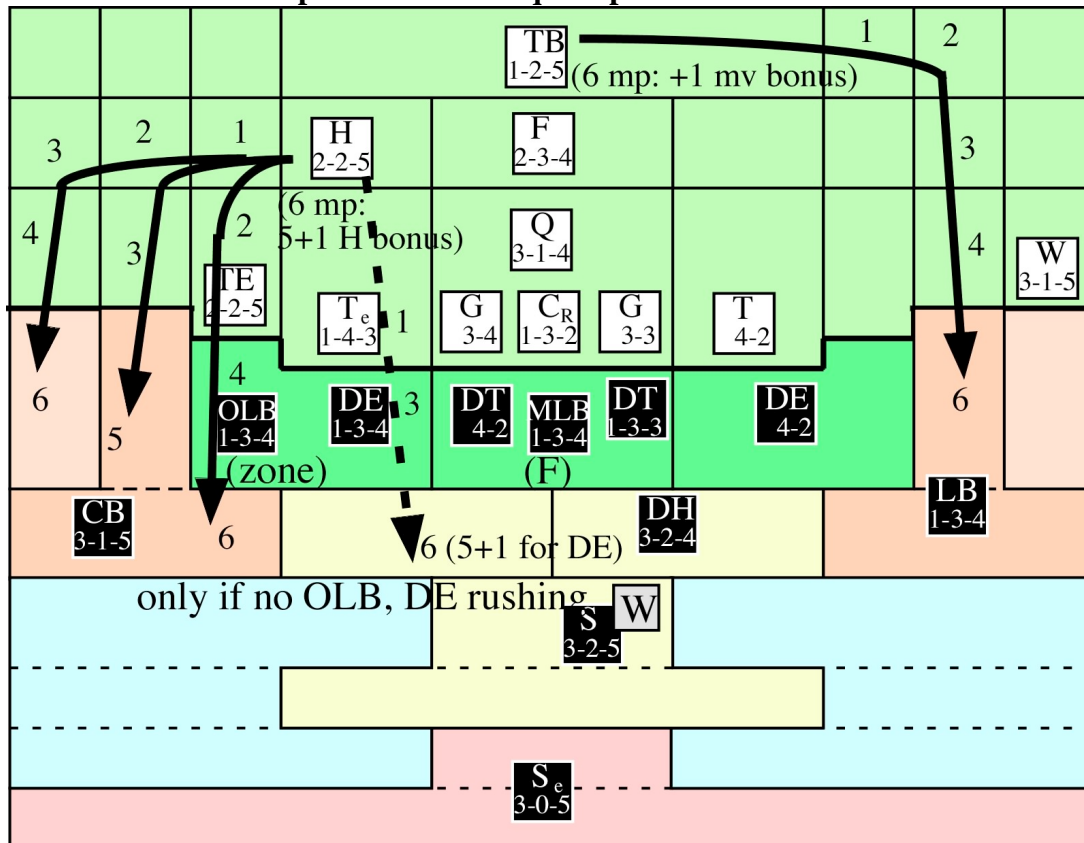


Appendix C Examples of Play

C.1 Offensive Movement Examples for pass plays

Pass movement example 1: H and TB quick pass routes

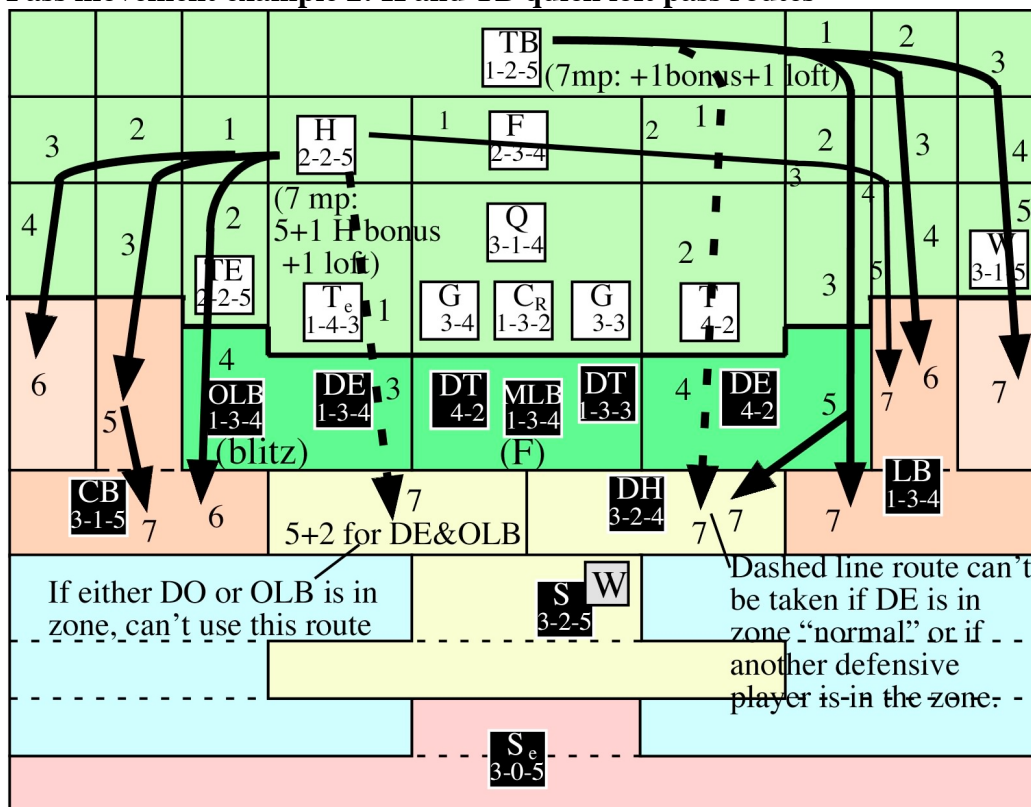


This figure shows legal qk H pass patterns: (H gets +1 speed bonus); Quick, so movement = $(5 + 1(H))/2 = 3$. But, instead, as described in 4.7.1 (2nd paragraph) count it as 1,2,3,4,6 (1 for each offensive zone, 2 for defensive zone).

(A B 2-1-6 could run same patterns, a H 2-2-4 could run these patterns if the pass is a loft. A H 2-2-4 or B 2-2-5 RH could only reach WR) If the OLB is m-m on H, he may not be able to get to RS (due to bump) That would be particularly bad, since the CB is waiting to intercept it.

The only legal qk TB route (for x-x-5 TB) non-loft is shown.

Pass movement example 2: H and TB quick loft pass routes



This figure shows legal qk loft pass patterns: (A specialized H gets +1, loft gets +1, so movement points = $(5 + 1(H) + 1(\text{loft})) = 7$. (Yes, speed is halved, but we get that by counting 1 for each offensive zone, 2 for each defensive zone.) A TB gets the benefit as a H. A B 1-2-6 could run the same patterns.

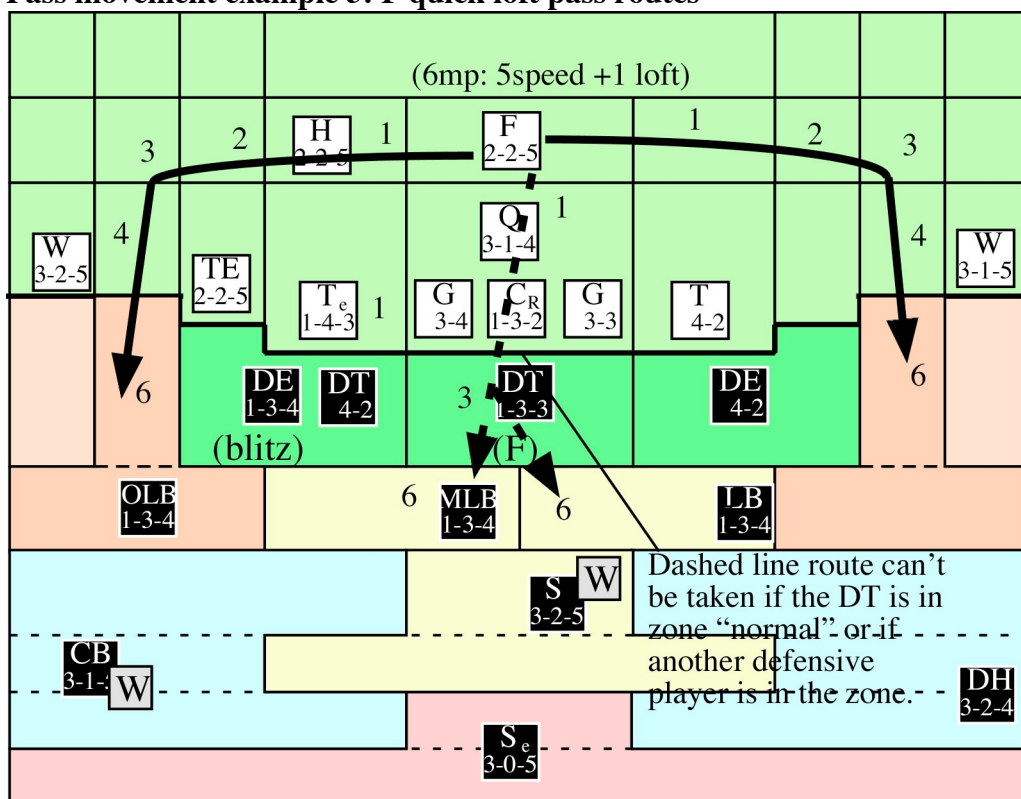
The OLB in R could bump, possibly preventing H getting to RS if he was in man-to-man.

The OLB in LS bumps the TB at WL if m-m, but doesn't stop him (bump affects pass, speed for pursuit purposes, rather than movement, since the player gets into the zone. Of course, in the extreme case that the receiver falls, that's different.)

The OLB in LS can bump the TB in LS (rather than at WL) if the TB moves through the TE slot, but must be so written/announced or it's assumed no deep bump is made.

The TB can get thorough L to SL via the interior route only if the DE rushes. Via the TE slot, it doesn't matter if he is rushing or not since one defender is ignored for movement purposes.

Pass movement example 3: F quick loft pass routes



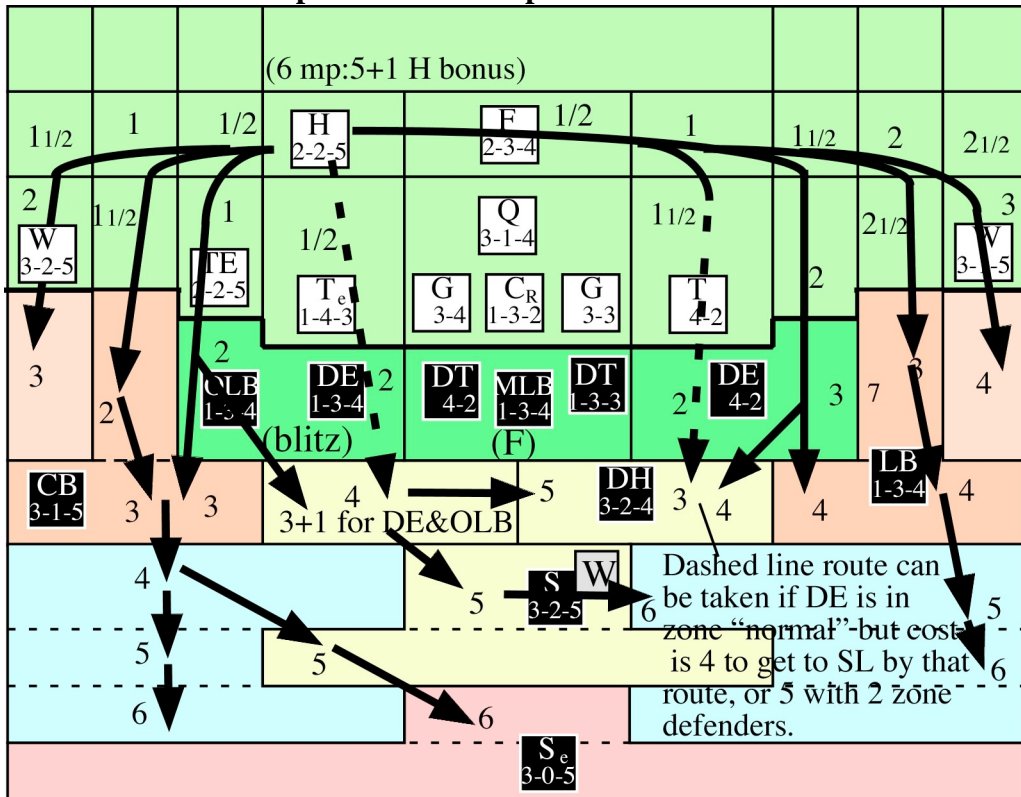
Legal qk loft F pass patterns (a 5 speed F or better is needed):

Movement = 5 + 1(loft) = 6 (but offensive zones count 1, defensive zones count 2)

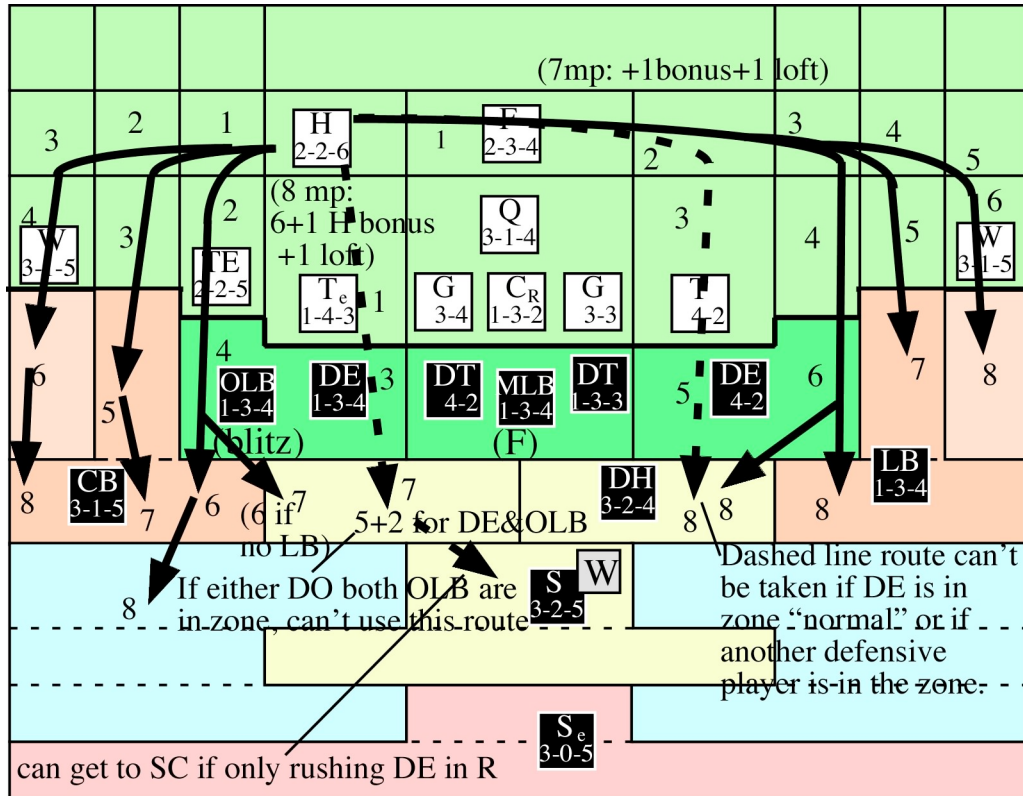
If there is any rusher or zone defender other than a rushing DT in C, the F cannot get to SL, SR. If there is a MLB m-m on F in C, there is a “bump”. (Issue: does the MLB ALSO count as 1 for “traffic”? I believe so. In which case the F would have to be a 6 if both DT rushing and MLB m-m are in zone. OR, does the man coverage only count as a bump? Assume the latter.

A F x-x-5 cannot get to VWR quick, but a H (starting in that same zone, from which he does get his bonus) would be able to. A 4 speed F does not have any legal “Quick” pass patterns, not even if lofted.

Pass movement example 4: Normal H pass routes



Pass movement example 5: Quick loft speed 6 H pass routes

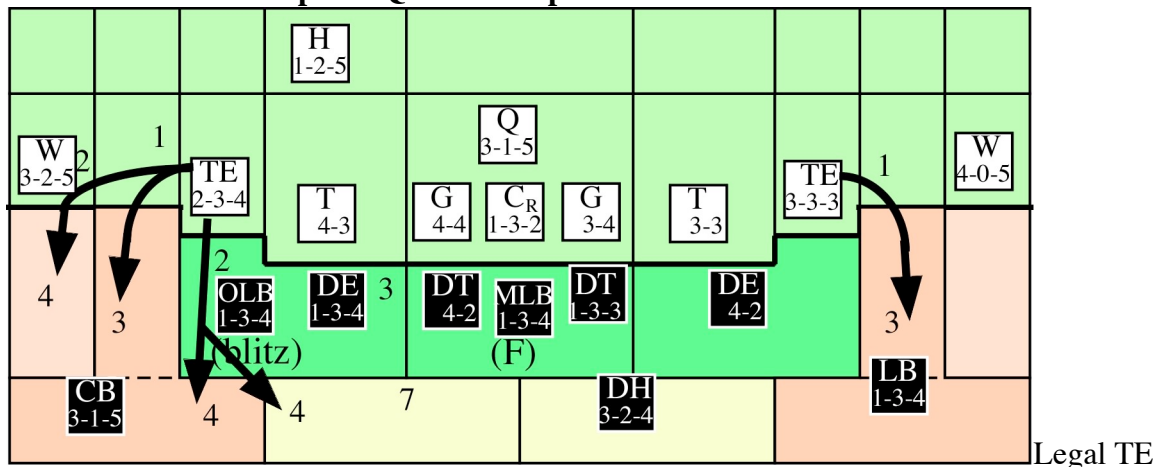


Legal qk loft H pass patterns for a fast (6 speed) halfback: (H gets +1 speed, +1 for loft) = $6 + 1(H) + 1(\text{loft}) = 8$

As other qk examples, offensive zones count 1, defensive zones count 2, and a rushing/blitzing player in L, R, or C counts 1 extra to exit (unless entered from TE, in which case the number of defensive players is reduced by one.)

If the OLB is m-m on H, can he prevent the H getting to RS? No, because the path through TE is shorter. The OLB gets a bump. But if the CB was man-to man on the H and the OLB was blitzing, the H would not get bumped by the CB because he's going through the TE/R zone, and only enters RS deep. If the TE route was unavailable due to extra defenders, H would get bumped when he enters RS. The H does NOT take the route through VWL because the route through WR is shorter, even though both get to RS with sufficient movement points.

Pass movement example 6: Quick 4 TE pass routes

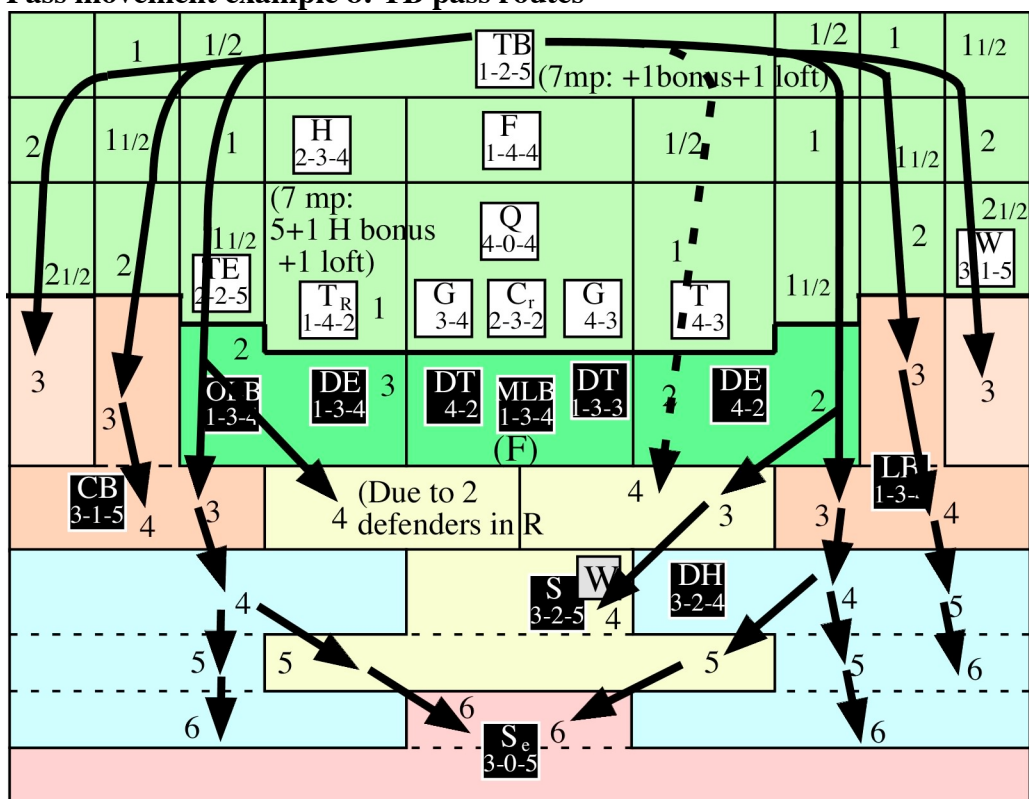


TE qk pass patterns: Movement value as given. If it is qk AND a loft, the LTE can run the same patterns as the RTE. Even with a loft, the RTE can't get further.
 A x-x-3 TE (non-quick) has only one quick pattern! An x-x-2 TE could do this on a loft.
 An x-x-5 TE can get to IR or SC if he does a quick loft, but not just QK.
 The OLB in R, if he is man-to-man, bumps the TE on any of these routes.

Pass movement example 7: F pass routes

[What's this? Is this one missing?]

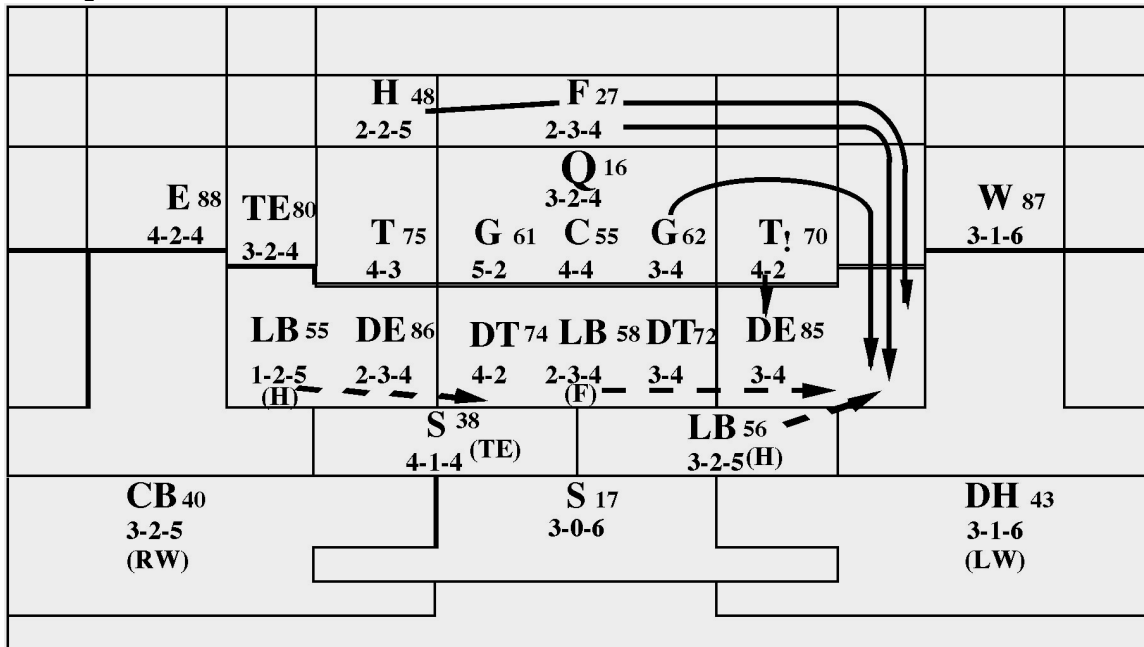
Pass movement example 8: TB pass routes



Normal TB patterns. TB gets +1 (as H). So preferred routes are normally those that get the extra +1/2 for rounding on the offensive side, unless the route through the TE slot is congested by extra defenders. (The middle through C is a possibility if there is only one rushing DT. With loft or +1 the TB can get a bit farther. Note that in this case two defenders are in R, both count fully (in “zone”) requiring an extra movement point to exit R. If either the LB was covering the H man to man (and so counting ½) or if the line was rushing (so the DE counts ½), there would be “1½” defenders in R for movement purposes, so the movement from R to SR would only cost one movement point.

C.2 Examples of Plays:

Example #1



Play: H/LE (F,LG)(-) "normal" defense

In this play the halfback follows the left guard and fullback around left end. The halfback receives the handoff directly behind the quarterback, after moving one zone as required. The guard moves 4 movement points, three zones to move to enter L at the LE slot and one for pulling. He has 5, since a pulling specialized G gets a +1 bonus. (If the guard had first moved to C, he could not have reached L since he would need three extra points to leave, plus one to get in position.) Dashed lines show defensive reactions. The left linebacker, unable to get into the play directly, can only give chase in hopes that the halfback will be slowed up enough for him to get into the play (in IL) after pursuit. A specialized OLB would be +1 in reaction, and would be able to get to LS and then would later meet the ballcarrier six yards deep in IL after pursuit.

The initial contact advantage is $2(H)+3(F)+3(G)+4(T)-3(DE)-3(LB)-2(LB)=+4$. A roll of 4 indicates a 6 yard gain in the contact table. The halfback needs only 4 yards to exit from zone L (-1 to +3 ; the entry point at LE is at -1 yard with respect to the line of scrimmage). He thus moves on into LS. During defensive pursuit, no defenders enter LS. Since the halfback does not exit LS, the ball is dead in LS for a 5 yard gain, 6 yards (as rolled) from the halfback's entry point into L at -1.

Notice that the way the play was written, the "(-)" for blockers in LS could have been left off. The tackle did not have to be written into the play since he blocks straight ahead. If the guard or fullback had been designated as a lead blocker, he would have moved through L to LS, not being available to block in L. But, a dpecialized guard or fullback gets an extra +1 as a lead blocker, so the lead blocker would have moved on downfield to IL and blocked there.

Here the fullback follows a pulling guard, the tight end, and tackle. The tackle did not need to be mentioned in the play, since he blocked straight ahead. The guard uses his full 4 movement points: one for pulling, one for passing behind the center, and two for the number of zones traversed. (As a specialized guard, he has 5 movement points, including one not needed for this play.)

The contact roll at the line includes #55, but he is at -2 value (0) since he is assigned to cover the halfback, who is not written into the play and plays no part in the action. The contact advantage is +5. A roll of 6 gives a '*' result, breaking the play through the zone, and the fullback moves to SR. In pursuit, DT#72, having the same speed as #27, also moves to SR, and #85 to SL (which probably won't matter), and S#17 is put in MC so that he will be in the ballcarrier's path if he gets that far. In SR the contact value is $3(F)+2(E)-2(CB)-3(DT)=0$. A roll of 4 gives 2 yards from the entry point at +3, for a total gain of 5 yards on the play.

Example #3

			H 48 2-2-5		F 27 2-3-4				
	E 88 4-2-4	TE 80 3-2-4	T 75 4-3		Q 16 3-2-4			W 87 3-1-6	
				G 61 5-2	C 55 4-4	G 62 3-4	T 70 4-2		
		LB 55 1-2-5 (H)	DE 86 2-3-4	DT 74 4-2	LB 58 2-3-4 (F)	DT 72 3-4	DE 85 3-4		
			S 38 4-1-4 (TE)			LB 56 3-2-5 (H)			
	CB 40 3-2-5 (RW)			S 17 3-0-6				DH 43 3-1-6 (LW)	

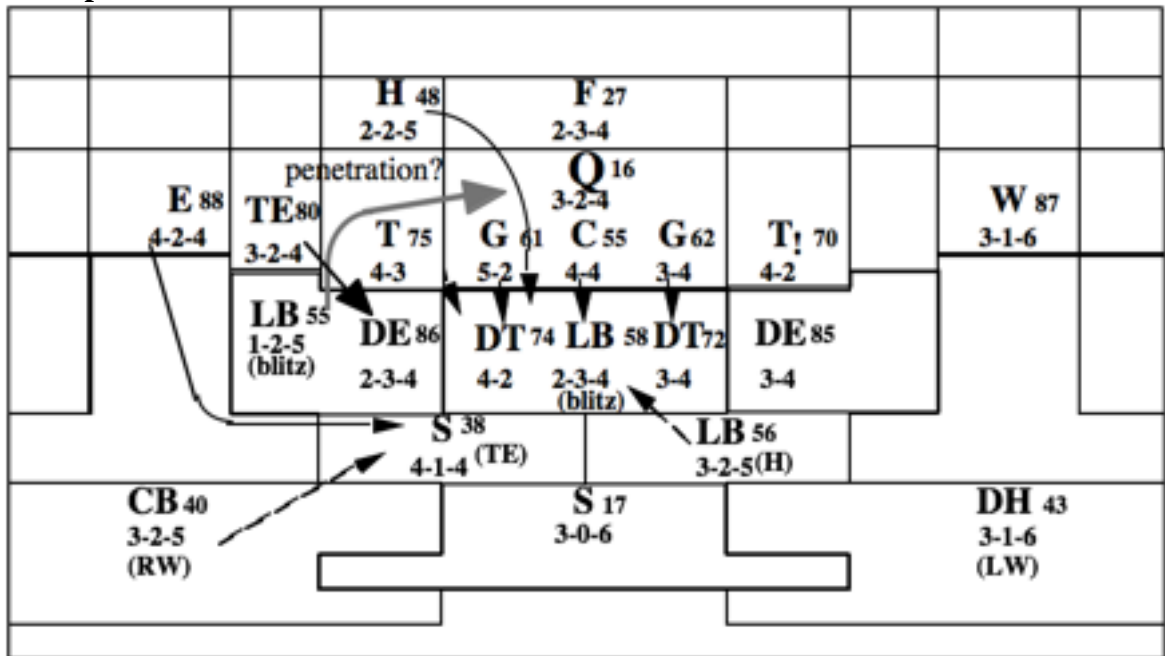
Play: H/RT (TE)qk

This play is a quick hitter with the halfback following the right tackle and tight end. Offensive movement rates are halved, implemented by counting 1 for each offensive zone and 2 for each defensive zone. Does the TE need his second movement point to get position in R, since he does not enter at RT? Since the H runs straight ahead, he is NOT coming from the same side, and does not need the extra point. (A 3 speed TE could have done this.) The TE could have, instead, blocked in SR.

Defensive reaction is limited by the relative speeds, with the offense having a +1 bonus for reaction purposes. S #38 would normally have been able to move to R as in example #2, but with the offensive bonus of +1 he has a speed relative to the TE of -1. Thus, he can only wait in SR. LB #56, with a similar penalty, cannot move the one zone sideways to SR, but can only move one area downfield to SC, where he will be positioned in the MC zone in case the ballcarrier gets that far. S#17 is placed in MC also, and won't matter since his 0 is added to 2 for #56. Already in the right place, LB#55 does not need to move, and because of that gets a +1 contact bonus since he is covering the ballcarrier, and not just a blocker, man-to-man. (Had he been a specialist OLB, the bonus would have been +2.)

The initial contact roll is $2(H)+4(T)+2(TE)-3(DE)-(2+1)(LB)=+2$. A roll of 5 gives a potential 5 yard gain, but slows down the ballcarrier by 1 to a (modified for qk) 5. In SR, the contact roll is $2(H)-1(S)=+1$. A roll of 4 (2 yard gain from +3) fails to stop the play short of the previous limit of a 5 yard gain, so the total gain is indeed 5 yards.

Example #4



Play: **H/RC(RT)(RW) defense rushes, LB #55, LB#58 blitz**

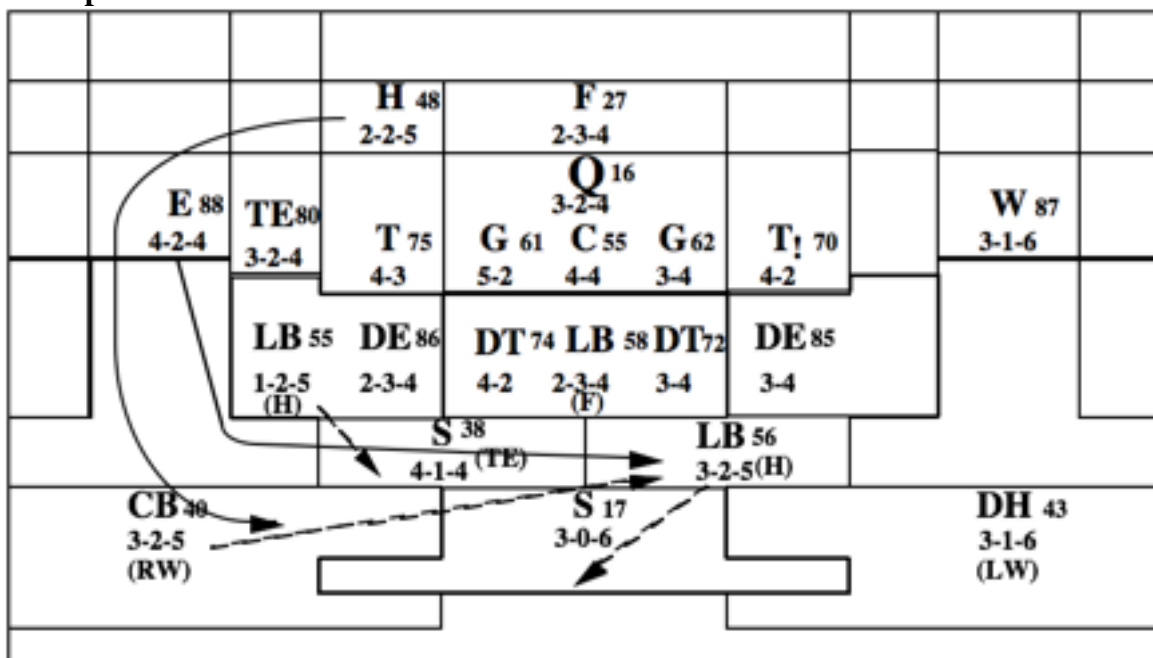
Here the tackle blocks into the middle, leaving a hole through which a rushing defender may penetrate. The wide receiver #88 expends all of his movement points, since he needs one extra to establish position in zone SR, as he is moving the same direction as the ballcarrier and enters from the side. In zone R, two rushing defenders are opposed by only one blocker. (Note that since the TE thus becomes involved in the play, S #38 is released to be involved, and pursue if necessary.

For penetration, blockers are allocated in R to linemen first, so the TE blocks DE #86, and LB #55 remains unblocked. The path to the ballcarrier on the offensive side of the line is 2 zones, to T and to Q starting zones. For DE#86, the rush value is $C+S+P(\text{pass rush value})+1(\text{bonus for specialized DE})=10$. The blocking value for TE #80 is $2(C)+2(\text{for speed } 2)-1(\text{penalty for starting } 1 \text{ player farther away from the zone boundary than the blockee, giving poor position})=3$. Rush value - blocker value - 2 times distance in zones = $10-3-2 \times 2=3$. There is a 3/6 chance for #86 to successfully penetrate. A roll of 5 (he needed 1, 2 or 3) fails to get there.

Blitzing LB #55 is unblocked. His rush value is $2(C)+5(S)-1(\text{penalty for being one player farther away from the zone boundary})$. Rush value - zero block value (nobody blocking) - 2 times the distance is $6-4=2$ chances in 6. A roll of 1 says he succeeds. The contact is at -3 yards (the "forward" edge of the Q zone). The contact value is $2(H)-1(\text{the LB is } -1 \text{ for blitzing})=1$. A roll of 3 gives one yard gain from -3, for a loss of 2 yards on the play. Pulling the tackle is a dangerous play if this particular DE is rushing aggressively, and the blitzing LB adds to the danger. Somebody is likely to get there.

Note that for F/RC(-) (TE) there is also only one blocker opposite R, since the TE goes downfield to block. But the F needs only one movement point to get to the Q zone, and the OLB (unblocked blitzer) needs 2, so there is no penetration. The F is into the line by the time the LB gets there. If it was a quick play, there would also be no penetration.

Example 5



Play: H/IR || RW/SL defense rushing

The primary receiver, the halfback #48, expends 4 1/2 movement points, since the three zones on the offensive side count 1/2 each, rounded down to 4. (As a "H" the halfback gets an extra movement point, so he moves as if speed 6. So he has 2 unexpended full movement points.) The secondary receiver expends four and has no movement point left over, so the secondary receiver will not qualify as a "safety valve" receiver for pass rush purposes. CB #40 has an effective speed advantage of 2, since he is a specialized CB in addition to being one faster than the receiver he is covering. This allows him to move 2 areas in any direction, or any number downfield, so he can easily reach SL (He would have reached it even if he was either speed 4 or only an unspecialized DH, since the lateral move counts as downfield.) He will be -1 in pass value for the extra area, however. The two linebackers covering the primary receiver cannot reach IR, since each can move only one area, but get as far as they can. Only LB#56 has a guaranteed chance (after pursuit) to catch H#48 if he catches the ball. Note that LB #56 reacts one area, to MC zone, the most favorable position within the SC area. LB #55 has no chance at #48, but he will make the play on #88, the secondary receiver, should he catch the ball instead of #48. (He could have moved to either SR or RS) This motivates his defensive reaction to SR rather than to RS, given that he can move only one area in reaction.

The blocking total is 4(#80 C+2) +6(#75 C+1.5+1 bonus as a T) +6(#61 C+1) + 6(#55 C+2) + 5(#62 C+2) +6(#70 C+1+1 bonus) +5(#27 C+2) +6(#16 C+S) (rounded down) = 44. With the (optional) 1/2 for speed three, assuming no rookies or experienced veterans, the total would be 1/2 point more, but rounded down to stay at 44. The rush value is 10(#86 P+C+S+1 bonus as a DE) + 7(#74 C+S+1 bonus as DT) + 8(#72 C+S+1 bonus) + 8(#85 C+S+1 bonus) = 33. The outside rusher speed bonus for the DE #85 versus tackle #70 (who is 2 slower) adds 1, to give 34. The other DE has two blockers, and the outside one is just as fast (the TE).

The total for the pass rush roll is thus 44 (blocking) + 10 (two extra movement point for #48) -34 = 19. A pass rush roll of 3 has no effect. (The same column would be used even for +20.) The pass value is 3(QB#16) +2(H#48) +2(IR zone)=7. There is no defender present; the 7 column on the pass table is used. A roll of 2 completes the pass.

Since there is no defender in the IR zone, H#48, having caught the pass, may exit the zone to MR or MC without a contact roll. He is thus far not limited in his possible gain. (Had there been a defender in IR, his gain would have been measured from 12 yards, the far boundary of the IR zone. This is true for the pass play initial contact only.) The logical choice is MR, since no defenders are in or can get to that zone either, giving #48 the longest possible free run. (Had he chosen to go to MC then LB #56 in MC would make the play with a contact roll at +12 yards. The offensive player has to say which way he is going first, so to the right (MR rather than MC) is clearly the best choice.)

The defense may now pursue. S #17 (who could have been positioned in either MC or SC) may pursue to LR. In by-mail play, he is required to do so, to intercept the ballcarrier's path at the earliest possible point. The only logical choice for LB #56 is to move to LR also. LB#55 may move to IR, though it will do no good. CB #40, in SL, is also far out of the play, but moves to SC in rather hopeless fashion. S#38, assigned to cover the TE, was released from that assignment since the TE pass blocked. He does get the +1 speed bonus for being a specialized S even though he was not originally in zone coverage, because he reverts to zone when the TE blocked. He gets pursuit since he is equal to #48 in speed with the bonus, but he started out behind, and can reach IR only as H #48 is moving on to MR; he does not get a chance to make a tackle. Other defenders are also too slow to pursue or, in the case of #43 who would otherwise have moved to VDC, are covering non-involved offensive players man-to-man, and thus get no pursuit. Notice that if S#17 pursues to LR with LB #56, his contact value of 0, added to the defense, has no impact on the play. With a speed advantage of 2, he could pursue as many as 3 zones downfield. For in-person play, the logical move is for #17 to pursue to VDC where he can try to tackle H#48 at 30 yards if LB#56 misses at 20. It is reasonable, however, to play in-person with the same constraints as would be used by mail, if the players agree. (In FOOL in-person play, this is the practice.)

No defenders are in MR, so H#48 moves with the ball to the next zone downfield, LR, where defenders #56 and #17 are converging on him. The contact advantage is +0. A roll of 1 gives a gain of -1 yard, relative to the near boundary of the zone at 20 yards, giving a 19 yard gain on the play.

Had the pass roll to #48 been a roll of 4 (C/CS), then 5 (CS), the quarterback would have not noticed that H#48 was open and would have looked to his reliable veteran end #88, the secondary receiver. The second pass rush would be 44(blocking) +0(no extra move for #88) -34(rushing) -3(secondary receiver) =7. A roll of 3(s/-2), then 4 to choose which (-2) modifies the pass value by minus two. So the pass total would be 3(QB#16) +4(E#88) +4(SL zone) -2(rush) -2(DH#40, with a penalty of 1 for a 2 area reaction) =7. With a roll of 3 E#88 would catch the ball, and immediately resolve contact with the defender in the zone, #40. A roll of 6 (*) would allow #88 to choose to move either to IL or SC. IL is preferred, since the only defender there is DH#43, who is busy watching W#87. Once E#88 moves to IL, the defenders may pursue. Notice that LB#56, who has already reacted to MC, remains there in the ballcarrier's path. LB#55 can get to MC (2 areas downfield), #38 to MC also (but with 0 contact value after -1 for having been

covering a blocker). The contact value in MC when #88 gets there is $2 (\#88) - 2 (\#56) - 2 (\#55) - 0 (\#38) - 0 (\#17) = -2$. With a roll of 1 #88 is stopped at LL for 18 yards gain on the play.

An interesting issue is whether H #48 may circle through WR as shown to get to his destination and avoid going through the TE slot where he would be bumped by LB #55. The route via TE would mean that the pass route was shorter in distance, but difference is just the $\frac{1}{2}$ movement point for the offensive zone that is rounded away anyway. So, in movement points, both routes give the same remaining 2 unused movement points, and could be considered equivalent. So, the ballcarrier is free to choose the route shown.

(However, is that how we are going to play it?)

The TE slot route has an extra hazard. The LB man to man coverage produces a bump roll at the line of scrimmage. C+S for H#48 is 7; C+S for the LB is also 7. The H gets -2 for going through the TE slot, but +1 because he did not start adjacent to the line of scrimmage. A roll of 7 on the "bump" table is modified to "6" and gives -S (and -P), which would mean that the play occurs the same way but the receiver has only one unused movement point and is -P. The pass rush value would be 14 instead of 19. and the pass value less (at 6) but a roll of 2 would still catch the pass. Furthermore, with the speed reduction LB #55 can follow 2 areas to where the pass is caught. His pass value is reduced to 0, but he can make the tackle. Other pursuit would get downfield faster too.

Had the bump roll been 8, modified to 7 (-P) then #48 would have gotten to IR with 2 movement points left, the pass rush would have been the same as earlier at +19. The pass would still be at +6, but #55 would not be there to make a tackle. (Had #55 been pass value 0, the extra area reaction would have made him -1, pass value and so he would thus be treated as -1 in contact value.

Example #6

			H 48 2-2-5		F 27 2-3-4				
		E 88 4-2-4	TE 80 3-2-4	T 75 4-3	Q 16 3-2-4	G 61 5-2	C 55 4-4	G 62 3-4	T 70 4-2
			LB 55 1-2-5 (H)	DE 86 2-3-4	DT 74 4-2	LB 58 2-3-4 (F)	DT 72 3-4	DE 85 3-4	
				S 38 4-1-4 (TE)		LB 56 3-2-5(H)			
		CB 40 3-2-5 (RW)			S 17 3-0-6			DH 43 3-1-6 (LW)	

Play: RW/RS qk defense rushing

With the receiver, E#88, having his normal movement of 4 halved to 2 for a quick pass, he can go no farther than RS. (It's counted as 2, 4 – 2 points per defensive zone.) As a quick play, there can be no secondary receiver; the pass is thrown without the quarterback taking time to ponder. E#88's speed is counted as 5 (+1 for being a CB but - 1 for quick) for reaction and pursuit due to the reduced time the defense has to react. (This is no problem for CB#40, whose speed is effectively 6 as a CB. Had his base speed been 4, he still could move up to RS.)

Since the play is quick, there is no roll for pass rush. But DE#86 is particularly good at getting his big hands up, and has his pass value counts for pass defense to RS, WWR, and IR areas if he is rushing against a quick non-loft pass or a normal bullet pass. The pass value is thus 3(QB#16) +4(E#88) +3(RS zone) -3(CB#40) -2(DE#86) = 5. Had it not been a quick pass, the total would have been 7, though there would have been a pass rush roll. A roll of 5 indicates incomplete, but on any roll of 5 (with a defender present) there is a chance of a pass interference penalty. A second roll is made, and a 6 indicates that a flag was thrown. Consulting the official with a die roll of 4, we learn that the penalty is on the defense, in this case CB#40, whose superior speed apparently allowed him to arrive before the ball. The 5 result was incomplete, so the offense takes the penalty for 6 yards (far edge of zone; where the receiver would be if he caught the ball as the play was written) and a first down.

Example #7

			H 48 2-2-5		F 27 2-3-4				
	E 88 4-2-4	TE 80 3-2-4	T 75 4-3	G 61 5-2	Q 16 3-2-4 C 55 4-4	G 62 3-4	T 70 4-2	W 87 3-1-6	
		LB 55 1-2-5 (H)	DE 86 2-3-4	DT 74 4-2	LB 58 2-3-4 (F)	DT 72 3-4	DE 85 3-4		
			S 38 4-1-4 (TE)		LB 56 3-2-5(H)				
	CB 40 3-2-5 (RW)			S 17 3-0-6				DH 43 3-1-6 (LW)	

Play: LW/SL qk normal defense (no special rush, but not "stay at home" either)

As a speed 6 wide receiver, W#87 can go 3 zones (3 ½ down the sideline) on a quick pass, 4 on a quick loft down the sideline. DH#43, who is covering the receiver, has a modified speed disadvantage of 1, since #87 is speed 7 for reaction purposes. He could move one zone downfield to ML or MC. In one sense he is better off waiting in IL where he will meet the play earlier and have a +1 bonus for being man-to-man but not moving. That is, if the receiver goes that way. He can also move to SC, counting this lateral move as "downfield" to match the move of W#87's move from LS to SL, if the receiver goes toward SC. It depends on where W #87 decides to go, a decision made when he moves. (He commits to one direction or the other when movement is complete, before the pass resolution or even reaction. See 5.1.1.) W#87 might do best to move so that the next downfield zone is SC. Thus, he will encounter both defensive halfbacks (#17 and #43) immediately after catching the ball, in one roll, instead of having each take a separate shot in two rolls at different spots. This gives a better chance at a very long play in this case, since there is no deeper safety. Also, DH43 does not get +1 for man-to-man but not moving. If #87 gets past this tackle attempt, he is gone. This of course also assumes W87 gets away from the linebacker. (On the other hand, if he encounters just DH43 in IL first, he gets a +1 to the die roll, so he has a better chance at getting first down yardage perhaps, even though #43 is +1C without having to move.)

So DH#43 moves to SC in reaction. (Had #43 been a specialized CB, he could have moved to SL and defended the pass instead of waiting to catch the receiver downfield.) (For in-person play, the requirement to meet the ballcarrier at the earliest possible point might be waived by mutual agreement.)

The quick play has no pass rush.

The pass value of LB#56 is at -1 since he is man-to-man on someone else, on a quick play. (On a non-quick play he would have been -2.) Without a pass rush, neither defensive tackle affects the play. The pass value is 3(QB#16) +3(W#87) +4(SL zone) -

2(LB#56) = 8. There is no additional -1 for a LB covering a W since the LB was man-to-man on someone else, not the W.] A roll of 2 completes the pass. The initial contact is with LB#56, who is at -1 for contact as well as giving up a +1 on the die roll. This gives a contact value of 0. A roll of 5 has 1 added to give 6, since all defenders (just LB#56) are man-to-man on others not involved in the play. (If this had been a normal play, the H would have been pass blocking, so he would have been -P and -C but would not have given up the +1 on the die roll.) W#87, having already committed to move to SC rather than IL, moves to SC to get a contact roll on the 0 column against S #17 and DH #43. A roll of 1 gives a +5 yard net gain, -1 yard from the near edge of the SC zone at 6 yards.

The +1 option used on this play gives offensive players an extra movement point each, but defenders are +1 for reaction and pursuit. The extra move allows the fullback to block for the halfback going wide left. (With his lateral movement bonus of 1, the halfback could have gotten there anyway without the +1 option. The guard could get there with the +1 for "pulling guard" rule) The extra movement point for the guard is also expected to allow a blocker to get to LS if no defender is found at the line of scrimmage. The tight end can block, since as a specialized TE entering from the TE position it only costs him one point to exit zone R, and he has the needed one movement point left (with this being a +1 play) to gain position. The center cannot get to LS, since he needs 4 total points just to exit C, with 3 defenders there, two of whom are neither rushing nor man-to-man on uninvolved players. (The LB counts only ½ since he is man to man on the F, not the C.) (Even had #55 encountered only two defenders in C, he could not have blocked in LS without the one extra point needed to gain position, but he might have blocked in IL had he been assigned there.)

With an effective +1 speed advantage LB#55, who is man to man on the ballcarrier in R, can move one area in any direction and one downfield. He cannot reach the LS area, but he can get to SL, from which he will later pursue to IL. S#38, who also had a +1 advantage over his man, can move to the LS area, but must go to the LS zone as well (rather than the WL zone of that area) since that is the destination of his man. He could

not have reached WL anyway, because that would not count as downfield from SL (the one area in any direction comes before the one area downfield.)

OLB#56 has no trouble reacting to meet the play in WL (or WWL). LB#58, covering the fullback, can reach LS but not WL, since he can go one area in any direction and one downfield. He cannot count L to WL as downfield because F#27 made no lateral move on the defensive side of the line of scrimmage. DH#43 does not react, because his man (#87) was not written into the play.

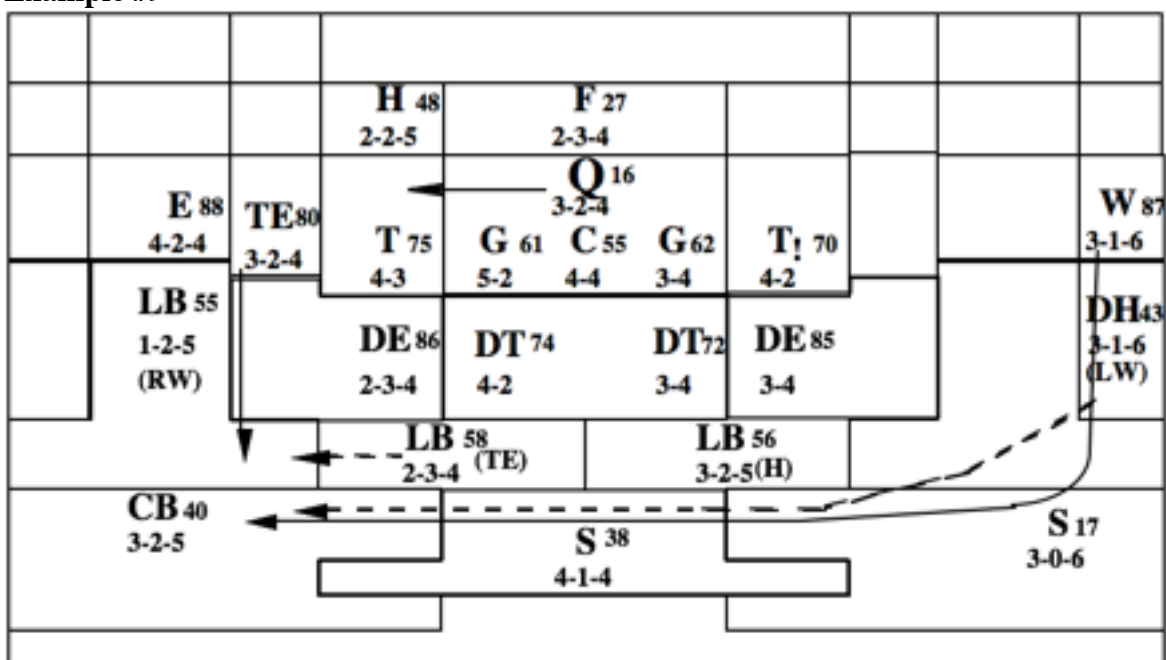
The initial contact roll in WL is modified by -1 for each defender, in this case only OLB#56. The contact value is $2(H\#48) + 3(F\#27) + 3(G\#62) - 3(LB\#56) = 5$. This is resolved on the "4" column of the contact table. A roll of 5 gives a result of "*-&" indicating H#48 is free to move down the field, but he has been delayed, giving defenders another +1 speed advantage in pursuit. The "&" indicates a possible penalty or injury, to be resolved later. (Actually, it might be good to roll this early in case a procedure penalty makes everything moot.) Pursuit now takes place. Defenders get a bonus of 2 (+1 for it being a slow developing "+1" play, and +1 for the "-" to #48's speed as a result of the first contact roll.) in comparing to H#48's speed of 5. DE#85 can pursue to LS, DT#72 to IL, DE#86 to SC, LB#55 (in SL after reaction) to IL, and S#17 from MC to LL. In his next contact in zone LS, H#48 finds that the contact value is $2(H\#48) + 2(TE\#80) - 3(LB\#58) - 1(S\#38) - 3(DE\#85) = -3$. (Note that the +C for each defender only applies at the line of scrimmage.) Using the -4 column of the contact table (since there is no -3 column), a die roll of 2 is found to give a result of "-2#". The ball is dead at -2 yards from the forward edge of the LS zone, for a 1 yard gain, unless there is a fumble.

The special events are now resolved, the # first. (The order is arbitrary, but here if a fumble is rolled, it affects the play final results, so it is rolled first.) A roll of 2 indicates that the ballcarrier is injured, and that there has indeed been a fumble. The fumble is resolved on the appropriate chart. A roll of 1 indicates that the ball is recovered 1 yard deeper, giving an aggregate gain of 2 yards on the play. If credit is to be awarded, the players most likely to have recovered are listed. In this case, some imagination is called for. LS is a sideline zone, where perhaps on a 1 or 2 the ball bounced out of bounds. H#48 is injured, so maybe give him one chance: a roll of 1, although usually he would be credited with 2 chances. TE#80 has two contact points. Credit him with the recovery on a 4 or 5. Other nearby offensive players are T#70, G#62, and F#27, all of which are just a zone away, and we will figure one of them gets it on a 6. A roll of 4 means #80 recovered the fumble.

Note that for the fumble roll itself, only a 1 or 2 would have allowed the offense to recover the ball, since the defense had both more men (3 to 2) and more points (7 to 4, counting #48) in the zone. Only a roll of 6 would have allowed a run with the ball after recovery. If the defense recovers, it could not have bounced out of bounds.

Now the injury to H#48 needs to be resolved. A roll of 3 on the injury table indicates that he is out for the remainder of the series. For the "&" result at the line of scrimmage, a roll of 5 followed by a roll of 1 indicates that a defensive lineman, if present, is injured. In this case the only defender present was LB#56, who is not a defensive lineman, so there is no injury and the "&" has no effect, to everyone's relief. For clock management purposes, the injury is ignored; we assume either #48 hobbled off the field, or it was a while before officials stopped the clock to call for help.

Example #9



Play: LW/IR || TE/RS roll rt defense rushes

On this play the movement of the primary receiver is subject to variation due to an attempt to "bump" him at the line by the man-to-man defender, DH#43. W#87 has a +1 advantage since, even though C+S is equal, he is a specialist W starting at the line opposite WWL (or WL). A bump dice roll (with two dice) is 5, modified +1 for the advantage of W#87. The result (for a 6) is "r-s", or receiver - 1 speed (and pass value as well), is that W#87 is now effectively a 5 in movement and speed. He still can reach his destination of IR, but with no movement points left. The secondary receiver easily gets to RS with 2 points left over (more than 0 for #87), and so qualifies as a safety valve receiver. (Nobody tried to bump him.) Note that any defender at the line of scrimmage is assumed to be bumping a receiver opposite him. LB#55 would bump E#88, but since E#88 is not involved in the play, the bump there is not resolved. (Nobody is watching.)

The next issue to resolve is whether Q#16 succeeds in rolling out. To see whether a rollout is possible, count rushers and blockers for the R zone. H#48, who is available to block, is counted by default. There is one rusher and two blockers, so a rollout is possible, but if H#48 had been written as not blocking rollout would not have been possible. With speed 4, a QB has a nominal 2/3 chance to roll out. A roll of 3 means he is successful.

Defensive reaction for DH#43 is somewhat complicated. Had the bump been unsuccessful, he could have moved only one area (to LS) and would be effectively out of the play. Since after the bump his speed is higher than the offensive player's, he can follow anywhere on the field with no more than a -P penalty. So, he follows the receiver all the way to IR. The reaction to TE#80's route is straightforward. LB#58, covering him man-to-man, has sufficient speed to defend the pass in zone RS.

The pass rush involves only the defenders in R and C, and their offensive opposites, since the rollout was successful. The pass blocking total is $6.5(T\#75) + 6(G\#61) + 6(C\#55) + 5(G\#62) + 5(F\#27) + 3(H\#48) + 6(Q\#16) = 37$. Note that as a rollout to the right, rushers

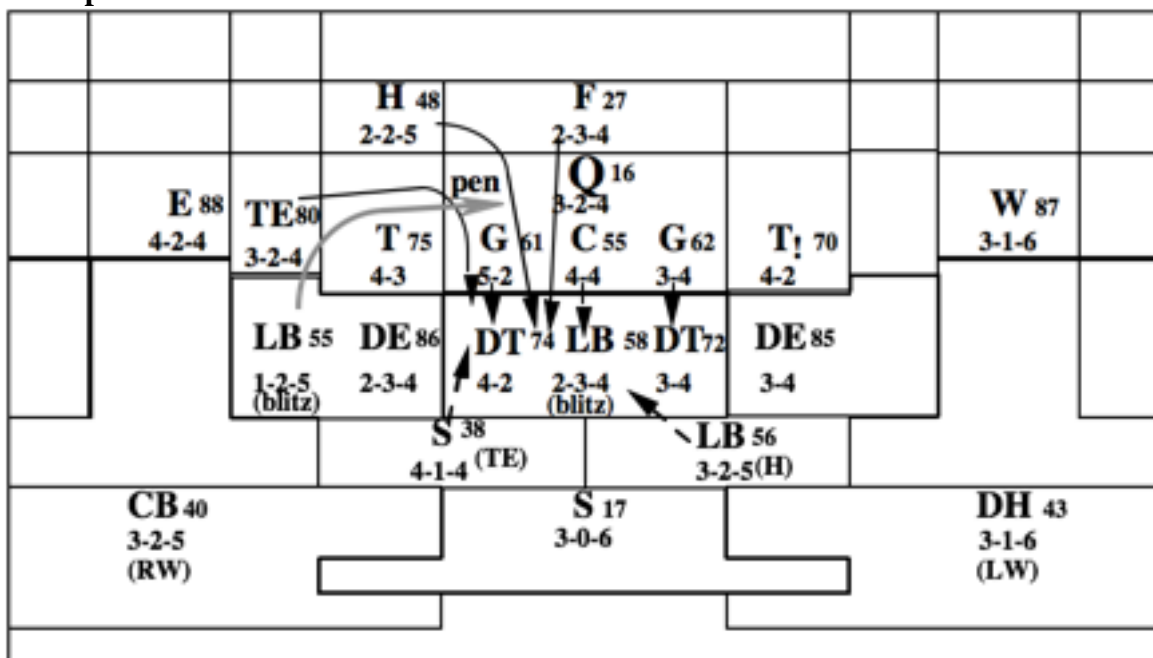
in WR and adjacent blockers may also count. But with no defender rushing adjacent, #88 is left out. Had he been a "W" he would not have counted anyway. [This is a matter of interpretation. It is also reasonable to say that #88 does block (helping against #86) and a close reading of the rules would not contradict this. If he does block (and the play could be written to make that explicit), then LB55 ends up in zone at -C, -P and ready to help.] The rush total is $10(\text{DE}\#86) + 7(\text{DT}\#74) + 8(\text{DT}\#72) = 25$. The rush value is 37 (blocking) $+0$ (W#87 has no extra movement points) -25 (rushers) $= 12$. A roll of 4 has no effect. A pass may now be attempted to W#87 in IR.

The pass values of zones IR and RS are increased $+1$ to 3 and 4 respectively, since the quarterback #16 has successfully rolled to that side, and he is (by default) a right handed quarterback. [A left handed quarterback is usually designated as Q_L.] The pass total is $3(\text{Q}\#16) + 3(\text{W}\#87) + 3(\text{IR}) - 3(\text{CB}\#40) - 2(\text{DH}\#43) = 4$. A roll of 3 (CS/S) indicates that a pass will instead be thrown to the secondary receiver. But first there is another pass rush roll, this one at -3 from the previous pass rush total, or $+9$. (The TE had more movement points left over, but the secondary route addition cannot be greater than that of the primary route if the secondary receiver is thrown to as a result of a pass table, rather than pass rush table, die roll.) A roll of 4 again has no effect. The pass total for the throw to TE#80 is $3(\text{QB}\#16) + 3(\text{TE}\#80) + 4(\text{RS}) - 2(\text{LB}\#58) - 0(\text{LB}\#55 \text{ is in the zone but is } -2\text{P, so at } -1\text{P he is treated as if not there}) = 8$. A roll of 4 completes the pass.

The initial contact roll has a total of $2(\text{TE}\#80) - 3(\text{LB}\#58) - 0$ (LB#55 is -2 since #88 is not involved) $= -1$. A roll of 5 yields a relative gain of $+2$. This is measured from the far boundary of the RS zone since it is the initial contact roll on a pass. Thus, TE#80 advances into zone IR.

Defenders with a speed of 4 or more can now pursue. DH#43 is already in IR since he followed #87 there, and #40 was there in zone from the beginning. Nobody can get there in pursuit, and there's no point moving anybody else since the receiver won't get more than 2 more yards. The contact total in IR is $2(\text{TE}\#80) - 2(\text{CB}\#40) - 1(\text{DH}\#43) = -1$. W#87 does not block, since with a penalty of -1 in blocking as a wide receiver specialist, he would contribute nothing to the total. A better blocker would have made an attempt at blocking. The roll of 6 for contact might have allowed a long gain, but the contact in RS limits the total gain to 8 yards.

Example #10



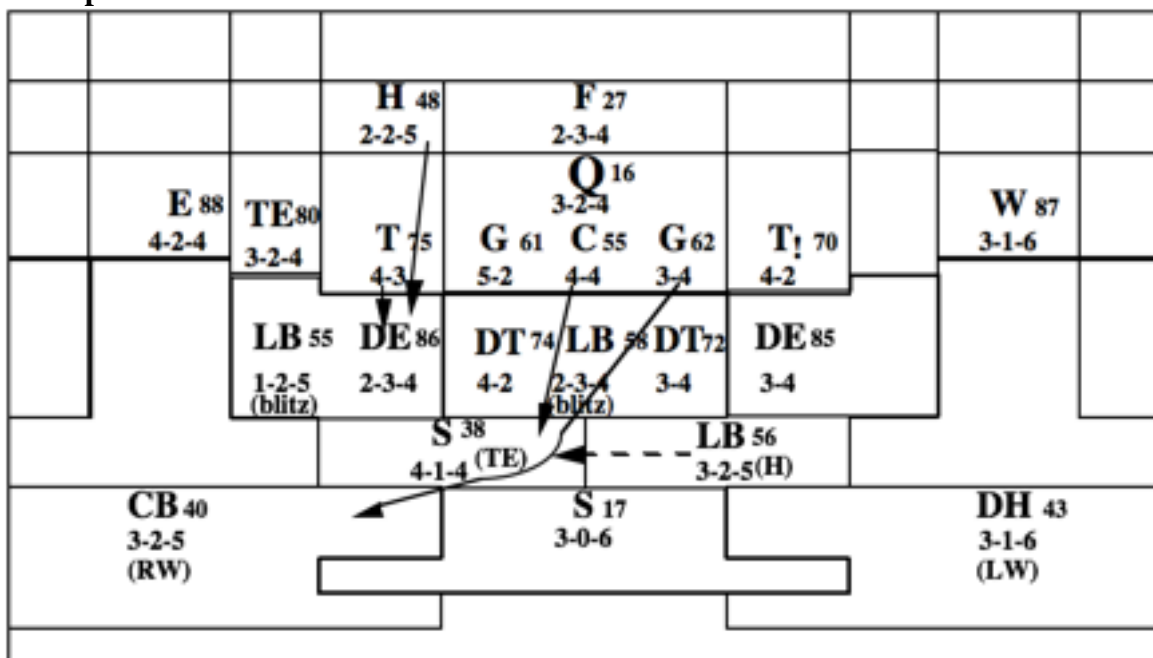
Play: H/RC (F,TE) dive defense blitzing

This play is designed to make short yardage near the goal line or on third down. Normally the offense is limited to four blockers in zone C, but a "dive" play allows one extra, in this case the TE. (This is an optional rule. Without it, the TE would have been left out, giving +1 less at the line but preventing the penetration risk.)

Since this is not a "quick" play and there is a blitz, there is chance for penetration. Of the eligible defenders, only LB#55, who is unblocked, has a chance. (For DE#86, the penetration value is $10 - 6(\text{blocker}) - 2 \times 2 \text{ spaces to move} = 0$.) The linebacker's chances are $7(\text{LB}\#55 \text{ C+S}) - 4(2 \text{ zones distance}) - 1(1 \text{ player from zone boundary}) = 2$ chances in 6. A roll of 5 fails (1 or 2 was needed.), and the play proceeds. LB#56 and S#38 react to meet the play in zone C.

Before the first contact roll, the "dive" table is used. A roll of 6 is increased to 7 due to the halfback's specialization bonus of +1. (A fullback would get +2.) A 7 indicates "+1", a one column shift to the right on the contact chart. The contact total is $2(\text{H}\#48) + 5(\text{G}\#61) + 4(\text{C}\#55) + 3(\text{G}\#62) + 3(\text{F}\#27) + 2(\text{TE}\#80) - 4(\text{DT}\#74) - 2(\text{LB}\#58, -1 \text{ for blitzing}) - 3(\text{DT}\#72) - 1(\text{S}\#38) - 2(\text{LB}\#56) = +7$. A shift of 1 column right puts the play on the +8 column, guaranteeing at least 3 yards. The die roll of 5 gives a result of "*". Since dive table result was not "N" (normal play), the gain is limited to 3 yards, and the ball is dead. Had the dive table roll been 1 (modified to 2), H#48 would have had a chance for a longer gain.

Example 11



Play: H/Scn R (T)(C)(G) defense blitzing

The screen pass avoids the blitz, and the rushers play no further part in the play (unless they read the screen - see 4.7.8a). DE #86 has a chance, since the opposite tackle is blocking. Assuming no modifiers for the QB being a rookie or the DE experienced, he needs a roll of 1 on one die to read it. Alas, he rolls a 3. So Zone R is, in effect, empty. The blockers are -1 in movement for a screen pass, and can get to the zones assigned as shown. Since the ballcarrier's path is unknown, the blockers each go to the nearest of the possible zones since no special guidance is given. After offensive movement, the offensive player must declare where the H#48 will exit the zone, to RS or SR. There is a C waiting to block in SR (the nearest zone is the default if none is specified) but LB#56 is waiting there, while no defenders are in RS. So, #48 chooses the outside route.

Only one defender can react, LB#56 moving to SR. T#75 was assigned to block in R, but there are no defenders present, and no possibility of one pursuing into the zone. Since he had one extra movement point, he moves on to SR (again, as a default, the inside zone) and helps block there, but as it happens the block does no good since the ballcarrier cut right.

The pass to H#48 is $3(\text{QB}\#16) + 2(\text{H}\#48) + 4(\text{zone R}) = 9$. There is no secondary receiver on a screen pass. A roll of 3 completes. An initial contact roll in R is unnecessary, with no defenders present.

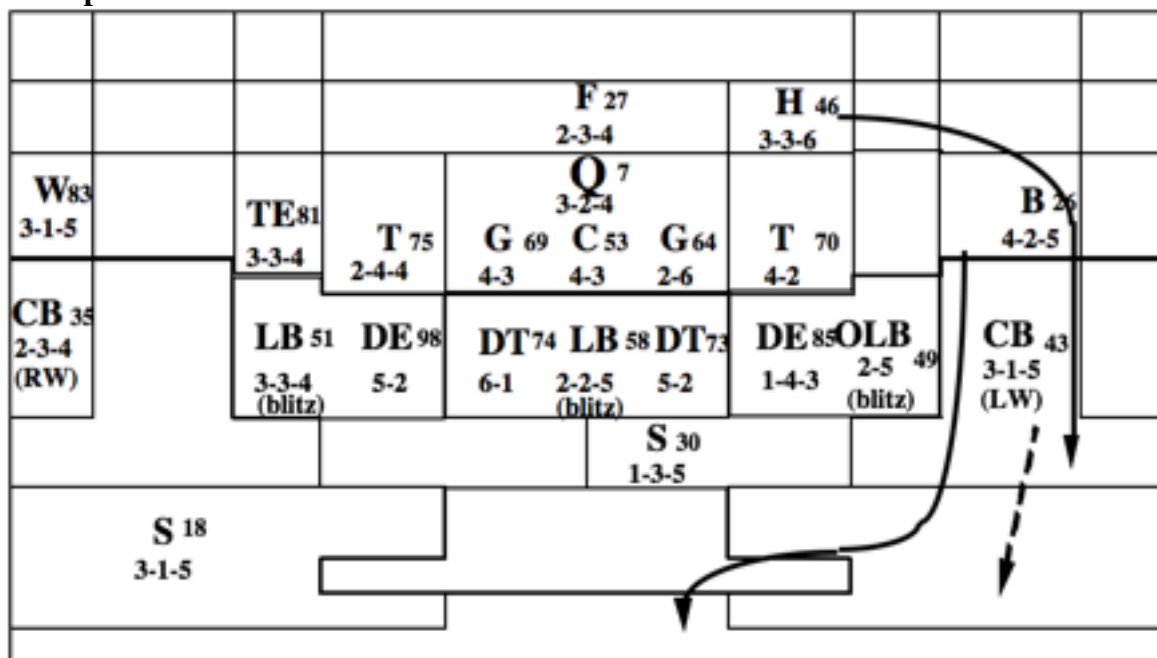
Now the defense can pursue. LB#56 moves to IR, and S#17 to LR. H#48 runs into WR rather than SR as mentioned, thus avoiding the need for a contact roll. H#48 continues to IR and encounters LB#56 and CB#40 (who, as man-to-man on #80, is at -2 in contact and thus contributes zero for the defense). G#62 is blocking, giving a contact value of +3. A roll of 6 lets H#48 keep running, so he next encounters S#17 in LR, a contact roll on the +2 table. Here again he is fortunate to get a 6, another "*" result. Since there are no other defenders to encounter, a roll is made on the "*" table. A roll of 4 gives 50 yards +5 (for speed 5), for a total of 75, since the * gain starts at the last contact

The screen can be very effective against a blitzing defense, but in this case H #48 made some nifty moves too. Had DE#86 read the screen, the pass value would have been 6, with a chance for an interception, and the first contact would have been at -3 yards, at +3 contact, likely stopping the play for negative gain.

Here the halfback is fast enough to run a quick hitter in the center. (With S=5 plus the H bonus of 1, a 5 speed H could do this.) The TE#80 would normally be fast enough to get to SR, since as a TE specialist he needs only one point to exit R even with two defenders. But since one of the defenders in man to man on him, that defender counts as two (his contact value is equal - see 4.1.14), and TE#80 cannot exit R. The covering man, LB#51, also stays in R, which does help. LB#49 can react, but only downfield to SL since, with the quick play speed bonus for the offense, he has a -1 disadvantage. He is a specialized OLB, though, so he gets a +S for reaction and pursuit with respect to the man he is covering. That means he reacts one area downfield (and would have been able to pursue to SC but H#46 gets a +1 in speed for the qk play. He needs for the H #46 to be slowed down in order to get into the play.) LB#58, well positioned, does not need to move, and gets a +1 bonus. (Had he been a MLB, the bonus would have been +2.) The initial contact is $3(H\#46) + 3(F\#27) + 4(G\#69) + 4(C\#53) + 2(G\#64) - 6(DT\#74) - 3(LB\#58) - 5(DT\#73) = +2$. The contact roll is a 6. Since H#46 has a modified speed of 7, no defenders are fast enough to get pursuit, and none block his path. A "*" roll is a 1, limiting the gain to $20+15$ (for speed 7) yards from the last contact roll at the line of scrimmage.

Notice that if the TE had reached SR, the linebacker following him would have been in position to make the play before H#46 broke loose. This might have been the case with a very fast TE, or if his coverage had been elsewhere. A technical point: Note also that G#64 has a speed of 4 or more (halved to 2 or more) that would allow him to get position even with the play going right. Had H#46 come from the right HB spot and run LC, G#69, with a speed of 3 (halved to 1) could be said not have gotten position. In practice, this problem at the line of scrimmage has been ignored. That's because RC and LC are both from the same zone. (Or, has this been an oversight?) By this understanding, any guard or center with speed 2 can block. On a quick play H/RT qk, a speed 3 TE blocks too. That is allowed because the runner is going straight ahead; the blocker can enter from the same side anywhere. H/REqk (TE) requires RT speed 4 for the RT to block.

Example 13



Play: LW/DC || H/LS defense blitzes

Here the offensive play is a long pass designed to shake off close coverage, but the defense is blitzing. Either the offense failed to "read the blitz" or they ran this play anyway. It is a risky play. The first issue is the attempt of CB#43 to slow up B#26 at the line. The CB is specialized, and with that considered C+S is equal. An unmodified roll of 8 (with two dice) has no effect. B#26 runs his route, and CB#43, unable to cover him 3 areas away, cannot get to the pass (notice that his +1 speed for reaction does not count as making him faster, and hence able to follow anywhere. Notice also that even though the DC area has a zone (VDC) two areas downfield from LS, the DC zone is not. DH#43 can get to MC, ML, LL, or VDC. DL is chosen since from that zone he is guaranteed to be able to catch B#26 in VDC should he catch the pass, and in LL he can also be in better position to limit the gain of H#46 (at 20 yards rather than 30) should he receive the ball.

The next issue concerns the blitz. The quarterback, who is 26 years of age, has one plus one per blitz chances in 6 to notice the impending blitz before the snap and check off to a different play or, in this case, a secondary receiver. A roll of 5 indicates he was preoccupied with the matchup at wide left, and did not notice. He does soon after the snap. The pass rush blocking is: 5(TE#81) +9(T#75) +5.5(G#69) +5.5(C#53) +4(G#64) +6(T#70) +5(F#27) +6(QB#7) +0 (no points of movement left for #26) - rushers: -7(LB#51) -8(DE#98) -8(DT#74) -7(LB#58) -8(DT#73) -9(DE#93) -7(OLB#49) -3 for no blocker against outside rusher #49 = -12. A roll of 5 on the pass rush table offers an escape: "s".

This "s" result indicates that the quarterback, seeing the heavy rush, dumps the ball to a safety valve receiver (if he has one) instead of holding it long enough for the primary route to develop. To qualify, the secondary receiver must have more movement points left over than the primary receiver. This is true for H#46; he has 4 extra. (Had there been no safety valve, Q#7 would have simply thrown incomplete, ending the play.) With H#46 as the receiver, the pass rush total comes to +8 instead of -12, due to the 20

points for 4 movement points left over. Notice that this is different from a secondary receiver pass due to a pass table "s" result. The safety valve pass rush has a roll of 2, followed by a 3, on the +6 column of the table, giving a "qt" result, for "quarterback trapped." QB#7 must try to run. The "qt" table is consulted. There are no die roll modifiers. A roll of 3 gives -8rb, a roll on the runback table from 8 yards behind the line of scrimmage. Q#7 rolls a 4, for a 5 yard gain, so he loses only 3 yards on the sack.

Since a 2 was rolled on the pass rush table, there is also the possibility of a penalty. A roll of 2 for this possible penalty indicates "offensive holding", probably an offensive lineman who was particularly anxious to help his QB. The defense will have to decide between a down and 7 yards. (A 2 roll on the primary receiver's rush would have been illegal procedure, and play would stop there.)

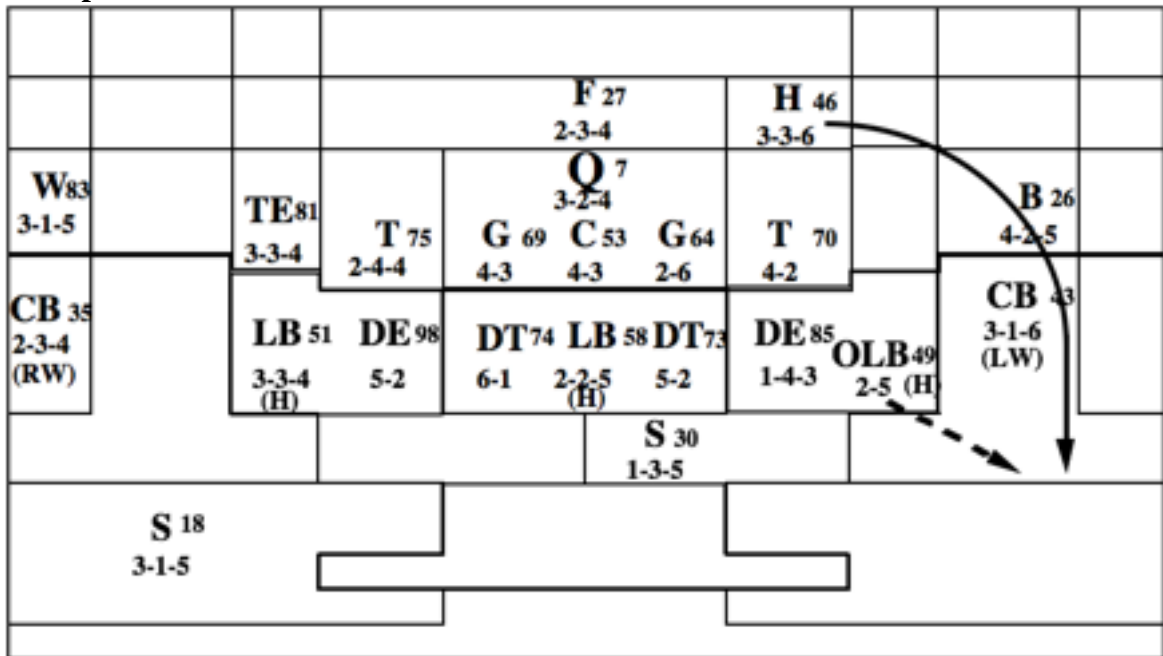
If the "qt" roll had been a 2, the loss on the play would have been 9 yards, with no chance for the quarterback to run. Furthermore, the "#" could cause further problems. A roll on the "#" table of 1 indicates a fumble on the sack (rather than on the scramble, as it would on the "rb" table. For this circumstance, a roll of 3 or 4 on the Fumble table (normally #men and #points) is interpreted as a recovery by the defense and 1 is added to the die roll on the "rb" and "lrb" tables. Here a roll of 4, and a rb roll of 4 (+1) gives a fumble runback of 8 yards, plus a possible bonus, depending on which rusher recovered. The rushers have a total of 27 contact points. Breaking these into groups of 6 (we will count in order of player number), a roll of 4, then 5 translates into the 23rd contact point. The highest numbered player, #98, contributed points 23 to 27, so he recovered the fumble. With his contact ability of 5, he gets a bonus of 2 yards, for a fumble runback of 10 yards, and a total loss of 19 yards by the offense.

			F ²⁷ 2-3-4			H ⁴⁶ 3-3-6			
W ⁸³ 3-1-5		TE ⁸¹ 3-3-4	T ⁷⁵ 2-4-4	G ⁶⁹ 4-3	C ⁵³ 4-3	G ⁶⁴ 2-6	T ⁷⁰ 4-2	B ²⁶ 4-2-5	
CB ³⁵ 2-3-4 (RW)		LB ⁵¹ 3-3-4 (TE)	DE ⁹⁸ 5-2	DT ⁷⁴ 6-1	LB ⁵⁸ 2-2-5 (H)	DT ⁷³ 5-2	DE ⁸⁵ 1-4-3	CB ⁴³ 3-1-6 (LW)	
					S ³⁰ 1-3-5				
S ¹⁸ 3-1-5									

This quick play is unusual in that the guard is extremely fast, and so can block in the L zone. (Most teams would have had this guy convert to running back.) The guard's movement is 2 (for the move to the T zone) + 2 (pulling) +2 (to cross the line of scrimmage into L). A speed 5 guard could also have done this, since specialized guards get +1 movement when pulling.

The other linebacker covering H#46, LB#58, was too slow to get to L, since with the quick play modifier his relative speed disadvantage is 2. He cannot even react to SL, as he could had the qk option not been used. He also does not get pursuit. This would be true even had H#46 been slowed, unless #58 was a specialized middle linebacker, in which case his reaction to SL would allow him to meet the ballcarrier at +1 contact if he got through the line. H#46 hits the hole extremely quickly. The defense did have S #30 there in SL just in case though.

Example #15



Play: H/LS qk defense rushing

The H can get to LS without going through LE where he would have been bumped. Through LE the cost would be 2 (2 offensive zones)+ 2 (into L) +2 (into LS)=6 plus any bump effect. Through WL the cost is 3 (3 offensive zones) +2(into WL) +2(into LS)=7. The halfback #46 has 7 movement points as a specialized H. A speed 5 H would have to go through the TE spot and get bumped. (Both routes are considered the same speed for purposes of route selection because they are no different in extra movement points affecting the pass rush. Indeed, there is no pass rush on a qk play.

If H#46 had started from the tailback spot behind the fullback, he still might have tried to run a route to LS, but would have had to pass through zone L from the TE position. This would have not been a problem except for the presence of a defender covering him man-to-man, thus preventing him from completing his pass route without a "bump". [Here again, the general rule for by-mail play, and perhaps for in person as well, is that the back should take the shortest route regardless of coverage, and let the bump roll tell the story. That is probably the better way to do this. It is unusual where there's a choice. Usually that occurs for backs out of the backfield.

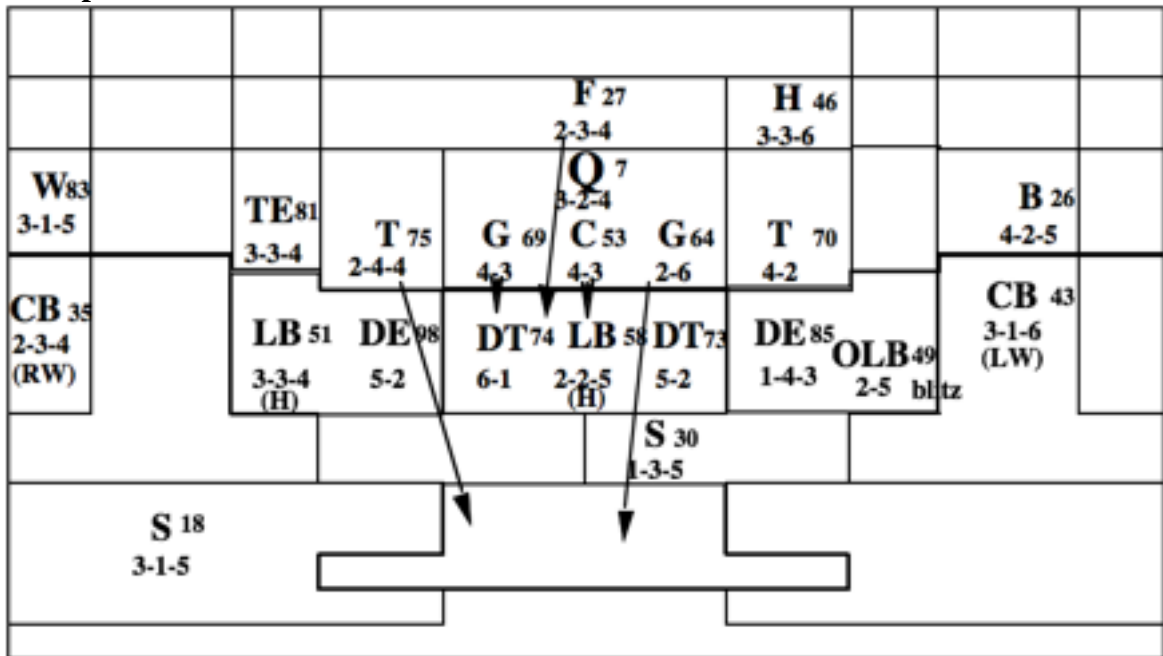
This quick pass will have to get over the outstretched arms of DE#85. Since it is a quick pass, the rush has no other effect.

As for a run, the linebacker OLB#49 reacts to LS. His modified speed is 6 (+1 for OLB in L) and the ballcarrier's is 7 (+1 for qk) so the OLB can react one area downfield. The CB is in the area, and since there is only the one active player (and his man is not involved) he too is placed in LS. The pass value is 3(Q#7) +3(H#46) +3(LS zone) - 1(DE#85) -2(CB#43) -0(OLB#49)=6. The CB is at -1 value since he is man-to-man on B#26. DE#85 would not have been counted if he had not rushed. A roll of 4 on the pass table gives "cs/s". There is no secondary receiver, as it is a "qk" play. A second roll of 1 indicates that the "c" applies; the pass is complete. The contact value is +1 (since CB#43

is -1). A roll of 5 gives a 4 yard gain into IL, with no defenders having sufficient speed to pursue. (S#30 is 6 with his safety bonus to H#46's 7.) The total gain is 10 yards.

If this was a first down play, a measurement is needed to see if the ball got far enough for a first down. On a die roll of 1-3, it would be just short. The play would only run 20 seconds off the clock instead of the usual 40 if the offense is trying to save clock.

Example #16



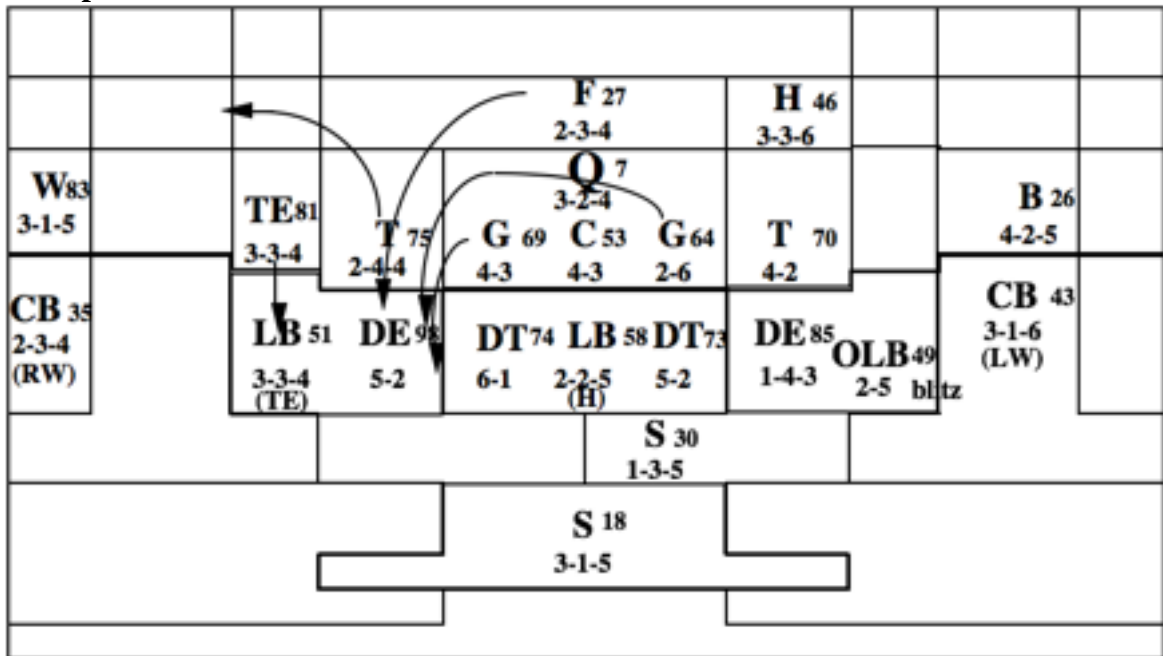
F/C (RG,C)(LG,RT) draw defense blitzes

If the defenders are rushing as they are here, offensive movement on the draw is -1 but the rushers do not affect movement through L, R, and C as they usually do. The only defenders left in these zones are those man-to-man on players not involved in the play, and so only count 1/2 each, rounded down, for no effect on movement in either R or C. T#75 is able to reach SC to block, as does G#64 easily. G#64 could have moved farther since the zone is vacant, but stays in SC to block S#30 who will pursue into the zone. The other guard and center block at the line. Notice that, like a pass play, The ballcarrier's destination is a zone. He does need to choose which of the two possible paths downfield he will take, but that decision comes after seeing the defense (but not their reaction). F#27 chooses to move to SR rather than SL to avoid (temporarily) S#30. Also notice that penetration does not apply; it is a planned part of the play, and is taken into account by the near edge of zone C being (for the draw) placed at -3 relative to the initial line of scrimmage. (Zones L and R are at -6 yards for a draw.)

Each DT has a chance to read the draw, but the chance is 0 (opposite linemen blocking +1/6, -1/6 for base chance to read it, no rookie or veteran effects apply etc.)

The initial contact is $3(F\#27) + 4(C\#53) + 4(G\#69) - 6(DT\#74) - 5(DT\#73) - 0(LB\#58, at -2) = 0$. A roll of 3 would normally give a "0" result, but since the play is a draw and all defenders are either rushing or man-to-man on non-involved players, a 1, 3 or a 4 gives a "*" result. In pursuit, S#30 moves to SC, where a roll of 1 on the +6 table gives a +2, for an 8 yard overall gain. (Had #30 started in SC, in zone, he would have a 2 yard benefit (1 faster and he is a safety = -2 yards) and the play would have stopped for only 6 yards gain.)

Example #17



F/RT(LG,RG,TE,no T) defense rushes

This is a trap play, with the right tackle T#77 pulling to entice the rushing DE#98 to vacate the hole through which F#27 is to run. Tackle #75 fulfills the requirement that the pulling lineman be of speed 3 or more. DE#98 is only of speed 2, which means that he may not vacate the hole very quickly. There is a 2/3 chance that he is indeed trapped. A roll of 6 indicates he was trapped, and plays no part in the play. Since there was a rush, there is some chance of defensive penetration. C#53 blocks DT#74, who is closer to the play, so C#53 has a -1 penalty. DT#74 is worth 8 rushing, -4 for 2x distance to intercept point, -5 (blocking value of #53) - 1 (#53 being over one) = 0 chances to make the play. DT#73 is unblocked, but he is the third player from the zone boundary (notice that the LB counts), and so has a penalty of -2. He thus has $8(C+S+1 \text{ bonus}) - 2(3\text{rd from R}) - 4(2 \text{ zones away}) = 2$ chances to penetrate and attempt a tackle. A roll of 3 just misses.

The initial contact has the same benefits as the draw since the hole was vacated. The contact total is $3(F\#27) + 2(G\#64) + 4(G\#69) + 3(TE\#81) - 3(OLB\#51) = +9$. A roll of 2, normally a +4, now counts as "*". (For +8 and +10 it is rolls of 2 and 3 vice 3 and 4 that give special benefits.) F#27 then runs all the way to MC where he is caught by S#30 in pursuit and S #18, too). The contact value is -1. A contact roll of 3 limits the play to an 11 yard gain. Had #98 not vacated the hole, the initial contact would have been at +4, and a roll of 2 or 3 would have given F#8 only a short gain. A roll of 4 still would have sprung him since there was no man to man or zone coverage. The safety #18 does not get the "early stop" bonus here because most of the points got to the zone in pursuit rather than starting there in zone.

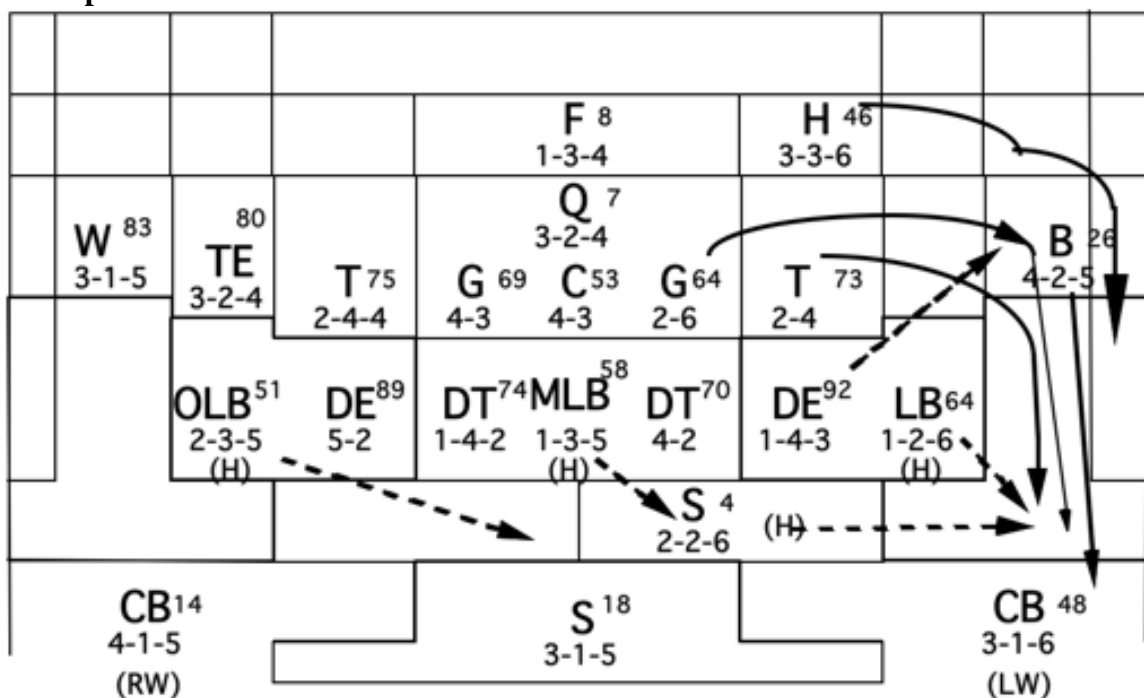
Example #18

					F 27 2-3-4		H 46 3-3-6		
W 83 3-1-5		TE 81 3-3-4	T 75 2-4-4		Q 7 3-2-4	G 69 4-3	C 53 4-3	G 64 2-6	T 70 4-2
		OLB 51 2-3-5 (TE)	DE 89 5-2		DT 74 1-4-2	MLB 52 2-2-5 (H)	DT 70 4-2	DE 92 1-4-3	LB 64 1-2-6 (H)
						S 20 2-2-6 (H)			
		CB 14 4-1-5 (RW)			S 18 3-1-5				CB 48 3-1-6 (LW)

Play: LW/LS qk defense rushing

On this quick out pattern the cornerback is more than fast enough to meet the receiver and defend on the pass. The Defensive end DE#92, rushing from L, contributes his one point also to pass defense since the pass is to LS or IL, and it is a quick pass. The pass value is $3(Q\#7) + 4(B\#26) + 3(LS \text{ zone}) - 3(CB\#48) - 1(DE\#92) = +6$. When the pass is thrown a 6 is rolled (-/is) followed by a 4, resulting in an interception. (There is no opportunity to throw to a secondary receiver on a quick pass.) Since DE#92 contributed 1 of 4 points to the pass defense, there is a possibility of his deflecting the pass, and the interception being made by a rusher. A selection roll of 4 gives just this outcome. Another die is rolled to see which rusher caught it. A 5 says roll again, followed by a 4 indicating that DE#92, the highest numbered rusher, caught it. (One might also allocate the chance to intercept by pass value plus one, or just assume it was the lineman that contributed the point, who is the most likely to see where the ball went.) Since a lineman intercepted, the reference point for the interception is at the line of scrimmage -6 yards instead of at +6 yards where the receiver is. A 4 roll on the interception table gives double the usual distance on the runback. On the "rb", runback table, a roll of 6 means that another roll is made on the "lrb", long runback table, giving a 2 for 14 yards, which is modified for DE#92's speed (-2) to 12 then doubled to give a runback of 24 from the the interception point at -6 from line of scrimmage. So the play loses 30 yards. A roll on the "&" table of 4 indicates that an offensive player (rather than defensive, given the change of possession) was injured. He is randomly selected from those pass blocking and the quarterback, since only they would be able to make the play. (On lrb & on 4 has been eliminated; there is only one "&" on the lrb table now.)

Example #19



Play: LH/PWL (LT,LGlead)(-)(LW) defense rushing

This pitchout is supposed to allow the halfback to get wide with blockers, but the reactions of LB#64 and S#20 can make it difficult by reacting to WL. If H#46 goes to WWL, which he can opt to do as a specialized H, then he would meet S#20 and LB#64 in LS at +3 yards instead of at -2 yards! That seems preferable. So that's what he does.

Note that T#73, with nobody outside of him, can get to WL with a movement value of 3. Having him pull gives DE #92 a better penetration shot though. G#64, in his role as lead blocker, finds WL clear and proceeds downfield to block CB#48. (Offensive movement reaction has not yet taken place, so zone LS is not yet occupied.) The play might have done better had he not been a "lead blocker" and been assigned to LS.

The next issue to resolve is whether H#46 catches the pitchout. He has a pass value for the purpose of 4 (including +1 as a halfback). The pitch could be received in the P2 or P3 zones with a pass value of 6 or 5 respectively. The choice is made to receive it in P2, making it necessary to either expend an extra movement point there or be -1 in pass value. H #46 has no problems with using a movement point; he has two extra movement points. But he does not want to linger in order to avoid a possible penetration, so he takes the -1 pass penalty. This gives a total pass value of $3(Q\#7) + 4(H\#46) + 5(P2\text{zone} - 1) = 12$. The choice to receive it in P2 at -1 prevents rushing defender DE#92 from catching H#46 at 6 yards deep. (He's assumed charging in from opposite the TE spot.) Also, if penetration takes place in the offensive zone across from WWL, the first zone where the movement points are equal for both the H and the DE, DE#92 has 1/6 chance less chance for not being the outermost defender. The penetration chances are $9(DE\#92\ C+S+1) - 1(\text{not outermost}) - 6(3\text{ zones distant}) = 2$ of 6. The roll is 2, indicating success. Lead blocker #64 doesn't help because he is going in the same direction as H #46; he's out in front instead of being able to block #92 who is converging on #46 at the sideline. H#46 against DE#92, but is speed 6 versus speed 3 in the backfield. That is a

+2 advantage (die roll modifier). There is a -1 contact value (but +2 modifier). A roll of 1 (modified to 3) indicates -1 yard gain, from -3 yards from the line of scrimmage, for a net loss of 4 yards on the play.

However, suppose H#46 does not catch the pitch: not good. A pitch pass roll sequence of 6,5 or 6,6 would give this result for a +12 pass value. (The rules do not address rushing linemen in this case, just man to man defenders near the line.) The actual destination (WWL) is the point of interest. LB #64 started within 3 zones of WWL (which is not on the sideline), so he counts on fumble resolution. S #20 is also three zones away, so he does too. A roll of 3 (men=1 to 2) or 4 (points = 3 to 4) would result in defense recoveries. The recovery would be at -6 yards.

Example #20

					F 27 2-3-4		H 46 3-3-6		
W 83 3-1-5		TE 81 3-3-4	T 75 2-4-4	G 69 4-3	Q 7 3-2-4 C 53 4-3	G 64 2-6	T 70 4-2		B 26 4-2-5
		OLB 51 2-3-5 (TE)	DE 89 5-2	DT 74 1-4-2	MLB 52 2-2-5 (F)	DT 70 4-2	DE 92 1-4-3	LB 64 1-2-6(H)	
			S 20 2-2-6 (H)						
CB 14 4-1-5 (RW)				S 18 3-1-5				CB 48 3-1-6 (LW)	

Play: RE/RS qk no rush

Here the tight end is shown to pass through zone R to get to his assigned destination at RS. It is possible for him to get there by this route even though, with a man covering him in the zone, there are in effect 3 defenders. He is entering from the TE spot (normally meaning 2 defenders rather than one would have to be present to require him to expend an extra point to leave zone R). He is a specialized TE, meaning with 2 defenders he expends only the one point to leave R. Finally, he is cutting out to RS rather than SR, meaning that even with an effective 3 defenders he can get there.

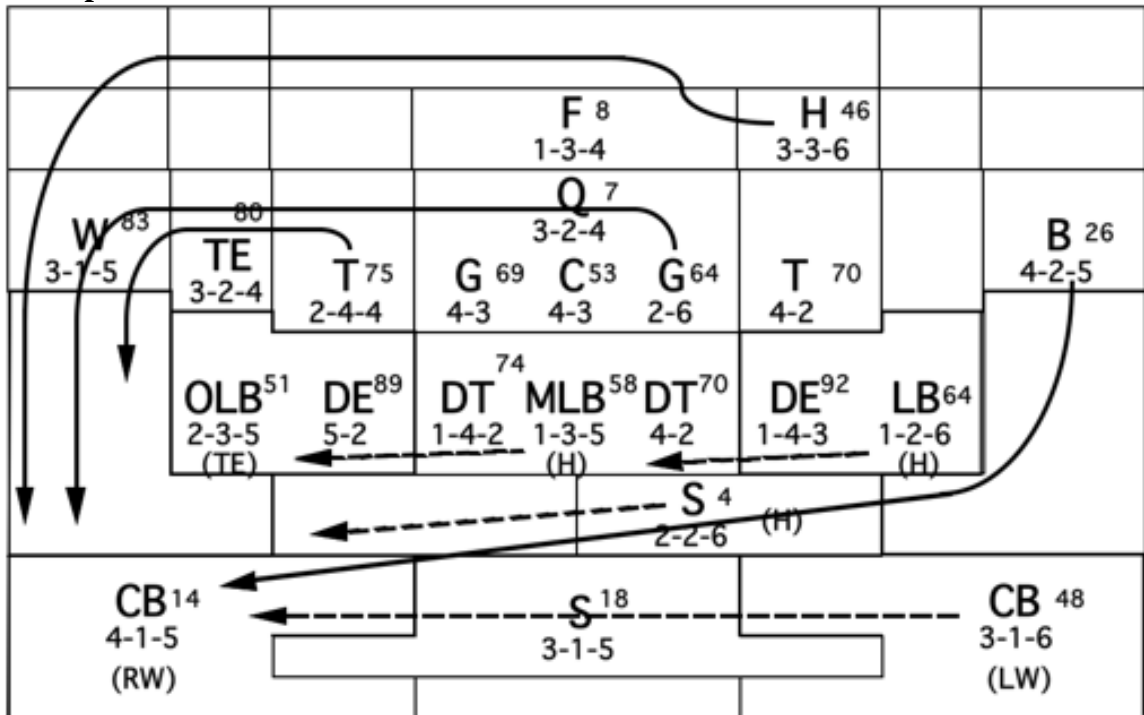
The above assumes that the Chapter 4 movement provisions for blockers also apply to receivers. If that was the case, a 4 contact value LB would have prevented TE 81 from going out, and the pass would fall incomplete. The other interpretation is that for receivers man to man coverage is not counted at all except bump effects. We seem to have been playing the latter way.

It is necessary to resolve a "bump" attempt by the defender. The modified roll is $8(2 \text{ dice}) + 7(\text{TE}\#81 \text{ C+S}) - 8(\text{OLB}\#51 \text{ C+S}) - 2(\text{bump action in R "TE slot" rather than WR by location}) + 1(\#81 \text{ is a TE specialist}) = 6$. On the bump table, the result is receiver speed -1 (and also P-1). TE#81, with only one movement point left now, cannot get to RS (he needs two since it is a qk play). OLB#51 stays with him in R. The pass is still thrown, however, to the empty zone. The pass value is $3(\text{Q}\#7) + 3(\text{RS}) + 1(\text{empty}) = 7$. A roll of 5, then 6 indicates a pass interference penalty. A further 6 indicates it is on the offense, TE#81, for a 10 yard penalty.

Actually, as the play is written TE#81 seemingly can avoid this hazard by first moving toward the sideline, then to RS via WR, with OLB#51 defending there. He can't do this first because he has insufficient movement points; he'd have to be a "5" or the pass a loft. However, even so the rules always allow the adjacent defender to get a "bump" so the bump is resolved as described and the TE can't get there. This is another case where

following the principle of taking the shortest route without looking at the coverage / bump possibilities makes for a cleaner game.

Example #21



Play: H/WR (RT, RG lead)(-)(WL) defense rushes

The offense uses its offensive line speed to get H#46 wide with blockers in front. T#75 expends 4 points getting to WR and can move no farther, even though there are no defenders to block there. G#64 expends 6 points in getting to WR: 4 zones, 1 for pulling, and 1 for passing behind the center. In his role as lead blocker, and as a specialized guard he gets two further movement points which can be used to move to RS, since there are no defenders to block in WR, and even further to IR. (Note that, for determining if a lead blocker moves on through an occupied zone, the order in which blockers are listed, and moved, can be important.) The wide receiver #26 can block in IR since, beyond the line of scrimmage, an extra movement point to get into position is not needed if the blocker enters from the near zone boundary as does B#26 here.

There is conceivably a chance for penetration by DE#89 in the H2 zone behind the tackle. H#46 has to take the handoff somewhere, and he starts in an H2 zone. He can't take it there. He could cut directly across through the FB, H2, and P3 zones. That route to WL needs 6 movement points, and with his H bonus #46 has seven. So, he can either go all the way to WWR (unnecessary) or take a longer route to WR avoiding the penetrating tackle (he hopes). So, #46 moves to the F spot (H1), takes the handoff there, then runs deep and wide through the TB zone on his way to WR.

DE#89, having a pass rush value of 8, is blocked only by TE #80. He can possibly make the play in the offensive zone adjacent to WR, or way back in the backfield where #46 runs around out of the TB zone heading right (at -10 yards!) or anywhere in between. We always pick (or try) the first zone where penetration is possible, even though the odds might be adjacent to WR (only 2 zones instead of 3 distant). DE#89 is NOT penalized -1 for not being adjacent to the WR zone boundary of R if he aims for the zone 2 behind the TE position, the first one where a tackle is possible. The same is true for a penetration attempt been to H2, one behind the TE spot

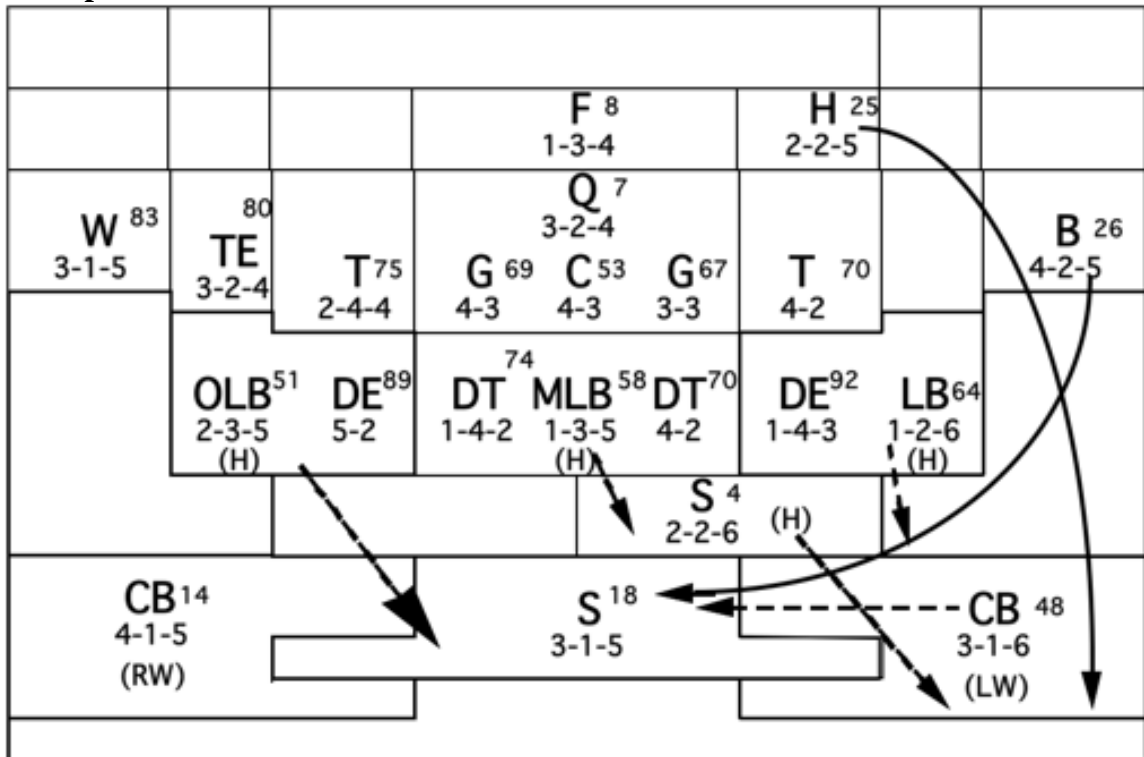
has the H followed that route to WWR. Neither DE #89 nor the TE#80 blocking him are penalized, since the penetration is straight ahead. The penetration chances are $8(\text{DE}\#89) - 4(\text{TE}\#80) - 6(3 \text{ zones away}) = -2$; no chance to make the play. The DE has a chance only if his route is closer. What about just behind WR? The penetration chances are $8(\text{DE}\#89) - 4(\text{TE}\#80) - 4(2 \text{ zones away}) - 1(\text{not adjacent to WR}) = -1$; still no chance to make the play. Penetration isn't possible. (Indeed, H #46's longer route seems not to have been necessary.) The tight end TE#80 DID need to become involved in the play to block DE#89, to reduce his chances to zero, so the linebacker covering him, OLB#51, is released to participate in the play, though at -1 value in contact.

The man-to-man defenders react as shown. S#20 can move one area to SR, from whence he will be able to pursue to IR. He does not get the extra +1 speed bonus for reaction since he did not start in SC, but he will get the +1 pursuit bonus. He does not need it anyway, in this case. MLB#52, being 1 slower than H#46 (but +1 with MLB specialization), can move to R from which he will later pursue (at +1) to RS. He will be able to catch the play there. (As a specialized MLB, he gets a +1 speed bonus for reaction and pursuit vs the ballcarrier if he starts in zone C, SL or SR against the covered man, making his effective speed equal to that of H#46.) CB#48 easily follows B#26 across the field to IR. LB#64 can at best move to C then pursue to RS and hope H#46 is slowed down in RS so he will get an extra move in pursuit to IR. OLB #51 gets a man to man bonus against #80 but not against #46, but since #80 blocks penetration, he reverts to zone (at -C). so on that basis he does get to pursue to RS since he has a +1 pursuit bonus as an OLB in R in (now) zone, even though C is -1.

When H#46 arrives in WR, no defenders are present, so a contact roll is not necessary. The defenders can now pursue. OLB#51, released from the need to cover TE#80, gets his +1 pursuit bonus, since he is the outermost OLB defender, in zone R. This makes his speed effectively 6, as fast as H#46, so he can get to RS to make the play. MLB#52 is there too. S#4 pursues to IR. LB#64 pursues from C to SR.

The contact value in RS is $3(\text{H}\#46) - 2(\text{OLB}\#51, -1 \text{ for initially covering TE}\#80) - 2(\#52) = -1$. A roll of 6 gives a result of "**". H#46 is not slowed, and so LB#64 cannot reach IR. H#46 now moves to IR. The contact total there is $3(\text{H}\#46) + 2(\text{B}\#26) + 2(\#64) - 2(\text{S}\#4) - 1(\text{CB}\#48) = +4$. CB#14, who is -2 since he is covering the uninvolved W#83, is not counted at all rather than at a negative value. There is no open field advantage since the defense has a 6 speed defender. (S #20 actually counts as 7 speed.) A roll of 2 stops the run at +2 yards, for an overall gain of +8.

Example #22



Play: H/LL loft || LW/SC bullet defense “normal”

Here the secondary receiver, B#26, benefits the play by drawing coverage out of the IL area. H#25 gets a bonus movement point for the loft pass, and 1 point as a specialized halfback, for a total of 7 movement points. He moves 3 offensive zones to pass through WL (1 ½ movement points, equal to his bonuses), rather than L where LB#64 would have possibly slowed him up. [The extra ½ movement point would have been lost in rounding, so he ends up with the same number of extra movement points one way or the other. So, he can choose, and naturally takes the outside route.] As it is, H#25 has one extra movement point (since it was a loft).

S#20 can react far enough to defend on the pass and tackle H#25 if need be.

OLB #64 is faster (speed 6 versus 5) so he can follow all the way to LL. But he is -p for following 2 areas and -2p for a LB being LL after reaction. That reduces his pass value to -2, which is taken from contact value when contact is resolved. Since contact value is only zero, that means he is out of the play; it's as if he's not there.

OLB #51, on the far side, can also move two areas (one any direction, one downfield) in coverage. So he could get to IR area, LR zone, from which he will get pursuit to VDC. He would be reduced to less than 0 pass value in DR, however, (-1P for 2 areas distant, -2P for being an OLB in LR) so he is also -3P. But since he is C=3, and P=2 to begin with, he still has a contact value of 2 should he have to attempt a tackle. But, he has another option. He can react to MC instead. From there, with his +S for pursuit against the covered man, he can pursue 2 zones to VDC, and will retain a contact value of 3 instead of 2 since he would just be -2P in MC. Note that this has the added benefit of putting him in the path of the secondary receiver.

MLB #52 also reacts 2 areas (downfield) and can reach the IL area. The LL zone is within that area. He is -2P (as #64, #51) plus -P for moving two areas, so he is -1P and

hence treated as P=0, C=1. There is lots of coverage, but in effect the halfback has gotten behind them but has to pull up a bit to make the catch.

For a "normal" defense, each defensive lineman is -1 in pass rush value. Here, the blocking total is 4(#80) + 9(#75) + 6 1/2 (#69, using the optional rule that gives 1 1/2 points for speed 3) + 6 1/2 (#52) + 4 (#64) + 6 (#70) + 5 (#8) + 6 (#7) + 5 (one extra movement point) = 52. The pass rush value is 7 (#89) + 7 (#74) + 6 (#70) + 8 (#93) = 28. So resolution is at +24. A roll of 6 does nothing. (Often one can just roll, and on seeing a 6 and no special blitz, one need not bother figuring the numbers.)

The pass value is 3(Q#7) + 2(H#25) + 0(LL zone) - 2(S#4, not -1 as the receiver is not a W) = +5. The one LB present, #52, has no remaining pass value. A roll of 6 is "is/s" on the Pass value 3 column (used since on a loft a column 2 left is used is used for resolving interceptions.) A subsequent roll of 2 causes the pass to go to the secondary receiver.

Another pass rush is conducted. The -3 for secondary receiver does apply (the "s" was on the pass table, not the pass rush table, so this is not a "safety valve" pass. This particular secondary receiver could not be a "safety valve" anyway.) The rush total is 47 (blocking) - 28 (rushing) - 3 for secondary + 0 for extra movement points (since a bullet requires an extra movement point) = 16. A roll of 2 causes a -1 adjustment on the pass and a check for a penalty: roll of 5, but there are no "!" players.

On the pass, S#18, who is in zone, is halved in pass value, rounded up to 2. Since it is a bullet pass, DT#74 would normally contribute 1 to the pass defense. But the defense is "normal". The pass value is 3(QB#7) + 4(B#26) + 3(SC) - 2(S#18) - 3(CB#48, who is faster) - 1(rush) = +4. A roll of 3 on the +3 table (for a bullet) is in complete. ("s" becomes "-" since there is no other secondary receiver; the "s" is ignored.) Since this QB does not have the special "3 receivers" attribute (and in any event no 3rd receiver was written), the pass is resolved: With the roll of 3, the pass falls incomplete.

Had the pass been complete, B #26 would have had contact at +12 yards vs S#18 (+1) then vs. OLB #51 in MC (at -1) at 12 yards, and if he got past those pursuit by the various players in LL defending the primary receiver would have met him in VDC.