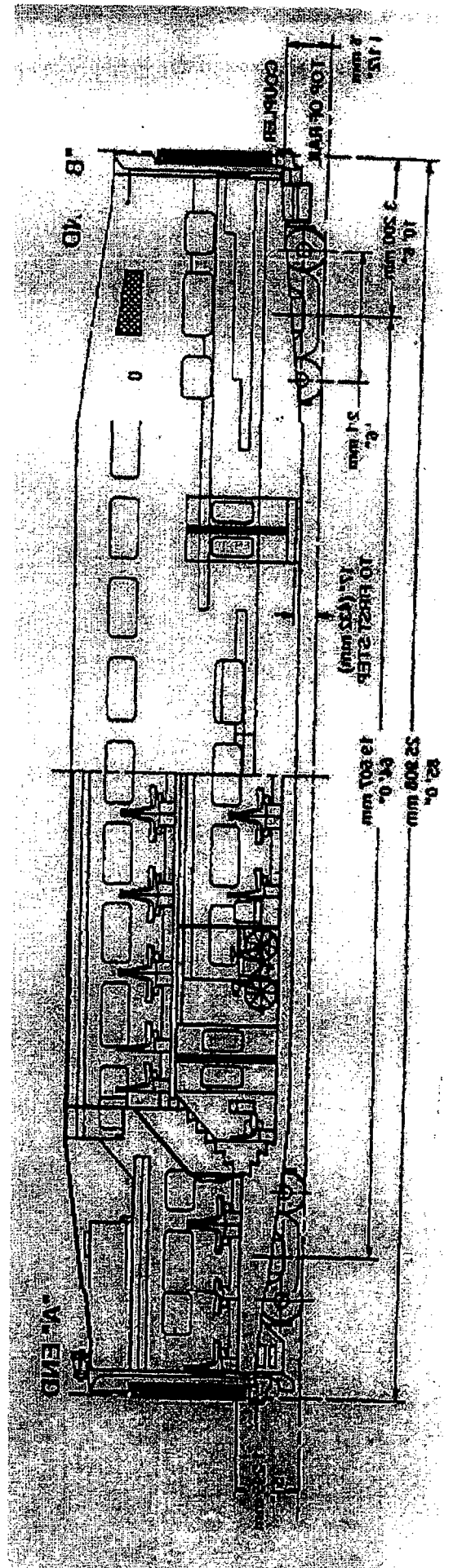
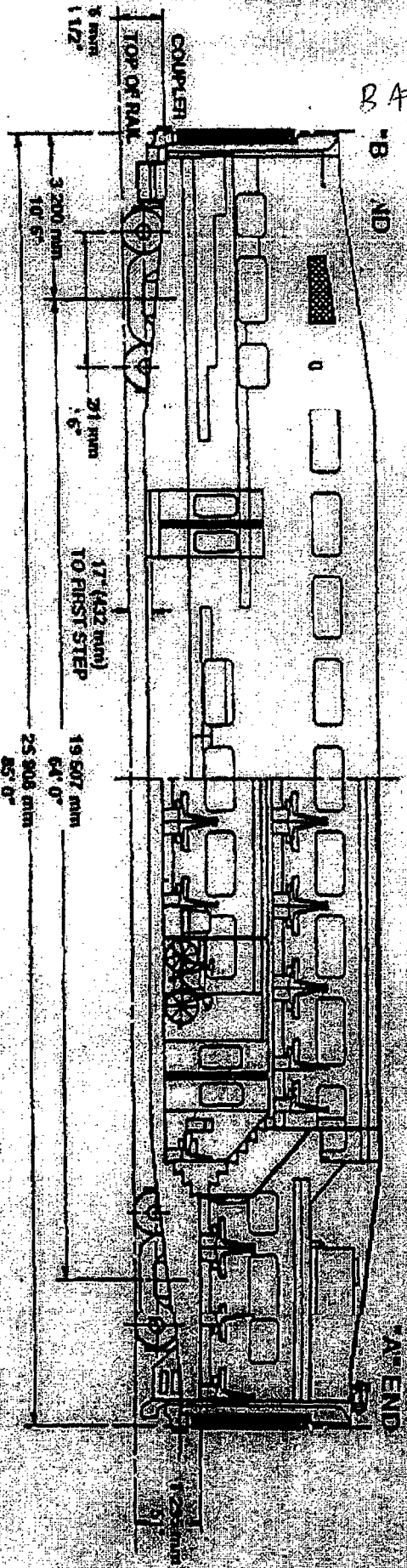
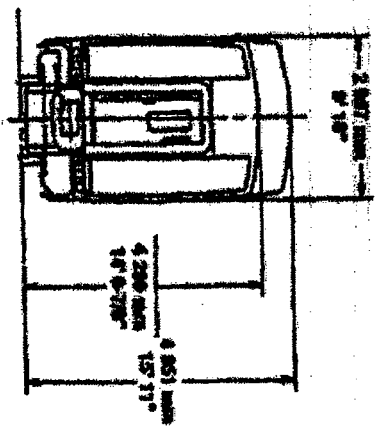


623
NB MAIN

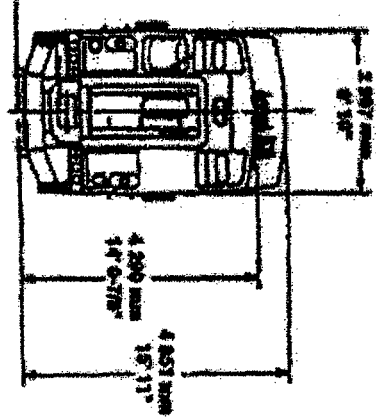
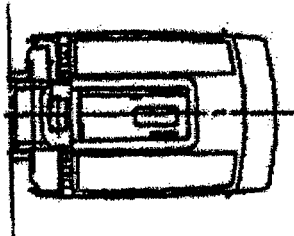
B A7 J ROOM

CAB
CAR

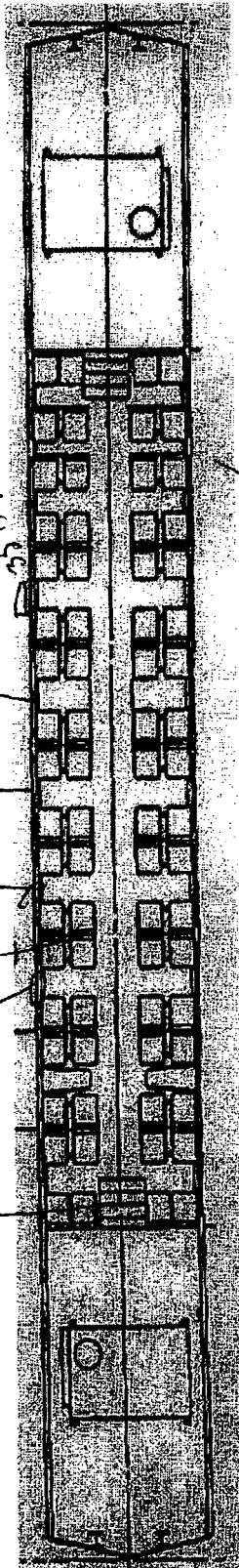




AND



UPPER DECK
PLAN

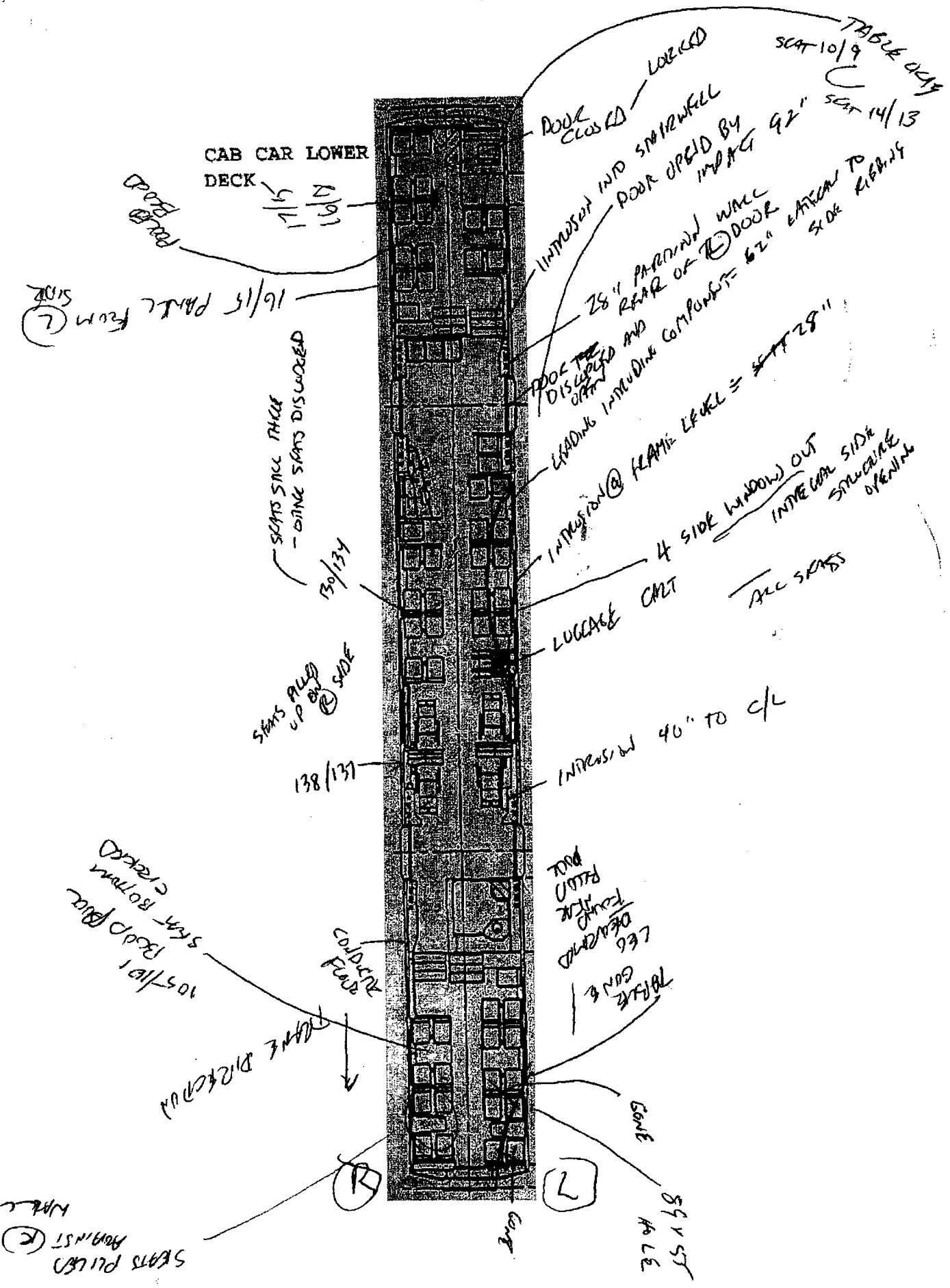


35769
GUESTS OUT
GUESTS OUT
GUESTS OUT
6/70 SEAT BRAC
OUTLINE GUESTS DISINTEGRATED
HORIZONTAL CRACKS
GROUP ON WALL OF STRIPS

ALL SEAT CUSHIONS OF TYPE A
(ALL WINDOWS OF TYPE B)

2

F



CAB CAR LOWER DECK

DOOR BOARD

11/15
16/91

16/15 PANEL FROM SIDE

SEATS SINCE TRACK
- DINING SEATS DISLOADED

130/134

SEATS PULLED UP BY SIDE

138/137

105/101
BOARD FROM SEAT BOTTOM
CRACKED

COLD DUCT FLOOR

FRAME DIRECTION

SEATS PULLED AGAINST WALL

DOOR CLOSED - LOCKED

INTRUSION INTO SWIRLWELL
DOOR OPENED BY IMPACT 92"

TABLE ONLY
SCAT 10/9
SCAT 14/13

28" PARANOID WALL REAR OF DOOR
LOADING INTRODUCING COMPONENTS 62" EARTH TO SIDE RIBBON

INTRUSION @ FRAME LEVEL = 28" 25"

4 SIDE WINDOW OUT
INTERIOR SIDE STRUCTURE OPENING
ALL SEATS

LUCCAGE CABT

INTRUSION 40" TO C/L

TABLE GONE
3 GONE
LEG CHAIRS
FRONT
FRONT
FRONT
FRONT

GONE

89 v 57
HOLE

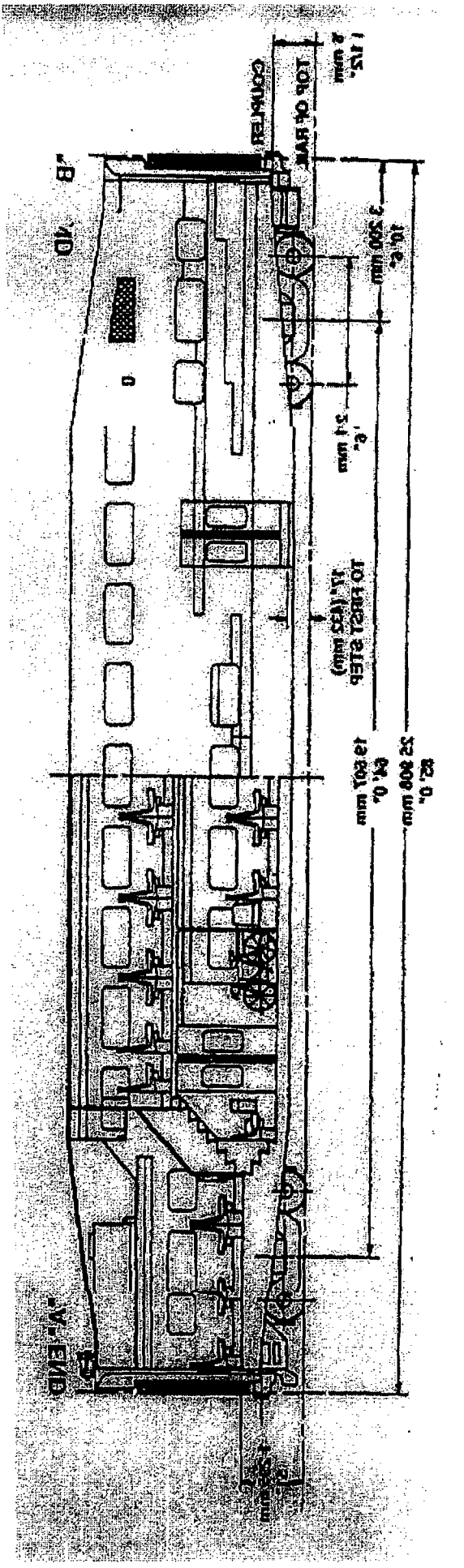
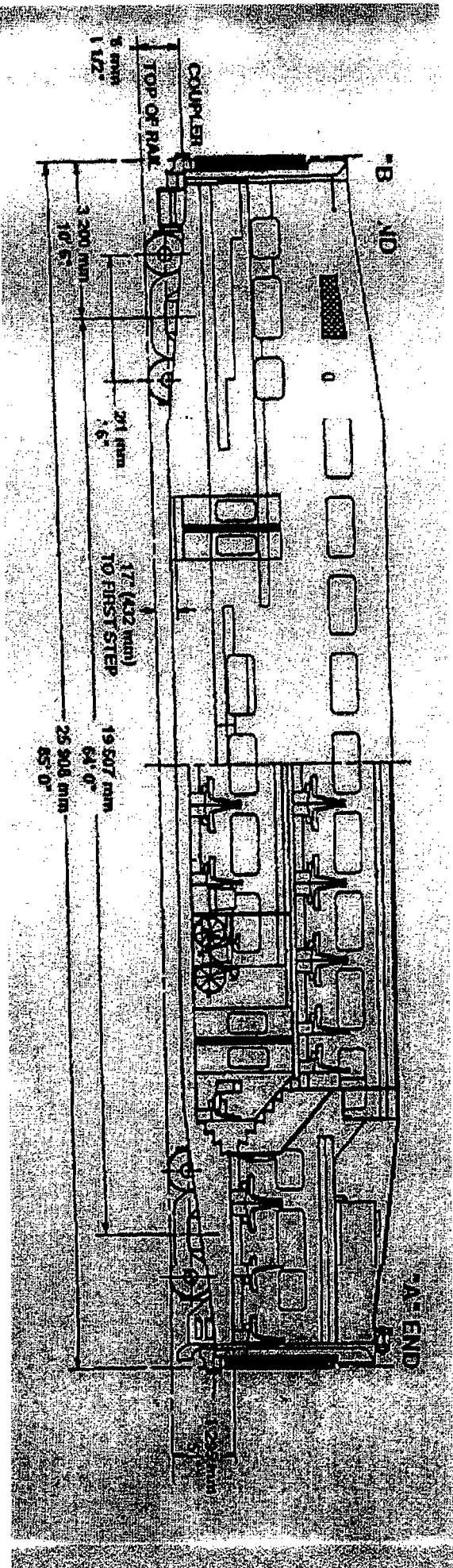
GONE

7

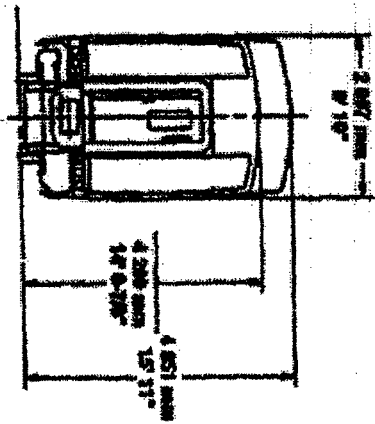
7

177

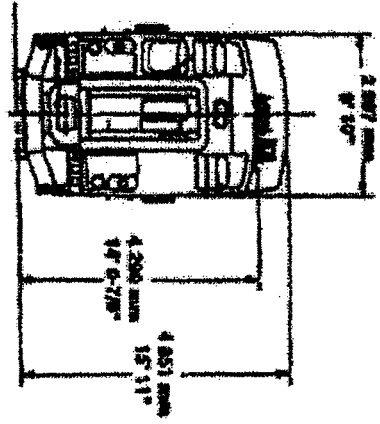
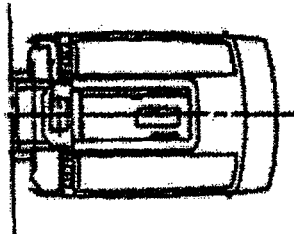
TRAILER
CAR



177



20

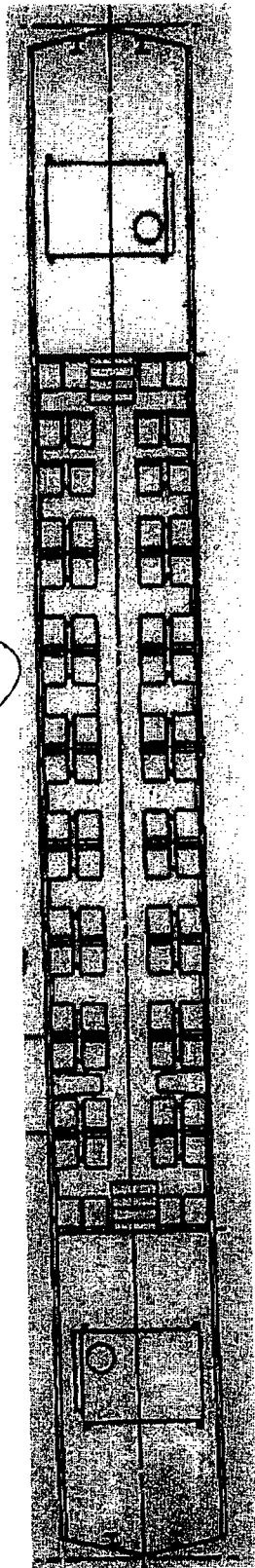


(77)

UPPER DECK
PLAN



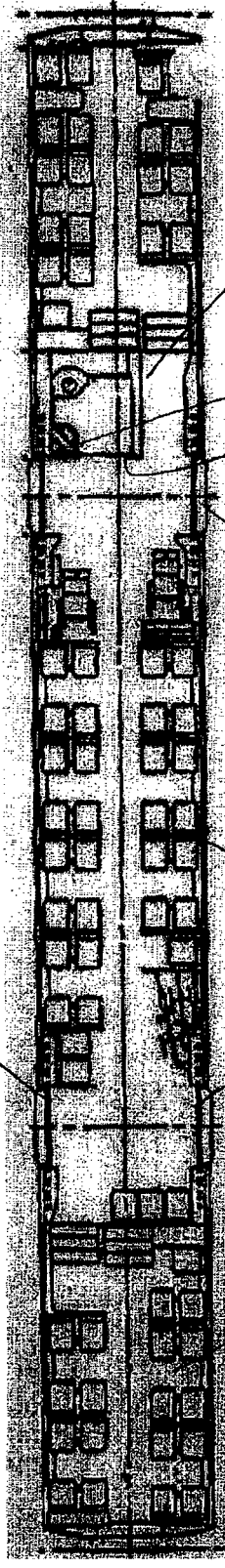
R



177



TRAILER CAR
LOWER DECK



HAMMER/SAW
ARTE CUT OUT

R

BELOW IN SINK
HEAD IMPACT
BLOOD STAIN

E/DOOR
SEATS
NOT CHAIRS
BO
BEANS

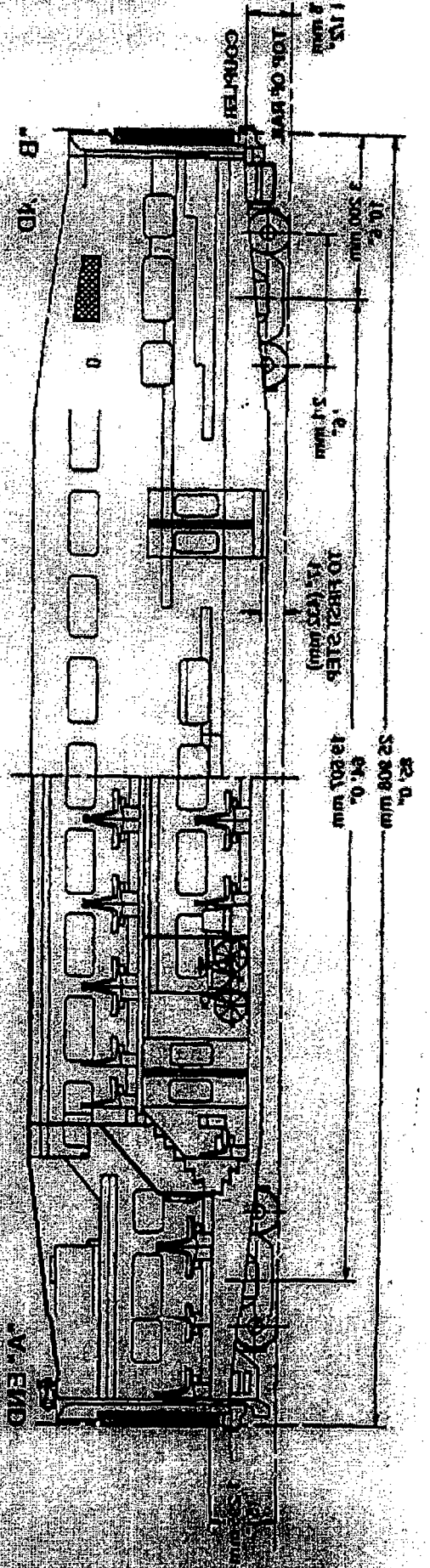
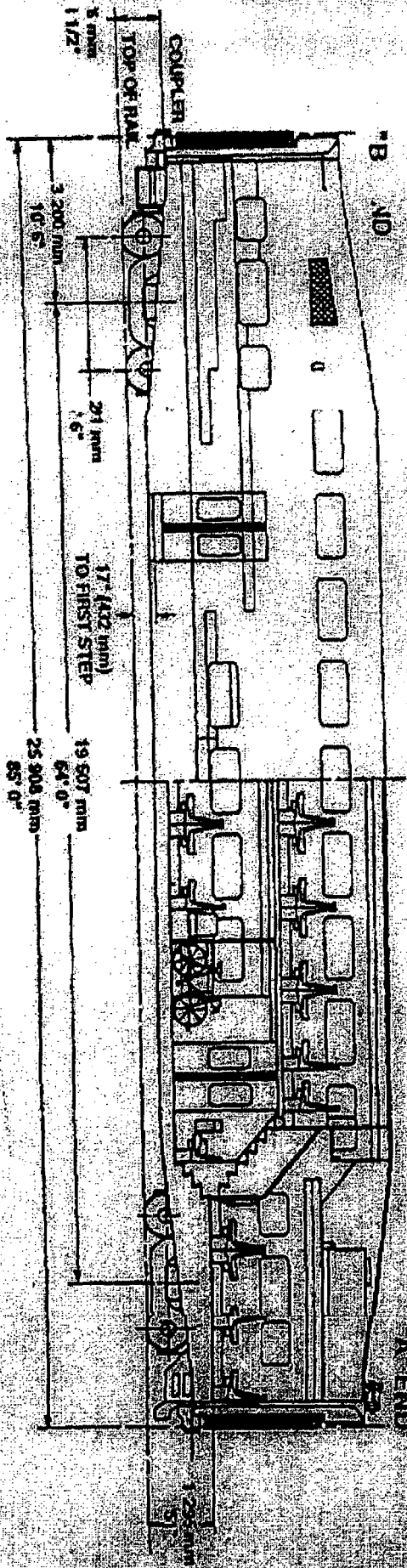
E/DOOR
OPTICAL

E/DOOR OPEN

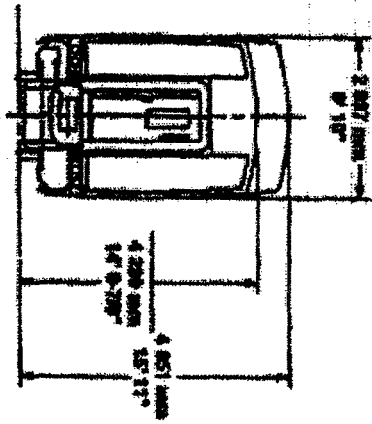
OKAY



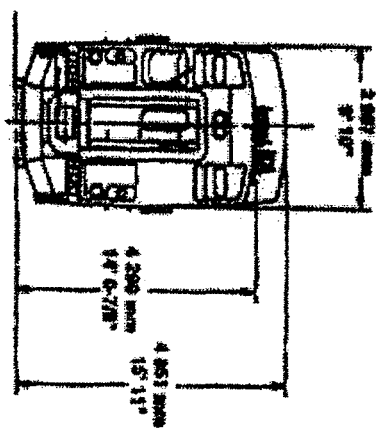
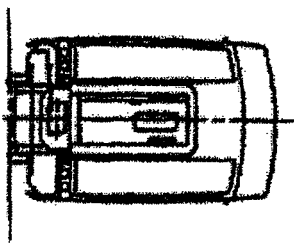
197
~~198A~~
TRAILER
CAR



198



20



197

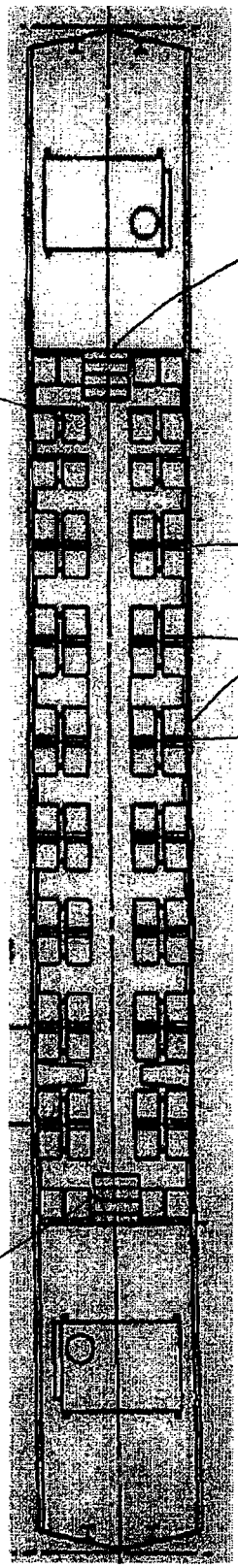


UPPER DECK
PLAN



R

HE OUT



27/BK

ON SECT BAL

3/BK

35/FLUID

39/FLUID/MORFUP

HE RETURN DUCT DOWN / RIGID

197

(B)

DAMAGE FROM FEW GAD

TRAILER CAR LOWER DECK

ALL DOOR WINDOWS OUT
BLOOD SPATTER
BLOOD ON STAIR
BLOOD ON WALL

part of blood

(7)

TOWEL IN BLOOD

ALL BLOOD
1300/1310

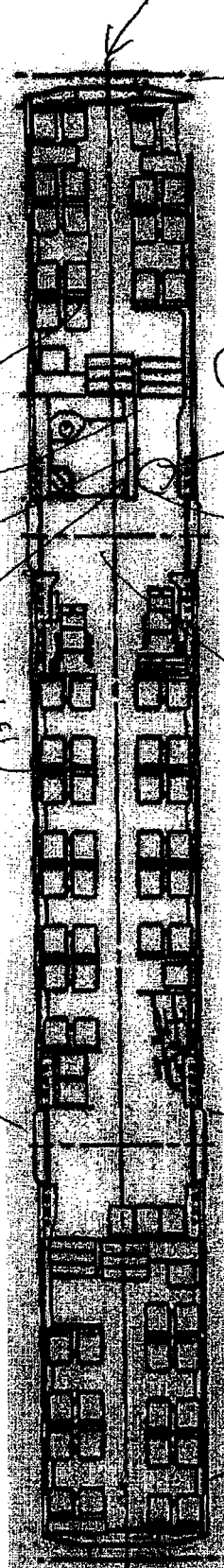
VE
11/10/91
019

E/DOOR
FRAM

(A)

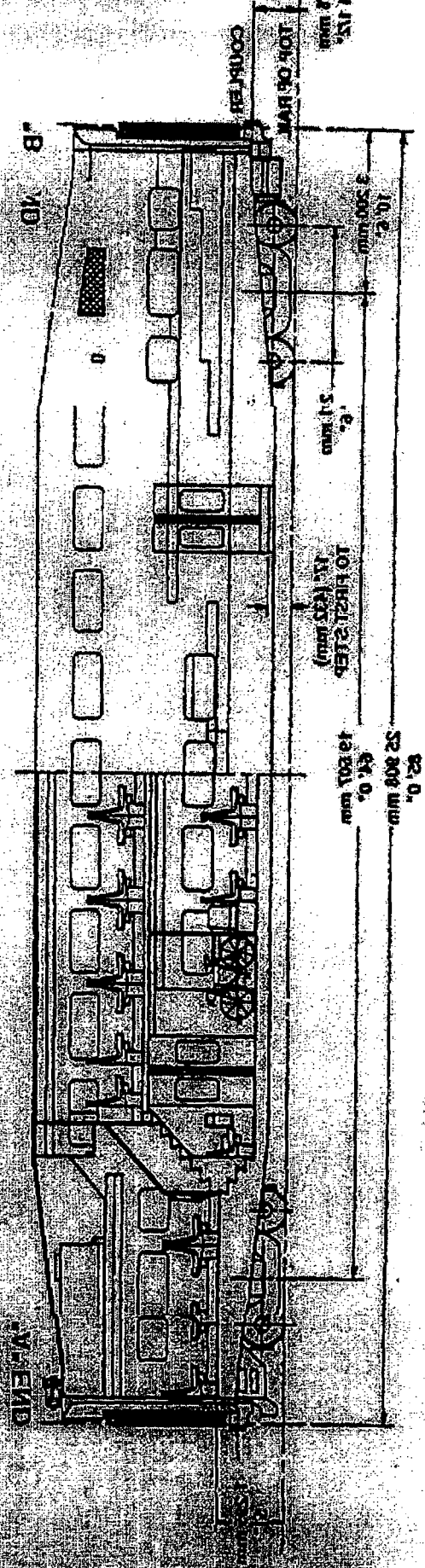
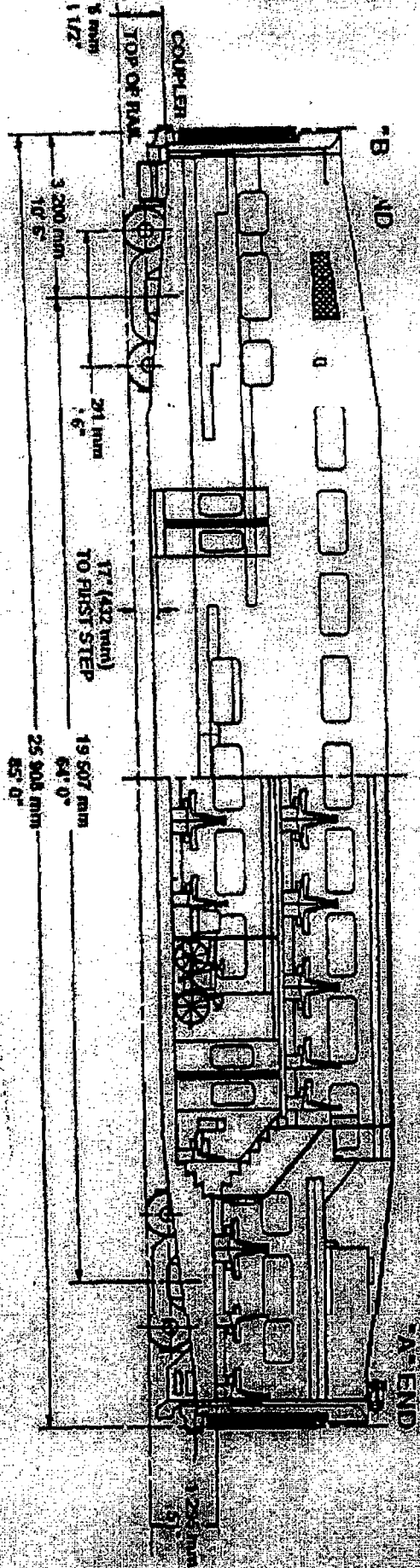
CRASHED
MIDWAY

BACK
SIDE
WALL

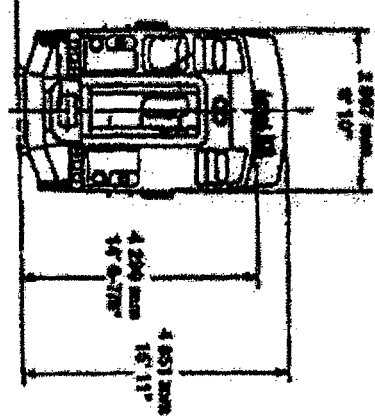
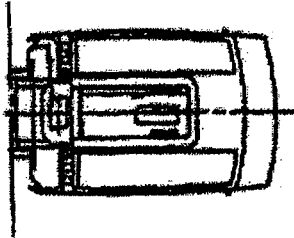
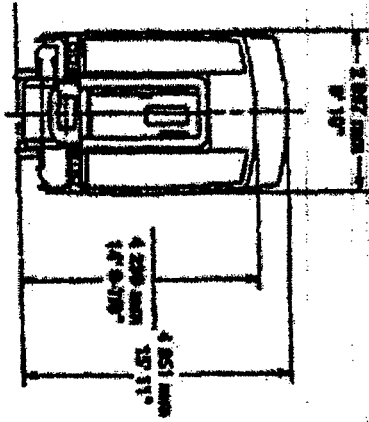


148

TRAILER
CAR



148

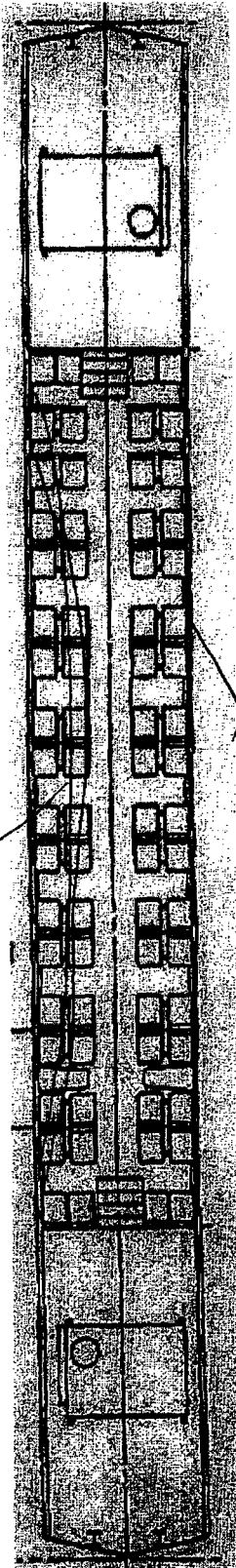


148



UPPER DECK
PLAN

R



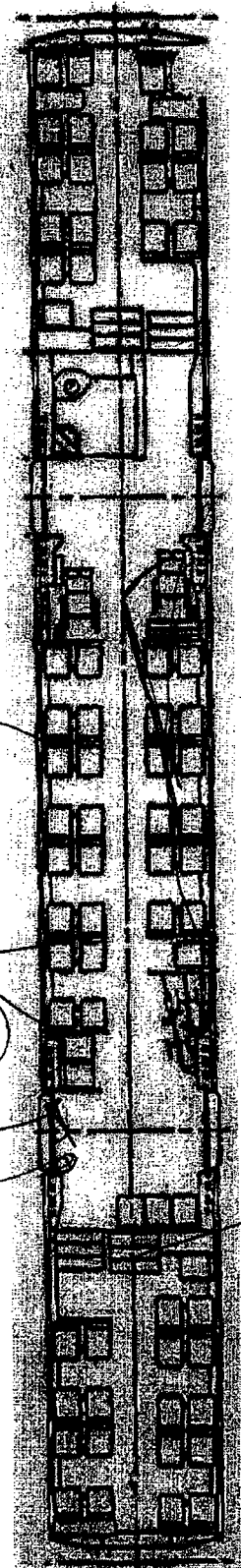
Jump
down
to
DECK
02 x C6

DOWN
TO
DECK
02 x C6
LIGHT/VENT
KIDSS
52"

871

148

TRAILER CAR
LOWER DECK



134 Seats

145/146
147/148
149/150
151/152
153/154
155/156
157/158
159/160
161/162
163/164
165/166
167/168
169/170
171/172
173/174
175/176
177/178
179/180
181/182
183/184
185/186
187/188
189/190
191/192
193/194
195/196
197/198
199/200

START BAR
START BAR

141

(K)

DOOR MARK

PILE OF GEAR

605" 1 standard

ALL ROOT PARTS
OUT

ALL SEATS
DISLURBED

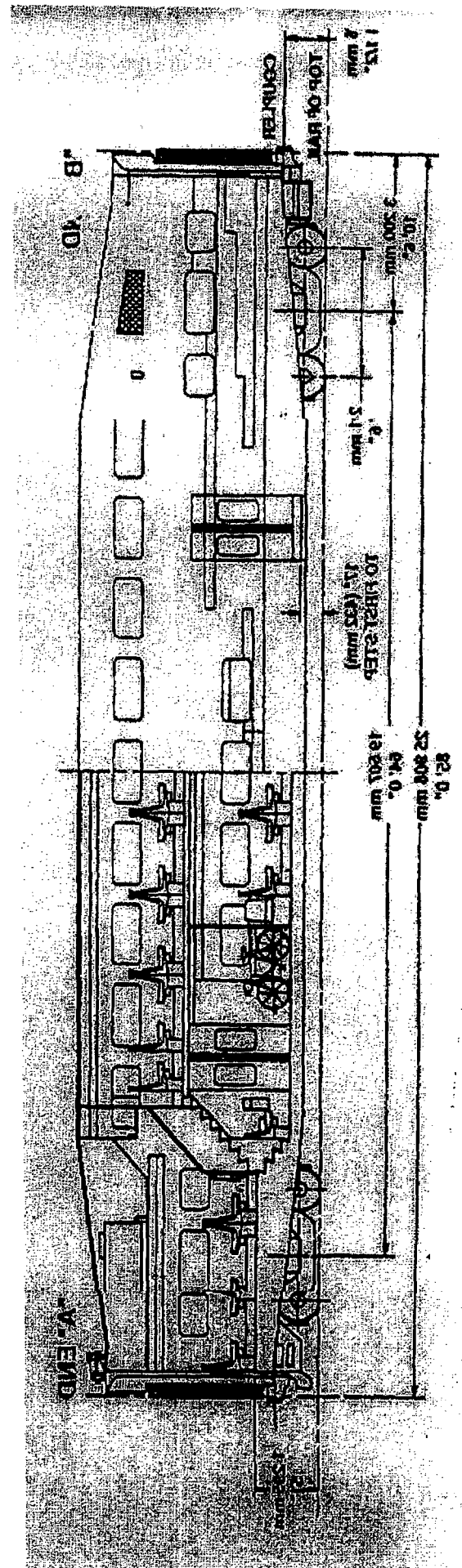
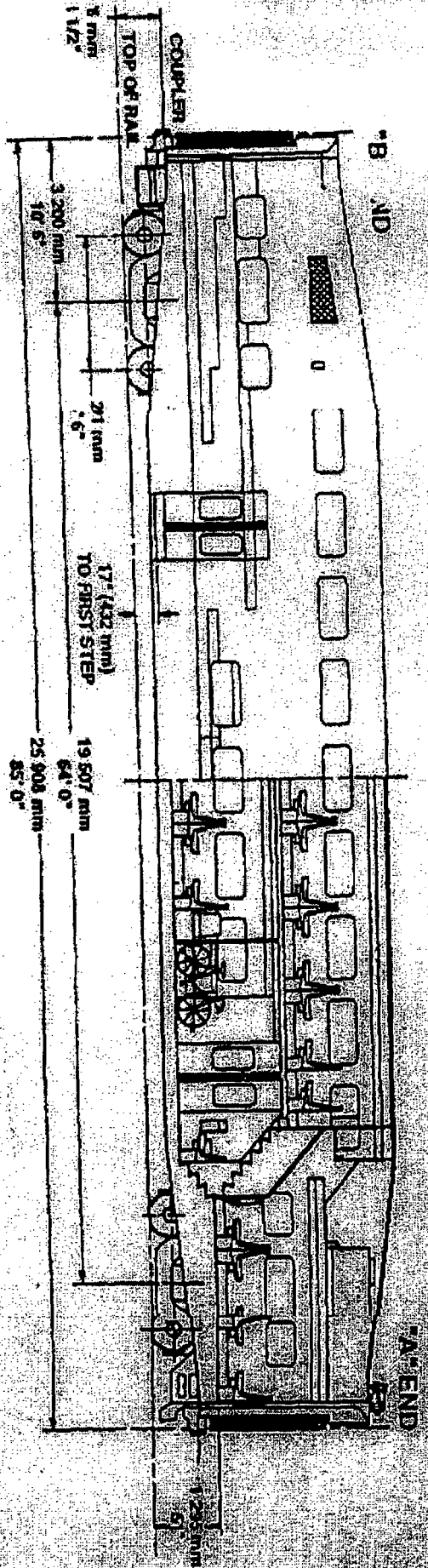
(7)

FIRE AX WINDOW
BEHIND

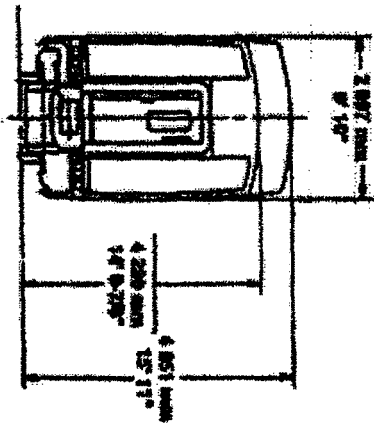
5
START GROUPS
GONTZ



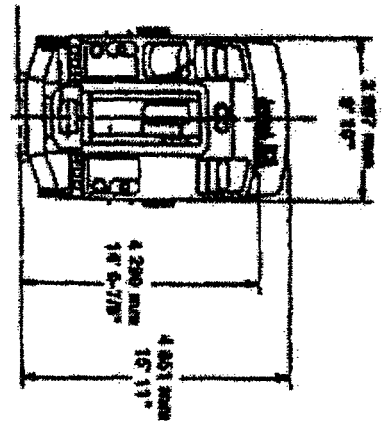
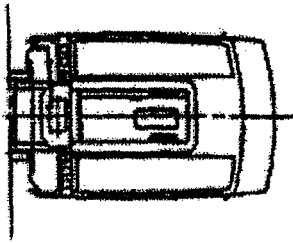
133
TRAILER
CAR



133

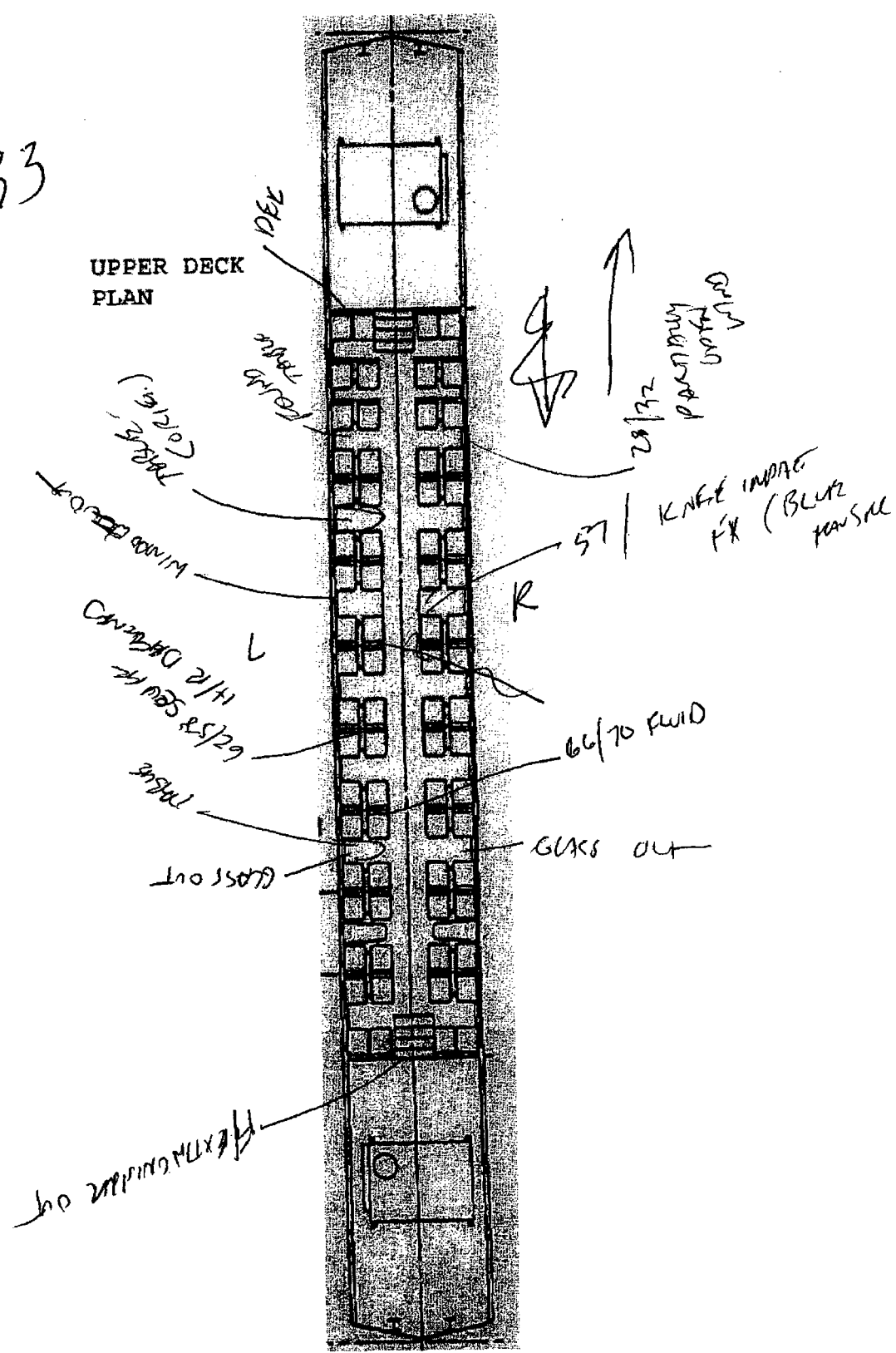


13



133

UPPER DECK PLAN



STAFFORD
SOUT

STAIRS 11/7
CORRIDOR

44" LOW INT.

VERTICAL
INT
LIGHT
RIDGE
55"

1/2 CRACKED
WINDOW CRACKS (MARKET MARK)

TISSUE
BUBBLE
12

133 133

TRAILER CAR
LOWER DECK

133

EYEBROWS

MIRACUL
OFF

BRACKED BY
OCC. CONTACT

MIRACUL
OFF

WALL SEP

SE1/131

9 3/4 x 12 1/2
KITS

WINDOW
OUT
134/130

NO WINDOW
123/120 CRACK

NO WINDOW
123/120 CRACK

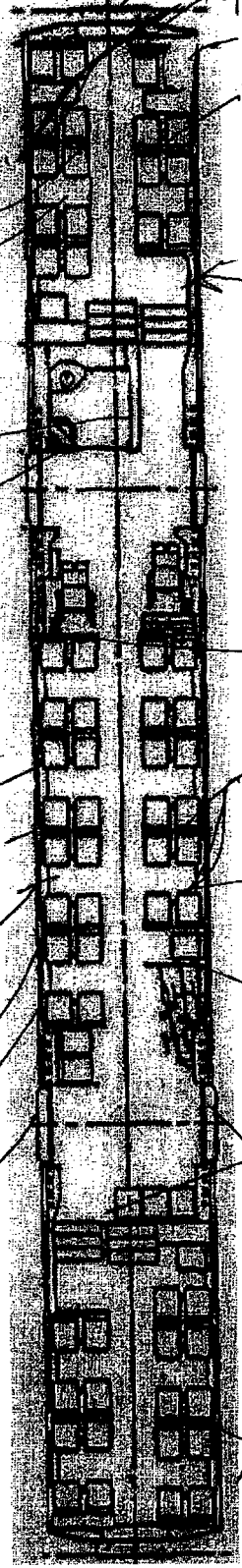
CRACK 0/2

PARTIAL
CRACK

FRAMING SAW CRACK/
FURNITURE CRACK

CRACK 2 1/2

AG
133
133
FURNITURE
MARK



GLENDALE, CALIFORNIA
Dynamic Science, Inc. No. 013
Volpe, John Hopkins/FRA

Injury Causation Study Field Notes

Crash Date: January 26th, 2005
Crash Time: 0602 Hours (6:02 a.m.)
Crash Type: Metrolink Train No. 100 Southbound impacts Jeep Cherokee
Parked perpendicular on tracks and derails impacting northbound
Metrolink Train No. 901. The lead car of Train No. 100
subsequently impacts stationary Union Pacific locomotive

**Dates of Equipment
Inspections:**

01/27/05 through 01/29/05
Note: The order in which the derailed cars were inspected does not
necessarily follow the order of the pre-derailment consist. The
interior of Northbound train No. 901 was initially inspected
followed by the interior inspections of Southbound Train No. 100

Documentation by:

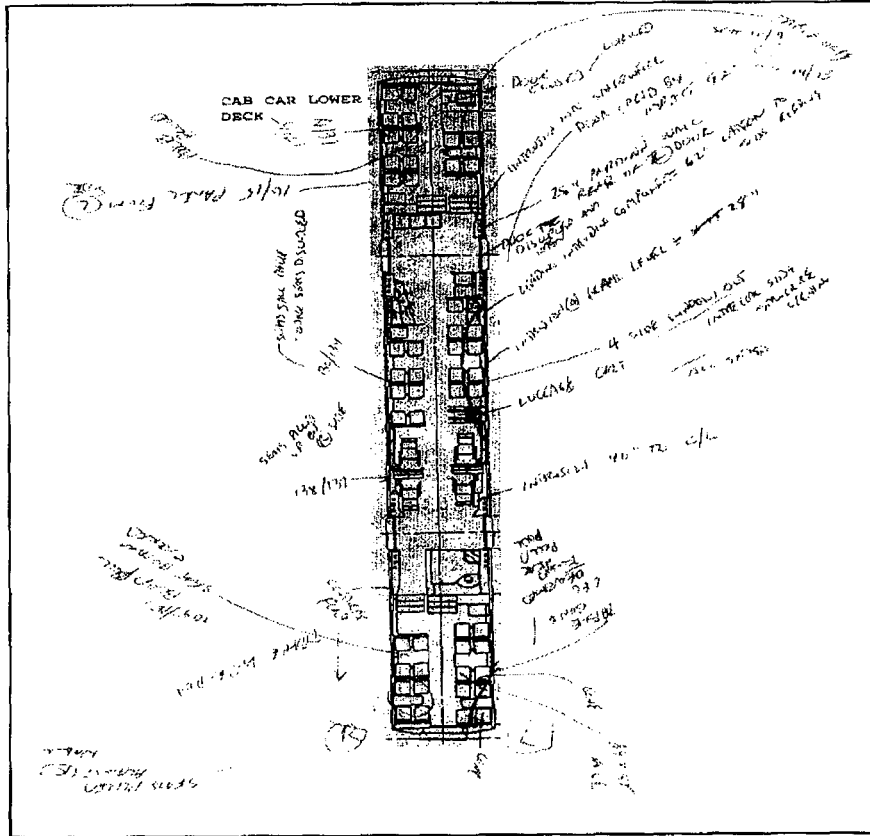
Joseph Kausch, DSI
James Perry, DSI
Harold Herrera, DSI
David Tyrell, Kari Jacobsen, Daniel Parent/ Volpe
Michael Kleinberger/ John Hopkins

The scene and exterior vehicle documentation will be documented in the body of the Final Report.

Car No. 623/ Northbound Train No. 901 (4th car in consist): The interior inspections initiated with the inspection of Coach No. 623. The DSI investigators entered the car through the left front lower side entrance/exit doors and initiated in the foyer/ vestibule area. The documentation process commenced as the investigators proceeded rearward in the car. The side, longitudinal rib structure intruded laterally (immediately forward of seats 130 & 134) 27 inches. Forward of this area was the leading intruding component which comprised of 62 inches of lateral displacement to the left side ribbing structure. The side re-enforced structure actually intruded approximately 12 inches right of the vehicle centerline. Massive integrity loss was noted through the left side wall as a result of the train to train impact forces. This resulted in numerous potential avenues for occupant ejection.

The seats along the left side of the car were heavily damaged, almost beyond recognition. Only

the aluminum seat anchor structure remained and was heavily deformed to the right, but still attached to the left side longitudinal re-enforcement beam structure. The actual fiberglass seat structures and cushions were piled up against the right side wall surface of Car No. 623. All left



side windows in the lower level were completely displaced due to the impact.

The left rear side entrance/exit doors completely separated due the impact and the opening was approximately 92 longitudinally. The trailing edge of the door was “snagged” which increased the longitudinal displacement and resulted in the left door opening. The partition door rearward of the left rear side entrance door intruded laterally 28 in.

Although the lower level area sustained severe deformation resulting in numerous intrusions and integrity loss, there were no apparent areas of occupant contact or indications of sustained trauma.

Moving upward via the heavily deformed stairwell and proceeding rearward to the lower level mezzanine seated area, the DSI investigators proceeded with the documentation process.

There was a large amount of blood and body fluids noted to the lateral aspect of right side seats

16 & 10. Heavy occupant loading evidence was identified to the lower area structure of the right side seats. It is suspected that a deceased 39 year old male (autopsy No. 2005-00768) may have been found in this region, possibly sprawled in across seated areas 16 & 10. This lower seat area was deformed and it appears likely that a passenger who was seated at left side seat No's 13 & 14 responded by moving to the right side of the car as the vehicle rolled onto its right side plane. All seat cushions from 13, 14, 10 & 11 separated and were thrust to the right side of the car.

It was in this lower rear, mezzanine area that a 32 year old Hispanic male passenger was riding. He was seated forward facing on the right side of the car, in a window seat. This passenger was interviewed via telephone while he was still in the hospital. He stated that his friend was seated in the seats across the isle from him and they were conversing back and forth at the time of the crash.¹

A plastic panel immediately rearward of the left side entrance doors, adjacent to the stairwell separated, traversing the center isle area becoming wedged along seat No's. 16 & 15. There was a large blood deposit noted to this panel.

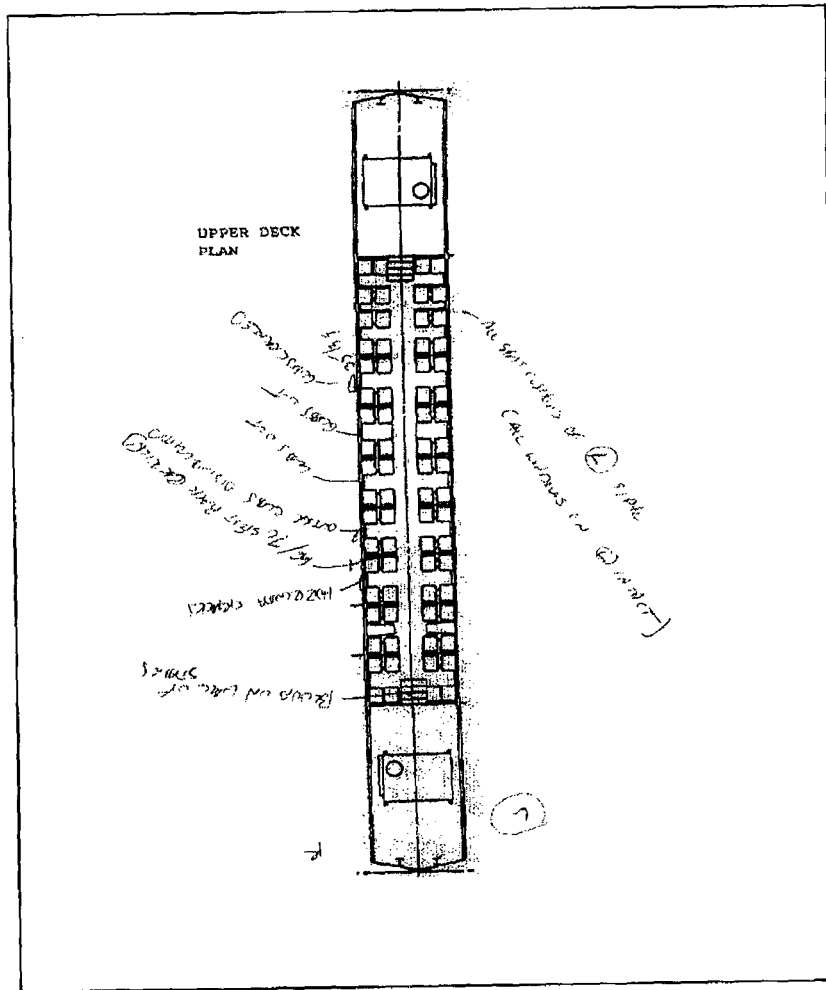
The upper level deck was accessed by moving up the stairwell and the upper level was document moving forward toward the front of the car. Most of the seat cushions on both sides of the car separated from their velcro attachments and were piled up against the right side of the car. All left side windows (upper level) remained in tact with no bond separation. The right side glazing adjacent to seat No's 35 & 39 was cracked. The two right side windows, forward of seats 35 & 39, were separated and missing. The outer tempered glazing (right side) was disintegrated. This was adjacent to seats 63 & 62 on the right side. The seatback support to seat No. 66/70 was cracked or fractured likely due to occupant loading. There was a reddish substance identified to the seat back which resembled a human flesh piece. A hemident test was performed to substantiate whether it contained human blood or not. The test proved to be negative.

Moving forward and exiting the upper deck of car No. 623 via the forward stairwell area, there was a blood transfer or smear noted on the right side of the stairwell. This could likely be a hand smear from an occupant during the egression process.

The lower, front mezzanine area was accessed and there was large blood deposit noted to the right side seated positions adjacent to seat 97 on the right hand side. Moving forward of this area, on the left hand side, there was a large gapping hole present to the left side plane/ corner area.. This hole measured 89 in. x 55 in. which resulted in a large area for possible occupant ejection.

A large blood deposit was noted against the right side wall, adjacent to seats 98/97. There was a cigar that was stuck or pasted to the wall due to the drying blood deposit. There was large amount of seating material and debris noted to have been piled up against the right side of the car adjacent to seats 106 & 105. The left roof side rail/lighting air ventilation ridge intruded laterally 36 in. into the forward, lower level mezzanine area (refer to Figure 2).

¹ This interview will be detailed in the interview section of the Final Report



Coach Car No. 148/ Northbound Train No. 901 (3rd car in consist): There was heavy left side deformation due to the train vs. train “raking” type impact. DSI investigators initiated the inspection of this car by entering the rear lower level side entrance/ exit doors on the left side of the car.

The left side interior wall surface intruded laterally approximately 65 in. The lighting/ air ventilation ridge intruded laterally traversing the entire width of the vehicle. The large left side gapping hole resulted in numerous avenues for potential passenger ejection.

Blood deposits were noted to the right side window pillar, adjacent to window seat No. 134.

There was a large amount of ballast and outside debris noted to have entered through the right side window, rearward of seat No. 126. Through initial review, it appears that this may be the region that a deceased 53 year old male passenger was located, partially buried in ballast and debris (autopsy report No. 2005-00768). The light/air ventilation ridge moved laterally 89 in. from the extreme left side of the car to the extreme far right side of the car. In addition, a 63 year old male that was later interviewed via telephone from his hospital bed, relayed that he was in this region, seated on the left side of the car. Upon impact, he was thrust across the aisle and into the right side seated areas. He was later back boarded out of an Emergency exit window.²

Approximately 5 seat groups along the left side are completely missing due to the left side impact. In addition, a large amount of ballast entered through the deformed right side/ entrance/ exit door located at the front of the car. The right side entrance/exit door intruded into the foyer/ vestibule area approximately 31 inches. The ballast debris was distributed up the hallway towards the stairwell which leads to the raised, forward mezzanine seating area. This seated area in the forward/ lower mezzanine area was unremarkable for occupant contacts, intrusion or integrity loss. There were no indications of sustained trauma in this area.

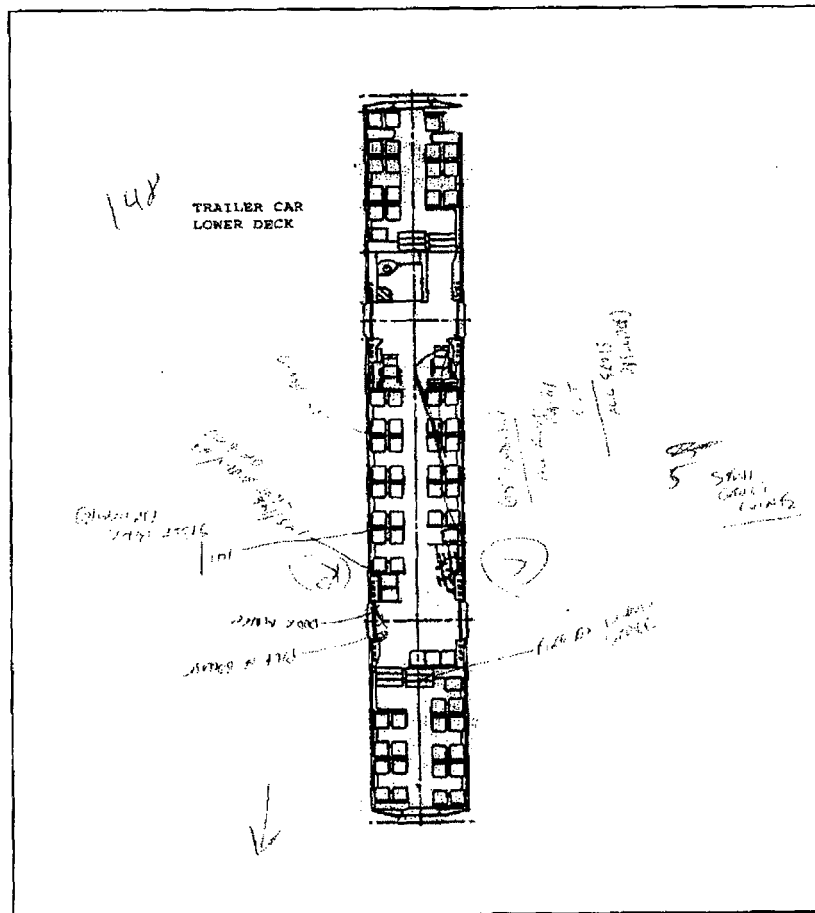
² This Interview will be detailed in the interview section of the Final Report

The upper level was accessed via the forward staircase and the left lighting vent ridge was observed to have intruded approximately 52 in. The right side lighting/ ventilation ridge was deformed vertically downward approximately 29 in. due to buckling.

A large tear or hole in the roof panel along the right side of the car was observed. The hole measured 59 in. x 30 in. in width. This hole was due to direct contact with the collapsed signal mast tower.

A row of seats behind seat No's 64 & 68 are missing and another row of seats further back are separated and completely missing. There is a hole in the left side window which is 17 in. x 11.5 in. This holed left side window designates the actual initiating point of direct contact along the left side plane.

There were no noted areas of occupant contact or indications of sustained trauma despite the



enormous degree of structural left damage and component displacement.

The plastic cover to the left side emergency door opening pull ring was broken and the pull ring was engaged which would open the door. The right side emergency door opening pull ring was not engaged.

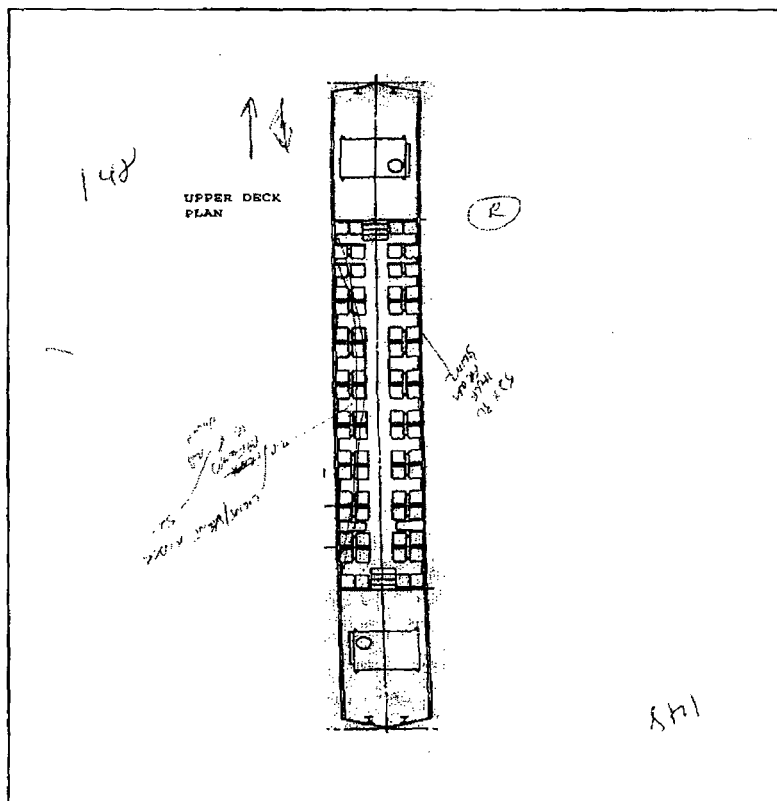
Coach Car No. 177/ Northbound Train No. 901 (2nd Car in Consist): The lower level rear mezzanine area was initially inspected and there were no indications of sustained trauma. There were no identifiable occupant contacts and no intruding components.

The left and right rear side entrance/ exit doors were opened and the emergency pull rings that open the doors were engaged or pulled. The emergency break cover panels on both sides were broken.

A large blood deposit was noted on the seatback support of seat No. 130 on the right side. This contact is located approximately at the mid-point of the car. There is a head impact contact point noted to the door frame edge of the Handicapped Bathroom. This is substantiated by documented hair follicles and blood fluids. There was also blood pooling and spatters noted to the

Handicapped bathroom sink basin. The latching mechanism to the Handicapped bathroom door is operational with no damage noted.

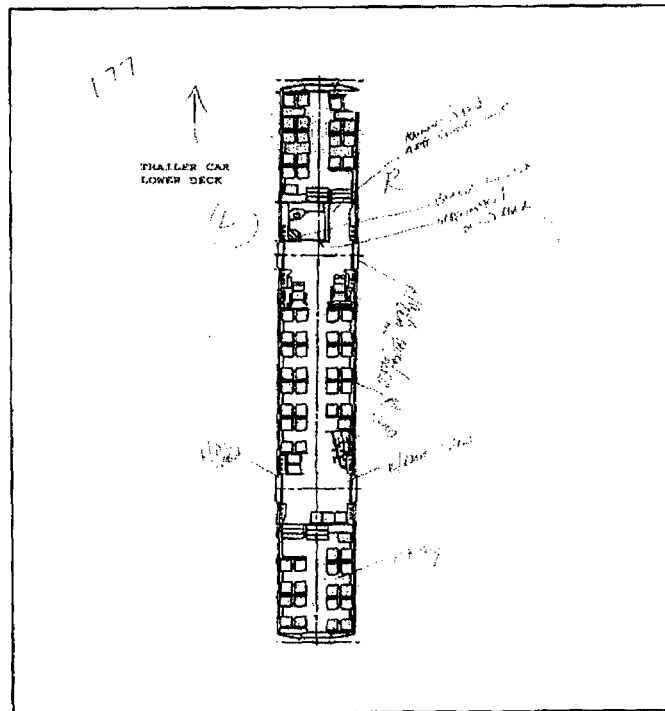
The glass or plastic cover to the emergency pull ring on the right side was broken, however, the pull ring was not engaged or pulled. The panel and gasket that shrouds the sledge hammer and saw was pulled and there

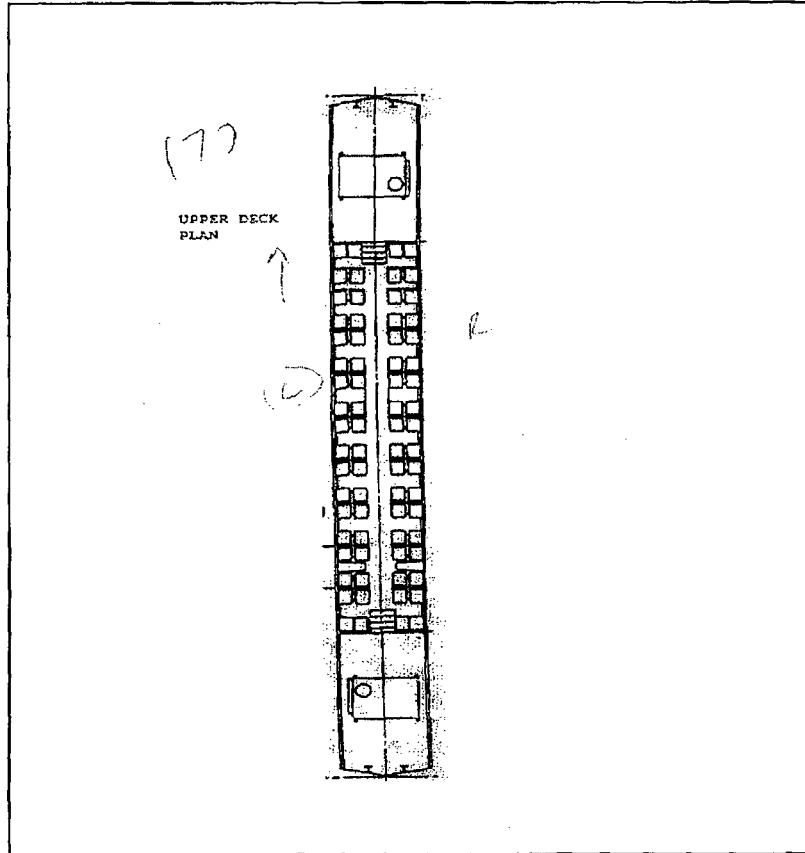


was a blood smear that was documented adjacent to the sledge hammer door panel. The front

lower level mezzanine area was accessed via the stairwell. Like the rear mezzanine area, there were no indications of sustained trauma to the forward, lower level seating areas. There were no intrusions or signs of occupant contacts.

The DSI investigators accessed the upper level via the forward stairwell. The upper level of Coach car No. 177 revealed no areas of occupant contacts. Or indications of sustained trauma. The upper level of this car was void of any intruding components or integrity loss.



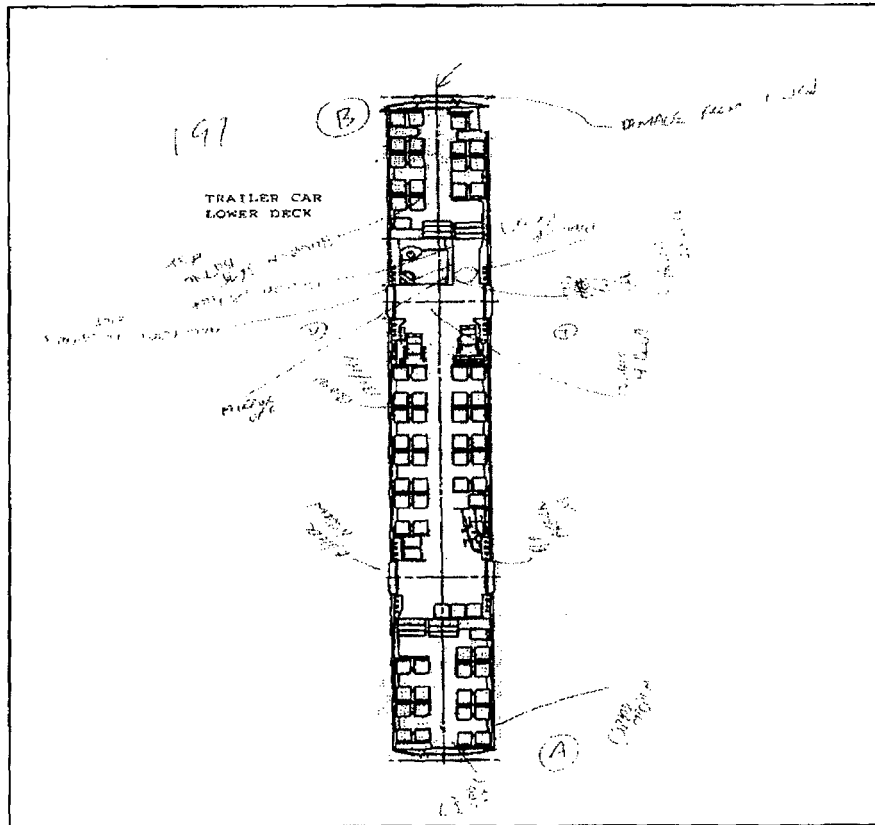


Coach Car No. 197/ Southbound Train No. 100 (3rd car in Consist): The Inspection of this car was initiated by accessing the lower front right entrance/exit door. The inspection initiated at the “B” end of the car, commencing forward.

Blood deposits were noted on seat No. 88 on the right side of the car. The blood was spattered on the seat cushion and immediate floor region of this seating area. There was a blood smear noted to the handrail which accesses the upper level. This likely was the result of passenger egression, post-derailment. Numerous seat cushions were noted to be displaced, but their actual final rest is unknown.

Moving down the stairwell towards the front of the car, it was noted that the panels which cover the sledge hammer/saw and fire extinguisher were opened/broken. Immediately forward of the narrow hallway, a large blood pooling and spatters were documented on the floor surface,

adjacent to the left rear side entrance/exit door. The door to the handicapped bathroom was noted to be operational and the latching mechanism worked. The left wall mounted mirror fell off of its mounts, onto the bathroom floor. There was small blood deposit noted to the leading edge of the handicapped bathroom door frame. This was probably a hand smear that occurred during the vehicle exiting process.



The emergency door opening pull rings on each side of the car remained within the break covers and were not engaged.

Forward of the handicapped bathroom region, there was an area of blood pooling and spatters on the floor along with numerous bloody napkins. There are blood deposits and bloody napkins noted adjacent to seat No. 138 on the right side and a blood deposit/smear was noted to the head restraint of seat No. 134/130, also on the right side of the car.

At the forward lower level side doors, the emergency door opening devices were activated on the left and right rear side entrance/exit doors. The break glass was broken and the pull rings were activated..

The upper mezzanine seated area ("A" end of car) was inspected via access of the stairwell. The stairwell area was unremarkable and void of occupant contacts. The outer tempered glazing was broken adjacent to window seats 04 & 08. Seatback and seat cushions separated from their velcro anchor points. A black scuff mark was identified to the lateral aspect of the most forward seatback support of seat No. 03 (rearward facing seat).

The upper level of the car was accessed via the stairwell at the "A" end of the car. The fire extinguisher door panel above the stairwell was broken and the fire extinguisher was missing. An eyeglass lens was noted on left side seat No. 25 and possible body fluids were detected to the back head rest of right side window seat No. 27. In addition, possible body fluids were also noted to the head restraint on seat No. 31 (window seat/ right side). There was large facial make-up (rouge) deposit along with body fluids noted to the head restraint to right side window seat No. 39. The seat immediately forward of seat No. 39 is window seat No. 35. There were possible body fluid deposits noted to the head restraint here.

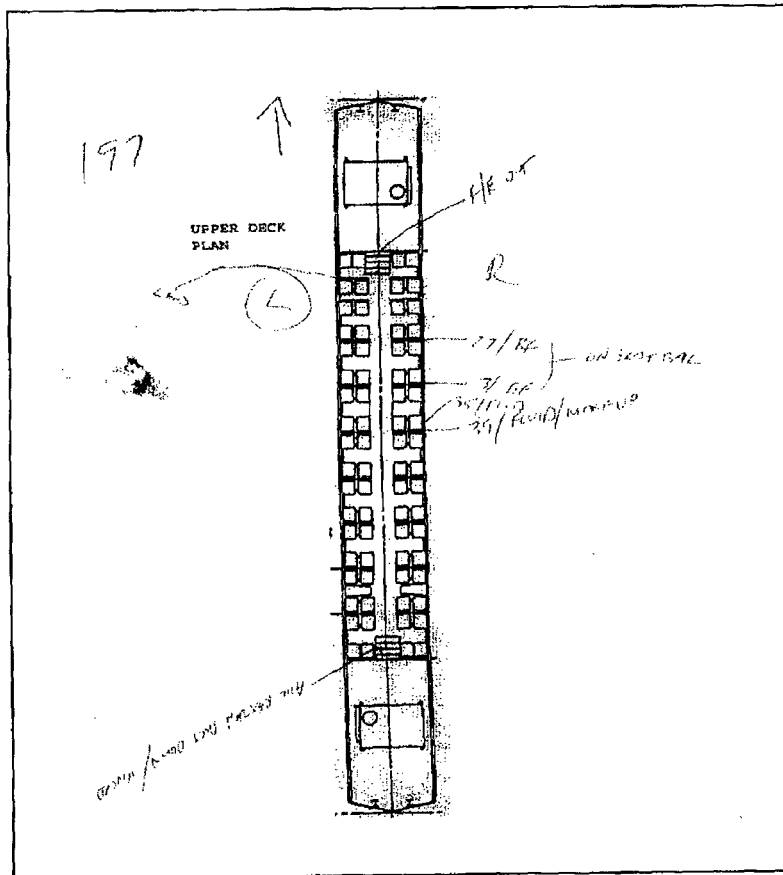
The air conditioning air duct return grate was opened over the stairwell which accesses the rear, lower mezzanine area. There were no intruding components noted to the upper level and no integrity loss that would have offered avenues for potential ejection.

Coach Car No.

133/

**Southbound
Train No. 100
(3rd Car in**

Consist): The rear lower level mezzanine area was initially inspected where there are eight seated positions. A coffee spill was noted to the right side, adjacent to right side seats 100 & 99. There is a black scuff mark noted to isle seat No. 94 immediately rearward of the stairwell. Moving forward down the



stairwell, the panel door for the sledge hammer & saw was removed. Pull ring to panel pulled and gasket removed. The flashlight was also removed which was in the sledge/saw closet. The fire extinguisher from the hallway was removed and was found on the floor by the entrance/exit doors (vestibule/foyer area).

The wall mounted mirror in the Handicapped bathroom was dislodged and fell onto the bathroom floor surface. The mirror above the sink basin was broken and unusual scuffs (surfaces scratches) were noted immediately above the broken mirror.

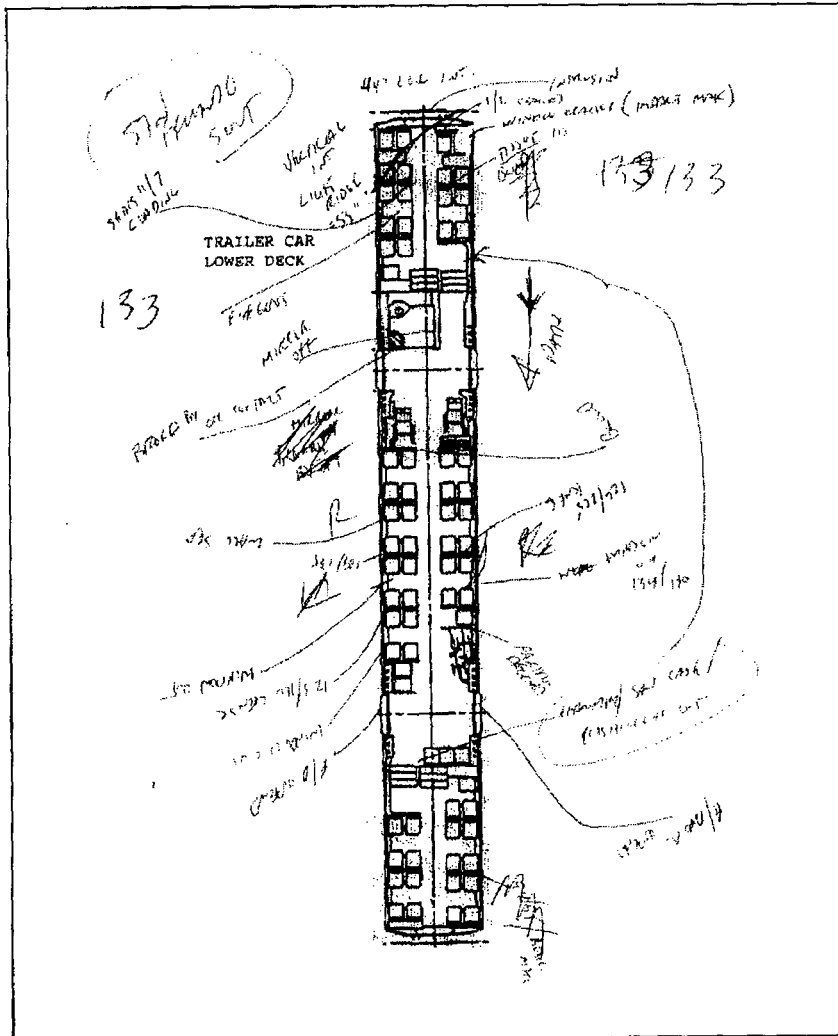
A large blood deposit with pooling was noted on the floor of the vestibule/foyer area immediately forward of the bathroom and adjacent to the handicapped seated area. Immediately forward of the aforementioned foyer area is seat No. 144. The seatback cushion is displaced and blood/body fluids were documented to the padded head restraint. Blood spatters were also noted to a seat cushion which was close to isle seat No. 137. In addition, the head restraint to this seat had residual body fluid deposits.

Both break covers and pull rings for the emergency door opening were in tact and not activated.

Moving forward of this location, several side emergency exit windows were pulled out. The outer tempered glass (left side) adjacent to seat No. 138 and also the window adjacent to Seat No. 131 on the right side was broken. There was a knee impact from a passenger that was seated at isle seat No. 129 on the left side of the car. The fiberglass base of the seat was fractured due to this loading occupant contact. An eyeglass lens was noted on seat cushion of Seat No. 123 (right side/window seat). There was a scuff mark and loading to the seatback support on isle seat No. 125. There is displacement to the molding along with the heavy scuff marks noted. The emergency exit window on the right side, adjacent to window seat 120/116 was pulled and the glazing was fractured.

Both Plastic break covers which shroud the emergency door opening pull rings were broken and the pull rings were activated at thee lower level, forward side entrance/exit doors. The fire extinguisher which was mounted on the forward wall above the three rearward facing seats was removed. The fire extinguisher was found on the floor and had been used.

Proceeding up the stairwell, the forward, mezzanine area was inspected. The forward, left area and seated positions sustained significant deformation due to contact with the northbound train (while leading car No. 625 was angulated). The left light/ventilation ridge and roof panel was displaced vertically downward 55 in. and also intruded laterally approximately 31 in. to the right, nearly to the vehicle centerline. There is a blood deposit noted to the head restraint next to isle seat No. 10 on the right side of the car and immediately across the isle, there is loading evidence to the seatback support of isle seat No. 11 and 7. Blood deposits and broken side seat panels are noted adjacent to seat No's 9 & 2 on the right side of the car. In addition, the window on the right side in this vicinity is shattered. The leading end wall where the door is located, intruded longitudinally approximately 44 inches due to the impact.

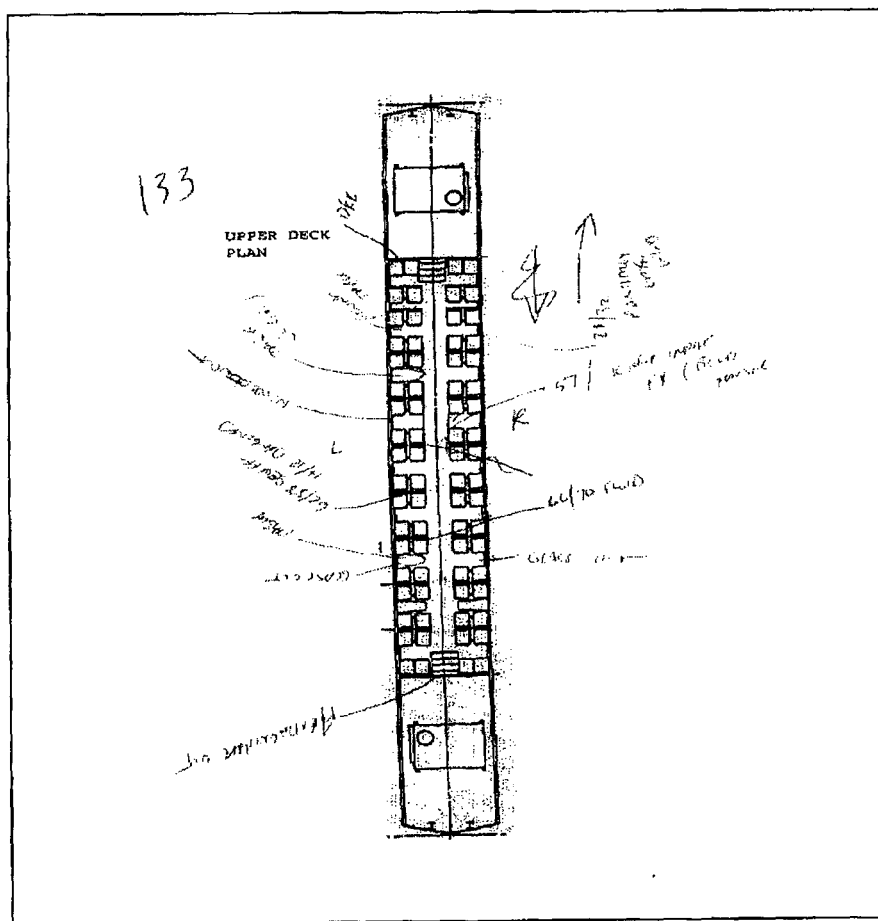


Moving up the stairwell from the lower/ forward mezzanine area, the upper level was assessed and documented. The light/ventilation ridge in the lower front mezzanine area loaded the back/ upper partition wall. This induced impact displaced and fractured the panel. A scuff mark on isle seat No. 26 (left side of car) was noted to the seatback support. An emergency exit window on the right side of the car, adjacent to seat No's 28/32 was partially pulled, but the window did not separate from its bonds or gasket. It appears that the passenger may have had difficulty removing the window or aborted this process when another route was potentially identified. The center table completely separated from its floor anchor bolts at seat No's 39/38 and 42/43 on the left side of the car. The emergency exit window on the left side along seat No's 47 & 51 was removed.

Knee impact damage was noted to right side seats 53/52 and it appears that an occupant who was seated at isle seat No. 57 loaded the fiberglass frame of the seat, fracturing it and leaving a residual heavy blue fabric transfer (likely from blue jeans). Forward of that knee impact, opposite left side, the seatback support to isle seat No. 62/58 is fractured and there are scuff marks noted to the head restraint along with documented body fluids. The emergency exit window adjacent to window seat 63/67 on the left side of the car was removed and the head restraint on isle seat No. 70/66 also on the left side, exhibited body fluid deposits.

Emergency exit windows along the right side, above seats 76/80 were pulled and the glazing was cracked. On the opposite side and adjacent to window seats 83/79, the window fell onto the center table resulting in glazing damage. The fire extinguisher above the stairwell, immediately rearward of the air conditioning return duct vent grate was removed.

This completes the interior inspection of Coach Car No. 133.



Coach Car No. 625/ Southbound Train No. 100 (4th car in Consist): This car sustained the most significant deformation due to the numerous impacts. The frontal plane of this car initially impacted the jeep that was placed perpendicular on the southbound tracks. The left rear corner was damaged due to contact with trailing car No. 133 and the right rear corner was likely damaged due to contact with northbound Train No 901. The frontal plane subsequently impacted the front of a stationary CEFX freight locomotive (No. 4323) that was facing northerly.

Two separate measurements were taken to ascertain the degree of crush to the front of Coach Car No. 625. Daniel Parent/Volpe, reported that the locomotive encroached or penetrated into the front of Car No. 625 approximately 26 feet longitudinally rearward. A second measurement was taken which further substantiated and confirmed that the crush extended approximately 26 feet rearward to approximately the trailing edge of the left front side/entrance exit doorway.

It should be noted that numerous damaged components have been altered due to the post-crash rescue/recovery efforts. In addition, front end damage was altered due to the vehicle removal process by the track restoration team.

The interior inspection was initiated by entrance through the opening where the left front side entrance/exit door would have been originally. The inspection was initiated at the A-end of the car. There are 15 seated positions (11 on the left side and 4 on the right side) in the forward, lower level, front mezzanine area. The engineers control room is located in the front, right corner. There were three rearward facing seats located below the stairwell (right side) forward of the foyer/vestibule region. All of the aforementioned seated positions and engineers control room were completely consumed by the frontal impact. These areas were obliterated and were no longer present for any type of inspection. Seven fatalities occurred in this car. One fatally injured occupant, a Sheriff's Deputy, was possibly riding in the rear of the car and was subsequently completely ejected. It is suspected that the other 6 fatalities occurred in the forward section of Car No. 625. These fatally injured occupants sustained massive crushing head injuries to their occipital regions suggesting that they may have been rearward facing at the time of the crash.

The lighting/ventilation ridge on the left side of the car was deformed approximately 9 in. The gapping hole on the left side where the left front side entrance/exit door was located measured 147 inches in length by 87 inches in height. This integrity loss resulted in a large avenue for potential occupant ejection. The gapping hole in the front of the car created by the freight locomotive impact measured approximately 106 in. x 72 in. also resulting in a large avenue for passenger ejection. Seat No. 121 (right side) is a forward facing seat and seat No. 124 is a rearward facing seat. There are large deposits and spatters of blood noted to the head restraints and the seatback supports are fractured.

Seat No's 120/123 are window seats (right side) which were observed to have partially separated from their wall anchor points and there were large bloods to the head restraint. The base of rearward facing seat No. 123 was fractured or cracked. The side edge of the seatback support had hair follicles and blood deposits which was documented. Across the isle (left side of the car) is the lateral facing jump seat. This seat is immediately rearward of the bicycle storage bench.

There was a very large blood deposit with hair follicles and body fluids noted to the seatback support. Blood spatters from this impact were found on the emergency side exit window and bicycle storage area. There was a sizeable (~ 2cm) piece of body matter (flesh deposit) noted just below the emergency exit window pull handle.

Immediately rearward of the aforementioned jump seat is isle seat No. 125 which exhibited heavy loading damage to the seatback support (cracked/fractured). The seat adjacent to 125 is rearward facing seat No. 126. The previous mentioned blood deposits & matter on the jump seat may have been from the occupant seated in No. 125. Immediately rearward of seat 125/126 are forward facing seats 129 (isle) & 130 (window). The seatback to seat No. 130 is cracked with blood deposits noted to the head restraint and a large blood deposit/pooling to the actual seat area (cushion missing). Isle seat No. 128 and window seat No. 127 are located across the isle from this area to the right side of the car. There were blood deposits to the head restraint of seat No. 128 and the seatback support to No. 127 was fractured with noted blood deposits and spatters to the seat cushions adjacent to this area.

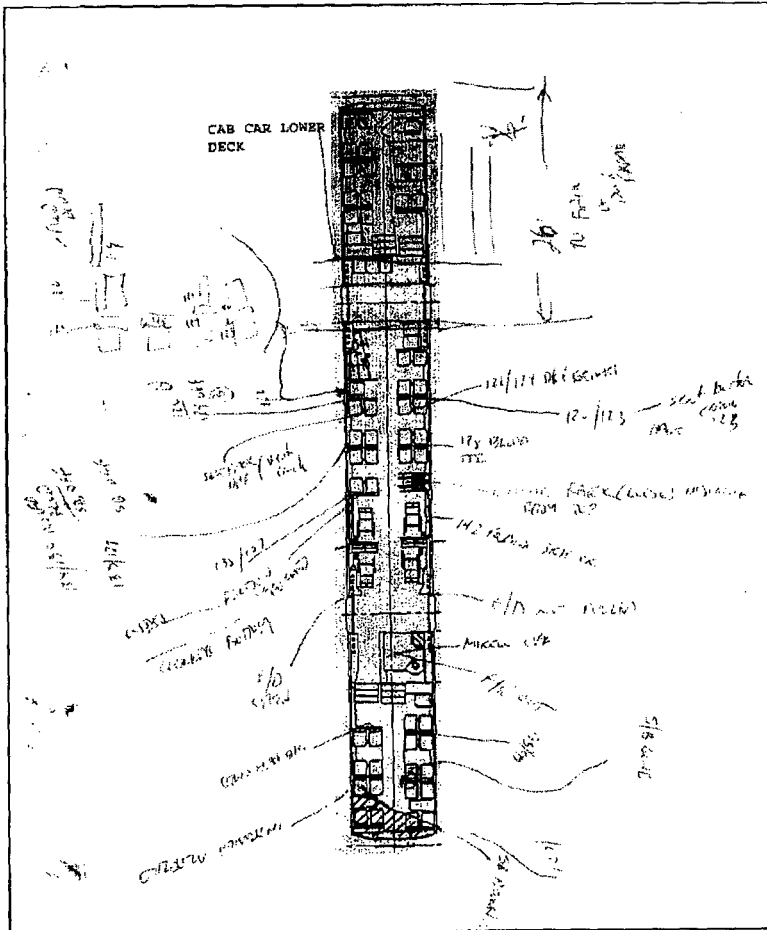
Moving rearward and across the isle (left side of car), the seatback support to isle seat No. 133 was broken due to occupant loading and there were blood deposits noted to the head restraint of seat No. 134. Immediately rearward is forward facing seats 137/138. The seatback support to No. 137 was fractured and the head restraint is displaced. There were a set of eyeglasses that were wedged behind the seatback support of window seat No. 138. The partition wall which backs seat No's 137/138 was loaded from the rearward side. The lower portion of the partition wall was fractured and black scuff transfers were noted. Seat No's 101/105 was located in the rearward entrance/exit foyer area. The seatback was cracked and it is unknown whether this was due to impact forces or occupant contact.

The emergency door break cover and pull ring on the right side was in tact and not activated. The break cover on the left side was broken, the pull ring was pulled and the left side door was open.

The handicapped bathroom was inspected and the door which harbors the waist basket and towel dispenser is fractured. The door opened and the latch/striker mechanism failed. The wall mounted mirror (left side) fell onto the floor. The door to the handicapped bathroom was operational.

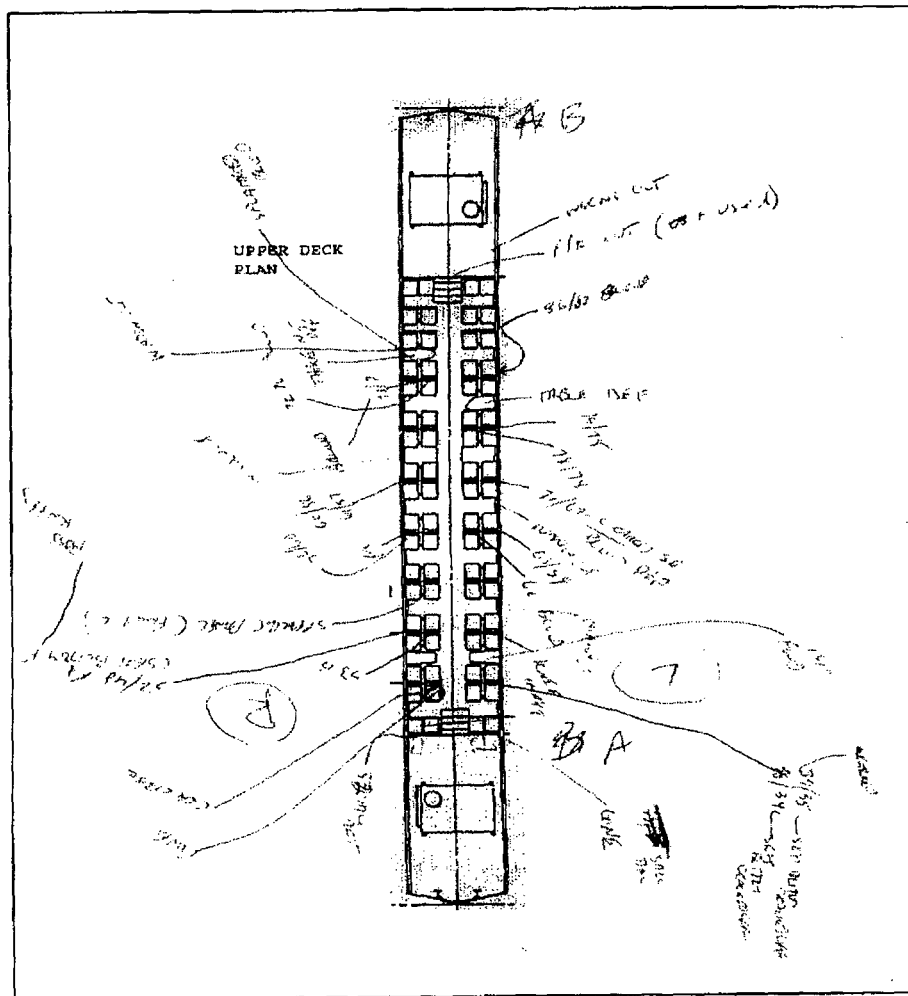
The plastic panel that shrouds the fire extinguisher in the hallway is missing and the fire extinguisher is missing. There was a considerable amount of damage to the lower rear level mezzanine area. The air conditioner unit (compressor) fell down into the seated areas. This was unstable and apparently fell during the post-impact vehicle transport process. The roof panel immediately rearward of the air conditioning air return duct has a large blood deposit with several hair follicles & strands. The right side light/ventilation ridge was displaced downward and was resting on the rear table of the left side seated areas. The downward displacement was measured to be 37 inches. The group of seats located at the left rear of the car are completely missing. Again, it is suspected that it was potentially this area that the deceased Sheriff's deputy was ejected.

The upper level was accessed via the rearward stairwell. The fire extinguisher above the stairwell is missing and the extinguisher was utilized. Head restraints to seat No's 86/82 (isle seat) had residual blood deposits. There is a spider web configuration to the left side window adjacent to seats 86/82. It is unknown whether this was due to occupant contact or loose debris. Post-impact blood



spatters were noted to the exterior surface to the emergency exit window, adjacent to seat No's 80 & 78 on the right side of the car. Rearward facing isle seat No. 77 had a large amount of blood and spatters to the seatback support and head restraint. This was adjacent to the aforementioned emergency exit window on the right side. The center table to seats 82/83 (forward facing) and 79/78 (rearward facing) has been loaded and displaced forward 19.5 in.

The fire extinguisher that was removed from above the rear stairwell was located on the floor between seated positions 81/80 (isle positions) and was utilized. A large blood deposit/body fluids was identified to seats 71/70 which are rearward facing seats (70 is an isle seat and 71 is a window seat). In addition, a sizeable blood deposit (pooling) was noted to the center arm rest area and the armrest was loaded and cracked. The seatback support to 71/67 was fractured or cracked. Blood smears were noted to isle seats 69/65 to the seatback support.



The emergency exit window on the right side, adjacent to seat No's 64 and 60 was removed. The seatback support to seat No. 64 is cracked and the emergency exit window across the center isle and adjacent to window seat No. 63/67 was removed. Blood deposits & spatters were noted to the seatback support of isle seat No. 62 (left side of car). Blood spatters and droplets were also noted to the head restraint to seat No. 57 (right side of car). The seatback support to the adjacent window seat was also fractured.

A speaker panel, that was mounted on the roof/ventilation ridge area (left side of car) completely separated and was found on the right side. There were blood spatters and droplets noted to the surface of this panel. The panel was found between seats 57 & 53. There was blood noted to the seatback support of rearward facing isle seat No. 53 on the right side of the car. In addition, the

seatback support was fractured possibly due to occupant loading. The adjacent seatback support to seat No. 52 was also fractured. The center armrest between seats 53/52 was loaded and fractured due to a possible knee contact from an occupant situated across in seat No. 56/57.

Blood spatters were observed to forward facing seat No. 49 (isle seat) and adjacent seat No. 48. Seat 46/47 on the left side of the car are rearward facing seats and the center armrest is fractured with blood deposits (possible knee contact). The emergency exit window adjacent to this area was pulled. Heavy black scuffing was noted to the side surface of seat No. 46 (left side of car) which was likely due to contact from the side gasket surface of the pulled emergency exit window. Additionally, blood was observed to right side, forward facing seats 41 & 40 and also the seatback support was cracked at the seat bight. The center table at this area completely separated from the floor mounted anchor bolts.

The right side light/ventilation ridge was displaced downward 52 inches due to induced buckling. The center table at left side, seated positions 42/43 (forward facing) and 38/39 (rearward facing) was displaced forward approximately 14 inches likely due to occupant contact. The emergency exit window, adjacent to this table was pulled during occupant egress. A spider web configuration impact was present to the inner laminated glazing surface. The forward area, from the stairwell to the lower, front mezzanine area is completely missing due to the frontal impact with the freight locomotive. This concludes the interior inspections of both northbound Train no. 901 and southbound Metrolink Train No. 100.