# Addendum #2

## Lake County American Recovery & Reinvestment Act of 2009 (ARRA) Project:

Lakeshore Drive Bridge Project No. 2010-18, Bid No. 10-0033
FPN# 428436-1-58-01

This addendum is being issued to make the following changes, corrections, clarifications and additions to the bidding document listed above. The information in this addendum modifies and changes the original bidding document and takes precedence over the original documents. **Receipt of this addendum shall be acknowledge by the bidder by signing and dating the appropriate line on page W-5 of the applicable bid proposal.** Failure to acknowledge this addendum may preclude consideration of the bid proposal for award.

The Florida Department of Transportation Local Agency Program Manual revision requires prequalification of Contractors for bridge construction. Therefore, the Instruction to Bidders, Division A, Section **4. Pre-Qualification of Contractor** of the bidding document shall be changed as follows:

This is not a pre-qualification project.---deleted--

The contractor shall be Florida Department of Transportation pre-qualified for Minor Bridge Construction.--inserted--

Contractors who are not pre-qualified can elect to receive a refund of the bidding document cost.

## *Questions Via Email:*

***November 3, 2010***

Q4 – Can you verify that the permanent sheet pile wall data table on sheet BW-01 states the minimum criteria per foot of wall rather than just the inches to the 4th which is shown. Especially the minimum required moment of inertia as well as the section modules.

A4 – Per our discussions with the designer, the minimum required moment of Inertia and section modules in the table on Sheet BW-01 of the construction plans is per foot of wall.

Q5 – On the far right side of page BW-01 under the words (PERMANENT SHEETING NOTES: The sentences are cut off on the right numbers 1-10, please provide this information.

A5 – Attached to this Addendum is corrected sheet BW-01 of the construction plans. A pdf copy of this sheet BW-01 of the construction plans has also been added to the County's ftp site below:
ftp://ftp.co.lake.fl.us/Public_Works/Funding_Production/ARRA%20Lakeshore%20Drive%20Bridge/

Approved by:

Jeff Johnson
Construction Inspection Manager

# PERMANENT RETAINING WALL SYSTEM DATA TABLES

## GEOTECHNICAL INFORMATION

| Wall Nos. W1 and W2 | Reinforced Soil | Retained Backfill | Foundation Soil |
|---|---|---|---|
| Moist Unit Weight (pcf) | 105 | 115 | 110 |
| Saturated Unit Weight (pcf) | 115 | 120 | 115 |
| Cohesion (psf) | 0 | 0 | 0 |
| Internal Friction Angle (degrees) | 30 | 34 | 32 |

## SOIL REINFORCEMENT LENGTHS FOR EXTERNAL STABILITY

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Wall No. W1 | Wall Height (ft.) | 11 or Less | 12 | 13 | 14 | 15 | 16 |
| | Reinforcement Length (ft.) | 8 | 9 | 10 | 10 | 11 | 12 |
| | Factored Bearing Resistance (psf) | 7,000 | 7,500 | 7,700 | 7,700 | 8,100 | 8,100 |
| Wall No. W2 | Wall Height (ft.) | 11 or Less | 12 | 13 | 14 | 15 | 16 |
| | Reinforcement Length (ft.) | 8 | 9 | 10 | 10 | 11 | 12 |
| | Factored Bearing Resistance (psf) | 7,000 | 7,500 | 7,700 | 7,700 | 8,100 | 8,100 |

MSE WALL NOTES:

1. The reinforcement strap lengths shown above are the minimum lengths required for external stability. The reinforcement lengths used in the construction of the retaining walls will be the longer of that required for external or internal stability (determined by proprietary wall companies).
2. The Factored Bearing Resistances shown above are the critical (least) values from all the load cases analyzed using LRFD methodology.
3. Wall heights noted are measured from top of Leveling Pad to the Top of Coping.
4. If the unit weight and/or internal friction angle of the fill proposed by the Contractor differs from that shown above, the Project Engineer will contact both the District Geotechnical Engineer and the Wall Designer for a possible redesign.
5. The soil reinforcement and fasteners for the End Bent backwall shall be designed and furnished by the proprietary wall company. The soil reinforcement shall be designed to resist a factored horizontal load as shown on Sheet No. D1 Dx. The cost of soil reinforcement and fasteners shall be included in the cost of the Retaining Wall System.
6. Concrete facing panels shall receive a Class 5 Surface Finish.

## RETAINING WALL VARIABLES

| Wall No. | Wall Settlement: Long Term Settlement (in.) | Short Term Settlement (in.) | Differential Settlement (in./ft.) |
|---|---|---|---|
| W1 | 3.5 | 2.5 | 0.04 |
| W2 | 3.5 | 2.5 | 0.04 |

## ESTIMATED QUANTITIES - MSE WALLS

| ITEM | UNIT | QUANTITY: W1 Phase I | W1 Phase II | W2 Phase I | W2 Phase II |
|---|---|---|---|---|---|
| Retaining Wall System (Permanent) | SF | 2,866.6 | 3,660.2 | 2,572.1 | 811.9 |
| Pedestrian/Bicycle Conc. Parapet | LF | - | 228 | - | 10 |
| Concrete Traffic Railing Barrier - Retaining Wall System, mounted with Stepped Slab | LF | 175 | | 156 | |
| Aluminum Picket Railings | LF | - | 228 | - | 10 |

## ESTIMATED QUANTITIES - PERMANENT SHEET PILE WALLS

| ITEM | UNIT | QUANTITY: SW1 Phase I | SW1 Phase II | SW2 Phase I | SW2 Phase II |
|---|---|---|---|---|---|
| Sheet Piling (Steel, F&I Permanent) | SF | 2,754 | 1,732 | 3,963 | 2,015 |
| Concrete Class II (Bulkhead) | CY | 19.9 | 12.5 | 25.4 | 13.1 |
| Reinforcing Steel (Retaining Wall) | LB | 1,176 | 738 | 1,523 | 810 |

MSE WALL NOTES (cont.):

7. Applicable FDOT Wall types for each wall location are listed below. See the Qualified Products List for approved Wall Systems and Design Standards Index No. 5300 for allowable Wall Type substitutions.
   Wall Nos. W1 & W2 - FDOT Wall Types 2B through 2F
8. See Design Standards Index No. 5300 for Additional Notes and Details.
9. Design walls for the settlements noted in the table above. Short term settlement occurs during wall construction and Long Term Settlement is measured from the beginning of wall construction.

## PERMANENT SHEETING NOTES:

1. Design Conforms to the Applicable Requirements of the Following Specifications:
   - FDOT Structures Design Guidelines (Jan 2010)
   - American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Design Specifications, 4th Edition (2007), thru the 2009 Interims.
2. Design loading includes two (2) foot fill land surcharge and an embankment surcharge representing the mass of MSE embankment supported by the sheet pile wall.
3. Maximum wall deflection limited to one (1) inch.
4. For geotechnical information, see Geotechnical Engineering Report for Lakeshore Drive Bridge.
5. Contractor shall submit shop drawings for the permanent sheet pile wall system selected. For additional requirements, see section 455 of the FDOT standard specifications.
6. Sheet piling for Wall Nos. SW1 and SW2 shall be ASTM A572 Grade 50 steel (hot-rolled) and shall have a Moment of Inertia and Section Modulus according to the table. If the contractor elects to use a cold-rolled section, section properties noted for hot-rolled section shall be increased 120%.
7. Sheet piling installed should provide the section properties noted above plus an additional 1/4" sacrificial steel thickness to account for future corrosion below soil and/or water line.
8. Structural Backfill required for the construction of the Permanent Sheet Pile Wall shall be included in the cost of the wall. No separate payment will be made for backfill.
9. The exposed surface of permanent sheet piling above El. 54.0 and below the level of proposed ground scour depth (El. 66.3 Wall SW1, El. 63.8 Wall SW2) shall receive a three coat shop applied system comprised of an inorganic zinc primer and two coats of tar epoxy in accordance with Section 560-14 of the Specifications.
10. The cost of coating steel sheet piling shall be included in the cost of the permanent sheet piling.

## PERMANENT SHEET PILE WALL DATA TABLE

| CONSTRUCTION INFORMATION: WALL LOCATION: WALL NO. | WALL LOCATION | BEGIN WALL STATION | BEGIN WALL OFFSET | END WALL STATION | END WALL OFFSET | WALL TYPE | MAX WALL TIP ELEV. (FT) | CONSTRUCTION INFORMATION: MIN. SECTION MODULUS ($IN^3$) A328 (fy=39 ksi) | A572 (fy=50 ksi) | MAXIMUM BENDING MOMENT (FT-LB) | MIN. REQ'D MOMENT OF INERTIA ($IN^4$) | MAX. SCALED DEFLECTION (LB-$IN^3$) | DESIGN PARAMETERS: WALL TOP ELEV. (FT) | SOIL ELEVATION: BACK OF WALL (FT) | FRONT OF WALL (FT) | WATER ELEVATION: BACK OF WALL (FT) | FRONT OF WALL (FT) | DESIGN LIVE LOAD (PSF) | WEIGHT OF MSE FILL BEING SUPPORTED (FT) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SW1 | EB1 | 1004+71.30 | 24.67' Rt. | 1006+41.40 | 33.63' Lt. | Cont. | 52.650 | N/A | 50.4 | 1091.70 | 916 | $9.67 \times 10^{10}$ | 99.976 | +100.3 | +92.6 | +96.8 | +96.8 | 240 | 12.26 |
| SW2 | EB2 | 1004+38.62 | 33.63' Lt. | 1006+85.02 | 24.67' Rt. | Cont. | 50.650 | N/A | 64.9 | 2410.10 | 1662 | $4.82 \times 10^{10}$ | 102.635 | +103.0 | +92.4 | +96.5 | +96.5 | 240 | 9.36 |

10/4/10

BRIDGE NO. 114098

| REVISIONS: BY | DATE | DESCRIPTION | BY | DATE | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | |

| | BY | DATE |
|---|---|---|
| DRAWN BY | TAL | 2-08 |
| REVIEWED BY | MBJ | 2-08 |
| DESIGNED BY | JBC | 2-08 |
| CHECKED BY | RDB | 2-08 |
| APPROVED BY | SCOTT R. DEAN, P.E. | |

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LAKE COUNTY OF FLORIDA
DEPARTMENT OF PUBLIC WORKS

| ROAD NO. | COUNTY |
|---|---|
| CR 561A | LAKE |

SHEET TITLE: MSE AND SHEET PILE WALL - GENERAL NOTES

PROJECT NAME: LAKESHORE DRIVE BRIDGE

SHEET NO. BW-01