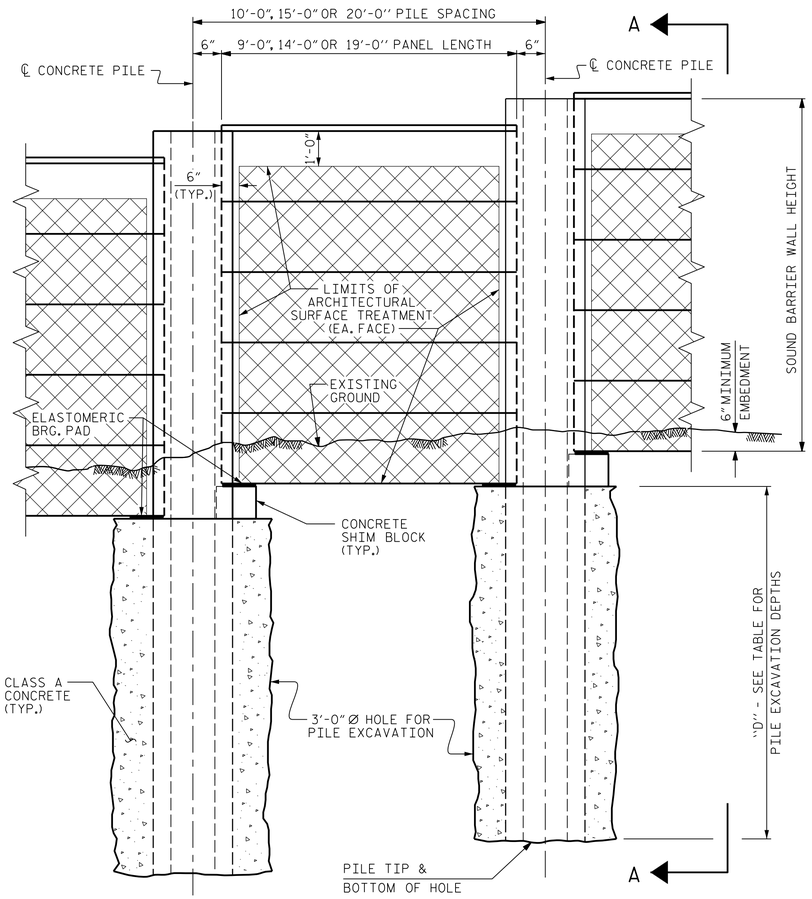
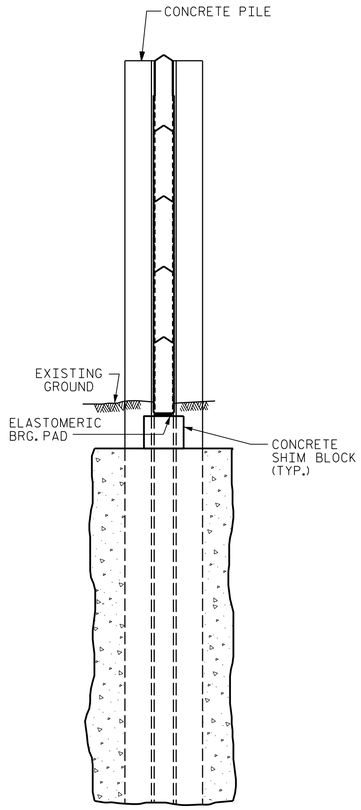


ELEVATION



SECTION A-A

PILE EXCAVATION DEPTHS ″D″

WALL -NW11- FROM : STA. 10+00.00 -NW11-
TO : STA. 23+20.00 -NW11-

	PILE SPACING	WALL HEIGHT		
		H ≤ 15′	15′ < H ≤ 20′	20′ < H ≤ 25′
3′-0″ Ø HOLE	10′-0″	10′-0″	12′-0″	13′-0″
	15′-0″	11′-0″	13′-0″	16′-0″
	20′-0″	12′-0″	15′-0″	18′-0″

THE STANDARD SOUND BARRIER WALL FOUNDATION TABLES ARE BASED ON 36″ DIA. HOLES. FOR 30″ DIA. HOLES, ADD 1 FT TO PILE EXCAVATION DEPTHS (D).

NOTES

FOR SOUND BARRIER WALL, SEE SPECIAL PROVISIONS.

CONSTRUCT SOUND BARRIER WALL TO LINES AND GRADES SHOWN ON THE ROADWAY PLANS.

PROVIDE PANELS WITH A FLAT BOTTOM.

VERIFY THE LOCATION OF UNDERGROUND UTILITIES BEFORE DRILLING HOLES TO ENSURE SUFFICIENT CLEARANCE IS AVAILABLE.

ADJUST PILE EXCAVATION ELEVATIONS TO MAINTAIN 6″ MINIMUM EMBEDMENT OF THE BOTTOM PANEL.

USE CLASS AA FOR PANELS AND CLASS A CONCRETE PILE EXCAVATION BACKFILL, IN ACCORDANCE WITH ARTICLE 1000-4 OF THE STANDARD SPECIFICATIONS.

AT THE CONTRACTOR'S OPTION, USE 10′-0″, 15′-0″, OR 20′-0″ PILE SPACINGS. STANDARD PRECAST CONCRETE PANELS MAY BE USED WITH THE 10′-0″ AND 15′-0″ PILE SPACING. FOR 20′-0″ PILE SPACING, PANELS DESIGNED AND MANUFACTURED BY A THIRD PARTY VENDER SHALL BE USED.

FOR SOUND BARRIER WALL STATIONS, OFFSETS, AND WALL ENVELOPE, SEE ROADWAY PLANS.

PLACE 1″ Ø BACKER RODS FULL HEIGHT ON EACH SIDE OF THE PRECAST PANELS. SET AND SEAL THE BACKER ROD IN PLACE WITH SEALANT THAT CONFORMS WITH ARTICLE 1028-3 OF THE STANDARD SPECIFICATIONS.

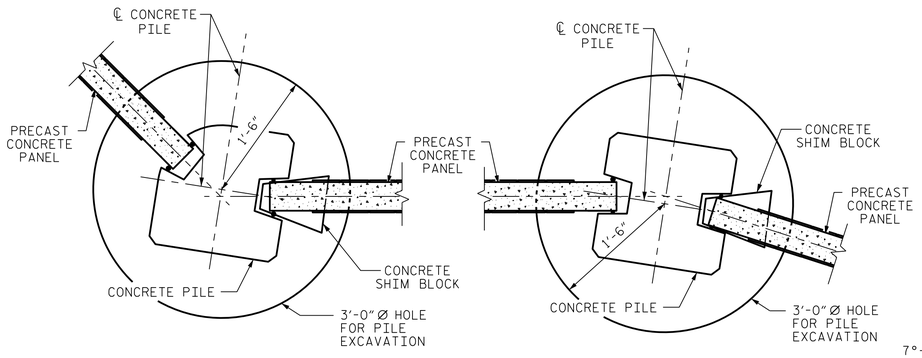
FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

PILE REINFORCING STEEL
DESIGN WIND PRESSURE = 40 PSF

PILE TYPE I				PILE TYPE III			
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES
10′-0″	H ≤ 25′	4 - #8 EA. FACE	#3 @ 1′-4″CTS.	10′-0″	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1′-4″CTS.
15′-0″	H ≤ 20′	4 - #8 EA. FACE	#3 @ 1′-4″CTS.	15′-0″	H ≤ 20′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1′-4″CTS.
	20′< H ≤ 25′	4 - #10 EA. FACE	#3 @ 1′-4″CTS.		20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 1′-4″CTS.
20′-0″	H ≤ 20′	4 - #9 EA. FACE	#3 @ 1′-4″CTS.	20′-0″	H ≤ 20′	3 - #10 SHORT FACE 4 - #10 LONG FACE	#3 @ 1′-4″CTS.
	20′< H ≤ 25′	4 - #11 EA. FACE	#3 @ 1′-4″CTS.				

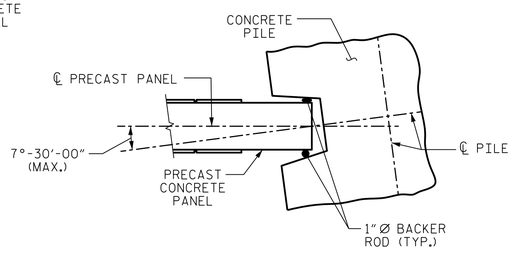
PILE TYPE II				PILE TYPE III ALT.			
PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES	PILE SPACING	MAXIMUM WALL HEIGHT (H)	VERTICAL REINFORCING STEEL	TIES
10′-0″	H ≤ 25′	4 - #6 EA. FACE	#3 @ 1′-4″CTS.	10′-0″	H ≤ 25′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1′-4″CTS.
15′-0″	H ≤ 20′	4 - #6 EA. FACE	#3 @ 1′-4″CTS.	15′-0″	H ≤ 20′	3 - #9 SHORT FACE 4 - #9 LONG FACE	#3 @ 1′-4″CTS.
	20′< H ≤ 25′	4 - #7 EA. FACE	#3 @ 1′-4″CTS.		20′< H ≤ 25′	3 - #11 SHORT FACE 4 - #11 LONG FACE	#3 @ 1′-4″CTS.
20′-0″	H ≤ 20′	4 - #6 EA. FACE	#3 @ 1′-4″CTS.	20′-0″	H ≤ 20′	3 - #10 SHORT FACE 4 - #10 LONG FACE	#3 @ 1′-4″CTS.
	20′< H ≤ 25′	4 - #8 EA. FACE	#3 @ 1′-4″CTS.				



15° TO 45° TURNS
(PILE TYPE III)

0° TO 15° TURNS
(PILE TYPE I)

TYPICAL WALL TURN DETAILS



PILE ROTATION LIMIT FOR WALL TURN

(ROTATE THE CONCRETE PILE ±7°-30′-00″ TO ACCOMMODATE WALL TURN.)

BILL OF MATERIAL

SOUND BARRIER WALL	18,303 S.F.
ARCHITECTURAL SURFACE TREATMENT	29,462 S.F.
QUANTITIES PROVIDED ARE APPROXIMATE AND ARE FOR BID PURPOSES ONLY.	
ARCHITECTURAL SURFACE TREATMENT	
TEXTURE OPTION:	DRY STACK STONE FORMLINER
STAIN OPTION:	DARK GRAY (FS 26008)

PROJECT NO. R-2233BB
RUTHERFORD COUNTY
STATION: 860+65.54 -L3- = 10+00 -NW11-
SHEET 4 OF 8

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
SOUND BARRIER WALL
No. -NW11-

DESIGNED BY:	C. CORMAN	DATE :	APR 2020
DRAWN BY:	K. WHITE	DATE :	APR 2020
CHECKED BY:	M. NIFONG	DATE :	APR 2020
DESIGN ENGINEER OF RECORD:	J. DOUGHTY	DATE :	APR 2020

DRAWN BY : MAA 6/11
CHECKED BY : GM 6/11

REV. 9/26/14	MAA/TMG
REV. 10/17	MAA/THC
REV. 5/18	MAA/THC

MODJESKI and MASTERS
333 FAYETTEVILLE STREET, SUITE 500
RALEIGH, NC 27601
NC LICENSE NO. C-2979

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 032967 ENGINEER JASON R. DOUGHTY
7/24/2020
DocuSigned by: Jason R Doughty
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SW-4
1			3			TOTAL SHEETS
2			4			8

STD. NO. SBW1

4/24/2020
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