POST–TENSIONING SYSTEM MATERIALS:

1. PRESTRESSING STRAND USED IN THE PT SYSTEM SHALL BE 0.6" DIA. GRADE 270 LOW RELAXATION STRANDS CONFORMING TO AASHTO M203.

2. USE MAXIMUM OF 4 STRANDS PER 2" ø PT DUCT.

3. FLAT ANCHORAGE ASSEMBLY SHALL BE GALVANIZED. LOCAL ZONE REINFORCEMENT SHALL BE EPOXY COATED. STRAND GRIPPING WEDGES SHALL NOT BE COATED.

4. GROUT USED FOR HAUNCHES, TRANSVERSE SHEAR KEYS, VERTICAL ADJUSTMENT ASSEMBLY VOIDS, AND HAND HOLES FOR DUCT CONNECTIONS SHALL BE MORTAR CONFORMING TO THE REQUIREMENTS OF M4.04.5.

5. GROUT FOR PT DUCTS SHALL BE A CEMENTITOUS, PRE–BAGGED, NON–SHRINK GROUT SPECIFICALLY FORMULATED FOR PT DUCTS.

DESIGN OF POST–TENSIONING:

1. THE CONSTRUCTION DRAWINGS DETAIL A PT SYSTEM THAT IS DESIGNED TO PROVIDE A UNIFORM NET FINAL COMPRESSIVE STRESS OF XXX PSI ACROSS THE TRANSVERSE DECK JOINTS. THIS MINIMUM STRESS SHALL BE PROVIDED AFTER LOSSES DUE TO ELASTIC SHORTENING, DUCT FRICTION, WOBBLE AND ANCHORAGE SET. THE DETAILS ARE BASED ON THE FOLLOWING MATERIAL PROPERTIES AND PARAMETERS:
   - FRICTION AND WOBBLE COEFFICIENT = .0002
   - ANCHORAGE SET = .25 INCHES
   - THE AREA OF CLOSURE POUR CONCRETE IS NOT INCLUDED IN THE CALCULATION OF THE NET PRESTRESS FORCE.

2. THE DESIGN DETAILED ON THE CONSTRUCTION DRAWINGS IS BASED ON A JACKING FORCE EQUAL TO XXX KIPS PER DUCT (AFTER ANCHORAGE SET).

3. THE CONTRACTOR SHALL DESIGN THE FINAL PT SYSTEM BASED ON THE FRICTION, WOBBLE, AND ANCHORAGE SET ACCORDING TO THE ACTUAL MATERIALS. MINOR CHANGES TO THE SYSTEM CAN BE MADE, PROVIDED THAT THE FINAL NET COMPRESSIVE STRESS AFTER LOSSES IS EQUAL TO OR GREATER THAN XXX PSI.

4. THE DESIGN OF THE PT SYSTEM SHALL INCLUDE THE DESIGN OF THE LOCAL ZONE REINFORCEMENT BEHIND THE ANCHORAGE PLATE AND ANCHORAGE ASSEMBLY.

5. THE SYSTEM DESIGN SHALL INCLUDE A SEQUENCE OF STRESSING OF ALL TENDONS IN A PANEL TO ENSURE THAT THE STRESSING OPERATION DOES NOT PERMIT MORE THAN 12.5% OF THE PRESTRESSING FORCE TO BE ECCENTRIC AT ANY TIME FOR THE ENTIRE PANEL. STRESSING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.

6. DECK PANELS MUST BE ALLOWED TO SLIDE ON GIRDERS DURING PT. TEMPORARY RESTRAINT SHALL BE USED FOR PANELS SET ON GIRDERS WITH GRADES IN EXCESS OF 4%.

7. AT THE CONCLUSION OF THE STRESSING, QUALIFIED PERSONNEL SHALL PREPARE AND SUBMIT A STRESSING REPORT BASED ON ACTUAL MATERIAL PROPERTIES USED ON SITE TO THE ENGINEER FOR APPROVAL.