

GENERAL NOTES

1. THE PROJECT IS ALONG NIMITZ HIGHWAY FROM SUMNER STREET TO THE VICINITY OF QUEEN STREET. THE SCOPE OF WORK FOR THIS PROJECT CONSISTS OF INSTALLING WATER MAINS AND APPURTENANCES INCLUDING BUT NOT LIMITED TO: CONNECTIONS TO EXISTING MAINS; CUTTING AND PLUGGING OF MAINS TO BE ABANDONED; RECONNECTION FOR EXISTING SERVICE LATERALS; INSTALLATION OF NEW FIRE HYDRANTS; AND ASSOCIATED ROADWAY REPAIRS REQUIRED TO PERFORM THE WORK.
2. ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, AND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, AS AMENDED, OF THE DEPARTMENTS OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU AND THE COUNTIES OF KAUAI, MAUI AND HAWAII.
3. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES, MANHOLES, MONUMENTS, BURIED RAILROAD TRACKS AND CONCRETE PAVEMENTS, AND OTHER 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 WORK IS POSSIBLE. THE CONTRACTOR SHALL MAKE AN INDEPENDENT CHECK ON THE GROUND BY PROBING AND/OR WITH THE VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCIES TO VERIFY THE EXACT LOCATIONS AND DEPTHS OF THE EXISTING UTILITIES AND OBSTRUCTIONS. THE CONTRACTOR SHALL EXERCISE PROPER CARE IN EXCAVATING AND COLD PLANING IN THE AREA. WHENEVER 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 EXCAVATING FOR THE NEW LINES. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGES INCURRED TO THE EXISTING FACILITIES AND/OR IMPROVEMENTS AS A RESULT OF HIS OPERATIONS.
4. THE EXISTING UTILITIES HAVE BEEN SHOWN ON THESE PLANS INSOFAR AS IT IS POSSIBLE TO DO SO. THEIR LOCATIONS AS SHOWN ARE APPROXIMATE ONLY AND THE CONTRACTOR SHALL MAKE AN INDEPENDENT CHECK ON THE GROUND BY PROBING AND WITH THE VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCIES TO ASCERTAIN THEIR EXACT LOCATIONS.
5. ALL EXISTING UTILITIES TO REMAIN IN USE, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR DURING CONSTRUCTION UNLESS SPECIFIED ON THE PLANS TO BE ABANDONED. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPAIRED AND PAID FOR BY THE CONTRACTOR.
6. UNLESS RELOCATION IS CALLED FOR ON THE PLANS, EXISTING UTILITIES SHALL REMAIN IN-SERVICE AND IN PLACE. IF RELOCATION OF EXISTING UTILITIES IS REQUIRED FOR THE CONTRACTOR'S CONVENIENCE, INTERRUPTION OF SERVICE SHALL BE KEPT TO A MINIMUM AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE OFFICER-IN-CHARGE.
7. 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 OFFICER-IN-CHARGE FOR CLARIFICATION.
8. NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW INTO EXISTING CITY DRAINAGE SYSTEMS, OR ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS NECESSARY.
9. THE CONTRACTOR, AT HIS EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCES. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE WATER QUALITY AND WATER POLLUTION CONTROL STANDARDS CONTAINED IN HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 54, "WATER QUALITY STANDARDS" AND TITLE 11, CHAPTER 55, "WATER POLLUTION CONTROL", AS WELL AS CHAPTER 14 OF THE REVISED ORDINANCES OF HONOLULU, AS AMENDED. BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED AT ALL TIMES DURING CONSTRUCTION.
11. FOR BORING LOGS LOCATION SEE SHT. C-8 AND OF C-9, AND REFER TO GEOTECH INVESTIGATION REPORT, DATED MAY 4, 2001 BY ERNEST K. HIRATA & ASSOC., INC.
12. FOR BENCHMARK, SEE SHT. C-19 .
13. NO BLASTING SHALL BE PERMITTED ON THIS PROJECT.
14. THE CONTRACTOR SHALL NOTIFY THE OFFICER-IN-CHARGE UPON UNCOVERING ANY POTENTIAL HISTORICAL ARTIFACTS OR ITEMS OF ARCHAEOLOGICAL SIGNIFICANCE.

15. THE EXISTING IMPROVEMENTS ON THE PREMISES AND IN ADJACENT AREA THAT ARE NOT TO BE REMOVED, SHALL BE PRESERVED AND PROTECTED. ANY AND ALL DAMAGES RESULTING FROM THE CONTRACTOR'S CONSTRUCTION OPERATION SHALL BE REPLACED AND REPAIRED TO ORIGINAL OR BETTER CONDITION, TO THE SATISFACTION OF THE OWNER.
16. ALL FIRE HYDRANT POSTS, POLES, AND OTHER FIXTURES LOCATED IN THE SIDEWALKS OR PEDESTRIAN ROUTES SHALL BE PLACED SUCH THAT A MIN. 36" PEDESTRIAN PASSAGE IS PROVIDED.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORATION TO ITS ORIGINAL OR BETTER CONDITION, NEARBY IMPROVEMENTS AFFECTED BY DUST AND/OR OTHER REASONS RESULTING FROM THE CONSTRUCTION ACTIVITY.
18. PRIOR TO THE START OF EXCAVATION, THE CONTRACTOR SHALL NOTIFY ALL APPLICABLE AGENCIES AND HAVE THEM LOCATE THEIR RESPECTIVE UTILITY LINES IN THE PROJECT AREA PRIOR TO EXCAVATING. THE CONTRACTOR SHALL BE HELD RESPONSIBLE AND SHALL PAY FOR ALL DAMAGES TO AND MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.
19. THE CONTRACTOR SHALL NOTIFY THE INSPECTION SECTION, CIVIL ENGINEERING BRANCH, D.P.P. AT 523-4881 TO ARRANGE FOR INSPECTION SERVICES AND SUBMIT FOUR (4) SETS OF CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION WORK.
20. DURING NON-WORKING HOURS, THE TRENCHES ON ALL STREETS SHALL BE COVERED WITH NON-SKID STEEL PLATES AND ALL LANES MAINTAINED OPEN FOR TRAFFIC.
21. THE CONTRACTOR SHALL PROVIDE ACCESS TO AND FROM DRIVEWAYS AND PUBLIC STREETS AT ALL TIMES EXCEPT AS NOTED ON THE PLANS.
22. 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.
23. BACKFILL UNDER EXISTING STRUCTURES OR FACILITIES SHALL BE SANDY OR GRANULAR MATERIAL COMPLETELY PLACED AS SOON AS THE PIPE IS LAID AND TESTED. THE BACKFILL MATERIAL SHALL BE RAMMED WITH PROPER TOOLS UNTIL COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DENSITY.
24. 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 TO THE CONTRACTOR'S BID PRICE.
25. THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL OR BETTER CONDITION ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING PAVEMENTS, EMBANKMENT, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC. UNLESS PROVIDED FOR SPECIFICALLY IN THE PROPOSAL, DEMOLITION AND RESTORATION OF EXISTING ITEMS SHALL BE INCIDENTAL AND INCLUDED WITHIN THE CONTRACTOR'S BID PRICE.
26. RESTORATION OF PAVEMENT SHALL BE DONE WITH EQUIVALENT OR BETTER QUALITY MATERIALS. THE CONTRACTOR SHALL MATCH THE EXISTING THICKNESS OR USE THE FOLLOWING MINIMUM THICKNESSES, WHICHEVER IS GREATER: 12" MIN. SUBBASE COURSE, 8" MIN. BASE COURSE, 4" MIN. ASPHALTIC CONCRETE AND/OR 8" MIN. PORTLAND CEMENT CONCRETE PAVEMENT.
27. PAYMENT FOR RESTORATION OF DRIVEWAYS, CURBS AND GUTTERS WILL NOT BE MADE DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACTOR'S BID PRICE IN THE VARIOUS ITEMS OF THE BID.
28. 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.
29. SMOOTH RIDING CONDITIONS SHALL BE CONSTRUCTED AT ALL LIMITS AFFECTED BY THE PROJECT.
30. ALL COORDINATES AND AZIMUTHS ARE REFERRED TO GOVERNMENT TRIANGULATION STATION "PUNCHBOWL" Δ .
31. ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON MEAN SEA LEVEL (MSL).

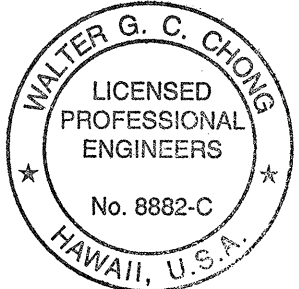
WATER NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL MATERIALS AND CONSTRUCTION OF WATER SYSTEM FACILITIES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CITY AND COUNTY OF HONOLULU, BOARD OF WATER SUPPLY'S "WATER SYSTEM STANDARDS", VOLUME 1, DATED 1985, THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, THE "WATER SYSTEM EXTERNAL CORROSION CONTROL STANDARDS", VOLUME 3, DATED 1991, AND ALL SUBSEQUENT AMENDMENTS AND ADDITIONS.
2. THE CONTRACTOR SHALL NOTIFY THE BOARD OF WATER SUPPLY IN WRITING ONE WEEK PRIOR TO COMMENCING WORK ON THE WATER SYSTEM.
3. PAYMENT FOR ITEMS OF WORK CALLED FOR IN THE PLANS, SPECIAL PROVISIONS AND SPECIFICATIONS FOR WHICH PAYMENT IS NOT SPECIFIED SHALL NOT BE MADE DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ITEMS OF THE PROPOSAL AND NO ADDITIONAL COMPENSATION SHALL BE MADE.
4. THE CONTRACTOR IS ALERTED TO THE ENCOUNTERING OF OBSTACLES WHETHER SHOWN ON THE PLANS OR NOT, OR WHICH MAY DIFFER IN LOCATION FROM THAT SHOWN ON THE PLANS WHICH MAY INTERFERE WITH HIS NORMAL METHOD OF OPERATIONS. THE CONTRACTOR SHALL TAKE INTO ACCOUNT ANY ADDITIONAL COSTS ANTICIPATED DUE TO THESE CONDITIONS AND SHALL HAVE THESE COSTS INCLUDED IN THE BID ITEMS WHICH HE/SHE FEELS MOST APPROPRIATE. NO SEPARATE ADDITIONAL COMPENSATION SHALL BE MADE.
5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR- ALL ASSUMPTIONS, DEDUCTIONS, OR CONCLUSIONS HE/SHE MAY MAKE OR DERIVE FROM THE SUBSURFACE INFORMATION OR DATA FURNISHED ON THE PLANS. THE CONTRACTOR MUST SATISFY HIMSELF/HERSELF THROUGH HIS/HER OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED.
6. PRIOR TO START OF EXCAVATION, THE CONTRACTOR SHALL NOTIFY ALL AGENCIES AND UTILITIES AND HAVE THEM LOCATE THEIR RESPECTIVE LINES AFFECTED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL OF HIS/HER CONSTRUCTION AND SHALL PAY FOR ALL DAMAGES TO AND FOR THE PROTECTION OF EXISTING UTILITIES AND STRUCTURES.
7. THE CONTRACTOR SHALL EXPOSE, VERIFY AND BACKFILL ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO EXCAVATION OF PIPELINE TRENCH. THE WATER MAIN ALIGNMENT AND GRADE MAY BE CHANGED IF THERE ARE CONFLICTS WITH ANY EXISTING UNDERGROUND UTILITIES AND STRUCTURES, WHETHER SHOWN ON THE PLANS OR NOT. PAYMENT FOR WORK INCLUDED IN THIS PARAGRAPH SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE ITEMS OF THE PROPOSAL, AND NO ADDITIONAL COMPENSATION SHALL BE MADE. IF THE CONTRACTOR ELECTS NOT TO EXPOSE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO PIPELINE EXCAVATION, HE FORFEITS HIS RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES.
8. EXISTING UTILITIES CROSSING THE WATER MAIN ARE TO REMAIN IN SERVICE AND IN PLACE. IF RELOCATED FOR THE CONTRACTOR'S CONVENIENCE, INTERRUPTION OF SERVICE SHALL BE FOR A MINIMUM PERIOD OF TIME AND SHALL BE DONE AT THE CONTRACTOR'S EXPENSE AND ONLY WITH THE APPROVAL OF THE BOARD OF WATER SUPPLY.
9. ANY COST INCURRED BY GASCO, HECO, OR VERIZON HAWAII BY THIS PROJECT SHALL BE PAID BY THE BOARD OF WATER SUPPLY THROUGH THE CONTRACTOR. PAYMENT SHALL BE ONLY FOR THE ACTUAL COST AS SHOWN ON THE UTILITY COMPANY'S INVOICE. NO PAYMENT WILL BE MADE FOR PROFIT, TAX, OVERHEAD, AND BOND COST.
10. PAYMENT FOR RESTORATION OF DRIVEWAYS, CURBS AND GUTTERS SHALL NOT BE MADE DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ITEMS OF THE PROPOSAL.
11. RESTORATION OF PAVEMENT SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS AND DONE WITH EQUIVALENT TO OR BETTER QUALITY MATERIALS. ALL A.C. AND CONCRETE PAVEMENT TO BE TRENCHED (FOR PIPELINE OR ANY WATER SYSTEM INSTALLATION) SHALL BE "SAW-CUT" TO THE REQUIRED WIDTH PRIOR TO REPAVING.
12. UNLESS OTHERWISE SPECIFIED, CONNECTIONS TO EXISTING WATER MAINS AND CHLORINATION OF NEW MAINS SHALL BE DONE BY THE CONTRACTOR, WITH THE BOARD OF WATER SUPPLY'S INSPECTOR COORDINATING THE WORK. FOR DETAILS, CONTACT THE BWS MAINTENANCE UNIT, ENGINEERING BRANCH, CONSTRUCTION SECTION.
13. WHEREVER CONNECTIONS TO EXISTING MAINS ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING MAINS PRIOR TO EXCAVATION OF MAIN TRENCH. THE REMAINING EXCAVATION FOR THE CONNECTION SHALL BE EXCAVATED WHEN THE CONTRACTOR IS READY TO MAKE THE CONNECTION.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	01-87A	2002	ADD. 227	268

14. ALL WATER MAIN TRENCHES SHALL BE BACKFILLED AS CALLED FOR UNDER PART III, SECTION 1.2.2, TRENCH BACKFILL OF THE "WATER SYSTEM STANDARDS", DATED 1985. COMPACTION OF TRENCH BACKFILL SHALL MEET APPLICABLE REQUIREMENTS OF "THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", SEPTEMBER 1986, OF THE COUNTIES OF THE STATE OF HAWAII, OR THE STATE DEPARTMENT OF TRANSPORTATION STANDARDS FOR PROJECTS WITHIN STATE HIGHWAYS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EFFLUENT ASSOCIATED WITH THE CONSTRUCTION ACTIVITY AND THE DISINFECTION AND HYDROTESTING OPERATIONS TO SAFEGUARD PUBLIC HEALTH AND SAFETY IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF HEALTH REQUIREMENTS. ALL PERMITS AND LICENSES FOR CONSTRUCTION WATER DISPOSAL, INCLUDING ALL APPLICATIONS, CHARGES, FEES, AND TAXES, ARE THE RESPONSIBILITY OF THE CONTRACTOR.
16. SHOULD MAJOR TREE ROOTS 2" AND GREATER BE ENCOUNTERED DURING CONSTRUCTION, THESE ROOTS SHALL BE CUT AND SEALED WITH ASPHALTIC PAINT.
17. DURING NON-WORKING HOURS, THE TRENCHES ON STREETS SHALL BE COVERED WITH NON-SKID STEEL PLATES AND ALL LANES MAINTAINED OPEN FOR TRAFFIC. TEMPORARY STEEL PLATES FOR VEHICULAR TRAFFIC SHALL BE FLUSH AND/OR PROVIDE SMOOTH RIDING CONNECTION WITH ADJOINING PAVEMENT OR SIDEWALK. NO BUMPS OR ELEVATED STEEL PLATES SHALL BE ALLOWED.
18. UNLESS OTHERWISE SPECIFIED, ALL ABANDONED LINES SHALL BE CUT AND PLUGGED WITH CLASS DWS 2000 CONCRETE. PAYMENT FOR CUTTING AND PLUGGING SHALL NOT BE MADE DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS ITEMS OF THE PROPOSAL. THE CONTRACTOR SHALL VERIFY THE SIZE AND TYPE OF LINE TO BE PLUGGED.
19. ALL WATER MAINS AND APPURTENANCES INCLUDING SERVICE LATERALS AND SERVICE CONNECTIONS SHALL BE SUBJECTED TO A HYDROSTATIC TEST PRESSURE OF 150 PSI BY THE CONTRACTOR IN THE PRESENCE OF THE BOARD OF WATER SUPPLY INSPECTOR.
20. ALL LATERALS SHALL BE REPLACED OR RECONNECTED WITH COPPER TUBING
21. PAYMENT FOR SERVICE LATERALS AND SERVICE CONNECTIONS SHALL BE MADE AT THE UNIT PRICE BID IN THE PROPOSAL. PAYMENT SHALL INCLUDE TAPS INTO MAINS, RECONNECTIONS TO EXISTING SERVICES, TRANSFERAL OF METERS, AND INSTALLING PIPE LATERALS, FITTINGS, BALL CORPS, BALL STOPS, GLOBE VALVES, METER SPLICES, BRASS PIPES, CAPS, 3/4" PVC SCHEDULE 80 CONDUIT FOR MULTIPLE METER BOXES, AND ALL APPURTENANCES, AS REQUIRED, IN PLACE COMPLETE. PAYMENT FOR METER BOXES, INCLUSIVE OF C.I. FRAMES AND COVERS AND TYPE "A" VALVES BOXES, SHALL BE MADE AT THE RESPECTIVE UNIT PRICE BID IN THE BID. BALL CORPS AND BALL STOPS SHALL BE INSTALLED IN LIEU OF THE CORPORATION STOPS AND STOPCOCKS, RESPECTIVELY.
22. DEMOLISH AND BACKFILL ALL ABANDONED MANHOLES, VALVE BOXES AND METER BOXES. SALVAGE ALL CAST IRON FRAMES, COVERS AND FIRE HYDRANTS. FOR WATERPROOFED MANHOLES, DRILL HOLES IN WALLS AND FLOOR SLABS FOR DRAINAGE FLOW, AS REQUIRED. ALL SALVAGE MATERIALS SHALL BE CLEANED, REPAINTED AND DELIVERED TO THE KALIHI BWS CORPORATION YARD.
23. CONTRACTOR SHALL CUT AND PLUG ALL EXISTING UNUSED LATERALS AT THE MAIN WHETHER OR NOT SHOWN ON THE PLANS. METER AND VALVE BOXES TO BE OR ALREADY ABANDONED SHALL BE DEMOLISHED OR REMOVED AND PROPERLY DISPOSED OF. 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.
24. AFTER INSTALLATION OF TAPPING SLEEVE AND TAPPING VALVE AND PRIOR TO TAPPING THE EXISTING WATER MAIN, THE ASSEMBLY SHALL BE PRESSURE TESTED AT 150 PSI ON BOTH SIDES OF THE VALVE AND IN ACCORDANCE WITH THE WATER SYSTEM STANDARDS, DATED 1985.

12/21/01	REVISED GEN. NOTE #23
Date	Revision



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Walter G. C. Chong
SIGNATURE DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES-1	
NIMITZ HIGHWAY	
WATER SYSTEM IMPROVEMENTS, PART 1	
BWS JOB No. 01-87A	
Scale: As shown	Date: 08/27/01
SHEET No. C-2 OF 43 SHEETS	

ADD. 227

WATER NOTES (CONT.)

25. THE NEW WATER MAIN SHALL BE COMPLETED IN PHASES AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL COMPLETE EACH PHASE INCLUDING INSTALLATION AND TESTING OF THE WATER MAIN, TRANSFER OF SERVICES AND FINAL PAVING OF THE STREET PRIOR TO BEGINNING THE NEXT PHASE; HOWEVER, THE CONTRACTOR MAY COMMENCE WORK ON THE NEXT PHASE UPON SATISFACTORY PROGRESS OF ALL REMAINING WORK ON THE PREVIOUS PHASE AS APPROVED IN WRITING BY BWS.
26. THE CONTRACTOR SHALL INSTALL FIRE HYDRANT REFLECTIVE MARKERS. PAYMENT FOR INSTALLATION OF REFLECTIVE HYDRANT MARKERS SHALL BE MADE AT THE RESPECTIVE UNIT PRICE IN THE PROPOSAL.
27. MECHANICAL JOINT GLANDS SHALL BE "STRAIGHT-SIDED", POLYGON IN SHAPE, AND DUCTILE IRON GLAND THICKNESS SHALL MEET OR EXCEED GRAY IRON GLAND THICKNESS, AS DESCRIBED IN ANWA C111. REDUCED METAL GLAND SECTION THICKNESS IS NOT PERMITTED.
28. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY BOARD OF WATER SUPPLY, THE MANUFACTURER'S CERTIFICATION THAT ALL PIPES, FITTINGS, SPECIAL CASTINGS, AND VALVES CONFORM IN ALL RESPECTS TO THE WATER SYSTEM STANDARDS.
29. ALL AIR RELIEF VALVES SHALL HAVE A MINIMUM WORKING PRESSURE RANGE OF 0 TO <150 PSI.
30. PIPE CUSHION SHALL BE OF HIGH RESISTIVITY MATERIAL. THE CONTRACTOR SHALL SUBMIT A SOIL CERTIFICATION THAT HIGH RESISTANT CUSHION MATERIAL HAS A RESISTIVITY GREATER THAN 5,000 OHM-CM. REMAINDER OF THE BACKFILL MATERIAL SHALL BE AS SPECIFIED IN VOLUME 1 OF THE WATER SYSTEM STANDARDS. PIPE CUSHION AND BACKFILL MATERIAL SHALL CONTAIN NO HAZARDOUS SUBSTANCES ABOVE REGULATORY ACTION LEVELS INCLUDING BUT NOT LIMITED TO LEAD, ASBESTOS, MERCURY, CHROMIUM, CADMIUM, ZINC, STRONTIUM, AND POLYCHLORINATED BIPHENYLS (PCB).
31. ALL SECTIONS OF THE WATER MAIN REQUIRING REINFORCED CONCRETE JACKETING SHALL BE DUCTILE IRON PIPE WITH DUCTILE IRON FITTINGS OR CONCRETE CYLINDER PIPE WITH CONCRETE CYLINDER FITTINGS.
32. CLEANING SHALL BE BY THE USE OF "PIGS" INTRODUCED INTO THE PIPELINE AND RUN COMPLETELY THROUGH ALL INSTALLED PIPELINES AND ALL BRANCH LINES FOR FIRE HYDRANTS. "PIGGING" OF SERVICE LATERALS IS NOT REQUIRED. BARE FOAM "PIGS" SHALL BE USED TO SWAB PIPING CLEAN AS EACH LENGTH OF THE PIPELINE IS INSTALLED. EACH "PIG" SHALL CONSIST OF A CYLINDRICAL PIECE OF POLYURETHANE FOAM WITH A DENSITY OF 3-7 POUNDS PER CUBIC FOOT AND A VINYL-COATED NOSE. OUTSIDE DIAMETER OF THE "PIG" SHALL BE EQUAL TO 1-1/4 TO 1-1/2 TIMES THE INSIDE DIAMETER OF THE PIPE BEING INSTALLED. THE LENGTH OF THE "PIG" SHALL BE 1-1/2 TO 2 TIMES ITS DIAMETER. PRIOR TO USE, THE "PIG" SHALL BE SUBMERGED IN A CHLORINE SOLUTION OF 1 OZ. OF 5% CHLORINE BLEACH IN 5 GALLONS OF WATER. "PIGGING" OF THE PIPELINE SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE NEW PIPELINE.
33. THE CONTRACTOR SHALL COORDINATE THE SECURING OF THE EXISTING WATER SYSTEM WITH THE BWS PRIOR TO EXCAVATING BEHIND OR REMOVING ANY EXISTING THRUST BLOCKS, STRUCTURAL STRUTS OR REACTION BEAMS, OR ANY FITTINGS SUCH AS TEES, PLUGS, CAPS, BENDS, OFFSETS, AND VALVES, OR ANY OTHER PIPELINE APPURTENANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASSOCIATED DAMAGES RESULTING FROM FAILURE TO ADEQUATELY SECURE THE EXISTING SYSTEM.
34. DUCTILE IRON PIPES SHALL BE CLASS 52, DOUBLE WRAPPED WITH POLYETHYLENE. PAYMENT FOR POLYETHYLENE WRAP SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR DI PIPE, VALVES AND FITTINGS. DOUBLE POLYETHYLENE WRAP SHALL NOT BE LESS THAN 16 MILS.
35. ALL WATER CONSTRUCTION REQUIRING SHUTDOWN CONNECTION SHALL BE SCHEDULED FOR NORMAL WORKING HOURS OR AFTER WORKING HOURS AT THE INDICATED MAXIMUM DOWNTIME NOTED BELOW.

PLAN NO.	STREET NAME	CONNECTION STATION	NORMAL WORKING HOURS	AFTER WORKING HOURS	REMARKS (MAXIMUM DOWNTIME)
1	N. NIMITZ HWY	W.L. "A" STA. 0+00		X	6
3	N. NIMITZ HWY	W.L. "F-2" STA. 0+9.23		X	8
3	N. NIMITZ HWY	W.L. "F-3" STA. 0+26.3		X	6
3	N. NIMITZ HWY	W.L. "F-1" STA. 0+20.75±		X	6
4	IWILEI RD.	W.L. "F" STA. 6+21±		X	8
4	IWILEI RD.	W.L. "D" STA. 7+25.78±		X	10
4	IWILEI OFF RAMP	W.L. "D-1" STA. 0+21.39±		X	6
4	IWILEI RD.	W.L. "F-4" STA. 0+31.30±		X	6
6	RIVER ST.	W.L. "C" STA. 0+00		X	6
7	KEKAULIKE ST.	W.L. "C-1" STA. 0+74.4±		X	6
7	MAUNAKEA ST.	W.L. "C-2" STA. 0+72±		X	6
8	SMITH ST.	W.L. "C-3" STA. 0+52.84±		X	6
8	NUUANU AVE.	W.L. "C-4" STA. 0+42.95±		X	6
9	BETHEL ST.	W.L. "C-5" STA. 0+51.42±		X	6
9	QUEEN ST.	W.L. "C-6" STA. 1+31.54±		X	6
9	S. NIMITZ HWY	W.L. "C" STA. 18+17.64±		X	6

SEWER NOTES

1. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS, SEPT. 1986, THE DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS, SEPT. 1984, CURRENT CITY PRACTICES AND REVISED ORDINANCES OF HONOLULU, 1990 AS AMENDED, AND THE DESIGN STANDARDS OF THE DEPARTMENT OF WASTEWATER MANAGEMENT VOL. 1, JULY 1993.
2. THE CONTRACTOR SHALL NOTIFY THE INSPECTION SECTION, WASTEWATER BRANCH, DDC, AT 527-5842 OR 523-4345 TO ARRANGE FOR INSPECTION SERVICES AND SUBMIT FOUR (4) SETS OF APPROVED CONSTRUCTION PLANS SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF SEWER WORK. THE CONTRACTOR SHALL PAY FOR ALL INSPECTION COSTS.
3. THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS RESEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF THE FACILITIES, INCLUDING AND AFFECTING SEWER LINES, IN THE PRESENCE OF THE WASTEWATER INSPECTOR AND EXERCISE PROPER CARE IN EXCAVATING THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL DAMAGED UTILITIES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS SEWER SERVICE TO ALL AFFECTED AREAS DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SEWAGE SPILLS CAUSED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE STATE DEPARTMENT OF HEALTH AND UTILIZE APPROPRIATE SAMPLING AND ANALYZING PROCEDURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC NOTIFICATIONS AND PRESS RELEASES.
6. CONFINED SPACE FOR ENTRY BY CITY PERSONNEL, INCLUDING INSPECTORS, INTO A PERMIT REQUIRED CONFINED SPACE AS DEFINED IN 29 CFR PART 1910.146(b), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING:
1. ALL SAFETY EQUIPMENT REQUIRED BY THE CONFINED SPACE REGULATIONS APPLICABLE TO ALL PARTIES OTHER THAN THE CONSTRUCTION INDUSTRY, TO INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- a. FULL BODY HARNESSES FOR UP TO TWO PERSONNEL.
- b. LIFELINE AND ASSOCIATED CLIPS.
- c. INGRESS/EGRESS AND FALL PROTECTION EQUIPMENT.
- d. TWO-WAY RADIOS (WALKIE-TALKIES) IF OUT OF LINE-OF-SIGHT.
- e. EMERGENCY (ESCAPE) RESPIRATOR (10 MINUTE DURATION).
- f. CELLULAR TELEPHONE TO CALL FOR EMERGENCY ASSISTANCE.
- g. CONTINUOUS GAS DETECTOR (CALIBRATED) TO MEASURE OXYGEN, HYDROGEN SULFIDE, CARBON MONOXIDE AND FLAMMABLES (CAPABLE OF MONITORING AT A DISTANCE AT LEAST 20- FEET AWAY.)
- h. PERSONAL MULTI-GAS DETECTOR TO BE CARRIED BY INSPECTOR.

2. CONTINUOUS FORCED AIR VENTILATION ADEQUATE TO PROVIDE SAFE ENTRY CONDITIONS.
3. ONE ATTENDANT/RESCUE PERSONNEL TOPSIDE (TWO, IF CONDITIONS WARRANT IT).
7. SEWERS SHALL BE LAID AT LEAST 6 FEET, HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER MAIN. WHEN CONDITIONS PREVENT A LATERAL SEPARATION OF 6 FEET, A SEWER MAY BE LAID CLOSER THAN 6 FEET TO THE WATER MAIN UNDER THE FOLLOWING CONDITION: 1. IT IS LAID IN A SEPARATE TRENCH OR IT IS LAID IN THE SAME TRENCH AS THE WATER MAIN LOCATED TO ONE SIDE ON A BENCH OF UNDISTURBED EARTH. 2. THE ELEVATION OF THE TOP (CROWN) OF THE SEWER IS AT LEAST 6 INCHES BELOW THE BOTTOM (INVERT) OF THE WATER MAIN. 3. OTHER ALTERNATIVES SUCH AS A CONCRETE JACKET SHALL BE CONSIDERED.
8. WATER LATERALS AND WATER METER BOXES SHOULD NOT BE PLACED OVER OR NEAR SEWER LATERALS. WATER VALVES, AIR RELEASE VALVES, BENDS AND CONCRETE BLOCKS, FIRE HYDRANTS, ETC. SHOULD NOT BE PLACED OVER OR NEAR SEWER LINES AND LATERALS.
9. WHENEVER A SEWER LINE VERTICALLY CROSSES WATER MAINS, THE SEWER LINE MUST BE JACKETED WITH REINFORCED CONCRETE FOR A MINIMUM OF 5 FEET ON BOTH SIDES OF THE POINT OF CROSSING IF THE SEWER IS ABOVE THE WATER MAIN AND FOR 3 FEET ON BOTH SIDES IF THE SEWER IS BELOW THE WATER MAIN. HOWEVER, JACKETING MAY BE ELIMINATED IF THE SEWER LINE IS BELOW THE WATER MAIN AND THE SEPARATION IS GREATER THAN 18 INCHES AND STRUCTURAL REQUIREMENTS ARE MET. SEE STD. DET. S-5 FOR THE DETAIL OF THE REINFORCED CONCRETE JACKET FOR PIPES 12 INCHES AND SMALLER. FOR PIPES GREATER THAN 12 INCHES IN DIAMETER, SEE SHT. C-33.

AMERICANS WITH DISABILITIES ACT NOTE

1. ALL NEW SIDEWALK AND WALKWAY CROSS SLOPE SHALL BE 2% MAX. CROSS SLOPE SHALL BE DEFINED AS THE DIRECTION PERPENDICULAR TO THE PREVALENT PEDESTRIAN FLOW OF TRAVEL.

HAZARDOUS MATERIAL NOTE:

CONTRACTOR SHOULD BE AWARE OF EXISTING PETROLEUM PIPES IN THE ROADWAY AND SHALL EXERCISE CAUTION WHEN TRENCHING FOR INSTALLATION OF WATERLINES. CONTRACTOR SHALL NOTIFY ALL STATE AND FEDERAL AGENCIES FOR REQUIRED REMEDIATION WORK. SEE SPECIFICATION SECTION 107.25 "CONTAMINATED AND/OR HAZARDOUS MATERIAL" FOR ADDITIONAL INFORMATION.

RESURFACING CITY ROADS (SUMMER, RIVER, NUUANU & BETHEL) BEYOND STATE RESURFACING LIMITS:

CONTRACTOR SHALL BE REQUIRED TO COLD PLANE 1 1/2" MIN. OF EXIST. A.C. PAVT. (FULL ROAD WIDTH) WHENEVER BWS WATER LINE TRENCHING EXTENDS BEYOND THE STATE'S RESURFACING LIMITS. SEE SHT. C-32 FOR NOTES #1 TO 3 & REPAVING DETAIL FOR RESURFACING REQUIREMENTS.

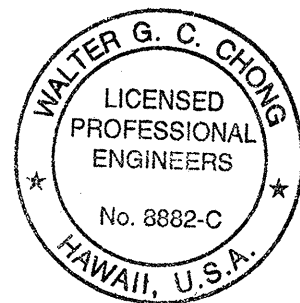
APPROVED:

Principal Executive, Maintenance Unit, BWS 11/15/01
Date

Wagner 11/29/01
Chief, Wastewater Branch, DPP Date

M. J. J. 11/14/01
Chief, Civil Engineering Branch, DPP Date
(For Work in City R-O-W Only)

Chief, Traffic Review Branch, DDP 11/28/01
Date
(For Work in City R-O-W Only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Signature: *Walter G. C. Chong* 11/28/01
DATE

TRAFFIC NOTES FOR WORK ON CITY & COUNTY STREETS:

1. A PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION SERVICES BEFORE WORK ON ANY PORTION OF A PUBLIC STREET OR HIGHWAY MAY BEGIN. CONSTRUCTION TRAFFIC CONTROL PLANS APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES AND/OR THE DEPARTMENT OF PLANNING AND PERMITTING MUST BE PROVIDED WHEN APPLYING FOR THE PERMIT.
2. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS AND OTHER PROTECTIVE FACILITIES, WHICH SHALL CONFORM WITH THE "HAWAII ADMINISTRATION RULES GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAYS ADMINISTRATION'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI-TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS."
3. WORK ON ANY CITY STREET AREA MAY BE PERFORMED ONLY BETWEEN THE HOURS OF 8:30 A.M. TO 3:30 P.M., MONDAY THROUGH FRIDAY, UNLESS OTHERWISE PERMITTED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
4. DURING WORKING HOURS, THE CONTRACTOR SHALL PROVIDE FOR THROUGH TRAFFIC. DURING NON-WORKING HOURS, ALL TRENCHES SHALL BE COVERED WITH A SAFE NON-SKID BRIDGING MATERIAL AND ALL LANES SHALL BE OPEN TO TRAFFIC.
5. AS REQUIRED BY THE DEPARTMENT OF TRANSPORTATION SERVICES, THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
6. WHERE PEDESTRIAN WALKWAYS EXIST, THEY SHALL BE MAINTAINED IN PASSABLE CONDITION OR OTHER FACILITIES FOR PEDESTRIANS SHALL BE PROVIDED. PASSAGE BETWEEN WALKWAYS AT INTERSECTIONS SHALL LIKEWISE BE PROVIDED.
7. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTY USING THESE RIGHTS-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.
8. CONTRACTOR SHALL REFERENCE TO THE APPROVAL OF THE DEPARTMENT OF TRANSPORTATION SERVICES AND THE DEPARTMENT OF PLANNING AND PERMITTING, ALL EXISTING TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS DISTURBED BY HIS ACTIVITIES.
9. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PLANNING AND PERMITTING AT 523-4881 ONE (1) WEEK PRIOR TO ANY WORK TO BE DONE ON SIGNS, POSTS AND PAVEMENT MARKINGS.
10. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN STREET RIGHTS-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
11. THE CONSTRUCTION MANAGER SHALL ENSURE THAT THE CONTRACTOR INSTALLS THE CONSTRUCTION TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MUTCD AND THE HAWAII ADMINISTRATION RULES AS SPECIFIED IN TRAFFIC NOTE #2.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES-2	
NIMITZ HIGHWAY	
WATER SYSTEM IMPROVEMENTS, PART 1	
BWS JOB No. 01-87A	
Scale: As shown	Date: 08/27/01
SHEET No. C-3 OF 43 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	01-87A	2002	229	268

SIGNS & MARKINGS NOTES:

- ALL TRAFFIC SIGN AND PAVEMENT MARKING INSTALLATIONS SHALL BE DONE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," 1988 EDITION, AS AMENDED, THE LATEST SPECIFICATIONS FROM THE TRAFFIC REVIEW BRANCH, DEPARTMENT OF PLANNING AND PERMITTING, AND AS SHOWN ON THE PLANS.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WORK WITH THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING, ONE (1) WEEK IN ADVANCE OF COMMENCING WORK AT 523-4881.
- CONTRACTOR SHALL SUBMIT MATERIAL BROCHURES FOR ALL SIGNS AND PAINT MATERIALS TO THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING.
- THE SIGNING AND/OR STRIPING CONTRACTOR SHALL KEEP ONE (1) SET OF APPROVED PLANS AT THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION WORK.
- CONTRACTOR SHALL PAINT TEMPORARY GUIDELINES AND OUTLINE OF ARROWS, LEGENDS, AND CROSSWALKS WITH A TWO INCH (2") WIDE BRUSHED LINE ON THE DAY THE ROADWAY IS OPENED TO TRAFFIC. THESE MARKINGS MUST BE APPROVED BY THE INSPECTOR FROM THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING.
- CONTRACTOR SHALL NOTIFY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING AT 523-4881, THREE (3) DAYS IN ADVANCE OF FINAL INSPECTION.
- CONTRACTOR SHALL MEET WITH THE INSPECTOR FROM THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING DURING THE FINAL INSPECTION.
- WITHIN TEN (10) DAYS FOLLOWING NOTIFICATION OF AWARD OF CONTRACT, THE CONTRACTOR SHALL SUBMIT TO THE DEPARTMENT OF PLANNING AND PERMITTING (PHONE: 523-4881) FOR APPROVAL, A LIST OF ANY SIGNING AND PAVEMENT MARKING MATERIAL WHICH HE PROPOSES TO INSTALL. THE LIST SHALL BE COMPLETE AS TO THE NAME OF MANUFACTURER, CATALOG NUMBER, AND SHALL BE SUPPLEMENTED WITH MATERIAL BROCHURES.
- UPON FINAL INSPECTION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A LETTER OF CERTIFICATION FOR ALL TRAFFIC SIGNING AND PAVEMENT MARKING MATERIALS INSTALLED.
- SIGNS SHALL BE ATTACHED TO BRACKETS WITH 5/16" ZINC PLATED STEEL BOLTS, NUTS AND WASHERS. SIGNS 48" WIDE OR LARGER THAN 10 SQ. FT. IN AREA SHALL BE MOUNTED ON TWO 2" GALV. PIPE POST. THE SIGN SHALL BE INSTALLED WITH AT LEAST (1) ONE FOOT CLEARANCE FROM THE SIGN EDGE TO THE CURB FACE.
- ALL TRAFFIC SIGNS SHALL BE REFLECTORIZED.
- RAISED PAVEMENT MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DEPARTMENT OF PLANNING AND PERMITTING STANDARDS.
- LOCATION OF "STOP" SIGN:
 - INSTALL "STOP" SIGN AT CURB TANGENT POINT.
 - INSTALL "STOP" SIGN ON METAL STREET LIGHT STANDARD IF A STANDARD IS LOCATED WITHIN 10 FEET OF CURB RETURN.
 - INSTALL "STOP" SIGN IN FRONT OF UTILITY POLE IF A POLE IS LOCATED WITHIN 10 FEET OF CURB RETURN
- PAVEMENT WORK AND SYMBOL MARKINGS SHALL BE IN ACCORDANCE WITH THE DEPARTMENT OF PLANNING AND PERMITTING STANDARDS.
- THE CONTRACTOR SHALL USE THERMOPLASTIC MATERIAL, APPROVED BY THE CIVIL ENGINEERING BRANCH, DEPARTMENT OF PLANNING AND PERMITTING, FOR ALL CROSSWALKS, STOP BARS, PAVEMENT ARROWS, CENTER LINES, LANE LINES, ARC LINES CHANNELIZED TRAFFIC ISLANDS AND LEGENDS.

PUBLIC TRANSIT DIVISION (DTS) NOTE:

THE CONTRACTOR SHALL NOTIFY OAHU TRANSIT SERVICES, INC., (OTS-THEBUS CONTRACTOR), ED SNIFFEN (848-4571) OR LOWELL TOM (848-4578), TWO WEEKS PRIOR TO CONSTRUCTION, INFORMING THEM OF LOCATION, SCOPE OF WORK, PROPOSED CLOSURE OF ANY STREETS OR TRAFFIC LANES, AND THE NEED TO RELOCATE ANY BUS STOPS.

TRAFFIC SIGNAL AND TECHNOLOGY DIVISION NOTES:

- THE CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL AND TECHNOLOGY DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES, THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK ON THE TRAFFIC SIGNAL SYSTEM (PHONE: 523-4589).
- THE TRAFFIC SIGNAL SYSTEM SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. ANY RELOCATION REQUIRED SHALL BE APPROVED BY THE TRAFFIC SIGNAL AND TECHNOLOGY DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES, AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING TRAFFIC SIGNAL FACILITIES, INCLUDING THE TRAFFIC SIGNAL INTERCONNECT SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING TRAFFIC SIGNAL FIBER OPTIC CABLE SYSTEM.. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.
- CONTRACTOR TO PROVIDE TEMPORARY VEHICLE DETECTOR EQUIPMENT & WIRING PRIOR TO CUTTING OR DAMAGING ANY EXISTING LOOP DETECTORS, SEE NIMITZ HWY. REHABILITATION PROJ. TRAFFIC SIGNAL PLANS, SHEETS 197 TO 199.

PUBLIC HEALTH SAFETY AND CONVENIENCE NOTES:

- THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND ITS SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH. THE CITY MAY REQUIRE SUPPLEMENTARY MEASURES AS NECESSARY
- NO CONTRACTOR SHALL PERFORM ANY GRADING OPERATION SO AS TO CAUSE FALLING ROCKS, SOIL OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATION OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ANY REMEDIAL ACTION NECESSARY.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.
- THE CONTRACTOR'S ATTENTION IS DIRECTED TO TITLE II, ADMINISTRATIVE RULES, CHAPTER 43 PUBLIC HEALTH REGULATIONS DEPARTMENT OF HEALTH, STATE OF HAWAII "COMMUNITY NOISE CONTROL FOR OAHU" IN WHICH MAXIMUM ALLOWABLE NOISE LEVELS, THE CONTRACTOR WILL BE REQUIRED TO OBTAIN A PERMIT FROM THE DIRECTOR OF THE DEPARTMENT OF PUBLIC HEALTH. THE CONTRACTOR SHALL OBTAIN A COPY OF CHAPTER 43 AND BECOME FAMILIAR WITH THE NOISE LEVEL RESTRICTIONS AND THE PROCEDURES FOR OBTAINING A PERMIT FOR CONSTRUCTION ACTIVITIES.

MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION NOTES:

- THE CONTRACTOR SHALL NOTIFY THE JOINT POLE COMMITTEE TWO (2) WEEKS IN ADVANCE OF ANY RELOCATION OF UTILITY POLE(S) THAT MAY BE NECESSARY.
- THE CONTRACTOR SHALL NOTIFY THE MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION, DEPARTMENT OF DESIGN AND CONSTRUCTION, THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK ON THE STREET LIGHTING SYSTEM
- THE STREET LIGHTING SYSTEM SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. ANY RELOCATION REQUIRED SHALL BE APPROVED BY THE MECHANICAL/ELECTRICAL DESIGN AND ENGINEERING DIVISION, DEPARTMENT OF DESIGN AND CONSTRUCTION, AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING STREET LIGHTING FACILITIES. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE CITY'S EXISTING COMMUNICATIONS FIBER OPTIC CABLE SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.

HECO NOTES:

- LOCATION OF HECO FACILITIES:

THE LOCATION OF HECO'S OVERHEAD AND UNDERGROUND FACILITIES SHOWN ON THE PLANS ARE FROM EXISTING RECORDS WITH VARYING DEGREES OF ACCURACY AND ARE NOT GUARANTEED AS SHOWN. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATIONS OF THE FACILITIES AND SHALL EXERCISE PROPER CARE IN EXCAVATING AND WORKING IN THE AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO HECO'S FACILITIES WHETHER SHOWN OR NOT SHOWN ON THE PLANS.
- COMPLIANCE WITH HAWAII OCCUPATIONAL SAFETY AND HEALTH LAWS:

THE CONTRACTOR SHALL COMPLY WITH THE STATE OF HAWAII'S OCCUPATIONAL SAFETY AND HEALTH LAWS AND REGULATIONS, INCLUDING WITHOUT LIMITATION, THOSE RELATED TO WORKING ON OR NEAR EXPOSED OR ENERGIZED ELECTRICAL LINES AND EQUIPMENT.
- EXCAVATION PERMIT

THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM HECO'S TECHNICAL DIVISION (543-5654) LOCATED AT 820 WARD AVENUE, 4TH FLOOR, TWO WEEKS PRIOR TO STARTING CONSTRUCTION: PLEASE REFER TO OUR REQUEST NUMBER AT THAT TIME.
- OVERHEAD LINES

STATE LAW REQUIRES THAT A WORKER AND THE LONGEST OBJECT HE OR SHE MAY CONTACT CANNOT COME CLOSER THAN A MINIMUM RADIAL CLEARANCE OF 10 FEET WHEN WORKING CLOSE TO OR UNDER ANY OVERHEAD LINES RATED 50KV AND BELOW. FOR EACH ADDITIONAL 1 KV ABOVE 50KV, AN ADDITIONAL 0.4 INCH SHALL BE ADDED TO THE 10-FOOT CLEARANCE REQUIREMENT. THE PRECEDING INFORMATION ON LINE CLEARANCE REQUIREMENTS IS PROVIDED AS A CONVENIENCE AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE INFORMED OF AND COMPLY WITH ANY REVISIONS OR AMENDMENTS TO THE LAW.

SHOULD THE CONTRACTOR ANTICIPATE THAT HIS WORK WILL RESULT IN THE NEED TO ENCR OACH WITHIN THE MINIMUM REQUIRED CLEARANCE AT ANY TIME, THE CONTRACTOR SHALL NOTIFY HECO AT LEAST FOUR (4) WEEKS PRIOR TO THE PLANNED ENCR OACHMENT SO THAT, IF FEASIBLE, THE NECESSARY PROTECTIONS (E.G. RELOCATE, DE-ENERGIZE, OR BLANKET HECO LINES) CAN BE PUT IN PLACE. HECO'S COST OF SAFEGUARDING ITS LINES WILL BE CHARGED TO THE CONTRACTOR.

CONTACT HECO'S CUSTOMER INSTALLATIONS DEPARTMENT AT 543-7846 FOR ASSISTANCE IN IDENTIFYING AND SAFEGUARDING OVERHEAD POWER LINES.

REFER TO SECTION X OF HECO'S ELECTRIC SERVICE INSTALLATION MANUAL FOR ADDITIONAL GUIDELINES WHEN WORKING AROUND HECO'S FACILITIES. A COPY MAY BE OBTAINED FROM HECO'S CUSTOMER INSTALLATIONS DEPARTMENT.
- POLE BRACING

A MINIMUM CLEARANCE OF 10 FEET MUST BE MAINTAINED WHEN EXCAVATING AROUND UTILITY POLES AND/OR THEIR ANCHOR SYSTEM TO PREVENT WEAKENING OR POLE SUPPORT FAILURE. SHOULD WORK REQUIRE EXCAVATING WITHIN 10 FEET OF A POLE AND/OR ITS ANCHOR SYSTEM, THE CONTRACTOR SHALL PROTECT, SUPPORT, SECURE, AND TAKE ALL OTHER PRECAUTIONS TO PREVENT DAMAGE TO OR LEANING OF THESE POLES. THE CONTRACTOR IS RESPONSIBLE FOR ALL ASSOCIATED COSTS TO BRACE, REPAIR, OR STRAIGHTEN POLES. ALL MEANS OF STRUCTURAL SUPPORT FOR THE POLE PROPOSED BY THE CONTRACTOR SHALL FIRST BE REVIEWED BY HECO BEFORE IMPLEMENTATION. FOR POLE BRACING INSTRUCTIONS, THE CONTRACTOR SHALL CALL THE HECO CONSTRUCTION AND MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT AT 543-4223 A MINIMUM OF TWO (2) WEEKS IN ADVANCE.
- UNDERGROUND LINES

THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF UNDERGROUND LINES. HECO'S EXISTING ELECTRICAL CABLES IN THE AREA ARE ENERGIZED AND WILL REMAIN ENERGIZED DURING CONSTRUCTION. ONLY HECO PERSONNEL ARE TO HANDLE THESE CABLES AND ERECT TEMPORARY GUARDS TO PROTECT THESE CABLES FROM DAMAGE. THE COST OF HECO'S ASSISTANCE IN PROVIDING PROPER SUPPORT AND PROTECTION OF ITS UNDERGROUND LINES WILL BE CHARGED TO THE CONTRACTOR. THE CONTRACTOR SHALL EXERCISE DUE CARE AND PRECAUTIONS TO AVOID DISTURBING ANY ENERGIZED CABLES AND TEMPORARY GUARDS AND SHALL WORK CAUTIOUSLY AT ALL TIMES TO AVOID ACCIDENTS.

FOR VERIFICATION OF UNDERGROUND LINES OR FOR ASSISTANCE IN PROVIDING PROPER SUPPORT AND PROTECTION OF THESE LINES, THE CONTRACTOR SHALL CALL HECO'S CONSTRUCTION & MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT, AT 543-4223, A MINIMUM OF TWO (2) WEEKS IN ADVANCE.
- EXCAVATIONS

WHEN TRENCH EXCAVATION IS ADJACENT TO OR BENEATH HECO'S EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR IS RESPONSIBLE FOR:

 - SHEETING AND BRACING THE EXCAVATION TO PREVENT SLIDES, CAVE-INS, AND SETTLEMENTS.
 - PROTECTING EXISTING STRUCTURES OR FACILITIES WITH BEAMS, STRUTS, OR UNDER-PINNINGS.

- BACKFILLING WITH PROPER BACKFILL MATERIAL INCLUDING SPECIAL THERMAL BACKFILL WHERE EXISTING (REFER TO ENGINEERING DEPARTMENT FOR THERMAL BACKFILL SPECIFICATIONS).

- RELOCATION OF HECO FACILITIES

ANY WORK REQUIRED TO RELOCATE OR MODIFY HECO FACILITIES SHALL BE DONE BY HECO, OR BY THE CONTRACTOR UNDER HECO'S SUPERVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, AND SHALL PROVIDE NECESSARY SUPPORT FOR HECO'S WORK, WHICH MAY INCLUDE, BUT NOT BE LIMITED TO, EXCAVATION AND BACKFILL, PERMITS AND TRAFFIC CONTROL, AND RESTORATION OF PAVEMENT, SIDEWALKS, AND OTHER FACILITIES.

ALL COSTS ASSOCIATED WITH ANY RELOCATION OR MODIFICATION (EITHER TEMPORARY OR PERMANENT) FOR THE CONVENIENCE OF THE CONTRACTOR, OR TO ENABLE THE CONTRACTOR TO PERFORM HIS WORK IN A SAFE AND EXPEDITIOUS MANNER IN FULFILLING HIS CONTRACT OBLIGATIONS SHALL BE BORNE BY THE CONTRACTOR.

- CONFLICTS

THE CONTRACTOR ACKNOWLEDGES THAT HECO IS NOT RESPONSIBLE FOR ANY DELAY OR DAMAGE THAT MAY ARISE AS A RESULT OF ANY CONFLICTS DISCOVERED OR IDENTIFIED WITH RESPECT TO THE LOCATION OR CONSTRUCTION OF HECO'S ELECTRICAL FACILITIES IN THE FIELD, REGARDLESS OF WHETHER THE CONTRACTOR HAS MET THE REQUESTED MINIMUM ADVANCE NOTICES. IN ORDER TO MINIMIZE ANY DELAY OR IMPACT ARISING FROM SUCH CONFLICTS, THE CONTRACTOR SHALL NOTIFY HECO IMMEDIATELY UPON DISCOVERY OR IDENTIFICATION OF SUCH CONFLICT.

- DAMAGE TO HECO FACILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL HECO SURFACE AND SUBSURFACE UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGES TO HECO'S FACILITIES AS A RESULT OF HIS OPERATIONS. THE CONTRACTOR SHALL IMMEDIATELY REPORT SUCH DAMAGES TO HECO'S TROUBLE DISPATCHER AT 548-7961. (24 HRS. A DAY) REPAIR WORK SHALL BE DONE BY HECO OR BY THE CONTRACTOR UNDER HECO'S SUPERVISION. COSTS FOR DAMAGES TO HECO'S FACILITIES SHALL BE BORNE BY THE CONTRACTOR.

- HECO STAND-BY PERSONNEL

THE CONTRACTOR MAY REQUEST HECO TO PROVIDE AN INSPECTOR TO STAND-BY DURING CONSTRUCTION NEAR HECO'S FACILITIES. THE COST OF SUCH INSPECTION WILL BE CHARGED TO THE CONTRACTOR.

THE CONTRACTOR SHALL CALL THE HECO CONSTRUCTION AND MAINTENANCE DEPT., CUSTOMER & SYSTEM SUPERINTENDENT AT 543-4223 A MINIMUM OF 5 WORKING DAYS IN ADVANCE TO ARRANGE FOR HECO STANDBY PERSONNEL.

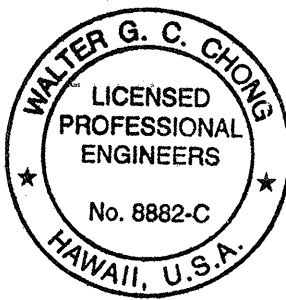
- INDEMNITY

THE CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS HECO FROM AND AGAINST ALL LOSSES, DAMAGES, CLAIMS, AND ACTIONS, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEY'S FEES AND COSTS BASED UPON OR ARISING OUT OF DAMAGE TO PROPERTY OR INJURIES TO PERSONS, OR OTHER TORTIOUS ACTS CAUSED OR CONTRIBUTED TO BY CONTRACTOR OR ANYONE ACTING UNDER ITS DIRECTION, OR CONTROL OR ON ITS BEHALF; PROVIDED CONTRACTORS INDEMNITY SHALL NOT BE APPLICABLE TO ANY LIABILITY BASED UPON THE SOLE NEGLIGENCE OF HECO.

APPROVED:

Principal Executive, Maintenance Unit, BWS 11/15/01
Date

Chief, Traffic Review Branch, DDP 11/15/01
Date
(For Work in City R-O-W Only)



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Walter G. C. Chong 11/20/01
SIGNATURE DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
NOTES-3	
NIMITZ HIGHWAY	
WATER SYSTEM IMPROVEMENTS, PART 1	
BWS JOB No. 01-87A	
Scale: As shown	Date: 08/27/01
SHEET No. C-4 OF 43 SHEETS	

VERIZON HAWAII

- THE LOCATION OF VERIZON HAWAII EXISTING FACILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION AND SHALL MAINTAIN PROPER CLEARANCES WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF VERIZON HAWAII TELEPHONE COMPANY'S FACILITIES. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND SHALL BE LIABLE FOR ANY DAMAGES TO VERIZON HAWAII FACILITIES. ANY DAMAGES SHALL BE REPORTED IMMEDIATELY TO GTE HAWAIIAN TELEPHONE COMPANY'S REPAIR SECTION AT #611 (24 HOURS) OR TO THE EXCAVATION PERMIT SECTION AT 483-8085 (NORMAL WORKING HOURS, MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS).
- FOR UNDERGROUND CABLE LOCATING AND MARKING, FIVE WORKING DAYS ADVANCE NOTICE IS REQUIRED. THREE WORKING DAYS ADVANCE NOTICE IS REQUIRED FOR ANY INSPECTION BY A DESIGNATED REPRESENTATIVE.
- THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS NOT TO DAMAGE ANY EXISTING CABLES OR CONDUITS. ANY WORK INVOLVING EXISTING VERIZON HAWAII CABLES OR CONDUITS, SHALL BE DONE IN THE PRESENCE OF A VERIZON HAWAII INSPECTOR OR DESIGNATED REPRESENTATIVE.
- THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT AND TONING REQUEST FROM VERIZON HAWAII EXCAVATION PERMIT SECTION, LOCATED AT 3239 UALENA STREET, THIRD FLOOR, TWO WEEKS PRIOR TO THE START OF CONSTRUCTION. HOURS OF BUSINESS IS 7:00 AM TO 10:30 AM AND 11:30 AM TO 3:00 PM MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS.
- THE CONTRACTOR SHALL NOTIFY VERIZON HAWAII INSPECTOR OR DESIGNATED REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION, BRACING OR BACKFILLING OF VERIZON HAWAII STRUCTURES OR FACILITIES.
- WHEN EXCAVATION IS ADJACENT TO OR BENEATH VERIZON HAWAII EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL:
 - SHEET AND/OR BRACE THE EXCAVATION TO PREVENT SLIDES, CAVE-INS OR SETTLEMENTS TO ENSURE NO MOVEMENT TO VERIZON HAWAII STRUCTURES OR FACILITIES.
 - PROTECT EXISTING STRUCTURES AND/OR FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING WHILE EXCAVATING BENEATH THEM TO ENSURE NO MOVEMENT TO VERIZON HAWAII STRUCTURES OR FACILITIES.

VERIZON HAWAII GENERAL
CONSTRUCTION/DESIGN NOTES

- THE CONTRACTOR SHALL PROCURE AND PAY FOR ALL LICENSES AND PERMITS AND SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
- THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT AND TONING REQUEST FROM VERIZON HAWAII'S EXCAVATION PERMIT SECTION, LOCATED AT 3239 UALENA STREET, THIRD FLOOR, TWO WEEKS PRIOR TO THE START OF CONSTRUCTION. HOURS OF BUSINESS ARE 7:00 A.M. TO 10:45 A.M. AND 11:30 A.M. TO 2:45 P.M. MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS.
- PRIOR TO THE EXCAVATION OF THE DUCTLINE, THE CONTRACTOR SHALL REQUEST VERIZON HAWAII TO LOCATE EXISTING DUCTLINE WHEREVER REQUIRED. FOR UNDERGROUND CABLE LOCATING AND MARKING, FIVE (5) WORKING DAYS ADVANCE NOTICE IS REQUIRED. THREE (3) WORKING DAYS ADVANCE NOTICE IS REQUIRED FOR ANY INSPECTION BY A DESIGNATED REPRESENTATIVE.
- THE LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION AND SHALL MAINTAIN PROPER CLEARANCES WHENEVER CONSTRUCTION CROSSES OR IS IN CLOSE PROXIMITY OF VERIZON HAWAII FACILITIES. THE CONTRACTOR SHALL VERIFY THEIR LOCATIONS AND SHALL BE LIABLE FOR ANY DAMAGES TO VERIZON HAWAII FACILITIES. ANY DAMAGES SHALL BE REPORTED IMMEDIATELY TO VERIZON HAWAII'S REPAIR SECTION AT #611 (24 HOURS) OR TO THE EXCAVATION PERMIT SECTION AT 840-1444 (NORMAL WORKING HOURS, MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS). AS A RESULT OF HIS OPERATIONS, ADJUSTMENTS TO THE NEW DUCTLINE ALIGNMENT, IF REQUIRED, SHALL BE MADE TO PROVIDE THE REQUIRED CLEARANCES.
- THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTION NOT TO DAMAGE EXISTING CABLES OR DUCTS. A VERIZON HAWAII INSPECTOR OR DESIGNATED REPRESENTATIVE IS REQUIRED TO BE AT ANY JOB SITE WHENEVER THERE WILL BE A BREAKAGE INTO OR ENTRY INTO ANY STRUCTURE THAT CONTAIN VERIZON HAWAII FACILITIES. TEMPORARY CABLE AND DUCT SUPPORTS SHALL BE PROVIDED WHEREVER NECESSARY.
- THE CONTRACTOR SHALL NOTIFY VERIZON HAWAII'S INSPECTOR OR DESIGNATED REPRESENTATIVE A MINIMUM OF 72 HOURS PRIOR TO EXCAVATION, BRACING, OR BACKFILLING OF VERIZON HAWAII'S STRUCTURES OR FACILITIES.

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE "VERIZON HAWAII STANDARD SPECIFICATIONS FOR PLACING UNDERGROUND TELEPHONE SYSTEMS" DATED MARCH 1999. ALL SUBSEQUENT AMENDMENTS AND ADDITIONS, AND ALL OTHER PERTINENT STANDARDS FOR TELEPHONE CONSTRUCTION. CONTRACTOR SHALL FAMILIARIZE HIS PERSONNEL BY OBTAINING APPLICABLE SPECIFICATIONS.
- WHEN EXCAVATION IS ADJACENT TO OR BENEATH VERIZON HAWAII'S EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL:
 - SHEET AND/OR BRACE THE EXCAVATION TO PREVENT SLIDES, CAVE-INS, OR SETTLEMENTS TO ENSURE NO MOVEMENT TO VERIZON HAWAII'S STRUCTURES OR FACILITIES.
 - PROTECT EXISTING STRUCTURES AND/OR FACILITIES WITH BEAMS, STRUTS, OR UNDERPINNING WHILE EXCAVATING BENEATH THEM TO ENSURE NO MOVEMENT TO VERIZON HAWAII'S STRUCTURES OR FACILITIES.
- THE CONTRACTOR SHALL BRACE ALL POLES OR LIGHT STANDARDS NEAR THE NEW DUCTLINE, MANHOLE, OR HANDHOLE DURING HIS OPERATIONS.
- THE CONTRACTOR SHALL SAW-CUT A.C. PAVEMENT AND CONCRETE GUTTER WHEREVER NEW MANHOLES, HANDHOLES, OR DUCTLINES ARE TO BE PLACED AND SHALL RESTORE TO EXISTING CONDITION OR BETTER.
- THE CONTRACTOR SHALL COMPLY WITH THE POLICY ADOPTED BY THE DEPARTMENT OF PUBLIC WORKS, CITY AND COUNTY OF HONOLULU, CONCERNING THE REPLACEMENT OF CONCRETE SIDEWALKS AFTER EXCAVATION WORK.
- 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. 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 THE NEW LINES.
- WHEREVER CONNECTIONS TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES PRIOR TO EXCAVATION OF THE MAIN TRENCHES TO VERIFY THEIR LOCATIONS AND DEPTHS.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL KEEP THE PROJECT AND SURROUNDING AREA FREE FROM DUST NUISANCE. THE COST FOR SUPPLEMENTARY MEASURES, WHICH WILL BE REQUIRED BY THE CITY AND COUNTY, SHALL BE BORNE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PUMP ALL MANHOLES DRY DURING FINAL INSPECTION.
- THE CONTRACTOR SHALL NOTIFY VERIZON HAWAII INSPECTOR 24 HOURS PRIOR TO THE POURING OF CONCRETE OR BACKFILLING.
- WHEN CONNECTING TO MANHOLE WALLS, ALL EXISTING REINFORCING BARS SHALL BE LEFT INTACT. DUCTS SHALL BE ADJUSTED IN THE FIELD IN ORDER TO CLEAR REINFORCING
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT ALL REQUIRED LINES AND GRADES AND SHALL PRESERVE ALL BENCH MARKS AND WORKING POINTS NECESSARY TO LAY OUT THE WORK CORRECTLY. THE NEW DUCTLINE SHALL BE ADJUSTED BY THE CONTRACTOR TO SUIT THE EXISTING CONDITIONS AND THE DETAILS AS DESCRIBED IN THE PLANS.
- MINIMUM CONCRETE STRENGTH SHALL BE:

FOR DUCTLINE	2500 PSI AT 28 DAYS
FOR MANHOLE	3000 PSI AT 28 DAYS OR AS SPECIFIED IN DESIGN NOTES
- BENDS IN THE DUCT ALIGNMENT, DUE TO CHANGES IN GRADE SHALL HAVE A MINIMUM RADIUS OF 25 FEET. ALL 90 DEGREE C-BENDS AT A POLE OR AT THE BUILDING FLOOR SLAB PENETRATION, SHALL HAVE A BEND RADIUS OFTEN TIMES THE DIAMETER OF THE DUCT OR GREATER.
- AFTER DUCTLINE HAS BEEN COMPLETED, A MANDREL WITH A SQUARE FRONT NOT LESS THAN 12" LONG AND HAVING A DIAMETER OF 1/4" LESS THAN THE INSIDE DIAMETER OF THE DUCT, SHALL BE PULLED THROUGH EACH DUCT AFTER WHICH A BRUSH WITH STIFF BRISTLES SHALL BE PULLED THROUGH TO MAKE CERTAIN THAT NO PARTICLES OF EARTH, SAND, OR GRAVEL HAVE BEEN LEFT INSIDE. DUCTS SHALL BE COMPLETELY DRY AND CLEAN.
- ALL DUCTS AND CONDUITS SHALL HAVE AN 1800# POLYESTER MULE-TAPE (NEPTCO, WP1800P, VERIZON HAWAII MATERIAL CODE NO. 571154) INSTALLED THROUGHOUT ITS ENTIRE LENGTH. ALL DUCTS SHALL BE CAPPED TO PREVENT ENTRY OF FOREIGN MATERIAL DURING CONSTRUCTION AND AT THE COMPLETION OF INSTALLATION.

GAS NOTES

- THE GAS COMPANY GAS PIPELINES IN THE PROJECT AREA ARE PLASTIC COATED AND CATHODICALLY PROTECTED. THE CONTRACTOR SHALL BE EXTREMELY CAREFUL WHEN WORKING NEAR THESE GAS PIPELINES.
- WRITTEN CLEARANCES MUST BE OBTAINED FROM THE GAS COMPANY, MAPS AND RECORDS DEPARTMENT, 515 KAMAEE STREET, AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING EXCAVATION NEAR THESE GAS PIPELINES.

- SINCE GAS LINE LOCATIONS ON FIELD MAPS ARE APPROXIMATE, THE CONTRACTOR, AFTER OBTAINING WRITTEN CLEARANCE, SHALL CALL USA NORTH A MINIMUM OF TWO (2) WORKING DAYS BEFORE STARTING EXCAVATION TO ARRANGE FOR FIELD LOCATION OF THE EXISTING GAS PIPELINES. THE TELEPHONE NUMBER IS 1-800-227-2600.
- THE CONTRACTOR SHALL EXCAVATE AND BACKFILL AROUND GAS PIPELINES IN THE PRESENCE OF A REPRESENTATIVE OF THE GAS COMPANY. ALL BACKFILL WITHIN SIX INCHES OF ANY GAS PIPELINE SHALL BE SELECT CUSHION MATERIAL APPROVED BY THE GAS COMPANY.
- FOR RELOCATION OF ANY GAS PIPELINE, THE CONTRACTOR SHALL NOTIFY THE GAS COMPANY FIVE (5) WORKING DAYS BEFORE STARTING WORK. THE TELEPHONE NUMBER IS 594-5574. THE CONTRACTOR SHALL PROVIDE THE NECESSARY EXCAVATION AND BACKFILL, OBTAIN TRAFFIC PERMITS, AND RESTORE PAVEMENT, SIDEWALKS, AND OTHER FACILITIES. ANY RELOCATION OF GAS FACILITIES SHALL BE DONE BY THE GAS COMPANY AND PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOTIFY THE GAS COMPANY IMMEDIATELY AFTER ANY DAMAGE HAS BEEN CAUSED TO EXISTING GAS PIPELINES, COATINGS, OR ITS CATHODIC PROTECTION DEVICES. THE TELEPHONE NUMBER IS 535-5933, 24 HOURS A DAY. THE CONTRACTOR SHALL BE LIABLE FOR ANY DAMAGE TO THE GAS COMPANY FACILITIES. REPAIR WORK ON SUCH DAMAGE SHALL BE DONE BY THE GAS COMPANY WITH PAYMENT FOR THIS WORK TO BE BORNE BY THE CONTRACTOR.
- MINIMUM VERTICAL AND HORIZONTAL CLEARANCE BETWEEN THE GAS PIPELINES AND OTHER PIPELINES, CONDUITS, DUCTLINES, OR OTHER FACILITIES SHALL BE 12 INCHES. ADEQUATE SUPPORT AND PROTECTION FOR GAS PIPELINES EXPOSED IN THE TRENCH SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE GAS COMPANY.
- THE CONTRACTOR SHALL WORK IN AN EXPEDITIOUS MANNER IN ORDER TO KEEP THE UNCOVERED GAS PIPELINES EXPOSED FOR AS SHORT A PERIOD OF TIME AS POSSIBLE.

FREE SERVICE FOR LOCATING UNDERGROUND UTILITIES:

A FREE SERVICE IS AVAILABLE TO CONTRACTORS FOR LOCATING UNDERGROUND UTILITIES. SERVICE PROVIDED BY THE UNDERGROUND SERVICE ALERT NORTH, AT TOLL FREE TELEPHONE NO. 1-800-227-2600. CALL UNDERGROUND SERVICE ALERT NORTH AT LEAST TWO (2) DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.

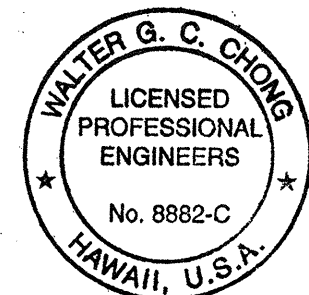
CHEVRON U.S.A. COMPANY NOTES

- ALL WORK IN VICINITY OF CHEVRON U.S.A. PIPELINES SHALL BE IN ACCORDANCE WITH CHEVRON U.S.A. INC. GUIDELINES FOR WORK NEAR CHEVRON U.S.A PIPELINES (FORM H-603).

CHEVRON USA'S HAWAIIAN REFINERY HAS ONE OR MORE PETROLEUM PRODUCT PIPELINES IN AN EASEMENT THAT RUNS THROUGH OR IMMEDIATELY ADJACENT TO CONTRACTOR'S PROPOSED PROJECT. THESE PIPELINES ARE USED FOR THE TRANSMISSION OF PETROLEUM PRODUCTS AT HIGH TEMPERATURES AND PRESSURES. THE PIPELINES ARE COATED AND CATHODICALLY PROTECTED. THEY REQUIRE FREQUENT INSPECTION AND MAINTENANCE.

IT IS ABSOLUTELY NECESSARY THAT CHEVRON BE PROVIDED ACCESS TO THESE BURIED PIPELINES AT ALL TIMES 24 HOURS A DAY, SEVEN DAYS A WEEK. THEREFORE, CONTRACTOR'S PROPOSED PROJECT MUST ADHERE TO THE FOLLOWING GUIDELINES:

 - IF THE EASEMENT AREA IS FENCED OR WALLED IN, CHEVRON MUST HAVE A GATE KEY UNLESS THE AREA IS ATTENDED ON A 24-HOUR BASIS.
 - STORAGE OF MATERIAL ON THE EASEMENT SHALL BE AVOIDED. THIS INCLUDES PARKING LOTS.
 - A MINIMUM OVERHEAD CLEARANCE OF 15 FEET MUST BE MAINTAINED WITHIN THE EASEMENT.
 - HEAVY LANDSCAPING (TREES, SHRUBS, SPRINKLERS, ETC.) SHOULD BE KEPT OFF THE EASEMENT.
 - HEAVY OBSTRUCTIONS SHOULD BE KEPT OFF THE EASEMENT (E.G., BUILDINGS, WALLS, EQUIPMENT PADS, ETC.).
 - NO TOP-TO-BOTTOM OBSTRUCTIONS WILL BE PERMITTED IN THE EASEMENT (E.G., POWER POLES, SEWER MANHOLES, SEWER CLEANOUTS, BRIDGE ABUTMENTS, ETC.).
 - LIGHT OBSTRUCTIONS (E.G., GRASS, PAVING [ASPHALTIC CONCRETE], CURB CROSSINGS, ETC.) ARE CONSIDERED REASONABLE. GRASSED AREAS MUST BE SUITABLE FOR ALL-WEATHER VEHICULAR TRAVEL.
 - CHEVRON'S COMPANY REPRESENTATIVE WILL STAKE THE PIPELINES AT CONTRACTOR'S REQUEST. DETERMINATION OF PIPELINE ELEVATIONS SHALL BE CONTRACTOR'S RESPONSIBILITY AND AT CONTRACTOR'S EXPENSE.
- CONTRACTOR TO CONTACT CHEVRON USA, WILSON RIVERA - PHONE 682-2259, ONE WEEK PRIOR TO EXCAVATION IN ALL EASEMENTS DUE TO KNOWN CONTINUOUS OIL LINES ALONG THE LOCH HARBOR. TIME DURING YOUR CONSTRUCTION PERIOD MUST BE OBTAINED FROM CHEVRON USA, INC.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.
Walter G. C. Chong 11/20/01
SIGNATURE DATE

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	01-87A	2002	230	268

- THE PIPELINE EASEMENT ACCESS ROAD MUST BE KEPT OPEN AT ALL TIMES. AUTHORIZATION TO BLOCK ACCESS ROADS AT ANY TIME DURING YOUR CONSTRUCTION PERIOD MUST BE OBTAINED FROM CHEVRON USA, INC.
- AVOID RUNNING ANY SEWERS, FENCES, SPRINKLER LINES, PIPELINES, CABLES, CURBS, ETC., WITHIN THE EASEMENT IN A PARALLEL OR NEAR PARALLEL ORIENTATION TO THE EASEMENT CENTERLINE. CROSSINGS ARE PERMITTED BUT MUST BE HELD TO A MINIMUM OF 45 DEGREES TO EASEMENT CENTERLINE.
- SEWER AND ELECTRICAL CONDUIT CROSSINGS SHOULD BE KEPT A MINIMUM OF FOUR FEET CLEAR BELOW CHEVRON'S PIPELINES FOR THE FULL EASEMENT WIDTH. IF THIS CONDITION CANNOT BE MET, THE CROSSINGS SHOULD BE ENCASED IN SIX INCHES OF CONCRETE, WITH A MINIMUM TWO FEET CLEAR BELOW CHEVRON'S PIPELINES.
- EXCEPT FOR ITEM K ABOVE, ALL CROSSING FACILITIES SHOULD BE AT LEAST 24 INCHES CLEAR BELOW CHEVRON'S PIPELINES FOR THE FULL EASEMENT WIDTH. CROSSINGS ABOVE CHEVRON'S PIPELINES ARE GENERALLY NOT PERMITTED.
- REMOVAL OF FILL FROM THE EASEMENT SHOULD NOT RESULT IN THERE BEING LESS THAN THREE FEET MINIMUM COVER OVER THE LINES.
- TRENCHES ACROSS THE PIPELINES SHALL BE LIMITED TO A MAXIMUM WIDTH OF FIVE FEET UNLESS THE LINES ARE SUPPORTED IN A MANNER ACCEPTED IN ADVANCE BY CHEVRON USA, INC.
- ALL EXCAVATIONS AND BACKFILLING OPERATIONS IN CHEVRON'S EASEMENT MUST BE WITNESSED BY A CHEVRON COMPANY REPRESENTATIVE. CONTRACTOR SHALL PROVIDE CHEVRON WITH 48 HOURS NOTICE PRIOR TO BEGINNING WORK WITHIN CHEVRON'S EASEMENT. ALL BACKFILL MATERIAL WITHIN SIX INCHES OF OUR PIPELINES MUST BE OF FINELY GRADED DIRT OR SAND. ALL EXCAVATIONS WITHIN TWO FEET OF OUR PIPELINES MUST BE ACCOMPLISHED BY HAND DIGGING. WORK SHALL BE HANDLED IN AN EXPEDITIOUS MANNER IN ORDER TO KEEP CHEVRON'S PIPELINES UNCOVERED FOR AS SHORT A PERIOD AS POSSIBLE.
- FILL ON CHEVRON'S EASEMENT SHOULD BE LIMITED TO FOUR FEET MAXIMUM COVER OVER CHEVRON'S PIPELINES. CHEVRON WILL STAKE THE PIPELINES UPON REQUEST SO THAT CONTRACTOR CAN EXCAVATE TO DETERMINE THE DEPTH OF THE PIPELINES.
- REGRADING OF ADJACENT PROPERTY SHOULD NOT ADVERSELY AFFECT DRAINAGE OF THE EASEMENT AREA OR POSE A HAZARD TO THE EASEMENT SUCH AS LANDSLIDES OR EROSION.
- THE SLOPE MUST BE KEPT REASONABLY LEVEL ACROSS THE EASEMENT. MAXIMUM SHOULD BE 5:1 TO PROVIDE FOR BACKHOE OPERATION.
- ALL COSTS PERTAINING TO DAMAGE OF CHEVRON'S PIPELINES, THEIR COATINGS, OR THE CATHODIC PROTECTION DEVICES, OR DAMAGE OF PROPERTY AND INJURY TO PERSONS CAUSED DIRECTLY OR INDIRECTLY BY THIS WORK, WILL BE TO CONTRACTOR'S ACCOUNT. ANY REPAIR WORK ON THE LINES RESULTING FROM CONTRACTOR'S PROJECT SHALL BE PERFORMED BY CHEVRON USA, INC., AND BILLED TO CONTRACTOR.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES-4

NIMITZ HIGHWAY
WATER SYSTEM IMPROVEMENTS, PART 1
BWS JOB No. 01-87A

Scale: As shown

Date: 08/27/01

SHEET No. C-5 OF 43 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	01-87A	2002	231	268

NOTES FOR CONSTRUCTION WITHIN
STATE RIGHT-OF-WAY

1. THE CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM WORK UPON STATE HIGHWAYS FROM THE OAHU DISTRICT ENGINEER, STATE HIGHWAYS, AT 727 KAKOI STREET, PRIOR TO COMMENCEMENT OF WORK WITHIN THE STATE'S HIGHWAY RIGHT-OF-WAY.
2. CONSTRUCTION AND RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN THE STATE'S RIGHT-OF-WAY, INCLUDING THE LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC, SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, AND THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, OF THE STATE HIGHWAYS DIVISION.

3. WORK THAT REQUIRES LANE CLOSURES SHALL BE PERFORMED ONLY AT NIGHT. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND RESTRICTIONS SET FORTH IN THE NOISE VARIANCE FOR THIS PROJECT. THE ENGINEER WILL ALLOW THE CONTRACTOR TO DO LANE CLOSURES ONLY AS FOLLOWS:

INBOUND LANES OF NIMITZ HIGHWAY AND ALL OTHER STREETS

SUNDAY	8:00 P.M. - 12:00 MIDNIGHT
MONDAY THRU THURSDAY	12:01 A.M. - 5:00 A.M.
FRIDAY (MORNING)	8:00 P.M. - 12:00 MIDNIGHT 12:01 A.M. - 5:00 A.M.

OUTBOUND LANES OF NIMITZ HWY. (QUEEN ST. - IWILEI RD. EXIT)

SUNDAY	9:00 P.M. - 12:00 MIDNIGHT
MONDAY THRU THURSDAY	12:01 A.M. - 5:00 A.M.
FRIDAY (MORNING)	9:00 P.M. - 12:00 MIDNIGHT 12:01 A.M. - 5:00 A.M.

OUTBOUND LANES OF NIMITZ HWY. (IWILEI RD. EXIT - SUMNER ST.)

SUNDAY	11:00 P.M. - 12:00 MIDNIGHT
MONDAY THRU THURSDAY	12:01 A.M. - 5:00 A.M.
FRIDAY (MORNING)	11:00 P.M. - 12:00 MIDNIGHT 12:01 A.M. - 5:00A.M.

THE CONTRACTOR SHALL NOT DO WORK ON FRIDAY NIGHTS AND SATURDAYS OR AS SPECIFIED BY THE ENGINEER. SUNDAY'S WORK WILL BE PART OF MONDAY'S WORKING DAY.

THE CONTRACTOR MAY DO WORK NOT REQUIRING LANE CLOSURES DURING THE DAYTIME WORKING HOURS. CONDUCT DAYTIME WORK BETWEEN THE HOURS OF 9:30 A.M. AND 3:30 P.M. ONLY. ALLOW TRAFFIC TO FLOW AT THE NORMAL POSTED SPEED LIMIT DURING NON-NIGHT-WORKING HOURS.

DURING NIGHT WORK, THE ENGINEER WILL PERMIT THE CONTRACTOR TO CLOSE ONE LANE OF TRAFFIC IN ONE DIRECTION FOR THE ROADWAY REHABILITATION WORK, AND UP TO TWO LANES OF TRAFFIC IN THE OTHER DIRECTION FOR THE BWS WATER LINE WORK, WITH A MAXIMUM OF THREE LANES CLOSED IN BOTH DIRECTIONS DURING ITS WORKING HOURS.

EXCEPTIONS TO THE ABOVE LANE CLOSURE HOURS SHALL REQUIRE THE ENGINEER'S ACCEPTANCE IN WRITING.

4. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES, AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE, AND SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "ADMINISTRATIVE RULES OF HAWAII GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS," ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAYS ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI - STANDARD AND GUIDES FOR TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS." IF LANE CLOSURES ARE REQUIRED DURING CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE INCORPORATED INTO THE CONSTRUCTION PLANS AND MUST BE APPROVED BY THE DIVISION PRIOR TO THE ISSUANCE OF THE PERMIT.

5. THE MINIMUM PAVEMENT STRUCTURE SHALL CONSIST OF:

A. RESIDENTIAL DRIVEWAYS

- (1) 2" ASPHALT CONCRETE (MIX IV) AND 6" AGGREGATE BASE COURSE, OR 2" ASPHALT CONCRETE AND 2-1/2" ASPHALT CONCRETE BASE COURSE OR ASPHALT CONCRETE.
- (2) 4" CLASS "A" CONCRETE REINFORCED WITHIN 6" X 6" - W2.9 X W2.9 WIRE MESH ON 12" AGGREGATE SUBBASE, IF DEEMED NECESSARY BY THE ENGINEER.

B. COMMERCIAL DRIVEWAYS, SIDE ROADS, AND UTILITY INSTALLATION ON MINOR HIGHWAYS

- (1) 2-1/2" ASPHALT CONCRETE (MIX IV), 8" AGGREGATE BASE COURSE AND 12" SUBBASE, OR 2-1/2" ASPHALT CONCRETE AND 8" ASPHALT CONCRETE BASE COURSE OR ASPHALT CONCRETE.

- (2) 6" OF CLASS "A" CONCRETE REINFORCED WITH 6" X 6" - W2.9 X W2.9 WIRE MESH ON 12" AGGREGATE SUBBASE, IF DEEMED NECESSARY BY THE ENGINEER.

C. CHANNELIZED INTERSECTIONS AND UTILITY INSTALLATIONS ON MAJOR HIGHWAYS

4" ASPHALT CONCRETE (MIX IV), 8" AGGREGATE BASE COURSE AND 12" AGGREGATE SUBBASE, OR 4" ASPHALT CONCRETE AND 8" ASPHALT CONCRETE BASE COURSE OR ASPHALT CONCRETE, OR MATCH EXISTING PAVEMENT STRUCTURE, WHICHEVER IS GREATER.

6. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN THE STATE'S HIGHWAY RIGHT-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DISTRICT ENGINEER.

7. COMPACTION TESTS SHALL BE TAKEN IN ACCORDANCE WITH THE SPECIFICATIONS FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, AS FOLLOWS:

A. SUBBASE: ONE (1) COMPACTION TEST PER LIFT PER 200 LINEAL FEET OF ROADWAY.

B. BASE COURSE: ONE (1) COMPACTION TEST PER LIFT PER 200 LINEAL FEET OF ROADWAY.

C. ONE (1) COMPACTION TEST PER LIFT PER 300 LINEAL FEET OF TRENCH.

D. A COPY OF THE TEST RESULTS SHALL BE SUBMITTED TO THE DISTRICT ENGINEER.

8. PRIOR TO COMMENCING TRENCH EXCAVATION WORK, THE CONTRACTOR SHALL TAKE A PROFILE ALONG THE CENTERLINE OF THE PROPOSED UTILITY TRENCH. THIS INFORMATION SHALL BE USED IN THE VERIFICATION OF RESTORING THE ROADWAY TO ITS ORIGINAL CONDITION. A COPY OF THE PROFILE SHALL BE SUBMITTED TO THE DISTRICT ENGINEER.

9. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE AND SAFE NON-SKID BRIDGING MATERIAL, INCLUDING SHORING, OVER TRENCHES IN PAVEMENT AREAS. THE BRIDGING SHALL BE ABLE TO SUPPORT ALL TYPES OF VEHICULAR TRAFFIC.

10. UNLESS OTHERWISE APPROVED BY THE DISTRICT ENGINEER, NO TRENCH SHALL BE OPENED WITH MORE THAN 25 IRON PLATES IN ADVANCE OF INSTALLED AND TESTED PIPELINE AND/OR DUCTLINE.

11. EXISTING DRAINAGE SYSTEMS SHALL BE FUNCTIONAL AT ALL TIMES.

12. THE CONTRACTOR SHALL EXERCISE CARE TO MINIMIZE DAMAGES TO EXISTING HIGHWAY IMPROVEMENTS. ALL DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR, AT HIS EXPENSE, TO THE SATISFACTION OF THE DISTRICT ENGINEER.

13. APPROVAL OF PERMIT CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF NOTIFICATION OF APPROVAL TO THE APPLICANT. IN THE EVENT CONSTRUCTION DOES NOT COMMENCE WITHIN THIS ONE-YEAR PERIOD, THE APPLICANT WILL BE REQUIRED TO RESUBMIT THE CONSTRUCTION PLANS FOR THE DIVISION'S REVIEW AND REAPPROVAL.

14. ALL REGULATORY, GUIDE, AND CONSTRUCTION SIGNS AND BARRICADES SHALL HAVE A HIGH-INTENSITY REFLECTIVE BACKGROUND.

15. THE CONTRACTOR SHALL INFORM THE STATE HIGHWAYS' PERMIT OFFICE (831-6712) AT LEAST TWO (2) DAYS PRIOR TO CLOSING ANY LANES.

16. DRIVEWAYS SHALL BE KEPT OPEN UNLESS THE OWNERS OF THE PROPERTIES USING THESE RIGHTS-OF-WAY ARE OTHERWISE PROVIDED FOR SATISFACTORILY.

17. 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.

18. THE CONTRACTOR SHALL REFERENCE, TO THE SATISFACTION OF THE DISTRICT ENGINEER, ALL EXISTING TRAFFIC SIGNS, POSTS AND PAVEMENT MARKINGS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL REPLACE OR REPAIR ALL TRAFFIC SIGNS, POSTS, AND PAVEMENT MARKINGS DISTURBED BY HIS ACTIVITIES, AT HIS EXPENSE, UNLESS DIRECTED OTHERWISE BY THE DISTRICT ENGINEER OR HIS REPRESENTATIVE.

19. THE CONTRACTOR SHALL EXERCISE CARE WHEN PERFORMING WORK IN, ON OR ADJACENT TO THE STATE'S HIGHWAY RIGHT-OF-WAY. DAMAGES TO EXISTING FACILITIES SHALL BE IMMEDIATELY REPORTED TO THE RESPECTIVE UTILITY COMPANIES, AND/OR CITY OR STATE AGENCIES. THE REPAIR WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE. THE

20. CONTRACTOR SHALL NOTIFY THE STATE HIGHWAYS' HIGHWAY LIGHTING AND TRAFFIC SIGNAL SUPERVISOR (837-8056), THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK.

21. THE CONTRACTOR SHALL NOTIFY THE SIGNAL AND TECHNOLOGY DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES, THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK ON THE TRAFFIC SIGNAL SYSTEM (PHONE: 523-4589).

22. TRAFFIC SIGNALS SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. ANY RELOCATION REQUIRED SHALL BE APPROVED BY THE SIGNAL AND TECHNOLOGY DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES, AND PAID FOR BY THE CONTRACTOR.

23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING TRAFFIC SIGNAL FACILITIES, INCLUDING THE TRAFFIC SIGNAL INTERCONNECT SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO THE EXISTING TRAFFIC SIGNAL FIBER OPTIC CABLE SYSTEM. ANY AND ALL DAMAGES TO THESE FACILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS COST IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY AND COUNTY OF HONOLULU.

25. THE CONTRACTOR SHALL NOTIFY OAHU TRANSIT SERVICES, INC. (DTS-THE BUS CONTRACTOR), ED SNIFFEN AT 848-4571, OR LOWELL TOM AT 848-4578, TWO WEEKS PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR SHALL INFORM DTS OF THE LOCATION AND SCOPE OF WORK, PROPOSED CLOSURE OF ANY STREET OR TRAFFIC LANES, AND THE NEED TO RELOCATE ANY BUS STOP.

26. THE PERMIT TO PERFORM WORK UPON STATE HIGHWAYS MAY BE REVOKED BECAUSE OF DEFAULT IN ANY OF THE FOLLOWING, BUT NOT LIMITED TO, CONDITIONS:

- A. WORK PERFORMED BEFORE OR AFTER PERMITTED HOURS.
- B. FAILURE TO MAINTAIN ROADWAY SURFACES IN A SMOOTH AND SAFE CONDITION.
- C. FAILURE TO CLEAN UP CONSTRUCTION DEBRIS GENERATED FROM PROJECT WORK.
- D. FAILURE TO PROVIDE PROPER TRAFFIC CONTROL.
- E. FAILURE TO REPLACE DAMAGED PAVEMENT MARKINGS AND SIGNS.

27. THE CONTRACTOR SHALL NOTIFY THE STATE HIGHWAYS PERMIT OFFICE (831-6712) AT LEAST TWO DAYS PRIOR TO PERFORMING ANY TRENCH RESTORATION WORK. THIS WORK SHALL INCLUDE ANY BACKFILLING AND COMPACTING OF TRENCH MATERIAL; ANY PLACING AND COMPACTING OF BASE COURSE MATERIAL; AND PAVING OPERATIONS. ANY TRENCH RESTORATION WORK PERFORMED BY THE CONTRACTOR THAT IS NOT WITNESSED BY A STATE REPRESENTATIVE WILL BE REQUIRED TO BE REMOVED AND RESTORED WITH A STATE REPRESENTATIVE PRESENT. ALL RESTORATION WORK WILL BE DONE AT THE CONTRACTOR'S EXPENSE.

28. 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 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.

29. THE CONTRACTOR WILL MAKE EVERY EFFORT TO MINIMIZE THE USE AND THE DURATION OF USE OF STEEL PLATES. ALL STEEL PLATES SHALL HAVE A NON-SKID SURFACE. THE STATE MAY REQUIRE THE BACKFILLING AND PATCHES OF TRENCHES DUE TO THE EXCESSIVE USAGE OF STEEL PLATES.

30. CONTRACTOR SHALL PROVIDE 24-HOUR EMERGENCY CONTACT INFORMATION FOR THE PUBLIC'S USE FOR ALL UTILITIES FOUND WITHIN THE PROJECT LIMITS.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) NOTES

- (A) EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

- (1) THE CONTRACTOR SHALL INSPECT THE EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE A WEEK OR AFTER 0.5 INCH OF RAINFALL.

- (2) THE CONTRACTOR SHALL MAINTAIN THE EROSION AND SEDIMENT CONTROL MEASURES ACCORDING TO THE CONTRACT. IF A REPAIR IS NECESSARY, THE CONTRACTOR SHALL INITIATE THE REPAIRS WITHIN TWENTY-FOUR (24) HOURS AFTER THE INSPECTION SUCH AS:

THE CONTRACTOR SHALL INSPECT THE CATCH BASINS AND REPAIR THE BREACHES.

- (3) THE CONTRACTOR SHALL HAVE ITS PERSONNEL MAKE A MAINTENANCE INSPECTION REPORT PROMPTLY AFTER EACH INSPECTION. THE CONTRACTOR SHALL SELECT A MINIMUM OF THREE (3) PERSONNEL WHO WILL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE, REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT. PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE CONTRACTOR. THE CONTRACTOR SHALL TRAIN THESE PERSONNEL IN THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT USED ONSITE ACCORDING TO THE CONTRACT.

(B) SUBMITTAL REQUIREMENTS:

- (1) CONSTRUCTION ACTIVITIES OF FIVE (5) ACRES OR MORE.

- (A) STORM WATER DISCHARGES INTO STATE WATERS DUE TO CONSTRUCTION ACTIVITIES OF FIVE (5) ACRES OR MORE, WILL REQUIRE AN NPDES PERMIT FROM THE DEPARTMENT OF HEALTH (DOH). THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOUR (4) SETS OF SITE-SPECIFIC BEST MANAGEMENT PLANS (BMPs). THE PLANS SHALL BE SUBMITTED NO LATER THAN THIRTY (30) CALENDAR DAYS AFTER THE AWARD OF CONTRACT.

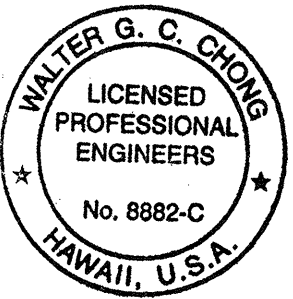
- (2) CONSTRUCTION ACTIVITIES DEWATERING AND/OR HYDROTESTING WATER.

- (A) DISCHARGES INTO STATE WATERS DUE TO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL REQUIRE NPDES PERMIT(S) FROM DOH. IF THE CONTRACTOR OPTIONS TO DISCHARGE DEWATERING AND/OR HYDROTESTING EFFLUENT INTO STATE WATERS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOUR (4) SETS OF SITE-SPECIFIC DEWATERING AND/OR HYDROTESTING BMPs, AND FOUR (4) COPIES OF THE QUALITY OF DISCHARGE TEST RESULTS. THE PLANS AND TEST RESULTS SHALL BE SUBMITTED NO LATER THAN THIRTY (30) CALENDAR DAYS AFTER THE AWARD OF CONTRACT.

- (B) NO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL BE AUTHORIZED UNTIL THE RECEIPT OF THE NPDES PERMIT(S) FROM DOH.

DISABILITY AND COMMUNICATION ACCESS BOARD NOTES

1. A MINIMUM 3'-0" WIDE ACCESSIBLE ROUTE WITH A CROSS SLOPE OF 2 % SHALL BE MAINTAINED ALONG THE ENTIRE LENGTH OF SIDEWALK AND AT THE BACK OF DRIVEWAY RAMPS, UNOBSTRUCTED BY LIGHT POLES, SIGNS, ETC.
2. ALL CURB RAMPS WITH A 48" MINIMUM TOP LANDING SHALL NOT EXCEED A MAXIMUM RATIO OF 12H:1V.
3. ALL CURB RAMPS WITHOUT A TOP LANDING SHALL BE 5' WIDE AND SHALL NOT EXCEED A MAXIMUM RATIO OF 1/4"/FT.
4. ALL CURB RAMP FLARES SHALL NOT EXCEED A MAXIMUM RATIO OF 12H:1V.



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Signature: *Walter G. C. Chong* 11/28/01
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES-5

NIMITZ HIGHWAY
WATER SYSTEM IMPROVEMENTS, PART 1
BWS JOB No. 01-87A

Scale: As shown

Date: 08/27/01

SHEET No. C-6 OF 43 SHEETS

COLD PLANING NOTES

1. PRIOR TO COLD PLANING OVER AN EXISTING STRUCTURE, THE CONTRACTOR SHALL DETERMINE THE ACTUAL DEPTH OF THE EXISTING ASPHALT CONCRETE PAVEMENT. THE CONTRACTOR SHALL TAKE SEVERAL CROSS SECTION MEASUREMENTS THROUGHOUT THE STRUCTURE. IF THE THICKNESS OF THE EXISTING PAVEMENT IS LESS THAN THE PROPOSED RESURFACING THICKNESS, THE CONTRACTOR SHALL REMOVE THE EXISTING PAVEMENT TO THE LEVEL OF THE STRUCTURE AND RESURFACE TO THE ORIGINAL THICKNESS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO COLD PLANING, AND WILL NOT BE PAID FOR SEPARATELY.
2. IN COLD PLANING THE PAVEMENT OVER A STRUCTURE, THE CONTRACTOR SHALL EXERCISE CARE NOT TO DAMAGE ANY PORTION OF THE STRUCTURE (ESPECIALLY THE SLAB, JOINTS, DRAIN PIPES OR REINFORCEMENT). ANY DAMAGE TO THE STRUCTURE DURING THE COLD PLANING OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. REPAIR WORK SHALL BE AS DIRECTED BY THE CONSTRUCTION MANAGER. THE CONTRACTOR SHALL VERIFY THE EXISTING PAVEMENT THICKNESS BY HAND DIGGING AT VARIOUS LOCATIONS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO COLD PLANING, AND WILL NOT BE PAID FOR SEPARATELY.
3. EXPOSURE OF EXISTING AGGREGATE BASE IS EXPECTED WHEN COLD PLANING DEEPER THAN 4 INCHES. THE CONTRACTOR SHALL PAVE OVER EXPOSED EXISTING AGGREGATE BASE WITH THE NEW ASPHALT BASE COURSE AT THE END OF EACH DAY. CONTRACTOR SHALL COMPACT THE EXISTING AGGREGATE BASE IN ACCORDANCE WITH SECTION 301 ASPHALT BASE COURSE AND APPLY PRIME COAT IN ACCORDANCE WITH SECTION 408 PRIME COAT, PRIOR TO LAYING THE NEW ASPHALT BASE COURSE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE NEW ASPHALT BASE COURSE, AND WILL NOT BE PAID FOR SEPARATELY.
4. THE VERTICAL PAVEMENT DROP-OFF SHALL NOT EXCEED 3-INCHES. IF A VERTICAL PAVEMENT DROP-OFF EXISTS AT THE END OF EACH DAY'S COLD PLANING AND PAVING, THE CONTRACTOR SHALL PROVIDE AT WEDGE WITH A 48:1 MINIMUM TRANSITION TAPER FOR TRANSVERSE DROP-OFF AND NO STEEPER THAN 6:1 FOR LONGITUDINAL DROP-OFF AS APPROVED BY THE OFFICER-IN-CHARGE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO COLD PLANING.
5. COLD PLANING OPERATIONS, THE CONTRACTOR IS TO TAKE SPECIAL MEASURES TO REDUCE DUST FROM COLD PLANING OPERATIONS INCLUDING BUT NOT LIMITED TO USE OF WATER MISTERS ON COLD PLANING EQUIPMENT AND VACUUM SWEEPERS. USE OF POWER BROOMS TO SWEEP ROAD ARE NOT ALLOWED IF DUST NUISANCE IS CREATED.

WATER POLLUTION AND EROSION CONTROL NOTES:

1. GENERAL:

1. THE CONTRACTOR IS REMINDED OF THE REQUIREMENTS OF SECTION 209 - WATER POLLUTION AND EROSION CONTROL, IN THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION". SECTION 209 DESCRIBES BUT IS NOT LIMITED TO: SUBMITTAL REQUIREMENTS; SCHEDULING OF A WATER POLLUTION AND EROSION CONTROL CONFERENCE WITH THE ENGINEER; CONSTRUCTION REQUIREMENTS; METHOD OF MEASUREMENT; AND BASIS OF PAYMENT. NO WORK SHALL COMMENCE WITHOUT AN APPROVED BMP PLAN.

THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE "BEST MANAGEMENT PRACTICES MANUAL FOR CONSTRUCTION SITES IN HONOLULU", DATED MAY 1999 IN DEVELOPING, INSTALLING AND MAINTAINING THE BEST MANAGEMENT PRACTICES (BMP) FOR THE PROJECT.

THE ENGINEER MAY ASSESS LIQUIDATED DAMAGES OF UP TO \$25,000 FOR NON-COMPLIANCE OF EACH BMP REQUIREMENT AND EACH REQUIREMENT STATED IN SECTION 209, FOR EVERYDAY OF NON-COMPLIANCE. THERE IS NO MAXIMUM LIMIT ON THE AMOUNT ASSESSED PER DAY.

THE ENGINEER WILL DEDUCT THE COST FROM THE PROGRESS PAYMENT FOR ALL CITATIONS RECEIVED BY THE DEPARTMENT FOR NON-COMPLIANCE, OR THE CONTRACTOR SHALL REIMBURSE THE STATE FOR THE FULL AMOUNT OF THE OUTSTANDING COST INCURRED BY THE STATE.

2. WASTE DISPOSAL:

- A. WASTE MATERIALS: ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER SHALL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER SHALL BE EMPTIED A MINIMUM OF TWICE PER WEEK OR AS OFTEN AS IS DEEMED NECESSARY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ONSITE. THE CONTRACTOR'S SUPERVISORY PERSONNEL SHALL BE INSTRUCTED REGARDING THE CURRENT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES SHALL BE POSTED IN THE OFFICE TRAILER AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.
- B. HAZARDOUS WASTE: ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. THE CONTRACTOR'S SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES AND SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

- C. SANITARY WASTE: ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK, OR AS REQUIRED.

3. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE AND MAINTENANCE PRACTICES:

- A. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY RAINFALL EVENT OF 0.5 INCHES OR GREATER. THE CONTRACTOR SHALL PROVIDE A RAIN GAUGE AND INSTALL AT A LOCATION AGREED TO BY THE STATE.
- B. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS AFTER THE INSPECTION.
- C. BUILT-UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IF HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
- D. SILT SCREEN OR FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO VERIFY THAT THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS OR CONCRETE SLAB AND TO VERIFY THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
- E. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS AND HEALTHY GROWTH.
- F. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A MAINTENANCE INSPECTION REPORT PROMPTLY AFTER EACH WEEKLY INSPECTION.
- G. THE CONTRACTOR SHALL SELECT A MINIMUM OF THREE PERSONNEL WHO SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
- H. PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE CONTRACTOR. THEY SHALL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.
- I. ALL SLOPES AND EXPOSED AREAS SHALL BE GRASSED AS SOON AS FINAL GRADES HAVE BEEN ESTABLISHED. GRADING TO FINAL GRADE SHALL BE CONTINUOUS, AND ANY AREA IN WHICH WORK WITHIN HAS BEEN INTERRUPTED OR DELAYED FOR MORE THAN 15 DAYS SHALL BE GRASSED IN ORDER TO PREVENT DUST, EROSION AND SILT RUNOFF. AREAS WITH IMPORTED SOILS SHALL BE GRASSED NOT MORE THAN 5 WORKING DAYS AFTER FINAL GRADES HAVE BEEN ESTABLISHED.
- J. TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.

4. GOOD HOUSEKEEPING BEST MANAGEMENT PRACTICES:

A. MATERIALS POLLUTION PREVENTION PLAN

- (1) APPLICABLE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION. OTHER MATERIALS AND SUBSTANCES NOT LISTED BELOW SHALL BE ADDED TO THE INVENTORY OF THE CONSTRUCTION CONTRACTOR'S SITE-SPECIFIC BMP PLAN.

CONCRETE	FERTILIZERS
DETERGENTS	PETROLEUM BASED PRODUCTS
PAINTS (ENAMEL AND LATEX)	CLEANING SOLVENTS
METAL STUDS	WOOD
TAR	MASONRY BLOCK

- (2) MATERIAL MANAGEMENT PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF. AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT AS IS REQUIRED TO DO THE JOB.

- (3) ALT MATERIALS STORED ONSITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND IF POSSIBLE UNDER A ROOF OR OTHER ENCLOSURE.

- (4) PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.

- (5) SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

- (6) WHENEVER POSSIBLE, A PRODUCT SHALL BE USED UP COMPLETELY BEFORE DISPOSING OF THE CONTAINER.

- (7) MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.

- (8) THE CONTRACTOR SHALL CONDUCT A DAILY INSPECTION TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

B. HAZARDOUS MATERIAL POLLUTION PREVENTION PLAN

- (1) PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
- (2) ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEET (MSDS) SHALL BE RETAINED AND MADE AVAILABLE TO THE ENGINEER UPON REQUEST.
- (3) SURPLUS PRODUCTS SHALL BE DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR LOCAL AND STATE RECOMMENDED METHODS.

APPROVED:

Principle Executive, Maintenance Unit, BWS 11/15/01
Date

WATER POLLUTION AND EROSION CONTROL

NOTES CONT.:

C. ONSITE AND OFFSITE PRODUCTS SPECIFIC PLAN

- (1) THE FOLLOWING PRODUCTS SPECIFIC PRACTICES SHALL BE FOLLOWED ONSITE:

- a. PETROLEUM BASED PRODUCTS: ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
- b. FERTILIZERS: FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE SHALL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
- c. PAINTS: ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE HIGHWAY DRAINAGE SYSTEM BUT SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
- d. CONCRETE TRUCKS: CONCRETE TRUCKS SHALL BE ALLOWED TO WASH OUT OR DRUM WASH WATER ONLY AT DESIGNATED SITE. WATER SHALL NOT BE DISCHARGED IN THE HIGHWAY DRAINAGE SYSTEM OR WATERS OF THE UNITED STATES (I.E. STREAMS, RIVERS, HARBORS). THE CONTRACTOR SHALL CONTACT DRINKING WATER BRANCH, DEPARTMENT OF HEALTH AT 586-4258 TO RECEIVE PERMISSION TO DESIGNATE A DISPOSAL SITE. THE CONTRACTOR SHALL CLEAN THE DISPOSAL SITE AS REQUIRED OR AS REQUESTED BY THE OWNER'S REPRESENTATIVE AT NO COST TO THE OWNER OR THE STATE.

D. SPILL CONTROL PLAN

- (1) A SPILL PREVENTION PLAN SHALL BE POSTED AND ADJUSTED TO INCLUDE A DESCRIPTION AND CAUSE OF EACH SPILL, MEASURES TO PREVENT AND CLEAN UP EACH SPILL.
- (2) THE CONTRACTOR SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR SHALL DESIGNATE AT LEAST THREE SITE PERSONNEL WHO SHALL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS SHALL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL SHALL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
- (3) MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
- (4) MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE.
- (5) ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
- (6) THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- (7) SPILLS OF TOXIC HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

5. PERMIT REQUIREMENTS

- A. THE CONTRACTOR IS REQUIRED TO OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR ALL CONSTRUCTION ACTIVITIES FIVE ACRES OR MORE. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOUR SETS OF THE WATER POLLUTION AND EROSION CONTROL SUBMITTALS AS DETAILED IN SUBSECTION 209.04 OF THE SPECIFICATIONS. NO WORK SHALL BEGIN UNTIL THE SUBMITTAL HAS BEEN REVIEWED AND APPROVED BY THE ENGINEER.

- B. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL PERMIT CONDITIONS. PERMITS MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

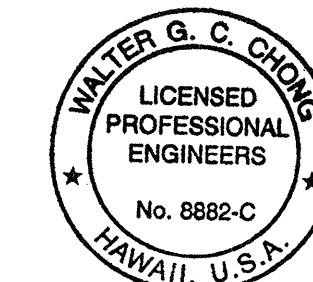
NPDES PERMIT FOR CONSTRUCTION ACTIVITIES

6. 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.
7. THE CONTRACTOR AT HIS OWN EXPENSE SHALL KEEP THE PROJECT AREA AND SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR AND WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.

LEGEND

Existing State Hwy. R/W	W 16	NEW WATER MAIN (SIZE AS NOTED)
Existing Property Line	W 12	NEW WATER MAIN INSTALLED ON EXIST. BRIDGE
Existing Fire Hydrant	NEW GATE VALVE	
Existing Sewer Line	NEW AIR RELIEF VALVE	
Existing Sewer Manhole	NEW REDUCER OR INCREASER	
Existing 6" Gas Line	NEW FIRE HYDRANT	
Existing Gas Valve Box		
Existing Gas Manhole		
Existing Monument		
Existing 24" Drain Line		
Existing Storm Drain Manhole		
Existing Grated Drop Inlet		
Existing Catch Basin		
Existing Traffic Sign		
Existing Highway Lighting Standard		
Existing Joint Pole		
Existing Power Pole		
Existing Guy Pole		
Existing Light Pole		
Existing Electrical Manhole		
Existing Street Light Box		
Existing Street Light Cable		
Existing Traffic Signal Box		
Existing Electrical Line		
Existing Fuel Oil Line		
Existing Traffic Light		
Existing Traffic Light (Traffic Signal) Cable		
Existing Telephone Line		
Existing Telephone Pole		
Existing Telephone Manhole		
Existing Signal Corps Line		
Existing Water Manhole		
Existing Water Meter		
Existing Water Valve		
Existing Water Air Valve		
Exist. Water Lateral (Contractor to field verify size and location)		
Existing Waterline, Size as indicated (Contractor to field verify size, invert and location)		
Existing TV Cable		
Existing Spot Elev.		
Existing Top of conc. (tc) Bottom of conc. (bc)		

DATE	11/15/01
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
SIGNATURE DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES-6

NIMITZ HIGHWAY
WATER SYSTEM IMPROVEMENTS, PART 1
BWS JOB No. 01-87A

Scale: As shown Date: 08/27/01

SHEET No. C-7 OF 43 SHEETS