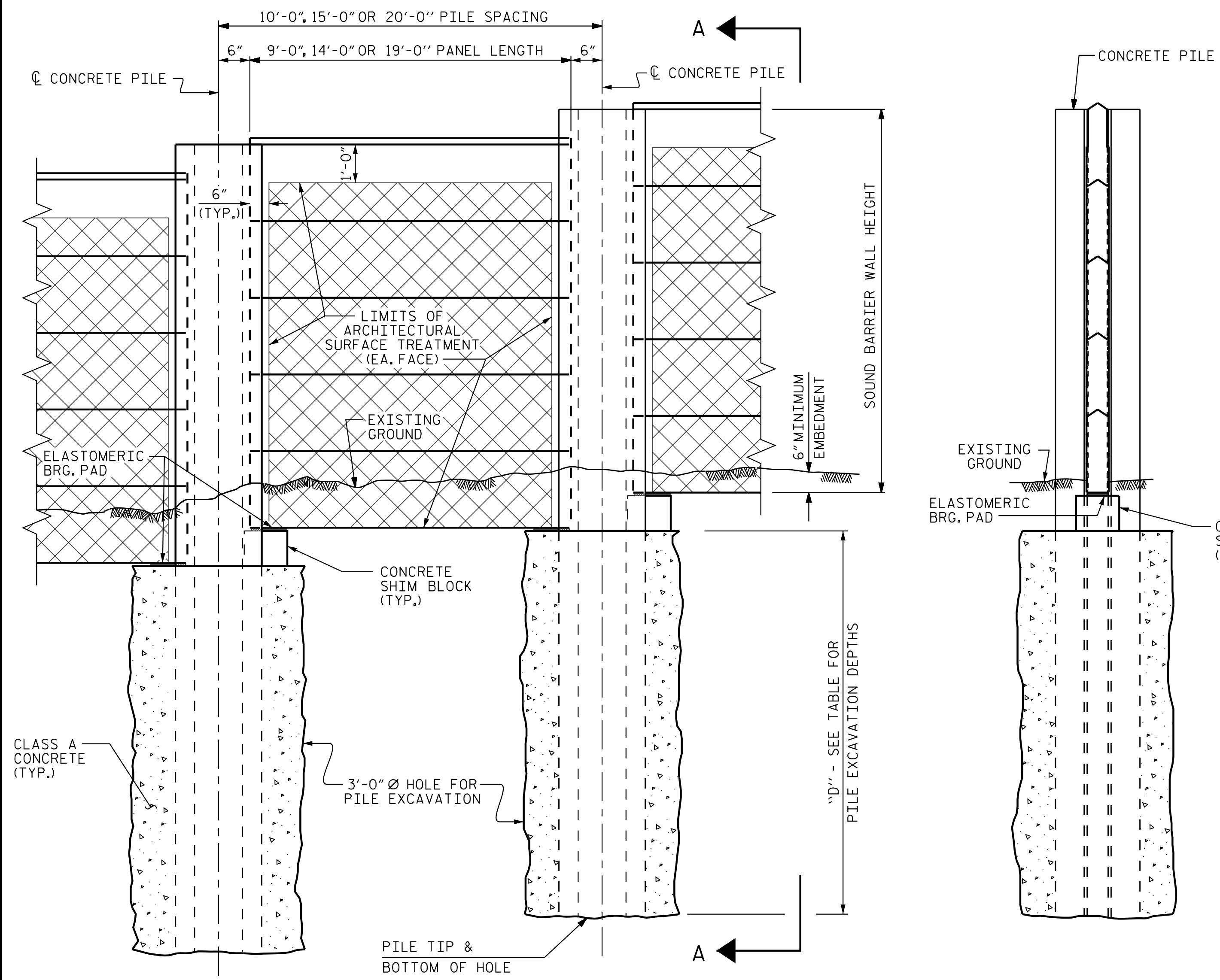


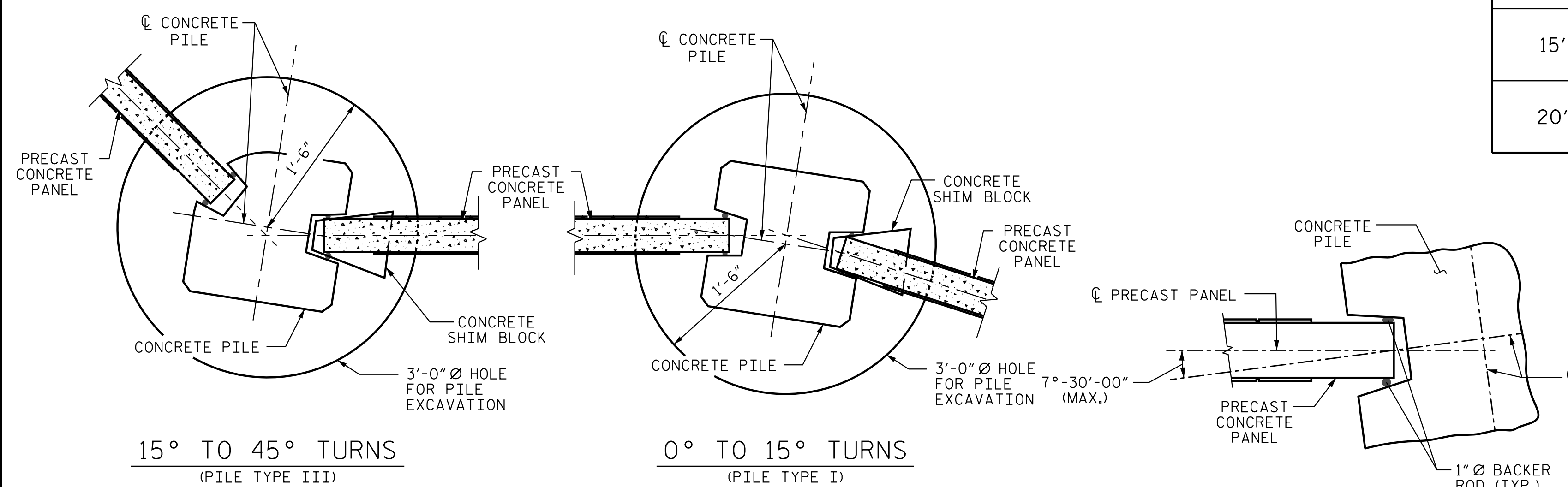
5/14/2023 5:04:03 PM jgelle

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ELEVATION

SECTION A-A



TYPICAL WALL TURN DETAILS

PILE ROTATION LIMIT FOR WALL TURN

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

DRAWN BY :	MAA	6/11	REV. 9/26/14	MAA/TMG
CHECKED BY :	GM	6/11	REV. 10/17	MAA/THC
			REV. 5/18	MAA/THC

PILE EXCAVATION DEPTHS "D"

WALL NW2		FROM : STA. 10+00.00 = -L- STA 42+50.63 (63.08' LT)		TO : STA. 20+04.75 = -L- STA. 53+00.00 (55.50' LT)		EXCAVATION DEPTHS		
3'-0" Ø HOLE	-NW2- BEGIN STA.	-NW2- END STA.	MAX. FRONT SLOPE	WALL HEIGHT (FT)	S = 10FT	S = 15FT	S = 20FT	
		10+00	12+25	6:1	7	8	9	10
	12+25	12+85	3:1	8	8	10	11	
	12+85	13+00	3:1	9	9	12	11	
	13+00	14+65	2:1	10-11	10	12	13	
	14+65	14+95	2:1	12	11	12	13	
	14+95	15+10	2:1	11	10	12	13	
	15+10	15+55	2:1	12	11	12	13	
	15+55	17+35	2:1	13	11	12	14	
	17+35	17+95	3:1	12	9	10	12	
	17+95	18+40	4:1	11	9	10	11	
	18+40	20+05	NONE	10-11	8	9	10	

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.				

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 VENDOR 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.

BILL OF MATERIAL

SOUND BARRIER WALL	10,365 S.F.
ARCHITECTURAL SURFACE TREATMENT	16,224 S.F.
QUANTITIES PROVIDED ARE APPROXIMATE AND ARE FOR BID PURPOSES ONLY.	
ARCHITECTURAL SURFACE TREATMENT	
TEXTURE OPTION:	ASHLAR STONE
STAIN OPTION:	NONE

PROJECT NO. R-3833C
IREDELL COUNTY
STATION: 42+50.63 -L-

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
SOUND BARRIER WALL
-NW2-

DRAWN BY : J. B. GETILE DATE : 05/11/2021
CHECKED BY : M. B. ISENHOUR DATE : 11/10/2021
DESIGN ENGINEER OF RECORD : M. B. ISENHOUR DATE : 05/04/23



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO. NW2-1
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 3
2			4			