

FOUNDATION NOTES (CONT'D FROM DWG. NO. G-12)

- 4.0 LOAD TEST PILES:
- 4.1 CONDUCT ONE (1) COMPRESSION LOAD TEST IN ADVANCE OF PRODUCTION PILES IF PILE LOAD TEST IS FINAL, ADDITIONAL PILE(S) APPROVED BY THE ENGINEER SHALL BE LOAD TESTED UNTIL PILE PASSES LOAD TEST REQUIREMENTS.
- 4.2 A MINIMUM WAITING PERIOD OF THREE (3) WEEKS SHALL ELAPSE FROM THE COMPLETION OF DRIVING AND CONCRETING THE LOAD TEST PILE TO COMMENCEMENT OF THE LOAD TEST.
- 4.3 PROPOSED LOCATIONS AND INSTALLATION CRITERIA FOR THE PILE TO BE LOAD TESTED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS OF THE LOADING FRAMES AND EQUIPMENT REQUIRED TO PERFORM ALL LOAD TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS CERTIFIED BY A PROFESSIONAL ENGINEER FOR THE ENGINEER'S REVIEW. INSTALLATION DETAILS INCLUDING REINFORCING STEEL TO BE INSERTED IN CONCRETED PILES REQUIRED TO BE TESTED WILL BE INCLUDED IN THE TEST PROGRAM. MEASUREMENTS OF MOVEMENT OF THE PILE BUTT, TELLTALES, REFERENCE BEAMS, ETC. WILL BE TAKEN BY A LICENSED SURVEYOR ENGAGED BY THE CONTRACTOR. THE DIAL GAUGES USED SHALL HAVE A MINIMUM TRAVEL OF 75mm (3 IN.).
- 4.4 LOAD TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE RESPECTIVE SECTION OF THE CONTRACT SPECIFICATIONS AND THE RESPECTIVE ASTM SPECIFICATIONS, AS DESCRIBED LATER.
- 4.5 RECENTLY CALIBRATED LOAD CELLS SHALL BE FURNISHED BY THE CONTRACTOR. DURING LOAD TESTS, THE LOAD CELL AND ITS ACCESSORIES SHALL BE KEPT DRY AND CLEAN, AND SHALL BE HANDLED CAREFULLY TO ENSURE PROPER FUNCTIONING.
- 4.6 CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 25 MPa (3,500 psi) AT THE TIME OF TESTING.
- 4.7 THE COMPRESSION LOAD TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 551.5022--17M: STATIC PILE LOAD TEST AND THE NYS DOT'S "STATIC PILE LOAD TEST MANUAL", GEOTECHNICAL CONTROL PROCEDURE GCP-18, REVISION # 3, APRIL 2007.
- 4.8 APPLY THE TEST LOAD IN ACCORDANCE WITH THE PROCEDURES FOR THE "INCREMENTAL STATIC LOAD TEST."

THE CONTRACTOR MUST ENGAGE THE SERVICES OF AN ENGINEER LICENSED AND REGISTERED IN NEW YORK STATE, EXPERIENCED IN ALL ASPECTS OF PILE LOAD TESTING AND ACCEPTABLE TO THE DEPUTY CHIEF ENGINEER STRUCTURES (D.C.E.S.), TO PERFORM THE LOAD TEST(S) AND TO PREPARE THE REPORT OF TEST RESULTS. THE CONTRACTOR'S AGREEMENT WITH THE PROFESSIONAL ENGINEER SHALL PROVIDE FOR ADDITIONAL QUALIFIED PERSONNEL TO BE AT THE TEST SITE AT ALL TIMES DURING TESTING TO ASSURE THAT LOADS ARE BEING MAINTAINED AND TO RECORD THE DATA.
- 4.9 THREE (3) TELLTALE RODS SHALL BE INSTALLED IN EACH LOAD TEST PILE. EACH TELLTALE SHALL CONSIST OF A STEEL SOUNDING ROD EXTENDING TO THE ELEVATION TO BE DESIGNATED BY THE ENGINEER. THE TELLTALES SHALL BE PROTECTED BY A STEEL TUBE EMBEDDED IN THE CONCRETE. THE TELLTALES SHALL BE CENTERED IN THE TUBE IN A MANNER TO AVOID FRICTION BETWEEN THE TELLTALE AND TUBE. BEFORE EACH TEST STARTS, FURNISH TO THE ENGINEER THE PROPOSED METHOD OF INSTALLATION, ANCHORAGE DETAIL, LOCATION AND EXACT LENGTH OF EACH INDIVIDUAL TELLTALE. A TELLTALE SHALL BE INSTALLED TO THE TIP OF THE PILE AND SHALL BE CENTERED IN THE PILE. THE DETAILS AND METHOD OF INSTALLATION ARE SUBJECT TO APPROVAL OF THE ENGINEER. AFTER COMPLETION OF LOAD TESTS, THE CONTRACTOR SHALL REMOVE ALL TELLTALES AND VERIFY THEIR LENGTH. THE TUBES SHALL BE FILLED WITH GROUT. FOLLOW THE REQUIREMENTS OF GCP-18.
- 4.10 WITHIN TEN (10) CALENDAR DAYS FOLLOWING THE COMPLETION OF THE REQUIRED NUMBER OF ACCEPTABLE PILE LOAD TESTS, THE ENGINEER WILL ESTABLISH THE FINAL DRIVING CRITERIA, INCLUDING THE MINIMUM TIP PENETRATION AND DRIVING RESISTANCE.

5.0 DRAINAGE SYSTEM FOUNDATION NOTES

GENERAL NOTES 1.2, 1.20, 1.21 AND 1.22, ON DRAWING G-12, APPLY TO THE DRAINAGE SYSTEM FOUNDATION.

- 5.1 PILE TYPE SHALL BE TREATED TIMBER PILES CONFORMING TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 720-PILES, SPECIAL SPECIFICATIONS FOR ITEM 11551.04M, ASTM D25, THESE FOUNDATION NOTES, AND APPLICABLE SPECIAL PROVISIONS.
- 5.2 SUBMIT PILE TREATMENT DATA, INCLUDING CERTIFICATION BY THE TREATMENT PLANT STATING THE TYPE OF PRESERVATIVE SOLUTION AND PRESSURE PROCESS USED, NET AMOUNT OF PRESERVATIVE RETAINED, AND COMPLIANCE WITH APPLICABLE STANDARDS.
- 5.3 PILE DIMENSIONS:
MINIMUM DIAMETER OF 200 MM (8 INCHES) AT THE TIP
MINIMUM DIAMETER OF 300 MM (12 INCHES) AT THE BUTT
- 5.4 ALLOWABLE PILE DESIGN LOADS:
AXIAL COMPRESSION 180 kN (20 TON) + 90 kN (10 TON) DOWNDRAG
AXIAL TENSION (UPLIFT) 45 kN (5 TON)
LATERAL/HORIZONTAL 9 kN (1 TON)
- 5.5 STATIC PILE LOAD TEST: NONE
- 5.6 SPLICING OF TIMBER PILES IS NOT PERMITTED.
- 5.7 DRIVING SHOES: TIMBER PILES SHALL BE PROTECTED BY A PROPERLY FITTED STEEL DRIVING SHOE SUCH AS THE ARROW POINT, MANUFACTURED BY THE ASSOCIATED PILE AND FITTING CORP., OR AN APPROVED EQUAL. THE SIZE OF THE SHOE SHALL FULLY COVER THE POINTED END OF THE PILE. THE POINTED END SHALL BE IN AXIAL ALIGNMENT WITH THE PILE.
- 5.8 PILES SHALL BE DRIVEN FROM THE BOTTOM OF THE PRE-EXCAVATION FOR THE PILE CAP.

- 5.9 TIMBER PILES SHALL BE DRIVEN WITH A SINGLE-ACTING AIR/STEAM, HYDRAULIC OR DIESEL HAMMER WITH A MINIMUM RATED ENERGY OF 20 kJ (15,000 FOOT-POUNDS). THE MINIMUM TRANSFERRED ENERGY SHALL BE 9.5 kJ (7,000 FOOT-POUNDS).
- 5.10 IF IN THE OPINION OF THE ENGINEER THE HAMMER IS NOT PRODUCING THE MINIMUM TRANSFERRED ENERGY, THEN THE CONTRACTOR SHALL REPLACE THE HAMMER AT NO EXPENSE TO NYCDOT. THE CONTRACTOR, AT HIS/HER OWN EXPENSE, MAY EMPLOY A PILE DRIVING ANALYZER TO DETERMINE THE MINIMUM TRANSFERRED ENERGY.
- 5.11 TIMBER PILES SHALL BE DRIVEN CONTINUOUSLY TO A MINIMUM DRIVING RESISTANCE EQUAL TO 30 BLOWS PER 300 MM (1 FOOT) OF PENETRATION, BUT NOT SHALLOWER THAN THE MINIMUM PILE TIP ELEVATIONS GIVEN IN THE TABLE.
- 5.12 COLLARS AND BANDS SHALL BE PROVIDED WHERE NECESSARY TO PROTECT TIMBER PILES FROM SPLITTING AND BROOMING.
- 5.13 MINIMUM CENTER-TO-CENTER PILE SPACING SHALL BE AS SHOWN ON THE NYCDOT SEWER DESIGN STANDARDS, DWG. NO. 2 FOR PILE SPACING FOR DIP AND ON THE NYCDOT SEWER DESIGN STANDARDS, DWG. NO. 4 AND DWG. NO. 6 FOR PILE SPACING FOR PRCP. MINIMUM PILE SPACING FOR REPLACEMENT PILES MAY BE MODIFIED BY THE ENGINEER. SPACING OF ALL TIMBER PILES SHALL BE INSTALLED WITH A MAXIMUM TOLERANCE OF 75 MM (3 INCHES) FROM PLAN LOCATION.
- 5.14 MINIMUM PILE TIP ELEVATIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, BUT NO PILE SHALL BE LESS THAN 3 M (10 FT) IN LENGTH BELOW THE BOTTOM OF THE PILE CAP:

TABLE
MINIMUM PILE TIP ELEVATIONS (METERS)

FROM	8+140	TO	8+345	MIN PTE=	-7.0	
FROM	8+345	TO	8+375	MIN PTE=	-6.5	
FROM	8+375	TO	8+405	MIN PTE=	-8.5	
FROM	8+405	TO	8+435	MIN PTE=	-6.5	
FROM	8+435	TO	8+525	MIN PTE=	-7.0	
FROM	8+525	TO	8+555	MIN PTE=	-6.5	
FROM	8+555	TO	8+585	MIN PTE=	-7.5	
FROM	8+585	TO	8+615	MIN PTE=	-7.0	
FROM	8+615	TO	8+645	MIN PTE=	-9.0	
FROM	8+645	TO	8+675	MIN PTE=	-7.5	
FROM	8+675	TO	8+700	MIN PTE=	-7.0	
FROM	8+700	TO	8+710	MIN PTE=	-6.0	
OUTFALL F1					MIN PTE=	-7.0
FROM	8+710	TO	8+780	MIN PTE=	-4.0	
OUTFALL F2					MIN PTE=	-4.5
FROM	8+935	TO	9+045	MIN PTE=	-4.5	
FROM	9+045	TO	9+075	MIN PTE=	-6.0	
FROM	9+075	TO	9+105	MIN PTE=	-6.5	
FROM	9+105	TO	9+120	MIN PTE=	-6.0	
FROM	9+120	TO	9+140	MIN PTE=	-7.5	
FROM	9+140	TO	9+170	MIN PTE=	-7.0	

- 5.15 DO NOT DRIVE PILES WITHIN 6 M (20 FT) OF CONCRETE LESS THAN SEVEN (7) DAYS OLD.
- 5.16 DURING DRIVING MAINTAIN THE HAMMER AND PILE IN COAXIAL ALIGNMENT.
- 5.17 INVESTIGATE ANY SUDDEN DECREASE IN DRIVING RESISTANCE FOR POSSIBLE BREAKAGE OF THE PILE. SUCH DECREASE IN DRIVING RESISTANCE MAY BE CAUSE FOR REJECTION OF THE PILE.
- 5.18 RE-DRIVE ANY PILE WHICH IS RAISED UP DURING DRIVING OF ADJACENT PILES, TO THE ORIGINAL PILE TIP ELEVATION AND BEARING RESISTANCE.
- 5.19 CUT OFF PILES AT TOP ELEVATION WHEN DIRECTED BY THE ENGINEER. REPLACE OR REPAIR PILES WHICH ARE DAMAGED WHEN CUT OFF.
- 5.20 FOR AREAS SUBJECT TO SURCHARGE, HIGHWAY DRAINAGE SYSTEM STRUCTURE IDENTIFIED AS PILE-SUPPORTED MAY BE INSTALLED PRIOR TO EMBANKMENT AND SURCHARGE PLACEMENT ABOVE HIGHWAY DRAINAGE SYSTEM STRUCTURE INVERT ELEVATIONS.

6.0 TEMPORARY STEEL SHEETING

- 6.1 FOR TYPICAL DETAILS AND DESIGN PARAMETERS FOR TEMPORARY STEEL SHEETING, SEE DWG. FMPT-17.

QUALITY ASSURANCE NOTES

- 1. ALL WORK SHALL BE DONE ACCORDING TO THE PLANS, NYS DOT STANDARD SPECIFICATIONS AND SPECIAL SPECIFICATIONS, NYS DOT STEEL CONSTRUCTION MANUAL, M.U.T.C.D. MANUAL, NYS DOT MATERIALS, METHODS AND CURRENT NYS DOT ENGINEERING INSTRUCTIONS.
- 2. A RESIDENT ENGINEERING INSPECTION TEAM WILL BE ASSIGNED TO THIS PROJECT. THE CONTRACTOR SHALL INFORM THE RESIDENT ENGINEER OF HIS SCHEDULE OF SHOP FABRICATION AS WELL AS FIELD WORK OPERATIONS AND SHALL PROVIDE MEANS OF ACCESS FOR INSPECTION OF THE WORK AT ALL TIMES.
- 3. ALL WORK AND DOCUMENTATION SHALL BE TO THE SATISFACTION OF THE RESIDENT ENGINEER AS WELL AS THE NYCDOT QUALITY ASSURANCE DEPARTMENT (NYCDOT-QA).
- 4. A MEETING SHALL BE SCHEDULED WITH NYCDOT-QA TO DISCUSS THEIR PROCEDURES PRIOR TO STARTING ANY WORK.

AVAILABILITY OF PLANS

- 1. NO SHOP DRAWINGS ARE AVAILABLE FOR THESE STRUCTURES.
- 2. A PARTIAL SET OF ORIGINAL DESIGN PLANS ARE AVAILABLE AT THE OFFICE OF THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION 2 RECTOR STREET, N.Y.C., 10006. THE CONTRACTOR USES THESE DRAWINGS AT HIS OWN RISK AND SHALL VERIFY ALL DIMENSIONS IN THE FIELD BEFORE SHOP DRAWINGS ARE SUBMITTED.

COAST GUARD (SEE DWG. NO. G-14 FOR COAST GUARD NOTES 2 THRU 11)

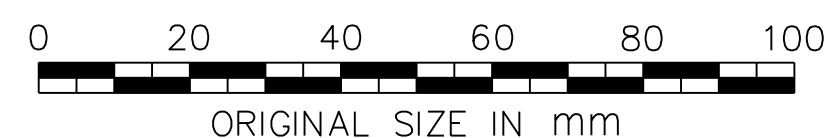
WORK IN NAVIGABLE WATERS AND OTHER WATERWAYS

- 1. **RESPONSIBILITIES:**
THE CONTRACTOR'S ATTENTION IS DIRECTED TO FRESH CREEK AND THE NAVIGATION CHANNEL THEREIN. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT OPERATIONS TO COMPLY WITH ALL THE REGULATIONS AND REQUIREMENTS OF THE U.S. COAST GUARD, THE CORPS OF ENGINEERS, THE NEW YORK CITY DEPARTMENT OF TRANSPORTATION, THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION, THE NEW YORK STATE DEPARTMENT OF STATE AND THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, IN CONNECTION WITH BUT NOT LIMITED TO, THE MAINTENANCE OF NAVIGATION AND WATER POLLUTION CONTROL.

THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF THE PLAN AND SCHEDULE OF OPERATIONS TO THE ENGINEER FOR APPROVAL AT LEAST 45 DAYS PRIOR TO COMMENCING ANY WORK IN OR OVER THE NAVIGABLE WATERWAY. TWO COPIES OF THE CONTRACTOR'S PLAN AND SCHEDULE OF OPERATIONS APPROVED BY THE NYCDOT SHALL THEN BE SUBMITTED BY THE CONTRACTOR TO THE U.S. COAST GUARD FOR THEIR APPROVAL AT LEAST 30 DAYS PRIOR TO COMMENCEMENT OF WORK.

THE PLAN AND SCHEDULE OR SEQUENCE OF OPERATION SHALL INCLUDE: A SKETCH OF THE WATERWAY, THE LOCATION OF ANY RESTRICTIONS THAT WILL BE PLACED IN THE WATERWAY, SUCH AS BARGES, ANCHORS AND ANCHOR LINES, THE LOCATION AND HEIGHT ABOVE MEAN HIGH WATER OF ANY SCAFFOLDING OR NETTING, THE PLACEMENT, TYPE AND DIMENSIONS OF COFFERDAMS, DOLPHINS, SPARS, ETC., IF USED, METHOD OF SCREENING SILT FROM DEWATERING OPERATIONS AND A PROJECTED SET OF DATES AND LENGTH OF TIME EACH OPERATION WILL TAKE. THE SCHEDULE SHALL ALSO INCLUDE THE HOURS OF OPERATION AND WHETHER OR NOT EQUIPMENT WILL BE REMOVED AT NIGHT.

ADDENDUM NO. 4
THIS DRAWING SUPERSEDES DWG. NO. G-13



PREPARED BY _____
IN CHARGE J.S.C. DRAFTER M.P.G.
DESIGNER J.J.E. CHECKER F.M.C.

**COAST GUARD (CONT'D FROM DWG. NO. G-13)
WORK IN NAVIGABLE WATERS AND OTHER WATERWAYS**

2. LAWS AND REGULATIONS:

THE CITY HAS RECEIVED A PERMIT FOR THE CONSTRUCTION OF THIS PROJECT FROM THE U.S. COAST GUARD. IT IS ANTICIPATED THAT THE U.S. COAST GUARD BRIDGE PERMIT WILL BE AVAILABLE FOR EXAMINATION AT THE OFFICE OF NYCDOT, DIVISION OF BRIDGES. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS AND PROVISIONS OF THIS PERMIT WHICH ARE APPLICABLE TO THE CONSTRUCTION WORK OF THIS CONTRACT AND SHALL PAY ALL COSTS IN CONNECTION THEREWITH INCLUDING BUT NOT NECESSARILY LIMITED TO, THE COST OF ANY "NOTICE TO MARINERS," THE COST OF RELOCATING EXISTING NAVIGATION AIDS AND THE COST OF SERVICES PERFORMED BY THE U.S. COAST GUARD, AS REQUIRED, SUCH AS SPECIAL SURVEYS IN CONNECTION WITH MISPLACED MATERIAL IN WATERWAYS OR MAKING DUMPING INSPECTIONS. THE COST TO THE CONTRACTOR FOR COMPLIANCE AS AFORESAID SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS SCHEDULED IN THE PROPOSAL.

THE CONTRACTOR SHOULD BE FAMILIAR WITH THE REGULATIONS OF SECTIONS 301, 302, 306, AND 307 OF THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972, PUBLIC LAW 92-500, 86 STAT. 816; THE GENERAL BRIDGE ACT OF 1946-(33 USC 525), SECTIONS 9 & 10 OF THE RIVERS AND HARBORS ACT OF MARCH 3, 1899 (33 U.S.C. 403); SECTION 404, STAT. 816, PUBLIC LAW 92-500; SECTION 103 OF THE MARINE PROTECTION RESEARCH AND SANCTUARIES ACT OF 1972, 86 STAT. 1052, PUBLIC LAW 92-532 AS THEY RELATE TO THE PROPOSED CONSTRUCTION ACTIVITIES. PROPOSED ACTIVITIES IN THE WATERWAY WHICH EXTEND BEYOND THE PURVIEW OF THE CITY'S PERMITS AS GRANTED BY THE COAST GUARD AND/OR THE CORPS OF ENGINEERS MAY BE AFFECTED OR RESTRICTED BY THESE REGULATIONS. ALL COSTS AND DELAYS INCURRED IN SECURING AUTHORIZATION FOR EXTRANEOUS WORK ACTIVITIES NOT INCLUDED IN THE PERMITS GRANTED AS STATED HEREIN, SHALL BE BORNE BY THE CONTRACTOR AND REFLECTED IN THE PRICES BID FOR THE VARIOUS CONTRACT ITEMS.

THE CONTRACTOR SHALL OBTAIN ALL OTHER PERMITS AND LICENSES AND PAY ALL CHARGES AND FEES INCURRED. THE CONTRACTOR SHALL GIVE ALL NOTICES NECESSARY AND INCIDENT TO THE DUE AND LAWFUL PROSECUTION OF THE WORK, AND SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS OF THE FEDERAL GOVERNMENT, THE STATE, THE CITY (CITIES) AND OTHER BODIES HAVING JURISDICTION OVER THE WORK AND ENCOMPASSED BY THEIR CONTRACT.

3. MAINTENANCE AND PROTECTION OF NAVIGATION:

A. ALL WORK SHALL BE SO CONDUCTED THAT THE FREE NAVIGATION OF THE WATERWAY IS NOT UNREASONABLY INTERFERED WITH AND THE PRESENT NAVIGABLE DEPTHS ARE NOT IMPAIRED. THE CONSTRUCTION OF FALSEWORK, PILINGS OR OTHER OBSTRUCTIONS, IF REQUIRED, SHALL BE ACCOMPLISHED IN ACCORDANCE WITH PLANS SUBMITTED TO AND APPROVED BY THE NYCDOT (E.I.C.), AND THE U.S. COAST GUARD PRIOR TO WORK BEING PERFORMED. AT NO TIME DURING CONSTRUCTION, SHALL RESTRICTIONS BE PLACED UPON NAVIGATION WITHOUT FIRST RECEIVING APPROVAL OF THE E.I.C. AND THE U.S. COAST GUARD. THE CONTRACTOR MUST REQUEST IN WRITING FOR APPROVAL TO BOTH E.I.C. AND SECTOR NEW YORK WATERWAYS MANAGEMENT DIVISION, AT LEAST 60 DAYS PRIOR TO THE PROPOSED WATERWAY CLOSURES, CHANNEL RESTRICTIONS AND SAFETY ZONES.

ALL DREDGED MATERIAL TAKEN FROM THE WATERWAY BEDS SHALL BE REMOVED IN ACCORDANCE WITH THE CONDITIONS AS STATED AND/OR REQUIRED BY THE U.S. COAST GUARD, THE CORPS OF ENGINEERS, THE NEW YORK STATE DEPARTMENT OF STATE AND THE CERTIFICATION OF COMPLIANCE WITH WATER QUALITY STANDARDS ISSUED IN ACCORDANCE WITH SECTION 401(A)(1) PUBLIC LAW 92-500, BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION FOR THIS PROJECT.

B. SIGNAL LIGHTS AND MARKERS:

THE CONTRACTOR SHALL DISPLAY SIGNAL LIGHTS, INCLUDING ANY OTHER AIDS TO NAVIGATION WHETHER PERMANENT OR TEMPORARY, AND CONDUCT OPERATIONS IN ACCORDANCE WITH THE GENERAL REGULATIONS OF THE U.S. COAST GUARD. THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL THE PROVISIONS OF THE COAST GUARD'S "NAVIGATION RULES (INTERNATIONAL - INLAND)" GOVERNING ALL ASPECTS OF THIS PROJECT AS THEY RELATE TO NAVIGABLE WATERS.

THE CONTRACTOR SHALL SERVICE AND MAINTAIN ALL "AIDS TO NAVIGATION" (LIGHTS, FOG HORN, BUOYS, ETC.) FROM THE TIME THEY ARE INSTALLED UNTIL ALL WORK OF THE CONTRACT HAS BEEN COMPLETED, AT WHICH TIME THEY SHALL BE LEFT IN PLACE AND THEIR MAINTENANCE TAKEN OVER BY OTHERS OR REMOVED AS ORDERED BY THE CITY OF NEW YORK AND/OR THE COAST GUARD.

THE CONTRACTOR SHALL ALSO FURNISH AND INSTALL WARNING SIGNS ALONG THE BANKS OF THE WATERWAY AS SPECIFIED BY THE CONTRACT PLANS AND/OR THE E.I.C. WHERE THEY MAY BE READILY SEEN BY MARINERS APPROACHING THE BRIDGE. THESE SIGNS SHALL WARN MARINERS THAT THEY ARE APPROACHING A BRIDGE CONSTRUCTION AREA AND THAT CAUTION SHOULD BE OBSERVED. SIZE, CONSTRUCTION AND LETTERING OF THE SIGNS SHALL CONFORM TO THE N.Y.S. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL COSTS INCURRED IN CONNECTION WITH THESE SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID PER MONTH FOR ITEM 619.0101M THROUGH 619.0106M - BASIC WORK ZONE TRAFFIC CONTROL.

C. NOTICE TO MARINERS:

THE CONTRACTOR SHALL NOTIFY THE COAST GUARD AND THE E.I.C. THIRTY (30) DAYS IN ADVANCE OF WORK COMPLETION SO THAT THE APPROPRIATE NOTICE CAN BE GIVEN TO MARINERS. THE CONTRACTOR SHALL KEEP ALL OFFICES APPRISED OF CONDITIONS EXISTING AT THE SITE, WHICH RELATE TO NAVIGATION, SO THAT MARINE TRAFFIC MAY BE NOTIFIED ACCORDINGLY, ON A TIMELY BASIS.

D. TEMPORARY REMOVAL OF NAVIGATION AIDS:

THE TEMPORARY REMOVAL OR CHANGES IN LOCATION OF CHANNEL MARKERS MAY BE REQUIRED TO FACILITATE NAVIGATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE U.S. COAST GUARD AT LEAST 10 DAYS PRIOR TO THE DESIRED REMOVAL OF ANY CHANNEL MARKER IN ORDER THAT APPROPRIATE PERMISSION MAY BE OBTAINED AND NAVIGATION INTERESTS FULLY INFORMED IN ADVANCE OF THE PROPOSED CHANGE IN LOCATION.

E. PRESERVATION OF THE EXISTING WATERWAY:

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT THE WATERWAY AND CHANNEL DEPTHS ARE NOT AFFECTED BY THE WORK. SHOULD IT BE SUSPECTED THAT THE WATERWAY OR CHANNEL DEPTHS MAY HAVE BEEN IMPAIRED OR THAT AN OBSTRUCTION MAY EXIST FROM THE WORK, THE CONTRACTOR SHALL UPON THE REQUEST OF THE COAST GUARD, CORPS OF ENGINEERS OR THE E.I.C., PROVIDE THE NECESSARY EQUIPMENT AND PERSONNEL TO UNDERTAKE A SURVEY TO DETERMINE THE PRESENCE OF ANY OBSTRUCTIONS, OBJECTS OR SILTING THAT MAY HAVE OCCURRED DURING CONSTRUCTION.

BEFORE COMMENCEMENT OF WORK IN OR NEAR THE WATERWAY, THE CONTRACTOR SHALL CONDUCT A FATHOMETRIC SURVEY (SOUNDINGS) OF THE WATERWAY BOTTOM BASED ON U.S.G.S. DATUM FOR THE FULL WIDTH OF THE WATERWAY AND FOR A DISTANCE 46 METERS UPSTREAM AND DOWNSTREAM OF THE WORK SITE (NEW STRUCTURE, BRIDGE BEING REPLACED). SOUNDINGS SHALL BE TAKEN ON A 3.0-METER GRID. A COPY OF THE SOUNDINGS SHALL BE SUBMITTED TO THE E.I.C.

UPON COMPLETION OF THE CONTRACT, AN INSPECTION OF THE WATERWAY SHALL BE PERFORMED AGAIN TO INSURE THAT ALL CONSTRUCTION WASTES HAVE BEEN COMPLETELY REMOVED FROM THE WATERWAY. THIS INSPECTION SHALL CONSIST OF BOTH A FATHOMETRIC (SOUNDINGS) SURVEY AND A WIRE DRAG. THE SURVEY SHALL BE TAKEN ON A 3.0-METER GRID AND COVER THE AREA PREVIOUSLY SURVEYED. THE WIRE DRAG SHALL BE PERFORMED AFTER A REVIEW AND COMPARISON OF THE SOUNDINGS HAVE BEEN MADE BY THE ENGINEER-IN-CHARGE.

F. MISPLACED MATERIALS:

SHOULD THE CONTRACTOR, DURING THE PROGRESS OF THE WORK, LOSE, DUMP, THROW OVERBOARD, SINK OR MISPLACE ANY MATERIAL, PLANT, MACHINERY OR APPLIANCE, WHICH MAY BE DANGEROUS OR OBSTRUCT NAVIGATION, THE CONTRACTOR SHALL PROMPTLY RECOVER AND REMOVE THE SAME. THE CONTRACTOR SHALL GIVE IMMEDIATE NOTICE OF SUCH OBSTRUCTION TO THE COAST GUARD AND THE E.I.C. THE NOTICE SHALL GIVE A DESCRIPTION AND LOCATION OF ANY SUCH OBJECT AND ACTION TAKEN OR BEING TAKEN TO PROTECT NAVIGATION. UNTIL REMOVAL CAN BE EFFECTED, THE OBJECT(S) SHALL BE PROPERLY MARKED IN ORDER TO PROTECT NAVIGATION. SHOULD THE CONTRACTOR NEGLECT TO REMOVE, OR REFUSE TO PROMPTLY REMOVE ANY SUCH OBSTRUCTION, THE E.I.C. SHALL HAVE THE SAME REMOVED AND CHARGE THE COSTS AGAINST MONIES DUE TO THE CONTRACTOR OR RECOVER UNDER HIS BOND.

G. OBSTRUCTION OF CHANNEL AND WATERWAY:

SHOULD THE CONTRACTOR'S PLANT OBSTRUCT THE CHANNEL AND WATERWAY SO AS TO ENDANGER THE PASSAGE OF VESSELS, AS DEFINED IN THE RIVER AND HARBOR ACT, IT SHALL BE PROMPTLY MOVED TO THE EXTENT NECESSARY TO AFFORD A PRACTICABLE PASSAGE. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROMPTLY REMOVE THE PLANT, INCLUDING RANGES, BUOYS, PILES, ANCHORS AND OTHER MARKERS PLACED BY THE CONTRACTOR UNDER THE CONTRACT, EITHER ON SHORE OR OFF SHORE.

4. PAYMENT

PAYMENT FOR ALL OF THE AFORESAID ITEMS CONTAINED IN NOTES 1 THRU 3 UNDER THE HEADING - "WORK IN NAVIGABLE WATERS AND OTHER WATERWAYS" ON DWGS. G-13 AND G-14 SHALL BE INCLUDED AND REFLECTED IN THE PRICES BID FOR THE VARIOUS CONTRACT ITEMS. NO SEPARATE PAYMENT WILL BE MADE FOR COMPLIANCE WITH THE CONDITIONS STATED HEREIN.

5. THE AS-BUILT VERTICAL AND HORIZONTAL CLEARANCES SHALL BE VERIFIED BY A LICENSED SURVEYOR OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW YORK. THE SURVEYED CLEARANCES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE COST OF ALL SURVEY WORK SHALL BE INCLUDED IN ITEM 625.01 M, SURVEY OPERATIONS. ALL OTHER WORK PERFORMED TO MEET COAST GUARD REQUIREMENTS SHALL BE DEEMED TO BE INCLUDED IN THE COST OF ALL THE ITEMS OF THE CONTRACT.

6. SHOULD ANY ARCHAEOLOGICAL RESOURCES BE ENCOUNTERED DURING CONSTRUCTION, THE WORK SHALL CEASE AND THE NEW YORK STATE HISTORIC PRESERVATION OFFICE SHALL BE CONSULTED FOR POSSIBLE RECOVERY OF THE RESOURCES.

7. SPILLAGE OF OIL AND HAZARDOUS SUBSTANCES IS SPECIFICALLY PROHIBITED BY SECTION 311 OF THE FEDERAL WATER POLLUTION CONTROL ACT, AS AMENDED IN 1972. MEASURES INCLUDING PROPER MAINTENANCE OF CONSTRUCTION EQUIPMENT, ARRANGEMENT OF THE FUEL HANDLING AREAS SO AS TO PERMIT SPILLS TO BE CONTAINED BEFORE REACHING THE STREAM; INSTRUCTING PERSONNEL NOT TO DISPOSE OF OIL OR OTHER SUCH MATERIAL INTO DRAINS OR INTO THE STREAM DIRECTLY, AS WELL AS OTHER PROCEDURES SHOULD BE PLANNED TO PREVENT SPILLAGE. IF, IN SPITE OF SUCH PLANNING, OIL IS SPILLED INTO THE STREAM, BESIDES THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, THE U.S. COAST GUARD IS TO BE NOTIFIED IMMEDIATELY AT 800-424-8802. A SUPPLY OF APPROVED ABSORBENTS AND SPILL CONTAINMENT EQUIPMENT SHOULD BE KEPT AT THE JOB SITE TO BE READILY DEPLOYED PENDING COAST GUARD ARRIVAL ON THE SCENE OF THE SPILL. THE USE OF CHEMICAL DISPERSING AGENTS AND EMULSIFIERS IS NOT AUTHORIZED WITHOUT PRIOR SPECIFIC FEDERAL APPROVAL.

8. THE CITY OF NEW YORK ASSUMES NO RESPONSIBILITY FOR ANY DAMAGES SUSTAINED OR CAUSED BY THE CONTRACTOR'S EQUIPMENT. APPROVAL OF THE CONTRACTOR'S OPERATIONS SHALL NOT ACT AS WAIVER OF LIABILITY FOR ANY DAMAGE THAT MAY RESULT.

9. CONTRACTOR INTENDING THE USE OF BARGE SHALL GET THE PROPER PERMITS FROM COAST GUARD AND SHALL MEET THE FOLLOWING REQUIREMENTS:

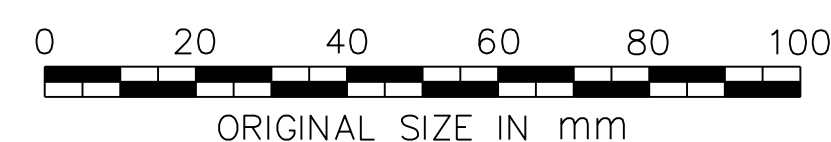
- A. CONTRACTOR SHALL NOTIFY COAST GUARD 30 DAYS PRIOR TO PLACEMENT OF BARGE.
- B. REGARD TO FLOATING EQUIPMENT, THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE NAVIGATION RULES, INTERNATIONAL - INLAND.
- C. ALL CONSTRUCTION EQUIPMENT IN THE WATERWAY SHALL BE LIGHTED IN ACCORDANCE WITH THE PROVISIONS AS OUTLINED IN THE NAVIGATION RULES INTERNATIONAL - INLAND.
- D. IF ANY BARGES OR WORK FLOATS ARE TO BE KEPT IN PLACE BY ANCHORS, THE ANCHOR LINES MUST BE MARKED BY BUOYS WHICH SHOULD BE LIGHTED.

10. BLACK AND WHITE, 8 1/2" X 11", GLOSSY PHOTOGRAPHS OF THE COMPLETED BRIDGE, TAKEN FROM THE MARINER'S PERSPECTIVE BOTH UP AND DOWNSTREAM OF THE BRIDGE, ARE REQUIRED FOR RECORD PURPOSES.

11. FOR ADDITIONAL DETAILS AND REQUIREMENTS, SEE APPENDIX C, "U.S. COAST GUARD CONSTRUCTION REQUIREMENTS" AND APPENDIX E, "U.S. COAST GUARD SECURITY ZONE / EXCLUSIONARY AREA".

CONSERVATION/WETLAND

1. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER TO PREVENT OR REDUCE TO A MINIMUM DAMAGE TO THE WATERWAY FROM POLLUTION BY DEBRIS, SEDIMENT OR OTHER FOREIGN MATERIAL, OR FROM THE MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR THE WATERWAY. HE SHALL NOT RETURN DIRECTLY TO THE WATERWAY, OR TO A DITCH IMMEDIATELY FLOWING INTO THE WATERWAY, ANY WATER WHICH HAS BEEN POLLUTED WITH SAND, SALT, CEMENT, OIL OR OTHER IMPURITIES. THE CONTRACTOR SHALL NOT USE WATER FROM THE WATERWAY.
2. TURBIDITY CURTAINS OR COFFERDAMS SHALL BE EMPLOYED WHERE SHOWN ON THE PLANS, OR AS REQUIRED, TO CONTAIN WORK AREAS AND PREVENT THE RELEASE OF DEBRIS, SEDIMENT OR OTHER FOREIGN MATTER INTO THE WATERWAY. TURBIDITY CURTAINS ALONG THE SHORELINES SHALL BE MAINTAINED IN PLACE UNTIL FINAL SITE CLEANUP IS COMPLETE. COFFERDAMS SHALL BE MAINTAINED IN PLACE UNTIL ALL WORK AND CLEANUP INSIDE THE COFFERDAMS IS COMPLETE.
3. NO DISCHARGE FROM A COFFERDAM OR ANY OTHER CONSTRUCTION ACTIVITY SHALL ENTER THE WATERWAY DIRECTLY UNLESS THE DISCHARGE IS AS CLEAR AS THE FLOWING WATERWAY. BEFORE STARTING SUCH OPERATIONS, THE CONTRACTOR SHALL CONTACT THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION IN ORDER THAT THE METHODS EMPLOYED WILL HAVE PRIOR APPROVAL OF THE DEPARTMENT.
4. COFFERDAMS FOR NEW BRIDGE PIERS SHALL BE FULLY INSTALLED BEFORE DRIVING CONCRETE OR TIMBER PILES OR EXCAVATING/DREDGING CREEK BED SEDIMENTS. WATER CONTAMINATED WITH CREEK BED SEDIMENT, AND THE SEDIMENT, SHALL BE REMOVED FROM THE COFFERDAMS AND HANDLED AND DISPOSED AS SPECIFIED UNDER ITEMS 39203.9001M AND 39206.002005M.
5. SUITABLE PREVENTIVE MEASURES SHALL BE TAKEN DURING CONSTRUCTION TO PREVENT BANK EROSION AND SILTATION INTO THE WATERWAY. PAYMENT FOR THESE MEASURES SHALL BE INCLUDED IN PAY ITEMS UNDER NYS SECTION 209-TEMPORARY SOIL EROSION AND SEDIMENT CONTROL. EQUIPMENT, MATERIALS AND DEBRIS SHALL NOT BE STAGED ON THE SIDE OF THE BANKS.
6. THE PROJECT IS LOCATED IN A DESIGNATED TIDAL WETLANDS AREA PROTECTED UNDER ARTICLE 25 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW. DEMOLITION AND CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH PERMITS ISSUED BY THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION. THE BOUNDARIES OF THE TIDAL WETLANDS AREA ARE SHOWN ON THE PLANS.
7. THE CONTRACTOR SHALL SUBMIT THE PLANS AND/OR WRITTEN DESCRIPTION FOR METHODS OF DEMOLITION OF EXISTING STRUCTURE, RECONSTRUCTION OF THE PROPOSED BRIDGE, EXCAVATION AND DREDGING, FREQUENCY, SIZE/TYPE AND LOCATIONS FOR BARGES TO BE USED, AND VEHICLE ACCESS ROUTES TO THE ENGINEER FOR APPROVAL BEFORE COMMENCING THE WORK. BARGES SHALL NOT REST UPON THE CREEK BOTTOM DURING LOW TIDE.
8. SITE CLEANUP, INCLUDING REMOVAL OF DEMOLITION DEBRIS, SCRAP MATERIALS, FLOATING DEBRIS ON THE WATERWAY, AND OTHER FOREIGN MATTER, SHALL BE COMPLETED BEFORE THE CONTRACTOR MAY DEMOBILIZE AND LEAVE THE SITE. ANY FLOATING DEBRIS ON THE WATERWAY SHALL BE REMOVED BEFORE IT IS CARRIED OUTSIDE THE SITE.
9. ALL DIRECT AND INDIRECT COSTS OF THE TIDAL WETLANDS PROTECTION SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THIS CONTRACT UNLESS INCLUDED IN SPECIFIC PAY ITEMS.



PREPARED BY _____
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