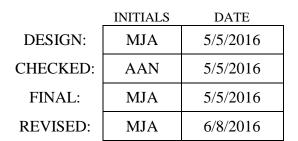
# FOUNDATION RECOMMENDATIONS

PROJECT: N/A DESCRIPTION: BRIDGE ON ACCESS ROAD (-L-)

TIP NO.: R-5769 OVER NORFOLK SOUTHERN RAILROAD

COUNTY: JOHNSTON OFF SR 1913 (GORDON ROAD)

STATION: 33+26.33 -L- CDocuSigned by:





	STATION	FOUNDATION TYPE	FACTORED RESISTANCE	MISCELLANEOUS DETAILS
END BENT	32+61.98 -L-	Cap on HP 14 x 117 Steel H-Piles	95 tons / pile	Bottom of Cap Elevation = $314.2 \pm ft$ Estimated Average Pile Length = $85 \pm ft$ Number of Piles = $8$ Pile Spacing = $5$ '- 1"
END BENT 2	33+75.48 -L-	Cap on HP 14 x 117 Steel H-Piles	95 tons / pile	Bottom of Cap Elevation = 313.9 ± ft  LEFT Estimated Average Pile Length = 70 ± ft  RIGHT Estimated Average Pile Length = 75 ± ft  Number of Piles = 8  Pile Spacing = 5'-1"

<u>COMMENTS & NOTES</u> (See Following Page)

#### FOUNDATION RECOMMENDATION NOTE ON PLANS AND COMMENTS

PROJECT: N/A TIP: R-5769 COUNTY: JOHNSTON

DESCRIPTION: BRIDGE ON ACCESS ROAD (-L-) OVER NORFOLK SOUTHERN RAILROAD

#### **NOTE ON PLANS:**

- 1. FOR PILES, SEE GEOTECHNICAL SPECIAL PROVISIONS AND SECTION 450 OF THE STANDARD SPECIFICATIONS.
- 2. PILES AT END BENTS NO. 1 AND 2 ARE DESIGNED FOR A FACTORED RESISTANCE OF 95 TONS PER PILE.
- 3. DRIVE PILES AT END BENT NO. 1 TO A REQUIRED DRIVING RESISTANCE OF 395 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR DOWNDRAG.
- 4. DRIVE PILES AT END BENT NO. 2 TO A REQUIRED DRIVING RESISTANCE OF 295 TONS PER PILE. THIS REQUIRED DRIVING RESISTANCE INCLUDES ADDITIONAL RESISTANCE FOR DOWNDRAG.
- 5. IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 55,000 TO 120,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO. 1. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.
- 6. IT HAS BEEN ESTIMATED THAT A HAMMER WITH AN EQUIVALENT RATED ENERGY IN THE RANGE OF 35,000 TO 80,000 FT-LBS PER BLOW WILL BE REQUIRED TO DRIVE PILES AT END BENT NO. 2. THIS ESTIMATED ENERGY RANGE DOES NOT RELEASE THE CONTRACTOR FROM PROVIDING DRIVING EQUIPMENT IN ACCORDANCE WITH SUBARTICLE 450-3(D)(2) OF THE STANDARD SPECIFICATIONS.
- 7. TESTING THE FIRST PRODUCTION OR TEST PILES WITH THE PDA DURING DRIVING, RESTRIKING OR REDRIVING IS REQUIRED FOR BOTH END BENTS NO. 1 AND 2. FOR PDA TESTING, SEE SECTION 450 OF THE STANDARD SPECIFICATIONS.

#### **SPECIAL NOTE ON PLANS:**

- 1. PILES AT END BENTS NO. 1 AND 2 ARE TO BE DRIVEN BEFORE THE CONSTRUCTION OF THE MSE WALL.
- 2. PILES AT END BENTS NO. 1 AND 2 ARE TO BE SLEEVED IN THE MSE WALL REINFORCED BACKFILL ZONE. SEE MSE WALL PLANS.

#### **COMMENTS:**

- 1. A WAITING PERIOD IS NOT REQUIRED PRIOR TO THE CONSTRUCTION OF END BENTS 1 AND 2.
- 2. ALL PILES AT END BENTS 1 AND 2 AND BENTS 1 AND 2 SHOULD BE DRIVEN VERTICAL.
- 3. THE FACTORED AXIAL LOAD FOR END BENTS NO. 1 AND 2 IS 93.6 TONS PER PILE (OPTION 4 LOADS).

## **PILE PAY ITEMS**

(Revised 8/11/15)

WBS ELEMENT_	N/A	_ DATE	6/8/2016
TIP NO.	R-5769	DESIGNED BY	MJA
COUNTY	JOHNSTON	CHECKED BY	AAN
STATION	33+26.33 -L-	_	
DESCRIPTION_	BRIDGE ON ACCESS ROAD (-L.	– -) OVER NORFOLK SOUTHEI 913 (GORDON ROAD)	RN
NUMI NUMBER OF	R OF BENTS WITH PILES BER OF PILES PER BENT END BENTS WITH PILES OF PILES PER END BENT	Only required for "Predrilling for Piles" & "Pile Excavation" pay items	

	PILE PAY ITEM QUANTITIES							
	Steel				Pile Excavation			
	Pile	Pipe Pile	Predrilling	Pile	(per linear ft)		PDA	
Bent # or	Points	Plates	For Piles	Redrives	In	Not In	Testing	
End Bent #	(yes/no)	(yes/no/maybe)	(per linear ft)	(per each)	Soil	Soil	(per each)	
END BENT 1	NO	NO	NO	8	0	0	\ /	
END BENT 2	NO	NO	NO	8	0	0	$  \setminus  $	
							\	
TOTALS	$>\!\!<$	$ \bigvee $	0	16	0	0	2	

### Notes:

Blanks or "no" represent quantity of zero.

If steel pile points are required, calculate quantity of "Steel Pile Points" as equal to the number of steel piles.

If pipe pile plates are or may be required, calculate the quantity of "Pipe Pile Plates" as equal to the number of pipe piles.

Show quantity of "PDA Testing" on the plans as total only.