

Memorandum of Agreement (MOA) Stipulation 15 – Terrain Model
Queen Ka’ahumanu Highway Phase 2
Kailua-Kona, Hawai’i

Friday, February 10, 2017
RMTc Kailua-Kona Field Office
Kalepa Business Center, 73-5574 Maiiau Street, Suite 11-B

10:00 am – 12:30 am

Attendees (See Attached Sign-In List)

Hawai’i Department of Transportation (HDOT)

Sterling Chow, P.E., Assistant District Engineer
Hawai’i District
Natasha Soriano, P.E., Project Manager

Federal Highway Administration (FHWA)

By Teleconference
Lisa Powell, P.E., Engineer
Meesa Otani, Planner

Advisory Council on Historic Preservation (ACHP)

By Teleconference
Mary Ann Naber, Senior Program Analyst/
FHWA Liaison

Project Consultant, R. M. Towill Corp. (RMTc)

Jason Tateishi, P.E., Project Coordinator
Stacy Armstrong, P.E., Project Coordinator
James Yamamoto, P.E., Vice-President
Brian Takeda, Planning Project Coordinator

Native Hawaiian Organizations (NHOs)

Fred Cachola
Isaac "Paka" Harp
Hannah Kihalani Springer
Cynthia Nazara
Maurice Kahawaii
Luana Keana’aina
Nainoa Perry
Russell Paio

Office of Hawaiian Affairs (OHA)

By Teleconference
Lauren Morawski

National Park Service (NPS)

Rae Godden, Chief of Interpretation
Jeff Zimpfer
Jon Jokiel
Rick Gmirkin
Mandy Johnson-Campbell

Agenda

1. Review MOA Stipulation 15, Terrain Model
2. Incorporation of topographic relief, traditional place names, historic trails, settlement locations, interpretive signs, and other important landmarks, to be determined
3. Review of area of inclusion: Lands of Kekaha (between Kailua and Anaeho’omalua). Scale and transportability of the model
4. Custodianship of the Terrain Model

Handouts

See Attachments

Meeting Summary

1. Prior to the start of the meeting Fred Cachola requested and offered a pule to help guide the proceeding. Fred next reminded everyone that there are still outstanding and important issues that need to be addressed, and that while the day's meeting to discuss the Terrain Model is a step in the right direction, that progress on HDOT updating the NHOs on the destruction of sacred sites has been too slow, and that the group still does not know what is going to be done to address it.
2. Sterling Chow acknowledged this and noted that there were several tasks that needed to be completed since the group last met in December 2016. The tasks included getting the project archaeologists to complete surveys of the area damaged and to extend the survey to investigate if there are any new sites not previously identified, due to work occurring in new areas. This resulted in the preparation of new archaeological site work that when completed, needed to be reviewed by FHWA, along with HDOT's Site Assessment. The archaeological information was since completed and has now been transmitted to the State Historic Preservation Division (SHPD) for review and to render a determination of effect. When SHPD completes its review, HDOT will report this to the NHOs and participants who requested this update.
3. Mary Ann Naber noted that the FHWA and HDOT are not in conformance with the MOA and asked that FHWA and HDOT convene a special meeting to describe the status of the MOA stipulations to all consulting parties. This should be done as soon as possible. Mary Ann added that she does not want to derail the process, but that this information should be provided. Fred agreed with Mary Ann and stated that since October 2016, he has reminded HDOT that a number of the stipulations were still not completed and asked for the status.
4. Paka asked that when FHWA and HDOT have this separate meeting with the Queen Ka'ahumanu Highway consulting parties that a plan of action be identified so everyone knows what to expect in the future. He asked for deadlines and goals. Sterling acknowledged that he will consult with the administration for the meeting so HDOT can provide the status of several of the MOA stipulations.
5. Sterling asked the group on what day the meeting should be held; maybe Saturday? The group indicated their preference for a weekday as some of them already work on a Saturday. Mary Ann further indicated that if a meeting is not possible that at least a conference call should be done. Lisa Powell noted her agreement.
6. Fred added that the Section 106 MOA began over four years ago and the Terrain Model was proposed because the NHOs were concerned that the knowledge of the region would be diminished by the Queen Ka'ahumanu Highway, Phase 2 project. The Terrain Model is supposed to show how the physical and cultural landscape was before it was destroyed by modern construction. It is a part of our Hawaiian Legacy.
7. Question – How far away from the highway will the Terrain Model show? Stacy Armstrong responded that it shows the entire Kekaha Region, from the sea to the

mauka boundaries of the ahupua'a. Members of the group added that they want those looking at the model to know the history and culture of the region before it was disturbed over a hundred years ago. Stacy responded that the model will incorporate and show all ahupua'a within the Kekaha Region. Sterling added that this is the purpose of today's meeting to discuss the scale of the model and how the features identified by the group would be provided.

8. Stacy next provided photographs of model examples to show what could be done. She asked the group to consider the size of the model, details of the content, and portability. Fred said that size is very important in order that the model can be taken to schools or other location events to serve as an educational tool and added that the custodianship of the model would be with the Hawai'i Pacific Parks Association (HPPA).
9. Paka added that he does not want the size of the model reduced with a loss of detail. Stacy acknowledged that the size of the model would be consistent with what the group agrees to.
10. A comment was made that the details of how the model is produced should be discussed and that a digital or 3D model help with this understanding.
11. Fred suggested that the model be similar to the Kaloko-Honokōhau National Historical Park example provided in the photograph showing a terrain model on a map table. The table appeared to have room for additional space that could be used for materials or documents.
12. A comment was made that the map should include Honokōhau, which is missing on the working map copy provided by Stacy. Another comment was that the map should show a marine component and the extent of land up to the summit lands. Stacy confirmed that the Honokōhau area will be included in the map's geographic area, which will contain the boundaries of all ahupua'a in the Kekaha Region.
13. Fred stated that he wants to show the relationship of the highway to the surrounding region to illustrate how the highway has affected cultural resources such as access between the marine and mountain areas of ahupua'a. He also wants to have shown the traditional transportation pathways through the region such as the trails. Fred next asked the group what timeline should be shown. Responses from the group indicated: that lava flows that have occurred over time should be shown; the political jurisdiction of land from the time of Kamehameha IV might be included although western influences would have already been in evidence; and that crown lands should be shown during the period of the Māhele.
14. Comment – Consider coordinating or checking with The Nature Conservancy for information they might have. Also, consider adding natural resource information since that information would lead one to know how the land was used. Anchialine ponds should also be shown if they are of a certain size.

15. Comment – The boundary of the area showing the Kekaha Region are agreed on as depicted by a dotted line. The timeframe to be shown also be up to the Lava Flow of 1859. Rick Gmerkin added that most of the trail system known today comes from the era of 1840 through 1859. It was added that the different eras associated with the trails be distinguished by different colors.
16. Sterling asked the group to describe how the model is intended to be used. Fred stated that the audience for the Terrain Model is broad and feels that the product will be an excellent resource for Hawaiians. He wants the model to convey as much information as possible. Paka added that this should include the historic trails. Hannah Springer said that ahupua'a names should be included. Stacy responded that the trails and ahupua'a boundaries and names will be included.
17. Hannah noted that Chad Wiggins (SIC?) at the The Nature Conservancy should be consulted for ocean contour information and the names for nearshore and offshore water features.
18. Sterling asked for clarification; you want to show the historical boundaries/names of ahupua'a? Rick indicated that he (NPS) has this information. Someone commented that the UH Hilo could also be used as a resource for this project. Fred added that a Francis Choy had done some prior survey work of the area/region before construction in the area and so should also be used for research in the area.
19. Stacy noted that from the group's input that would be enough information to describe the surface features of the terrain and that the addition of text to identify the surface features would need to be developed.
20. After further discussion, the group felt that a digital model should be developed for sharing and review by the group to establish content now that the boundaries of the model are defined. Once the basic shape of the model is established, the group could next move to having other information added to the model.
21. Comment – As the complexity of information is added to the model, the more the portability of the model is challenged. While the size of the physical terrain model is limited, more potential exists with a 3D model. However, it is essential that the boundary of Kekaha shown on the Terrain Model be preserved.
22. Fred agreed to Kekaha as the boundary for the model. The size of the model and the timeframe for its completion is not set, but there is progress being made. After further discussion by the group, it was decided that the Lava Flow of 1859 should be used for the topographic detail.
23. Stacy noted the group comments and performed a preliminary calculation that indicated the dimensions of the model to include the Kekaha Region could be approximately 5 feet by 3.5 feet.

24. Stacy next discussed the how the group process could be focused to incorporate all content items, and how the content becomes a part of the final product. The short list of these features included:
- Topography based on the Lava Flow of 1859
 - Geological features such as terrain and pu'u
 - Plant communities
 - Historical trails that are color coded according to era
25. The group asked for more information about the process for how the model is produced and how the different features are built onto the model. Stacy responded that this would be collected and information such as format, materials, and process would be brought back to the group.
26. Fred added that he wants the use of the model to be maximized in order to be able to take it to testimonies and other events. Taking a physical model to these would be better and more effective than looking at a computer screen. He added that he wants the physical terrain model to have several different sections created depicting all the different features and information that is desired. Sterling said that the objective should be one model. Paka added that the group should remember the content of the model should be based on the language of the stipulation. The NPS noted that they still want to see what is possible.
27. At the request of Stacy, the terrain modeler, Craig Martin, called into the meeting via conference call. Craig indicated that in order to build a historical model, that depending on the era selected, that any changed terrain would have to be digitally redrawn using a computer design program such as AutoCAD, and further that the modification should be based on a topographic map prepared by a land surveyor. NPS noted that the last major land changing event was the Lava Flow of 1859 and that the terrain contours do not appear to have changed by very much so this step might not be needed.
28. A question was raised about how text is added to the model. Craig indicated that the text would be vinyl lettering protected by a spray finish. Fred asked if the finish could be touched, the response was yes. Other information provided by Craig:
- The model would be fabricated in a high density material
 - The model can be cut into sections to make it more portable
 - The model and base would be composed of 30 lbs/ft³ foam and heavy board, and would have an estimated weight of about 60 pounds.
 - The time for construction of the model would be about four weeks.
29. The group discussed the data required to produce the Terrain Model. Fred noted that the group will need more time to think about how the model is intended to be used. It was commented that the HDOT will have its own homework to do and that if the NHOs and NPS find the data layers are too many, then it could be reduced to make the model usable.

30. The group was in general agreement that the maps as provided for the day's meeting are sufficient to serve as a starting point. Fred noted that he wanted to get back to the model builder by the first week in March 2017, if that is possible. This means that as of today the maps provided to the group would need to be used when the group next meets on February 21, Tuesday, at 10:00 am. Fred asked that the meeting venue be changed to accommodate a larger group. NPS offered to help find a larger facility.
31. Additional paper copies of maps were distributed to those present to use and to mark up to show features that should be included.
32. Adjournment: The meeting concluded about 1:07 pm.

Attachments

1. Sign in List (February 10, 2017)
2. Agenda
3. MOA Stipulation 15 – Terrain Model
4. Sample Photograph of Terrain Model: Kaloko-Honokōhau National Historical Park

Attendance Log

Queen Ka'ahumanu Highway Widening, Phase 2

MOA Stipulation 15, Terrain Model

Friday, February 10, 2017

10:00 - 12:30 pm

RMTC Field Office

No.	PRINT Name	Signature	Contact Info.	Notes
1	Jon Jokiel		(808) 329 6881 ext. 1329	Jon-Jokiel emp.s.g
2	RAE GODDEN		640-8990	Rae-Godd emp.s.g
3	JEFF ZIMPFER		Jeff_zimper@nps.gov	emp.s.g
4	Hannah Kihalani Springer		ohiwai@gmail.com	
5	Brian Takeda, RMTC		808-842-1133	
6	Isaac "Paka" Harp		808-756-7379	Paka@SandwichIsle.net rick.guerkin@nps.gov
7	Rick Guerin		808 326 6012	
8	MANDY JOHNSON-CAMPBELL		808-326-6012 x104	
9	FRED CASHOWA		808 753-8896	
10	MAURICE KAHAWAII		325-1973	
11	Natasha Soriano		933-2644	
12	Luana Keana'ane		989-5227	
13	Cynthia Nazara		156-0105	
14	(cynazara@gmail.com)			
15	STERLING CLAW		933-8466	
16	Jason Tateishi		329-4494	
17	Jimmy Yamamoto		842-1133	
18				
19				

Phone: OHA - Lauren
 OHP - Mary Ann Nelson
 FLOWA - Lisa Powell



Agenda

MOA Stipulation 15 – Terrain Model
Queen Ka’ahumanu Highway Widening, Phase 2
Kailua-Kona, Hawai’i

RMTC Kailua-Kona Field Office
Kalepa Business Center, 73-5574 Maiau Street, Suite 11-B
Kailua-Kona, HI 96740
Friday, February 10, 2017, 10:00 am – 12:30 pm

1. Review MOA Stipulation 15, Terrain Model 10:00 – 10:10 am
2. Incorporation of topographic relief, traditional place names, historic trails, settlement locations, interpretive signs, and other important landmarks, to be determined 10:10 – 11:00 am
3. Review of area of inclusion: Lands of Kekaha (between Kailua and Anaehoomalu). Scale and transportability of the model 11:00 – 11:40 am
4. Custodianship of the Terrain Model 11:40 – 12:15 pm
5. Digital Model 12:15 – 12:30 pm

MEMORANDUM OF AGREEMENT

Among the

ADVISORY COUNCIL ON HISTORIC PRESERVATION,
FEDERAL HIGHWAY ADMINISTRATION, and the
HAWAII STATE HISTORIC PRESERVATION OFFICER

Regarding the projects in the vicinity of the
District of North Kona, Island of Hawai'i, State of Hawai'i
which are known as the Queen Ka'ahumanu Highway Intersection
Improvements for the Kaloko-Honokōhau National Historical Park
and the Queen Ka'ahumanu Highway Widening, Kailua to Ke'āhole

STIPULATION 15:

“TERRAIN MODEL. The HDOT shall commission the construction of a terrain model depicting the lands of Kekaha (between Kailua and Anaehoomalu) in consultation with Makani Hou o Kaloko-Honokōhau. The model shall incorporate topographic relief, traditional place names, historic trails, settlement locations, interpretive signs, and other important landmarks, to be determined. The model may be housed at the Kaloko-Honokōhau National Historical Park under the auspices of the Hawai'i Pacific Parks Association. The model shall be of such scale that it can be transported to other locations and be used as a teaching tool. A second digital model will also be developed and include similar information as the terrain model.”



Map Table Dimensions

Height 27"

Length 49.5"

Width 30"

Visitor Center Bookstore

17 ft X 12 ft



