

ORIGINAL PLAN	No.	SURVEY PLOTTED BY _____	DATE _____
		DRAWN BY _____	_____
		DESIGNED BY _____	_____
		CHECKED BY _____	_____
NOTEBOOK			

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION", DATED 1994 AND THE "STANDARD PLANS", DATED 1986, AS AMENDED, OF THE HIGHWAYS DIVISION, DEPARTMENT OF TRANSPORTATION, AND THE CONSTRUCTION DRAWINGS AND DETAILED SPECIFICATIONS PREPARED FOR THIS PROJECT.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES WHETHER SHOWN ON THE PLANS OR NOT, AND SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF SAME IN THE EVENT OF DAMAGES DUE TO HIS CONSTRUCTION PRACTICES.
- ALL CONSTRUCTION WORK WITHIN ROADWAY SHALL BE DONE BETWEEN THE HOURS OF 8:30 AM TO 3:30 PM. CONSTRUCTION WORK MUST BE CLEAR FROM ROADWAY BY 3:30 PM. CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLAN TO THE ENGINEER.
- 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 UNDERPINNING TO FULLY PROTECT IT FROM DAMAGE.
- CONTRACTOR SHALL PROTECT TREES AND SHRUBS NOT CALLED FOR REMOVAL ON THE DRAWINGS AND MAKE PROVISIONS TO RESTORE AND/OR REPLACE DAMAGED TREES AT HIS OWN EXPENSE.
- NO CONSTRUCTION EQUIPMENT SHALL BE PARKED WITHIN THE ROAD RIGHT-OF-WAY IN SUCH A MANNER THAT THE EQUIPMENT WILL OBSTRUCT THE NORMAL MOVEMENT AND SIGHT DISTANCE OF THE DRIVING MOTORIST, EXCEPT DURING ACTUAL WORKING HOURS.
- EXCEPT DURING ACTUAL WORKING HOURS, ALL SIGNS WHICH DO NOT PERTAIN TO THE CONSTRUCTION ACTIVITY, SUCH AS "MEN WORKING" AND "FLAGMEN AHEAD" SHALL BE COVERED OR LAID DOWN. HOWEVER, ALL SIGNS NECESSARY FOR THE SAFETY OF THE PUBLIC SHALL BE MAINTAINED.
- THE CONTRACTOR SHALL EMPLOY A HAWAII REGISTERED PROFESSIONAL SURVEYOR TO PERFORM ALL CONSTRUCTION STAKEOUTS, THE COST OF WHICH SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR, AND PAY FOR ALL TEMPORARY UTILITIES REQUIRED FOR HIS WORK.
- SHOULD HISTORIC SITES SUCH AS WALLS, PLATFORMS, PAVEMENTS AND MOUNDS, OR REMAINS SUCH AS ARTIFACTS, BURIALS, CONCENTRATION OF CHARCOAL OR SHELLS BE ENCOUNTERED DURING CONSTRUCTION WORK. WORK SHALL CEASE IN THE IMMEDIATE VICINITY OF THE FIND AND THE FIND SHALL BE PROTECTED FROM FURTHER DAMAGE. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE STATE HISTORIC PRESERVATION DIVISION (243-5169), WHICH WILL ASSESS THE SIGNIFICANCE OF THE FIND AND RECOMMEND AN APPROPRIATE MITIGATION MEASURE IF NECESSARY.
- EXISTING TOPOGRAPHIC FEATURES ARE FROM FIELD SURVEY OF THE PROJECT SITE PROVIDED BY CONTROL POINT SURVEYING, INC. DATED SEPT. 22, 1998.

CONSTRUCTION NOTES WITHIN COUNTY RIGHT-OF-WAY

- CONTRACTOR SHALL OBTAIN A "WORK TO PERFORM ON COUNTY ROADS PERMIT" FROM THE DIVISION OF LAND USE & CODES ADMINISTRATION TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.
- STANDARD DETAIL DRAWINGS OF THE DEPARTMENT OF PUBLIC WORKS AND THE HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION (1994) SHALL BE INCLUDED AS PART OF THE CONSTRUCTION PLANS.
- CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, AND OTHER PROTECTIVE DEVICES FOR THE PROTECTION, SAFETY AND CONVENIENCE OF THE PUBLIC ACCORDING TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", AND TO THE RULES AND REGULATIONS GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON/OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS ADOPTED BY THE HIGHWAY SAFETY COORDINATOR AND THE U.S. FEDERAL HIGHWAY ADMINISTRATION'S CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS".
- THE DIRECTOR OF PUBLIC WORKS AND/OR THE DIRECTOR OF THE DEPT. OF WATER SUPPLY HAS THE RIGHT TO STOP CONSTRUCTION SHOULD ANY WORK BE FOUND CONTRARY TO THE APPROVED CONSTRUCTION PLAN OR DETRIMENTAL TO THE PUBLIC'S INTEREST.
- THE CONTRACTOR SHALL SUBMIT A MICROFILM COPY AND SIX (6) COPIES OF THE AS-BUILT DRAWINGS PRIOR TO THE FINAL APPROVAL OF THE IMPROVEMENTS.

PUBLIC WORKS NOTES

- THE CONTRACTOR SHALL OBTAIN THE FOLLOWING PERMITS FROM THE LAND USE AND CODES ADMINISTRATION OF THE DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT, COUNTY OF MAUI, BEFORE ANY WORK IS BEGUN:  
A. "WORK PERFORMED ON COUNTY ROADS PERMIT" TWO WEEKS PRIOR TO COMMENCEMENT OF WORK ON "MOLOKAI BASEYARD FACILITY".  
B. "DRIVEWAY PERMIT" TWENTY FOUR HOURS PRIOR TO COMMENCEMENT OF WORK ON DRIVEWAY.  
C. "GRADING PERMIT" THIRTY DAYS PRIOR TO COMMENCEMENT OF GRADING.
- THE CONTRACTOR WILL BE REQUIRED TO TAKE OUT AND PAY FOR ALL NECESSARY PERMIT AND LICENSES WHICH ARE REQUIRED BY LOCAL ORDINANCES FOR THE PROSECUTION OF THIS WORK.
- THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE LAND USE & CODES ADMINISTRATION FIVE DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY MAUI ELECTRIC COMPANY, VERIZON HAWAII, DEPARTMENT OF WATER SUPPLY, AND DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT AT LEAST SEVEN DAYS BEFORE ANY WORK IS BEGUN.
- THE CONTRACTOR SHALL STRIPE STOP LINES, CROSSWALKS, AND OTHER LINES AS REQUIRED, AND SHALL INSTALL SIGNS IN ACCORDANCE WITH THE CURRENT COPY OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- IF LANE CLOSURES ARE REQUIRED DURING CONSTRUCTION, PERMISSION SHALL BE OBTAINED FROM THE COUNTY OF MAUI AT LEAST SEVEN DAYS PRIOR TO COMMENCEMENT OF WORK.
- AS REQUIRED BY THE COUNTY, THE CONTRACTOR SHALL HIRE SPECIAL DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
- DURING NON-WORKING HOURS ALL LANES SHALL BE OPEN AND ALL EXCAVATIONS ON THE ROADWAY SHALL BE COVERED WITH A SAFE NON-SKID BRIDGING MATERIAL. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHTS-OF-WAYS ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
- DURING WORKING HOURS, THE CONTRACTOR SHALL MAINTAIN A ROADWAY SUITABLE FOR ONE LANE OF TRAFFIC WITH FLAGMEN AT BOTH ENDS, ALTERNATING DIRECTION OF TRAFFIC FLOW.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL PROPERTY CORNERS ADJACENT TO OR NEAR THE WORK AREAS. ALL CORNER TIES AND REPLACEMENT SHALL BE PERFORMED UNDER THE DIRECTION OF A LAND SURVEYOR LICENSED TO PRACTICE IN HAWAII.
- BENCH MARKS SHALL BE ESTABLISHED AND CERTIFIED BY A LICENSED LAND SURVEYOR AND SUBMITTED TO THE LAND USE AND CODES ADMINISTRATION.

EROSION CONTROL

TEMPORARY MEASURES - THE FOLLOWING MEASURES SHALL BE TAKEN TO CONTROL EROSION DURING THE CONSTRUCTION PERIOD:

- MINIMIZE TIME OF CONSTRUCTION.
- RETAIN EXISTING GROUND COVER UNTIL LATEST DATE TO COMPLETE CONSTRUCTION.
- EARLY CONSTRUCTION OF DRAINAGE CONTROL FEATURES.
- USE TEMPORARY AREA SPRINKLERS IN NON-ACTIVE CONSTRUCTION AREAS WHEN GROUND COVER IS REMOVED.
- STATION WATER TRUCK ON SITE DURING CONSTRUCTION PERIOD TO PROVIDE FOR IMMEDIATE SPRINKLING, AS NEEDED, IN ACTIVE CONSTRUCTION ZONES (WEEKENDS AND HOLIDAYS INCLUDED).
- USE TEMPORARY BERMS AND CUT-OFF DITCHES, WHERE NEEDED, FOR CONTROL OF EROSION.
- GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY AND ON WEEKENDS.
- ALL CUT AND FILL SLOPES SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED.

PERMANENT EROSION CONTROL MEASURES

- PERMANENT DRAINAGE SYSTEMS (SEE PLANS AND SPECIFICATIONS).
- A.C. PAVEMENT, CONCRETE CURBS, GUTTERS AND SIDEWALKS.
- THE CONTRACTOR SHALL GRASS ALL EXPOSED AREAS THAT HAVE BEEN CONSTRUCTED TO FINAL GRADES IMMEDIATELY UPON COMPLETION. THE CONTRACTOR SHALL IMMEDIATELY MAINTAIN THE GRASSED AREAS UNTIL THE COMPLETION OF THE PROJECT.

EROSION CONTROL (Cont'd)

DUST NUISANCE

- THE CONTRACTOR AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE WORK SHALL CONFORM WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH, AND THE COUNTY OF MAUI.
- THE CONTRACTOR SHALL PROVIDE DUST CONTROL WITH SPRINKLERS, AND/OR WATER WAGONS AS NECESSARY, WEEKENDS, AND HOLIDAYS INCLUDED. ALL GRADED AREAS SHALL BE THOROUGHLY WATERED AFTER CONSTRUCTION ACTIVITY HAS CEASED FOR THE DAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESPONDING TO DUST COMPLAINTS FROM NEIGHBORING PROPERTIES AND WILL PROVIDE ADDITIONAL MITIGATION MEASURES AS NECESSARY.

GRADING NOTES

- THE CONTRACTOR, AT HIS EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE OF DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH AND THE MAUI COUNTY CODE.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER POLLUTION CONTROL AND WATER QUALITY STANDARD CONTAINED IN THE PUBLIC HEALTH REGULATIONS, STATE DEPARTMENT OF HEALTH, AND THE COUNTY GRADING ORDINANCE.
- ALL SLOPES AND EXPOSED AREAS SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER GRADING WORK HAS BEEN COMPLETED. CONTRACTOR SHALL GRASS AND MAINTAIN ALL EXPOSED SLOPES SUCH THAT 60% COVERAGE WILL BE ACHIEVED WITHIN 30 DAYS AND 85% COVERAGE WILL BE ACHIEVED WITHIN 60 DAYS AFTER PLANTING.
- CONSTRUCTION DEBRIS AND WASTES SHALL BE DEPOSITED AT AN APPROVED SITE. THE CONTRACTOR SHALL INFORM THE ENGINEER OF THE LOCATION OF DISPOSAL SITES. THE DISPOSAL SITE MUST ALSO FULFILL THE REQUIREMENTS OF THE GRADING ORDINANCE.
- ALL EXPOSED SLOPES SHALL BE PROTECTED WITH TEMPORARY DIVERSIONS, BERMS, AND SWALES AT THE TOP OF THE SLOPES.
- EXISTING TOPOGRAPHIC INFORMATION SHOWN ARE FROM SURVEY MAP PREPARED BY CONTROLPOINT SURVEYING, INC. DUE TO THE LENGTH OF TIME WHICH HAS ELAPSED FROM THE DATE OF SURVEY, THE CONTRACTOR SHALL EXAMINE THE SITE AND TAKE WHATEVER MEASURES NECESSARY TO VERIFY CONDITIONS EXISTING IN THE FIELD. COMMENCEMENT OF CONSTRUCTION ON ANY PORTION OF PROJECT WILL BE DEEMED AS ACCEPTANCE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PERFORM ALL GRADING IN CONFORMANCE WITH THE REQUIREMENTS SPECIFIED IN THE MAUI COUNTY GRADING ORDINANCE AND THIS PROJECT'S SPECIFICATIONS.

EARTHWORK SUMMARY

EXCAVATION = 2,000 CUBIC YARDS  
EMBANKMENT = 825 CUBIC YARDS  
AREA TO BE GRADED = 2.0 ACS.

NOTE: QUANTITIES SHOWN ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR SHALL DETERMINE HIS OWN QUANTITIES FOR BIDDING PURPOSES.

- FOR BENCHMARK SEE SHEET C2.1.

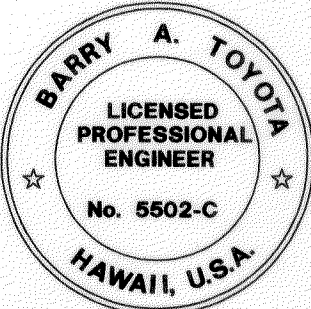
FED. ROAD DIST. NO.	STATE	-FED.-AID- PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-M-05-98	2002	5	99

PUBLIC HEALTH, SAFETY AND CONVENIENCE

- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH AND SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING AND REMOVAL OF ALL SILT AND DEBRIS GENERATED BY HIS WORK AND DEPOSITED AND ACCUMULATED WITHIN DOWN STREAM WATERWAYS, DITCHES AND DRAIN PIPES AND ON PUBLIC AND PRIVATE ROADWAYS. THE CONTRACTOR AGREES TO REIMBURSE THE COUNTY OF MAUI FOR ALL COSTS EXPENDED IN PERFORMANCE OF THE ABOVE WORK IF REQUIRED FOR PUBLIC HEALTH AND SAFETY, OR MADE NECESSARY BY NON-PERFORMANCE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL SUBMIT A NOISE POLLUTION CONTROL PLAN WHEN APPLYING FOR A CONSTRUCTION PERMIT.

COMPACTION REQUIREMENTS (WITHIN COUNTY R.O.W.)

- TESTING OF MATERIALS SHALL BE CONDUCTED BY AN APPROVED INDEPENDENT TESTING AGENCY IN ACCORDANCE WITH ASTM STANDARD METHODS OR AS SPECIFIED BY THE DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION, AS FOLLOWS:  
A. EMBANKMENT/SELECT BORROW AND SUBGRADE MATERIALS : ONE (1) COMPACTION TEST PER 600 SQUARE YARDS.  
B. AGGREGATE SUBBASE COURSE: ONE (1) COMPACTION TEST PER 400 SQUARE YARDS: ONE (1) GRADATION AND SAND EQUIVALENT TEST PER PROJECT.  
C. AGGREGATE BASE COURSE: ONE (1) COMPACTION TEST PER 300 SQUARE YARDS: ONE (1) GRADATION AND SAND EQUIVALENT TEST PER PROJECT.  
D. ASPHALT CONCRETE PAVEMENT OR ASPHALT TREATED BASE COURSE: THREE (3) A.C. CORES FOR THICKNESS AND DENSITY TESTS PER PROJECT.  
E. TRENCH BACKFILL MATERIAL: ONE (1) TEST FOR EACH 300 LINEAL FEET OF TRENCH PER LIFT OF MATERIAL.
- CONTRACTOR SHALL SUBMIT ALL TESTING REPORTS INCLUDING RESULTS TO THE COUNTY'S INSPECTION AGENCY FOR REVIEW AND APPROVAL PRIOR TO COUNTY'S ACCEPTANCE OF WORK.
- THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE COUNTY OF ANY TESTING FAILURES AND CORRECT EACH FAILURE PRIOR TO PROCEEDING TO THE NEXT PHASE OF CONSTRUCTION. NONCOMPLIANCE WILL REQUIRE REMOVAL OF ALL SUBSEQUENT WORK TO CORRECT THE AREA OF FAILURE. ALL COSTS OF TESTING, REMOVAL, AND RECONSTRUCTION, SHALL BE BORNE BY THE CONTRACTOR.



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

*Barry A. Toyota*

DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES MOLOKAI BASEYARD MOLOKAI INDUSTRIAL PARK Project No. HWY-M-05-98	
Scale: As Noted	Date: Sept. 13, 2001
SHEET No. C1.0 OF C1.1 SHEETS	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-M-05-98	2002	6	99

WATER SYSTEM

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF WATER SUPPLY (DWS), IN WRITING, ONE (1) WEEK PRIOR TO COMMENCEMENT OF WORK.
- ALL MATERIALS USED AND METHOD OF CONSTRUCTION OF WATER SYSTEM FACILITIES SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS OF DWS STANDARDS. CONTRACTOR SHALL OBTAIN THE LATEST REVISIONS OF THE DWS STANDARD DETAILS BEFORE COMMENCING CONSTRUCTION.
- THE EXACT DEPTH AND LOCATION OF EXISTING WATERLINES, SERVICE LATERALS AND OTHER UTILITIES ARE NOT KNOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE SAME PRIOR TO TRENCHING FOR THE NEW WATERLINE. THE COST OF LOWERING, RELOCATING OR ADJUSTING EXISTING WATERLINES, SERVICE LATERALS AND OTHER UTILITIES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE NEW WATERLINE, UNLESS NOTED OTHERWISE, AND WILL NOT BE PAID FOR SEPARATELY.
- CONCRETE FOR REACTION BLOCKS AND ANCHOR BLOCKS SHALL BE DWS CLASS 2500.
- THE MAXIMUM DISTANCE BETWEEN VALVE NUT AND TOP OF MANHOLE COVER SHALL BE THREE (3) FEET.
- THE CONTRACTOR SHALL SUBMIT A MATERIALS LIST TO DWS FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONNECTION TO DWS SYSTEM:
  - THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, DEPTH, TYPE AND CONDITION OF THE EXISTING LINE BEFORE ORDERING MATERIALS FOR THE HOOK-UP. HE SHALL, HOWEVER, CHECK WITH DWS BEFORE EXCAVATING FOR VERIFICATION PURPOSES. HE SHALL BE RESPONSIBLE FOR FURNISHING ALL NECESSARY FITTINGS AND OTHER MATERIALS REQUIRED FOR THE HOOK-UP.
  - WHENEVER FEASIBLE, MECHANICAL JOINT FITTINGS SHALL BE USED.
  - AUTHORIZED DWS PERSONNEL WILL MAKE THE FINAL CONNECTION TO EXISTING LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY DWS FOR SAID WORK, INCLUDING THE COST OF PRESSURE TESTING.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL, EQUIPMENT AND LABOR FOR CHLORINATION, TRENCH EXCAVATION, BACKFILLING, PAVING AND OTHER WORK NECESSARY TO COMPLETE THE HOOK-UP, AS DIRECTED BY AND TO THE SATISFACTION OF DWS.
- THE CONTRACTOR SHALL SUBMIT A COST LIST ALONG WITH AN AFFIDAVIT FOR THE WATER SYSTEM PRIOR TO ACCEPTANCE.
- THE CONTRACTOR SHALL SUBMIT TWO (2) SETS OF RECORD DRAWINGS VIA A CONSULTANT PRIOR TO ACCEPTANCE OF THE WATER SYSTEM.
- MINIMUM COVER OVER WATER MAIN, 6" DIAMETER OR LARGER, SHALL BE 3'-0". MINIMUM COVER FOR 4" DIAMETER SHALL BE 2'-6". MINIMUM COVER FOR DIAMETERS LESS THAN 4" SHALL BE 1'-6".
- ALL BURIED METALS SHALL BE WRAPPED WITH POLY-WRAP. FOR DUCTILE IRON PIPE INSTALLATION, POLY-WRAP SHALL BE REQUIRED.
- ALL NUTS AND BOLTS SHALL BE PAINTED WITH ASPHALTIC PAINT.
- LUBRICATE HYDRANT NOZZLE THREADS WITH NON-TOXIC GREASE.

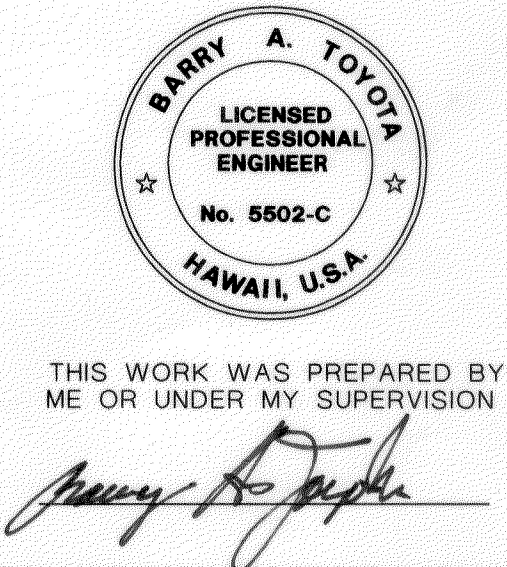
CHLORINATION OF WATER SYSTEMS

- LIQUID CHLORINE OR CALCIUM HYPOCHLORITE CONFORMING TO AWWA STANDARDS SHALL BE USED FOR CHLORINATION OF THE WATER SYSTEM.
- PRIOR TO CHLORINATION, THE WATER SYSTEM SHALL BE THOROUGHLY FLUSHED.
- THE INTERIOR SURFACES OF THE PROJECT SHALL BE EXPOSED TO THE CHLORINATING SOLUTION FOR A MINIMUM OF 24 HOURS AND THE CHLORINE RESIDUAL SHALL NOT BE LESS THAN 10 PPM AFTER SUCH TIME.
- SHOULD CALCIUM HYPOCHLORITE BE USED, NO SOLID AND/OR UNDISSOLVED PORTION OF THE COMPOUND SHALL BE INTRODUCED INTO ANY SECTION OF THE PROJECT TO BE CHLORINATED.
- AT THE END OF THE 24-HOUR DISINFECTION PERIOD, REPRESENTATIVE SAMPLES SHALL BE TAKEN AND ANALYZED TO ASSURE A CHLORINE RESIDUAL OF AT LEAST 10 PPM.
- SHOULD THE RESULTS INDICATE ADEQUATE CHLORINATION, THE PROJECT SHALL BE THOROUGHLY FLUSHED AND FILLED WITH WATER FROM THE EXISTING SYSTEM AND AGAIN TESTED FOR CHLORINE RESIDUAL. THE FLUSHING SHALL BE CONSIDERED ADEQUATE IF THE TEST RESULTS INDICATE THAT THE WATER IN THE PROJECT HAS A COMPARABLE CHLORINE RESIDUAL AS THE WATER IN THE EXISTING SYSTEM.
- FOLLOWING THE ACCEPTABLE FLUSHING OF THE PROJECT, TWO CONSECUTIVE SETS OF ACCEPTABLE SAMPLES, TAKEN AT LEAST 24 HOURS APART, FROM REPRESENTATIVE POINTS IN THE PROJECT SHALL BE TAKEN AND SUBJECTED TO MICROBIOLOGICAL TESTS. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1,200 FEET OF THE NEW WATER MAIN, PLUS ONE FROM THE END OF THE LINE AND AT LEAST ONE SET FROM EACH BRANCH. POSITIVE RESULTS WILL NOT BE ACCEPTABLE AND THE PROCESS WILL BE REPEATED.
- ANALYSIS FOR RESIDUAL CHLORINE SHALL BE MADE IN ACCORDANCE WITH "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER", AMERICAN PUBLIC HEALTH ASSOCIATION, 18TH EDITION.
- ALL MEASUREMENTS FOR CHLORINE RESIDUAL AND MICROBIOLOGICAL TESTS SHALL BE PERFORMED BY A LABORATORY APPROVED BY THE DIRECTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ALL OF THE FOREGOING.

DISABILITY AND COMMUNICATION ACCESS BOARD

THERE SHALL BE AT LEAST ONE ACCESSIBLE ROUTE COMPLYING WITH ADAAG 4.3. ACCESSIBLE ROUTES SHALL MAINTAIN 36" MINIMUM CLEAR WIDTH, A CROSS SLOPE OF 1:50 AND RUNNING SLOPE OF 1:20 MAX.

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
INDEXED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTEBOOK	
No.	



DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES MOLOKAI BASEYARD MOLOKAI INDUSTRIAL PARK Project No. HWY-M-05-98	
Scale: As Noted	Date: Sept. 13, 2001
SHEET No. C1.1 OF C1.1 SHEETS	