

GENERAL CONSTRUCTION NOTES:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-K(53)	2015	3	117

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ORIGINAL PLAN  
DATE  
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1. The project includes roadway improvements along Kalaniana'ole Highway from Olomana golf Course to Poalima Street. Improvements include road reconstruction, resurfacing and road widening to provide a two-way left-turn lane, left-turn pockets, paved shoulders, sidewalks and landscaping. Other improvement involved with this project include guardrail installation, electrical relocations, public safety and drainage improvements and related improvements.

2. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 104.11 - Utilities and Services, Section 107 - Legal Relations and Responsibility to Public, and Section 645 - Work Zone Traffic Control.

3. The Contractor shall notify the State in writing, two (2) weeks prior to starting paving operations.

4. At the end of each day's work, the Contractor shall remove all equipment and other obstructions to permit free and safe passage of public traffic.

5. The existence and location of underground utilities, manholes, monuments and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. The encountering of other obstacles during the course of the work is possible. The Contractor shall be held liable for any damages incurred to the existing facilities and/or improvements as a result of his operations.

6. The exact locations and limits or areas to be reconstructed and cold planed shall be determined in the field by the Engineer.

7. Preformed Pavement Marking Tape shall be removed prior to resurfacing. Removal shall be by scraping, grinding or other method approved by the Engineer. Payment shall be incidental to Item No. 401.0100 - Hot Mix Asphalt Pavement, Mix No. IV.

8. The Contractor shall remove and dispose of all existing raised pavement markers prior to the overlaying of Asphalt Concrete. This work shall be considered incidental to Item No. 401.0100 - Hot Mix Asphalt Pavement, Mix No. IV.

9. Existing drainage system will be functional at all times during construction. Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to maintain flow. This work shall be considered incidental to the various contract items.

10. Contractor shall provide for access to and from existing side streets and driveways at all times.

11. All saw cutting, tack coat and compacting of subgrade work shall be considered incidental to Item No. 401.0100 - Hot Mix Asphalt Pavement, Mix No. IV, and will not be paid for separately.

12. Initial preparation of shoulder areas shall be done by the Contractor. Shoulder preparation shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable excavated material from roadway reconstruction and cold planing, as shown on the plans and/or as directed by the Engineer. Contractor shall also be responsible for finish rolling and maintaining the shoulders until project completion. This work shall be considered incidental to Item No. 401.0100 - Hot Mix Asphalt Pavement, Mix No. IV.

13. Unprotected pavement drop offs greater than 2" shall not be allowed during non-working hours, except where approved by the Engineer in writing. The Contractor may choose to install steel plate covers or PCB's which shall be considered incidental to the various contract items.

14. Public Notice is required for lane closures. Contractor shall submit notice to the Engineer for approval a minimum of three weeks prior to publication. Pre-approval of notice, with dates left blank, is permissible.

15. Contractor shall maintain at least one paved shoulder free and clear of debris for pedestrian and bicycle traffic at the end of each work day.

16. Temporary striping on cold planed surfaces shall be with paint (tape will not be allowed). Temporary striping on final overlay shall be with temporary tape.

17. Pavement striping shall be done with alkyd-based thermoplastic.

18. Lane closure hours are between 8:30 am and 3:00 pm. Night work may be permitted. If the Contractor elects to perform work at night, a noise variance permit is currently being applied for by the HDOT. The Contractor shall conform to all requirements of the variance permit, which also includes a night work restriction from September 15 through December 15, due to the Newell's Shearwater nesting season.

19. When trench excavation is adjacent to or under existing structures or facilities, the contractor shall be responsible for properly sheeting and bracing the excavation and stabilizing the existing ground to render it safe and secure from possible slides, cave-ins and settlement and for properly supporting existing structures and facilities with beams, struts or under- pinning to fully protect them from damage.

20. Verify and check all dimensions and details shown on the drawings prior to the start of construction. Any discrepancy shall be immediately brought to the attention of the Engineer for direction.

21. No Contractor shall perform any construction activity so as to cause falling rock, soil or debris in any form to fall, slide or flow onto adjoining properties, streets or natural water courses. should such violations occur, the costs incurred for any remedial action shall be payable by the contractor.

22. The underground pipes, cables or ductlines known to exist by the engineer from his search of records are indicated on the plans. The contractor shall verify the locations and depths of the facilities and exercise proper care in excavating in the area. All damaged portions shall be replaced in accordance with the standards and specifications of the affected utility company and shall be the contractors responsibility. Personal injury resulting from contact with existing utilities shall be the contractors responsibility. Wherever connections of new utilities to existing utilities are shown on the plans, the contractor shall expose the existing lines at the proposed connections to verify their locations and depths prior to excavation for new lines.

23. The Contractor shall be responsible for conformance with the applicable provisions of Chapter 54, Water Quality Standards, and Chapter 55, Water Pollution Control, of Title 11, Administrative Rules of the State Department of Health.

24. The Contractor shall notify all agencies to verify the actual locations of all utilities in the project area prior to excavating. the Contractor shall coordinate all work.

25. The Contractor shall restore to their original condition or better, all improvements damaged as a result of the construction, including pavements, embankments, curbs, signs, landscaping, structures, utilities, walls, fences, etc. unless provided for specifically in the proposal.

26. Prior to placement of asphalt concrete base, the exposed subbase or subgrade shall be recompacted to a dense and unyielding condition. The work shall be considered to item No. 401.0100 - Hot Mix Asphalt Pavement, Mix IV.

27. The Contractor shall coordinate the construction of the concrete gutters, driveways and sidewalks to minimize disruptions and allow vehicular access by the end of the work day, either with phased construction or utilizing high-early strength concrete. Concrete mix designs shall be submitted to HDOT for review and approval.

28. Bed course material for concrete curb ramps, sidewalks and gutter shall be considered incidental to the various contract items.

29. The Contractor shall probe near utility lines before installing guardrail posts. This shall be considered incidental to guardrail items.

30. The Contractor shall be responsible to obtain all required City and County permits including but not limited to the Grading Permit.

31. Temporary cold mix trench patches will be permitted in any given area for a maximum duration of two weeks, and shall be a minimum of 2 inches thick. All temporary patches shall be placed over properly placed and compacted backfill and base course layers. Contractor shall be responsible for maintaining all temporary patches and to make repairs to unsatisfactory patches within 24 hours.

32. Monuments that are disturbed shall be restored under the licensed land surveyor's direction. Any new data such as elevations shall be certified by the surveyor, and submitted to the Engineer.

33. The Contractor shall be responsible for replacing/reconstructing all concrete curbs and gutters, concrete swales, driveways, fences and sidewalks damaged during construction.

34. Where pedestrian walkways exist they shall be maintained in a safe and passable condition, or other facilities for pedestrians shall be provided. Passages between walkways at intersections shall likewise be provided.

35. Existing topographic data was taken from topographic map prepared by Control Point Surveying, Inc. dated 7/27/09.

36. All work called for on the plans and not itemized in the proposal and all work not called for but required for the construction of this project, shall be considered incidental.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE: [Signature] 04/30/16  
EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>GENERAL CONSTRUCTION NOTES</b>	
KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1 Olomana Golf Course To Vicinity of Poalima St. Federal Aid Project No. NH-072-K(53)	
Scale: AS NOTED	Date: July, 2015
SHEET No. C03 OF 71 SHEETS	

3



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ORIGINAL PLAN	DATE
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NOTE BOOK	
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GENERAL CONSTRUCTION NOTES (CONTINUED):

- 37. No blasting shall be allowed on this project.
- 38. All earthwork shall be done in accordance with the Preliminary Consultation Letter provided by Masa Fujioka and Associates dated 11/19/10.
- 39. The Contractor shall notify the One Call Center at (866) 423-7287 at least five (5) days prior to the start of excavation or trenching.
- 40. The Contractor shall coordinate utility relocation activities with the respective utility agencies as required to maintain contract duration.

GENERAL NOTES FOR TRAFFIC CONTROL PLAN:

- 1. The permittee shall make minor adjustments at intersections, driveways, bridges, structures, etc., to fit field conditions.
- 2. Flaggers, cones or delineators shall be extended to a point where they are visible to approaching traffic.
- 3. Traffic control devices shall be installed such that the sign or device farthest from the work area shall be placed first. The others shall then be placed progressively toward the work area.
- 4. Regulatory and warning signs within the construction zone that are in conflict with the traffic control plans shall be removed or covered. All signs shall be restored upon completion of work.
- 5. Flaggers and/or police officers shall be in sight of each other or in direct communication at all times.
- 6. When required by the issuing office, the permittee shall install a variable message as required.
- 7. Sign spacings (D), taper lengths (T), and spacings of cones or delineators shall be as shown in Table 1, unless otherwise noted on the traffic control plans.
- 8. All traffic lanes shall be a minimum of 10 feet wide.
- 9. All construction warning signs shall be promptly removed or covered whenever the message is not applicable or not in use.
- 10. The backs of all signs used for traffic control shall be appropriately covered to preclude the display of inapplicable sign messages (i.e., when signs have messages on both faces).
- 11. At the end of each day's work or as soon as the work is completed, the permittee shall remove all traffic control devices no longer needed to permit free and safe passage of public traffic. Removal shall be in the reverse order of installation.
- 12. Permanent pavement markings and traffic signs shall be replaced upon the completion of each phase of work.
- 13. All work zone traffic control devices shall comply with the "Manual on Uniform Traffic Control Devices," 2009.

GENERAL NOTES FOR TRAFFIC CONTROL PLAN (CONTINUED):

- 14. The Scope of Services shall include preparation of a preliminary Traffic Control Plan ("TCP"). It is the Contractor's responsibility to be fully familiar with the site, the project and the traffic control needs to construct the project complete in place and operational. It is the Contractor's responsibility to implement the TCP for the protection of traffic through any and all portions of the construction operations. The Contractor shall comply with all of the requirements and technical specifications of the TCP. In addition, the Contractor shall assume full responsibility for the continuous and expeditious maintenance of all construction warning signs, barricades, lights, flaggers and all other traffic control measures and/or devices required by the TCP. Contractor shall be responsible for continuously reviewing and maintaining all traffic control measures.

TABLE 1 FOR TRAFFIC CONTROL PLAN							
Posted Speed Limit (M.P.H.)	Sign Spacing (D) (Feet)	Taper Length (T) (Feet)		Longitudinal Buffer Space (B) (Feet)	Spacing of Cones or Delineators (Feet)		
		W = 12' or Less Ⓞ	W = Greater Than 12' Ⓞ		Taper	Tangent	Work Area
20	250	200	W X 17	35	20	20	10
25	250	200	W X 17	55	25	25	10
30	250	250	W X 20	85	30	30	10
35	250	250	W X 20	120	35	35	10
40	500	350	W X 30	170	40	40	10
45	500	550	W X 45	220	45	45	10
50	1000	600	W X 50	280	50	50	10
55	1000	700	W X 55	335	55	55	10

Ⓞ Notes: W = Width of Lane or Shoulder

UTILITY CONSTRUCTION SEQUENCE:

- 1. The Contractor shall verify the locations of the existing utilities to be relocated for the new utility poles.
- 2. For areas where the new utility poles will be in conflict with existing water lines, the Contractor shall notify BWS Capital projects Division - Engineering, Construction Section in writing and submit six (6) sets of approved construction plans one (1) week prior to commencing work on the water system.
- 3. Contractor to construct waterline relocations.
- 4. The Contractor shall give each utility (HECO, HTCOM and Oceanic), in writing, a minimum of 30 working days' Notice to Proceed with each utility's portion of work.
- 5. Contractor shall stake out new utility poles at locations noted on the construction plans. Hubs shall be located at the pole's centerline.
- 6. Contractor shall coordinate and verify final utility pole locations with HECO prior to construction stakeout as poles have varying ground line diameters ranging from 13.28 inches to 23.89 inches. All utility poles shall be completely within the State Right-of-Way, including overhead lines and brackets.

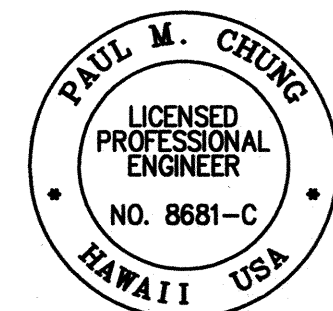
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2015	4	117

UTILITY CONSTRUCTION SEQUENCE (CONTINUED):

- 7. Contractor to construct portions of the retaining walls with block outs per structural details where new utility poles will be placed. For retaining walls in fill areas, the area above the foundation up to the finish grade shall be filled with approved backfill and compacted in accordance with the specifications prior to the pole hole excavation through the foundation block out space. Where new sidewalks are proposed, the Contractor shall provide a 4'x4' opening for the installation of the utility poles. HECO will be responsible to construct the balance of the sidewalk after the poles are installed.
- 8. The back face of the pole shall be a minimum of 2 inches from the right-of-way line for poles in sidewalk areas, and from the roadside face of the retaining wall for poles in areas with retaining walls. In all cases, ADA clearances shall be maintained.
- 9. HECO to install new utility poles.
- 10. The Contractor shall coordinate with the Utility companies for their respective facility transfers to the new poles.
- 11. The Contractor shall coordinate with HECO to obtain the pole diameters where the street light arm adjustable brackets will be located on the steel poles, and for final electrical connections.
- 12. Existing street lighting shall be operable throughout the relocations until the new street lights are operational.
- 13. The Contractor shall coordinate with the State of Hawaii Street Light Engineer for the disposal of the existing street light fixtures where designated for removal.
- 14. The last joint pole occupant off the existing poles shall remove the pole. If the street lights are the last occupants on the existing poles, then the Contractor will be responsible for removing the pole.

NOTES:

- 1. This construction sequence is to be used as a guide and shall not relieve the Contractor of obligations to fulfill the contract should this sequence not meet the Contractor's construction approach.
- 2. This construction sequence is limited to the construction activities related to the utility pole relocations and not the entire project.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

SIGNATURE

04/30/16

EXPIRATION DATE OF THE LICENSE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

GENERAL CONSTRUCTION NOTES

KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1  
Olomana Golf Course To Vicinity of Poalima St.  
Federal Aid Project No. NH-072-1(53)

Scale: AS NOTED      Date: July, 2015

SHEET No. C04 OF 71 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(53)	2015	5	117

GENERAL STRUCTURAL NOTES:

- Dressing of shoulder shall consist of clearing, grubbing, grading, reshaping and compacting the unpaved shoulders with suitable material as shown on the plans and/or as directed by the Engineer. This work shall be considered incidental to the various contract items.
- All welding - whether shop or field - shall be done by certified welders only.
- Discrepancies - Contractor shall verify all dimensions and conditions and shall report any discrepancies in writing to the Engineer before commencing work or ordering materials.
- Details shown on drawings shall be typical for all similar conditions. Modify details for special conditions as directed by the Engineer.

REINFORCING STEEL NOTES:

- Reinforcing bars shall conform to  
Deformed steel ASTM A615  
Welded wire fabric ASTM A185  
  
Strength: unless otherwise noted on plan, all reinforcing bars shall be;  
  
a. Deformed bar . . . 60 ksi  
b. Welded wire fabric . . . 70 ksi

CONCRETE NOTES:

- Portland cement shall conform to ASTM C150, Type I or Type II.
- All concrete shall develop the following minimum compressive strengths, with corresponding maximum size of aggregates and water/cement ratios as follows (unless shown elsewhere in schedules):

	28-day Strength (psi)	Maximum Size (inch) Aggregate	Water/Cement Ratio
a. Headwall	4000	3/4	0.40
- Admixtures: use of admixture at Contractor's option, but subject to Engineer approval.
- The use of any calcium chloride in any concrete is prohibited.
- Minimum concrete clear cover unless specified otherwise in drawings:  
a. Headwall 2"

SEWER NOTES:

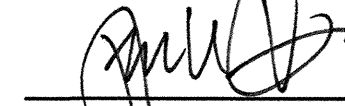
- Existing sewer system shall be functional at all times.
- The location of all sewer manholes shall be marked prior to and after paving and the manhole restored within one week after paving is completed.
- Manhole frames and covers are paired and are to be reinstalled as removed.
- The Contractor is responsible for removing all asphalt and debris from manholes in conformance with OSHA Standards and all Federal, State, and City laws and regulations applicable to Confined Space Entry.
- All "Sewer Note" as provided on the project plans are to be adhered to. No exceptions.
- The Collection System Maintenance, General Foremen, (768-7250) shall be notified when manhole restoration on this project is scheduled to be initiated.

WATER NOTES:

- Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, dated 2005, as amended, of the Hawaii Highways Division, Department of Transportation, and the City and County of Honolulu Board of Water Supply's "WATER SYSTEM STANDARDS", DATED 2002, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, and all subsequent amendments and additions.
- All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply.
- The Contractor shall notify BWS Capital Projects Division - Engineering, Construction Section in writing and submit six (6) sets of approved construction plans one week prior to commencing work on the water system.
- The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and pay for all damages to existing utilities. The Contractor shall not assume that where no utilities are shown, that none exist.
- Re-approval shall be required if this project is not under construction within a period of two years.
- The Contractor shall be responsible for the protection of all water lines during construction. The Contractor shall be especially careful when excavating behind water lines, tees, and bends wherever there is a possibility of water line movement due to the removal of the supporting earth beyond the existing reaction blocks. The Contractor shall take whatever measure necessary to protect the water lines, such as constructing special reaction blocks (with BWS approval) and/or modifying his construction method.
- Prior to any excavating, the Contractor shall verify in the field the location of existing water mains and appurtenances.
- Prior to installation, the Contractor shall submit for approval by Board of Water Supply, the manufacturer's certification that all cast iron (gray or ductile) fittings for the project conform in all respects to the Water System Standards, dated 2002.
- Contractor shall cut and plug all existing unused laterals at the main whether or not shown on the plans. The damaged area shall be repaired to an equal or better condition than the immediate area. All work shall be done at the expense of the Contractor.
- The Contractor/Developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Maintenance Unit - Engineering, Construction Section.
- Two-way blue reflective hydrant markers Type DB shall be installed at all new fire hydrant installations. Contractor shall verify the exact locations of hydrant markers with the nearest Honolulu Fire Department Battalion Chief.
- Test Pressure shall be one of the following:  
  
a. Prevailing line pressure, joints left expose for 24 hours to check for leaks prior to backfill.  
b. 150 psi. During the 30-minute pressure test, the pressure shall not drop more than 10 psi.

- The Contractor/Developer shall obtain a NPDES permit prior to chlorination and/or dewatering. A copy of the permit shall be submitted to the Board of Water Supply, Maintenance Unit - Engineering, Construction Section.
- All ductile iron pipe, fittings and valves shall be wrapped with two layers of 8 mil polyethylene wrap.
- Install 4 mil thick, non-metallic, blue colored, 6 inches wide warning tape over centerline of the pipe and below the base course along the entire length of trench. Tape should be marked with "CAUTION WATER LINE BURIED BELOW".
- Polyvinyl chloride (PVC) pipes shall be Class 150. All ductile iron valves and metallic fittings shall be wrapped with two layers of 8 mil polyethylene wrap. No bending of polyvinyl chloride pipes shall be permitted. The installation of PVC pipe, according to the plans and specifications as bid on by the Contractor, may require additional design work, additional fittings and special couplings shall be considered incidental to the unit price bid in the proposal for PVC pipe. Any additional design work shall be the responsibility of the Contractor.
- All Polyvinyl Chloride (PVC) pipe deflections shall be accomplished only by the use of special PVC deflection couplings. Deflection around curves shall be accomplished only by the use of PVC deflection couplings.
- The Contractor shall install electronic markers to ALL mains and test the electronic markers prior to installations to verify proper operation. BWS personnel shall verify the number and locations of placed electronic markers before final paving of the project.
- All PVC fittings shall conform to American Water Works Associations (AWWA) C-907. Ductile Iron fittings shall be used for all types of fittings not specified in AWWA C-907.
- For cut-in connection to existing:  
  
"All waterline construction requiring shutdown connection shall be scheduled for normal working hours at six (6) hours maximum downtime."

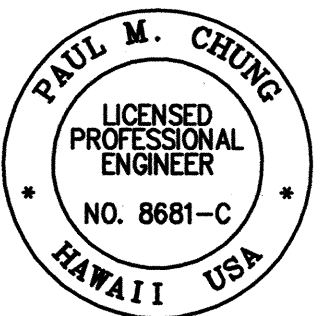
APPROVED:



MANAGER AND CHIEF ENGINEER, BWS  
(For work affecting BWS Facilities in  
State R/W and BWS Easements only)

6-19-2015

DATE



THIS WORK WAS PREPARED BY ME OR  
UNDER MY SUPERVISION

  
SIGNATURE

04/30/16  
EXPIRATION DATE  
OF THE LICENSE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**GENERAL CONSTRUCTION NOTES**  
**KALANIANA'OLE HIGHWAY IMPROVEMENTS, PHASE 1**  
**Olomana Golf Course To Vicinity of Poalima St.**  
**Federal Aid Project No. NH-072-1(53)**  
Scale: AS NOTED Date: Feb., 2015  
SHEET No. C05 OF 71 SHEETS