NOTES FOR TEMPORARY SHORING No. 1

FOR TEMPORARY SHORING, AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROJECT SPECIAL PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -LALT- 15+25 ±, 7.5 FT LEFT TO STATION -LALT- 15+57 ±, 7.5 FT LEFT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $(\gamma) = 120 \text{ LB/CF}$ FRICTION ANGLE (ϕ) = 24 DEGREES (RESIDUAL SOIL) FRICTION ANGLE (ϕ) = 30 DEGREES (EMBANKMENT SOIL) FRICTION ANGLE (ϕ) = 36 DEGREES (WEATHERED ROCK) COHESION (c) = 0 LB/SF GROUNDWATER ELEVATION = 376.5 FT ±

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -LALT- 15+25 ±, 7.5 FT LEFT TO STATION -LALT- 15+57 ±, 7.5 FT LEFT MAY NOT PENETRATE BELOW ELEVATION 365.8 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -LALT- 15+25 ±, 7.5 FT LEFT, TO STATION -LALT- 15+57 ±, 7.5 FT LEFT.

TEMPORARY SHORING FROM STATION -LALT- 15+25 ±, 7.5 FT LEFT, TO STATION -LALT- 15+57 ±, 7.5 FT LEFT, WILL BE REQUIRED TO REMAIN IN PLACE AND CUT OFF BELOW THE PAVEMENT STRUCTURE. USE PRECAST CONCRETE OR STEEL PLATE LAGGING FOR TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING No. 3

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROJECT SPECIAL PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -LALT- 59+80 ±, 6.0-9.0 FT LEFT, TO STATION -LALT- 61+75 ±. 6.0-9.0 FT LEFT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $(\gamma) = 120 \text{ LB/CF}$ FRICTION ANGLE (ϕ) = 24 DEGREES (RESIDUAL SOIL) FRICTION ANGLE (ϕ) = 30 DEGREES (EMBANKMENT SOIL) FRICTION ANGLE (ϕ) = 36 DEGREES (WEATHERED ROCK) COHESION (c) = 0 LB/SFGROUNDWATER ELEVATION = 348.0 FT ±

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -LALT- 59+80 ±, 6.0-9.0 FT LEFT, TO STATION -LALT- 61+75 ±, 6.0-9.0 FT LEFT, MAY NOT PENETRATE BELOW ELEVATION 347.5 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING STATION -LALT- 59+80 ±, 6.0-9.0 FT LEFT, TO STATION -LALT- 61+75 ±, 6.0-9.0 FT LEFT.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE FIRST DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON 07/11/2014 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, LICENSE # 032171. THE SECOND DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON 10/08/2014 AND SEALED BY A PROFESSIONAL ENGINEER, THEIN ZAN, LICENSE # 30943.

DESIGN TEMPORARY SHORING FROM STATION -LALT- 17+36 ±, 7.5 FT LEFT TO STATION -LALT- 17+70 ±, 7.5 FT LEFT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF FRICTION ANGLE (ϕ) = 24 DEGREES (RESIDUAL SOIL) FRICTION ANGLE (ϕ) = 30 DEGREES (EMBANKMENT SOIL) FRICTION ANGLE (ϕ) = 36 DEGREES (WEATHERED ROCK) COHESION (c) = 0 LB/SF GROUNDWATER ELEVATION = 376.5 FT ±

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -LALT- $17+36 \pm$, 7.5 FT LEFT, TO STATION -LALT- 17+70 ±, 7.5 FT LEFT, MAY NOT PENETRATE BELOW ELEVATION 365.8 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -LALT- 17+36 ±, 7.5 FT LEFT, TO STATION -LALT- 17+70 ±, 7.5 FT LEFT.

TEMPORARY SHORING FROM STATION -LALT- 17+36 ±, 7.5 FT LEFT, TO STATION -LALT- 17+70 ±, 7.5 FT LEFT, WILL BE REQUIRED TO REMAIN IN PLACE AND CUT OFF BELOW THE PAVEMENT STRUCTURE. USE PRECAST CONCRETE OR STEEL PLATE LAGGING FOR TEMPORARY SHORING.

NOTES FOR TEMPORARY SHORING No. 4

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROJECT SPECIAL PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -LALT- 36+30 ±, 7.9 FT RIGHT TO STATION -LALT- 38+25 ±, 6.6 FT RIGHT FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT $(\gamma) = 120 \text{ LB/CF}$ FRICTION ANGLE (ϕ) = 24 DEGREES (RESIDUAL SOIL) FRICTION ANGLE (ϕ) = 30 DEGREES (EMBANKMENT SOIL) FRICTION ANGLE (ϕ) = 36 DEGREES (WEATHERED ROCK) COHESION (c) = 0 LB/SFGROUNDWATER ELEVATION = 349.0 FT ±

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -LALT- 36+30 ±, 7.9 FT RIGHT, TO STATION -LALT- 38+25 ±, 6.6 FT RIGHT, MAY NOT PENETRATE BELOW ELEVATION 356.0 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -LALT- 36+30 ±, 7.9 FT RIGHT, TO STATION -LALT- 38+25 ±, 6.6 FT RIGHT.

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NOTES FOR TEMPORARY SHORING No. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROJECT SPECIAL PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

