

FIGURE 1: EXAMPLE AIRCRAFT W/ SUBGRADE CROSS SECTION

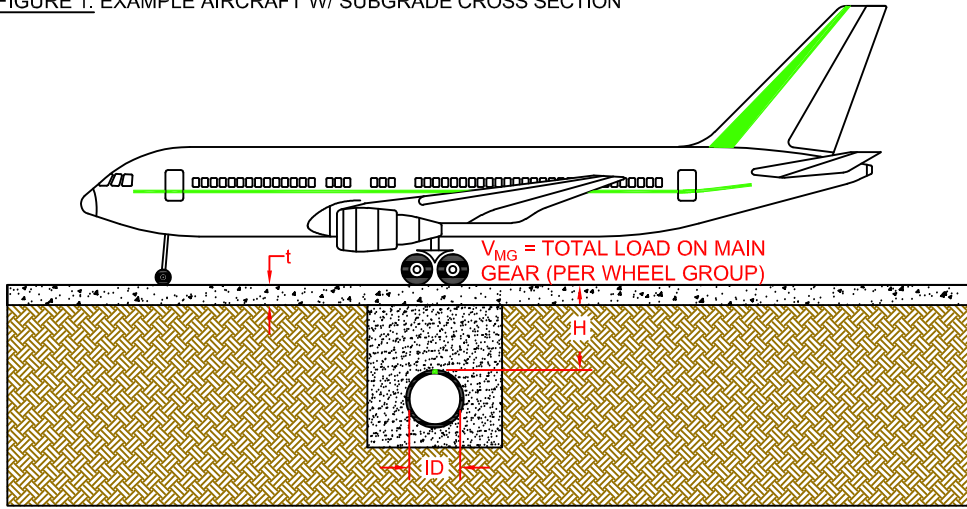


FIGURE 2A:
BOEING 737 LANDING GEAR
(1X2 WHEEL GROUP)

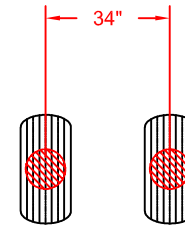


FIGURE 2B:
BOEING 757 LANDING GEAR
(2X2 WHEEL GROUP)

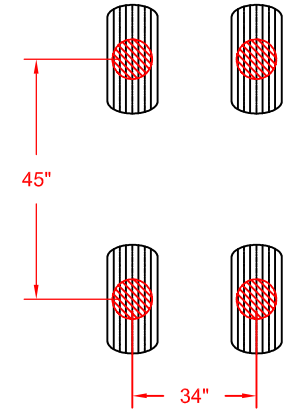


TABLE 1

MIN RECOMMENDED COVER (H) FOR TYPICAL AIRCRAFT LOADING	
INSIDE DIAMETER (ID)	COVER (H)
4"- 36" (100mm-900mm)	24" (610mm)
42"-60" (1050mm-1500mm)	36" (914mm)

NOTES:

1. THIS DETAIL IS INTENDED TO PRESENT MAX LOADS ABLE TO BE APPLIED TO LANDING GEAR CONFIGURATIONS AT MINIMUM ALLOWABLE COVER. ALTERNATE GEAR CONFIGURATIONS NOT ADDRESSED WITHIN MAY REQUIRE ADDITIONAL COVER. PLEASE CONTACT YOUR LOCAL ADS REPRESENTATIVE FOR GEAR CONFIGURATIONS NOT COVERED BY THE SCENARIOS ON THIS DETAIL.
2. SUITABLE BACKFILL MATERIAL SHALL BE CLASS I COMPACTED OR CLASS II AT 95% SPD PER ASTM D2321. REFER TO ADS STANDARD DETAIL STD-101H FOR RECOMMENDED INSTALLATION PRACTICES.
3. CALCULATIONS ASSUME A MODULUS OF SUBGRADE REACTION OF 300PSI/IN BELOW THE PAVEMENT LAYER, WITH A MINIMUM COVER REFLECTED IN TABLE 1 & BACKFILL MATERIAL REFLECTED IN NOTE 2.
4. MINIMUM COVER & ASSOCIATED LOAD LIMITS IN THIS DETAIL ARE BASED ON PRODUCT STRUCTURAL CAPACITY PER AASHTO LRFD. THESE RECOMMENDATIONS DO NOT INCLUDE ASSESSMENT OF THE OVERLYING PAVEMENT LAYER.
5. DIFFERENT PAVEMENT TYPES ARE REFERENCED IN TABLES 2A & 2B. RIGID PAVEMENT CAN BE CONSIDERED A PORTLAND CEMENT CONCRETE OR ANY OTHER MATERIAL RESISTANT TO FLEXURE. HMA REFERS TO HOT-MIX ASPHALT, WHICH IS COMMONLY RECOGNIZED AS A FLEXIBLE PAVEMENT.

TABLE 2A

PAVEMENT (t)	MAX LOAD (V_{MG}) WITH MIN COVER FOR 1X2 WHEEL GROUP - lb(kg)			
	4"-36" Nominal ID		42"-60" Nominal ID*	
BACKFILL TYPE	CLASS II AT 95% SPD	CLASS I COMPACTED	CLASS II AT 95% SPD	CLASS I COMPACTED
4" RIGID	72,100 (32,704)	122,900 (55,746)	80,300 (36,423)	160,600 (72,846)
8" RIGID	139,700 (63,366)	238,000 (107,954)	133,900 (60,736)	262,600 (119,113)
12" RIGID	225,200 (102,149)	383,600 (173,998)	205,500 (93,213)	398,100 (180,575)
12" FLEXIBLE	159,100 (72,166)	271,000 (122,923)	148,400 (67,313)	290,100 (131,587)
16" FLEXIBLE	224,800 (101,967)	382,800 (173,635)	203,900 (92,487)	395,200 (179,259)

TABLE 2B

PAVEMENT (t)	MAX LOAD (V_{MG}) WITH MIN COVER FOR 2X2 WHEEL GROUP - lb(kg)			
	4"-36" Nominal ID		42"-60" Nominal ID*	
BACKFILL TYPE	CLASS II AT 95% SPD	CLASS I COMPACTED	CLASS II AT 95% SPD	CLASS I COMPACTED
4" RIGID	104,500 (47,400)	178,100 (80,784)	103,700 (47,037)	203,700 (92,396)
8" RIGID	167,300 (75,886)	285,000 (129,273)	156,200 (70,851)	304,000 (137,892)
12" RIGID	252,000 (114,305)	429,200 (194,681)	227,100 (103,010)	438,500 (198,900)
12" FLEXIBLE	186,400 (84,549)	317,500 (144,015)	170,400 (77,292)	331,500 (150,365)
16" FLEXIBLE	251,900 (114,259)	429,000 (194,591)	225,700 (102,375)	435,700 (197,630)

*60" DIAMETER PIPE REQUIRES CLASS I COMPACTED BACKFILL

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REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D

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**MIN COVER FOR AIRCRAFT LOADS
(N-12)**

DRAWING NUMBER: STD-111H



4640 TRUEMAN BLVD
HILLIARD, OHIO 43026

DRAWN BY:	GCC
DATE:	01-02-2025
CHK'D BY:	RKC
SCALE:	NTS
SHEET:	1 OF 1