### **DESIGN CRITERIA**

SERVICE CONDITIONS DENOTES THE MAXIMUM ALLOWABLE ENVIRONMENTAL AND BERTHING CONDITIONS WITHIN WHICH THE STRUCTURE IS DESIGNED TO OPERATE. FACTOR OR SAFETY IS IN ACCORDANCE WITH CODE.

EXTREME CONDITION DENOTES THE MAXIMUM ALLOWABLE ENVIRONMENTAL AND IMPACT CONDITIONS WITHIN WHICH THE STRUCTURE IS DESIGNED TO MAINTAIN ITS STRUCTURAL INTEGRITY.

1. DESIGN LOADS -A. LIVE LOAD:

- LIVE LOAD ON PEDESTRIAN PLATFORMS, DECKING AND MARINE STRUCTURES = 100psf SNOW LOAD = 30psf (NON-CONCURRENT)
- B. WIND LOAD: WIND SPEED = 110mph

### **GENERAL NOTES**

- 1. ALL WORK SHALL CONFORM WITH ALL FEDERAL, STATE, COUNTY OR LOCAL CODES HAVING JURISDICTION OVER SUCH WORK. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.
- 2. CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, AND SAFETY OF WORK.
- DIMENSIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD 3. SURVEY AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS, ACCORDINGLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURES IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED CONSTRUCTION PLANS; THAT IS THE CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS, DIMENSIONS, CLEARANCES. ELEVATIONS. AND OTHER INFORMATION INDICATED IN THE DOCUMENTS PRIOR TO ORDERING ANY MATERIALS, COMMENCING AND ANY FABRICATIONS, OR PERFORMING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF ANY FIELD CONDITIONS WHICH MAY DIFFER FROM THE REPRESENTED PRIOR TO COMMENCING WORK.
- 4. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VISIT THE SITE AND SHALL IDENTIFY ANY UTILITIES, STRUCTURES, OR ANY OTHER ELEMENTS WHICH MAY IMPEDE WORK. UTILITY AND/OR STRUCTURE RELOCATIONS, IF NECESSARY, SHALL BE COORDINATED THROUGH THE OWNERS REPRESENTATIVE AT NO ADDITION COST.
- 5. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL VISIT THE SITE AND SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND ANY OTHER OCCUPYING TENANT WHO WILL BE AFFECTED BY REPAIR OPERATIONS
- 6. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL WORK THROUGH THE OWNER'S REPRESENTATIVE AND ANY OTHER OCCUPYING TENANT WHO WILL BE AFFECTED BY REPAIR OPERATIONS.
- 7. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA REGULATIONS AND SAFETY PROCEDURES TO ENSURE PERSONNEL HEALTH AND SAFETY. THE CONTRACTOR MUST MAINTAIN A SAFE AND CLEAN WORKING ENVIRONMENT AND SHALL ASSURE PROPER FUNCTIONING PERSONNEL EQUIPMENT AT ALL TIMES. IN AREAS WHERE PEDESTRIAN AND/OR VEHICULAR TRAFFIC MAY BE AFFECTED BY THE WORK, THE CONTRACTOR SHALL CORDON OFF THE WORK ARFA.
- 8. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO PREVENT DAMAGE TO EXISTING STRUCTURES BY OR AS A RESULT OF HIS OPERATIONS. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST. THE CONTRACTOR SHALL PROTECT AND MAINTAIN EXISTING OUTFALLS WITHIN THE PROJECT WORK LIMITS.
- 9. ALL DEBRIS AS A RESULT OF. OR IN THE IMMEDIATE VICINITY OF THE WORK SHALL BE RECOVERED AND PROPERLY DISPOSED OF BY THE CONTRACTORS AT NO ADDITIONAL COST.
- 10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY CONSTRUCTION DEBRIS OR WASTE FROM FALLING INTO THE WATER. ANY DEBRIS FALLING INTO THE WATER SHALL BE RECOVERED AND PROPERLY DISPOSED OF.
- 11. CONTRACTOR'S STORAGE AREA: DUE TO THE SITE'S WATERFRONT LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO PREVENT BY ANY METHOD, OIL, CONSTRUCTION DEBRIS, STOCKPILED MATERIALS, AND OTHER MATERIALS ON THE SITE, FROM ENTERING THE WATERWAY STAGING/LAY DOWN AREAS, AS APPROVED BY THE OWNER;S REPRESENTATIVE, SHALL BE RESTORED BY THE CONTRACTOR TO THE EXISTING CONDITION. IN ADDITION, THE CONTRACTOR SHALL REPLACE ALL DAMAGED MATERIALS AS A RESULT OF HIS OPERATIONS, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- 12. CONTRACTOR SHALL IMPLEMENT THOSE DIMENSIONS IDENTIFIED AS "MINIMUM" OR "MAXIMUM" AS INDICATED.
- 13. ALL REFERENCES IN THESE NOTES TO "ENGINEER" INDICATES THE ENGINEER OR RECORD HOUSE ENGINEERING, PC. ALL REFERENCES TO "OWNER" INDICATES THE COUNTY OF CURRITUCK. ALL REFERENCE TO TO "OWNER'S REPRESENTATIVE" INDICATE ANY DESIGNATED ENTITY AUTHORIZED TO ACT ON THE OWNER'S BEHALF.
- 14. SITE ACCESS AND STAGING ON LAND IS LIMITED. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH ANY AND ALL CONTRACTORS TO AVOID CONFLICTS. CONFLICTS WILL BE RESOLVED WITH THE OWNER'S REPRESENTATIVE.
- 15. SHEET PILE EMBEDMENT DEPTH IN EXCESS OF 16' SHALL BE DETERMINED BY EVALUATION BY ENGINEER OF RECORD.

### DEMOLITION

- TIMBER PILES COMPRISING EXISTING "DOLPHINS" ADJACENT TO EXISTING PAVILION TO BE REMOVED AND DISPOSED FULL LENGTH OF PILES. EXISTING PAVILION TO BE DISMANTLED AND REMOVED. ALSO REMOVE DECK, DECK PILES AND EXISTING BULKHEAD. ALL COSTS AND LOCATION OF SITE FOR DISPOSAL SHALL BE PROVIDED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE, STOCK PILE AND REPLACE RIPRAP AS NECESSARY TO INSTALL TIMBER PILES. SPECIAL CARE SHALL BE EXCISED TO PREVENT DAMAGE TO THE BEDDING AND FILER LAYERS.
- CONTAINMENT CURTAIN TO BE PROVIDED BY CONTRACTOR TO CONTAIN SEDIMENTATION OF <u>A</u> 3. WATERWAY IN ACCORDANCE WITH INDUSTRY STANDARDS.

# **EXCAVATION AND BACKFILL**

- THE CONTRACTOR SHALL SUBMIT TO THE OWNER'S REPRESENTATIVE, A REMOVAL SCHEDULE, AND A TEMPORARY SHORING PLAN AS MAY BE REQUIRED FOR DEMOLITION AND REMOVALS. THE TEMPORARY SHORING PLAN SHALL BE DESIGNED AND PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. THE CONTRACTOR SHALL NOT COMMENCE WORK WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE OF THE DEMOLITION AND REMOVAL SCHEDULE AND THE TEMPORARY SHORING PLAN. THE CONTRACTOR MUST PROVIDE THE ENGINEER AS PART OF THESE SERVICES.
- 2. WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIALS TO BE REMOVED AND DISPOSED, THE COST OF SUPPLYING A DISPOSAL AREA AND TRANSPORTATION TO THAT AREA SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THOSE ITEMS.
- EXCAVATION SHALL INCLUDE REMOVAL OF PAVEMENTS, FOUNDATIONS, AND ALL OTHER MATERIALS INCLUDING ROCK, IF ENCOUNTERED.
- 4. ELEVATIONS SHALL BE TO ELEVATIONS REQUIRED FOR INSTALLATION OF PERMANENT
- CONSTRUCTION WITHOUT DISTURBANCE TO SUBGRADE BELOW SUCH ELEVATIONS. BACKFILLING SHALL INCLUDE FILLING OF EXCAVATIONS MADE FOR CONSTRUCTION PURPOSED,
- EXTENDING TO EXISTING OR DESIGN GRADE.
- 6. BACKFILL SHALL BE PLACED IN EIGHT INCHES MAXIMUM LOOSE LIFTS AND COMPACTED TO PROVIDE 95% OF MAXIMUM DRY DENSITY PER ASTM-D-1556.

### TIMBER

- 1. ALL TIMBER SHALL BE SOUTHERN PINE. ALL TIMBER SHALL BE No. 2 OR BETTER.
- PER AWPA-P5.
- 3. ALL TIMBER BLOCKING JOISTS, PILE CAPS AND PILES SHALL BE ACQ TYPE B TREATED AT A RETENTION RATE OF 2.5 Ib./cu.ft PER AWPA-P5.
- CUSTS MADE AFTER INSTALLATION SHALL BE RE-TREATED IN ACCORDANCE WITH AWPA STANDARDS 2005, 63.1.

#### FASTENERS

- 1. LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1981.
- 2. LEAD HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS: UNTHREADED SHANK.
  - OF THE THREADED PORTION.
- 3. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY
- 4. ALL DECK SCREWS SHALL BE #10x4 STAINLESS STEEL.
- 5. ALL MARINE TIMBER BOLTS TO BE 5/8" HDG.
- 6. ALL TIEBACKS TO BE 1"dia. HDG. ROD w/ OGEE DOCK WASHER.

# TIMBER PILES

- 1. ALL TIMBER PILES SHALL BE 10" dia. (BUTT) SOUTHERN YELLOW PINE SUITABLE FOR A DESIGN STRESS OF 1,200psi. IAW ASTM D2899-70 T.
- 2. TIMBER PILES SHALL CONFORM TO REQUIREMENTS OF ASTM-D25-1999 (2005) AND SHALL BE DRIVEN TO A MINIMUM EMBEDMENT OF 30 FEET AND ACHIEVE A MINIMUM CAPACITY OF 10
- 3. TIMBER PILES SHALL BE CCA TREATED AT A RETENTION RATE OF 2.5 Ib/cu.ft. PER AWPA-P5.
- VERTICAL DEVIATION FOR PILES IS 1 INCH IN 10 FEET.

### GALVANIZING

- 1. UNCOATED CARBON-STEEL HARDWARE, FASTENERS, AND MISCELLANEOUS STEEL SHALL BE HOT-DIP GALVANIZED PER ASTM A153/ A153M.
- 2. DAMAGED OR MISSING COATINGS SHALL BE REPAIED PER ASTM-01.
- 3. MINIMUM HOT-DIP GALVANIZING THICKNESS SHALL BE GRADE 100, 2 oz./ft.<sup>2</sup>

# COMMERCIAL/MANUFACTURER COMPONENTS

- 1. THESE COMPONENTS WHERE SPECIFIED SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. UNLESS OTHERWISE NOTED.
- CAROLINA STATE SIGNED AND SEALED CALCULATIONS FOR APPROVAL BY ENGINEER FOR ALL COMMERCIAL/MANUFACTURER'S COMPONENTS.

# **RECYCLED PLASTIC LUMBER (OPTIONAL)**

- 1. ALL RPL COMPOSITE DECKING SHALL CONFORM TO REQUIREMENTS STATEDS IN THE TECHNICAL SPECIFICATION 067300.
- 2. ALL RPL COMPOSITE MATERIALS COLOR AND TEXTURE TO MATCH NATURAL WOOD.

#### PROPOSED SEEDING SPECIFICATIONS SEEDING DATES: APRIL 1- AUG. 31 SEED MIXTURE APPLICATION RATES/ACRE COMMON BERMUDA (HULLED) REBEL FESCUE 150 LBS. 250 LBS. FERTILIZER 10-10-10 @ 1,000 LB/ACRE LIME @ 3,000 LB/ACRE APPLY 4.000 LB/ACRE STRAW, ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. FERTILIZER RATES SHOWN ARE GENERAL RECOMMENDATIONS; FREQUENCY AND AMOUNT OF FERTILIZATION CAN BEST BE DETERMINED THROUGH SITE SPECIFIC SOIL TESTING. SATISFACTORY STABILIZATION AND EROSION CONTROL REQUIRES A COMPLETE VEGETATIVE COVER EVEN SMALL BREACHES IN VEGETATIVE COVER CAN EXPAND RAPIDLY IF LEFT UNATTENDED. A SINGLE HEAVY RAIN IS OFTEN SUFFICIENT TO GREATLY ENLARGE BARE SPOTS, AND THE LONGER REPAIRS ARE DELAYED THE MORE COSTLY THEY BECOME. PROMPT ACTION WILL KEEP SEDIMENT LOSS AND REPAIR COST DOWN. NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS AND QUILES DEVELOP THEY MUST BE FILLED, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAK MAINTENANCE REQUIREMENTS EXTEND BEYOND THE SEEDING PHASE WEAK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED AND RE-SEEDED AS PROMPTLY AS POSSIBLE. REFERTILIZATION MAY BE NEEDED TO MAINTAIN PRODUCTIVE STANDS.





