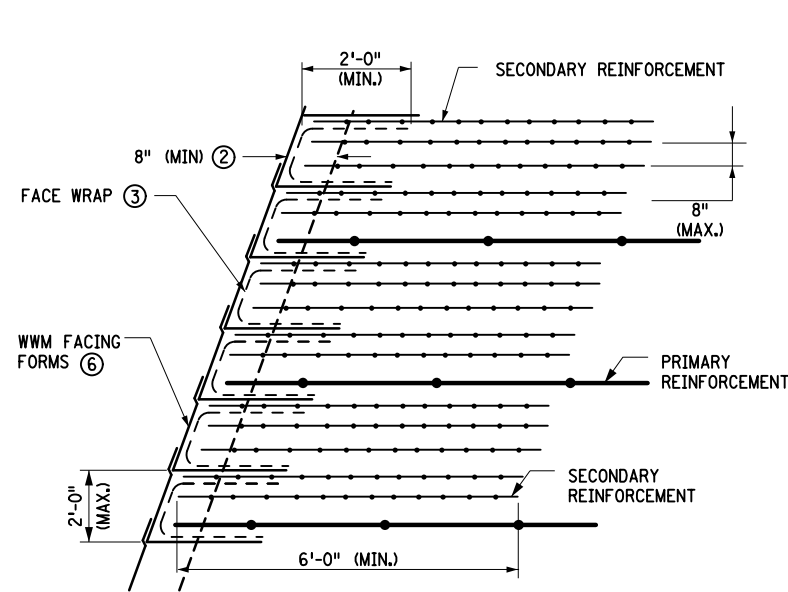
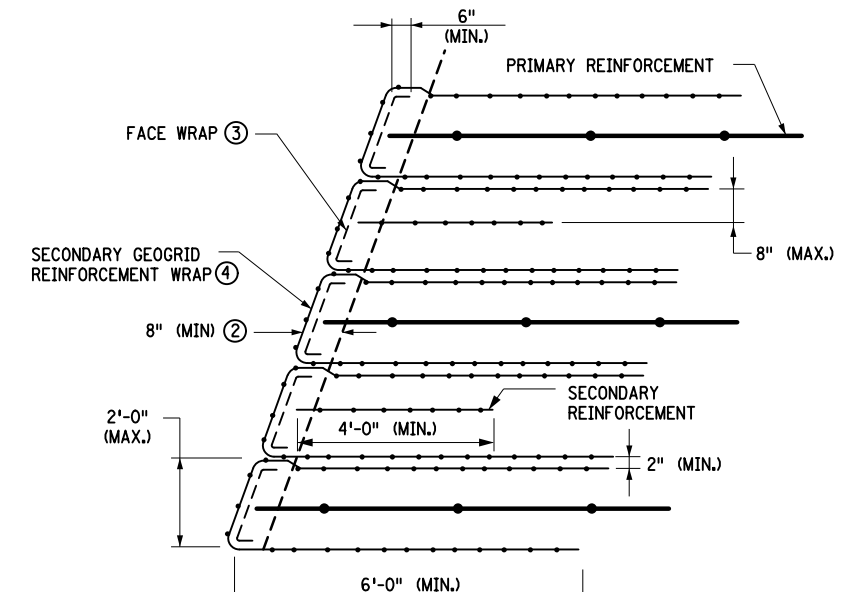


REINFORCED SOIL SLOPE										
CASE 2 - 70° MAXIMUM SLOPE ANGLE, STRUCTURAL BACKFILL (SPEC. 3149.2D2) REINFORCED SOIL FILL										
MAX. SLOPE ANGLE (DEGREES)	REINFORCED SOIL FILL FRICTION ANGLE (DEGREES)	MINIMUM PRIMARY REINFORCEMENT LENGTH, L (FT)	PRIMARY SOIL REINFORCEMENT ⑦		MAXIMUM SLOPE HEIGHT H (FT)		ZONE 1 ⑦		ZONE 2 ⑦	
			RSS CLASS	LONG TERM STRENGTH (T_{cl}) (PLF)	H1	H2	S1 _{MAX} (IN)	H2 (FT)	S2 _{MAX} (IN)	S2 _{MAX} (IN)
70	34	1.0 H	1050	1050	21.3	13.1	40	8.2	20	
					23.6	23.6	24	-	-	
			1400	1400	26.2	18.0	40	8.2	20	
					26.2	13.8	48	12.4	24	

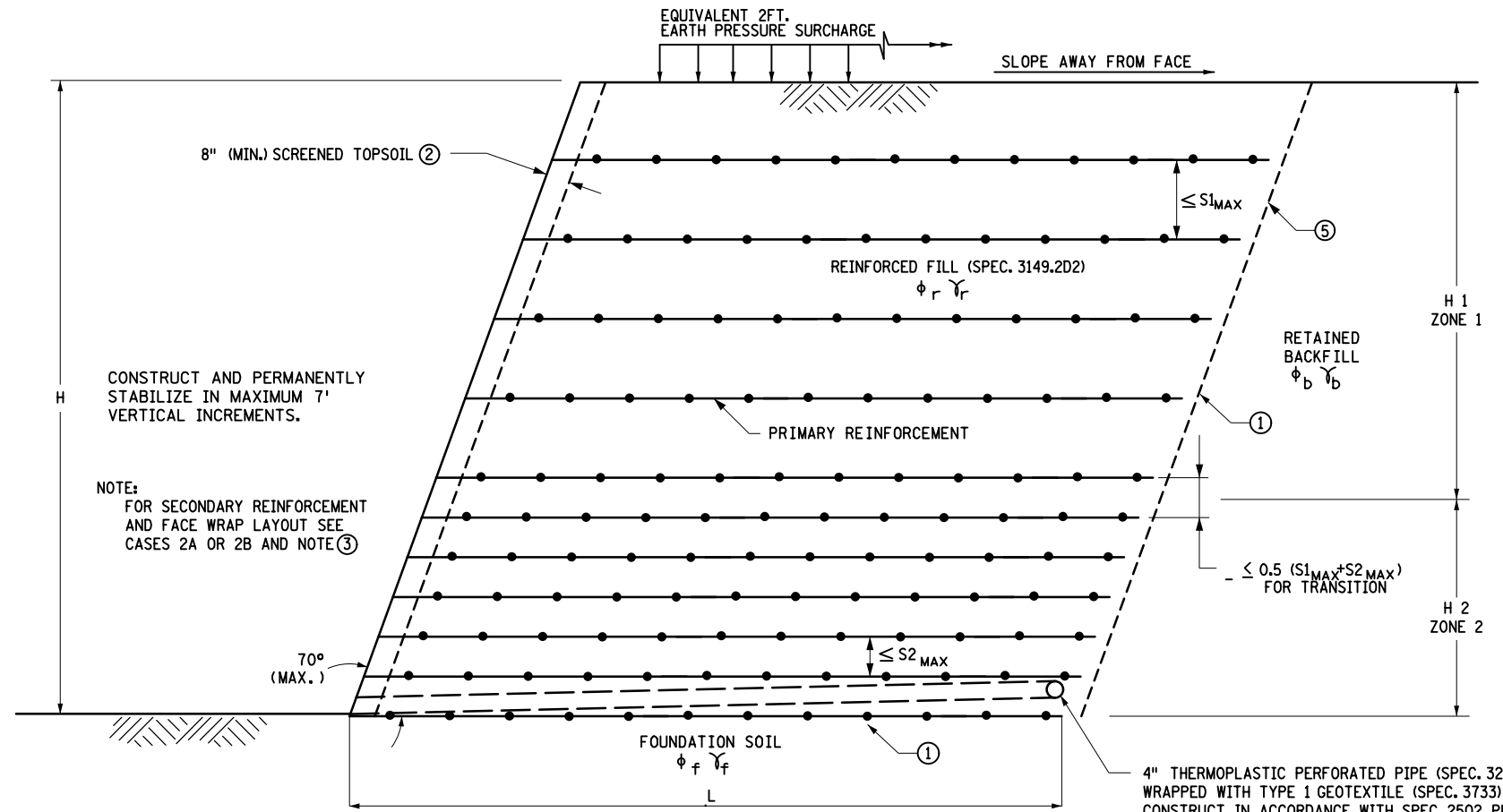
NOTES:
 SECONDARY REINFORCEMENT SHALL BE ON THE ON THE APPROVED SECONDARY REINFORCEMENT LIST ⑦.



CASE 2A - 70° SLOPE - WELDED WIRE MESH (WWM) FACE FORM



CASE 2B - 70° SLOPE - WRAPPED FACE



TYPICAL SECTION CASE 2

4" THERMOPLASTIC PERFORATED PIPE (SPEC. 3245), WRAPPED WITH TYPE 1 GEOTEXTILE (SPEC. 3733) (TYP.), CONSTRUCT IN ACCORDANCE WITH SPEC. 2502. PLACE RODENT SCREEN ON END OF PIPE. SCREEN SHALL BE FABRICATED FROM CARBON STEEL FLATTENED EXPANDED METAL, STYLE 1/2" NO. 4F. IT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. PLACE DRAIN PIPE WITHIN REINFORCED FILL AT THE INTERFACE OF THE RETAINED BACKFILL AND THE FOUNDATION SOIL AND RUN ENTIRE LENGTH OF REINFORCED SOIL SLOPE. OUTLET THROUGH SLOPE FACE OR TO STORM SEWER OUTLET AT LEAST EVERY 150 FT. OF REINFORCED SOIL SLOPE. DO NOT OUTLET ONTO SIDEWALK, ROADWAY OR CURB.

- NOTES:
- SEE STANDARD PLAN 5-297.646 FOR STORMWATER MANAGEMENT AND VEGETATION ESTABLISHMENT NOTES.
 - ① OBSERVE EXCAVATION SLOPES FOR ACTIVE SEEPAGE AND PLACE ADDITIONAL AND/OR LARGER DRAINS WHERE SEEPAGE OCCURS. DRAINS SHALL OUTLET SLOPE EVERY 150 FT. MAX.
 - ② 8 INCHES OF SANDY CLAY LOAM TOPSOIL BORROW SHALL BE PLACED AT THE FACE WITH A SEED AND FERTILIZER MIX, SPECIFIED BY PROJECT DESIGNER. PROJECT DESIGNER SHALL DEVELOP SITE SPECIFIC SEED AND FERTILIZER FOR HIGHLY SHADED AREAS, HIGHLY VISIBLE URBAN APPLICATIONS OR IN SENSITIVE AREAS.
 - ③ PROJECT DESIGNER SHALL DESIGNATE WHETHER A DEGRADABLE SPEC. 3885 CATEGORY 35 CAN BE USED AS THE FACE WRAP. OTHERWISE, THE FACE WRAP SHALL BE EITHER A NON-DEGRADABLE SPEC. 3885 CATEGORY 72 INFILLED WITH SPEC. 3884 REINFORCED FIBER MATRIX (TRM) OR A NON-DEGRADABLE GEOSYNTHETIC MESH WITH OPENINGS RANGING FROM 0.1 TO 0.2 INCHES. EITHER NON-DEGRADABLE PRODUCT SHALL BE STABILIZED FOR LONG-TERM ULTRAVIOLET LIGHT EXPOSURE. DOCUMENTATION SHALL BE PROVIDED BY THE MANUFACTURER. IF THE FACE WRAP PRODUCT IS ON THE APPROVED SECONDARY REINFORCEMENT LIST, THEN THIS ONE PRODUCT CAN BE USED TO SATISFY BOTH FACE WRAP AND SECONDARY REINFORCEMENT REQUIREMENTS FOR CASE 2 - 70° - SLOPE - WRAPPED FACE.
 - ④ SECONDARY REINFORCEMENT, IF USED TO WRAP THE FACE, SHALL BE STABILIZED FOR LONG-TERM ULTRAVIOLET LIGHT EXPOSURE. DOCUMENTATION SHALL BE PROVIDED BY THE MANUFACTURER.
 - ⑤ PAY LIMITS OF EXCAVATION FOR REINFORCED FILL EQUAL TO ANGLE OF SLOPE FACE, 70° MAXIMUM. ACTUAL EXCAVATION SLOPE SHALL BE DETERMINED BY OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS AND IN-SITU SOILS; EXCAVATION BEYOND LIMITS OF REINFORCED FILL AT CONTRACTOR'S EXPENSE.
 - ⑥ PROJECT DESIGNER SHALL DESIGNATE WHETHER CASE 2A - WELDED WIRE MESH (WWM) FACE FORM OR CASE 2B WRAPPED FACE SHALL BE USED. WWM FACE FORM AND STRUTS SHALL BE APPROVED BY THE ENGINEER. GALVANIZED WELDED WIRE MESH FACE FORM AND GALVANIZED STRUTS ARE NOT REQUIRED UNLESS SPECIFIED BY PROJECT DESIGNER.
 - ⑦ PRIMARY SOIL REINFORCEMENT RSS CLASS 700, 1050 AND 1400 AND SECONDARY REINFORCEMENT ARE FOUND ON MnDOT'S APPROVED/QUALIFIED PRODUCTS LIST CURRENTLY AT <https://www.dot.state.mn.us> ZONE 1 AND ZONE 2 ONLY APPLY TO PRIMARY REINFORCEMENT.

LEAD EXPERT OFFICE	AMBER BLANCHARD ACTING DIRECTOR OFFICE OF MATERIALS & ROAD RESEARCH	REINFORCED SOIL SLOPE (70° MAXIMUM SLOPE)	APPROVED: 03-29-2023 REVISED:	THOMAS STYRBICKI STATE DESIGN ENGINEER	STANDARD PLAN 5-297.648	1 OF 1
		STANDARD PLAN		STATE PROJ. NO.	SHEET NO.	
				TRUNK HWY.	TOTAL SHEETS	