

Styling Design of 2011 Model Year Odyssey

Eric SCHUMAKER*

Catalin MATEI*

Devon FUJIOKA*

Lori ISHIDA*

Nathan BROWN*

ABSTRACT

The 2001 Honda Odyssey redefines the American minivan market by more completely fulfilling a family's rational needs and their emotional desires. Previous generations of the Odyssey led the competition in adaptable utility and spirited driving dynamics. The fourth generation Odyssey, guided by the concept of "Cool Family Dream," completely satisfies the minivan user's need for flexibility, utility, and comfort, while completely delighting the customer with exciting interior and exterior styling. It breaks free from the traditional image that a minivan works for a family, but is not something to desire.

For the 2011 Odyssey, the Interior Design Team's goal was to create an experience balancing emotional and rational needs. As a minivan, Odyssey's paramount mission is to satisfy a wide range of user expectations. Versatility and functionality are the cornerstones of the minivan's existence, and this new generation of Odyssey set forth to enhance Odyssey's already class-leading functionality and flexibility. The challenge came with adding an emotional aspect to that formula. Words such as "athletic" and "stylish" describe some traits the development team added as a new dimension to this pragmatic segment by way of a fresh interior layout and design.

The exterior design, based on the concept "Dynamic Monovolume," wraps the increased functionality of the interior with athletic forms and lines. The result is a new-generation Odyssey not just pleasant to look at, but truly stylish and desirable. No longer will the Odyssey be considered a "Mommy Mobile" or a necessary family household tool needing to be excused. The 2011 Odyssey is a stylish and smart expression desired by positive young families.

1. Introduction

The Honda Odyssey debuted in the North American market in 1995 as a smaller minivan with a more world market size and drive train. The second generation, introduced in 1999, targeted the mainstream North American minivan market in size, seating capacity, drive train, and features. It set the standard for minivan family utility and comfort with innovative automatic doors on both sides and a rear seat folding into the floor. Starting in 2005, the third generation extended its market segment leadership with improvements in comfort, performance, and convenience in package layout and solidified its position as the most spirited minivan in North America. It was enjoyed by customers as the minivan that fulfilled the family's needs yet supplied some style and driving pleasure. However, in the overall marketplace, minivans still carried the stigma of a vehicle that a family succumbed to buy—not one

they truly wanted. Minivans were purchased by growing American families to support their wide range of activities, and by Empty Nester couples who needed a vehicle to support their traveling and activity with their grown children's families. Understanding this foundation, the 2011 Odyssey design team set out to create a vehicle that worked even better for these two main groups and added the style and emotion that made them want to buy a minivan and display it with pride as an expression of their positive, active lifestyle. In particular, the design team imaged the younger Generation Y family.

The team came up with the grand concept of "Cool Family Dream" as the theme of the overall development for the new Odyssey with the goal to "delight the kids and the parents." The team learned that for today's growing families, enjoying family time is a priority. They are proud to be a family and want to project a positive image of their life stage (Fig. 1).

* HONDA R&D AMERICAS, INC.

Image not displayed for copyright reasons.

Fig. 1 Development concept

2. Package Layout

The package layout is the foundation of the family minivan. Odyssey has led the market with the most user-friendly flexible seating, and the 2011 Odyssey team desired to enhance this practical leadership and add more emotional exterior styling. One might consider these two goals to be contradictory. To deal with this challenge, the team honored the foundational characteristic of a minivan—its package layout. The new Odyssey provides three rows that will seat eight adults comfortably or adapts to a wide variety of seating for any family situation (Fig. 2).

The primary target area for improvement was the center row seating for three. These three seats were given equal status, which required widening the middle row by 100 mm, moving the left and right seats outboard by 50 mm, and making the doors more vertical by 45 mm at the top of the windows. This allows three adults to sit side-by-side or three child seats to be harnessed, or combinations of both. Adding further adaptability to the seating, the middle row center seat can be moved forward, which allows closer



Fig. 2 Sample seating arrangement options

access to the front row (Fig. 3). This feature gives a parent in the front row closer access to a child in the center seat of the middle row. Finally, the two outboard seats of the middle row can be moved inboard closer to the center seat or the center seat can be removed completely and the outboard seats moved next to each other. This allows very clear access to the third row of seats from the widened side sliding doors. An additional 25 mm of leg room was added to the third row to improve comfort.

Odyssey's third row "magic seat" system revolutionized the minivan segment and spawned many variations from competitors. The new Odyssey aims to re-establish itself as the "king of packaging" by making this feature simpler. Now, the customer can make either side of the 60/40 split third row "disappear" with a simple pull of a one seat strap versus two straps in the previous Odyssey.

The wider center row increased width and height in the center of the vehicle. The roof tapers and drops from the center to the front and rear, and narrows in width fore and aft from the center row. Overall, Odyssey gained a 35 mm wider stance and width, and 45 mm length on an unchanged wheelbase of 3000 mm. The driver position was made more car-like by lowering the hip point by 12 mm, and forward side visibility improved by moving the touchdown of the A-pillar forward by 127 mm. The windshield became more raked and flowing into the rounder side view roof line.

This layout would ultimately support the exterior designers' goal of creating a more fluid and stylish exterior shape (Fig. 4) and better aerodynamics with a 3% Cd reduction compared to the previous Odyssey's more conventional, rectangular form.

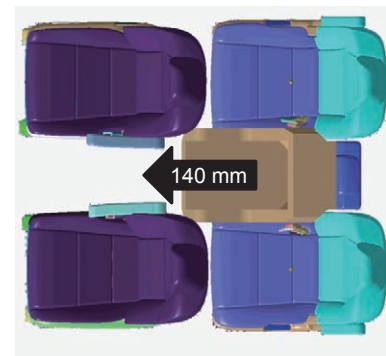


Fig. 3 Center seat function and adaptability

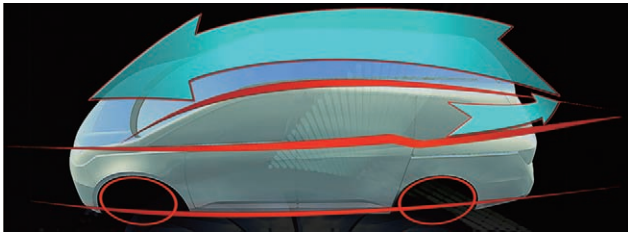


Fig. 4 2011 Odyssey body volume description

3. Exterior Design

To achieve the vehicle concept, the team wanted a vehicle that looked progressive and athletic while maintaining the classy, up-market look of the current Odyssey. Further, the designers wanted the styling to express the Odyssey's class-leading sporty driving traits. They desired to break free from the traditional minivan image of an emotionless box used to do the family hauling chores. In effect, redefine the minivan as something positive. The team envisioned a minivan that fathers wanted to buy and mothers felt younger while driving. Again, this was to be done without ever compromising the Odyssey's exceptional utility, comfort, and adaptability.

The team wanted to create a side view that will make the Odyssey unique in appearance from 100 m away. The side profile was styled to flow with the new package layout: a lower nose, low-angled windshield, raised roof in the center of the passenger area, and a tapered and lower tail. These characteristics changed the overall profile of the Odyssey away from the standard rectangle of a typical minivan. To complement the new profile, the window design introduced a rearward tapering upper edge and a belt line with a lightning bolt shape interacting with the body side forms as shown in Fig. 5. The body side is dominated by a spear form extending from the rear side panel between the rear side window and the C-line. It sets the overall forward dynamic stance of the body. It also works with the side door slide groove to both improve interior packaging and styling. The side door slide groove is lower and thus more outboard than the previous Odyssey and competitors. This allows for wider seats and a lower side window in the rear seat area, both of which provide better visibility for the passengers.

The overall mass and center line shape; the strong, dynamic window graphic and body forms; and smart functional engineering combine to achieve a vehicle that looks fluid, athletic, modern and confident, and functions better for the Cool Family.

3.1. Detail Design

The front end theme of the new Odyssey maintains Honda's family heritage from the FCX. It incorporates jewel-like projector headlights and adds HID in the Touring package. The grille and headlights form one wrapping front mask with secondary detail design using a mix of bright

chrome, satin chrome, and dark metallic finished grille bars. The front end components are positioned lower than the previous Odyssey to give a more car-like, air-penetrating appearance. The impression is classy and athletic.

The horizontally-oriented rear design theme leans the new Odyssey in a more automotive direction than previous minivans. The taillights extend from the side spear form wrapping around into a European proportioned license opening. The upper area of the tailgate integrates side and upper spoilers that extend smoothly from the tapered cabin. These spoilers were designed integrally with the Aerodynamic Engineers to achieve exceptional performance while enhancing the fluid styling. The Touring model has additionally rich detailing with gloss black finish on the cabin spoilers and center window pillar garnishes, and body color finish on the side sill garnishes. The expressive side window graphic is traced with bright trim just as the previous Odyssey. This maintains the upscale look while introducing the sportiness of the new window graphic shape. Finally, the door handles are designed to integrate with the body side spear shape while adding a jewel-like detail with a modern watch inspired shape and bright finish.



Fig. 5 Unique beltline shape



Fig. 6 Styling rendering showing lower, more car-like wrapping front end theme



Fig. 7 Styling sketch of rear shows car-like wide tail lamp design

Overall, the initial impression of the new Odyssey is more personal in size and more emotional than functional. Upon interaction, the customer realizes that the interior size, comfort and adaptability is better than the previous class-leading Odyssey. It looks emotional, but is actually more functional. The exterior styling achieves the concept of the “Cool Family Dream.”

4. Interior Design

The Interior Design team’s goal was to create an experience that balanced emotional and rational needs. Versatility and functionality are the cornerstones of the minivan owner’s wide range of expectations. The challenge came with adding athletic and stylish emotion to the new Odyssey (Fig. 8).

From a styling standpoint, the team created leaner, more athletic shapes, surfaces, and lines. Radii were minimized and surfaces simplified through minimal breaks. By doing this, the appearance lends itself to a more thoughtful concise statement: more youthful, modern, and dynamic in

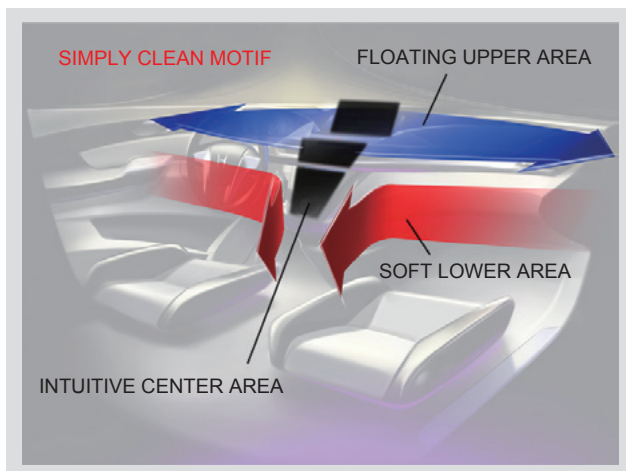


Fig. 8 Interior styling concept



Fig. 9 Key interior styling sketch

appearance. The design unifies the overall interior design theme by minimizing changes in patterns, textures and gloss between different materials and finishes. The final outcome is a product with depth and sophistication that can be appreciated, not only from the first impression, but also over time. The team aimed to create or improve on the instrument layout, passenger amenities, and seating to enhance the user experience.

Instrumentation. The team recognized that as technology becomes more of a presence in peoples’ lives, it creates a more complex experience for the customer. Therefore, a major objective was to simplify the instrumentation, especially the heater and audio controls, to create an easy-to-use and easy-to-understand interaction. Several different design techniques were used, such as color indication, surface treatment, and “zoning” logic, to achieve good ergonomics and clean appearance.

Cool Box. Minivans are the ultimate road-trip vehicles. So it seemed only natural to add a cooler box to the Instrument Panel to refrigerate and store cold beverages for the family. This feature is also practical to keep market or pharmacy items cold.

Split Screen. Another amenity new to the Odyssey is the Split Screen Rear Entertainment System, which is offered on the Touring Tech trim level, that allows second and third row passengers to watch two programs simultaneously. One video feed comes from the DVD player on the instrument panel; a second feed can be added through the HDMI input in the rear seat.

5. Color Design

A “Distinctive Living” concept guided the color and materials design for the 2011 Odyssey. The overall design of the vehicle was targeted for a stylish family wanting a vehicle that expressed their distinctive living and design sense. The interior and exterior materials and colors needed to express a carefree, relaxed, yet fresh and modern stylishness of owners who are embracing their family image—not held back by it.

The color and material design, much like the interior and exterior design, started from the customer’s usage of the inside of the vehicle and then radiated out. The foundation was the fabric. A double Rochelle knit with a flowing line graphic pattern was created. It expresses a carefree, relaxed, stylish feeling of a flat surface with a fresh, slight sheen and warmth to the touch. Practically speaking, the material is very durable and cleanable.

5.1. Interior

The 2011 Odyssey offers a choice of three new interior colors, one of which is exclusive (Fig. 10). The “New Beige” color is greyer, darker, and more natural than the beige on the previous generation, and together with the new fabric complements the modern, stylish family. “New Grey” is a lighter mid-tone hue with a redder earth tone, again



Fig. 10 Interior color and material coordination

projecting a softer, more natural and friendlier feel. The new “Truffle” color, exclusive to the Odyssey, is a dark warm grey that exemplifies the Odyssey family who are proud of their life stage and their sense of modern style. It carries the undertone of luxury and style, without the formality of black, while projecting sportiness and modernity with just a hint of warm, natural hue. It is a medium tone that can be dressed up or down with different exterior colors to meet any occasion, much like the stylish family’s home and fashion design.

5.2. Exterior

Complementing the interior colors is a pallet of eight exterior colors including two new colors designed specifically for Odyssey; one exclusive. Smokey Topaz was designed along with the exclusive Truffle interior color. It is a dark metallic color with rich, warm, almost red-brown side hue and bright, clean direct highlights. It accentuates the long, flowing exterior forms and crisp lines. It is similar in value to the window areas thus shows the entire vehicle as one interrupted form. Together with the new sporty, modern interior and exterior forms and designs, Smokey Topaz and Truffle present the carefree, relaxed, stylishness of the Odyssey family. They are a color set which is very upscale, confident, yet inviting. New Celestial Blue was designed for Odyssey and sedans. It is a light value cold color with just enough warmth to keep from being unfriendly. It complements the modern, crisp, machine surfacing of Odyssey’s exterior, and because of its light value, allows the unique exterior window graphic shapes be

expressed. Celestial Blue enhances and complements the different materials of the exterior’s bright chrome window trim, door handle details, grille and lamps, and gloss black pillars and rear air valance. The exterior pallet will soon offer a new Pearl White with the simplicity and cleanliness of straight shade white and the added luxury and richness of pearl. Rounding-out the color offerings are Alabaster silver, Polished Metal metallic, Crystal Black pearl, Dark Cherry red metallic, and Mocha metallic. All together, the 2011 Odyssey color and materials design expresses the carefree and stylish family who are proud of their family lifestyle.

6. Conclusion

The Honda Odyssey has established itself as the minivan with spirit. With each generation of design, Honda has delighted the American family with a vehicle combining clever utility and convenience and fun-to-drive character. The fourth generation Odyssey establishes an almost new category of vehicle: a sporty family minivan. By focusing deeply on the theme “Cool Family Dream,” the design team has created a vehicle that exceeds the young family’s functional needs with flexible, easy to use seating, unprecedented features, and exceptional visibility. Trend-setting young families will be excited to show off their life stage through the styling expression of the new Odyssey. It embraces and celebrates the joys of family and parenting. The package layout design establishes a solid foundation of equal comfort and seating flexibility for all passengers. The clean, athletic interior design styling seamlessly

blends an unprecedented amount of features. The exterior design wraps the new layout and interior design in a fluid yet crisp athletic and dynamic form with modern, elegant graphics and details. And the colors and materials complete the expression by providing different sets of exterior and interior finishes to fit the individuality of these vibrant families. All together, the 2011 Odyssey is a minivan to proud of.

■ Author ■



Eric SCHUMAKER



Catalin MATEI



Devon FUJIOKA



Lori ISHIDA



Nathan BROWN