

TREE PROTECTION / PRESERVATION NOTES

1. ABBREVIATIONS LIST:

A/EC	—	ARCHITECT / ENGINEER CONSULTANT
BWS	—	BOARD OF WATER SUPPLY
DDC	—	DEPARTMENT OF DESIGN AND CONSTRUCTION
DPR	—	DEPARTMENT OF PARKS AND RECREATION
DPP	—	DEPARTMENT OF PLANNING AND PERMITTING
DUF	—	DIVISION OF URBAN FORESTRY, DPR
FLMP	—	FORMAL LANDSCAPE MAINTENANCE PERIOD
GSTUA	—	GUIDELINES AND STANDARDS FOR TREES IN URBAN AREAS
LC	—	LANDSCAPE CONTRACTOR
OIC	—	OFFICER-IN-CHARGE, DDC
PMRS	—	PARK MAINTENANCE AND RECREATION SERVICES, DPR
QA	—	QUALIFIED ARBORIST
QAA	—	QUALIFIED ARBORIST APPLICATION
TAR	—	TREE ASSESSMENT REPORT
TPZ	—	TREE PROTECTION ZONE

2. SHOULD THE PROPOSED CONSTRUCTION IMPACT PARK TREES, STREET TREES, CITY TREES, OR PRIVATE PROPERTY TREES, THE CONTRACTOR SHALL:

A. HIRE A QA AT NO COST TO THE CITY, THE QA SHALL:

- SUBMIT QAA AND INCLUDE COPIES OF THEIR CURRENT ISA CERTIFIED ARBORIST AND TREE RISK ASSESSMENT QUALIFICATION CREDENTIALS TO THE ADDRESS LISTED IN 2C OR VIA EMAIL TO DUF@HONOLULU.GOV.
- OBSERVE AND SUPERVISE THE TREE ROOT AND BRANCH PRUNING WORK TO ASSURE THE WORK PERFORMED DOES NOT DESTABILIZE THE TREE AND CAUSE FAILURE OR DEMISE OF THE TREES AND RISK PERSONAL INJURY AND PROPERTY DAMAGES.
- IMMEDIATELY REPORT THEIR CONCERNS TO THE DUF.
- BE RESPONSIBLE FOR ENSURING THAT EXISTING TREES, LANDSCAPING, AND GRASS ARE AMPLY WATERED INSIDE THE PROJECT LIMITS LINE AND OUTSIDE THE PROJECT LIMITS LINE WHERE AFFECTED BY THE CONSTRUCTION.

B. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL:

- SUBMIT CURRENT PHOTOS (DO NOT INCLUDE GOOGLE STREET VIEW PHOTOS) AND/OR VIDEO TO DOCUMENT THE EXISTING SITE CONDITIONS.

(1) NOTE DISCREPANCIES FROM THE PLANS, ITEMS BROKEN OR DAMAGED OR IN NEED OF REPAIR, ERODED AREAS, TREES AND GROUNDS. SUBMIT MARKED SET OF PLANS WITH ITEMS MARKED IN RED TO:

URBAN FORESTRY ADMINISTRATOR
DIVISION OF URBAN FORESTRY
DEPARTMENT OF PARKS AND RECREATION
3902 PAKI AVENUE, HONOLULU, HAWAII 96815.

3. CONTRACTOR SHALL SCHEDULE A PRE-MOBILIZATION MEETING:

A. CONTACT DIVISION OF URBAN FORESTRY (DUF), VIA EMAIL AT: DUF@HONOLULU.GOV

ALLOW A MINIMUM SEVEN DAYS NOTIFICATION

B. THE MEETING ATTENDEES SHALL INCLUDE THE QA, A/EC, DDC PROJECT MANAGER, OIC, CONTRACTOR, LC, DUF, AND PMRS STAFF.

C. THE DISCUSSION SHALL INCLUDE, BUT NOT BE LIMITED TO:

- TREE ASSESSMENT REPORT, IF APPLICABLE.
- TREE DISPOSITION PLAN, IF APPLICABLE.
- TREE INVENTORY PLAN, IF APPLICABLE.
- THE PROPOSED CONSTRUCTION SCHEDULE IN REGARD TO:
 - EXPOSING OF TREE/SHRUB ROOTS
 - GRADING
 - DEMOLITION
 - TRENCHING
 - EXCAVATION WORK, TREE/SHRUB REMOVALS
 - TREE/SHRUB RELOCATIONS
 - TREE ROOT/BRANCH PRUNING
 - TREE PROTECTION MITIGATION MEASURES
 - TREE PROTECTION ZONE FENCING ALIGNMENT
 - INSTALLATION OF TEMPORARY CONSTRUCTION BMPS'S SUCH AS SILT FENCE, FILTER SOCK/FILTRATION TUBE, ETC.
- DETERMINING VEHICULAR, AND EQUIPMENT INGRESS/EGRESS ACCESS ROUTE FROM THE STREET.
- VEHICLE AND EQUIPMENT TURNING RADIUS INCLUDING 3-POINT TURNS, TREE BRANCH PRUNING FOR SCAFFOLDING AND WORK SET-UP, LOW BRANCH PRUNING AND FROND TRIMMING WORK (FOR VEHICLE VERTICAL AND HORIZONTAL CLEARANCE).
- LOCATING IRRIGATION HEADS AND UTILITY VALVE BOXES
- MODIFICATIONS TO THE EXISTING IRRIGATION SYSTEM, TREE, SHRUB, AND GRASS WATERING (INSIDE AND OUTSIDE THE PROJECT LIMITS LINE).
- 120-CALENDAR DAY FORMAL LANDSCAPE MAINTENANCE PERIOD (FLMP) FOR TREE CARE.
- 90-CALENDAR DAY MAINTENANCE PERIOD FOR GRASS, GROUND COVERS, AND SHRUBS.
- IDENTIFYING PARKING AREAS FOR WORKERS (PARKING IS NOT PERMITTED UNDER TREES AND IN GRASSED AREAS).
- STAGING AND STOCKPILING AREAS TO PREVENT DAMAGE TO TREE SURFACE ROOTS AND TO PROTECT THE LANDSCAPED AREAS, GRASS, AND GROUNDS FROM COMPACTION AND EROSION.
- APPRISE (DUF) AND (PMRS) OF THE HOURS OF CONSTRUCTION FOR THE PROJECT.

4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS, INCLUDING, BUT NOT LIMITED TO:

- EXCAVATION PERMIT
- STREET USAGE PERMIT
- EXCEPTIONAL TREE PERMIT (DPR)
- TRENCHING PERMIT

5. FOR WORK ON OR IN THE VICINITY OF EXCEPTIONAL TREES OR AS DETERMINED BY DUF, THE CONTRACTOR SHALL:

- SUBMIT AN EXCEPTIONAL TREE PERMIT APPLICATION. REFER TO THE FOLLOWING WEBSITE: http://www.honolulu.gov/rep/site/dpr/hbg_docs/ROH_Chapter_41a1-25.pdf

B. FOR TREE CROWN AND/OR ROOT PRUNING, CONTRACTOR SHALL SUBMIT AN APPLICATION FOR PRUNING. REFER TO THE FOLLOWING WEBSITE:
http://www.honolulu.gov/rep/site/dpr/hbg_docs/ET_PRUNING_PERMIT_rev_2017fillable.pdf

C. SUBMIT THE COMPLETED APPLICATIONS WITH ATTACHED CREDENTIALS TO:

DUF ADMINISTRATOR
3902 PAKI AVENUE
HONOLULU, HAWAII 96815
OR VIA EMAIL TO DUF@HONOLULU.GOV

D. INCLUDE SUPPORTING DOCUMENTATION SUCH AS SITE MAP, PLANS, PHOTOGRAPHS, TREE ASSESSMENT REPORT, TREE DISPOSITION PLAN, IF APPLICABLE, TREE PROTECTION PLAN WITH THE APPLICATION.

6. PROHIBITED ACTIVITIES:

A. DUMPING OF CONSTRUCTION MATERIALS, EQUIPMENT, WASTE PRODUCTS AND HAZARDOUS DEBRIS.

B. VEHICLES STAGED, PARKED, STORED OR OPERATING WITHIN THE DRIP LINE OF THE TREES.

C. DRIVING VEHICLES AND EQUIPMENT OVER THE TREE SURFACE ROOTS.

D. SOIL COMPACTION AND EROSION DAMAGE OF THE GROUNDS IRRIGATION SYSTEM, TREE TRUNK, BRANCHES, ROOTS, LANDSCAPED AREAS AND GRASS.

E. VEHICLE PARKING FOR WORKERS WITHIN THE PROJECT LIMITS LINE, GRASSED AREAS OUTSIDE THE PROJECT LIMITS LINE, STAGING AREAS, PLANTING STRIPS AND ROADWAY SHOULDERS, UNLESS OTHERWISE DETERMINED BY DUF AND PARK MAINTENANCE AND RECREATION SERVICES (PMRS) OF DESIGNATED STAFF.

7. DURING THE CONSTRUCTION PERIOD THE QA SHALL:

A. SHALL PREPARE AN ARBORIST FIELD REPORT (INCLUDE PHOTOS) AFTER EVERY SITE VISIT AND SUBMIT TO DUF FOR REVIEW AND COMMENT IN A TIMELY MATTER.

B. THE QA SHALL NOT SUB-CONTRACT THE WORK TO OTHER ARBORISTS WITHOUT WRITTEN APPROVAL BY DUF.

8. THE CONTRACTOR AND QA ARE RESPONSIBLE FOR:

A. DEVELOPING A TREE WATERING SCHEDULE (WATERING DAYS, WATER USAGE, RUN TIMES, CYCLES), AND TO ENSURE THAT THE TREES AND GRASS INSIDE THE LIMITS OF WORK AND IN STAGING/STOCKPILING AREAS ARE SATISFACTORILY WATERED.

B. ON-GOING LANDSCAPE MAINTENANCE, SUCH AS:

- PRUNING TREES AND HEDGES
- FERTILIZING, INCORPORATING SOIL AMENDMENTS.
- WEEDING, WATERING AND GRASS MOWING

C. SHOULD THERE BE NO AUTOMATIC IRRIGATION SYSTEM OR IT IS DISABLED, THEN THESE AREAS ARE TO BE HAND-WATERED USING HOSES, INCLUDING AREAS OUTSIDE THE PROJECT LIMIT LINES THAT ARE AFFECTED BY THE DISABLED IRRIGATION SYSTEM.

D. STAKING OUT THE TREE PROTECTION ZONE FENCING ALIGNMENT, IRRIGATION HEADS AND UTILITY VALVE BOXES AND ABOVE-GRADE TREE SURFACE ROOTS AND MARK WITH ORANGE-SURVEYOR'S PAINT FOR DUF REVIEW, MODIFICATION AND APPROVAL AT THE PRE-MOBILIZATION MEETING.

E. MONITORING THE HEALTH OF THE TREES IN THE VICINITY OF THE WORK TO ASSESS THEIR POTENTIAL TO DROP LARGE BRANCHES AND/OR FAIL WHICH CAN DAMAGE THE CONSTRUCTION WORK AREA AND CAUSE BODILY INJURY TO WORKERS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

A. PAYING FOR ITS WATER AND ELECTRICAL USAGE FOR THE PROJECT.

B. THE RE-GRASSING OF ALL GRASSED AREAS WITHIN THE PROJECT LIMITS LINE.

C. RESTORATION OF DAMAGED AREA TO MATCH THE EXISTING AREAS AND FINISH GRADES.

D. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO:

- SOIL AERATION (AERATOR EQUIPMENT).
- TOPSOIL.
- SOIL AMENDMENTS.
- GRASS (SOD), SPRIGS, OR STOLONS (OR SEED).
- LEVEL, FINE GRADE, COMPACT WITH MECHANICAL ROLLER.
- FERTILIZING
- FILLING TO PROPER GRADE ALL DEPRESSIONS AND LOW SPOTS CAUSED BY THE CONTRACTOR'S OPERATIONS INCLUDING REGRASSING.
- IRRIGATION, MULCHING AND OTHER BENEFICIAL PRACTICES.
- NEW GRASS TYPE SHALL MATCH THE EXISTING GRASS TYPE, UNLESS OTHERWISE DIRECTED BY OIC OR PMRS OR DESIGNATED STAFF PRIOR TO GRASS PLANTING.
- THE AREA TO BE RESTORED SHALL BE AERATED OR ROTOTILLED TO LOOSEN THE COMPACTION.
- IF IMPORTED TOPSOIL IS REQUIRED, ROLL THE AREA TO PREVENT DEPRESSIONS AND RUTS. TOPSOIL SHALL BE PLACED NO LESS THAN ONE-HALF INCH BELOW THE TOP OF THE WALKWAYS TO PREVENT A TRIP HAZARD.
- PREPARE THE AREA PRIOR TO GRASS PLANTING TO INCLUDE USE OF PRE AND POST-EMERGENT HERBICIDES.

E. MINIMIZE ROOT CUTTING BY REROUTING THE PIPE AWAY FROM ROOTS OR SNAKE PIPE OR MICRO-TUNNEL UNDER AND/OR OVER THE TREE ROOTS FOR TRENCHING WORK INVOLVING PIPE WORK.

F. THE CONTRACTOR AND SUB-CONTRACTORS ARE REQUIRED TO CONTINUE TO FOLLOW AND APPLY TREE PROTECTION PROTOCOLS DURING THE CONSTRUCTION WORK.

G. INSPECTION OF ALL TREES PRIOR TO THE START OF CONSTRUCTION FOR WHITE TERNS, HAWAIIAN HOARY BATS AND OTHER THREATENED AND ENDANGERED SPECIES THAT MAY BE NESTING OR ROOSTING IN THE TREES.

H. REPLACING GRASS THAT IS NOT READILY AVAILABLE MAY BE REQUIRED SAVING THE EXISTING GRASS TO BE RE-PLANTED AFTER CONSTRUCTION.

I. INSURE THAT GRAVEL FROM THE TEMPORARY INGRESS/EGRESS CONSTRUCTION GRAVEL PAD DOES NOT SPILL ONTO GRASSED/LANDSCAPED AREAS, SIDEWALKS, WALKWAYS, DRIVEWAYS, PARKING LOT AND STREETS. CONTRACTOR SHALL BE RESPONSIBLE FOR:

- ANY DAMAGES TO VEHICLES.
- INJURIES TO PEDESTRIANS.
- DAMAGES TO MOWING EQUIPMENT AND INJURIES TO THE PUBLIC FROM AIRBORNE GRAVEL THROWN UP DURING MOWING.
- DELAYS OR EXTENSIONS TO THE FLMP CAUSED BY GRAVEL EMBEDDED IN THE SOIL.

J. CAREFULLY REMOVE EXISTING PAVEMENT, CURBS AND GUTTERS (IF APPLICABLE) AROUND TREES SO AS NOT TO DAMAGE THE ROOTS THAT ARE BELOW THE PAVEMENT.

- CONTACT DUF FOR A MEETING AT THE SITE FOR DISCUSSION PRIOR TO THE APPROVAL OF ANY DEMOLITION, GRADING, EXCAVATION, TRENCHING AND RESTORATION WORK.
- SHOULD THE QA BE UNABLE TO DETERMINE THROUGH VISUAL INSPECTION THE AMOUNT AND THE EXTENT OF THE ROOT SYSTEM TO BE PRUNED, DUF MAY REQUIRE THE CONTRACTOR TO USE AN AIR-WAND (AIR SPADE GUN) TO EXPOSE THE EXISTING TREE ROOTS WHEN PERFORMING EXCAVATION AND TRENCHING.

K. FOR TRENCHING WORK, WHERE POSSIBLE, MINIMIZE ROOT CUTTING BY REROUTING THE PIPE AWAY FROM ROOTS, OR SNAKE PIPE OR MICRO-TUNNEL UNDER AND/OR OVER THE TREE ROOTS.

10. NEW TREES, REPLACEMENT TREES, RELOCATED TREES AND ROOT/BRANCH PRUNED TREES

A. SHALL BE PRE-APPROVED AT THE NURSERY BY THE CONSULTANT'S LANDSCAPE ARCHITECT, LC, AND DUF AT LEAST TWO (2) WEEKS PRIOR TO THEIR DELIVERY TO THE PROJECT SITE. CONTACT DUF NURSERY AND LANDSCAPE SECTION VIA EMAIL AT DUF@HONOLULU.GOV TO SCHEDULE AN INSPECTION.

B. DUF WILL NOT ACCEPT NEW, REPLACEMENT AND RELOCATED TREES THAT:

- HAVE AN UNDERDEVELOPED ROOT SYSTEM.
- ARE ROOT-BOUND.
- ARE DAMAGED DUE TO THE REMOVAL, TRANSPORT, OR INSTALLATION WORK BY THE LC, OR ITS SUBCONTRACTORS.
- ARE UNHEALTHY, OR
- HAVE POOR STRUCTURE.

C. FOR LANDSCAPE PLANTERS, PLANTING STRIPS AND TREE WELL PLANTINGS, DUF WILL NOT ACCEPT TREES:

- THAT HAVE TRUNKS WHICH ARE NOT CENTERED IN THE MIDDLE OF THE LANDSCAPE PLANTERS, PLANTING STRIP, OR TREE WELL.
- WHERE THE TRUNK AND/OR ROOT FLARES THAT RUB AGAINST THE TREE WELL GRATES.

D. CONTRACTOR TO INSURE THAT THE MATURE TREE TRUNK AND CANOPY DO NOT:

- CONFLICT WITH OTHER TREE CANOPIES.
- CONFLICT WITH VEHICULAR TRAFFIC SIGHT LINES.
- TOUCH BUILDING FACADE, ROOF, OR AWNING.
- DO NOT BLOCK STREET LIGHTING (NIGHT ILLUMINATION).

E. TREE PLANTING:

- FOR FIELD STOCK TREE RELOCATIONS CONTRACTOR SHALL:
 - USE A WATERING PROBE TO MOVE SOIL WHILE BACKFILLING AND FILLING AIR POCKETS
 - CONTINUE TO PROBE THREE TIMES A WEEK FOR TWO WEEKS OR UNTIL THE AIR POCKETS ARE FILLED WITH SOIL. BACKFILL AREAS AFTER INITIAL PROBING.
 - LEAVE NO HOLES AROUND THE ROOT BALL WHICH MAY DRY OUT THE EXPOSED ROOTS.
- FOR TREE INSTALLATIONS NEAR THE GROUND WATER TABLE, THE CONTRACTOR SHALL:
 - NOT EXCAVATE DOWN BELOW THE GROUND WATER TABLE
 - PLANT ROOT BALL SHALLOW OR ABOVE GRADE WITH A MULCH LAYER COVERING THE ENTIRE ROOT BALL.
- IN HIGH WIND AREAS, TREES SHALL BE INSTALLED WITH THE CANOPY SLIGHTLY LEANING INTO THE WIND.

F. THE LC AND QA SHALL CONSULT THE HAWAII PACIFIC RISK ASSESSMENT (HPWRA) WEBSITE FOR TREES HAVING POTENTIAL TO BE INVASIVE IN THE STATE OF HAWAII. <https://dlnr.hawaii.gov/hisc/files/2019/04/2018-HPWRA-FY18-Final-Report.pdf>

G. THE CONTRACTOR SHALL PROVIDE A 120-CALENDAR DAY FLMP WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO:

- TREE PRUNING/PALM TRIMMING.
- REPAIRING STAKES, GUYS, AND TIES.
- CONTROLLING FOR DISEASES, INSECTS, AND PESTS.

H. SHALL BE GUARANTEED FOR ONE YEAR

- FINAL ACCEPTANCE WILL BE BASED ON SUCCESSFUL COMPLETION OF THE 120-CALENDAR DAY FLMP.
- THE GUARANTEE PERIOD SHALL BEGIN ONLY AFTER ACCEPTANCE BY OIC, DUF, AND PMRS.
- THE CONTRACTOR SHALL CONTACT OIC AND DUF FOR THE COMMENCEMENT DATE OF THE ONE-YEAR TREE GUARANTEE PERIOD.


DIRECTOR, Department of Parks and Recreation


Date