the contract.  
97

98 (B) The Engineer will pay for the various types of pavement markers at  
99 the contract price per each according to the contract, complete in  
100 place, including adhesives.  
101

102 The Engineer will pay for the following pay items when included in  
103 the proposal schedule:  
104

105 Pay Item	106 Pay Unit
107 _____ - Inch Pavement Striping (Tape, Type ____ or 108 Thermoplastic Extrusion)	109 Linear Foot

110  
111  
112  
113

Type \_\_\_\_ Pavement Marker

Each”

**END OF SECTION 629**



48 Supplemental Plaque

Each”

49

50

51

52

53

**END OF SECTION 631**

1 **SECTION 632 – MARKERS**

2  
3 Make the following amendment to said Section:

4  
5 **(I) Amend Section 632.03 – Construction** by adding this paragraph after line  
6 lines 77 to read as follows:

7  
8 **“(e) Type V Object Marker (OM5).** OM5 shall be Type XI retroreflective  
9 sheeting marker. One complete unit of OM5 shall be the complete installation of  
10 retroreflective sheetings per post.”

11  
12 **(II) Amend Section 632.04 - Measurement** by replacing lines 79 to 81 to read:

13  
14 **“632.04 Measurement.** The Engineer will measure reflector marker,  
15 milepost marker with post (bi-directional), and object marker per each as  
16 complete units of the type and design specified in the proposal.”

17  
18 **(III) Amend Section 632.05 – Payment** by replacing lines 83 to 100 to read:

19  
20 **“632.05 Payment.** The Engineer will pay for reflector marker, milepost  
21 marker with post (bi-directional) and object marker at the contract price per each  
22 for the type and design specified complete in place. Payment will be full  
23 compensation for excavating and backfilling, furnishing and installing materials,  
24 furnishing equipment, tools, labors and incidentals necessary to complete the  
25 work.

26  
27 The Engineer will pay for the following pay items when included in the  
28 proposal schedule:

<b>Pay Item</b>	<b>Pay Unit</b>
Reflector Marker (RM-3) with Steel Post	Each
Reflector Marker (RM-3) with Flexible Post	Each
Mile Post Marker with Post (Bi-Directional)	Each
Type _____ Object Marker (_____)	Each”

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42  
43 **END OF SECTION 632**

1 Make the following Section a part of the Standard Specifications:  
2

3 **“SECTION 636 – E-CONSTRUCTION**  
4  
5

6 **636.01 Description.** This section specifies requirements for performing the Project in  
7 a “paperless” manner, using electronic tools for all submittals, communications, quantity  
8 tracking, testing, and sampling, scheduling, quality control, and performance monitoring.  
9

10 **636.02 General Requirements.** The Contractor shall implement the use of the E-  
11 Construction platform, as provided by the HDOT and directed by the Engineer, for use  
12 throughout the project. Paper-based or hard copy submittals will not be accepted.  
13

14 This Special Provision shall take precedence over all other Specification sections  
15 with respect to providing and receiving paper copy communications, submittals, and any  
16 project records. Where conflicts exist, and a decision between a hard-copy item and a  
17 corresponding electronic version is needed, the electronic version shall be selected,  
18 unless otherwise directed by the Engineer.  
19

20 **636.03 Construction**  
21

22 **(A) Plans and Specifications.** Project drawings will not be provided to the  
23 Contractor in hard copy format. An electronic version will be provided in the E-  
24 Construction platform for use during the project.  
25

26 The Contractor shall note all changes to the work, including all  
27 subcontractor’s work, in electronic format using the E-Construction platform Red  
28 annotations shall be used to note changes. Blue annotations shall be used for any  
29 additional notes that will be helpful for the State in interpreting the field posted  
30 drawings. Other drafting standards may be implemented by the Engineer and shall  
31 be adhered to by the Contractor. Changes shall be input by the Contractor and  
32 reviewed by the Engineer monthly. The Contractor shall make any changes that  
33 the Engineer requires.  
34

35 **(B) Submittals.** The Contractor shall provide all required submittals, as listed  
36 within the contract documents, via the E-Construction platform.—All review,  
37 approval, and resubmittal regarding submittals shall also be documented within  
38 the E-Construction platform.  
39

40 **(C) Correspondence.** Electronic mail (email) shall be the preferred method of  
41 electronic communication. All communications that affect project scope, schedule,  
42 cost, or quality, including changes and requests for information, shall be submitted  
43 as directed by the Engineer.  
44

45 **(D) Prosecution and Progress.** The Contractor shall provide all  
46 administrative, management, and project support documents required by various

47 specification sections, using the E-Construction platform. These elements include,  
48 but are not limited to:

- 49 (1) Preconstruction Submittals (Section 108.03)
- 50 (2) Correspondence regarding Contract Time and Delays (Section  
51 108.05)
- 52 (3) Progress Schedules (Section 108.06)
- 53 (4) Weekly Meeting preparatory materials (Section 108.07)
- 54 (5) Samples, certifications, material data, installation instructions, and  
55 shop drawings (Sections 105 and 106)
- 56 (6) Field-posted Drawings (Section 648)
- 57 (7) Pre-Final Inspection submittals (Section 108.13)
- 58 (8) Warranty documentation (Section 108.17)
- 59 (9) Project Closing Documents (Section 108.19)

60  
61  
62 In addition to the foregoing, the Contractor shall provide any other  
63 materials, correspondence, and submittals using the E-Construction  
64 platform as directed by the Engineer.

65  
66 **(E) Resources.** The Contractor shall provide a comprehensive list of  
67 Contractor labor and equipment, including all subcontractor labor and equipment,  
68 that will be deployed on the project, using spreadsheet-based templates provided  
69 in the E-Construction platform. All template fields shall be completed. The  
70 submitted information shall comply with the requirements of Specification Section  
71 108 – Prosecution and Progress (identification of labor and equipment resources)  
72 and Specification Section 109 - Measurement and Payment (cost data) and  
73 represent all individual personnel with labor categories and rates, and all  
74 equipment owned or rented, with associated rates, on this project. Updates for  
75 additional personnel or equipment shall be accomplished by the Contractor at will  
76 and shall be completed when directed by the Engineer.

77  
78 **636.04 Measurement.** The Engineer will measure additional E-Construction  
79 programs, additional licenses, or additional equipment, if ordered by the Engineer, on a  
80 force account basis in accordance with Subsection 109.06 – Force Account Provisions  
81 and Compensation.

82  
83 **636.05 Payment.** The Engineer will pay for the additional E-Construction programs,  
84 additional licenses, or additional equipment, on a force account basis in accordance with  
85 Subsection 109.06 – Force Account Provisions and Compensation.

86 The Engineer may withhold progress payment until the Contractor is in compliance  
87 with all E-Construction requirements.

88	89	90
	<b>Pay Item</b>	<b>Pay Unit</b>
91	Additional E-Construction Programs, Additional Licenses	
92	or Additional Equipment	Force Account

93  
94  
95  
96  
97

An estimated amount for force account may be allocated in the proposal schedule under “Additional E-Construction Programs, Additional Licenses or Additional Equipment.” The actual amount to be paid will be the sum shown on accepted force account records.”

98  
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102

**END SECTION 636**

1           **SECTION 638 – PORTLAND CEMENT CONCRETE CURB AND GUTTER**

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Make the following amendments to said Sections:

**(I)** Amend **Section 638.04 Measurement**, from line 130 to 131 to read as follows:

**“503.04 Measurement.** The Engineer will measure gutter per linear foot in accordance with the contract documents.”

**(II)** Amend **Section 503.05 Payment**, from line 133 to 148 to read as follows:

**“503.05 Payment.** The Engineer will pay for the accepted gutter at the contract price per linear foot. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

<b>Pay Item</b>	<b>Pay Unit</b>
Gutter, Type 2 (61614)	Linear Foot
Gutter, Modified Type 2 (61212)	Linear Foot”

**END OF SECTION 638**



1                                   **SECTION 645 - WORK ZONE TRAFFIC CONTROL**

2  
3    Make the following amendments to said Section:

4  
5    **(I)**    Amend **645.03 (B) Construction Signs** from line 162 to 169 by changing all  
6            references to “Construction Signs” to read “**Work Zone Signs**”.

7  
8    **(II)**    Amend **Subsection 645.03 Construction** by adding this paragraph after line  
9            170 to read as follows:

10  
11            **“(1) Covers.** Use sign covers when existing signs confuse the public or  
12            are in conflict with TCP signs installed. Sign covers shall be commercially  
13            manufactured and accepted by the Engineer before use. Sign covers shall at  
14            all times and under all conditions not allow any portion of the sign being  
15            covered to be visible. If more than one side of the sign has words or symbols  
16            cover all sides of the sign until needed. “Homemade” or “field made” covers  
17            shall not be used. Covering of sign identification markings are not required if  
18            that is the only markings on that side of the sign. Sign covers shall be  
19            maintained.

20  
21            Removal of the existing sign in lieu of the use of sign covers may be  
22            acceptable to the Engineer provided the previously removed existing sign is  
23            immediately reinstalled when directed. Removal of existing post(s) and  
24            mounting hardware is required if not used to mount the new TCP sign. New  
25            mounting hardware shall be used to mount the TCP signs if the existing  
26            hardware is in an unacceptable condition in the opinion of the Engineer. In  
27            addition, should the sign or post during storage, in the opinion of the  
28            Engineer, become unacceptable or lost or stolen the Contractor shall replace  
29            the sign or post with a new sign or post. Use new hardware to reinstall the  
30            sign regardless whether it is an existing sign or new.”

31  
32    **(II)**    Amend **Subsection 645.03 (F) Lane Closures** Line 253 by changing "Oahu"  
33            to “Kauai”.

34  
35    **(III)**   Amend **Subsection 645.03 (G) Advisory Signs** from Line 314 to Line 324 to  
36            read as follows:

37  
38            **“(G) Advisory Signs.** Advisory signs are not required for this project.”

39  
40    **(IV)**   Amend **Subsection 645.03 (H) Advertisement** from Line 391 to Line 392 to  
41            read as follows:

42  
43            “Place advertisement for three (3) consecutive days and within one (1) week  
44            before traffic pattern changes, in publication as ordered by the Engineer. In lieu of  
45            the advertisement(s), the Engineer may substitute the use of two portable  
46            changeable message boards and accessories at no additional cost for three (3)  
47            days for each required advertisement.”

48 (V) Amend **Subsection 645.04 - Measurement** from line 394 to line 403 to read  
49 as follows:

50  
51 **“645.04 Measurement.**

52  
53 (A) Traffic control as specified in Subsection 645.03 – Construction  
54 including sign covers and the initial advertisement(s) will be measured on contract  
55 lump sum basis. Measurement for payment will not apply.

56  
57 (B) The Engineer will measure additional police officers, additional traffic  
58 control devices, and additional advertisements, if ordered by the Engineer, on a  
59 force account basis, in accordance with Subsection 109.06 – Force Account  
60 Provisions and Compensation.’

61  
62 (VI) Amend **Subsection 645.05 - Payment** from lines 405 to 428 to read:

63  
64 **“645.05 Payment.** The Engineer will pay for the accepted traffic control,  
65 additional police officers, and additional traffic control devices, and additional  
66 advertisements at the contract price per pay unit, as shown in the proposal  
67 schedule. Payment will be full compensation for the work prescribed in this section  
68 and the contract documents.

69  
70 The Engineer will pay for the following pay items when included in the  
71 proposal schedule:

72 <b>Pay Item</b>	73 <b>Pay Unit</b>
74 Traffic Control	75 Lump Sum
76 Additional Police Officers, Additional Traffic Control Devices, 77 and Additional Advertisements	78 Force Account

79  
80 An estimated amount for the force account may be allocated in the proposal  
81 schedule under “Additional Police Officers, Additional Traffic Control Devices, and  
82 Additional Advertisements”, but the actual amount to be paid will be the sum shown  
83 on the accepted force account records, whether this sum be more or less than the  
84 estimated amount allocated in the proposal schedule.

85  
86 The Engineer will not pay for request submittals. The Engineer will not  
87 consider claims for additional compensation of late submittals or requests by  
88 Contractor.”

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92

**END OF SECTION 645**

1 Make the following Section a part of the Standard Specifications:  
2

3 **“SECTION 671 – PROTECTION OF THREATENED AND ENDANGERED**  
4 **SPECIES**  
5

6 **671.01 Description.** The endangered Hawaiian hoary bat or ‘ōpe‘ape‘a  
7 (*Lasiurus cinereus semotus*) may roost, forage, and rear young in the general  
8 vicinity of the proposed project. The project site is located in a known flight corridor  
9 for the endangered Hawaiian petrel or ‘ua‘u (*Pterodroma sandwichensis*), the  
10 endangered Hawai‘i distinct population segment (DPS) of the band-rumped storm-  
11 petrel or ‘ake‘ake (*Oceanodroma castro*), and the threatened Newell’s shearwater  
12 or ‘a‘o (*Puffinus auricularis newelli*), hereinafter referred to as Hawaiian seabirds.  
13 Endangered Hawaiian waterbirds, including the Hawaiian stilt or ae‘o (*Himantopus*  
14 *mexicanus knudseni*), the Hawaiian coot or ‘alae ke‘oke‘o (*Fulica americana alai*),  
15 the Hawaiian gallinule or ‘alae ‘ula (*Gallinula galeata sandvicensis*), and the  
16 Hawaiian duck or koloa (*Anas wyvilliana*) are known to be in the general vicinity of  
17 the project and may be attracted to the project staging areas even in sub-optimal  
18 locations if water is present. Also to be considered is the threatened Hawaiian  
19 goose or nēnē (*Branta [=Nesochen] sandvicensis*) which may use the construction  
20 staging areas or areas adjacent to the roadway. The endangered Hawaiian monk  
21 seal or ‘īlio holo i ka uaua (*Neomonachus schauinslandi*) and sea turtles, including  
22 the endangered Hawksbill Sea Turtle or 'ea (*Eretmochelys imbricate*), and the  
23 threatened Central North Pacific DPS of the Green Sea Turtle or honu (*Chelonia*  
24 *mydas*) are in the general vicinity of the proposed project and may transit or visit  
25 the proposed project area.  
26

27 The Contractor shall protect these threatened and endangered species  
28 throughout the construction duration.  
29

30 **671.02 Materials.** None  
31

32 **671.03 Construction.**  
33

34 **(A) Pre-Construction and Construction Requirements.** Comply with  
35 the following conditions and the notes in the Contract Plans:  
36

37 **(1) Hawaiian Hoary Bat.** Hawaiian hoary bats nest in both  
38 native and non-native woody vegetation.  
39

40 The Contractor shall incorporate these measures to avoid and  
41 minimize project-related adverse effects to the Hawaiian hoary bat:  
42

43 **(a)** There shall be no disturbance, removal, or trimming of  
44 woody plants greater than 15 feet (4.6 meters) tall  
45 during the bat birthing and pup rearing season (June 1  
46 through September 15).  
47

48 **(b)** Barbed wire shall not be used for fencing.  
49

50 **(2) Hawaiian Seabirds.** Hawaiian seabirds may traverse the  
51 project area at night during breeding, nesting and fledgling season,

52 which extends from March 1 through December 15. Permanent  
53 lighting poses a very high risk of seabird attraction so new highway  
54 lighting should not be installed to protect seabird flyways and  
55 preserve the night sky. Additional or increased lighting exacerbates  
56 the problem of Newell's shearwater fallout.  
57

58 Fallout shall be defined as the occurrence of seabirds being  
59 harmed, injured or killed and falling to the ground due to: 1) collision  
60 with structures such as wires, poles, or other objects; 2) light  
61 attraction and the resulting collision with structure associated with or  
62 near the light sources; or, 3) the exhaustion from circling the light  
63 source.  
64

65 If nighttime work will be required in conjunction with the  
66 development of the project, the Contractor shall incorporate these  
67 measures to avoid and minimize project-related adverse effects to  
68 Hawaiian seabirds:  
69

70 **(a)** Before beginning any work at the project site, the  
71 Contractor shall:  
72

73 **i.** Collect information regarding the protection of  
74 seabirds and seabird fallout.  
75

76 **ii.** Submit to the Engineer for acceptance a protection  
77 of seabirds training plan including a detailed  
78 description of information and materials the  
79 Contractor intends to use in the training classes.  
80 The training plan shall be submitted to the Engineer  
81 for acceptance at least fifteen (15) days in advance  
82 of the class. If the Engineer rejects the training  
83 plan, the Contractor shall revise and promptly  
84 propose another training plan.  
85

86 **iii.** Disseminate information regarding the protection of  
87 seabirds and seabird fallout by conducting training  
88 classes for all employees, subcontractors, suppliers  
89 and other personnel working on the project,  
90 including HDOT personnel, on such topics as the  
91 Save Our Shearwater (SOS) program, proper use  
92 of temporary lighting, procedures to store and  
93 report downed seabirds, and the consequences of  
94 non-compliance with the laws regarding threatened  
95 and endangered seabirds. The Engineer may  
96 request for additional topics related to seabirds to  
97 be included in the training classes.  
98

99 Training classes shall be taught by  
100 authorized representatives of the USFWS, the

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Department of Land and Natural Resources, the SOS program or other qualified personnel accepted by the Engineer.

- iv. Furnish the Engineer with evidence that the Contractor has held training classes, including the dates of the classes, identify who conducted the training, and the content and nature of the training.

(b) The Contractor shall comply to the following construction requirements:

- i. As directed by the Engineer, the Contractor shall conduct additional training classes during the project to update all employees, subcontractors, suppliers, HDOT personnel and other personnel on new and/or updated information regarding the protection of seabirds and seabird fallout.
- ii. No permanent streetlights shall be installed as part of the project.
- iii. All temporary lights used for night work (between sunset and sunrise) shall contain less than 2% wavelengths less than 550 nm, and shall be downward-facing and shielded so the bulb can only be seen from below. Temporary lights shall include but are not limited to flood lights, light towers, lights for construction equipment and other lights as determined by the Engineer. All traffic control devices, including warning lights, arrow boards, portable changeable message signs and other lighting device as determined by the Engineer shall be shielded.
- iv. Nighttime construction and the use of all temporary lights shall cease during the peak seabird fledgling period (September 15 through December 15).
- v. The Contractor shall furnish and maintain a small (approximately 10" x 12" x 19"), portable cat kennel on site to temporarily hold a downed seabird. The Contractor shall obtain acceptance of the cat kennel from the Engineer prior to use.

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- vi. If a downed dead seabird is found, the Contractor shall contact the USFWS (Ms. Megan Laut at 808-792-9400) within 24 hours.
- vii. If the downed seabird is alive, the Contractor shall:
  - I. Pick up the seabird from behind as soon as possible using a clean towel, t-shirt or cloth by gently wrapping it around its back and wings.
  - II. Place the seabird in the cat kennel and immediately contact the SOS Program Coordinator at 808-635-5117 for further instructions on where to deliver the seabird.
  - III. Deliver the seabird to the location determined by the coordinator of the SOS program and as directed by the Engineer.
  - IV. Keep the seabird in a cool, quiet location and out of direct sunlight with adequate ventilation.
  - V. The Contractor and any personnel on-site shall not feed, provide water, handle or release the seabird.
- viii. The Contractor shall maintain records of all downed seabirds for the duration of the project. The records shall include the date, time, location and condition (dead or alive) the seabird was found and delivered. Submit a copy of the records to the Engineer after finding each and every downed seabird.

**(3) Hawaiian Waterbirds.** Hawaiian waterbirds occupy fresh and brackish water marshes, coastal estuaries and natural or manmade ponds. Hawaiian stilts also occupy areas with ephemeral or persistent standing water, conditions of which can be found in culverts and drainage structures. Because this project occurs near water, threats to these species from this project may include predation, reduced reproductive success, disturbance from human activity and injury or mortality from vehicle strikes.

The Contractor shall incorporate these measures to avoid and minimize project-related adverse effects to Hawaiian waterbirds:

- (a) In areas where known presence of Hawaiian waterbirds occurs, post, implement and enforce reduced

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speed limits, and inform project personnel and Contractors of the presence of these endangered species on-site.

**(b)** Because water resources occur in the project site, employ U.S. Fish and Wildlife Service (USFWS) Best Management Practices for Work in Aquatic Environments.

**(c)** Where appropriate habitat occurs within the vicinity of the project area, survey for Hawaiian waterbirds and nests prior to initiation of project work using survey biologists familiar with the species' biology. Survey biologists should be trained and capable of identifying adults and juveniles of each species, nesting behaviors, and nests. Repeat surveys again within three (3) days of project initiation and after any subsequent delay of work of three (3) or more days (during which the birds may attempt to nest).

- i. Surveys for species and nests should be repeated when a delay of work occurs that is three (3) days or more (during which the birds may attempt to nest).
- ii. If a nest or active brood is found, contact USFWS within 24 hours for further guidance.
- iii. Establish and maintain a 100-ft buffer around all active nests and/or broods until the chicks/ducklings have fledged. Do not conduct potentially disruptive activities or habitat alteration within this buffer.
- iv. A biological monitor that is familiar with the species' biology shall be present on the project site during all construction or earth moving activities until the chicks/ducklings fledge to ensure that Hawaiian waterbirds and nests are not adversely affected.

**(d)** A biological monitor is required during Hawaiian stilt nesting season from February 15 through August 31.

- i. A biological monitor that is familiar with the species biology and approved by the Federal Highways Administration will conduct Hawaiian stilt nest surveys where appropriate habitat occurs within the proposed maintenance site prior to cleaning culverts and drainage structures.

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- ii. Surveys will take place within three (3) days of project initiation and after any subsequent delay of work of three (3) or more days (during which the birds may attempt to nest).

**(4) Hawaiian Goose.** Hawaiian goose or nēnē uses various habitat types. Threats to the species from this project include disturbance from human presence, and injury and mortality from vehicle strikes. An increased human presence at the project site could disturb nēnē nesting, foraging, or loafing in the area.

The Contractor shall incorporate these measures to avoid and minimize project-related adverse effects to the nēnē:

- (a) Nēnē in or near the project area shall not be approached, fed, or disturbed in any way.
- (b) All food and or beverage waste shall be disposed of in appropriate, covered trash receptacles.
- (c) If nēnē are observed loafing, foraging, or otherwise present within the project area during the breeding season (September 1 through April 30), a trained biologist familiar with nēnē nesting behavior will survey the area in and around the project area for nests prior to work each day. Surveys will be repeated after any subsequent delay of work of three (3) or more days (during which the birds may attempt to nest).
- (d) If a nest is identified within a radius of 150 feet of the project area, or a previously undiscovered nest is found within the 150-foot radius after work begins, all work shall cease and the USFWS will be contacted immediately for further guidance.
- (e) Reduced speed limits shall be posted and implemented in areas where nēnē are known to be present, and project personnel and Contractors will be informed of the presence of endangered species on-site.
- (f) There shall be no feeding of birds or dogs on the project site.

**(5) Hawaiian Monk Seal.** The Contractor shall incorporate these measures to avoid and minimize project-related adverse effects to the Hawaiian monk seal:

- (a) All regular on-site staff shall be trained to identify the Hawaiian monk seal and trained on appropriate steps to take if this species is present on-site.

- 291 (b) Construction activities shall not take place if a Hawaiian  
292 monk seal is in the construction area or within 150 feet  
293 of the construction area. Construction can only begin  
294 after the animal voluntarily leaves the area. If a monk  
295 seal/pup pair is present a minimum 300-foot buffer  
296 shall be observed. If a Hawaiian Monk Seal is noticed  
297 after work has already begun, that work may continue  
298 only if, in the best judgment of the Biological Monitor,  
299 that there is no way for the activity to adversely affect  
300 the animal(s).
- 301 (c) Any construction-related debris that may pose an  
302 entanglement threat to Hawaiian monk seals shall be  
303 removed from the construction area at the end of each  
304 day and at the conclusion of the construction project.
- 305 (d) Workers shall not attempt to feed, touch, ride, or  
306 otherwise intentionally interact with any listed species.

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310 **(6) Sea Turtles.** Sea turtles may nest on any sandy beach in the  
311 Pacific Islands. Nesting occurs on beaches from May through  
312 September, peaking in June and July, with hatchlings emerging  
313 through November and December. Construction can compact and  
314 erode sand and sediments, destroy sea turtle nests, erode beaches,  
315 create runoff of contaminants, and create light that disorients  
316 hatchlings and deters nesting. Off-road vehicle traffic on beaches,  
317 including construction equipment, directly affecting sea turtles and  
318 their nests by crushing individuals and degrading habitat with erosion  
319 and compacting sand and sediment.

320  
321 To avoid and minimize project-related adverse effects to sea  
322 turtles and their nests, incorporate these conservation measures:

- 323 (a) No vehicle use or modifying the beach/dune  
324 environment during the sea turtle nesting or hatching season,  
325 which extends from May through December.
- 326 (b) Employ U.S. Fish and Wildlife Service Recommended  
327 Standard Best Management Practices when working in aquatic  
328 environments.
- 329 (c) Remove any project-related debris, trash, and  
330 equipment from the beach or dune if not actively in use.
- 331 (d) Do not stockpile project-related materials in the  
332 intertidal zone, reef flats, stream channels, or river channels.

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335 Optimal turtle nesting habitat is a dark beach, free of barriers  
336 that could restrict sea turtle movement. Lighting and human  
337 presence deters nesting turtles from approaching, laying eggs, and  
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341 successfully nesting. Artificial light disorients sea turtles and they  
342 become exhausted, causing them to nest in inappropriate locations,  
343 such as at or below the high tide line. Artificial lighting also disorients  
344 hatchlings as they emerge from nests. Sea turtles need darkness on  
345 beaches so they can successfully navigate back to the ocean. In-  
346 water work at night shall be avoided, unless emergency maintenance  
347 and repair of erosion and sediment controls are necessary to meet  
348 permit conditions.  
349

350 The Contractor shall incorporate these measures to avoid and  
351 minimize project-related adverse effects to sea turtles and their  
352 young from lighting:  
353

354 (a) Avoid nighttime work during the nesting and hatching  
355 season, which extends from May through December.

356 (b) Minimize the use of lighting and shield all project-  
357 related lights to ensure this light is not visible from any beach.  
358

359 (c) If full shielding of light is not possible, or if you require  
360 the use of headlights, fully enclose the light source using light  
361 filtering tape or filters.  
362

363  
364 **(7) Essential Fish Habitat.** The Contractor shall incorporate  
365 these measures to avoid and minimize project-related adverse  
366 effects to essential fish habitat:  
367

368 (a) Contractor shall conduct a pre-construction biological  
369 survey to determine whether infrastructure materials (e.g,  
370 riprap, piles, boulders) are colonized with benthic  
371 communities. If infrastructure materials (e.g, riprap, piles,  
372 boulders) that are colonized with benthic communities will be  
373 removed or destroyed as part of permitted activities,  
374 Contractor shall prepare relocation plan for HDOT approval,  
375 and relocate these materials to an appropriate receiving site.  
376

377 (b) The Contractor shall prevent debris from falling into the  
378 water.  
379

380 **(B) Compliance Requirements.** The Contractor shall protect all  
381 species noted above for the duration of construction. Failure to  
382 comply with the construction requirements, harm or a taking of an  
383 individual during the construction duration shall be enforceable by  
384 the USFWS as set forth by the Endangered Species Act. Resultant  
385 penalties and/or fines shall be at the Contractor's expense without  
386 cost or liability to the State.  
387

388 **671.03 Measurement.** The Engineer will measure the work required for the  
389 protection of threatened and endangered species on a force account basis in  
390 accordance with Subsection 109.06 – Force Account Provisions and  
391 Compensation and as ordered by the Engineer.

392  
393 **671.04 Payment.** The Engineer will pay for the accepted protection of  
394 threatened and endangered species on a force account basis in accordance with  
395 Subsection 109.06 – Force Account Provisions and Compensation. Payment will  
396 be full compensation for the work prescribed in this section, by the Engineer, and  
397 in the contract documents.

398  
399 The Engineer will pay for the following pay item when included in the  
400 proposal schedule:

<b>Pay Item</b>	<b>Pay Unit</b>
Protection of Threatened and Endangered Species	Force Account

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406 An estimated amount may be allocated in the proposal schedule under  
407 “Protection of Threatened and Endangered Species”, but the actual amount to be  
408 paid will be the sum shown on the accepted force account records, whether this  
409 sum be more or less than the estimated amount allocated in the proposal  
410 schedule.”

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**END OF SECTION 671**







1                   **SECTION 717 – CULLET AND CULLET-MADE MATERIALS**

2  
3    Make the following amendments to said Section:

4  
5    **(I) Amend Subsection 717.01 – Cullet and Cullet-Aggregate Mixtures as**  
6    **Construction Materials** by revising the third paragraph from line 16 to 20 to  
7    read:

8  
9           “Debris shall not exceed values specified in Tables 717.02-1 - Cullet in  
10   Roadway Applications, 717.03-1 - Cullet in Utility Applications, and 717.04-1 -  
11   Cullet in Drainage Applications. Debris is defined as deleterious material that  
12   includes plastics, papers, and non-ceramic constituents of cullet. Hazardous  
13   material will not be allowed in cullet such as but not limited to, TV or other  
14   cathode ray tubes, fluorescent light bulbs, and any toxic or hazardous materials.  
15   Test cullet stockpile for toxic or hazardous materials every ninety (90) days and  
16   submit the results to the Engineer.”

17  
18   **(II) Amend Subsection 717.01 – Cullet and Cullet-Aggregate Mixtures as**  
19   **Construction Materials** by adding the following paragraph after line 21:

20  
21           “Cullet shall not be used in concrete.”

22  
23   **(III) Amend Table 717.03-1 – Cullet in Utility Applications** from line 37 to  
24   line 39 to read:

25

<b>TABLE 717.03-1 - CULLET IN UTILITY APPLICATIONS</b>		
<b>Utility Trench Bedding and Backfill Applications</b>	<b>Maximum Cullet Content (Percent By Weight)</b>	<b>Maximum Debris Level (Percent By Weight Of Cullet)</b>
Sewer Pipes	25	0.3
Electrical Conduits	25	0.3
Fiber Optic Lines	25	0.3

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(IV) Amend **Table 717.04-1 – Cullet in Drainage Applications** from line 47 to line 49 to read:

<b>TABLE 717.04-1 - CULLET IN DRAINAGE APPLICATIONS</b>		
<b>Drainage Fill Applications</b>	<b>Maximum Cullet Content (Percent By Weight)</b>	<b>Maximum Debris Level (Percent By Weight Of Cullet)</b>
Retaining Walls	25	0.2
Foundation Drains	25	0.2
Drainage Blankets	25	0.2
French Drains	25	0.2

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**END OF SECTION 717**

1           **SECTION 750 – TRAFFIC CONTROL SIGN AND MARKER MATERIALS**

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3       Make the following amendments to said Section:

4  
5       **(I)**     Amend **Subsection 750.01(A)(1) Retroreflectorization** by replacing lines  
6       8 through 31 to read:

7  
8       **“(1) Retroreflectorization.** The following shall be retroreflectorized:

9  
10       **(a)**     Background for illuminated guide signs and exit number panels (“E”  
11       designation) with ASTM D 4956 Type XI retroreflective sheeting.

12  
13       **(b)**     Background for non-illuminated guide signs and exit number panels  
14       (“D” designation) with ASTM D 4956 Type XI retroreflective sheeting.

15  
16       **(c)**     Messages, arrows, and borders of guide signs and exit number  
17       panels (“D” and “E” designations) with ASTM D 4956 Type XI  
18       retroreflective sheeting.

19  
20       **(d)**     Regulatory and warning signs, directional signs (“DIR” designation),  
21       route and auxiliary markers, shield symbols, yellow “EXIT ONLY” panels,  
22       construction warning signs, and barricade rails, completely, with Type III,  
23       IV, or IX retroreflective sheeting.

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25       **(e)**     Pedestrian, school, bicycle crossing series, completely with Type IX  
26       fluorescent yellow green retroreflective sheeting.”

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29       **(II)**    Amend **Subsection 750.01(B) Backing** by replacing lines 72 through 73  
30       to read:

31  
32       “Aluminum sheet shall conform to ASTM B 209, alloy 5052-H38 or 6061-  
33       T6 flat sheet.”

34  
35       **(III)**   Amend **Subsection 750.01(E) Retroreflective Sheeting Materials** by  
36       replacing lines 1126 through 1137 to read:

37  
38       **“(E) Retroreflective Sheeting Materials.** Retroreflective sheeting  
39       includes white or colored sheeting having smooth outer surface.

40  
41       Retroreflective sheeting shall be classified in accordance with ASTM D  
42       4956.

43  
44       The coefficient of retroreflection shall meet the minimum requirements of  
45       ASTM D 4956 for the type of reflective sheeting specified.



1                                   **SECTION 755 – PAVEMENT MARKING MATERIALS**  
2

3    Make the following amendments to said Section:  
4

5    **(I)**    Amend **Subsection 755.02 (C) Retroreflective Pavement Markers** by  
6    revising lines 223 to 236 to read:

7  
8            “Exterior surface of shell shall be smooth and contain one or two  
9    retroreflective faces of specified color.”  
10

11   **(II)**   Amend **Subsection 755.05 (C)(1) Glass Beads** by adding the following  
12   after line 869:

13  
14           **(f)**   The glass spheres shall not contain more than 200 ppm (total)  
15   arsenic, 200 ppm (total) antimony nor more than 200 ppm (total)  
16   lead, when tested according to EPA Methods 3052 and 6010C.  
17   Other suitable x-ray fluorescence spectrometry analysis methods  
18   may be used to screen samples of glass spheres for arsenic and  
19   lead content.”  
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27                                   **END OF SECTION 755**  
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## Requirements of Chapter 104, HRS Wages and Hours of Employees on Public Works Law

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Chapter 104, HRS, applies to every public works construction project over \$2,000, regardless of the method of procurement or financing (purchase order, voucher, bid, contract, lease arrangement, warranty, SPRB).

### Rate of Wages for Laborers and Mechanics

- Minimum prevailing wages (basic hourly rate plus fringe benefits), as determined by the Director of Labor and Industrial Relations and published in wage rate schedules, shall be paid to the various classes of laborers and mechanics working on the job site. [§104-2(a), (b), Hawaii Revised Statutes (HRS)]
- If the Director of Labor determines that prevailing wages have increased during the performance of a public works contract, the rate of pay of laborers and mechanics shall be raised accordingly. [§104-2(a) and (b), HRS; §12-22-3(d) Hawaii Administrative Rules (HAR)]

### Overtime

- Laborers and mechanics working on a Saturday, Sunday, or a legal holiday of the State or more than eight hours a day on any other day shall be paid overtime compensation at not less than one and one-half times the basic hourly rate plus the cost of fringe benefits for all hours worked. If the Director of Labor determines that a prevailing wage is defined by a collective bargaining agreement, the overtime compensation shall be at the rates set by the applicable collective bargaining agreement [§§104-1, 104-2(c), HRS; §12-22-4.1, HAR]

### Weekly Pay

- Laborers and mechanics employed on the job site shall be paid their full wages at least once a week, without deduction or rebate, except for legal deductions, within five working days after the cutoff date. [§104-2(d), HRS]

### Posting of Wage Rate Schedules

- Wage rate schedules with the notes for prevailing wages and special overtime rates, shall be posted by the contractor in a prominent and easily accessible place at the job site. A copy of the entire wage rate schedule shall be given to each laborer and mechanic employed under the contract, except when the employee is covered by a collective bargaining agreement. [§104-2(d), HRS]

### Withholding of Accrued Payments

- If necessary, the contracting agency may withhold accrued payments to the contractor to pay to laborers and mechanics employed by the contractor or subcontractor on the job site any difference between the wages required by the public works contract or specifications and the wages received. [§104-2(e), HRS]

### Certified Weekly Payrolls and Payroll Records

- A certified copy of all payrolls shall be submitted weekly to the contracting agency. [§104-3(a), HRS; §12-22-10, HAR]
- The contractor is responsible for the submission of certified copies of the payrolls of all subcontractors. The certification shall affirm that the payrolls are correct and complete, that the wage rates listed are not less than the applicable rates contained in the applicable wage rate schedule, and that the classifications for each laborer or mechanic conform with the work the laborer or mechanic performed. [§104-3(a), HRS; §12-22-10, HAR]
- Payroll records shall be maintained by the contractor and subcontractors for three years after completion of construction. The records shall contain: [§104-3(b), HRS; §12-22-10, HAR]
  - the name and home address of each employee
  - the last four digits of social security number
  - a copy of the apprentice's registration with DLIR
  - the employee's correct classification
  - rate of pay (basic hourly rate + fringe benefits)
  - itemized list of fringe benefits paid
  - daily and weekly hours worked
  - weekly straight time and overtime earnings
  - amount and type of deductions
  - total net wages paid
  - date of payment
- Records shall be made available for examination by the contracting agency, the Department of Labor and Industrial Relations (DLIR), or any of its authorized representatives, who may also interview employees during working hours on the job. [§§104-3(c), 104-22(a), HRS; §12-22-10, HAR]

## Termination of Work on Failure to Pay Wages

- If the contracting agency finds that any laborer or mechanic employed on the job site by the contractor or any subcontractor has not been paid prevailing wages or overtime, the contracting agency may, by written notice to the contractor, terminate the contractor's or subcontractor's right to proceed with the work or with the part of the work in which the required wages or overtime compensation have not been paid. The contracting agency may complete this work by contract or otherwise, and the contractor or contractor's sureties shall be liable to the contracting agency for any excess costs incurred. [§104-4, HRS]

## Apprentices

- Apprentice wage rates apply to contractors who are a party to a bona fide apprenticeship program which has been registered with the DLIR. In order to be paid apprentice rates, apprentices must be parties to an agreement either registered with or recognized as a USDOL nationally approved apprenticeship program by the DLIR, Workforce Development Division, (808) 586-8877, and the apprentice must be individually registered by name with the DLIR. [§12-22-6(1) and (2), HAR]
- The number of apprentices on any public work in relation to the number of journeyworkers in the same craft classification as the apprentices employed by the same employer on the same public work may not exceed the ratio allowed under the apprenticeship standards registered with or recognized by the DLIR. A registered or recognized apprentice receiving the journeyworker rate will not be considered a journeyworker for the purpose of meeting the ratio requirement. [§12-22-6(3), HAR]

## Enforcement

- To ensure compliance with the law, DLIR and the contracting agency will conduct investigations of contractors and subcontractors. If a contractor or subcontractor violates the law, the penalties are: [§104-24, HRS]
  - First Violation Equal to 25% of back wages found due or \$250 per offense up to \$2,500, whichever is greater.
  - Second Violation Equal to amount of back wages found due or \$500 for each offense up to \$5,000, whichever is greater.
  - Third Violation Equal to two times the amount of back wages found due or \$1,000 for each offense up to \$10,000, whichever is greater; and  
**Suspension** from doing any new work on any public work of a governmental contracting agency for three years.
- A violation would be deemed a second violation if it occurs within two years of the **first notification of violation**, and a third violation if it occurs within three years of **the second notification of violation**. [§104-24, HRS; §12-22-25(b), HAR]
- **Suspension:** For a first or second violation, the department shall immediately suspend a contractor who fails to pay wages or penalties until all wages and penalties are paid in full. For a third violation, the department shall penalize and suspend the contractor as described above, **except that if the contractor continues to violate the law, then the department shall immediately suspend the contractor for a mandatory three years. The contractor shall remain suspended until all wages and penalties are paid in full.** [§§104-24, 104-25, HRS]
- **Suspension:** Any contractor who fails to make payroll records accessible or provide requested information within 10 days, or fails to keep or falsifies any required record, shall be assessed a penalty including suspension as provided in Section 104-22(b) and 104-25(a)(3), HRS. [§104-3(c), HRS; §12-22-26, HAR]
- If any contractor interferes with or delays any investigation, the contracting agency shall withhold further payments until the delay has ceased. Interference or delay includes failure to provide requested records or information within ten days, failure to allow employees to be interviewed during working hours on the job, and falsification of payroll records. The department shall assess a penalty of \$10,000 per project, and \$1,000 per day thereafter, for interference or delay. [§104-22(b), HRS; §12-22-26, HAR]
- Failure by the contracting agency to include in the provisions of the contract or specifications the requirements of Chapter 104, HRS, relating to coverage and the payment of prevailing wages and overtime, is not a defense of the contractor or subcontractor for noncompliance with the requirements of this chapter. [§104-2(f), HRS]



For additional information, visit the department's website at <http://labor.hawaii.gov/vsd> or contact any of the following DLIR offices:

Oahu (Wage Standards Division).....(808) 586-8777  
Hawaii Island .....(808) 974-6464  
Maui and Kauai .....(808) 243-5322

**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
**HIGHWAYS DIVISION**  
**HONOLULU, HAWAII**

**P R O P O S A L**

**6/02/98**

**PROPOSAL TO THE  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION**

**PROJECT:** KUAMOO ROAD RESURFACING  
VICINITY OF UH AGRICULTURAL  
EXPERIMENT STATION  
TO END OF KUAMOO ROAD  
District of Kawaihau  
Island of Kauai

**PROJECT NO.:** 580A-01-22M

**COMPLETION TIME:** ONE HUNDRED TWENTY (120) Working days from  
the Start Work Date from the Department.

**DESIGN PROJECT MANAGER:**

**NAME:** Eric I. Fujikawa  
**ADDRESS:** 1720 Haleukana St. Lihue, Kauai, Hawaii 96766  
**PHONE NO.:** (808) 241-3015  
**EMAIL:** eric.i.fujikawa@hawaii.gov  
**FAX NO.:** (808) 241-3011

Director of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Sir:

The undersigned bidder declares the following:

1. It has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.
2. It has not been assisted or represented on this matter by any individual who has, in a State capacity, been involved in the subject matter of this contract within the past two (2) years.
3. It has not and will not, either directly or indirectly offered or given a gratuity (i.e.. an entertainment or gift) to any State or County employee to obtain a contract or favorable treatment under a contract.

The undersigned bidder further agrees to the following:

1. If this proposal is accepted, it shall execute a contract with the Department to provide all necessary labor, machinery, tools, equipment, apparatus and any other means of construction, to do all the work and to furnish all the materials specified in the contract in the manner and within the time therein prescribed in the contract, and that it shall accept in full payment therefore the sum of the unit and/or lump sum prices as set forth in the attached proposal schedule for the actual quantities of work performed and materials furnished and furnish satisfactory security in accordance with Section 103D-324, Hawaii Revised Statutes, within ten (10) days after the award of the contract or within such time as the Director of Transportation may allow after the undersigned has received the contract documents for execution, and is fully aware that non-compliance with the aforementioned terms will result in the forfeiture of the full amount of the bid guarantee required under Section 103D-323, Hawaii Revised Statutes.
2. That the quantities given in the attached proposal schedule are approximate only and are intended principally to serve as a guide in determining and comparing the bids.
3. That the Department does not either expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Director of Transportation, and that all increased or decreased quantities of work shall be performed at the unit prices set forth in the attached proposal schedule except as provided for in the specifications.

4. In case of a discrepancy between unit prices and the totals in said Proposal Schedule, the unit prices shall prevail.
5. Agrees to begin work within ten (10) working days after the date of notification to commence with the work, which date is in the notice to proceed, and shall finish the entire project within the time prescribed.
6. The Director of Transportation reserves the right to reject any or all bids and to waive any defects when in the Director's opinion such rejections or waiver will be for the best interest of the public.

The bidder acknowledges receipt of and certifies that it has completely examined the following listed items: Hawaii Standard Specifications for Road and Bridge Construction, 2005, the Notice to Bidders, the Special Provisions, the Technical Provisions, the Proposal, the Contract and Bond Forms, and the Project Plans.

In accordance with Section 103D-323, Hawaii Revised Statutes, this proposal is accompanied with a bid security in the amount of 5% of the total amount bid, in the form checked below. (Check applicable bid security submitted with bid.)

\_\_\_\_\_ Surety Bid Bond (Use standard form),

\_\_\_\_\_ Cash,

\_\_\_\_\_ Cashier's Check,

\_\_\_\_\_ Certified Check, or

\_\_\_\_\_ \_\_\_\_\_  
(Fill in other acceptable security.)

The undersigned bidder acknowledges receipt of any addendum issued by the Department by recording in the space below the date of receipt.

Addendum No. 1 \_\_\_\_\_ Addendum No. 3 \_\_\_\_\_

Addendum No. 2 \_\_\_\_\_ Addendum No. 4 \_\_\_\_\_

In accordance with Section 103D-302, Hawaii Revised Statutes, the undersigned as bidder has listed the name of each person or firm, who will be engaged by the bidder on the project as Joint Contractor or Subcontractor and the nature of work to be done by each. It is understood that failure to comply with the aforementioned requirements may be cause for rejection of the bid submitted.

	<u>Name of Subcontractor</u>	<u>Nature and Scope of Work</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____

	<u>Name of Joint contractor</u>	<u>Nature and Scope of Work</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____

("None" or if left blank indicates no Subcontractor or Joint Contractor; if more space is needed, attach additional sheets.)

The undersigned hereby certifies that the bid prices contained in the attached proposal schedule have been carefully checked and are submitted as correct and final.

This declaration is made with the understanding that the undersigned is subject to the penalty of perjury under the laws of the United States and is in violation of the Hawaii Penal Code, Section 710-1063, unsworn falsification to authorities, of the Hawaii Revised Statutes, for knowingly rendering a false declaration.

\_\_\_\_\_  
Bidder

By \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
Email Address

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contact Person (If different from above.)

\_\_\_\_\_  
Phone Number and Email Address

NOTE:

If bidder is a CORPORATION, the legal name of the corporation shall be set forth above, the corporate seal affixed, together with the signature(s) of the officer(s) authorized to sign contracts for the corporation. Please attach to this page current (not more than six (6) months old) evidence of the authority of the officer(s) to sign for the corporation.

If bidder is a PARTNERSHIP, the true name of the partnership shall be set forth above, with the signature(s) of the general partner(s). Please attach to this page current (not more than six (6) months old) evidence of the authority of the partner authorized to sign for the partnership.

If bidder is an INDIVIDUAL, the bidder's signature shall be placed above.

If signature is by an agent, other than an officer of a corporation or a partner of a partnership, a POWER OF ATTORNEY must be on file with the Department before opening bids or submitted with the bid. Otherwise, the Department may reject the bid as irregular and unauthorized.

## PREFERENCES

Bidders agree that preferences shall be taken into consideration to determine the low bidder in accordance with said Sections and the rules promulgated, however, the award of contract will be in the amount of the bid offered exclusive of any preferences.

### **A. HAWAII PRODUCTS PREFERENCE**

In accordance with ACT 174, SLH 2022, effective June 27, 2022, Hawaii Products Preference shall not apply to solicitations for public works construction. Therefore, the Hawaii Products Preference shall not apply to this project.

### **B. APPRENTICESHIP PROGRAMS PREFERENCE**

In accordance with ACT 17, SLH 2009 – Apprenticeship Program, a 5% bid adjustment for bidders that are parties to apprenticeship agreements pursuant to Hawaii Revised Statutes (HRS) Section 103-55.6 may be applied to the bidder's price for evaluation purposes.

Any bidder seeking this preference must be a party to an apprenticeship agreement registered with the Department of Labor and Industrial Relations at the time the offer is made for each apprenticeable trade the bidder will employ to construct the public works projects for which the offer is being made.

The bidder is responsible for complying with all submission requirements for registration of its apprenticeship program before requesting the preference.

**( ) Yes, I wish to be considered for the Apprenticeship Programs Preference. I have included Certification Form(s) 1 with my bid.**

### **C. RECYCLED PRODUCT PREFERENCE**

Recycled product preference shall not apply to this proposal.

**PROPOSAL SCHEDULE**

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
201.0100	Clearing and Grubbing	2,500	SY	\$ _____	\$ _____
203.0100	Roadway Excavation	120	CY	\$ _____	\$ _____
203.0200	Borrow Excavated Material	100	CY	\$ _____	\$ _____
209.0100	Installation, Maintenance, Monitoring, and Removal of BMP	LS	LS	LS	\$ _____
209.0200	Additional Water Pollution, Dust, and Erosion Control	FA	FA	FA	\$ <u>50,000.00</u>
301.0100	Hot Mix Asphalt Base Course	400	TN	\$ _____	\$ _____
304.0100	Aggregate Base Course	1,400	CY	\$ _____	\$ _____
305.0100	Aggregate Subbase Course	2,000	CY	\$ _____	\$ _____
401.0410	PMA Pavement Mix No. IV (PG 64E-22)	2,600	TN	\$ _____	\$ _____
401.0900	Pavement Smoothness Incentive	Allow	Allow	Allow	\$ <u>1,900.00</u>
414.0110	Excavation of Weakened Pavement Areas	200	CY	\$ _____	\$ _____
415.0110	Cold Planing of Existing Pavement	18,500	SY	\$ _____	\$ _____
603.0100	Clean Existing Culverts	FA	FA	FA	\$ <u>20,000.00</u>

**PROPOSAL SCHEDULE**

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
606.2066	Guardrail, 31-Inch Strong Post Midwest Guardrail System with 8-Foot Post and No Offset Block	225	LF	\$ _____	\$ _____
606.5000	Terminal Section, MSKT-SP-MGS, SoftStop, Max Tension or Approved Equal	4	EA	\$ _____	\$ _____
629.1012	Double 4-Inch Pavement Striping (Tape, Type II or Thermoplastic Extrusion)	9,800	LF	\$ _____	\$ _____
629.1022	6-Inch Pavement Striping (Tape, Type II or Thermoplastic Extrusion)	19,600	LF	\$ _____	\$ _____
629.1052	12-Inch Pavement Striping (Tape, Type III or Thermoplastic Extrusion)	12	LF	\$ _____	\$ _____
629.2020	Type C Pavement Marker	980	EA	\$ _____	\$ _____
629.2030	Type D Pavement Marker	1960	EA	\$ _____	\$ _____
629.2040	Type F Pavement Marker	2	EA	\$ _____	\$ _____
631.0100	Regulatory Sign (10 Sq. Ft. or Less) with Post	3	EA	\$ _____	\$ _____
631.0120	Regulatory Sign (More Than 10 Sq. Ft.) with Posts	2	EA	\$ _____	\$ _____
631.0200	Warning Sign (10 Sq. Ft. or Less) with Post	16	EA	\$ _____	\$ _____
631.0210	Warning Sign (10 Sq. Ft. or Less) without Post	3	EA	\$ _____	\$ _____

**PROPOSAL SCHEDULE**

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
631.0400	Supplemental Plaque	5	EA	\$ _____	\$ _____
632.0120	Reflector Marker (RM-3) with Steel Post	6	EA	\$ _____	\$ _____
632.0122	Reflector Marker (RM-3) with Flexible Post	10	EA	\$ _____	\$ _____
632.0500	Milepost Marker with Post (Bi-Directional)	4	EA	\$ _____	\$ _____
632.1010	Type II Object Marker (OM2-2H)	4	EA	\$ _____	\$ _____
632.1050	Type V Object Marker (OM5)	21	EA	\$ _____	\$ _____
636.1000	Additional E-Construction Programs, Additional Licenses or Additional Equipment	FA	FA	FA	\$ <u>10,000.00</u>
638.1010	Gutter, Type 2 (61614)	400	LF	\$ _____	\$ _____
638.1020	Gutter, Modified Type 2 (61212)	690	LF	\$ _____	\$ _____
641.0100	Hydro-Mulch Seeding	2,500	SY	\$ _____	\$ _____
643.0110	Maintenance of Existing Landscape Areas	FA	FA	FA	\$ <u>30,000.00</u>
645.1000	Traffic Control	LS	LS	LS	\$ _____
645.2000	Additional Police Officers, Additional Traffic Control Devices, and Additional Advertisements	FA	FA	FA	\$ <u>50,000.00</u>

**PROPOSAL SCHEDULE**

ITEM NO.	ITEM	APPROX. QUANTITY	UNIT	UNIT PRICE	AMOUNT
648.1000	Field-Posted Drawings	LS	LS	LS	\$ _____
671.1000	Protection of Threatened and Endangered Species	FA	FA	FA	\$ <u>10,000.00</u>
699.1000	Mobilization (Not to Exceed 6% of the Sum of All Items Excluding the Bid Price of this Item)	LS	LS	LS	\$ _____

Sum of All Items ..... \$ \_\_\_\_\_

- 1.0 Bids shall include all Federal, State, County and other applicable taxes and fees.
- 2.0 The TOTAL AMOUNT FOR COMPARISON OF BIDS shall be used to determine the lowest possible bidder.
- 3.0 Bidders shall complete all unit prices and amounts. Failure to do so may be grounds for rejection of bid.
- 4.0 If a discrepancy occurs between unit bid price and the bid price, the unit bid price shall govern.
- 5.0 Completed Proposal file shall be uploaded into HlePRO prior to bid opening date and time. All other required confidential or proprietary document shall be uploaded separately.

1 **PROPOSAL SCHEDULE**

2  
3 The bidder is directed to Subsection 105.16 – Subcontracts.

4  
5 The bidder's attention is directed to Section 699 - Mobilization for the  
6 limitation of the amount bidders are allowed to bid.

7  
8 If the bid price for any proposal item having a maximum allowable bid  
9 indicated therefore in any of the contract documents is in excess of such a  
10 maximum amount, the bid price for such proposal item shall be adjusted to reflect  
11 the limitation thereon. The comparison of bids to determine the successful  
12 bidder and the amount of contract to be awarded shall be determined after such  
13 adjustments are made, and such adjustments shall be binding upon the bidder.

14  
15 The bidder is directed to Section 717 – Cullet and Cullet-Made Materials  
16 regarding recycling of waste glass.

17  
18

# SURETY BID BOND

Bond No. \_\_\_\_\_

KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_  
(Full name or legal title of offeror)

as Offeror, hereinafter called the Principal, and

\_\_\_\_\_  
(Name of bonding company)

as Surety, hereinafter called Surety, a corporation authorized to transact business as a  
Surety in the State of Hawaii, are held and firmly bound unto

\_\_\_\_\_  
(State/county entity)

as Owner, hereinafter called Owner, in the penal sum of

\_\_\_\_\_  
(Required amount of bid security)

Dollars (\$ \_\_\_\_\_), lawful money of the United States of  
America, for the payment of which sum well and truly to be made, the said Principal and  
the said Surety bind ourselves, our heirs, executors, administrators, successors and  
assigns, jointly and severally, firmly by these presents.

## WHEREAS:

The Principal has submitted an offer for \_\_\_\_\_

\_\_\_\_\_  
(Project by number and brief description)

## NOW, THEREFORE:

The condition of this obligation is such that if the Owner shall reject said offer, or  
in the alternate, accept the offer of the Principal and the Principal shall enter into a  
contract with the Owner in accordance with the terms of such offer, and give such bond  
or bonds as may be specified in the solicitation or Contract Documents with good and  
sufficient surety for the faithful performance of such Contract and for the prompt  
payment of labor and material furnished in the prosecution thereof as specified in the  
solicitation then this obligation shall be null and void, otherwise to remain in full force  
and effect.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

(Seal) \_\_\_\_\_  
Name of Principal (Offeror)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal) \_\_\_\_\_  
Name of Surety

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**STATE OF HAWAII**  
**DEPARTMENT OF TRANSPORTATION**  
**HONOLULU, HAWAII**

**FORMS**

**Contents**

**Contract**

**Performance Bond (Surety)**

**Performance Bond**

**Labor and Material Payment Bond (Surety)**

**Labor and Material Payment Bond**

**Chapter 104 Compliance Certificate**

**Certification of Compliance for Employment of State Residents**

# C O N T R A C T

THIS AGREEMENT, made this \_\_\_\_\_ day \_\_\_\_\_ 20\_\_\_\_\_, by and between the STATE OF HAWAII, by its Director of Transportation, hereinafter referred to as "STATE," and \_\_\_\_\_ whose business and/or post office address is \_\_\_\_\_

\_\_\_\_\_ hereafter referred to as "CONTRACTOR":

WITNESSETH: That for and in consideration of the payments hereinafter mentioned, the CONTRACTOR hereby covenants and agrees with the STATE to complete in place, furnish and pay for all labor and materials necessary for

or such a part thereof as shall be required by the STATE, the total amount of which labor, material and construction shall be computed at the unit and/or lump sum prices set forth in the attached proposal schedule and shall be the sum of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_) as follows:

which sum shall be provided from the following fund(s):

all in accordance with the specifications, the special provisions, if any, the notice to bidders, the instructions to bidders, the proposal, and plans for \_\_\_\_\_, on file in the office of the Director of Transportation. These documents, together with all alterations, amendments, and additions thereto and deductions therefrom, are attached hereto or incorporated herein by reference and made a part of this contract.

The CONTRACTOR hereby covenants and agrees to complete such construction within \_\_\_\_\_ ( \_\_\_\_\_ ) working days from the date indicated in the notice to proceed from the STATE subject, however, to such extensions as may be provided for under the specifications.

For and in consideration of the covenants, undertaking and agreements of the CONTRACTOR herein set forth and upon the full and faithful performance thereof by the CONTRACTOR, the STATE hereby agrees to pay the CONTRACTOR the sum of \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ ) in lawful money, but not more than such part of the same as is actually earned according to the STATE'S determination of the actual quantities of work performed and materials furnished by the CONTRACTOR at the unit or lump sum prices set forth in the attached proposal schedule. Such payment, including any extras, shall be made, subject to such additions or deductions hereto or hereafter made in the manner and at the time prescribed in the specifications and this contract. In any event, extras shall not exceed \_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_ ) in lawful money and shall be provided from the following fund(s):

Where Federal funds are involved, it is covenanted and agreed by and between the parties hereto that the sums of

shall be paid out of the applicable Federal funds, and that this contract shall be construed to be an agreement to pay said sums to the Contractor only out of the aforesaid Federal funds if and when such Federal funds shall be received from the Federal Government, and that this contract shall not be construed to be a general agreement to pay said portions at all events out of any funds other than those which may be so received from the Federal Government; provided, that if the Federal share of the cost of the project is not immediately forthcoming from the Federal Government, the STATE may advance the CONTRACTOR the anticipated Federal reimbursement of the cost of the completed portions of the work from funds which have been appropriated by the STATE for its pro rata share.

The CONTRACTOR further agrees to execute the attached non-gratuity affidavit form prior to payment of the final estimate by the STATE.

All words used herein in the singular number shall extend to and include the plural. All words used in the plural number shall extend to and include the singular. The use of any gender shall extend to and include all genders.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be duly executed the day and year first above written.

STATE OF HAWAII

By \_\_\_\_\_  
Director of Transportation

By \_\_\_\_\_

By \_\_\_\_\_

APPROVED AS TO FORM

\_\_\_\_\_  
Deputy Attorney General

**PERFORMANCE BOND (SURETY)**  
(6/21/07)

**KNOW TO ALL BY THESE PRESENTS:**

That \_\_\_\_\_,  
*(Full Legal Name and Street Address of Contractor)*

as Contractor, hereinafter called Principal, and \_\_\_\_\_  
\_\_\_\_\_  
*(Name and Street Address of Bonding Company)*

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a  
surety in the State of Hawaii, are held and firmly bound unto the \_\_\_\_\_,  
*(State/County Entity)*

its successors and assigns, hereinafter called Obligee, in the amount of \_\_\_\_\_

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_), to which payment Principal and Surety bind themselves,  
their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by  
these presents.

**WHEREAS**, the above-bound Principal has signed a Contract with Obligee on  
\_\_\_\_\_, for the following project: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

hereinafter called Contract, which Contract is incorporated herein by reference and made a part  
hereof.

**NOW THEREFORE**, the condition of this obligation is such that:

If the Principal shall promptly and faithfully perform, and fully complete the Contract in  
strict accordance with the terms of the Contract as said Contract may be modified or amended  
from time to time; then this obligation shall be void; otherwise to remain in full force and effect.

Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

In the event of Default by the Principal, of the obligations under the Contract, then after written Notice of Default from the Oblige to the Surety and the Principal and subject to the limitation of the penal sum of this bond, Surety shall remedy the Default, or take over the work to be performed under the Contract and complete such work, or pay moneys to the Oblige in satisfaction of the surety's performance obligation on this bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Principal (Contractor)

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**\*ALL SIGNATURES MUST BE ACKNOWLEDGED  
BY A NOTARY PUBLIC**

# PERFORMANCE BOND

## KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_  
*(full legal name and street address of Contractor)*

as Contractor, hereinafter called Contractor, is held and firmly bound unto the

\_\_\_\_\_  
*(State/County entity)*

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_),  
*(Dollar amount of Contract)*

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- Legal Tender;**
- Share Certificate** unconditionally assigned to or made payable at sight to \_\_\_\_\_  
Description: \_\_\_\_\_;
- Certificate of Deposit, No.** \_\_\_\_\_, dated \_\_\_\_\_  
issued by \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Cashier's Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Teller's Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Treasurer's Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Official Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Certified Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

**WHEREAS:**

The Contractor has by written agreement dated \_\_\_\_\_ entered into a contract with Obligee for the following Project: \_\_\_\_\_

\_\_\_\_\_ hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

**NOW THEREFORE,**

The Condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, and shall deliver the Project to the Obligee, or to its successors or assigns, fully completed as in the Contract specified and free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

**AND IT IS HEREBY STIPULATED AND AGREED** that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal) \_\_\_\_\_  
Name of Contractor

\* \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

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ACKNOWLEDGED BY A NOTARY PUBLIC

**LABOR AND MATERIAL PAYMENT BOND (SURETY)**  
(6/21/07)

**KNOW TO ALL BY THESE PRESENTS:**

That \_\_\_\_\_,  
*(Full Legal Name and Street Address of Contractor)*

as Contractor, hereinafter called Principal, and \_\_\_\_\_  
\_\_\_\_\_  
*(Name and Street Address of Bonding Company)*

as Surety, hereinafter called Surety, a corporation(s) authorized to transact business as a surety in the State of Hawaii, are held and firmly bound unto the \_\_\_\_\_,  
*(State/County Entity)*

its successors and assigns, hereinafter called Oblige, in the amount of \_\_\_\_\_

\_\_\_\_\_ Dollars (\$\_\_\_\_\_), to which payment Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the above-bound Principal has signed Contract with the Oblige on \_\_\_\_\_ for the following project: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

**NOW THEREFORE**, the condition of this obligation is such that if the Principal shall promptly make payment to any Claimant, as hereinafter defined, for all labor and materials supplied to the Principal for use in the performance of the Contract, then this obligation shall be void; otherwise to remain in full force and effect.

1. Surety to this Bond hereby stipulates and agrees that no changes, extensions of time, alterations, or additions to the terms of the Contract, including the work to be performed thereunder, and the specifications or drawings accompanying same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, extensions of time, alterations, or additions, and agrees that they shall become part of the Contract.

2. A "Claimant" shall be defined herein as any person who has furnished labor or materials to the Principal for the work provided in the Contract.

Every Claimant who has not been paid amounts due for labor and materials furnished for work provided in the Contract may institute an action against the Principal and its Surety on this bond at the time and in the manner prescribed in Section 103D-324, Hawaii Revised Statutes, and have the rights and claims adjudicated in the action, and judgment rendered thereon; subject to the Obligee's priority on this bond. If the full amount of the liability of the Surety on this bond is insufficient to pay the full amount of the claims, then after paying the full amount due the Obligee, the remainder shall be distributed pro rata among the claimants.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal)

\_\_\_\_\_  
Name of Principal (Contractor)

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

(Seal)

\_\_\_\_\_  
Name of Surety

\*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

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BY A NOTARY PUBLIC**

# LABOR AND MATERIAL PAYMENT BOND

## KNOW ALL BY THESE PRESENTS:

That we, \_\_\_\_\_  
(full legal name and street address of Contractor)

as Contractor, hereinafter called Contractor, is held and firmly bound unto \_\_\_\_\_  
(State/County entity)

its successors and assigns, as Obligee, hereinafter called Obligee, in the amount  
\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_),  
(Dollar amount of Contract)

lawful money of the United States of America, for the payment of which to the said Obligee, well and truly to be made, Contractor binds itself, its heir, executors, administrators, successors and assigns, firmly by these presents. Said amount is evidenced by:

- Legal Tender;**
- Share Certificate** unconditionally assigned to or made payable at sight to \_\_\_\_\_  
Description: \_\_\_\_\_
- Certificate of Deposit, No.** \_\_\_\_\_, dated \_\_\_\_\_  
issued by \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Cashier's Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Teller's Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Treasurer's Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Official Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
drawn on \_\_\_\_\_  
a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;
- Certified Check No.** \_\_\_\_\_, dated \_\_\_\_\_  
accepted by a bank, savings institution or credit union insured by the Federal Deposit Insurance Corporation or the National Credit Union Administration, payable at sight or unconditionally assigned to \_\_\_\_\_;

**WHEREAS:**

The Contractor has by written agreement dated \_\_\_\_\_ entered into a contract with Obligee for the following Project: \_\_\_\_\_

hereinafter called Contract, which Contract is incorporated herein by reference and made a part hereof.

**NOW THEREFORE,**

The condition of this obligation is such that, if Contractor shall promptly and faithfully perform the Contract in accordance with, in all respects, the stipulations, agreements, covenants and conditions of the Contract as it now exists or may be modified according to its terms, free from all liens and claims and without further cost, expense or charge to the Obligee, its officers, agents, successors or assigns, free and harmless from all suits or actions of every nature and kind which may be brought for or on account of any injury or damage, direct or indirect, arising or growing out of the doing of said work or the repair or maintenance thereof or the manner of doing the same or the neglect of the Contractor or its agents or servants or the improper performance of the Contract by the Contractor or its agents or servants or from any other cause, then this obligation shall be void; otherwise it shall be and remain in full force and effect.

**AND IT IS HEREBY STIPULATED AND AGREED** that suit on this bond may be brought before a court of competent jurisdiction without a jury, and that the sum or sums specified in the said Contract as liquidated damages, if any, shall be forfeited to the Obligee, its successors or assigns, in the event of a breach of any, or all, or any part of, covenants, agreements, conditions, or stipulations contained in the Contract or in this bond in accordance with the terms thereof.

**AND IT IS HEREBY STIPULATED AND AGREED** that this bond shall inure to the benefit of any and all persons entitled to file claims for labor performed or materials furnished in said work so as to give any and all such persons a right of action as contemplated by Sections 103D-324(d) and 103D-324(e), Hawaii Revised Statutes.

The amount of this bond may be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payments of mechanics' liens which may be filed of record against the Project, whether or not claim for the amount of such lien be presented under and against this bond.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

(Seal) \_\_\_\_\_  
Name of Contractor

\* \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

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ACKNOWLEDGED BY A NOTARY PUBLIC

CHAPTER 104, HRS COMPLIANCE CERTIFICATE

The undersigned bidder does hereby certify to the following:

1. Individuals engaged in the performance of the contract on the job site shall be paid:

A. Not less than the wages that the director of labor and industrial relations shall have determined to be prevailing for corresponding classes of laborers and mechanics employed on public works projects; and

B. Overtime compensation at one and one-half times the basic hourly rate plus fringe benefits for hours worked on Saturday, Sunday, or a legal holiday of the State or in excess of eight hours on any other day.

2. All applicable laws of the federal and state governments relating to workers' compensation, unemployment compensation, payment of wages, and safety shall be fully complied with.

DATED at Honolulu, Hawaii, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
«CONTRACTOR»  
Name of Corporation, Partnership, or Individual

\_\_\_\_\_  
Signature and Title of Signer

Notary Seal  
NOTARY ACKNOWLEDGEMENT

Subscribed and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_  
Notary signature \_\_\_\_\_  
Notary public, State of \_\_\_\_\_  
My Commission Expires: \_\_\_\_\_

Notary Seal  
NOTARY CERTIFICATION

Doc. Date: \_\_\_\_\_ #Pages: \_\_\_\_\_  
Notary Name: \_\_\_\_\_ Circuit \_\_\_\_\_  
Doc. Description: \_\_\_\_\_  
\_\_\_\_\_  
Notary signature \_\_\_\_\_  
Date \_\_\_\_\_

**PROVISIONS TO BE INCLUDED IN  
CONSTRUCTION PROCUREMENT SOLICITATIONS**

1. Definitions for terms used in HRS Chapter 103B as amended by Act 192, SLH 2011:
  - a. "Contract" means contracts for construction under 103D, HRS.
  - b. "Contractor" has the same meaning as in Section 103D-104, HRS, provided that "contractor" includes a subcontractor where applicable.
  - c. "Construction" has the same meaning as in Section 103D-104, HRS.
  - d. "General Contractor" means any person having a construction contract with a governmental body.
  - e. "Procurement Officer" has the same meaning as in Section 103D-104, HRS.
  - f. "Resident" means a person who is physically present in the State of Hawai'i at the time the person claims to have established the person's domicile in the State of Hawai'i and shows the person's intent is to make Hawai'i the person's primary residence.
  - g. "Shortage trade" means a construction trade in which there is a shortage of Hawai'i residents qualified to work in the trade as determined by the Department of Labor and Industrial Relations.
  
2. HRS Chapter 103B as amended by Act 192, SLH 2011--Employment of State Residents Requirements:
  - a. A Contractor awarded a contract shall ensure that Hawai'i residents comprise not less than 80% of the workforce employed to perform the contract work on the project. The 80% requirement shall be determined by dividing the total number of hours worked on the contract by Hawai'i residents, by the total number of hours worked on the contract by all employees of the Contractor in the performance of the contract. The hours worked by any Subcontractor of the Contractor shall count towards the calculation for this section. The hours worked by employees within shortage trades, as determined by the Department of Labor and Industrial Relations (DLIR), shall not be included in the calculation for this section.

- b. Prior to award of a contract, an Offeror/Bidder may withdraw an offer/bid without penalty if the Offeror/Bidder finds that it is unable to comply with HRS Chapter 103B as amended by Act 192, SLH 2011.
- c. Prior to starting any construction work, the Contractor shall submit the subcontract dollar amount for each of its Subcontractors.
- d. The requirements of this section shall apply to any subcontract of \$50,000 or more in connection with the Contractor; that is, such Subcontractors must also ensure that Hawai'i residents comprise not less than 80% of the Subcontractor's workforce used to perform the subcontract.
- e. The Contractor and any Subcontractor whose subcontract is \$50,000 or more shall comply with the requirements of HRS Chapter 103B as amended by Act 192, SLH 2011.
  - 1) Certification of compliance shall be made in writing under oath by an officer of the General Contractor and applicable Subcontractors and submitted with the final payment request.
  - 2) The certification of compliance shall be made under oath by an officer of the company by completing a "Certification of Compliance for Employment of State Residents" form and executing the Certificate before a licensed notary public.
  - 3) In addition to the certification of compliance as indicated above, the Contractor and Subcontractors shall maintain records such as certified payrolls for laborers and mechanics who performed work at the site and time sheets for all other employees who performed work on the project. These records shall include the names, addresses and number of hours worked on the project by all employees of the Contractor and Subcontractor who performed work on the project to validate compliance with HRS Chapter 103B as amended by Act 192, SLH 2011. The Contractor and Subcontractors shall retain these records and provide access to the State for a minimum period of four (4) years after the final payment, except that if any litigation, claim, negotiation, investigation, audit or other action involving the records has been started before the expiration of the four-year period, the Contractor and Subcontractors shall retain the records until completion of the action and resolution of all issues that arise from it, or until the end of the four-year period, whichever occurs later. Furthermore, it shall be the Contractor's responsibility to enforce compliance with this provision by any Subcontractor.

- f. A General Contractor or applicable Subcontractor who fails to comply with this section shall be subject to any of the following sanctions:
- 1) With respect to the General Contractor, withholding of payment on the contract until the Contractor or its Subcontractor complies with HRS Chapter 103B as amended by Act 192, SLH 2011.
  - 2) Proceedings for debarment or suspension of the Contractor or Subcontractor under Hawai'i Revised Statutes §103D-702.
3. Conflict with Federal Law: This section shall not apply if the application of this section is in conflict with any federal law, or if the application of this section will disqualify the State from receiving Federal funds or aid.

**CERTIFICATION OF COMPLIANCE  
FOR  
EMPLOYMENT OF STATE RESIDENTS  
HRS CHAPTER 103B, AS AMENDED BY ACT 192, SLH 2011**

Project Title: \_\_\_\_\_

Agency Project No: \_\_\_\_\_

Contract No.: \_\_\_\_\_

As required by Hawai'i Revised Statutes Chapter 103B, as amended by Act 192, Session Laws of Hawaii 2011--Employment of State Residents on Construction Procurement Contracts, I hereby certify under oath, that I am an officer of \_\_\_\_\_ and  
(Name of Contractor or Subcontractor Company)  
for the Project Contract indicated above, \_\_\_\_\_ was in  
(Name of Contractor or Subcontractor Company)  
compliance with HRS Chapter 103B, as amended by Act 192, SLH 2011, by employing a workforce of which not less than eighty percent are Hawai'i residents, as calculated according to the formula in the solicitation, to perform this Contract.

I am an officer of the **Contractor** for this contract.

I am an officer of a **Subcontractor** for this contract.

*CORPORATE SEAL*

\_\_\_\_\_  
(Name of Company)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Print Title)

Subscribed and sworn to me before this  
\_\_\_\_ day of \_\_\_\_\_, 2011.

Doc. Date: \_\_\_\_\_ # of Pages \_\_\_\_\_ 1<sup>st</sup> Circuit

Notary Name: \_\_\_\_\_

Doc. Description: \_\_\_\_\_

\_\_\_\_\_  
Notary Public, 1<sup>st</sup> Circuit, State of Hawai'i  
My commission expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Signature

\_\_\_\_\_  
Date

NOTARY CERTIFICATION