

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, AND THE "APPROVED MATERIAL LIST AND STANDARD DETAILS FOR WATER SYSTEM CONSTRUCTION", VOLUME 2, DATED 1985, AND ALL SUBSEQUENT AMENDMENTS AND ADDITIONS.
2. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS ARE FROM THE LATEST AVAILABLE DATA BUT IS NOT GUARANTEED AS TO THE ACCURACY OR THE ENCOUNTERING OF OTHER OBSTACLES DURING THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL PAY FOR ALL THE DAMAGES TO EXISTING UTILITIES.
3. PRIOR TO START OF EXCAVATION, THE CONTRACTOR SHALL NOTIFY ALL AGENCIES AND HAVE THEM LOCATE THEIR RESPECTIVE LINES AFFECTED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE AND SHALL PAY FOR ALL DAMAGES TO AND MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.
4. THE CONTRACTOR SHALL NOTIFY THE BWS PLANNING AND ENGINEERING DIVISION, CONSTRUCTION SECTION, ONE WEEK PRIOR TO COMMENCING WORK ON THE WATER SYSTEM.
5. THE CONTRACTOR SHALL EXPOSE, VERIFY AND BACKFILL ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO EXCAVATION OF PIPELINE TRENCH.
6. 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 TRENCHING.
7. 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 PLANNING AND ENGINEERING DIVISION, ENGINEERING BRANCH, CONSTRUCTION SECTION. ALL CONNECTIONS WILL BE MADE AFTER NORMAL WORKING HOURS.
8. 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.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL WATER LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE ESPECIALLY CAREFUL WHEN EXCAVATING BEHIND WATER LINES, TEES AND BENDS WHEREVER THERE IS A POSSIBILITY OF WATER LINE MOVEMENT DUE TO THE REMOVAL OF THE SUPPORTING EARTH BEYOND THE EXISTING REACTION BLOCKS. THAT CONTRACTOR SHALL TAKE WHATEVER MEASURE NECESSARY TO PROTECT THE WATER LINES, SUCH AS CONSTRUCTING SPECIAL REACTION BLOCKS (WITH BWS APPROVAL) AND/OR MODIFYING HIS CONSTRUCTION METHOD.
10. 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.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF CHLORINATED WATER TO SAFEGUARD PUBLIC HEALTH AND ENVIRONMENT IN ACCORDANCE WITH APPLICABLE BOARD OF HEALTH REQUIREMENTS.
12. TEST PRESSURE SHALL BE ONE OF THE FOLLOWING:
 - A. PREVAILING LINE PRESSURE, JOINTS LEFT EXPOSED FOR 24 HOURS TO CHECK FOR LEAKS PRIOR TO BACKFILL.
 - B. 150 PSI.
13. THE CONTRACTOR SHALL CHLORINATE THE ENTIRE INSIDE SURFACE OF EACH PIPE AND FITTING WITH DISINFECTION SOLUTION OF 5 OUNCES OF SODIUM HYPOCHLORITE MIXED WITH 10 GALLONS OF WATER.
14. 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.

15. ALL SAVAGE MATERIALS SHALL BE CLEANED, REPAINTED AND DELIVERED TO THE KALIHI BWS STOCKYARD.
16. ALL NEW 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.
17. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY BOARD OF WATER SUPPLY, THE MANUFACTURER'S CERTIFICATION THAT ALL CAST IRON (GRAY OR DUCTILE) FITTINGS FOR THE PROJECT CONFORM IN ALL RESPECTS TO THE WATER SYSTEM STANDARDS, DATED 1985.
18. ALL WATERLINE CONSTRUCTION REQUIRING SHUTDOWN SHALL BE SCHEDULED FOR NORMAL WORKING HOURS AND MAXIMUM DOWNTIME SHALL BE SIX (6) HOURS, TO BE DONE CONCURRENTLY AT BOTH CONNECTIONS.
19. ALL WATER METER BOXES SHALL BE ADJUSTED TO MATCH THE NEW SIDEWALK GRADES.
20. DEMOLISH AND BACKFILL ALL ABANDONED MANHOLES, VALVE BOXES AND METER BOXES. SALVAGE ALL CAST IRON FRAMES AND COVERS.
21. 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.
22. POLYGON SHAPE FOR MECHANICAL JOINT GLANDS AS DESCRIBED IN AWWA STANDARD CL. C111 SHALL BE "STRAIGHT-SIDED" OR AN APPROVED EQUAL ON A JOB TO JOB BASIS.
23. RE-APPROVAL SHALL BE REQUIRED IF THIS PROJECT IS NOT UNDER CONSTRUCTION WITHIN A PERIOD OF TWO YEARS.
24. THE CONTRACTOR SHALL VERIFY ALL EXISTING SERVICE LATERAL LOCATIONS WHETHER SHOWN OR NOT SHOWN ON THE PLANS PRIOR TO COMMENCING WITH ANY OF THE WORK AND SHALL NOT ASSUME THAT WHERE NO SERVICES ARE SHOWN NONE EXISTS.

1. CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL CULVERTS IN THE FIELD.
2. CULVERTS WITHIN CATCH BASINS, GRATED DROP INLETS, AND STORM DRAIN MANHOLES SHALL BE CUT FLUSH WITH THE INSIDE FACE OF THE WALL. ABOVE WORK SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS CONTRACT ITEMS.
3. CONCRETE FOR CATCH BASINS, GRATED DROP INLETS, AND STORM DRAIN MANHOLES SHALL BE CLASS "A". REINFORCING BARS SHALL BE GRADE 60.
4. STATIONING AND OFFSETS USED TO LOCATE GRATED DROP INLETS (GDI'S) ARE REFERENCED TO GDI CENTERLINE AS INDICATED ON THE GDI DETAILS. STATIONING AND OFFSETS USED TO LOCATE CATCH BASINS (CB'S) ARE REFERENCED TO THE POINT AT WHICH THE CB DRAIN PIPE CENTERLINE INTERSECTS THE FACE OF CURB.

15. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS' DIVISION OF ENGINEERING CONSTRUCTION BRANCH SEVEN (7) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
16. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL STREETS AND DRIVEWAYS OR SHALL MAKE OTHER ARRANGEMENTS TO THE SATISFACTION OF THE AFFECTED RESIDENTS. THE CONTRACTOR SHALL NOTIFY THE HONOLULU POLICE AND FIRE DEPARTMENTS OF THE WORK IN PROGRESS AND BLOCKING OF ANY STREETS.

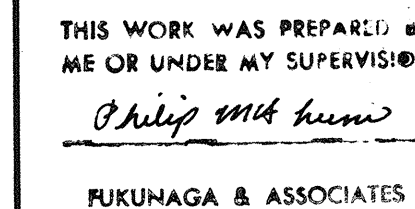
CHIEF, DIV. OF WASTEWATER MANAGEMENT, DPW
CITY AND COUNTY OF HONOLULU

CHIEF, PLANNING & ENGINEERING, BWS

GASCO NOTES

1. THE GASCO, INC. GAS PIPELINES IN THE PROJECT AREA ARE PLASTIC COATED AND CATHODICALLY PROTECTED. THE CONTRACTOR SHALL BE EXTREMELY CAREFUL WHEN WORKING NEAR THESE GAS PIPELINES.
2. FOR RELOCATION OF ANY GAS PIPELINES, THE CONTRACTOR SHALL NOTIFY GASCO, INC. TWENTY (20) WORKING DAYS BEFORE STARTING WORK. THE CONTRACTOR SHALL PROVIDE THE NECESSARY EXCAVATION AND BACKFILL, ARRANGE FOR TRAFFIC PERMITS AND RESTORE SIDEWALK, PAVEMENT OR OTHER FACILITIES. ANY RELOCATION OF GAS FACILITIES SHALL BE DONE BY GASCO INC., AND PAID FOR BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL NOTIFY GASCO, INC. IMMEDIATELY AFTER ANY DAMAGE HAS BEEN CAUSED TO EXISTING GAS PIPELINES, THEIR COATINGS OR THEIR CATHODIC PROTECTION DEVICES. REPAIR WORK ON THIS DAMAGE SHALL BE DONE BY GASCO, INC. WITH PAYMENT FOR THIS WORK TO BE BORNE BY THE CONTRACTOR.
4. MINIMUM VERTICAL OR HORIZONTAL CLEARANCE BETWEEN GAS PIPELINES AND OTHER PIPELINES, CONDUITS, OR DUCTLINES SHALL BE 12 INCHES. ADEQUATE SUPPORT AND PROTECTION FOR GAS PIPELINES EXPOSED IN THE TRENCH SHALL BE PROVIDED. SUCH SUPPORT AND PROTECTION SHALL BE APPROVED BY GASCO, INC.
5. THE CONTRACTOR SHALL WORK IN AN EXPEDITIOUS MANNER IN ORDER TO KEEP UNCOVERED GAS PIPELINES EXPOSED FOR AS SHORT A PERIOD OF TIME AS POSSIBLE.
6. PRIOR WRITTEN CLEARANCE MUST BE OBTAINED FROM GASCO, INC. AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING EXCAVATION NEAR THESE GAS LINES. SINCE GAS LINE LOCATIONS ON FIELD MAPS ARE APPROXIMATE, THE CONTRACTOR, AFTER OBTAINING A WRITTEN CLEARANCE, SHALL CALL GASCO, INC., A MINIMUM OF 48 HOURS BEFORE STARTING EXCAVATION TO ARRANGE FOR FIELD LOCATION OF EXISTING GAS LINES. THE TELEPHONE NUMBER IS 547-3575 DURING BUSINESS HOURS, AND 526-0066 AFTER HOURS. THE CONTRACTOR SHALL EXCAVATE AND BACKFILL AROUND GAS PIPELINES IN THE PRESENCE OF A GASCO, INC. REPRESENTATIVE. ALL BACKFILL WITHIN SIX INCHES OF GAS PIPELINE SHALL BE SELECT CUSHION MATERIAL APPROVED BY GASCO, INC.

1. ALL SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS, SEPTEMBER 1986, STANDARD DETAILS, SEPTEMBER 1984, AND THE REVISED ORDINANCES OF HONOLULU, 1978, AS AMENDED.
2. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION SECTION, DIVISION OF WASTEWATER MANAGEMENT AT 527-5820 TO ARRANGE FOR INSPECTION SERVICES AND SUBMIT FOUR (4) SETS OF APPLICABLE, APPROVED CONSTRUCTION PLANS SEVEN DAYS PRIOR TO COMMENCEMENT OF SEWER WORK.



KALIHI STREET IMPROVEMENTS
NIMITZ HWY. TO DILLINGHAM BLVD.
PROJECT NO. 63A-02-89

SHEET No. 1 OF 2 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	_____
	TRACED BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
NO. _____	CHECKED BY _____	_____

CITY AND COUNTY TRAFFIC NOTES

1. A PERMIT SHALL BE OBTAINED FROM THE DEPARTMENT OF TRANSPORTATION SERVICES BEFORE WORK ON ANY PORTION OF A CITY PUBLIC STREET OR CITY HIGHWAY MAY BEGIN.
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 HIGHWAY 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING STREET LIGHT AND TRAFFIC SIGNAL FACILITIES AND DAMAGES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE CITY.
4. THE CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL DEPARTMENT 48 HOURS PRIOR TO ANY EXCAVATION, PHONE 523-4961 OR 523-4962.
5. THE CONTRACTOR SHALL NOTIFY THE JOINT POLE COMMITTEE TWO (2) WEEKS IN ADVANCE OF ANY RELOCATION OF UTILITY POLE THAT MAY BE NECESSARY.
6. THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL AND MAINTENANCE SERVICES DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES, THREE (3) WORKING DAYS PRIOR TO COMMENCING WORK ON THE STREET LIGHTING SYSTEM (PHONE: 527-4905).
7. WORK ON ANY CITY STREET AREA MAY BE PERFORMED ONLY BETWEEN THE HOURS OF 8:30 A.M. TO 3:30 P.M. UNLESS OTHERWISE PERMITTED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
8. DURING WORKING HOURS, THE CONTRACTOR SHALL PROVIDE TWO LANES FOR THROUGH TRAFFIC. ON STREETS TOO NARROW TO MAKE THIS PRACTICABLE, THE CONTRACTOR MAY WORK IN ONE HALF THE ROADWAY, KEEPING THE OTHER HALF OPEN TO TRAFFIC AND ALTERNATING THE FLOW OF 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.
9. AS REQUIRED BY THE DEPARTMENT OF TRANSPORTATION SERVICES, THE CONTRACTOR SHALL HIRE SPECIAL DUTY POLICE OFFICERS TO CONTROL THE FLOW OF TRAFFIC.
10. TRAFFIC SIGNAL CONDUITS OR LOOP DETECTORS DAMAGED BY CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY. ANY AND ALL DAMAGES TO THE TRAFFIC SIGNAL SYSTEM INCLUDING, BUT NOT LIMITED TO CONDUITS, PULL BOXES, CABLES, STANDARDS AND LOOP VEHICLE DETECTORS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPLACE OR REPAIR ANY AND ALL DAMAGES INCURRED AT THE CONTRACTORS EXPENSE.
11. STREET LIGHTING AND FIRE ALARM SHALL BE KEPT OPERATIONAL DURING CONSTRUCTION. ANY RELOCATION REQUIRED SHALL BE APPROVED BY THE ELECTRICAL AND MAINTENANCE DIVISION, DEPARTMENT OF TRANSPORTATION SERVICES AND PAID FOR BY THE CONTRACTOR.
12. 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.
13. A ROADWAY MAY BE CLOSED ONLY WITH THE EXPRESS PERMISSION OF THE DEPARTMENT OF TRANSPORTATION SERVICES.
14. THE CONTRACTOR SHALL REFERENCE TO THE SATISFACTION OF THE DEPARTMENT OF TRANSPORTATION SERVICES. 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, UNLESS DIRECTED OTHERWISE BY THE DEPARTMENT OF TRANSPORTATION SERVICES. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF TRANSPORTATION SERVICES AT 523-4029 ONE (1) WEEK PRIOR TO ANY WORK TO BE DONE ON SIGNS, POSTS AND PAVEMENT MARKINGS.
15. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL STREETS AND DRIVEWAYS OR SHALL MAKE OTHER ARRANGEMENTS TO THE SATISFACTION OF THE AFFECTED RESIDENTS. THE CONTRACTOR SHALL NOTIFY THE HONOLULU POLICE AND FIRE DEPARTMENTS OF THE WORK IN PROGRESS AND BLOCKING OF ANY STREETS.

CITY AND COUNTY TRAFFIC NOTES (CONT.)

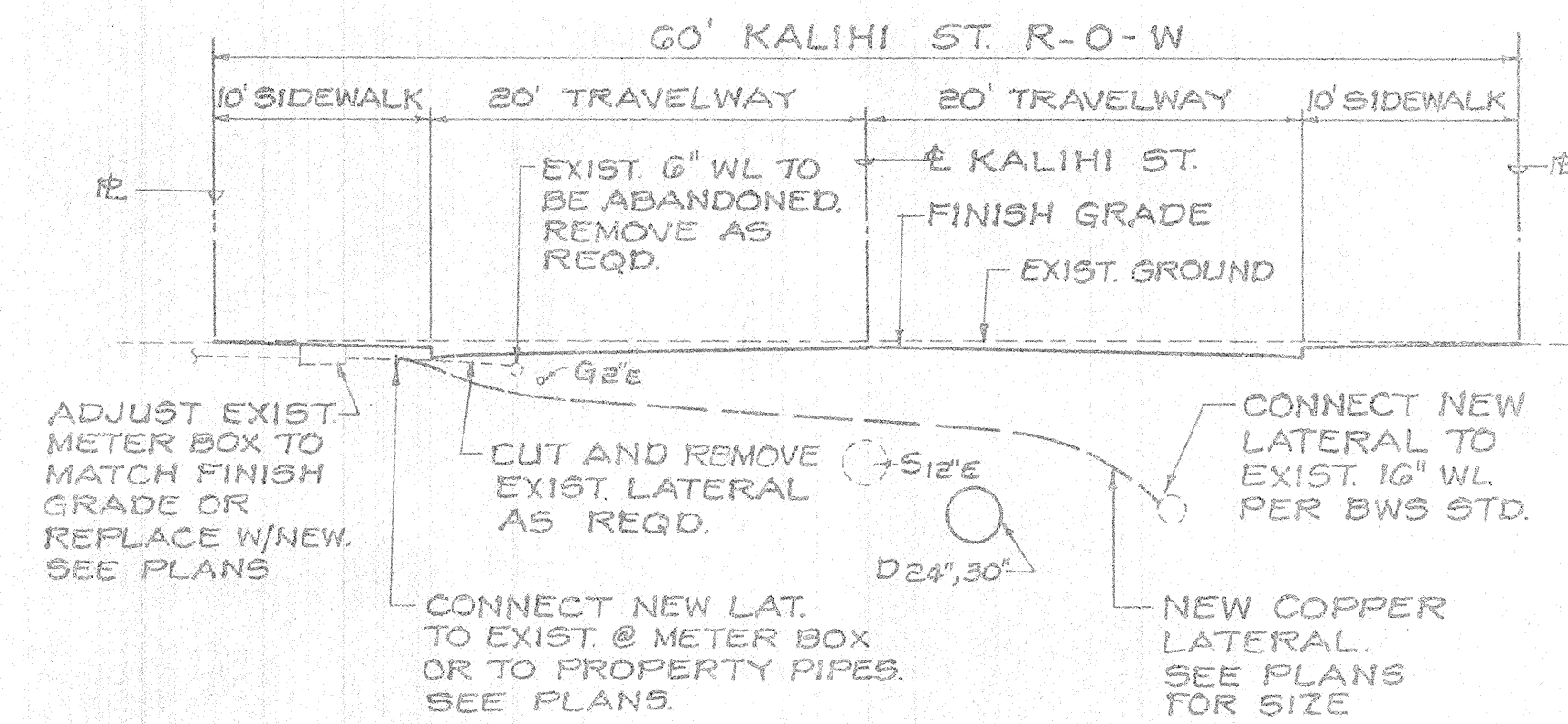
16. THE CONTRACTOR SHALL NOTIFY MTL, JOHN CHONG (848-4538) OR KENNETH HONG (848-4537), TWO (2) WEEKS PRIOR TO CONSTRUCTION, INFORMING THEM OF LOCATION, SCOPE OF WORK, PROPOSED CLOSURE OF ANY STREET OR TRAFFIC LANES, AND THE NEED TO RELOCATE ANY BUS STOP.
17. NO MATERIAL AND/OR EQUIPMENT SHALL BE STOCKPILED OR OTHERWISE STORED WITHIN STREET RIGHTS-OF-WAY EXCEPT AT LOCATIONS DESIGNATED IN WRITING AND APPROVED BY THE DEPARTMENT OF TRANSPORTATION SERVICES.
13. THE CONTRACTOR SHALL CONTACT THE DEPARTMENT OF TRANSPORTATION SERVICES PARKING SECTION AT 523-4314 AT LEAST TWO WORKING DAYS PRIOR TO ANY PARKING METER WORK.

PUBLIC HEALTH, SAFETY AND CONVENIENCE NOTES

1. THE CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
2. 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.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANING AND REMOVAL OF ALL SILT AND DEBRIS GENERATED BY HIS WORK AND DEPOSITED AND ACCUMULATED WITHIN DOWNSTREAM WATERWAYS, DITCHES AND DRAIN PIPES AND ON PUBLIC AND PRIVATE ROADWAYS. THE CONTRACTOR AGREES TO REIMBURSE THE CITY AND COUNTY OF HONOLULU FOR ALL COSTS EXPENDED IN PERFORMANCE OF THE ABOVE WORK IF REQUIRED FOR PUBLIC HEALTH AND SAFETY OR MADE NECESSARY BY NONPERFORMANCES BY THE CONTRACTOR.
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 THE PUBLIC.
5. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL STREETS AND DRIVEWAYS OR SHALL MAKE OTHER ARRANGEMENTS TO THE SATISFACTION OF THE AFFECTED RESIDENTS. THE CONTRACTOR SHALL NOTIFY THE HONOLULU POLICE AND FIRE DEPARTMENTS OF THE WORK IN PROGRESS AND BLOCKING OF ANY STREETS.

SIGNING AND PAVEMENT MARKING NOTES

1. LOCATIONS OF ALL NEW PAVEMENT MARKINGS SHALL BE STAKED OUT BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
2. EXISTING PAVEMENT MARKINGS NOT INCORPORATED IN THE FINAL TRAFFIC PATTERN SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. COSTS INCURRED SHALL BE INCIDENTAL TO THE VARIOUS PAVEMENT MARKING ITEMS.
3. RAISED PAVEMENT MARKERS SHALL NOT BE PLACED WITHIN CROSSWALKS.
4. EXISTING SIGNS NOT SHOWN ON THESE PLANS SHALL REMAIN AS POSTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL SIGN PLACARDS SHOWN ON THE PLANS TO BE INSTALLED OR RELOCATED SHALL BE NEW. REUSE OF EXISTING SIGN POSTS SHALL BE APPROVED BY THE ENGINEER. REMOVAL AND DISPOSAL OF EXISTING SIGNS AND/OR POSTS AS DESIGNATED ON THESE PLANS SHALL BE INCIDENTAL TO THE VARIOUS SIGNING ITEMS.
5. FINAL LOCATIONS OF ALL SIGNS SHALL BE APPROVED BY THE ENGINEER.
6. SEE SHEET 16 FOR SIGNING AND PAVEMENT MARKING PLAN.



NOTE: ALL METER BOXES FOR TRANSFERRED LATERALS SHALL BE TYPE "X".

1 TYPICAL WATER LATERAL TRANSFER DET.

SCALE: 1/8" = 1'-0"

LEGEND: (FOR WATER LATERAL WORK)

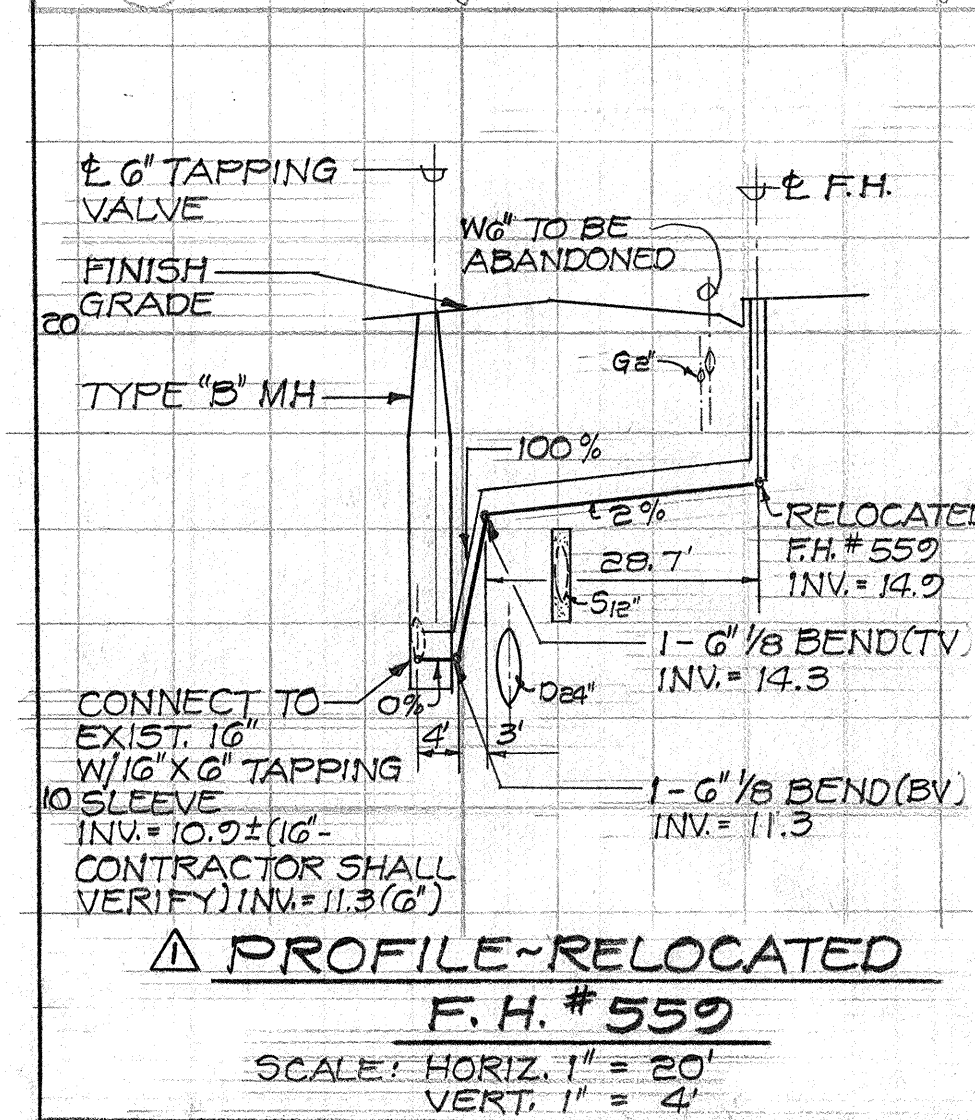
"NEW 1/4\" CU. LATERAL",
"NEW 1/2\" CU. LATERAL"

NEW LATERAL PIPING ONLY. REPLACE EXISTING AND RECONNECT TO EXISTING METER BOX.

NEW METER BOX ONLY. REPLACE EXISTING METER BOX.

NEW LATERAL PIPING AND NEW METER BOX. REPLACE EXISTING AND RECONNECT TO PROPERTY PIPES.

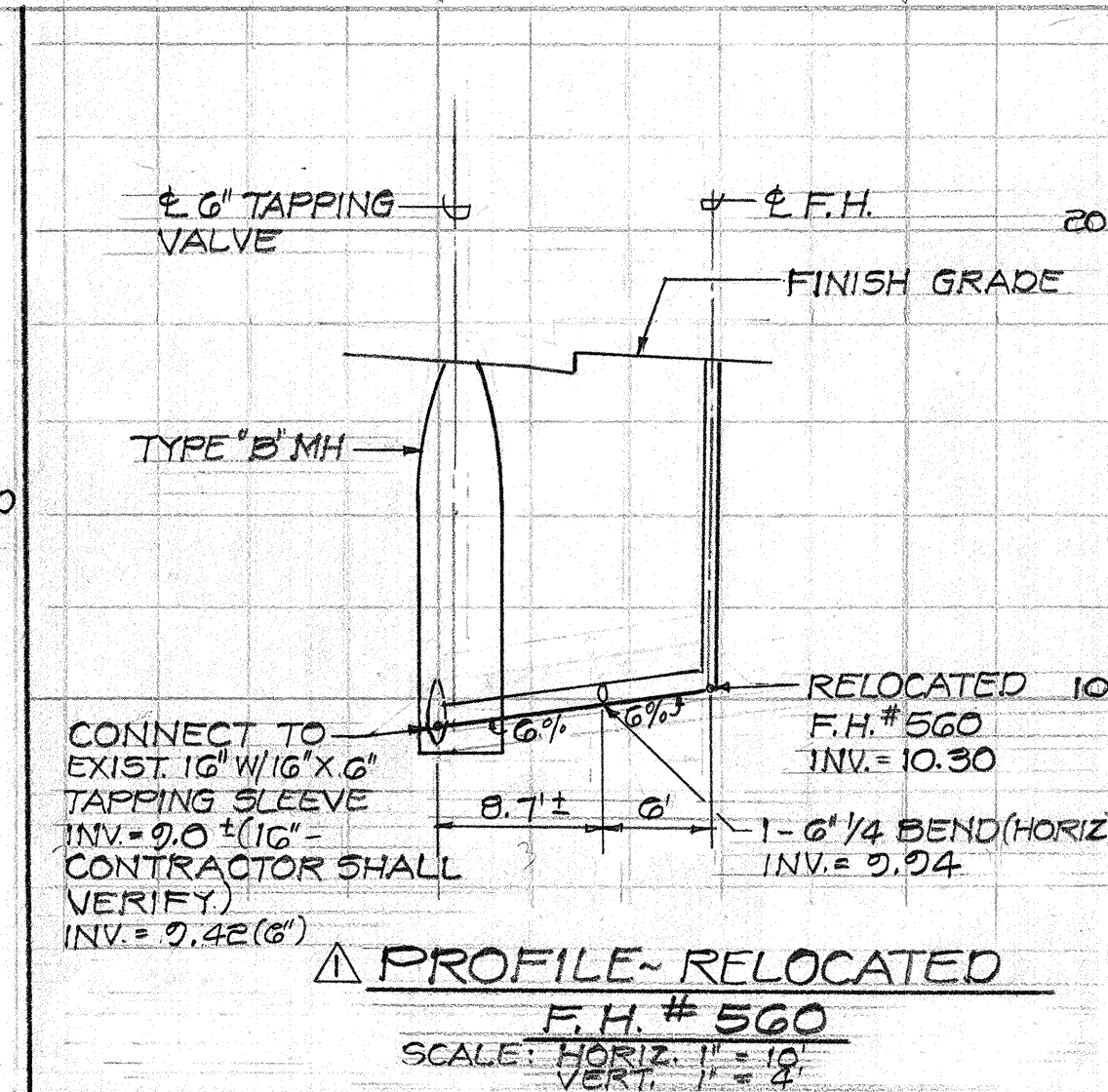
EXISTING LATERAL ALREADY CONNECTED TO 16\" MAIN.



PROFILE-RELOCATED

F.H. #559

SCALE: HORIZ. 1\" = 20'
VERT. 1\" = 4'

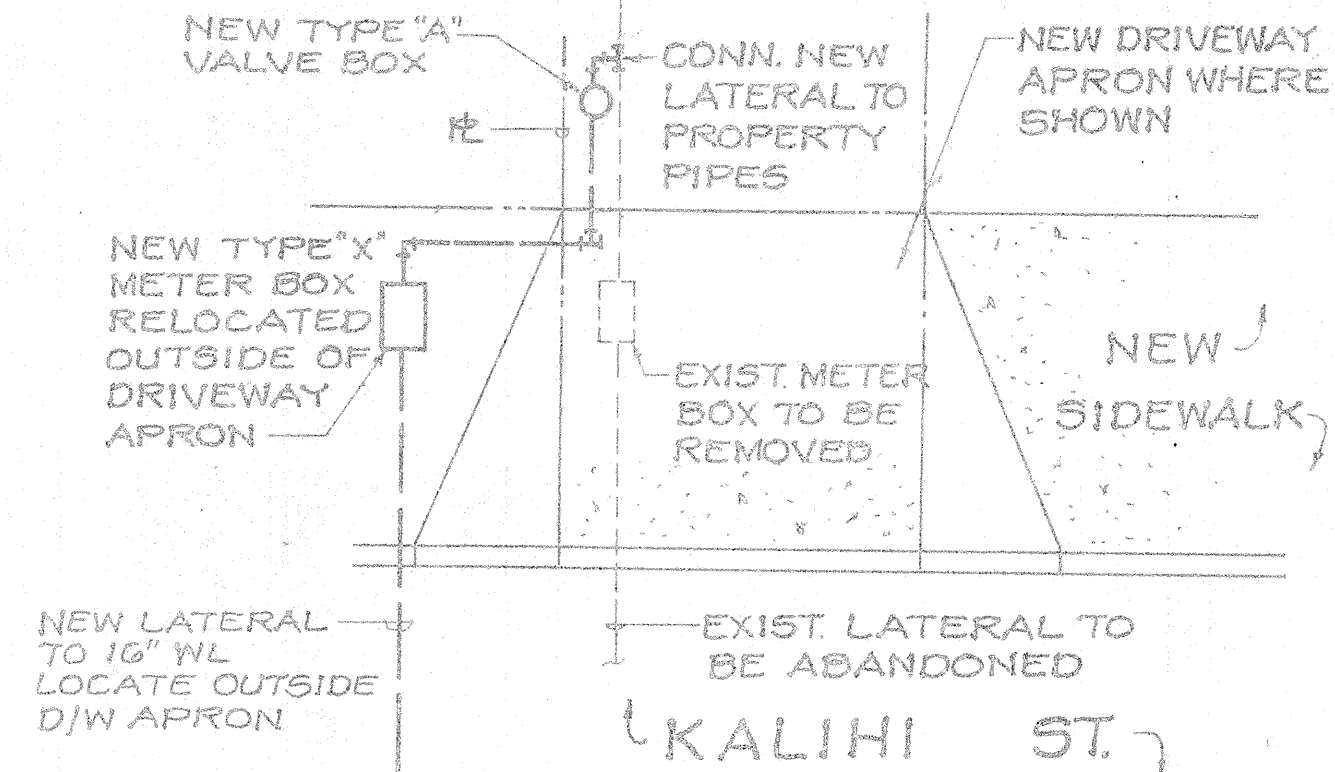


PROFILE-RELOCATED

F.H. #560

SCALE: HORIZ. 1\" = 10'
VERT. 1\" = 2'

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-02-89	1991	4	23



NOTE: EXIST. LATERALS SHALL REMAIN IN SERVICE UNTIL ALL SERVICES HAVE BEEN TRANSFERRED TO THE 16\" WATERLINE

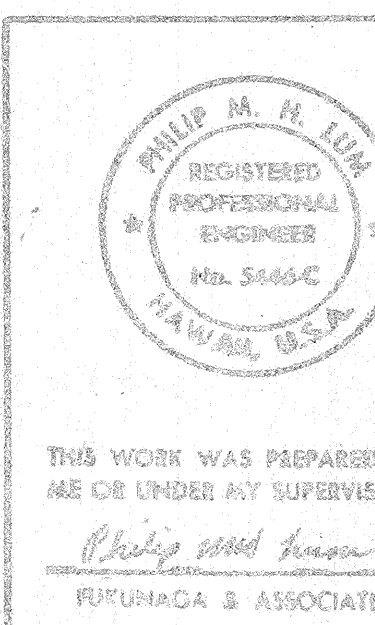
2 TYPICAL METER BOX INSTALLATION DETAIL

APPROVED: *[Signature]* 10/31/01
CHIEF PLANNING & ENGINEERING
BOARD OF WATER SUPPLY

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
BV	BOTTOM VERTICAL
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
DMH	DRAIN MANHOLE
DIP	DUCTILE IRON PIPE
E, EXIST	EXISTING
EW	EACH WAY
GDI	GRATED DROP INLET
GMH	GAS MANHOLE
LP	LIGHT POLE
OC	ON CENTER
PB	PULL BOX
RCP	REINFORCED CONCRETE PIPE
STD	STANDARD
TSL	TRAFFIC SIGNAL LIGHT
TV	TOP VERTICAL
WM	WATER METER
WMH	WATER MANHOLE
WV	WATER VALVE

NO.	DATE	REVISION	APPROVED
1	8/30/01	ADDED NEW WATER LATERAL DETAILS AND LEGEND, NEW HYDRANT PROFILES	<i>[Signature]</i> 10/31/01



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

NOTES, ABBREVIATIONS AND LEGEND

KALIHI STREET IMPROVEMENTS
NIMITZ HWY. TO DILLINGHAM BLVD.

PROJECT NO. 63A-02-89

SHEET NO. 2 OF 2 SHEETS

C.O. 4