STRUCTURAL STEEL GENERAL NOTES

GENERAL NOTES

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING THE ACTUAL EXISTING CONDITIONS AND HOW THEY AFFECT THE REQUIRED WORK PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCY NOTED BETWEEN ACTUAL CONDITIONS AND THOSE DESCRIBED BY THESE DRAWINGS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER. NO ADDITIONAL COST ASSOCIATED WITH THE MODIFICATIONS TO THE SCOPE OF WORK REQUIRED DUE TO INACCURATE EXISTING CONDITIONS AS SHOWN BY THESE DRAWINGS WILL BE CONSIDERED UNLESS SAID CONDITIONS HAVE BEEN BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO RECEIVING BIDS.

2. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE ALABAMA STATE PORT AUTHORITY AND ALL SUBCONTRACTORS.

3. ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL BUILDING CODES AND ORDINANCES.

4. AT ALL TIMES, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEW OF THESE CONDITIONS. THE ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.

5. THE PHYSICAL ADDRESS OF THE JOB SITE IS:
   McDUFFIE COAL TERMINAL
   EZRA TRICE BLVD.
   MOBILE, AL 36603

REFERENCE SPECIFICATIONS

1. STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING PROJECT SPECIFICATIONS:

   05100 – "STRUCTURAL STEEL MATERIALS FABRICATION AND ERECTION"

2. STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" (1989) AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (1992).

3. HIGH STRENGTH BOLTING SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS OR A490 BOLTS" (1994).

4. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARD D1.1, LATEST EDITION.

MATERIALS

1. STRUCTURAL STEEL "W", "WT" AND "S" SHAPES SHALL CONFORM TO ASTM A992, GRADE 50. ALL CHANNELS, ANGLES AND PLATES SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.

2. HIGH STRENGTH BOLTS, NUTS AND HARDENED WASHERS SHALL CONFORM TO ASTM A325, ASTM A563 DH, AND ASTM F436 RESPECTIVELY. MACHINE BOLTS AND NUTS SHALL CONFORM TO ASTM A307, AND PLAIN WASHERS SHALL CONFORM TO ANSI B18.22.1. BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED.

3. WELDING ELECTRODES USED FOR FIELD CONNECTIONS SHALL CONFORM TO AWS A5.1, CLASS E70XX UNLESS NOTED OTHERWISE ON THE DRAWINGS. WELDING ELECTRODES USED FOR SHOP CONNECTIONS SHALL CONFORM TO AWS A5.1 WITH A MINIMUM ELECTRODE TENSILE STRENGTH OF 70 KSI, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

4. GRATING SHALL BE WELDED STEEL BAR TYPE WITH SERRATED 1¾ INCH BY 3/16 INCH BEARING BARS SPACED AT 1 3/16 INCH CENTER TO CENTER, UNLESS NOTED OTHERWISE ON THE DRAWINGS. CROSS BARS SHALL BE SPACED AT 4 INCHES CENTER TO CENTER. ALL BEARING BARS AND CROSS BARS SHALL BE WELDING QUALITY MILD CARBON STEEL AND SHALL CONFORM TO ASTM A1011.

5. CHECKERED FLOOR PLATE SHALL BE FOUR WAY RAISED PATTERN STEEL PLATE OF THE THICKNESS CALLED FOR ON THE DRAWINGS.

6. ALL STRUCTURAL STEEL, MISCELLANEOUS STEEL, HANDRAIL AND LADDERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

7. GRATING AND CHECKERED PLATE SHALL BE HOT–DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH APPLICABLE PROVISIONS OF ASTM A123, A143, A384 AND A385. ALL DAMAGED HOT–DIP GALVANIZED AREAS SHALL BE COATED WITH ZRC COLD GALVANIZING COMPOUND OR EQUAL. SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. SHOP WELDED CONNECTIONS SHALL BE CONTINUOUSLY SEAL WELDED WITH A MINIMUM 1/8 INCH FILLET WELD IN ACCORDANCE WITH ASTM A385.

FABRICATION AND ERECTION

1. NO TEMPORARY ERECTION BOLTS OTHER THAN HIGH STRENGTH BOLTS SHALL BE USED DURING ERECTION OF THE MEMBERS REQUIRING HIGH STRENGTH BOLTS.

2. WHEN CONNECTIONS REQUIRE FIELD PREPARATION OF BOLT HOLES, THE HOLES SHALL BE DRILLED OR PUNCHED, AND THE DIAMETER OF THE BOLT HOLES SHALL BE 1/16 INCH GREATER THAN THE NOMINAL BOLT DIAMETER.

3. FIELD CORRECTING OF FABRICATED STEEL BY GAS CUTTING SHALL NOT BE PERMITTED ON MAJOR STRUCTURAL FRAMING MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

4. ALL ANGLE AND STRUCTURAL TEE BRACING SHALL HAVE 1/8 INCH DRAW PER 10 FEET OF LENGTH. MAXIMUM DRAW SHALL BE 3/16 INCH AND NO DEDUCTION SHALL BE MADE FOR LENGTHS LESS THAN 10 FEET.

5. FILLET WELD SIZES, IF NOT CALLED OUT ON THE DRAWINGS, SHALL BE 3/16 INCH MINIMUM UNLESS TABLE J2.4 OF AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" REQUIRES A LARGER SIZE.

6. ALL LOADS SHOWN ON BRACING, BEAM CONNECTIONS AND COLUMNS SPLICES ARE DESIGN LOADS. NO FURTHER ALLOWABLE STRESS INCREASE OR LOAD REDUCTION SHOULD BE CONSIDERED.

7. SLIP CRITICAL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED AND TIGHTENED THROUGH THE USE OF "TURN–OF–THE–NUT" TIGHTENING AS PROVIDED IN THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. ALL NON–SLIP CRITICAL BOLTS MAY BE TIGHTENED TO A "SNUG–TIGHT" CONDITION AS DEFINED BY AISC.

8. SLIP CRITICAL CONNECTIONS SHALL BE INDICATED ON ERECTION DRAWINGS.

9. THE CONTRACTOR SHALL NOT CUT OR ALTER STRUCTURAL MEMBERS WITHOUT THE APPROVAL OF THE ENGINEER.

10. ERECTOR SHALL PROVIDE ALL TEMPORARY SHORING AND BRACING NEEDED FOR STABILITY UNTIL STRUCTURE IS COMPLETE.

11. SURFACES THAT HAVE BEEN DAMAGED BY WELDING, CUTTING, BURNING, SHEARING OR OTHER DAMAGE INCURRED DURING TRANSIT OR ERECTION SHALL BE REPAIRED TO PROVIDE A FINISH IN ACCORDANCE WITH SPECIFICATIONS.

CONNECTIONS

1. UNLESS SPECIFICALLY NOTED ON THE DRAWINGS, SHOP CONNECTIONS MAY BE ASSEMBLED BY EITHER BOLTING OR WELDING.

2. BOLTED CONNECTIONS FOR PRIMARY STRUCTURAL MEMBERS SHALL BE BOLTED WITH HIGH STRENGTH BOLTS CONFORMING TO ASTM A325 UNLESS NOTED OTHERWISE ON THE DRAWINGS. HIGH STRENGTH BOLTED CONNECTIONS SHALL BE CLEARLY INDICATED ON THE ERECTION DRAWINGS.

3. BOLTED CONNECTIONS FOR SECONDARY STRUCTURAL MEMBERS (PURLINS, GIRTS, STAIR FRAMING, STAIR BRACING, TOE PLATE, HANDRAIL, LADDERS, ETC) SHALL BE BOLTED WITH HIGH STRENGTH BOLTS CONFORMING TO ASTM A325, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

4. ALL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS INCLUDED IN THE SHEAR PLANE EXCEPT FOR TRUSSES, MOMENT CONNECTIONS, HANGERS, DIRECT TENSION CONNECTIONS AND VIBRATORY STRUCTURES, WHICH SHALL BE SLIP CRITICAL CLASS A.

5. WHEN CONNECTION DETAILS ARE NOT SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH PROJECT SPECIFICATION 05100 – "STRUCTURAL STEEL MATERIALS FABRICATION AND ERECTION".

6. HIGH STRENGTH BOLT SIZES SHALL BE ¾ INCH DIAMETER (UNO) EXCEPT THAT TOE PLATES, HANDRAIL AND LADDERS SHALL BE BOLTED WITH ⅝ INCH DIAMETER BOLTS.

7. THICKNESS OF GUSSET AND STIFFENER PLATES, IF NOT CALLED FOR ON THE DRAWINGS, SHALL BE ⅜ INCH MINIMUM.

8. WORKING POINTS FOR HORIZONTAL BRACING CONNECTIONS SHALL BE THE CENTERLINE OF THE INTERSECTING HORIZONTAL BEAMS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

9. WORKING POINTS FOR VERTICAL BRACING CONNECTIONS SHALL BE THE CENTERLINE OF BEAM AND CENTERLINE OF COLUMN, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

10. GRATING ANCHORS SHALL BE GFI G–CLIPS WITH A MECHANICALLY GALVANIZED FINISH AS MANUFACTURED BY:

    GRATING FASTENERS, INC.
    PO BOX 6438
    NEW ORLEANS, LA 70174

11. USE 4–BOLT MINIMUM FOR WT BRACE CONNECTIONS AND 2–BOLT MINIMUM FOR ANGLE BRACE CONNECTIONS.

REV NO.	DATE:	BY	REVISION
T.M.A.	04/16/20	T.M.A.	ISSUE FOR BID

ALABAMA STATE PORT AUTHORITY
MOBILE ALABAMA

McDUFFIE COAL TERMINAL
TOWER T–10 STRUCTURAL REPAIR
STRUCTURAL STEEL –GENERAL NOTES

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