PROJ. REFERENCE NO.	SHEET NO.
B-3673	TMP-2A

Shoring Location No. 1

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

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION -L- 12+36±, 11.43 FT (LT), TO STATION -L- 12+96±, 10.94 FT (LT).

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 -L- 12+36±, 11.43 FT (LT), TO STATION -L- 12+96±, 10.94 FT (LT) FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 12+36±, 11.43 FT (LT), TO STATION -L- 12+96±, 10.94 FT (LT). THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -L- 12+36±, 11.43 FT (LT), TO STATION -L- 12+96±, 10.94 FT (LT) MAY NOT PENETRATE BELOW THE INVERT ELEVATION OF THE PIPE DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 12+36±, 11.43 FT (LT), TO STATION -L- 12+96±, 10.94 FT (LT). FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION. TEMPORARY SOIL NAIL WALL MAY BE USED PROVIDED THE MINIMUM CLEAR DISTANCES FROM THE PCB ARE MAINTAINED.

Shoring Location No. 2

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

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION -L- 19+15±, 19.9 FT (RT), TO STATION -L- 19+65±, 23.4 FT (RT).

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 -L- 19+15±, 19.9 FT (RT), TO STATION -L- 19+65±, 23.4 FT (RT) FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 19+15±, 19.9 FT (RT), TO STATION -L- 19+65±, 23.4 FT (RT). THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L- 19+15±, 19.9 FT (RT), TO STATION -L- 19+65±, 23.4 FT (RT) MAY NOT PENETRATE BELOW THE INVERT ELEVATION OF THE PIPE DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM -L- 19+15±, 19.9 FT (RT), TO STATION -L- 19+65±, 23.4 FT (RT). SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 19+15±, 19.9 FT (RT), TO STATION -L- 19+65±, 23.4 FT (RT). FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION. TEMPORARY SOIL NAIL WALL MAY BE USED PROVIDED THE MINIMUM CLEAR DISTANCES FROM THE PCB ARE MAINTAINED.

Shoring Location No. 3

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

TEMPORARY SHORING IS REQUIRED FOR THE PIPE INSTALLATION FROM STATION -L- 21+75±, 33.2 FT (RT), TO STATION -L- 22+18±, 34.9 FT (RT).

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 -L- 21+75±, 33.2 FT (RT), TO STATION -L- 22+18±, 34.9 FT (RT) FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 21+75±, 33.2 FT (RT), TO STATION -L- 22+18±, 34.9 FT (RT). THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L- 21+75±, 33.2 FT (RT), TO STATION -L- 22+18±, 34.9 FT (RT) MAY NOT PENETRATE BELOW THE INVERT ELEVATION OF THE PIPE DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 21+75±, 33.2 FT (RT), TO STATION -L- 22+18±, 34.9 FT (RT). FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION. TEMPORARY SOIL NAIL WALL MAY BE USED PROVIDED THE MINIMUM CLEAR DISTANCES FROM THE PCB ARE MAINTAINED.

Shoring Location No. 4

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

TEMPORARY SHORING IS REQUIRED FOR THE END BENT INSTALLATION FROM STATION -L- 26+60±, 27.7 FT (RT), TO STATION -L- 27+80±, 28.7 FT (RT).

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 -L- 26+60±, 27.7 FT (RT), TO STATION -L- 27+80±, 28.7 FT (RT) FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 26+60±, 27.7 FT (RT), TO STATION -L- 27+80±, 28.7 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 A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 26+60±, 27.7 FT (RT), TO STATION -L- 27+80±, 28.7 FT (RT). SEE STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

Shoring Location No. 5a

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

TEMPORARY SHORING IS REQUIRED FOR THE END BENT INSTALLATION FROM STATION -L- 30+50±, 31.1 FT (RT), TO STATION -L- 31+20±, 26.4 FT (RT).

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

DESIGN TEMPORARY -L- 30+50±, 31.1 FT (RT), TO STATION -L- 31+20±, 26.4 FT (RT) FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 30+50±, 31.1 FT (RT), TO STATION -L- 31+20±, 26.4 FT (RT). THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM -L- 30+50±, 31.1 FT (RT), TO STATION -L- 31+20±, 26.4 FT (RT) MAY NOT PENETRATE BELOW AN ELEVATION OF 1,147± DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -L- 30+50±, 31.1 FT (RT), TO STATION -L- 31+20±, 26.4 FT (RT). FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

Shoring Location No. 5b

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

TEMPORARY SHORING IS REQUIRED FOR THE END BENT INSTALLATION FROM STATION -L- 30+98±, 31.1 FT (RT), TO STATION -L- 32+50±, 26.4 FT (RT).

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

DESIGN TEMPORARY -L- 30+98±, 31.1 FT (RT), TO STATION -L- 32+50±, 26.4 FT (RT) FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ)= 30 DEGREES
COHESION (c) = 0 LB/SF

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION -L- 30+98±, 31.1 FT (RT), TO STATION -L- 32+50±, 26.4 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 A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- 30+98±, 31.1 FT (RT), TO STATION -L- 32+50±, 26.4 FT (RT). SEE STANDARD DETAIL NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

APPROVED: DocuSigned by: Michael Stephens B196315B3C7046C...

DATE: 1/16/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 028893 ENGINEER MICHAEL H. STEPHENS

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

TEMPORARY SHORING NOTES

1/15/2015
P:\TIPProjects-B\B3673\Traffic\TrafficControl\Turn_In_Docs\CADD_Files\B3673_TMP_2A.dgn
User:rmgarrett