


TEMPORARY SHORING DATA

PROJ. REFERENCE NO.	SHEET NO.
R-3830	TMP-2A
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

TEMPORARY SHORING LOCATION NO. 1 (SEE TMP-4.01 & 4.02)

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

DESIGN TEMPORARY SHORING FROM STATION 23+00 +/- -L-, 37 FT. RT. TO STATION 27+70 +/- -L-, 37 FT. RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 433 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 23+00 +/- -L-, 37 FT. RT. TO STATION 27+70 +/- -L-, 37 FT. RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 23+00 +/- -L-, 37 FT. RT. TO STATION 27+70 +/- -L-, 37 FT. RT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO. 2 (SEE TMP-5.01 & 5.02)

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

DESIGN TEMPORARY SHORING FROM STATION 170+00 +/- -L-, 7.5 FT. LT., TO STATION 174+00 +/- -L-, 7.0 FT. LT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 404 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 170+00 +/- -L-, 7.5 FT. LT., TO STATION 174+00 +/- -L-, 7.0 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 170+00 +/- -L-, 7.5 FT. LT., TO STATION 174+00 +/- -L-, 7.0 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. 3 (SEE TMP-5.01)

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

DESIGN TEMPORARY SHORING FROM STATION 170+50 +/- -L-, 7.7 FT. LT. TO STATION 171+65 +/- -L-, 6.6 FT. LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 404 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 170+50 +/- -L-, 7.7 FT. LT. TO STATION 171+65 +/- -L-, 6.6 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 170+50 +/- -L-, 7.7 FT. LT. TO STATION 171+65 +/- -L-, 6.6 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO. 4 (SEE TMP-6.12)

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

DESIGN TEMPORARY SHORING FROM STATION 186+00 +/- -L-, 5.4 FT. LT. TO STATION 194+00 +/- -L-, 3.4 FT. LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 402 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 186+00 +/- -L-, 5.4 FT. LT. TO STATION 194+00 +/- -L-, 3.4 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 186+00 +/- -L-, 5.4 FT. LT. TO STATION 194+00 +/- -L-, 3.4 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. 5 (SEE TMP-6.12)

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

DESIGN TEMPORARY SHORING FROM STATION 189+50 +/- -L-, 5.3 FT. LT., TO STATION 190+70 +/- -L-, 5.1 FT. LT., FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 402 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 189+50 +/- -L-, 5.3 FT. LT., TO STATION 190+70 +/- -L-, 5.1 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 189+50 +/- -L-, 5.3 FT. LT., TO STATION 190+70 +/- -L-, 5.1 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO. 6 (SEE TMP-6.13)

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

DESIGN TEMPORARY SHORING FROM STATION 203+00 +/- -L-, 0.4 FT. LT. TO STATION 210+00 +/- -L-, CENTERLINE, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 407 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 203+00 +/- -L-, 0.4 FT. LT. TO STATION 210+00 +/- -L-, CENTERLINE. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 203+00 +/- -L-, 0.4 FT. LT. TO STATION 210+00 +/- -L-, CENTERLINE. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING LOCATION NO. 7 (SEE TMP-6.13)

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

DESIGN TEMPORARY SHORING FROM STATION 205+00 +/- -L-, 1.3 FT. LT. TO STATION 206+00 +/- -L-, 0.8 FT. LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 407 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 205+00 +/- -L-, 1.3 FT. LT. TO STATION 206+00 +/- -L-, 0.8 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 205+00 +/- -L-, 1.3 FT. LT. TO STATION 206+00 +/- -L-, 0.8 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO. 8 (SEE TMP-6.13)

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

DESIGN TEMPORARY SHORING FROM STATION 205+00 +/- -L-, 1.3 FT. LT. TO STATION 206+00 +/- -L-, 0.8 FT. LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

- UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
- UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
- FRICTION ANGLE, $\phi = 30$
- COHESION, $c = 0$ PSF
- GROUNDWATER ELEVATION = 407 FT.

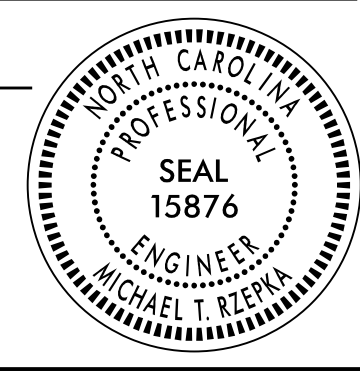

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 205+00 +/- -L-, 1.3 FT. LT. TO STATION 206+00 +/- -L-, 0.8 FT. LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 205+00 +/- -L-, 1.3 FT. LT. TO STATION 206+00 +/- -L-, 0.8 FT. LT. SEE GEOTECHNICAL STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 9-1-2021 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, PE, LICENSE #027869.

REVISIONS
PLOT DRIVER: NCD01.pdf_color_eng_50.ppt
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TIME: 10:44:51 AM
DATE: 5/4/2022

APPROVED: <i>Michael T. Rzepka</i> DATE: 7/12/2022 SEAL 		TEMPORARY SHORING DATA
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		