

## Coach Areas

Sleeper Bedrooms

Food & Beverage

Toilets & Showers

Common Use Areas

Amtrak® Long Distance Product Features

# Coach Areas

**Coach Areas**

Sleeper Bedrooms

Food & Beverage

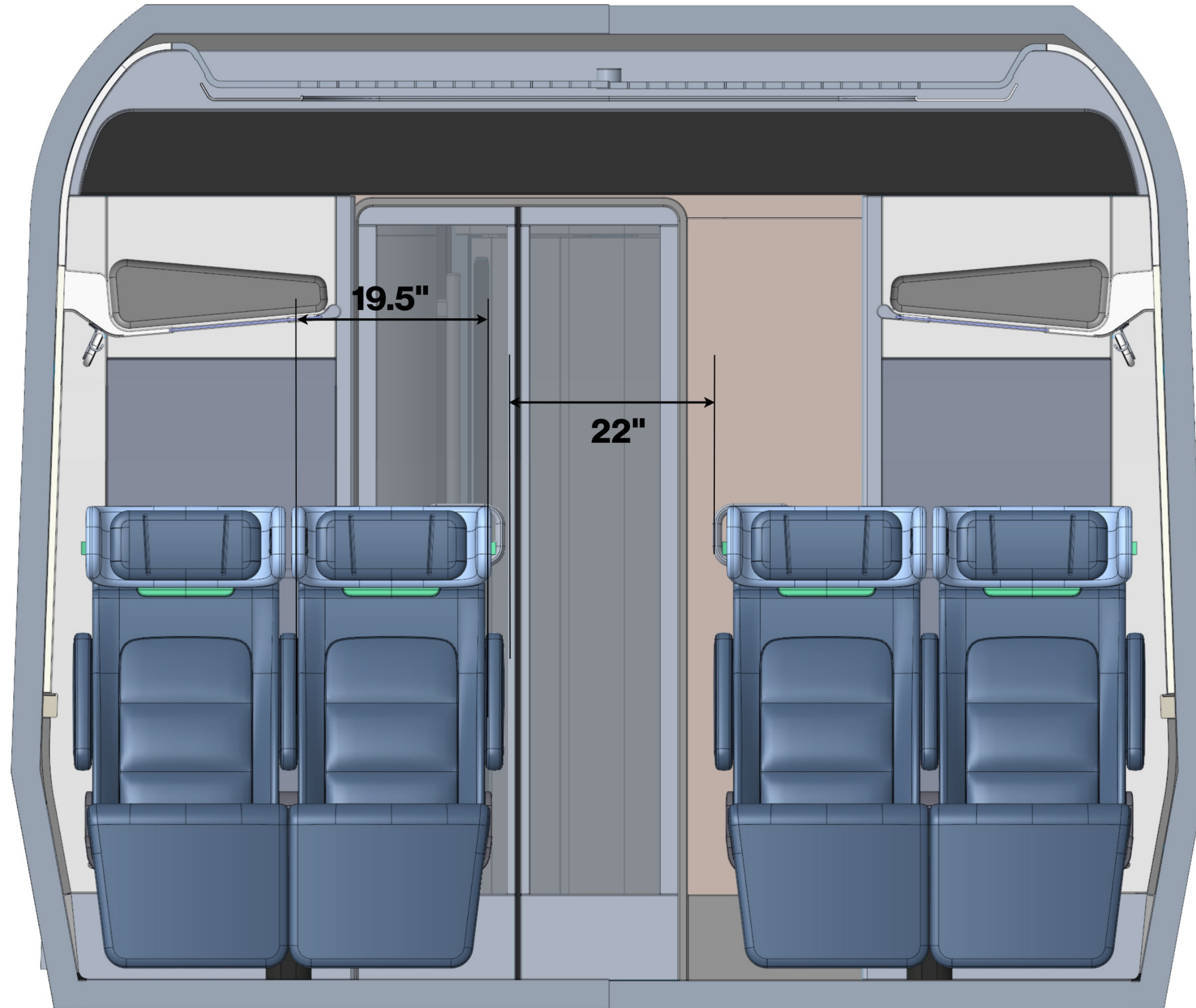
Toilets & Showers

Common Use Areas

Amtrak® Long Distance Product Features

# 01 | Coach

## Coach Seat | General



### **The Coach Seat**

The coach seat is designed to work as pairs with four seats across the width of the train. The seat should be optimized for both day and night time operations.

Features should be included that aid a better night's sleep or support passengers on longer journeys by maximizing comfort and available passenger space.

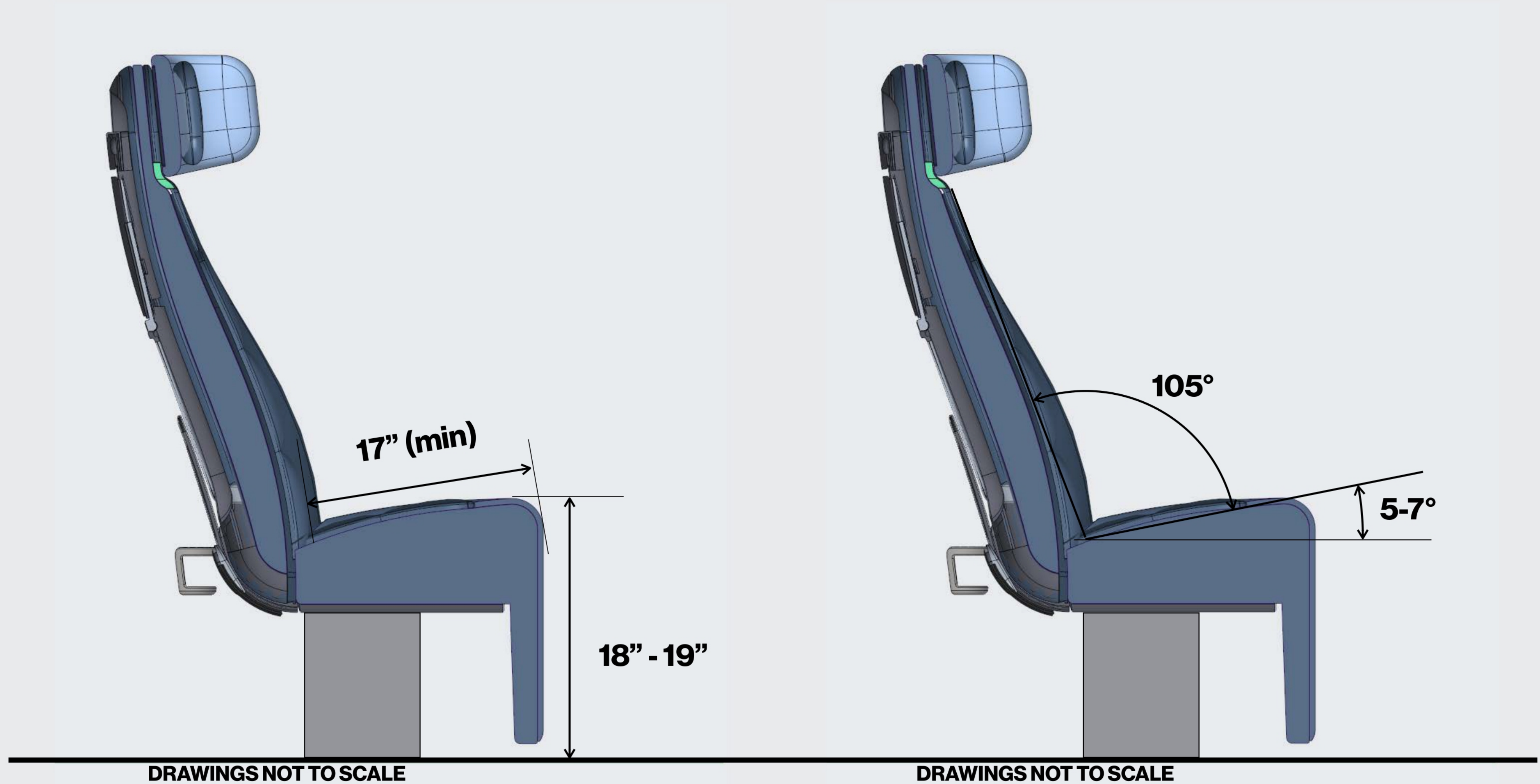
The minimum width of the seat between armrests should be 19.5" when arranged with a minimum aisle dimension of 22".

A single seat option may also be required in smaller numbers to accommodate transfer seats and fulfill requirements around accessible paths in our accessible coach car.

# Coach Seat | General

## Seat Dimensions

All seat dimensions, cushion density/shore hardness will be subject to mockup review, a detailed human factors study and approval by Amtrak.



# Coach Seat | Features

## Coach Seat | Features

### Headrest Pillow

Headrest pillow should be adjustable in height for a range of people sizes. It should have adjustable wings that fold outwards to adjust the width of the headrest.

### Privacy Wing

Privacy wing on the seats should provide good separation between passengers at head level.

### Seat Comfort

Seat cushions are contoured to aid seat comfort. Detailing will be evaluated and judged carefully during the design review process and will be subject to Amtrak approval.



### Hand Grab

Every aisle seat should have a compliant accessible grab for better access along the aisle.

### Reading Light

Positioned so as not to disturb neighbors during night time hours. Passengers should be able to adjust the lighting angle to cast light over the shoulder. Light intensity should have three settings.

## Coach Seat | Features



### 20° Recline

The seat should have a minimum seat recline angle of 20 degrees.

### Seat Controls

Seat controls for recline and leg rest should be located within easy reach of a customer. It should be possible to control the seat back recline and the calf rest independently.

### Folding Armrests

2" wide armrest with a soft wrap around the top for comfort, and a hard-wearing bottom wrap and side cap for durability.

### Seat Recline Mech

Seat recline mechanism should allow the seat pan to slide forwards so as not to burden the full recline onto the passenger behind.

### Calf Rest Pad

Calf-rests tilt up for optimal leg support and comfort. The calf rest should be integral to the seat pan to avoid seat pinch.

## Coach Seat | Features



**Clean, Tidy Seat Back**

The back of the seat should be designed to have an integrated appearance.

**Flexible Pocket**

A stowage pocket should be provided on the back of the seat.

**Central Foot Pedestal**

A central seat pedestal should be positioned to maximize foot clearance.

**On-seat Power**

Two USB ports should be provided on the back of each of the seats.

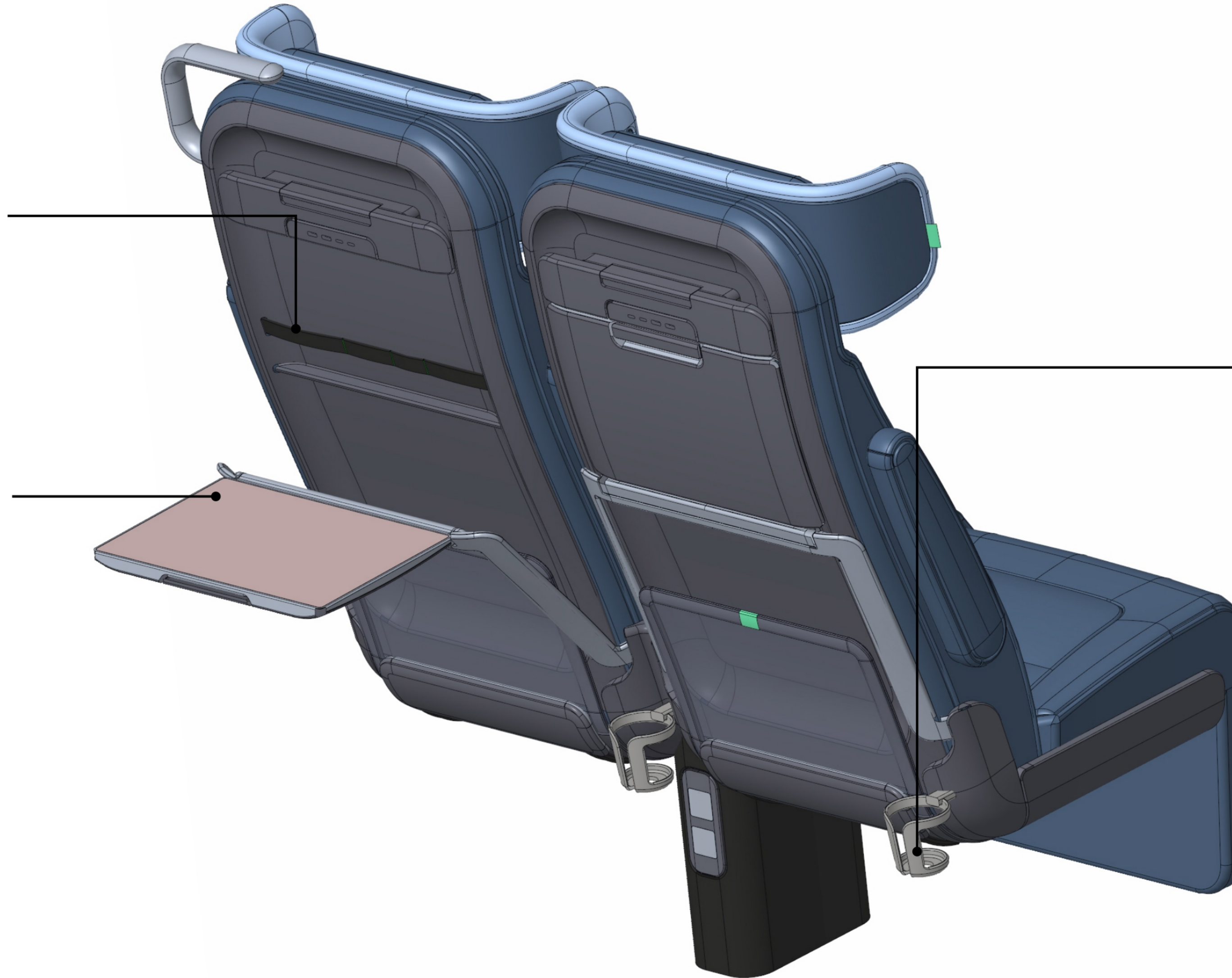
## Coach Seat | Features

### Storage Lectern

Behind the fold down table a lectern edge and elastic restraint band suitable to allow customers to simply stow smart phones and other personal items behind table.

### Fold out Table

A fold out table should have an independent pivot point so that its resting position will not be impacted by the recline of the seat in front.



### Cup Holders

A metal cup holder should be positioned on the back of the seat. Cup holders should be placed in positions outside of knee and leg clearance and free from the movement of the seat.

## Coach Seat | Features

### Device Holder

A fold out lectern edge with clip should allow the secure mounting of passengers' personal devices. The angle should be set so it is usable in both recline and upright positions.

### Folding Table Extension

The table should be able to extend forwards telescopically. The usable surface should allow people to use a 15" laptop even when seat is fully reclined.

### Fold-out Footrest

A fold-out adjustable footrest should be provided. There should be three set positions and the footrest should have a degree of angle adjustment.

### Power Socket

Two power sockets should be located on the seat pedestal.



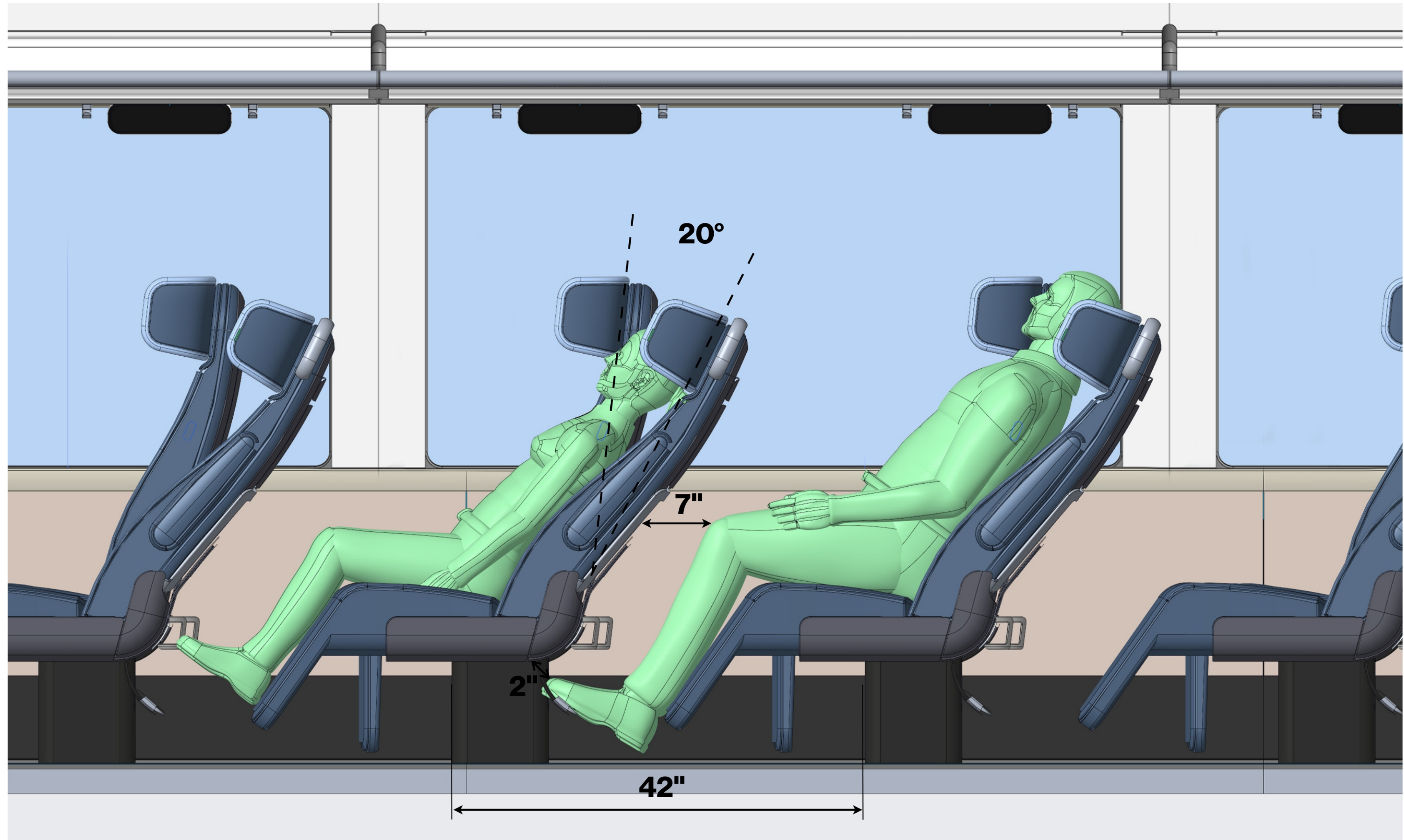
## Coach Seat | Features

### Seat Dimensions

All seat dimensions, cushion density/shore hardness will be subject to mockup review and approval by Amtrak.

### Knee Clearance

Seats set at a 42" pitch must provide at least 7" knee clearance and at least 2" of feet clearance for a 95th percentile male in the seat's worst case scenario - i.e. when both seats are reclined.



5th Percentile Female

95th Percentile Male

**Coach Areas**

Sleeper Bedrooms

Food & Beverage

Toilets & Showers

Common Use Areas

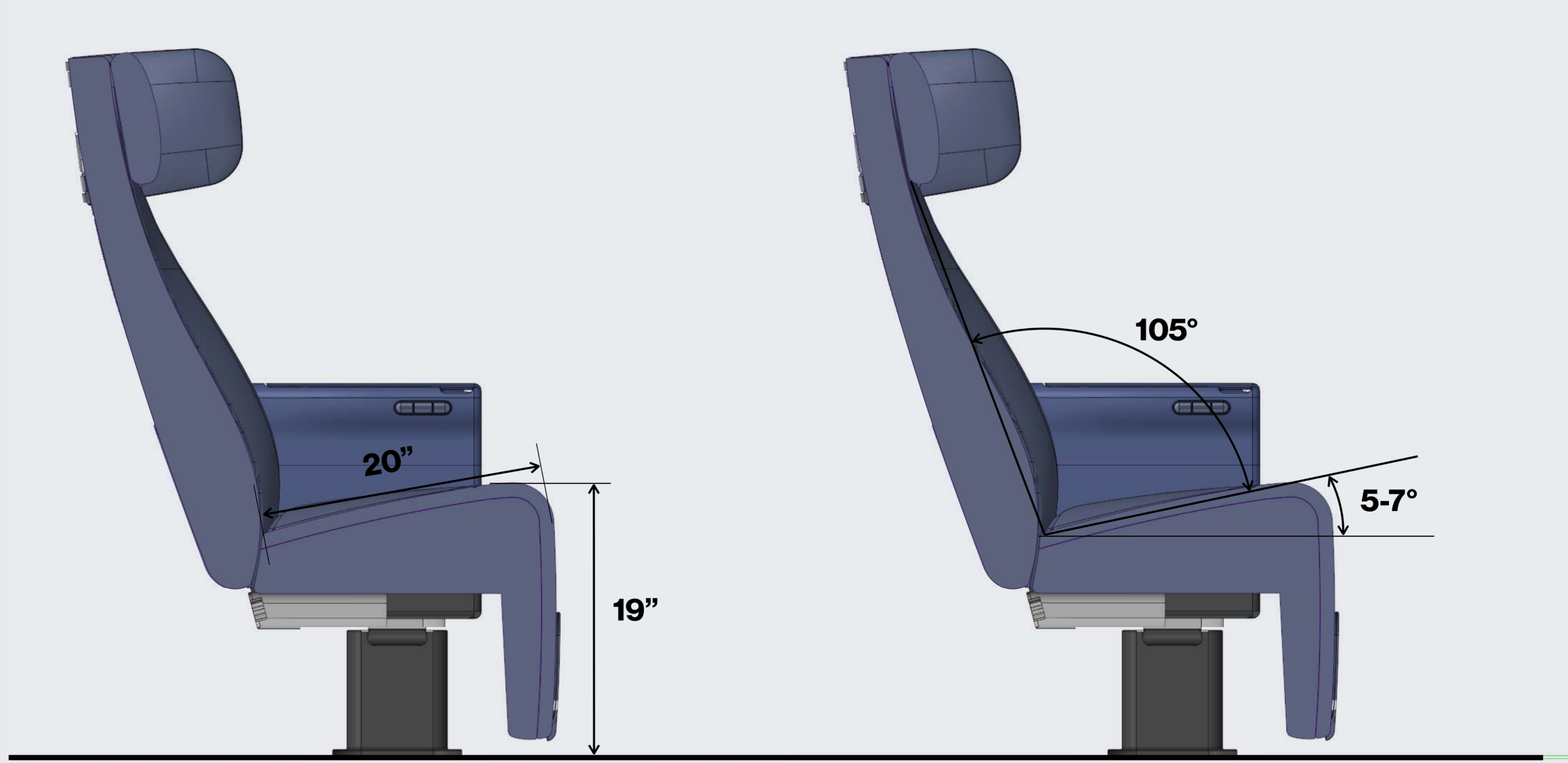
Amtrak® Long Distance Product Features

# 02 | Premium Coach

# Premium Coach Seat | General

## Seat Dimensions

All seat dimensions, cushion density/shore hardness will be subject to mockup review and approval by Amtrak.



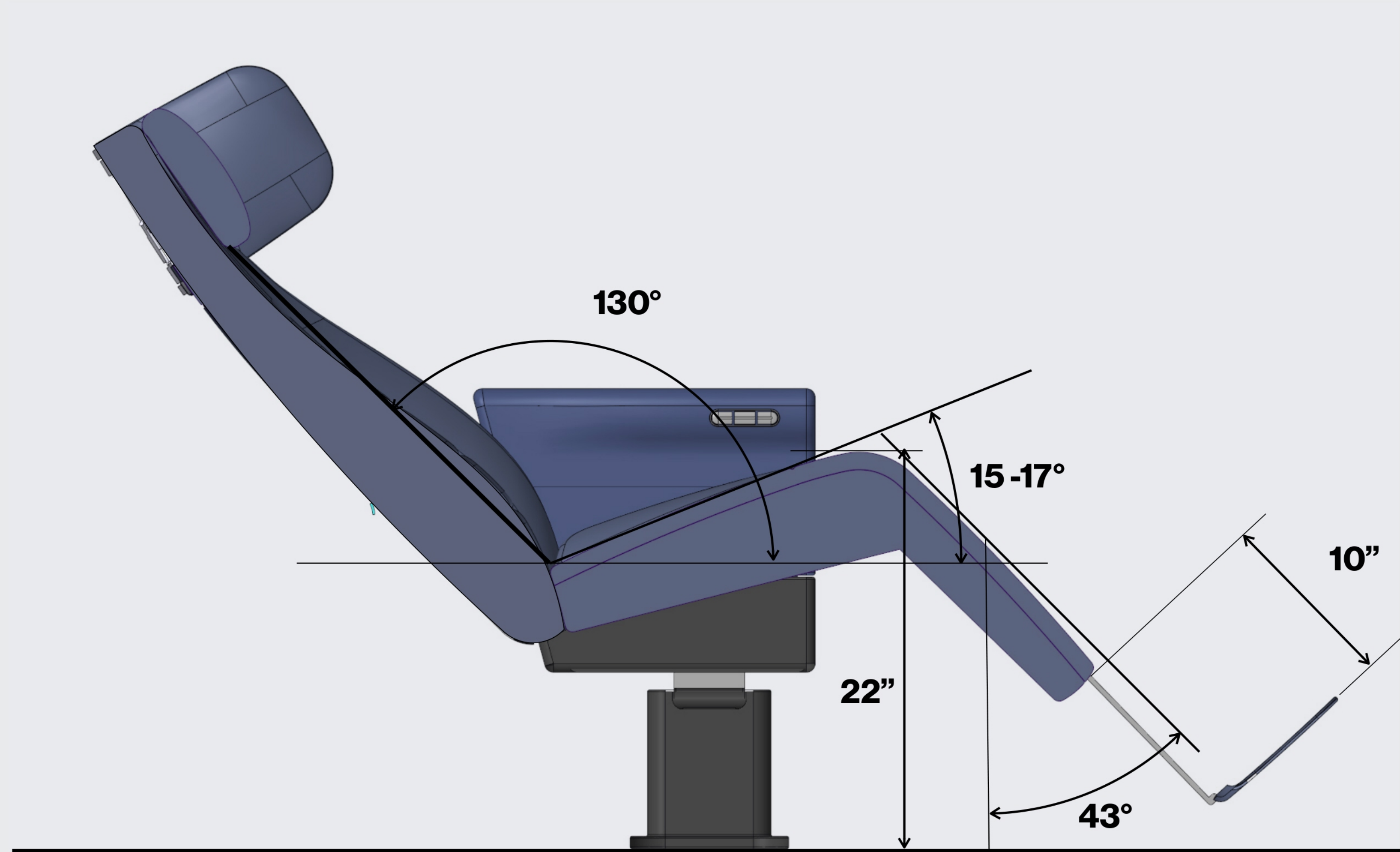
**DRAWINGS NOT TO SCALE**

## Premium Coach Seat | General

### Lazy Z

The Premium Coach Seat has a 25° recline. Importantly the seat pan should also change angle with the recline by 10° lifting the knees upwards to create a cradle position. An adjustable calf rest angle of 43° supports the legs while a flip out foot rest with a telescopic movement of 10" supports the feet.

The seat should be optimized to maximize foot and leg clearance at a 48" pitch.



**DRAWINGS NOT TO SCALE**

## Premium Coach Seat | General

### Rotating Seat Mechanism

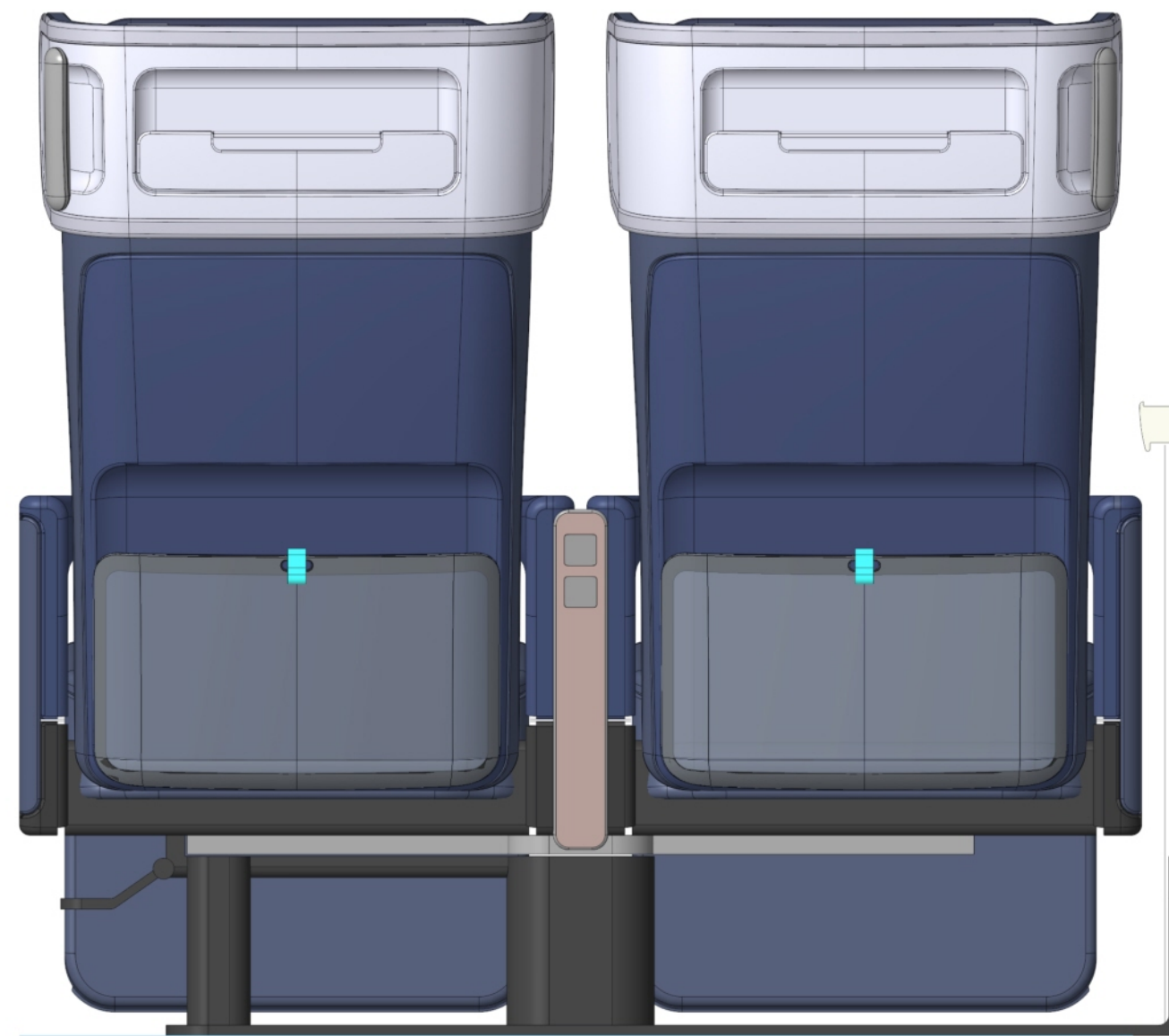
The seat should rotate with the seat pan moving past the side wall when the seat is fully upright. The pivot location should be positioned in such a way to maximize the width of the seat and provide an optimized arrangement of the seats in both directions.

### Rotating Seat Pedestal

The pedestal size and position should be designed to maximize foot space and space for small bags under the seat. The design under the seat should be free from protrusions and snag points and be easy to clean around the pedestal

### Release Pedal

A foot release pedal should unlock the seat ready for rotation.



0° Rotation

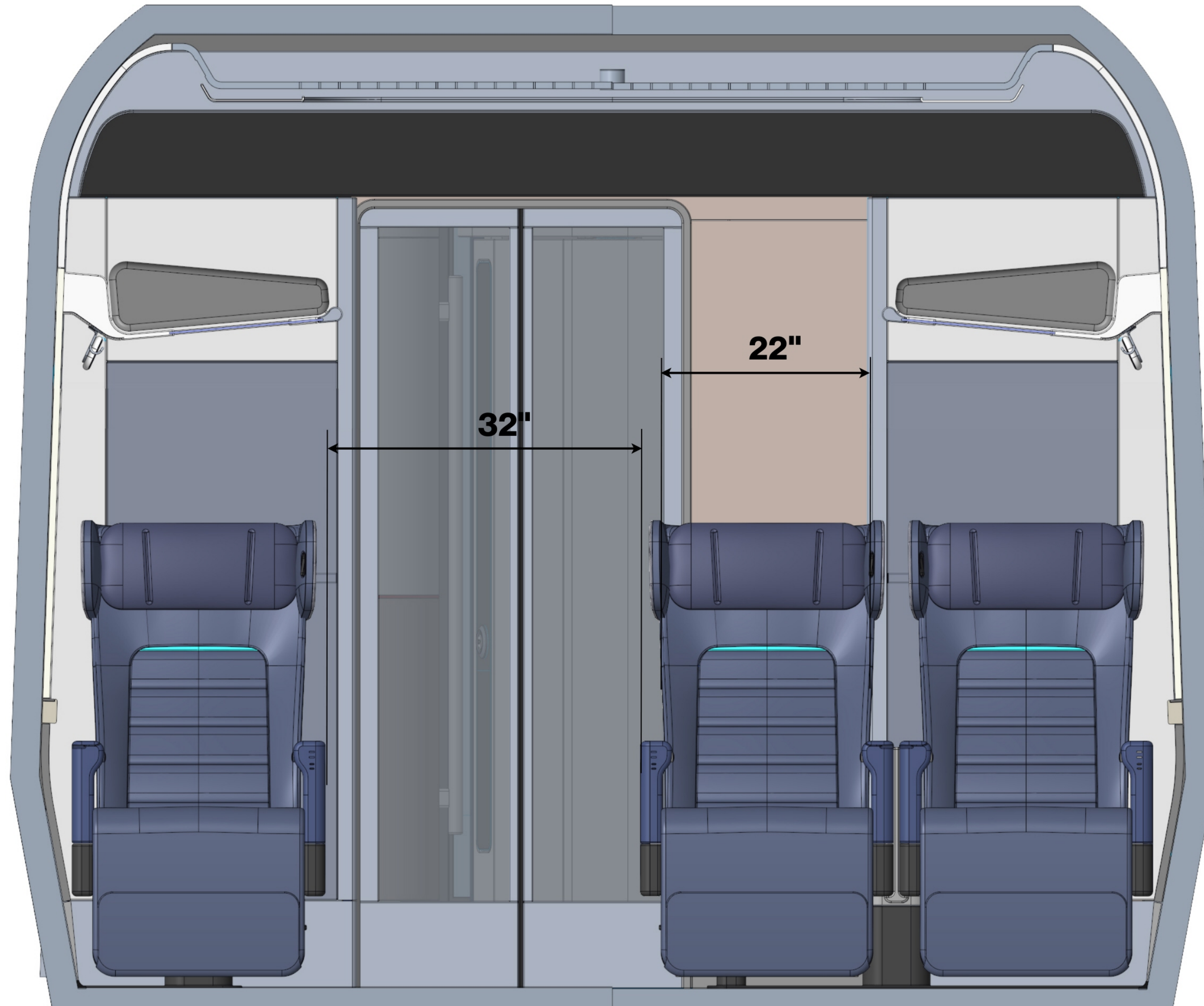


45° Rotation



180° Rotation

## Premium Coach Seat | General



### **The Premium Coach Seat**

The Premium Coach seat is designed as an elevated coach product. The seat can be arranged 2x1 across a 32" accessible aisle. The seat should be optimized for both day and night time operations.

All features should be optimized to provide a better night's sleep, maximizing comfort and the available space to support passengers on longer journeys.

The minimum width of the seat between armrests should be 22" when arranged with a 32" aisle.

# Premium Coach Seat | Features

## Premium Coach Seat | Features

### Privacy Wing

Wide privacy wing should offer good separation between passengers at head level.

### Headrest Pillow

Headrest pillow should be adjustable in height for a range of people sizes and have adjustable wings that fold outwards to adjust the width of the headrest.

### Seat Controls

Seat controls for recline and leg rest should be located within easy reach of a customer  
It should be possible to control the seat back recline and the calf rest independently.



### Reading Light

Positioned so as not to disturb seat neighbor during night time hours. Passengers should be able to adjust the lighting angle. Light intensity should have three settings.

### USB ports

On seat USB ports to charge mobile devices should be in the armrest of each seat.

## Premium Coach Seat | Features



### Cup Holders

A fold out metal cup holder on each seat should be deployed from the central console.

### Fold Out Table

An airline style bi-fold table should deploy from central console. The usable surface should allow people to use at least a 15" laptop. The table should also be able to track forward and back when deployed.

# Premium Coach Seat | Features

**Seat Comfort**  
Seat cushions are contoured to aid seat comfort.



**Lazy Z**  
The seat must achieve a Lazy Z position.

**Rotating Seat Pedal**

**Seat Mechanism**  
Seat mechanism should be easy to use by people of all abilities.

## Premium Coach Seat | Features



**Calf Rest Pad**

Calf rest must be independently controlled from the Lazy Z recline.

**Foot rest**

Each seat has fold out, telescopic foot rest to increase seat comfort.

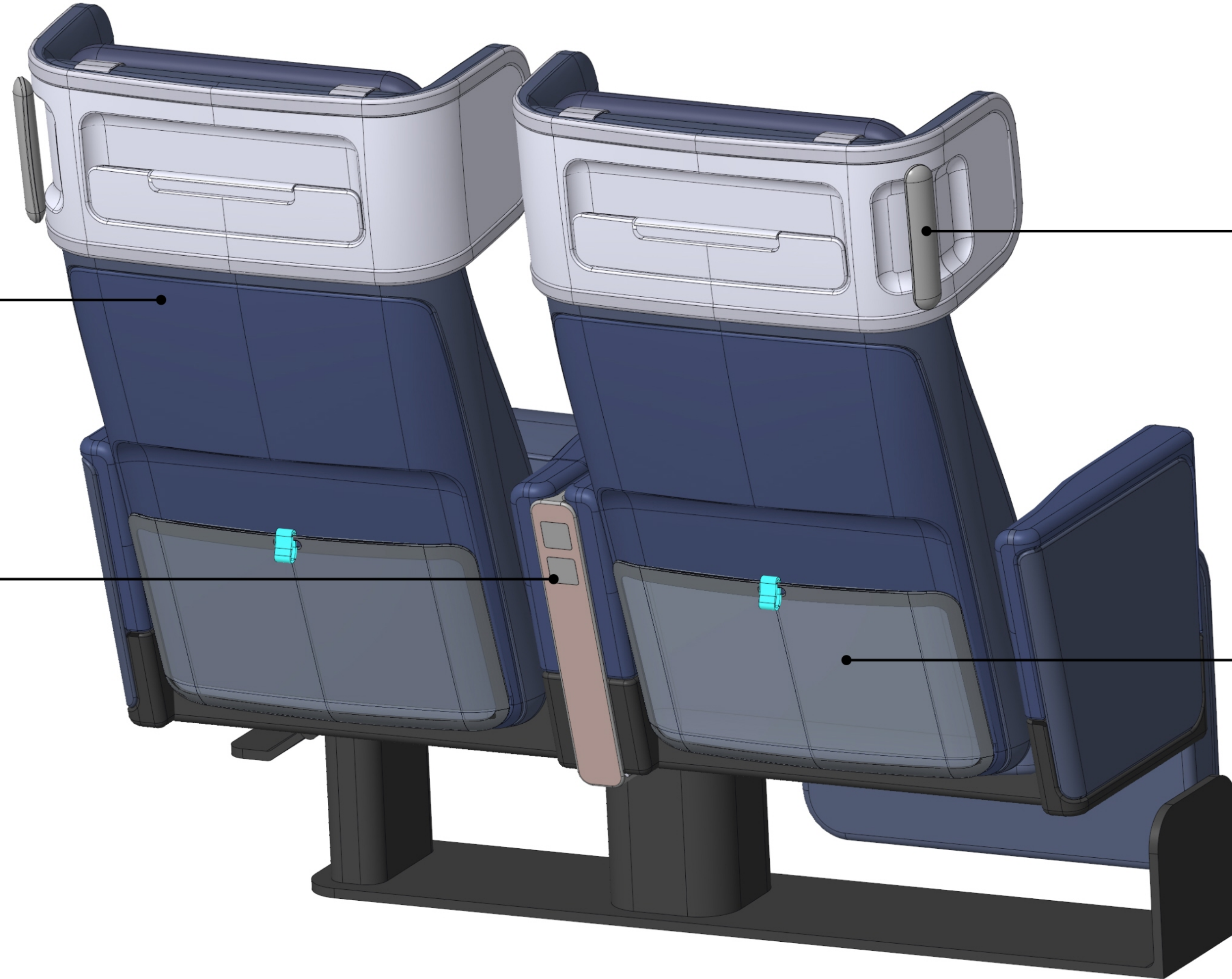
## Premium Coach Seat | Features



### **Slide Down Armrest**

The aisle armrest must move to provide an unobstructed approach to the seat pan so a person using a wheelchair can complete a successful side transfer.

## Premium Coach Seat | Features



**Clean, Tidy Seat Back**

The back of the seat should be designed to have an integrated appearance.

**Power Socket**

Two power sockets should be located on the seat pedestal.

**Hand Grab**

Seats should have a compliant accessible grab on both sides of the seat pair and on both sides of the single seat for better access along the aisle regardless of the seat rotation condition.

**Flexible Pocket**

A stowage pocket should be provided on the back of the seat.

## Premium Coach Seat | Features



### **Device Holder**

A fold out lectern edge with clip should allow the secure mounting of passengers' personal devices. The angle should be set so it is usable in both recline and upright positions.

## Premium Coach Seat | Features

### Seat Dimensions

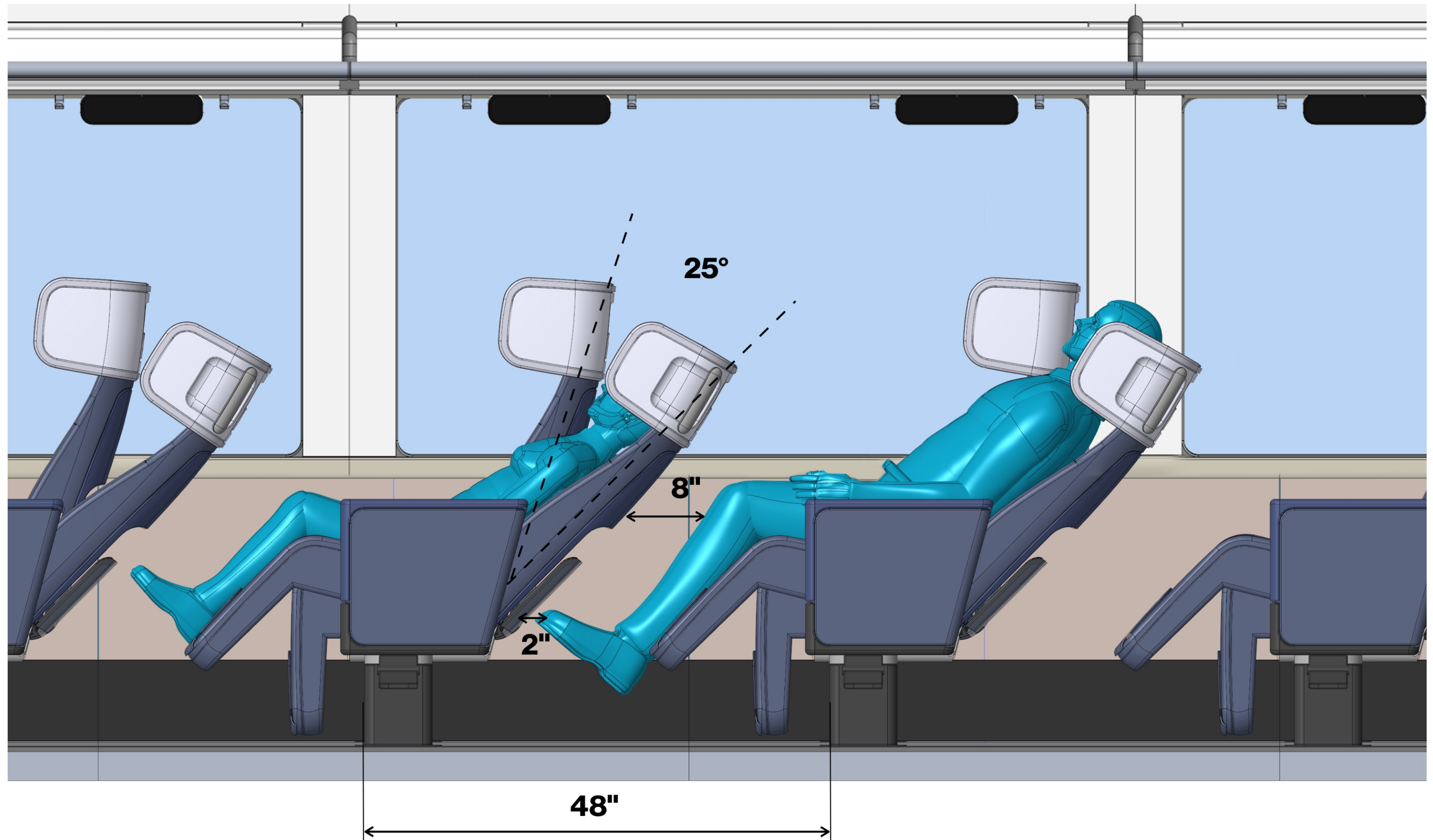
All seat dimensions, cushion density/shore hardness will be subject to mockup review and approval by Amtrak.

### Knee Clearance

Seats set at a 48" pitch must provide at least 8" knee clearance for a 95th percentile male in the seat's worst case scenario - i.e. when both seats are reclined.

### Feet Clearance

Seats set at a 48" pitch must provide at least 2" of feet clearance for a 95th percentile male with the footrest and seat at its most reclined and most extended condition.

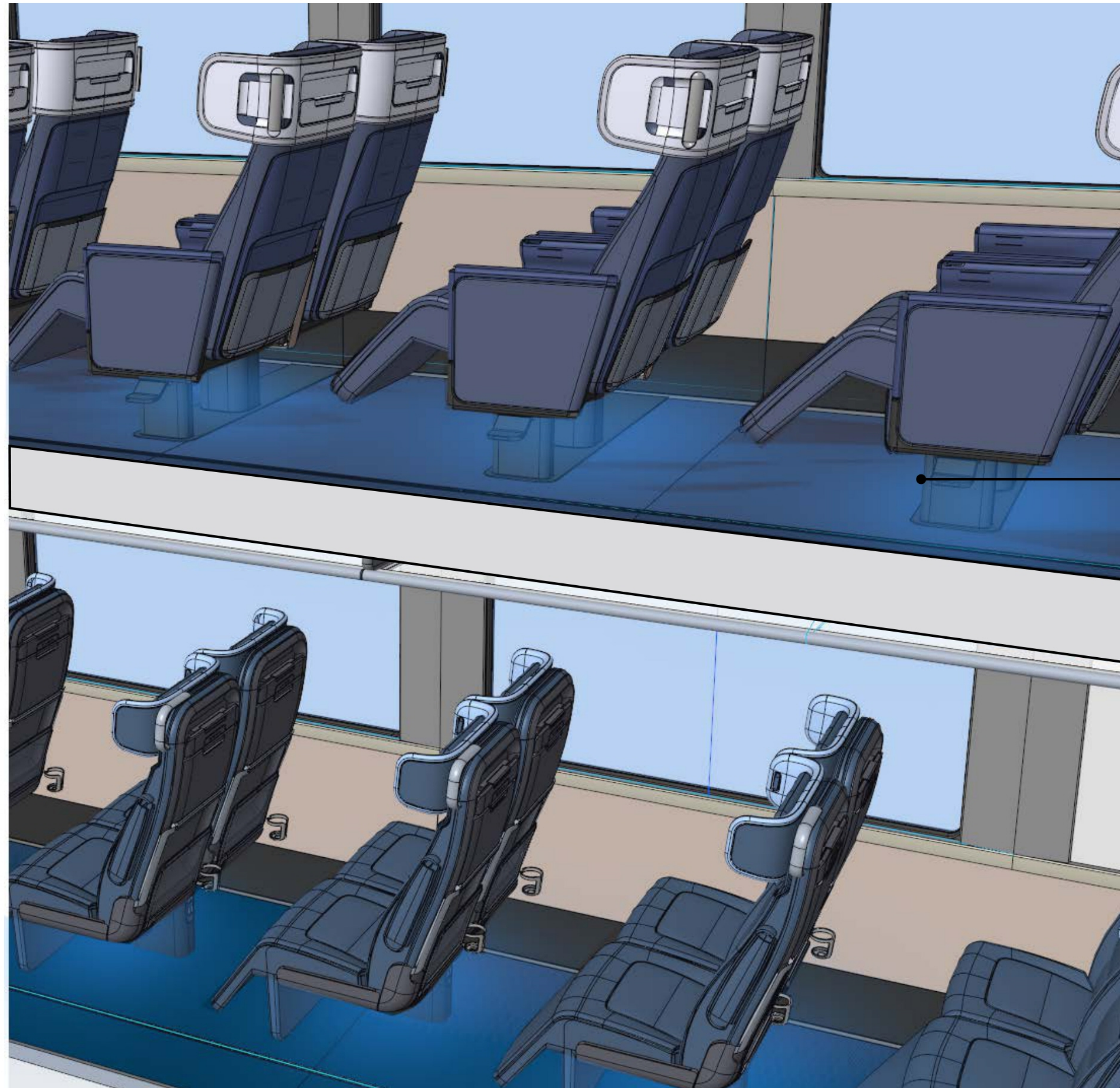


5th Percentile Female

95th Percentile Male

# Coach & Premium Coach | Lighting

## Coach and Premium Coach | Lighting



### **Under Seat Lighting**

Indirect wash lighting under each seat or seat pair washes pools of light under and around seat. Spread of light to be approved by Amtrak.

**Coach Areas**

Sleeper Bedrooms

Food & Beverage

Toilets & Showers

Common Use Areas

# 03 | Accessible Positions

# Coach and Premium Coach | General

## Accessibility

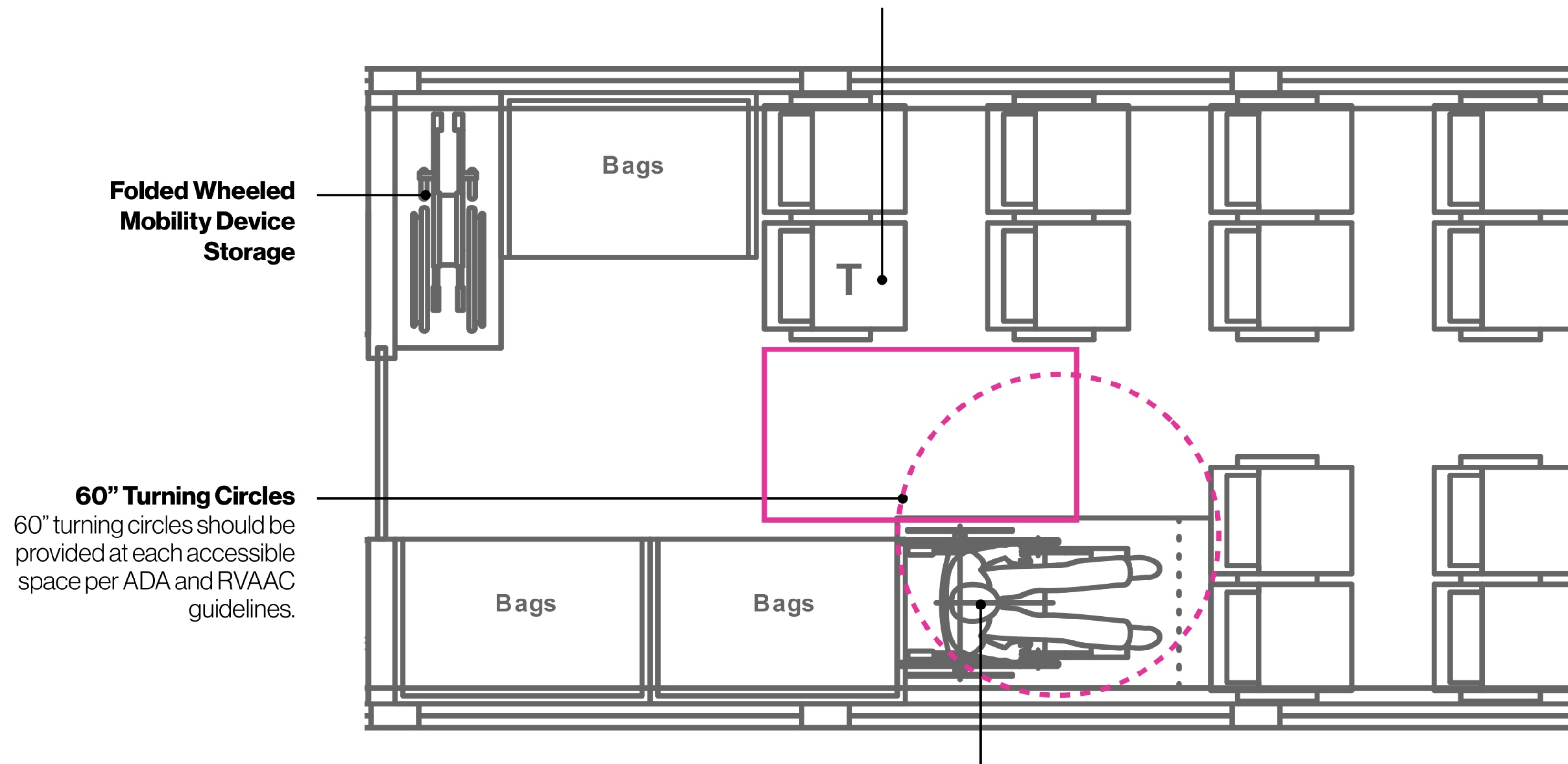
All accessible spaces, turning circles and transfer seats will be subject to mockup review, user testing and approval by Amtrak.

## Transfer Seats

Transfer seats shall have an RVAAC Accessible space allowance so people who choose to transfer from their wheelchairs to a seat have free and easy access to complete this maneuver.

## First Row Seating

First row seating should have the same provisions and features as all other seats, including at seat power, stowage pockets, tables and footrests. In the case of rotating seats these shall be provisions at both ends of the cars so features are accessible in both seating orientations.



## Accessible Spaces

Accessible spaces should have the same provisions and features as all other seats, including at seat power, stowage pockets and tables. Accessible spaces should be protected in the case of rotating seats. A short partition should be provided that gives an option for wheelchair restraints. Accessible spaces should allow passengers to have a choice in direction of travel.

