

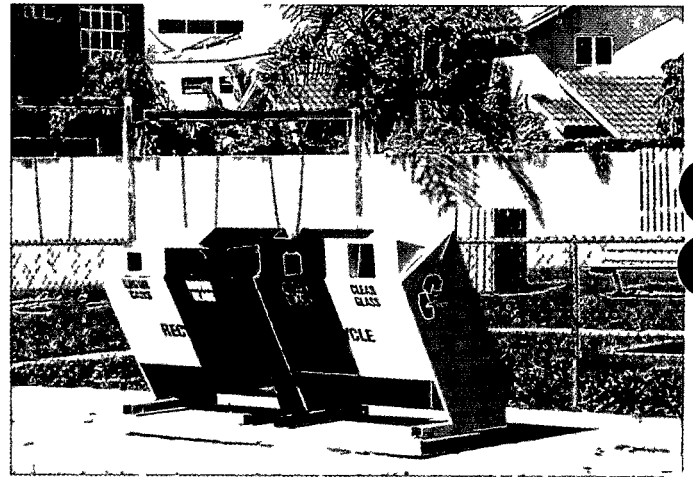
Hid-A-Bag® RECYCLER

- Convenient user openings
- Restricted removal of material for areas with beverage container deposits



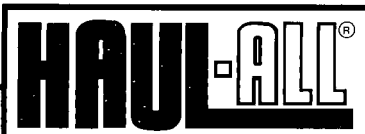
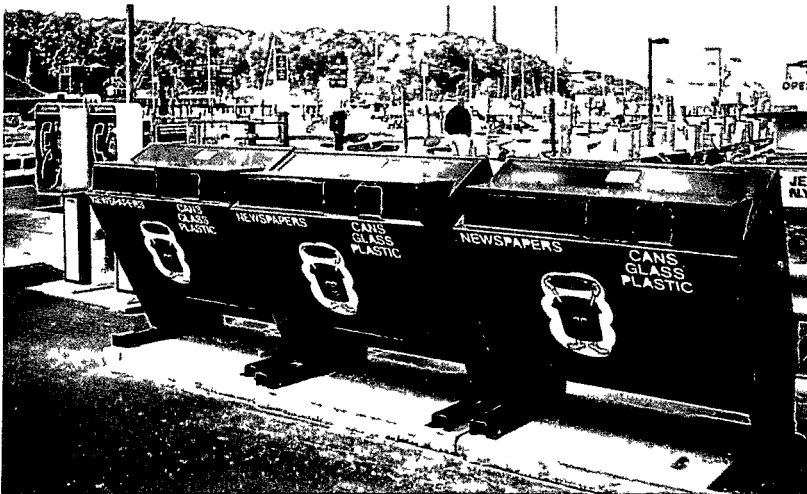
Hid-A-Bag® features

- Standard keylock on unloading door
- Mounting on a poured or pre-cast pad
- Clustered to handle most recyclables
- Convenient, durable and aesthetically pleasing
- Standard plastic or re-usable canvas bags



Hid-A-Bag® Depot advantages

- Low cost drop-off collection
- Minimal space requirements - expandable for future material or higher volumes
- Simple unloading of bags - No special equipment required
- Easily installed on grass, pavement or concrete surface



US Patent No D291135

EQUIPMENT SYSTEMS

Haul-All reaches you through a network of selected distributors whose integrity and product knowledge qualifies them to assist you in the selection and planning of your solid waste and recycling equipment needs. HAUL-ALL, Hid-A-BAG, Hyd-A-Way and Transtor® are registered trademarks.

Phone (403) 328-7719
Fax (403) 328-9956

e-mail: sales@haulall.com
www.haulall.com

McCIntock Metal Fabricators, Inc
455 Harter Avenue
Woodland, CA 95776-6105
(800) 350 3588
(530) 666-6007 (530) 666-7071 FAX

DISTRIBUTOR

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Site Furniture
of Distinction



KEYSTONE RIDGE
DESIGNS





The Modern Classics

Keystone Ridge Designs introduces Modern Classics in exclusive site furniture. Keystone Ridge Designs manufactures premier site furnishings including: benches, litter receptacles, food court seating, planters, ash urns, picnic tables, bike racks and bollards. With more than a decade of experience and a reputation as a leader in site amenities, our products stand the test of time—from outdoor city streetscapes to indoor shopping malls across America.

Combining superior workmanship with an architectural flair, we create a stunning piece of furniture which will enhance your outdoor environment or interior setting. Keystone Ridge Designs offers the best value comprised of top quality products, competitive pricing, innovative designs and personal service.

Produced by skilled craftsmen, our continuous-flow weld seam is practically unnoticeable. This weld process penetrates the metal ensuring a virtually inseparable weld that deters rust. In addition, each piece goes through a rigorous inspection that guarantees the Keystone Ridge Designs' seal of quality approval.

Offering the exclusive KEYSHIELD™ metal finish, Keystone Ridge Designs begins with unsurpassed metal preparation followed by the application of 7-15 mils of colored polyester powder coating. The result is a first class appearance and extremely durable finish that is rust, abuse, and sun fade resistant. KEYSHIELD™ is strength, durability and quality—our stamp of armored excellence that is foremost in the industry.

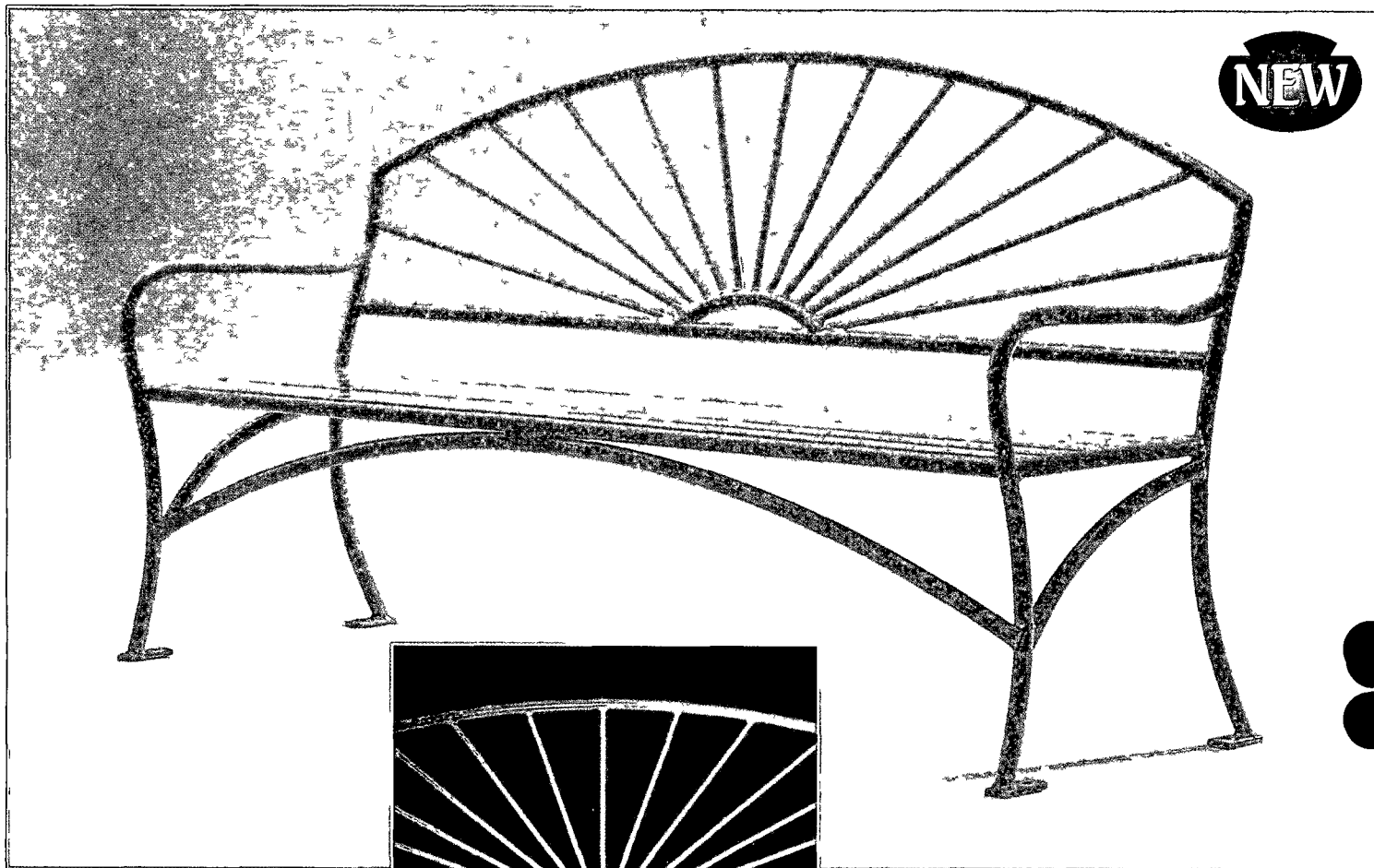
Keystone Ridge Designs is uniquely able to create custom products to meet your specifications and designs. Our in-house CAD designers will gladly provide you with presentation-ready specification drawings for your next custom project.

Quality, craftsmanship, dedication to your *creative vision*—these are the hallmarks of Keystone Ridge Designs.

CATALINA SERIES

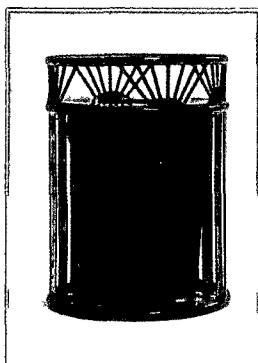
(Patent Pending)

NEW

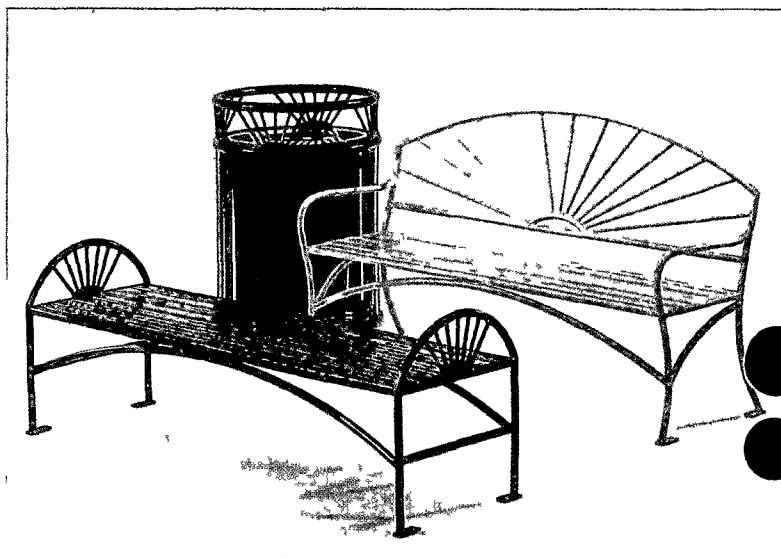


A Georgian visionary, the Catalina series separates itself from the mainstream with a delicate flow of curves bringing with it sunshine and warmth. The Catalina back design hints at an era of gentility and gracious living.

- Curved, rolled and straight bar form an industry unique back design
- Delicate bar on the arm and under the seat represents Georgian embellishment complementing the flow of the back
- Backless bench also has sunburst effect
- Bench available with back or flat in any length, mounting or standard color
- Litter receptacle includes plastic liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color, optional lids and liners (see page 17)
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry



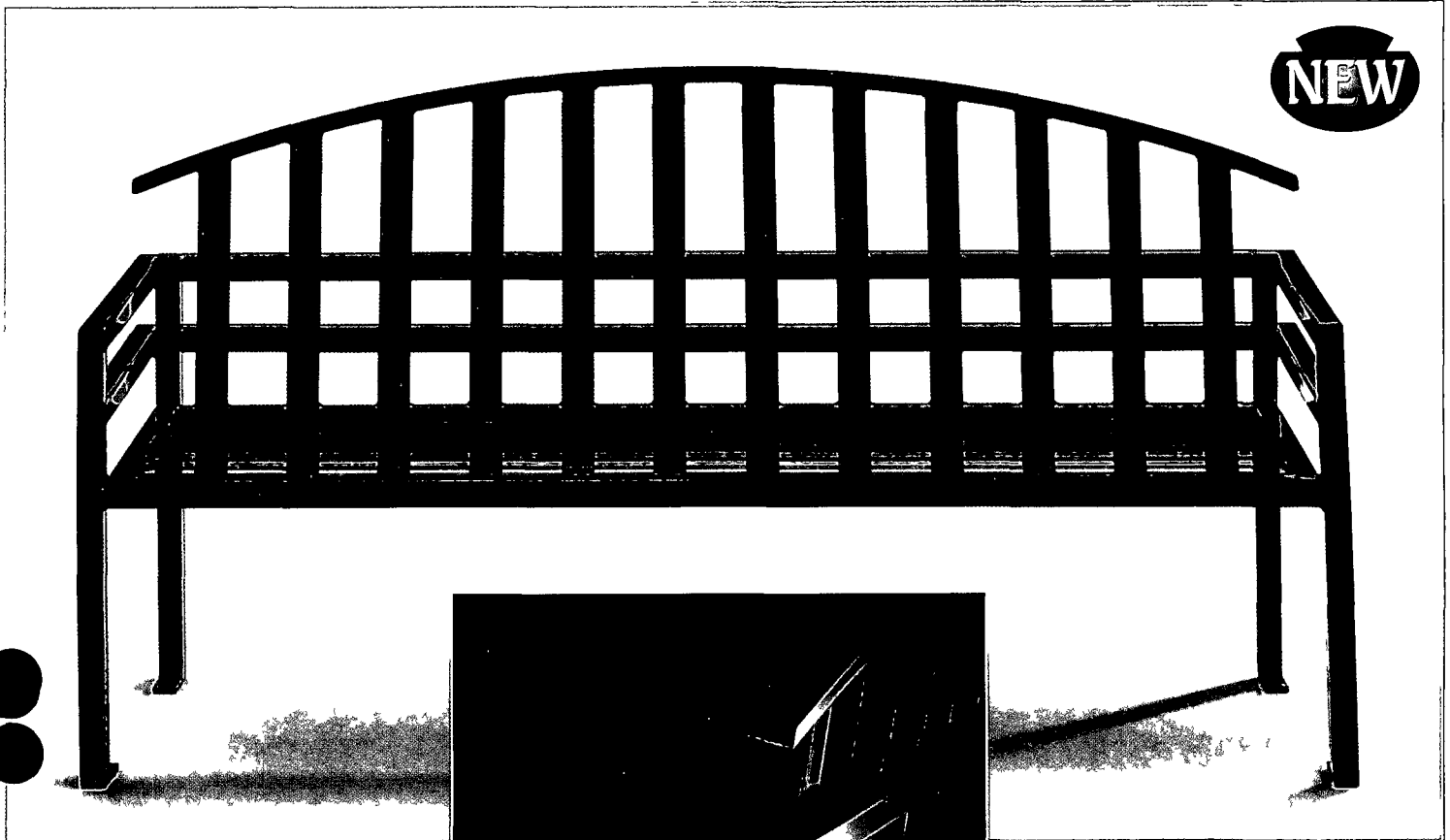
CA26	Catalina Bench w/back 6	\$670
CA28	Catalina Bench w/back 8	\$770
CA16	Catalina Bench flat 6	\$520
CA18	Catalina Bench flat 8	\$620
CA3 22	Catalina litter 22 gal	\$670
CA3 32	Catalina litter 32 gal	\$720



McCONNELL SERIES

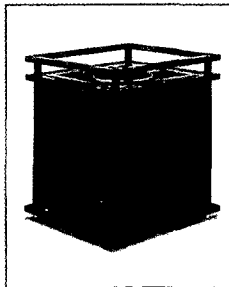
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NEW



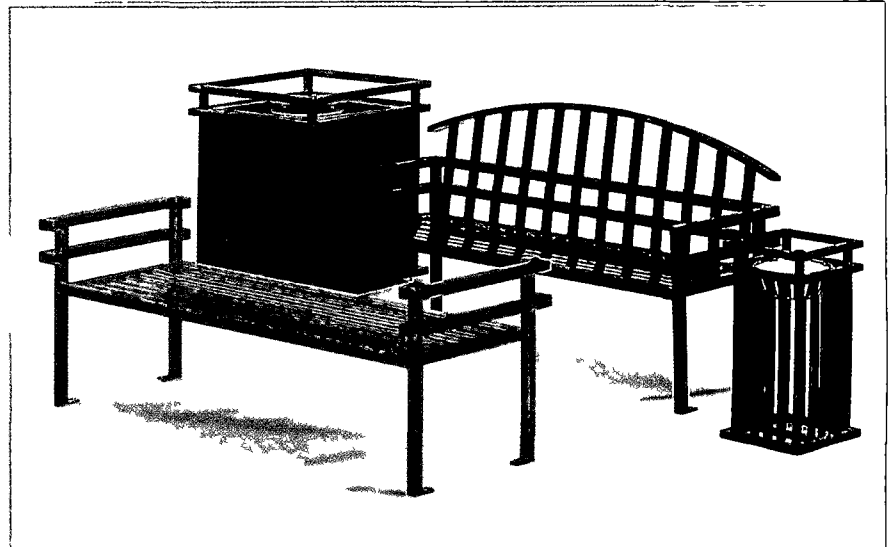
In the style of the Arts and Crafts Movement, the McConnell bench focuses attention on the creation of the heart and hand. A regal appearance is dramatized by the arm design with evidence of horizontal lines and artistic engineering. The back is crowned with an arc completing this period recreation.

- Double steel reinforcement in the arms of the bench
- Curved rectangular tubing accents top of bench
- Bench available with back or flat in any length mounting, or standard color



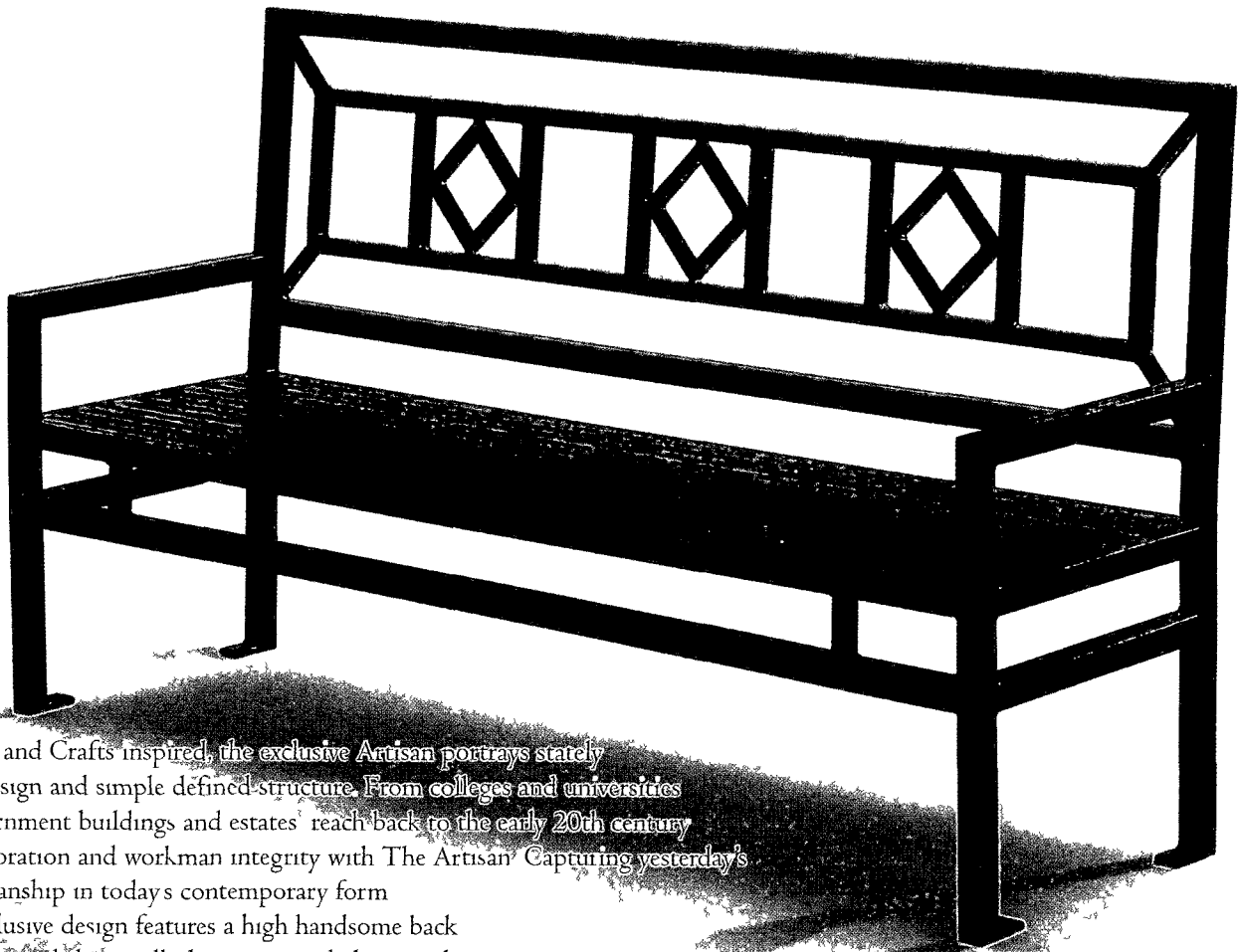
Litter receptacle includes plastic liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color, optional lids and liners (see page 17). Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry.

MC26	McConnell Bench w/ back 6	\$810
MC28	McConnell Bench w/ back 8	\$910
MCI6	McConnell Bench flat 6	\$590
MC18	McConnell Bench flat 8	\$690
MC3-22	McConnell litter 22 gal	\$840
MC3-32	McConnell litter 32 gal	\$890
MC5	McConnell Ash Urn	\$425



ARTISAN SERIES

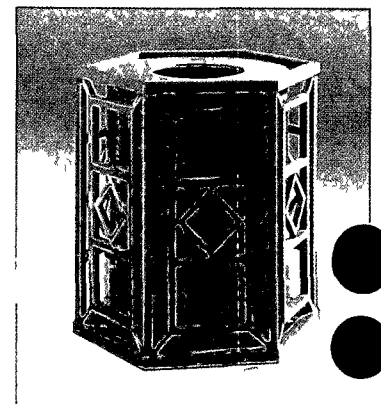
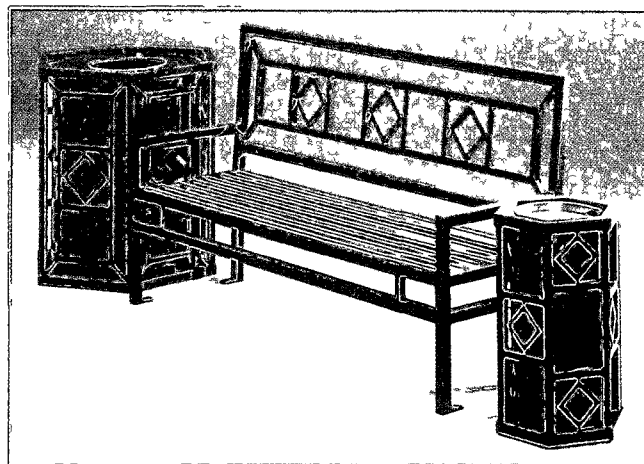
(Patent Pending)



Art and Crafts inspired, the exclusive Artisan portrays stately design and simple defined structure. From colleges and universities to government buildings and estates reach back to the early 20th century for restoration and workman integrity with The Artisan. Capturing yesterday's craftsmanship in today's contemporary form

- Exclusive design features a high handsome back
- Diamond shapes allude to a stained glass window appearance
- Bench available with back in any length mounting or standard color
- Litter receptacle includes plastic liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color, optional lids and liners (see page 17)
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry

AR26	Artisan Bench w/back 6	\$845
AR28	Artisan Bench w/back 8	\$990
AR3 22	Artisan litter 22 gal	\$760
AR3 32	Artisan litter 32 gal	\$790
AR5	Artisan Ash Urn	\$445

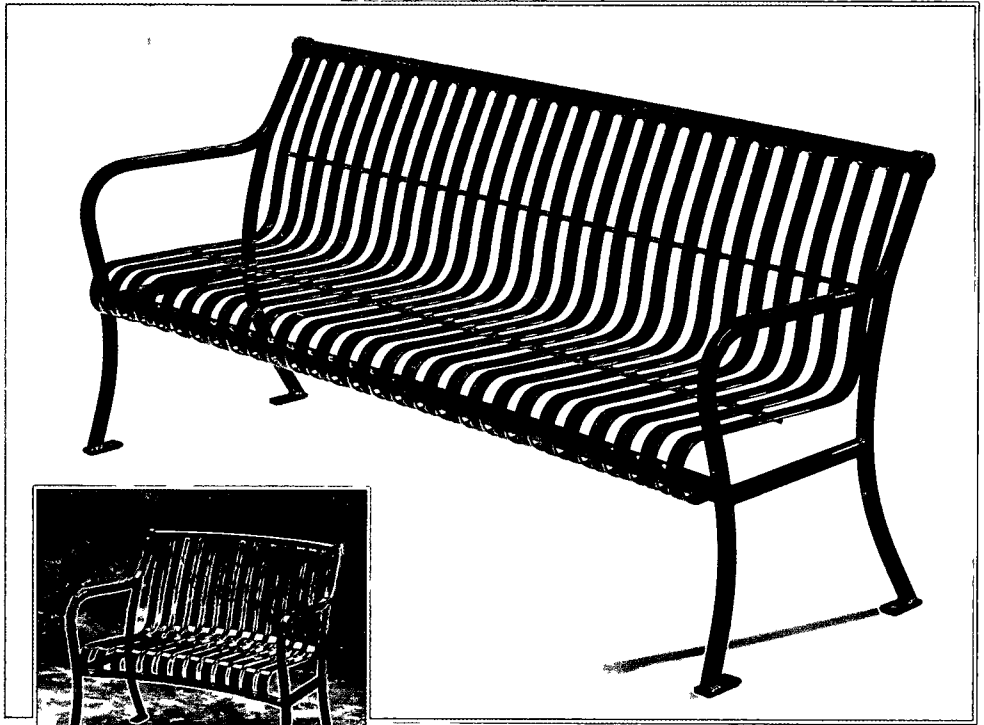


PULLMAN SERIES

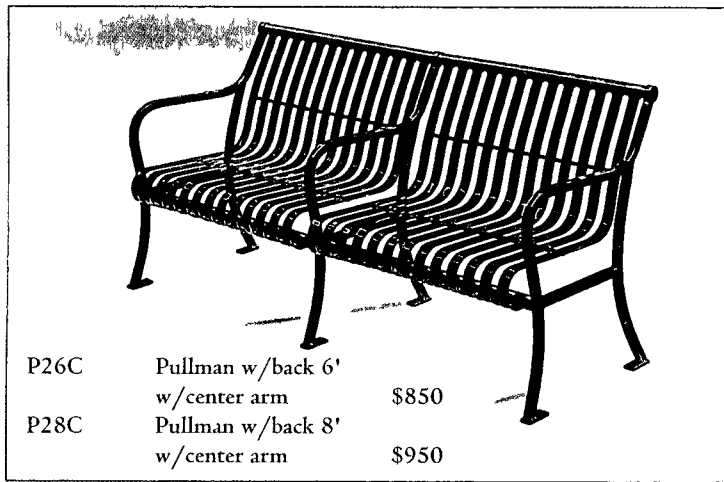
The workhorse of commercial benches this versatile metal bench delivers the required stability needed for any project and an appearance that blends with any decor. The Pullman is a popular satisfying choice for any setting.

Combining to take site furniture into the 21st century the Pullenium fits the mold for futuristic seating systems. Sleek and stylish yet fully assembled for ease of installation and optimum stability the Pullenium makes tomorrow's visions a reality today.

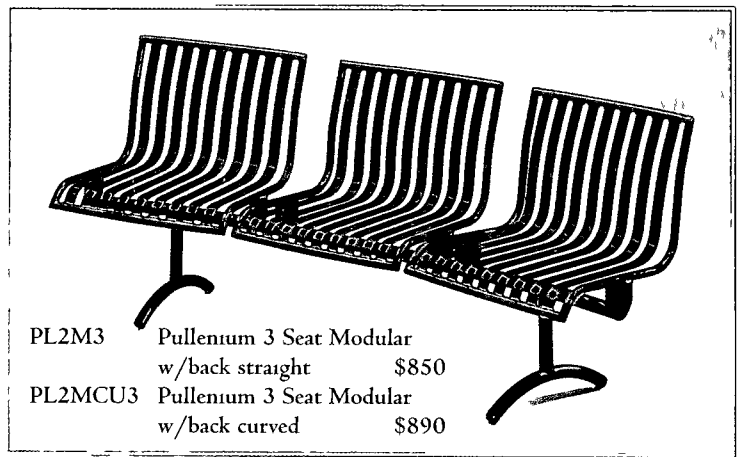
- Lumbar support for supreme comfort
- Fully assembled
- Center arm option
- Modular seating perfect for public waiting areas
- Straight or curved
- Bench available with back or flat in any length mounting or standard color
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry



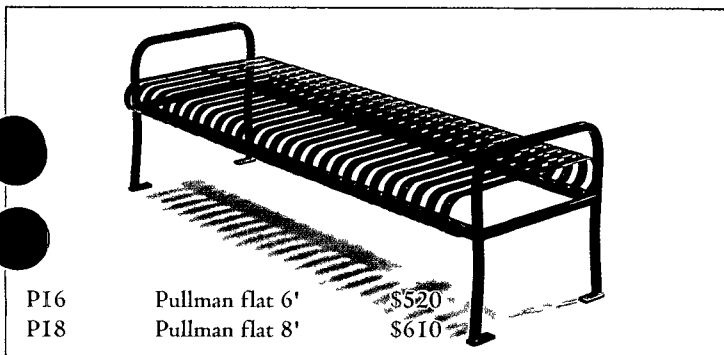
P26	Pullman w/back 6'	\$725
P28	Pullman w/back 8'	\$825
P2CU3	Pullman Curved w/back 3	\$650
P2CU6	Pullman Curved w/back 6	\$1200
P2CU8	Pullman Curved w/back 8	\$1600



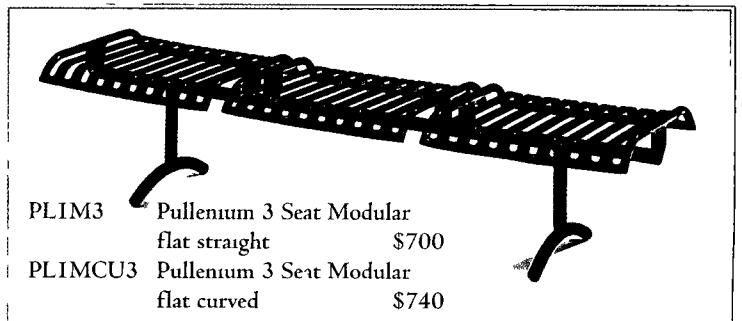
P26C	Pullman w/back 6' w/center arm	\$850
P28C	Pullman w/back 8' w/center arm	\$950



PL2M3	Pullenium 3 Seat Modular w/back straight	\$850
PL2MCU3	Pullenium 3 Seat Modular w/back curved	\$890



PI6	Pullman flat 6'	\$520
PI8	Pullman flat 8'	\$610



PL1M3	Pullenium 3 Seat Modular flat straight	\$700
PL1MCU3	Pullenium 3 Seat Modular flat curved	\$740

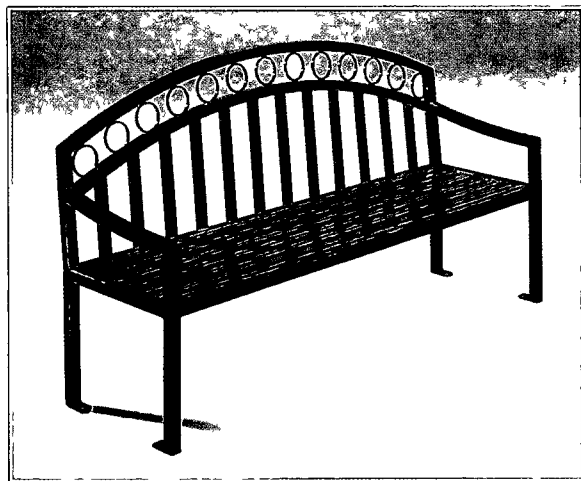


ATLANTA SERIES

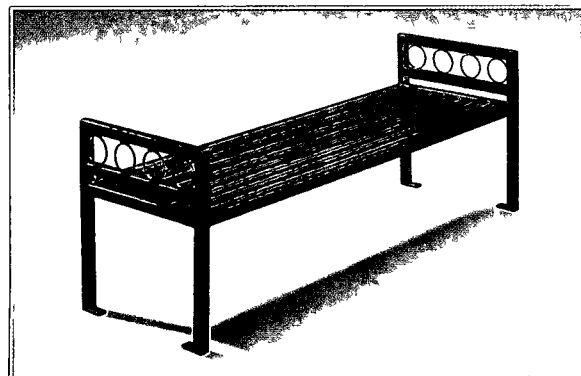
(Patent No Des 372 133)

Inspired by architects the patented Atlanta bench offers the distinctive grace that many settings require with the quality manufacturing of a fully assembled metal unit. Innovative engineering has given the Atlanta the freedom to curve and adapt to any surrounding. Bend the Rules—We Did!

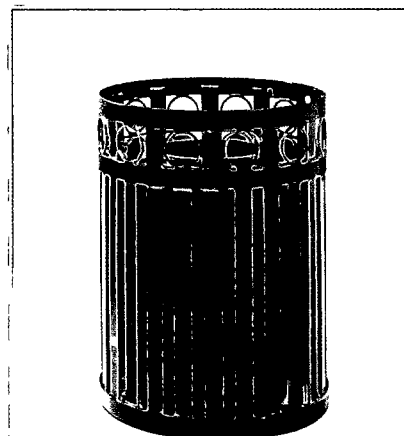
- Grace of curved lines with the option of a curved seat and back
- Fully assembled unit
- Bench available with back or flat in any length mounting or standard color
- Litter receptacle includes plastic liner flat lid anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color, optional lids and liners (see page 17)
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry



AT24	Atlanta w/back 4'	\$760
AT26	Atlanta w/back 6'	\$825
AT28	Atlanta w/back 8'	\$930



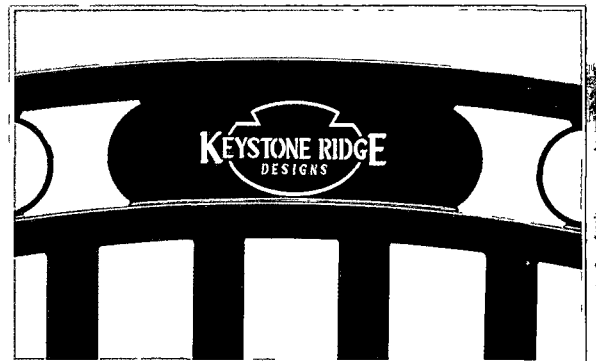
AT16	Atlanta flat 6'	\$595
AT18	Atlanta flat 8'	\$695



AT2CU6	Curved Atlanta w/back 6'	\$1250
AT2RCU6	Reverse curved Atlanta w/back 6'	\$2000
ATRT	Atlanta rectangular table w/ash insert	\$776
AT3SQ 32	Atlanta square litter 32 gal	\$730
AT4SQ	Atlanta square planter	\$695
AT3 22	Atlanta litter 22 gal	\$430
AT3 32	Atlanta litter 32 gal	\$530



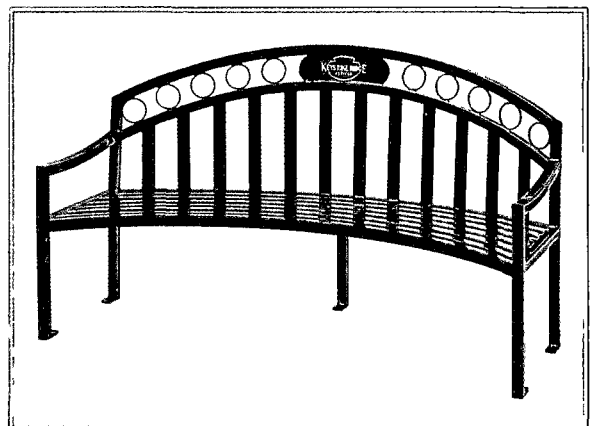
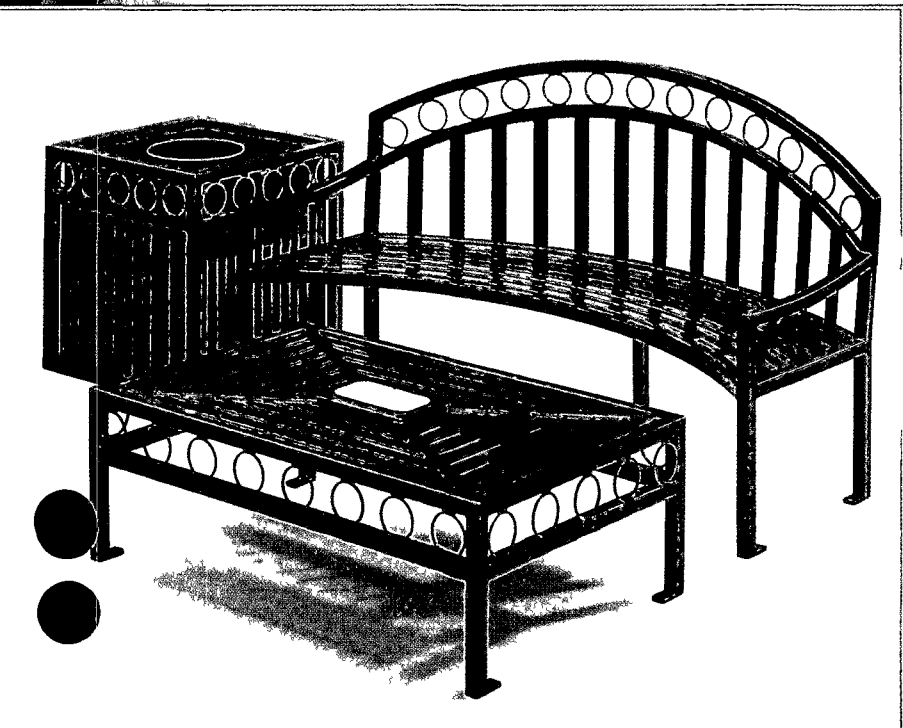
AT9 6 Atlanta Fence 6' \$460
 AT9 8 Atlanta Fence 8' \$610



SIGNATURE SERIES

For the ultimate in customized furnishings add your corporate logo or community crest to the Atlanta. The Keystone Ridge Designs Logo Option is literally a Signature piece and allows the opportunity to add a truly personal touch to your surroundings.

- Duplication of any logo
- Option of curved or straight backed Atlanta
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry

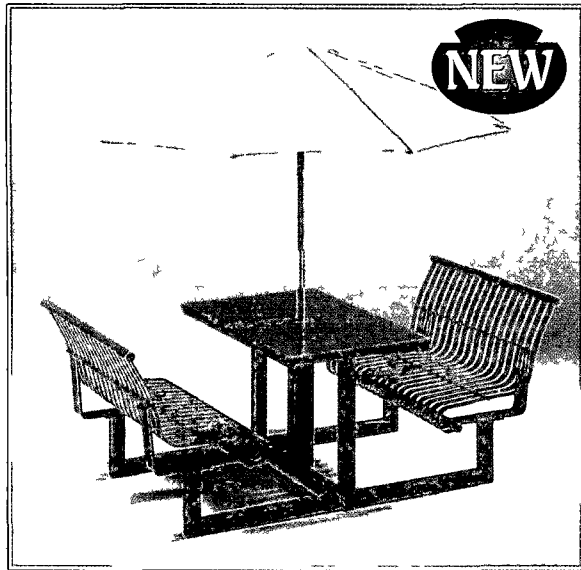


ATS2CU6 Signature Curved Atlanta w/back 6' \$1350

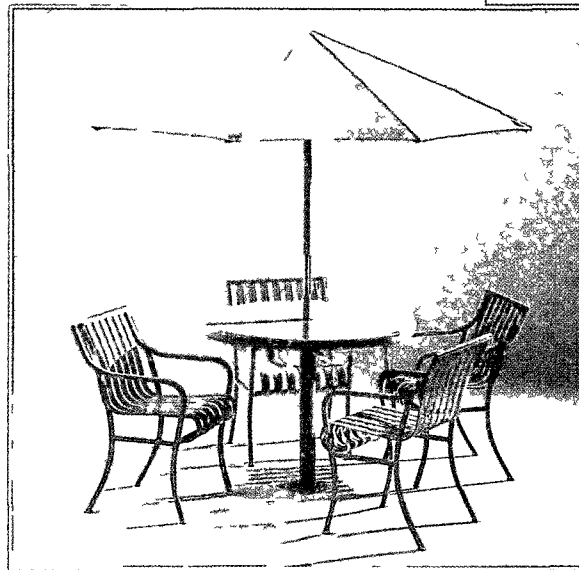
PULLMAN TABLE SETS

Enhance a food court by creating an extraordinary setting for enjoying a luncheon while dining either inside or out. The Pullman proves its adaptability once again with this series extension while reinforcing its statement of durability and comfort.

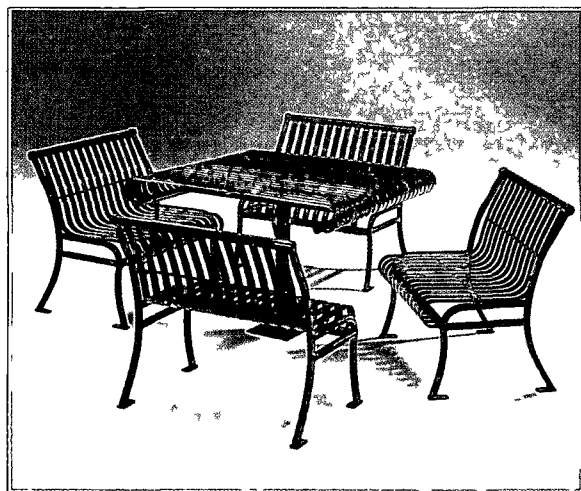
- Optional round, square or rectangular table tops
- Seating options: flat or with back
- Mounting options: freestanding portable or pedestal
- Umbrella hole option
- Optional portable glides or stationary anchoring systems
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry



P6P 2RT Pullman portable rectangular table & seats w/back \$1480



P6C-P Pullman courtyard table & chairs w/pedestal leg \$1350



P6 2 Pullman table & seats w/back \$1450



P6P 2SQ Pullman portable square table & seats w/back \$1565

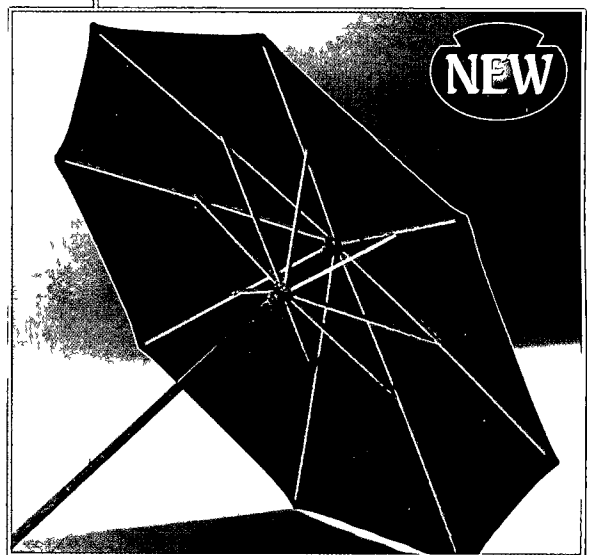
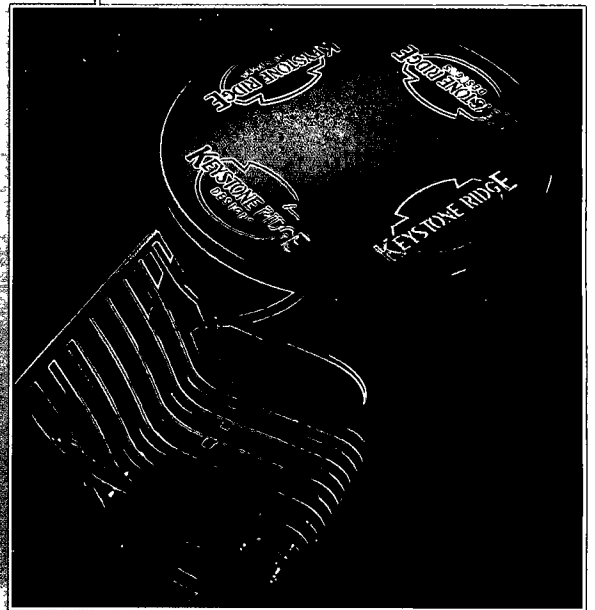
P6P 2RD Pullman portable round table & seats w/back \$1565





P6C Pullman courtyard table & chairs
(Signature logo option shown)

\$1350



UMB7	Umbrella 7 ft	\$299
UMB9	Umbrella 9 ft	\$399

Call for Umbrella color choices



READING SERIES

(Patent No Des 376 270)

Designed in the style of a wooden country garden bench, this patented sturdy metal bench is equally at home in a train station or an exclusive mall

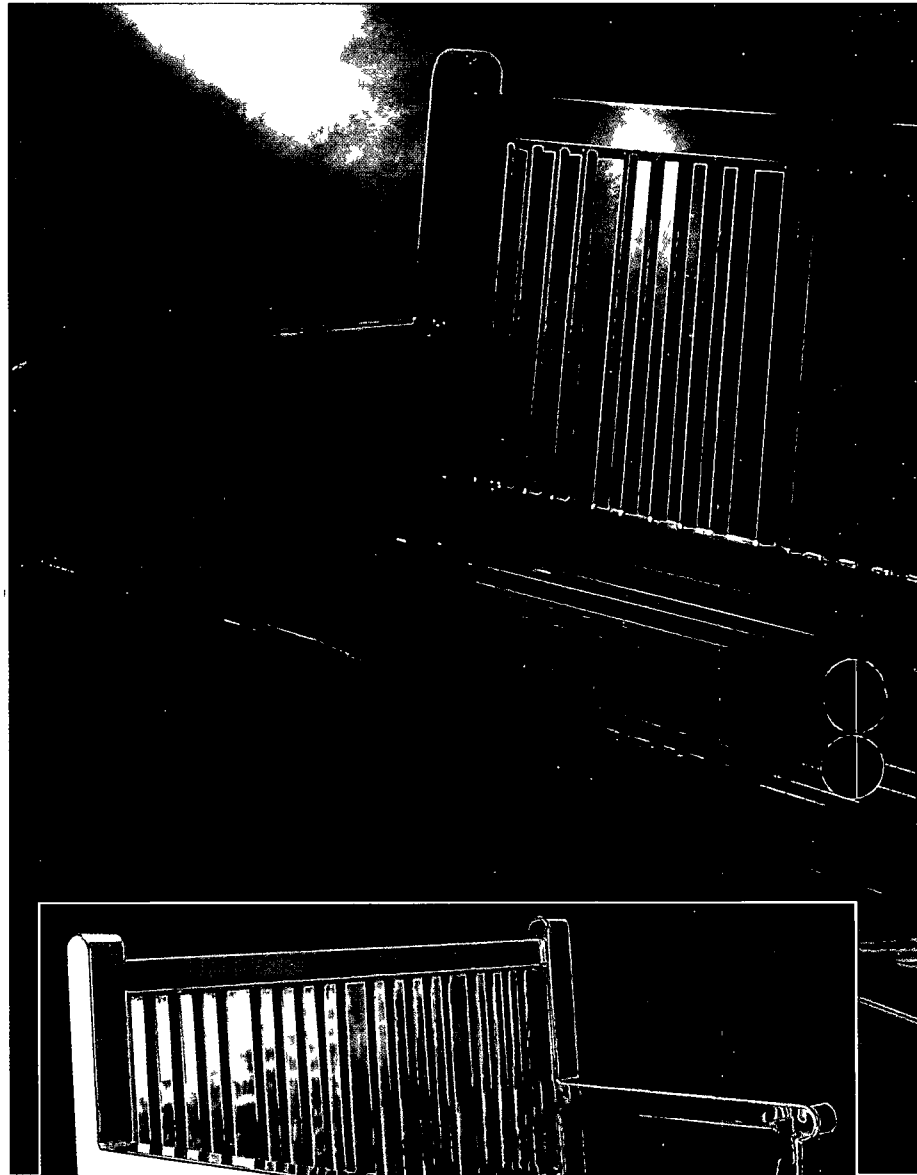
- Ruggedly-made available in multi-color
- Bench available with back or flat in any length mounting or standard color
- Litter with door offers self-latching hinge system to avoid lost keys and open hanging door
- Litter receptacle includes plastic liner flat lid anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color optional lids and liners (see page 17)
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry



RE26 Reading w/back 6' \$850
RE28 Reading w/back 8' \$1050



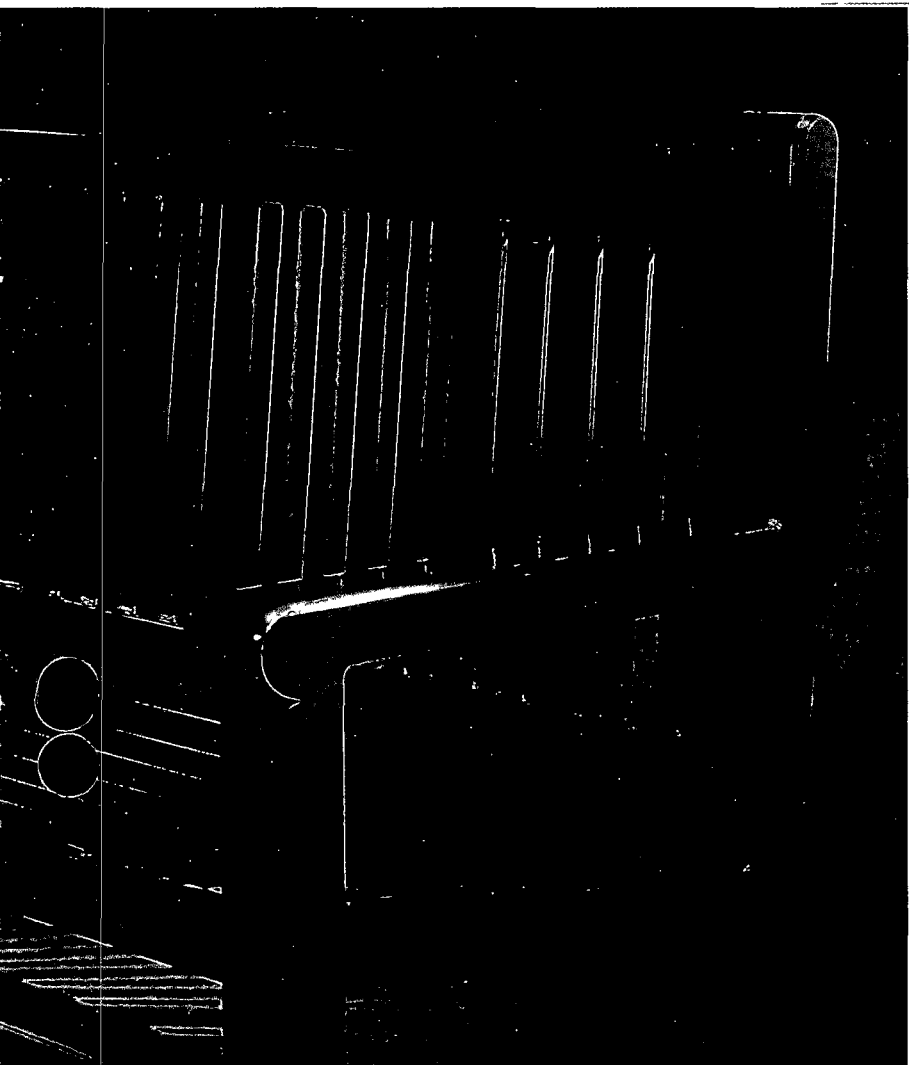
RE2CU6 Curved Reading w/back 6' one color \$1150
RE2CU6X Curved Reading w/back 6' two color \$1250



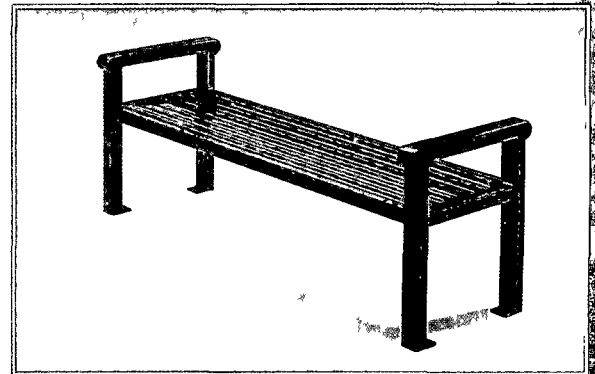
STAINLESS READING BENCH

A stunning design that reflects light and adds lustre to museums and galleries or reinforces a perception of purity for medical facilities. Inspired by the Reading design this piece offers exceptional strength and a pristine contemporary look for the distinctive site.

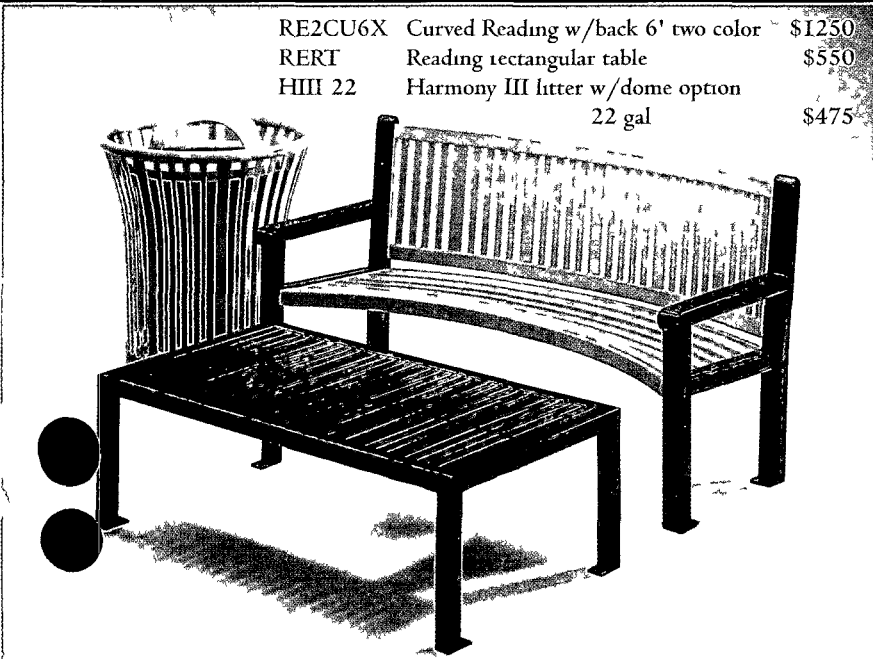
- Available in mirror or brushed finish
- Fully assembled unit
- Bench available with back or flat in any length or mounting



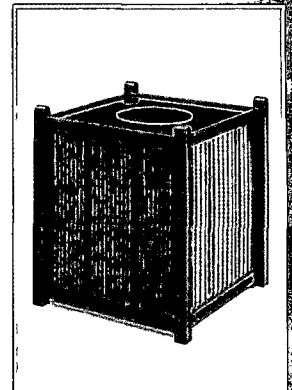
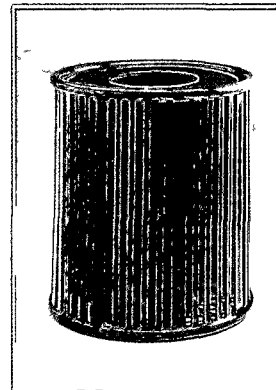
RE2CU6 Curved Reading w/back 6' one color \$1150
 RE22 Reading Chair \$700
 HIII 32 Harmony III litter 32 gal \$420



RE16 Reading flat 6' \$658
 RE18 Reading flat 8' \$758



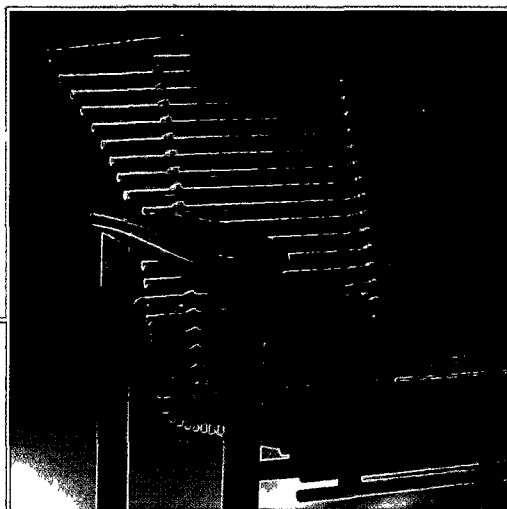
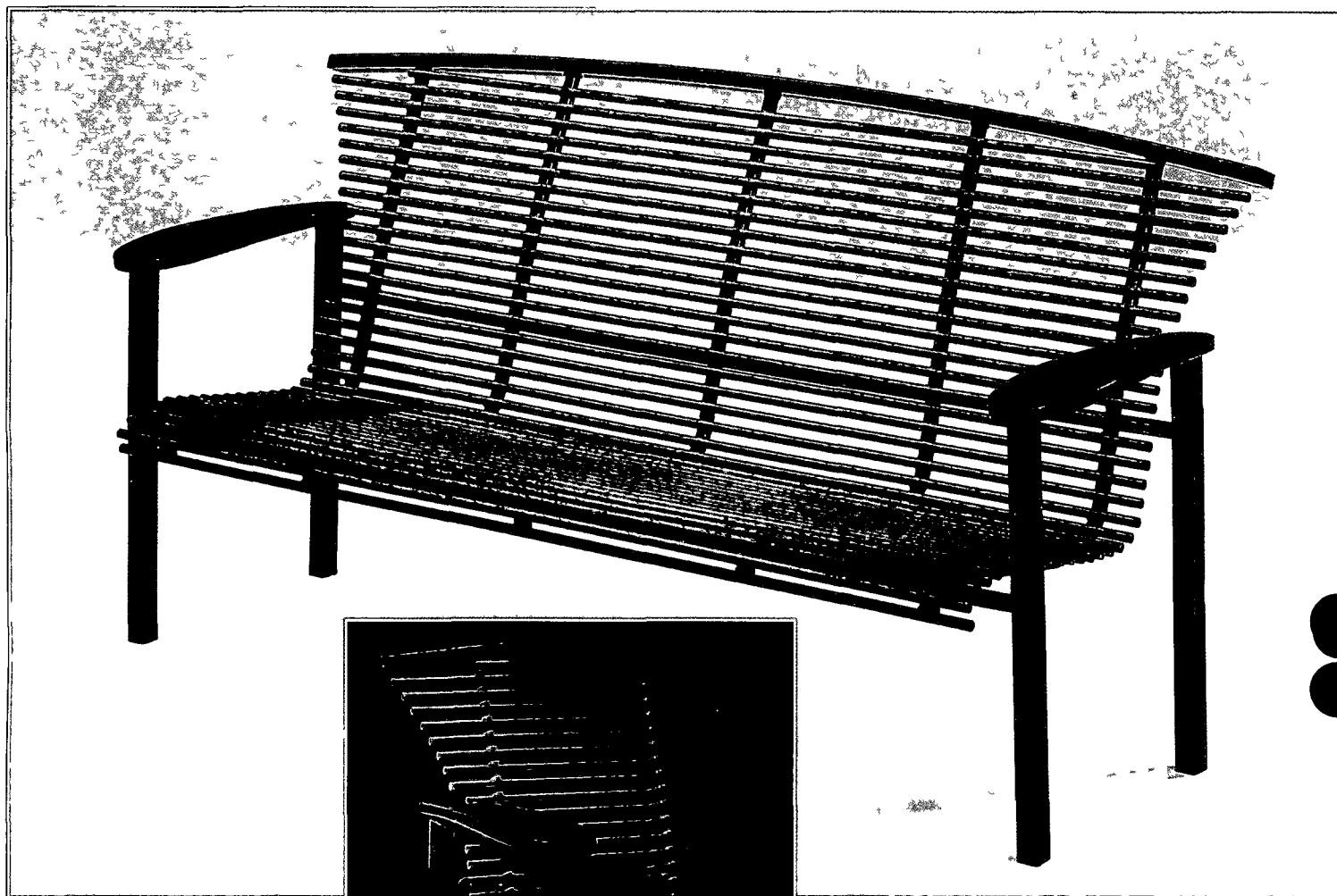
RE2CU6X Curved Reading w/back 6' two color \$1250
 RERT Reading rectangular table \$550
 HIII 22 Harmony III litter w/dome option 22 gal \$475



RE3 22 Reading litter 22 gal \$500
 RE3 32 Reading litter 32 gal \$540
 RE3SQ 32 Reading square litter 32 gal \$785
 RE4SQ Reading square planter \$750

HORIZON SERIES

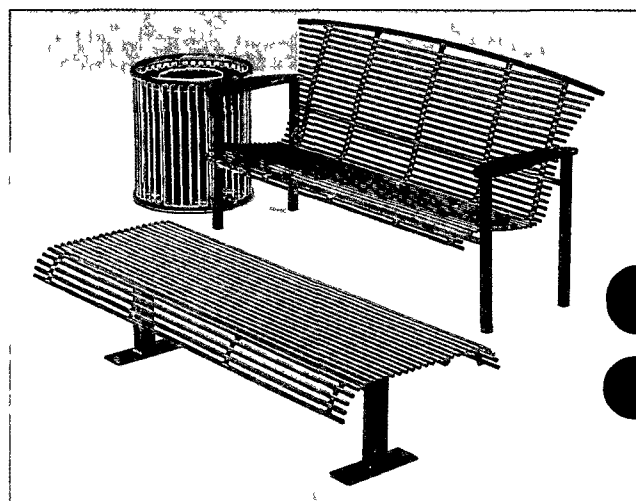
(Patent Pending)



East meets west in the distinctive Horizon Series. Expertly designed to fit into any setting from a Japanese garden to a downtown cultural district, this bench lends itself to anyone who has a taste for culture and adventure. Single rolled bar framed in a curved rectangular tubing incorporates the image of sun dawning on the Horizon.

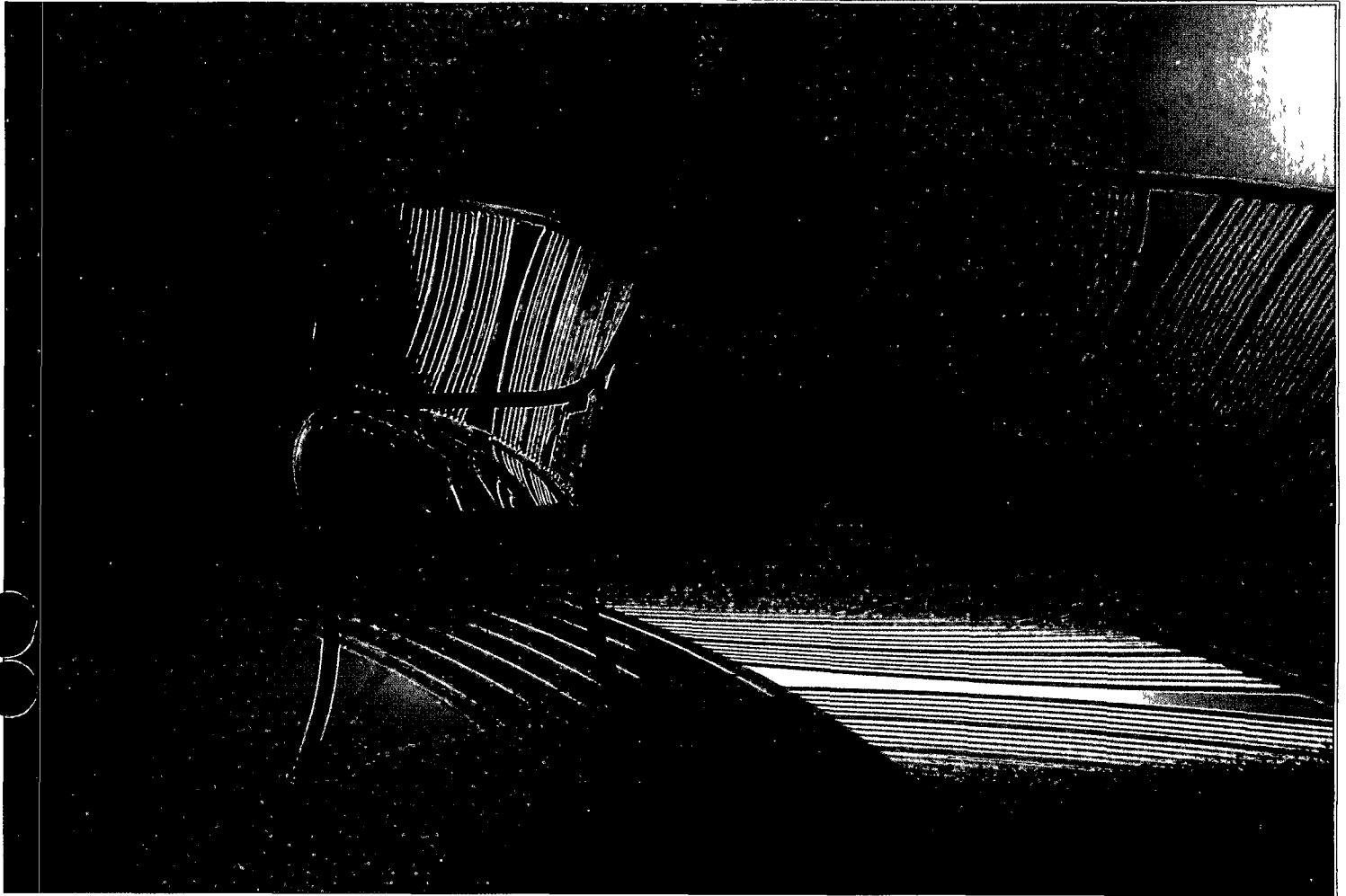
- Unsurpassed comfort with bench back lumbar support
- Repetition of solid metal tubing, evenly spaced, creates a superior seating experience
- Horizontal lines enhance any decor
- Bench available with back or flat in any length mounting or standard color
- Litter receptacle includes plastic liner, flat lid, anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color, optional lids and liners (see page 17)
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry

HZ26	Horizon Bench w/back 6	\$995
HZ28	Horizon Bench w/back 8	\$1175
HZ16	Horizon Bench flat 6	\$825
HZ18	Horizon Bench flat 8	\$975
HZ3 22	Horizon litter 22 gal	\$500
HZ3 32	Horizon litter 32 gal	\$565



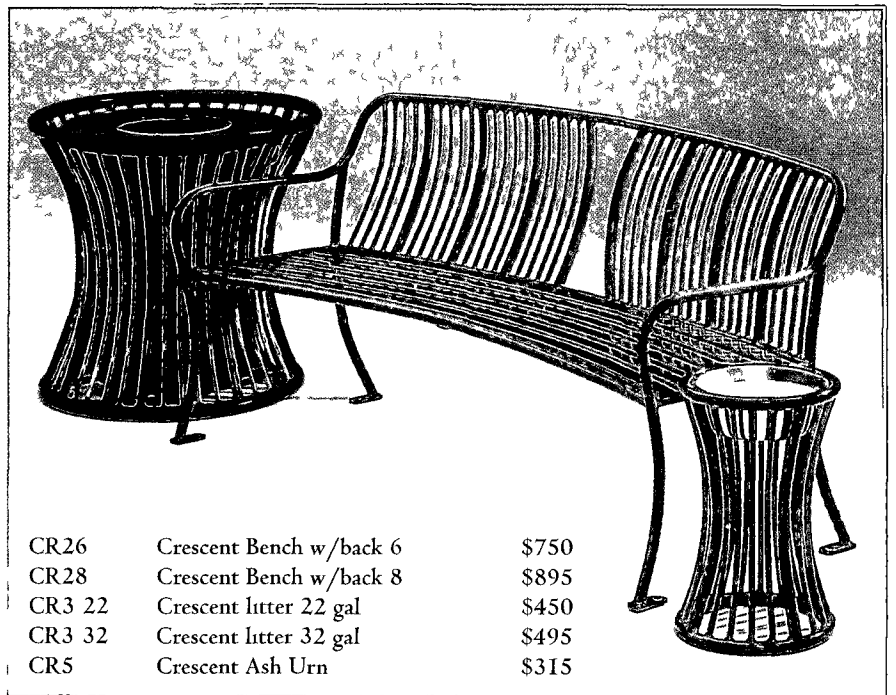
CRESCENT SERIES

(Patent Pending)



In the shape of a half-moon delicate arcs and accent curves complement the Crescent Series while taking the back detail to new dimensions. This series is an enchanting, soft alternative to straight-lined designs.

- Durable tubular steel frame
- Lower bench back provides an invitation to star gaze or to relax
- Curved seat provides stability and a graceful look, enhancing any setting
- Bench available with back in any length mounting or standard color
- Litter receptacle includes plastic liner flat lid anti-theft lanyard in either 22- or 32-gallon capacity with any mounting or standard color, optional lids and liners (see page 17)
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry

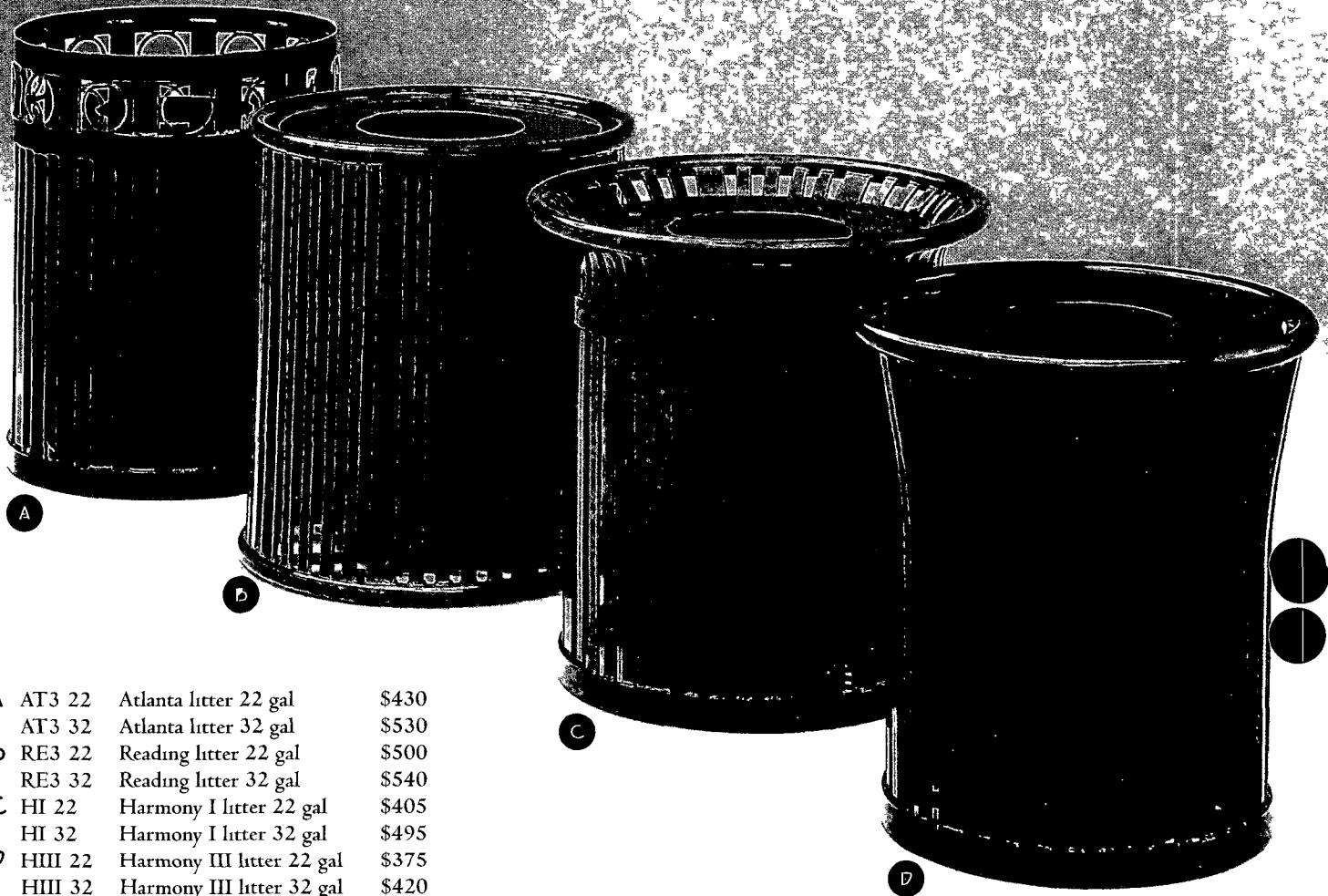


CR26	Crescent Bench w/back 6	\$750
CR28	Crescent Bench w/back 8	\$895
CR3 22	Crescent litter 22 gal	\$450
CR3 32	Crescent litter 32 gal	\$495
CR5	Crescent Ash Urn	\$315

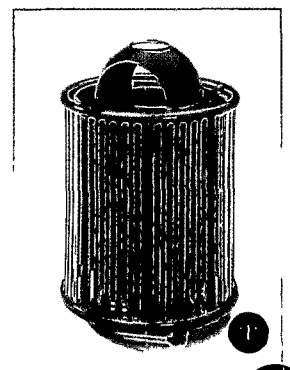
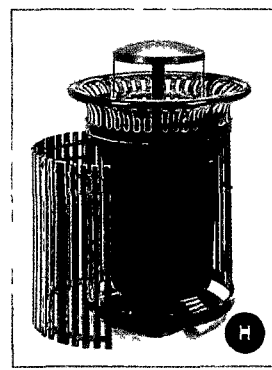
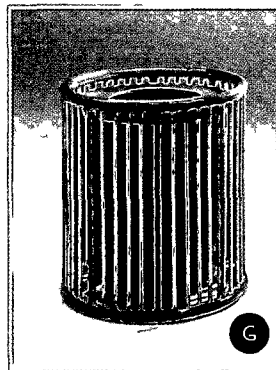
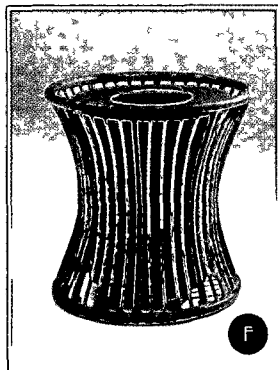
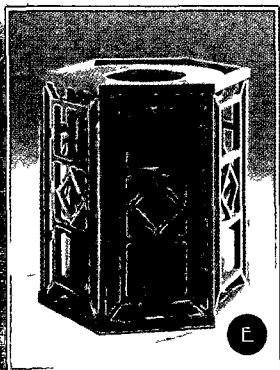


To order or for more information, call 1-800-284-8208 15

LITTER RECEPTACLES, PLANTERS, AND ASH URNS



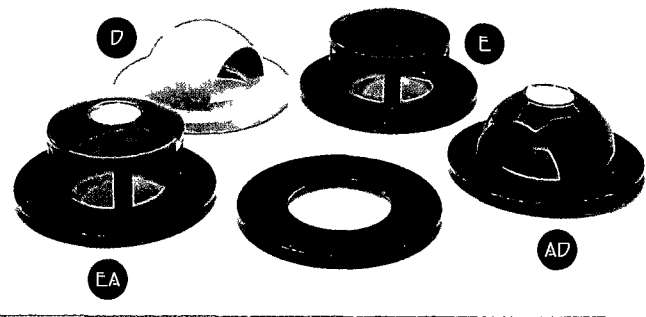
- | | | | |
|---|---------|---------------------------|-------|
| A | AT3 22 | Atlanta litter 22 gal | \$430 |
| | AT3 32 | Atlanta litter 32 gal | \$530 |
| B | RE3 22 | Reading litter 22 gal | \$500 |
| | RE3 32 | Reading litter 32 gal | \$540 |
| C | HI 22 | Harmony I litter 22 gal | \$405 |
| | HI 32 | Harmony I litter 32 gal | \$495 |
| D | HIII 22 | Harmony III litter 22 gal | \$375 |
| | HIII 32 | Harmony III litter 32 gal | \$420 |



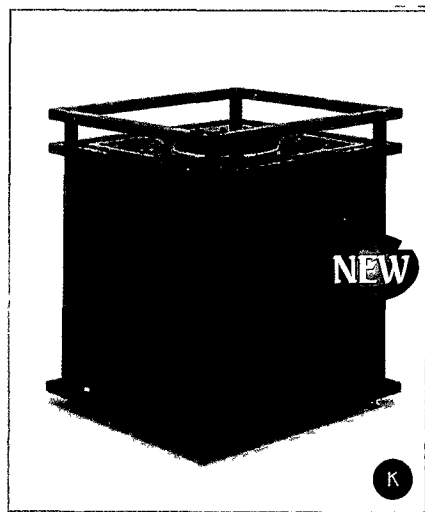
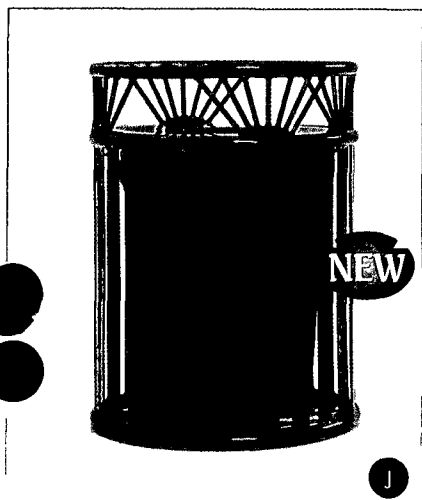
- | | | | | | | | | | | | |
|---|--------|------------------------|-------|---|---------|---|-------|---|----------|--|-------|
| E | AR3-22 | Artisan litter 22 gal | \$760 | H | HID 32E | Harmony I w/door
and elevated lid option
32 gal | \$820 | I | RE3 22AD | Reading litter w/ash dome
option 22 gal | \$635 |
| | AR3-32 | Artisan litter 32 gal | \$790 | | | | | | RE3 32AD | Reading litter w/ash dome
option 32 gal | \$ |
| F | CR3-22 | Crescent litter 22 gal | \$450 | | HID 32 | Harmony I w/door
32 gal | \$720 | | | | |
| | CR3-32 | Crescent litter 32 gal | \$495 | | | | | | | | |
| G | HZ3-22 | Horizon litter 22 gal | \$500 | | | | | | | | |
| | HZ3-32 | Horizon litter 32 gal | \$565 | | | | | | | | |

- All round litter receptacles are available in either 22- or 32-gallon size
- Standard features plastic liner flat lid and vinyl-coated stainless steel anti-theft lanyard
- Litter receptacle with door offers self-latching hinge system to avoid lost keys and open hanging door
- Optional lids dome ash dome elevated elevated ash (*see photo*)
- Planters and square litter receptacles available in all styles with galvanized liner, with or without drain hole
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry

LITTER RECEPTACLE LID OPTIONS

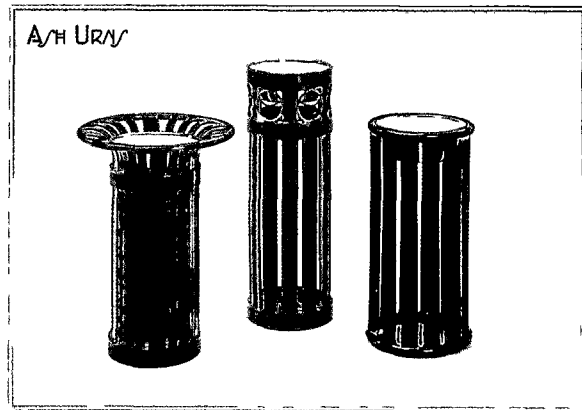


Flat—included
 Elevated ash lid (EA)—add \$135
 Dome (D)—add \$100
 Elevated lid (E)—add \$100
 Ash dome (AD)—add \$135



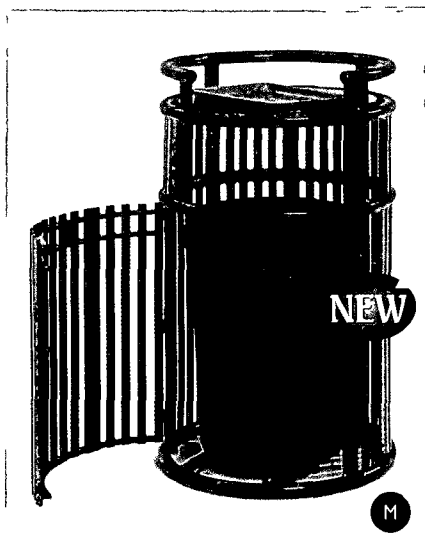
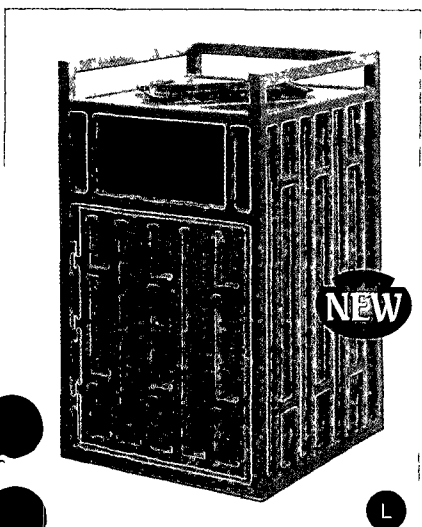
J CA3 22 Catalina litter 22 gal \$670
 CA3 32 Catalina litter 32 gal \$720

K MC3 22 McConnell litter 22 gal \$840
 MC3 32 McConnell litter 32 gal \$890



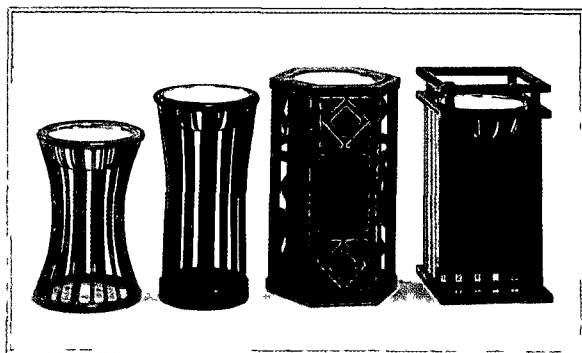
HI 5 Harmony I ash urn \$315
 AT5 Atlanta ash urn \$315
 P5 Pullman ash urn \$315

TRAY-TOP LITTER RECEPTACLES



L EM3T 32 Emporium tray top litter 32 gal \$955

M GA3T 32 Galleria tray top litter 32 gal \$860



CR5 Crescent ash urn \$315
 HIII 5 Harmony III ash urn \$315
 AR5 Artisan ash urn \$445
 MC5 McConnell ash urn \$425

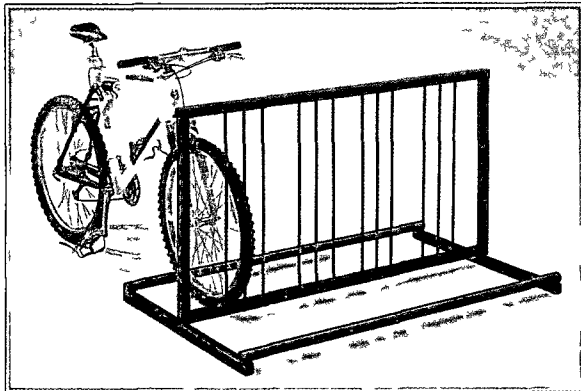
BIKE RACKS & BOLLARDS

BIKE RACKS

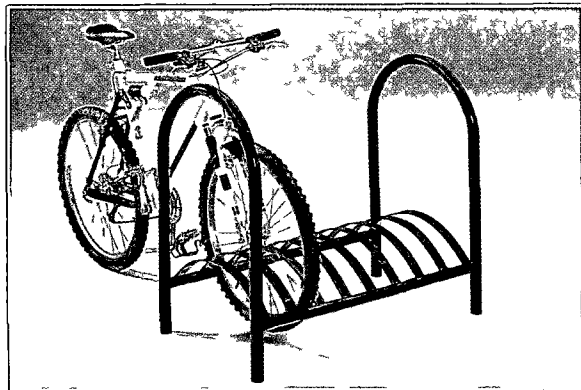
- Optional lengths available

BOLLARDS

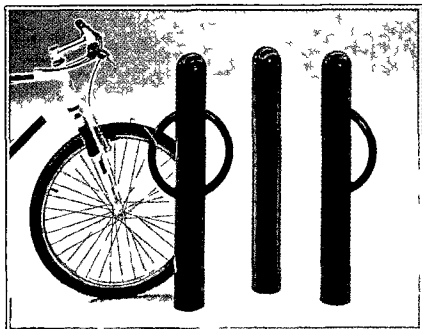
- Pedestrian and vehicle traffic deterrent
- Bicycle mount with one or two loop attachment
- Exclusive KEYSHIELD™ polyester powdercoating finish—our stamp of armored excellence that is foremost in the industry



RE I04 Reading bike rack capacity 4 \$300
 RE I08 Reading bike rack capacity 8 \$400

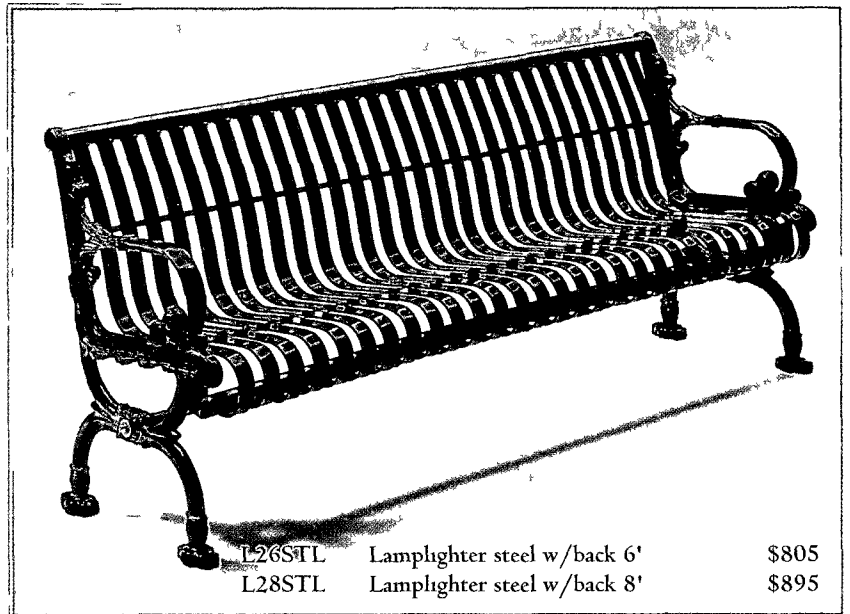


P I05 Pullman bike rack capacity 5 \$300



BOLLARDE Straight permanent bollard \$170
 BOLLARDR Straight removable bollard \$230
 BOLLARDIE 1 loop permanent bollard \$195
 BOLLARDIR 1 loop removable bollard \$265
 BOLLARD2E 2 loop permanent bollard \$220
 BOLLARD2R 2 loop removable bollard \$285

LAMPLIGHTER SERIES



L26STL Lamplighter steel w/back 6' \$805
 L28STL Lamplighter steel w/back 8' \$895

POWDER COATING STANDARD COLORS



Bumper Black



Gold



Bronze



Hunter Green



Burgundy



Light Teal



Cadet Blue



Ocean Blue



Evergreen



Peach

An additional 160 custom colors are available on request

TERMS & CONDITIONS

WARRANTY

Materials and workmanship are warranted against defect for a period of one year from date of purchase. Keystone Ridge Designs Inc. will repair or replace any part found defective upon written notification and inspection by our factory representative. Warranty covers only those items which have been installed according to our instructions and does not cover abnormal use, vandalism or acts of nature.

Keystone Ridge Designs Inc. reserves the right to alter product design, materials or construction without notice.

PRICING

Prices in this catalog supersede all other pricing and are subject to change without notice. Shipping charges are not included in prices.

GENERAL SPECIFICATIONS

- 1 Hardware** Stainless steel. Anchoring bolts are not supplied.
- 2 KEYSHIELD™ Metal Finish** All steel is coated using a colored polyester powder coating applied to a thickness of 7-15 mils. Substrate preparation consists of removing impurities such as heavy mill oils and rust inhibitors, ensuring that all surface contaminants are removed. The substrate is sandblasted to a white finish, the ultimate degree in powder coat preparation. The substrate receives a corrosion-inhibiting iron phosphate coating per TT-C 490 method II prior to application of the powdercoating. The substrate is preheated and the powdercoating is electrostatically applied to provide a smooth, satin-like finish. The product is then oven-cured according to powdercoating manufacturing specifications. The result: A product with the Keystone Ridge Designs stamp of quality with the KEYSHIELD™ armor to resist chipping, cracking, rusting, and UVA damage.

OPTIONS

- 1 Colors** Ten standard colors with an additional 160 custom colors available. Surcharge for custom color may be applied based on quantity. Colors in photos may not be exact; call for color chart.
- 2 Bench lengths** Standard sizes are 6' and 8' with custom size options.
- 3 Mountings** Surface and bury installation is standard; portable is optional. Litters and planters can be ordered with optional elevated leg for permanent installation.
- 4 Litter receptacles with doors** Offer the self-latching hinge system to avoid lost keys and open hanging doors.
- 5 Lids** Powdercoated flat metal lids with clear-coated stainless steel anti-theft lanyards are standard on all litter receptacles.
- 6 Litter liners** Round black plastic liners are standard. Round or square powdercoated steel liners are available options.
- 7 Planter liners** Powdercoated metal, with or without drain holes.
- 8 Ash inserts** Stainless steel with anti-theft lanyards.
- 9 Terms and conditions** All custom designs require 50% down, balance COD or prepay. For all other orders, please call our office for billing information. MasterCard and Visa also accepted.
- 10 Delivery** Keystone Ridge Designs Inc. is released of all responsibility for damages or shortages once the bill of lading is signed by the common carrier indicating the shipment was made complete and in good condition. The freight bill is your receipt and should be confirmed against the shipment received. Any damages or shortages should be indicated on the freight bill before the shipment is accepted.



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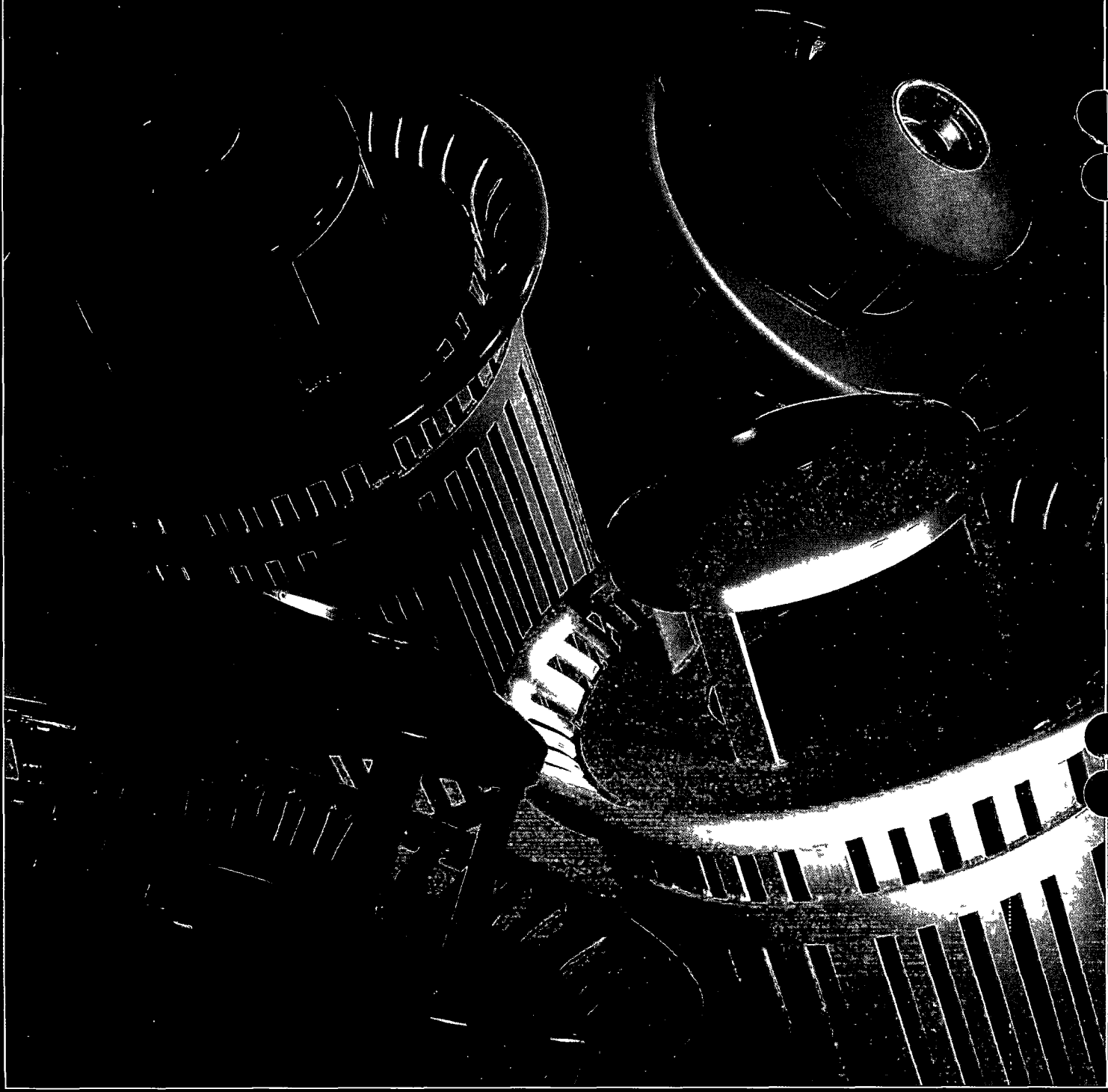
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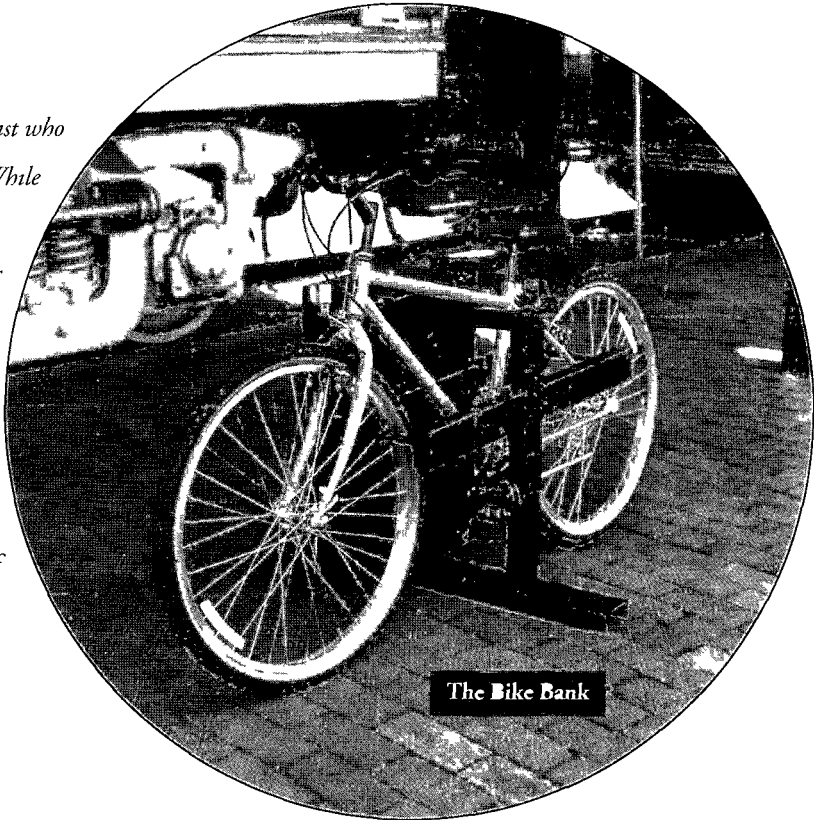
Address Correction Requested

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THE BIKE BANK

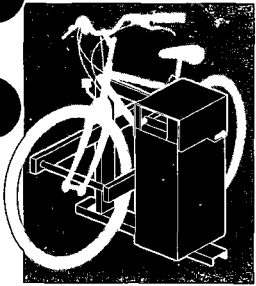
THE BIKE BANK

The BIKE BANK was designed for the cyclist who needs maximum protection against theft. While providing the luxury and convenience of personal storage, the bike bank's lock shelter is biker friendly, easily accessible, and will accommodate either padlocks or U locks. A durable, maintenance-free, weather-resistant polyvinyl coating covers all areas of the unit that come in contact with the bicycle, preventing scratching or marring of the bicycle finish. Units are offered in both single and double capacity.



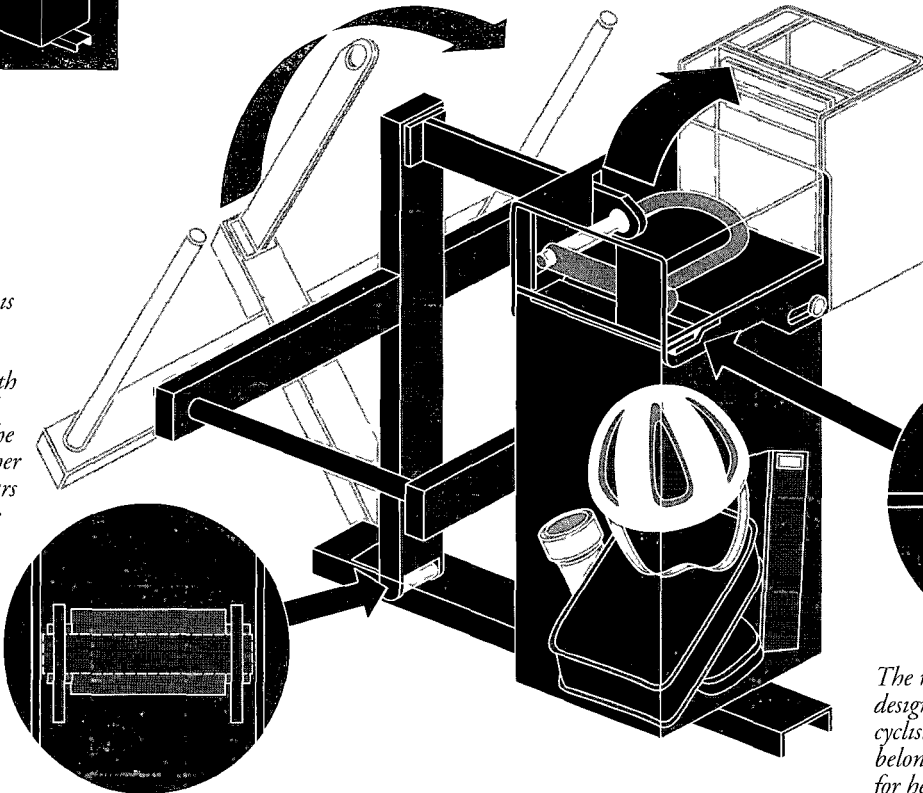
The Bike Bank

A unified locking system locks bicycle frame, both wheels, lock shelter, and storage bank as one.



The tamper-proof steel locking shelter in combination with the bike bank cover deters theft by making it very difficult to gain access to the biker's lock with a bolt cutter.

The locking arm is designed to pivot freely, offer maximum strength and security, and withstand even the most severe weather conditions for years of trouble-free use.

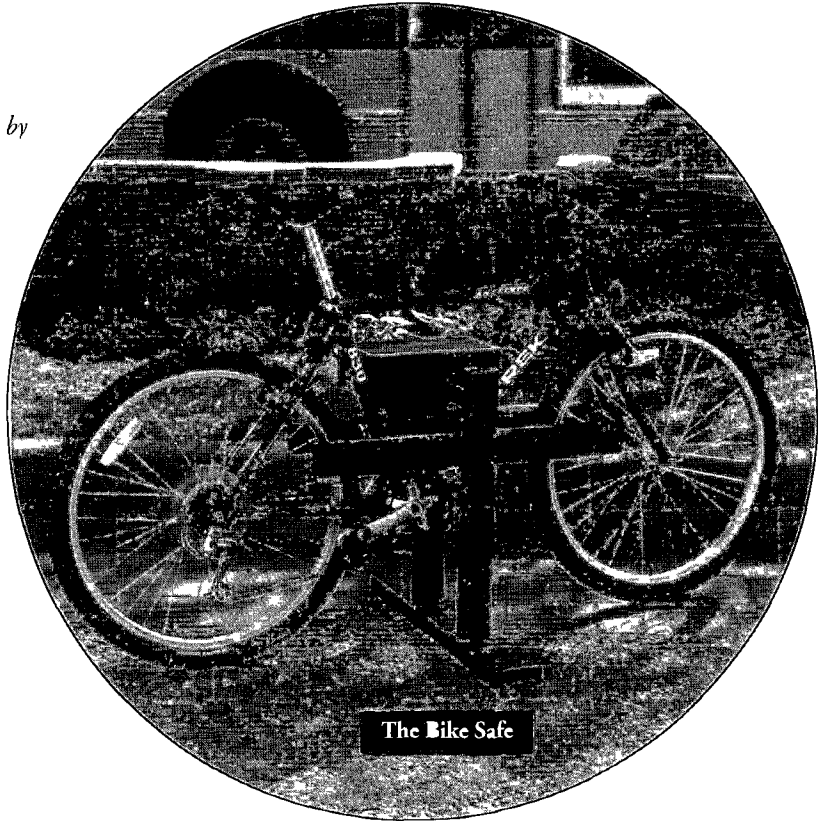


The rolled steel storage bank was designed for commuters, students, or cyclists who need to store their belongings in a secure place. Great for helmets, seats, book bags, rain gear, and bike accessories.

THE BIKE SAFE

THE BIKE SAFE

The BIKE SAFE offers maximum security by locking both wheels and frame of bike simultaneously in a biker friendly unified locking system. The locking shelter accepts both padlock or U-locks and protects them from bolt cutters prying and the weather. A black polyvinyl coating covers all areas that come in direct contact with the bicycle. Available in single or double capacity.



SPECIFICATIONS

- Steel base is 3/16" thick by 1 7/8" high by 4 9/16" wide
- Arms = rectangular tubing 1 1/2" x 3"
- Lock shelter = 14 ga
- Storage bank 14 ga 9" x 12" x 21"
- Locking arm = case hardened steel 1/4" x 1 1/2" x 10 3/4"
- Locking pins = case hardened steel 5/8" diameter x 8"
- Finish = black polyvinyl in areas that come in contact with the bike and black polyester paint in all other areas
- Special anchor expansion mounting bolts 1/2" x 4 3/4" included (3 with single or 5 with double)

Model	Description	Size (inches)	Weight
-------	-------------	---------------	--------

THE BIKE BANK

8001	Double w/ storage	26 9W x 58 0L x 32 5H	112#
8002	Single w/ storage	26 9W x 28 0L x 32 5H	55#

THE BIKE SAFE

8003	Double no storage	26 9W x 58 0L x 32 5H	98#
8004	Single no storage	26 9W x 28 0L x 32 5H	46#

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CIP Cost Analysis

Costs shown in the spreadsheet format reflect those directly related to construction of bicycle lanes or routes only. For example, proposed Class 2 or 3 facilities where such lanes have already been programmed by the City of Carlsbad reflect the costs of items such as striping and signage only. The costs of physical bicycle lane construction items, such as asphalt and subbase, is not included in these spreadsheets since they would already have been accounted for within the programmed CIP for the roadway.

Since the proposed Class 1 paths have not been previously programmed, their spreadsheet format does include construction costs, but does not include land acquisition costs or other unknown factors such as the extent of grading or the length and height of necessary bridges. (See Section 11.3, Typical Unit Construction Costs.)

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project A

Segment 5 Chestnut Street from Carlsbad Boulevard to El Camino Real

This segment takes advantage of an existing crossing under I-5 that is not encumbered by a freeway intersection. Chestnut Street does not have high motor vehicle traffic volumes and runs through primarily residential areas from north central Carlsbad at El Camino Real to Carlsbad Boulevard on the coast. The only missing section is at the rail line right-of-way, but this is also one of the points at which a rail line crossing is proposed under this bikeway master plan.

Class 3 Length

10,302 Feet

1.95 Miles

Primary Costs

Unit

Unit Cost

Quantity Total Cost

Class 3 Facility

Bike Route Signs

EA

\$165.00

20

\$3,300

Subtotal

\$3,300

Additional Costs:

Contingencies (20%)

\$660

Construction Costs with Contingencies

\$3,960

Engineering and Design (10%)

\$396

Administration (5%)

\$198

Construction Management (7%)

\$277

Total Construction Costs:

\$4,831

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project A

Segment 6 Chinquapin Avenue from Coastal Rail Trail to Highland Drive

This proposed segment would take advantage of an existing crossing over I-5 that is not encumbered by a freeway intersection. It would connect Segment 4 to the proposed Coastal Rail Trail and with Segment 7 along the north shore of Agua Hedionda Lagoon. Chinquapin Avenue has relatively low motor vehicle traffic volumes and runs primarily through residential areas.

Class 3 Length

3,690 Feet

0.70 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
---------------	------	-----------	----------	------------

Class 3 Facility				
-------------------------	--	--	--	--

Bike Route Signs	EA	\$165.00	8	\$1,320
------------------	----	----------	---	---------

				Subtotal	\$1,320
--	--	--	--	-----------------	----------------

Additional Costs:

Contingencies (20%)				\$264
---------------------	--	--	--	-------

Construction Costs with Contingencies				\$1,584
---------------------------------------	--	--	--	---------

Engineering and Design (10%)				\$158
------------------------------	--	--	--	-------

Administration (5%)				\$79
---------------------	--	--	--	------

Construction Management (7%)				\$111
------------------------------	--	--	--	-------

Total Construction Costs:				\$1,932
----------------------------------	--	--	--	----------------

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project A

Segment 7 Adams Street from Chinquapin Avenue to Park Drive

This segment would provide part of a scenic connection from the residential areas of northwestern Carlsbad to central Carlsbad along the northern shore of Agua Hedionda Lagoon. This proposed segment is currently considered an "undesignated" route. Adams Street has relatively low motor vehicle traffic volumes.

Class 3 Length

4,435 Feet

0.84 Miles

Primary Costs

Unit

Unit Cost

Quantity

Total Cost

Class 3 Facility

Bike Route Signs

EA

\$165.00

8

\$1,320

Subtotal

\$1,320

Additional Costs:

Contingencies (20%)

\$264

Construction Costs with Contingencies

\$1,584

Engineering and Design (10%)

\$158

Administration (5%)

\$79

Construction Management (7%)

\$111

Total Construction Costs:

\$1,932

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project A

Segment 8 Park Drive from Tamarack Avenue to Kelly Drive

This segment is a continuation of an existing Class 3 route adjacent to Carlsbad High School and other municipal facilities on Monroe Street, to Park Drive crossing Tamarack Drive. It would connect this area of central Carlsbad to El Camino Real via the northern shore of Agua Hedionda Lagoon and then on an existing Class 2 route on Kelly Drive adjacent to an elementary school and park. The proposed Segment 7 on Adams Street that intersects this segment would provide a link to the residential areas immediately east of I-5 and then to areas west of I-5 via Chiquapin Avenue (Segment 6).

Class 3 Length

9,163 Feet

1.74 Miles

Primary Costs

Unit

Unit Cost

Quantity

Total Cost

Class 3 Facility

Bike Route Signs

EA

\$165.00

18

\$2,970

Subtotal

\$2,970

Additional Costs:

Contingencies (20%)

\$594

Construction Costs with Contingencies

\$3,564

Engineering and Design (10%)

\$356

Administration (5%)

\$178

Construction Management (7%)

\$249

Total Construction Costs:

\$4,348

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project B

Segment 10 La Costa Avenue from El Camino Real to Calle Madero

This segment differs from all other segments in that it is proposed to have Class 2 facilities eastbound and Class 3 westbound. City engineers indicated that physical changes to this street are not feasible and any proposed changes to existing bicycle facilities would need to fit within the current street configuration. This combination of facility types is unusual, but will allow for continued parallel parking while making the route safer for cyclists.

Cycling volumes do not appear to be high on this segment at present, but this route forms an important east/west connection across southern Carlsbad, connecting the southeast section with the coastal strip.

Class 2 Length (Eastbound only)	6,590 Feet	1.25 Miles
Class 3 Length (Westbound only)	6,590 Feet	1.25 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
---------------	------	-----------	----------	------------

Class 2 Facility (one way)

Bike Lane Striping/Signing	MI	\$1,650.00	1.25	\$2,059
No Parking Signs	EA	\$165.00	1.25	\$206
Stripe Removal	LF	\$2.20	6,590	\$14,498
Restripe Centerline w/Reflectors	LF	\$2.20	6,590	\$14,498
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	14	\$770
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0

Class 3 Facility (one way)

Bike Route Signing	MI	\$165.00	6	\$990
			Subtotal	\$33,021

Additional Costs:

Contingencies (20%)	\$6,604
Construction Costs with Contingencies	\$39,626
Engineering and Design (10%)	\$3,963
Administration (5%)	\$1,981
Construction Management (7%)	\$2,774

Total Construction Costs:	\$48,343
----------------------------------	-----------------

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project C

Segment 12 Camino de los Ondas from Hidden Valley Rd to Paseo del Norte

This segment would close a gap between two existing Class 2 facilities and connect Palomar Airport Road with Paseo del Norte. It would allow riders to avoid a very busy intersection by creating an alternative route that runs through a relatively lightly traveled residential area.

Class 2 Length

1,030 Feet

0.20 Miles

Primary Costs

Unit

Unit Cost

Quantity

Total Cost

Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	0.20	\$660
No Parking Signs	EA	\$165.00	2	\$330
Stripe Removal	LF	\$2.20	1,030	\$2,266
Restripe Centerline w/Reflectors	LF	\$2.20	1,030	\$2,266
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	4	\$220
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0

Subtotal

\$5,742

Additional Costs:

Contingencies (20%)	\$1,148
Construction Costs with Contingencies	\$6,890
Engineering and Design (10%)	\$689
Administration (5%)	\$345
Construction Management (7%)	\$482

Total Construction Costs:

\$8,406

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project H

Segment 20 Palomar Airport Road from Paseo del Norte to Carlsbad Blvd

This proposed segment would constitute the completion (along with Segment 21) of Class 2 lanes on Palomar Airport Road along a section where no facilities currently exist. This segment would intersect Carlsbad Boulevard, creating a direct Class 2 route between coastal Carlsbad to the City of San Marcos. This segment has a major problem in the limited width currently available on the bridge over the rail line. However, any improvements in the short term are to be considered temporary since this problematic intersection is slated to be replaced with a "T" configuration.

Class 2 Length 3,677 Feet 0.70 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
---------------	------	-----------	----------	------------

Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	0.70	\$2,298
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	3,677	\$8,089
Restripe Centerline w/Reflectors	LF	\$2.20	3,677	\$8,089
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	8	\$440
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$18,917

Additional Costs:

Contingencies (20%)	\$3,783
Construction Costs with Contingencies	\$22,700
Engineering and Design (10%)	\$2,270
Administration (5%)	\$1,135
Construction Management (7%)	\$1,589

Total Construction Costs: \$27,694

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project I

Segment 22 Rancho Santa Fe Rd from Camino de los Coches to Melrose Dr

Only a short section of Rancho Santa Fe Road currently has Class 2 lanes in place. This proposed segment would constitute the completion (along with Segment 22) of Class 2 lanes on the entire length of Rancho Santa Fe Road in the sections where no facilities currently exist within the City of Carlsbad. Much of the improvements can be accomplished within the existing right-of-way, but the southern portion of this segment between Denning Drive and La Costa Avenue may need to be widened to accommodate a Class 2 facility.

Class 2 Length	12,936 Feet	2.45 Miles
----------------	-------------	------------

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
---------------	------	-----------	----------	------------

Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	2.45	\$8,085
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	12,936	\$28,459
Restripe Centerline w/Reflectors	LF	\$2.20	12,936	\$28,459
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	24	\$1,320
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$66,323

Additional Costs:

Contingencies (20%)	\$13,265
Construction Costs with Contingencies	\$79,588
Engineering and Design (10%)	\$7,959
Administration (5%)	\$3,979
Construction Management (7%)	\$5,571

Total Construction Costs:	\$97,097
----------------------------------	-----------------

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project I

Segment 23 Rancho Santa Fe Road from Olivenhain Road to City of Encinitas

Only a short section of Rancho Santa Fe Road currently has Class 2 lanes in place. This proposed segment would constitute the completion (along with Segment 21) of Class 2 lanes on the entire length of Rancho Santa Fe Road in the sections where no facilities currently exist within the City of Carlsbad. Some of the improvements may be accomplished with restriping, but this segment will need to be widened to accommodate a Class 2 facility. It would create a link between the northeastern section of the City of Encinitas and coastal Carlsbad via Olivenhain Road or La Costa Avenue.

Class 2 Length	3,612 Feet	0.68 Miles
----------------	------------	------------

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
---------------	------	-----------	----------	------------

Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	0.68	\$2,258
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	3,612	\$7,946
Restripe Centerline w/Reflectors	LF	\$2.20	3,612	\$7,946
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	8	\$440
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
Roadway Widening	LF			
			Subtotal	\$18,590

Additional Costs:

Contingencies (25%)	\$3,718
Construction Costs with Contingencies	\$22,308
Engineering and Design (10%)	\$2,231
Administration (5%)	\$1,115
Construction Management (7%)	\$1,562

Total Construction Costs:	\$27,216
----------------------------------	-----------------

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 25 Cannon Road from Paseo del Norte to City of Vista

This long segment represents a planned eastward extension of Cannon Road to include Class 2 lanes. This proposed segment would create a direct Class 2 route between the City of Vista and coastal Carlsbad. Several other proposed north/south segments would intersect this segment, making it a regional connection.

Class 2 Length

21,336 Feet

4.04 Miles

Primary Costs

Unit

Unit Cost

Quantity

Total Cost

Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	4.04	\$13,335
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	21,336	\$46,939
Restripe Centerline w/Reflectors	LF	\$2.20	21,336	\$46,939
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	0	\$0
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0

Subtotal \$107,213

Additional Costs:

Contingencies (20%)	\$21,443
Construction Costs with Contingencies	\$128,656
Engineering and Design (10%)	\$12,866
Administration (5%)	\$6,433
Construction Management (7%)	\$9,006

Total Construction Costs:

\$156,960

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 26 Faraday Avenue from current northwest end to Cannon Road

This segment represents a planned northward extension of Faraday Avenue to include Class 2 lanes. This proposed segment would create a Class 2 link between a proposed extension of Cannon Road and an existing section of College Boulevard and continue eastward into the City of Vista where it would intersect with the planned northward extension of Melrose Drive. The completion of Faraday Avenue would provide a connection between central Carlsbad and the City of Vista, and then on to coastal Carlsbad via the future extension of Cannon Road to intersect with Faraday Avenue.

Class 2 Length 6,286 Feet 1.19 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	1.19	\$3,929
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	6,286	\$13,829
Restripe Centerline w/Reflectors	LF	\$2.20	6,286	\$13,829
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	6	\$330
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
Subtotal				\$31,917

Additional Costs:

Contingencies (20%)	\$6,383
Construction Costs with Contingencies	\$38,301
Engineering and Design (10%)	\$3,830
Administration (5%)	\$1,915
Construction Management (7%)	\$2,681

Total Construction Costs: \$46,727

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 27 Faraday Avenue from current east end to City of Vista

This segment represents a planned eastward extension of Faraday Avenue to include Class 2 lanes into the City of Vista. This proposed segment would complete a Class 2 route connecting Vista and coastal Carlsbad via Faraday Avenue and Cannon Road.

Class 2 Length 6,280 Feet 1.72 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	1.72	\$5,676
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	6,280	\$13,816
Restripe Centerline w/Reflectors	LF	\$2.20	6,280	\$13,816
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	9	\$495
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
Subtotal				\$33,803

Additional Costs:

Contingencies (20%)	\$6,761
Construction Costs with Contingencies	\$40,564
Engineering and Design (10%)	\$4,056
Administration (5%)	\$2,028
Construction Management (7%)	\$2,839

Total Construction Costs: \$49,488

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 28 Poinsettia Lane from Aviara Pkwy to Melrose Drive

This lengthy proposed segment represents the planned extension of Poinsettia Lane to include Class 2 lanes from where Poinsettia Lane currently ends just east of Aviara Parkway to Melrose Drive Besides connecting coastal Carlsbad with the Cities of Vista and San Marcos via Melrose Drive, other existing and planned north/south segments also intersect this segment within Carlsbad, making it a regional bikeway link

Class 2 Length 19,100 Feet 3.62 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility				
Bike Lane Striping/Signing	MI	\$3,300.00	3.62	\$11,938
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	19,100	\$42,020
Restripe Centerline w/Reflectors	LF	\$2.20	19,100	\$42,020
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	20	\$1,100
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
Subtotal				\$97,078

Additional Costs:

Contingencies (25%)	\$19,416
Construction Costs with Contingencies	\$116,493
Engineering and Design (10%)	\$11,649
Administration (5%)	\$5,825
Construction Management (7%)	\$8,155

Total Construction Costs:	\$142,121
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Carlsbad Bikeway Master Plan**Capital Cost Estimate****Project K****Segment 30 Melrose Drive from Palomar Airport Road to City of Vista**

This segment represents a planned northward extension of Melrose Avenue from Palomar Airport Road into the City of Vista to include Class 2 lanes. This proposed segment would create a contiguous Class 2 route connecting the Cities of Encinitas, San Marcos and Vista via Melrose Drive and Rancho Santa Fe Road.

Class 2 Length	2,545 Feet	0.48 Miles
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Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	0.48	\$1,591
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	2,545	\$5,599
Restripe Centerline w/Reflectors	LF	\$2.20	2,545	\$5,599
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	10	\$550
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$13,339

Additional Costs:

Contingencies (25%)	\$2,668
Construction Costs with Contingencies	\$16,006
Engineering and Design (10%)	\$1,601
Administration (5%)	\$800
Construction Management (7%)	\$1,120

Total Construction Costs:	\$19,528
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Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 31 El Fuerte Street from current north end to Faraday Avenue

This segment represents a planned northward extension of El Fuerte Street from Alga Road to Faraday Avenue to include Class 2 lanes. This proposed segment would create a Class 2 route connecting east central and south central Carlsbad, and intersect three other existing and proposed east/west routes.

Class 2 Length 9,583 Feet 1.81 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	1.81	\$5,989
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	9,583	\$21,083
Restripe Centerline w/Reflectors	LF	\$2.20	9,583	\$21,083
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	10	\$550
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$48,705

Additional Costs:

Contingencies (20%)	\$9,741
Construction Costs with Contingencies	\$58,445
Engineering and Design (10%)	\$5,845
Administration (5%)	\$2,922
Construction Management (7%)	\$4,091

Total Construction Costs: \$71,303

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 32 Planned road from Rancho Santa Fe Rd to City of Encinitas

This segment represents a planned northward extension of a roadway from the City of Encinitas into the City of Carlsbad that would include Class 2 lanes. This proposed segment would create a Class 2 route connecting northern Encinitas with western San Marcos and Vista via eastern Carlsbad using contiguous sections of the planned road, Rancho Santa Fe Road and Melrose Avenue.

Class 2 Length 7,465 Feet 1.41 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	1.41	\$4,666
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	7,465	\$16,423
Restripe Centerline w/Reflectors	LF	\$2.20	7,465	\$16,423
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	7	\$385
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$37,897

Additional Costs:

Contingencies (20%)	\$7,579
Construction Costs with Contingencies	\$45,476
Engineering and Design (10%)	\$4,548
Administration (5%)	\$2,274
Construction Management (7%)	\$3,183

Total Construction Costs: \$55,481

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project K

Segment 33 La Costa Ave from Rancho Santa Fe Rd to planned road

This segment represents a planned eastward extension of La Costa Avenue eastward into the City of Encinitas via Camino de los Coches that would include Class 2 lanes This would eventually provide a Class 2 connection from the northeastern section of the City of Encinitas through southern Carlsbad to the coast via La Costa Avenue

Class 2 Length 4,186 Feet 0.79 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	0.79	\$2,616
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	4,186	\$9,209
Restripe Centerline w/Reflectors	LF	\$2.20	4,186	\$9,209
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	4	\$220
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$21,255

Additional Costs:

Contingencies (25%)	\$4,251
Construction Costs with Contingencies	\$25,506
Engineering and Design (10%)	\$2,551
Administration (5%)	\$1,275
Construction Management (7%)	\$1,785

Total Construction Costs:	\$31,117
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Carlsbad Bikeway Master Plan**Capital Cost Estimate****Project K****Segment 34 College Boulevard from El Camino Real to City of Oceanside**

This segment represents the planned northward extension of College Boulevard from El Camino Real into the City of Oceanside to include Class 2 lanes. In combination with Segment 28, this proposed segment would complete a Class 2 route along the entire length of College Boulevard within the City of Carlsbad. It would provide a northeast to southwest central artery through Carlsbad into Oceanside, intersecting several other planned east/west segments.

Class 2 Length	13,900 Feet	2.63 Miles
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Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 2 Facility

Bike Lane Striping/Signing	MI	\$3,300.00	2.63	\$8,688
No Parking Signs	EA	\$165.00	0	\$0
Stripe Removal	LF	\$2.20	13,900	\$30,580
Restripe Centerline w/Reflectors	LF	\$2.20	13,900	\$30,580
Restripe Continuous Left Turn	LF	\$3.30	0	\$0
Pavement Markings	EA	\$55.00	14	\$770
Bike Detector Loops	EA	\$385.00	0	\$0
Through Loops	EA	\$825.00	0	\$0
			Subtotal	\$70,618

Additional Costs:

Contingencies (20%)	\$14,124
Construction Costs with Contingencies	\$84,741
Engineering and Design (10%)	\$8,474
Administration (5%)	\$4,237
Construction Management (7%)	\$5,932

Total Construction Costs:	\$103,384
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Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project M

Segment 37 Agua Hedionda Creek from El Camino Real to Segment 39

This segment would be one of three segments (36, 37 and 39) running along the south side of the Agua Hedionda Creek drainage in a generally northeast to southwest direction across central Carlsbad. These segments would provide a scenic Class 1 access route almost all the way to the coast from northeastern Carlsbad.

Much of this segment could be retained once Cannon Road is completed and be designed to run parallel with it, or could be replaced by the Class 2 facility planned for Cannon Road.

Class 1 Length 4,773 Feet 0.90 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 1 Facility

Bike Path Striping/Signing	MI	\$3,300.00	0.90	\$2,983
96" AC Path w/Agg Base (3"/6")	SF	\$1.22	38,184	\$46,584
2-24" Parallel DG Paving Paths (3")	SF	\$0.50	19,092	\$9,546
Clear and Grub	SF	\$0.55	57,276	\$31,502
Subgrade Prep/Exec	CY	\$16.50	2,121	\$35,002
Drainage	LF	\$5.50	4,773	\$26,252
Fencing	LF	\$13.20	4,773	\$63,004
Subtotal				\$214,873

Additional Costs:

Contingencies (20%)	\$42,975
Construction Costs with Contingencies	\$257,847
Engineering and Design (10%)	\$25,785
Administration (5%)	\$12,892
Construction Management (7%)	\$18,049

Total Construction Costs: \$314,573

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project O

Segment 41 Class 1 path from Faraday Ave alignment to Palomar Airport Rd

This segment would be one of a series of five (40, 41, 42, 43 and 44) running in a generally northwest to southeast direction across central Carlsbad. These segments would provide a scenic Class 1 access route from west central Carlsbad to the City of San Marcos.

This particular segment would be a permanent Class 1 access route connecting Faraday Avenue with the remainder of this series of segments running roughly parallel and south of Palomar Airport Road. This Class 1 system would provide an alternative to cycling on major roadways with high motor vehicle volumes and relatively high speeds. (Specific alignment would be determined pending a future route location study.)

Class 1 Length 4,480 Feet 0.85 Miles

Primary Costs

Unit	Unit Cost	Quantity	Total Cost
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Class 1 Facility

Bike Path Striping/Signing	MI	\$3,300.00	0.85	\$2,800
96" AC Path w/Agg Base (3"/6")	SF	\$1.22	35,840	\$43,725
2-24" Parallel DG Paving Paths (3")	SF	\$0.50	17,920	\$8,960
Clear and Grub	SF	\$0.55	53,760	\$29,568
Subgrade Prep/Exec	CY	\$16.50	1,991	\$32,853
Drainage	LF	\$5.50	4,480	\$24,640
Fencing	LF	\$13.20	4,480	\$59,136
			Subtotal	\$201,682

Additional Costs:

Contingencies (20%)	\$40,336
Construction Costs with Contingencies	\$242,019
Engineering and Design (10%)	\$24,202
Administration (5%)	\$12,101
Construction Management (7%)	\$16,941

Total Construction Costs:

\$295,263

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project O

Segment 43 Class 1 along Poinsettia Lane from El Camino Real to El Fuerte St

This segment would be one of five (40, 41, 42, 43 and 44) running in a generally northwest to southeast direction across central Carlsbad. These segments would provide a scenic Class 1 access route from west central Carlsbad to the City of San Marcos. This particular segment would be the Class 1 connection between El Camino Real and El Fuerte Street. (Specific alignment would be determined pending a future route location study.)

Class 1 Length	7,110 Feet	1.35 Miles
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Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 1 Facility

Bike Path Striping/Signing	MI	\$3,300.00	1.35	\$4,444
96" AC Path w/Agg. Base (3"/6")	SF	\$1.22	56,880	\$69,394
2-24" Parallel DG Paving Paths (3")	SF	\$0.50	28,440	\$14,220
Clear and Grub	SF	\$0.55	85,320	\$46,926
Subgrade Prep/Exec	CY	\$16.50	3,160	\$52,140
Drainage	LF	\$5.50	7,110	\$39,105
Fencing	LF	\$13.20	7,110	\$93,852
			Subtotal	\$320,080

Additional Costs:

Contingencies (25%)	\$64,016
Construction Costs with Contingencies	\$384,096
Engineering and Design (10%)	\$38,410
Administration (5%)	\$19,205
Construction Management (7%)	\$26,887

Total Construction Costs:	\$468,598
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Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project R

Segment 46 Lake Calaveras loop

This segment would be a recreationally oriented loop around Calaveras Lake. It would take advantage of the numerous existing trails around the lake to define a paved alignment connected to the remainder of the City of Carlsbad's bikeway system. Connection with bikeways within the City of Oceanside from this segment should also be feasible.

Class 1 Length

10,909 Feet

2.07 Miles

Primary Costs

Unit

Unit Cost

Quantity

Total Cost

Class 1 Facility

Bike Path Striping/Signing	MI	\$3,300.00	2.07	\$6,818
96" AC Path w/Agg Base (3"/6")	SF	\$1.22	87,272	\$106,472
2-24" Parallel DG Paving Paths (3")	SF	\$0.50	43,636	\$21,818
Clear and Grub	SF	\$0.55	130,908	\$71,999
Subgrade Prep/Exec	CY	\$16.50	4,848	\$79,999
Drainage	LF	\$5.50	0	\$0
Fencing	LF	\$13.20	0	\$0
			Subtotal	\$287,107

Additional Costs:

Contingencies (20%)	\$57,421
Construction Costs with Contingencies	\$344,528
Engineering and Design (10%)	\$34,453
Administration (5%)	\$17,226
Construction Management (7%)	\$24,117

Total Construction Costs:

\$420,324

Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project R

Segment 47 End of Carlsbad Village Dr at College Blvd to Lake Calaveras loop

This segment would be the primary connection between the City of Carlsbad's Class 2 route system and the Class 1 loop (Segment 46) proposed around Lake Calaveras, as well as the northern terminus of a proposed Class 1 system along the Agua Hedionda Creek drainage

Class 1 Length 4,578 Feet 0.87 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Class 1 Facility

Bike Path Striping/Signing	MI	\$3,300.00	0.87	\$2,861
96" AC Path w/Agg Base (3"/6")	SF	\$1.22	36,624	\$44,681
2-24" Parallel DG Paving Paths (3")	SF	\$0.50	18,312	\$9,156
Clear and Grub	SF	\$0.55	54,936	\$30,215
Subgrade Prep/Exec	CY	\$16.50	2,035	\$33,572
Drainage	LF	\$5.50	4,578	\$25,179
Fencing	LF	\$13.20	4,578	\$60,430
			Subtotal	\$206,094

Additional Costs:

Contingencies (20%)	\$41,219
Construction Costs with Contingencies	\$247,313
Engineering and Design (10%)	\$24,731
Administration (5%)	\$12,366
Construction Management (7%)	\$17,312

Total Construction Costs: \$301,722

Carlsbad Bikeway Master Plan**Capital Cost Estimate****Project S****Segment 48 Unpaved multi-use trail from El Camino Real to Gabbiano Lane**

This segment would be one of two contiguous segments (48 and 49) along the northern shore of Batiquitos Lagoon between El Camino Real and the Coastal Rail Trail. It would be unpaved and would not be an official route.

Much of this particular segment already exists as a well established dirt road. To take advantage of this road and the more natural experience it affords, these two segments would differ from all other proposed segments in this bikeway master plan by remaining unpaved. Since this segment would be primarily for recreational use, commuting cyclists who preferred to ride on paved streets could use the closely parallel Batiquitos Drive.

Unpaved Multi Use Trail Length 11,688 Feet 2.21 Miles

Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Unpaved Multi Use Trail Facility**Upgrade existing dirt road (10,032 feet/1.9 miles)**

Multi use Path Signing	MI	\$165.00	10.0	\$1,650
12' DG Path (3" deep)	SF	\$0.50	120,384	\$60,192
Drainage	LF	\$5.50	0	\$0
Fencing	LF	\$13.20	0	\$0

Where no dirt road exists (1,584 feet/0.3 miles)

Multi use Path Signing	MI	\$165.00	10.0	\$1,650
12' DG Path (3" deep)	SF	\$0.50	19,008	\$9,504
Clear and Grub	SF	\$0.55	19,008	\$10,454
Subgrade Prep/Exec	CY	\$16.50	704	\$11,616
Drainage	LF	\$5.50	0	\$0
Fencing	LF	\$13.20	0	\$0

Subtotal \$95,066

Additional Costs:

Contingencies (20%)	\$19,013
Construction Costs with Contingencies	\$114,080
Engineering and Design (10%)	\$11,408
Administration (5%)	\$5,704
Construction Management (7%)	\$7,986

Total Construction Costs:	\$139,177
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Carlsbad Bikeway Master Plan

Capital Cost Estimate

Project S

Segment 49 Unpaved multi-use trail from Gabbiano Lane to Coastal Rail Trail

This segment would be one of two contiguous segments (48 and 49) running along the northern shore of Batiquitos Lagoon between El Camino Real and the Coastal Rail Trail. These two segments would differ from all other proposed segments in this bikeway master plan by remaining unpaved. This segment would require substantial engineering effort to cross under I-5 to connect with the planned Coastal Rail Trail just north of Batiquitos Lagoon.

Note: Requires passage under Interstate 5

Unpaved Multi-Use Trail Length	2,240 Feet	0.42 Miles
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Primary Costs	Unit	Unit Cost	Quantity	Total Cost
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Unpaved Multi-Use Trail Facility

Multi-use Path Signing	MI	\$165.00	10.00	\$1,650
12' DG Path (3" deep)	SF	\$0.50	26,880	\$13,440
Clear and Grub	SF	\$0.55	26,880	\$14,784
Subgrade Prep/Exec	CY	\$16.50	996	\$16,427
Drainage	LF	\$5.50	0	\$0
Fencing	LF	\$13.20	0	\$0
			Subtotal	\$46,301

Additional Costs:

Contingencies (20%)	\$9,260
Construction Costs with Contingencies	\$55,561
Engineering and Design (10%)	\$5,556
Administration (5%)	\$2,778
Construction Management (7%)	\$3,889

Total Construction Costs	\$67,784
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The following sections of the State Vehicle Code with specific application to cycling are included as a reference source concerning the legal implications of operating a bicycle on the roadways within the state of California

California Vehicle Code

Bicycle Sections (21200-21212)

21200 (a) Every person riding a bicycle upon a highway has all the rights and is subject to all the provisions applicable to the driver of a vehicle by this division, including, but not limited to, provisions concerning driving under the influence of alcoholic beverages or drugs, and by Division 10 (commencing with Section 20000), Section 27400, Division 16 7 (commencing with Section 39000), Division 17 (commencing with Section 40000 1), and Division 18 (commencing with Section 42000), except those provisions which by their very nature can have no application (b) (1) Any peace officer, as defined in Chapter 4 5 (commencing with Section 830) of Title 3 of Part 2 of the Penal Code, operating a bicycle during the course of his or her duties is exempt from the requirements of subdivision (a), except as those requirements relate to driving under the influence of alcoholic beverages or drugs, if the bicycle is being operated under any of the following circumstances

(A) In response to an emergency call

(B) While engaged in rescue operations

(C) In the immediate pursuit of an actual or suspected violator of the law

(2) This subdivision does not relieve a peace officer from the duty to operate a bicycle with due regard for the safety of all persons using the highway

21200 5 Notwithstanding Section 21200, it is unlawful for any person to ride a bicycle upon a highway while under the influence of an alcoholic beverage or any drug, or under the combined influence of an alcoholic beverage and any drug Any person arrested for a violation of this section may request to have a chemical test made of the person's blood, breath, or urine for the purpose of determining the alcoholic or drug content of that person's blood, and, if so requested, the arresting officer shall have the test performed A conviction of a violation of this section shall be punished by a fine of not more than two hundred fifty dollars (\$250) Violations of this section are subject to Section 13202 5

21201 (a) No person shall operate a bicycle on a roadway unless it is equipped with a brake which will enable the operator to make one braked wheel skid on dry, level, clean pavement

(b) No person shall operate on the highway any bicycle equipped with handlebars so raised that the operator must elevate his hands above the level of his shoulders in order to grasp the normal steering grip area

(c) No person shall operate upon any highway a bicycle which is of such a size as to prevent the operator from safely stopping the bicycle, supporting it in an upright position with at least one foot on the ground, and restarting it in a safe manner

(d) Every bicycle operated upon any highway during darkness shall be equipped (1) with a lamp emitting a white light which, while the bicycle is in motion, illuminates the highway in front of the bicyclist and is visible from a distance of 300 feet in front and from the sides of the bicycle, (2) with a red reflector on the rear which shall be visible from a distance of 500 feet to the rear when directly in front of lawful upper beams of headlamps on a motor vehicle, (3) with a white or yellow reflector on each pedal visible from the front and rear of the bicycle from a distance of 200 feet, and (4) with a white or yellow reflector on each side forward of the center of the bicycle, and with a white or red reflector on each side to the rear of the center of the bicycle, except that bicycles which are equipped with reflectorized tires on the front and the rear need not be equipped with these side reflectors Such reflectors and reflectorized tires shall be of a type meeting requirements established by the department

(e) A lamp or lamp combination, emitting a white light, attached to the operator and visible from a distance of 300 feet in front and from the sides of the bicycle, may be used in lieu of the lamp required by clause (1) of subdivision (d)

21201 5 (a) No person shall sell, or offer for sale, a reflex reflector or reflectorized tire of a type required on a bicycle unless it meets requirements established by the department If there exists a federal Consumer Product Safety Commission regulation applicable to bicycle reflectors, the provisions of that regulation shall prevail over provisions of this code or requirements established by the department pursuant to this code relative to bicycle reflectors

(b) No person shall sell, or offer for sale, a new bicycle that is not equipped with a red reflector on the rear, a white or yellow reflector on each pedal visible from the front and rear of the bicycle, a white or yellow reflector on each side forward of the center of the bicycle, and a white or red reflector on each side to the rear of the center of the bicycle except that bicycles which are equipped with reflectorized tires on the front and rear need not be equipped with these side reflectors

Appendix 1



(c) Area reflectorizing material meeting the requirements of Section 25500 may be used on a bicycle

21202 (a) Any person operating a bicycle upon a roadway at a speed less than the normal speed of traffic moving in the same direction at such time shall ride as close as practicable to the right-hand curb or edge of the roadway except under any of the following situations

- (1) When overtaking and passing another bicycle or vehicle proceeding in the same direction
- (2) When preparing for a left turn at an intersection or into a private road or driveway
- (3) When reasonably necessary to avoid conditions (including, but not limited to, fixed or moving objects, vehicles, bicycles, pedestrians, animals, surface hazards, or substandard width lanes) that make it unsafe to continue along the right-hand curb or edge, subject to the provisions of Section 21656 For purposes of this section, a "substandard width lane" is a lane that is too narrow for a bicycle and a vehicle to travel safely side by side within the lane

(b) Any person operating a bicycle upon a roadway of a highway, which highway carries traffic in one direction only and has two or more marked traffic lanes, may ride as near the left-hand curb or edge of such roadway as practicable

21203 No person riding upon any motorcycle, motorized bicycle, bicycle, coaster, roller skates, sled, or toy vehicle shall attach the same or himself to any streetcar or vehicle on the roadway

21204 (a) No person operating a bicycle upon a highway shall ride other than upon or astride a permanent and regular seat attached thereto

(b) No operator shall allow a person riding as a passenger, and no person shall ride as a passenger, on a bicycle upon a highway other than upon or astride a separate seat attached thereto If the passenger is four years of age or younger, or weighs 40 pounds or less, the seat shall have adequate provision for retaining the passenger in place and for protecting the passenger from the moving parts of the bicycle

21205 No person operating a bicycle shall carry any package, bundle or article which prevents the operator from keeping at least one hand upon the handlebars

21206 This chapter does not prevent local authorities, by ordinance, from regulating the registration of bicycles and the parking and operation of bicycles on pedestrian or bicycle facilities provided such regulation is not in conflict with the provisions of this code

21207 (a) This chapter does not prohibit local authorities from establishing, by ordinance or resolution, bicycle lanes separated from any vehicular lanes upon highways, other than state highways as defined in Section 24 of the Streets and Highways Code and county highways established pursuant to Article 5 (commencing with Section 1720) of Chapter 9 of Division 2 of the Streets and Highways Code

(b) Bicycle lanes established pursuant to this section shall be constructed in compliance with Section 891 of the Streets and Highways Code

21207 5 Notwithstanding Sections 21207 and 23127 of this code, or any other provision of law, no motorized bicycle may be operated on a bicycle path or trail, bikeway, bicycle lane established pursuant to Section 21207, equestrian trail, or hiking or recreational trail, unless it is within or adjacent to a roadway or unless the local authority or the governing body of a public agency having jurisdiction over such path or trail permits, by ordinance, such operation

21208 (a) Whenever a bicycle lane has been established on a roadway pursuant to Section 21207, any person operating a bicycle upon the roadway at a speed less than the normal speed of traffic moving in the same direction shall ride within the bicycle lane, except that such person may move out of the lane under any of the following situations

- (1) When overtaking and passing another bicycle, vehicle, or pedestrian within the lane or about to enter the lane if such overtaking and passing cannot be done safely within the lane
- (2) When preparing for a left turn at an intersection or into a private road or driveway
- (3) When reasonably necessary to leave the bicycle lane to avoid debris or other hazardous conditions

(b) No person operating a bicycle shall leave a bicycle lane until the movement can be made with reasonable safety and then only after giving an appropriate signal in the manner provided in Chapter 6 (commencing with Section 22100) in the event that any vehicle may be affected by the movement

21209 (a) No person shall drive a motor vehicle in a bicycle lane established on a roadway pursuant to Section 21207 except as follows

- (1) To park where parking is permitted
- (2) To enter or leave the roadway
- (3) To prepare for a turn within a distance of 200 feet from the intersection

(b) This section does not prohibit the use of a motorized bicycle in a bicycle lane, pursuant to Section 21207 5, at a speed no greater than is

Draft Carlsbad Bike Facility Master Plan



reasonable or prudent, having due regard for visibility, traffic conditions, and the condition of the roadway surface of the bicycle lane, and in a manner which does not endanger the safety of bicyclists

21210 No person shall leave a bicycle lying on its side on any sidewalk, or shall park a bicycle on a sidewalk in any other position, so that there is not an adequate path for pedestrian traffic. Local authorities may, by ordinance or resolution, prohibit bicycle parking in designated areas of the public highway, provided that appropriate signs are erected.

21211 (a) No person shall stop, stand, sit, or loiter upon any class I bikeway, as defined in subdivision (a) of Section 890.4 of the Streets and Highways Code, or any other public or private bicycle path or trail, if the stopping, standing, sitting, or loitering impedes or blocks the normal and reasonable movement of any bicyclist.

(b) No person shall place or park any bicycle, vehicle, or any other object upon any bikeway or bicycle path or trail, as specified in subdivision (a), which impedes or blocks the normal and reasonable movement of any bicyclist unless the placement or parking is necessary for safe operation or is otherwise in compliance with the law.

(c) This section does not apply to drivers or owners of utility or public utility vehicles, as provided in Section 22512.

(d) This section does not apply to owners or drivers of vehicles who make brief stops while engaged in the delivery of newspapers to customers along the person's route.

21212 (a) A person under 18 years of age shall not operate a bicycle, or ride upon a bicycle as a passenger, upon a street, bikeway, as defined in subdivision (a) of Section 2373 of the Streets and Highways Code, or any other public bicycle path or trail unless that person is wearing a properly fitted and fastened bicycle helmet that meets the standards of the American National Standards Institute (ANSI Z 90.4 bicycle helmet standard) or the Snell Memorial Foundation's Standard for Protective Headgear for Use in Bicycling. This requirement also applies to a person who rides upon a bicycle while in a restraining seat that is attached to the bicycle or in a trailer towed by the bicycle.

(b) Any helmet sold or offered for sale for use by operators and passengers of bicycles shall be conspicuously labeled in accordance with the standard described in subdivision (a) which shall constitute the manufacturer's certification that the helmet conforms to the applicable safety standards.

(c) No person shall sell, or offer for sale, for use by an operator or passenger of a bicycle any safety helmet which is not of a type meeting requirements established by this section.

(d) (1) A person who violates a requirement of this section in 1994 shall be warned of the violation by the enforcing official, but shall not be issued a notice to appear.

(2) Any charge under this subdivision shall be dismissed when the person charged alleges in court, under oath, that the charge against the person is the first charge against that person under this subdivision, unless it is otherwise established in court that the charge is not the first charge against the person.

(e) Except as provided in subdivision (d), a violation of this section is an infraction punishable by a fine of not more than twenty-five dollars (\$25). The parent or legal guardian having control or custody of an unemancipated minor whose conduct violates this section shall be jointly and severally liable with the minor for the amount of the fine imposed pursuant to this subdivision.

(f) Notwithstanding Section 1463 of the Penal Code or any other provision of law, the fines collected for a violation of this section shall be allocated as follows:

(1) Seventy-two and one-half percent of the amount collected shall be deposited in a special account of the county health department, to be used for bicycle safety education and for assisting low-income families in obtaining approved bicycle helmets for children under the age of 18 years, either on a loan or purchase basis. The county may contract for the implementation of this program, which, to the extent practicable, shall be operated in conjunction with the child passenger restraint program pursuant to Section 27360.

(2) Two and one-half percent of the amount collected shall be deposited in the county treasury to be used by the county to administer the program described in paragraph (1).

(3) If the violation occurred within a city, 25 percent of the amount collected shall be transferred to and deposited in the treasury of that city. If the violation occurred in an unincorporated area, this 25 percent shall be deposited and used pursuant to paragraph (1).



San Diego's Regional Planning Agency

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San Diego CA 92101 4231
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MAR 26 2002

ENGINEERING
DEPARTMENT

March 25, 2002

Mr Steve Jantz
City of Carlsbad
1635 Faraday
Carlsbad, CA 92008

MEMBER AGENCIES

- Cities of
- Carlsbad
- Chula Vista
- Coronado
- Del Mar
- El Cajon
- Encinitas
- Escondido
- Imperial Beach
- La Mesa
- Lemon Grove
- National City
- Oceanside
- Poway
- San Diego
- San Marcos
- Santee
- Solana Beach
- Vista
- and
- County of San Diego

ADVISORY MEMBERS

- California Department of Transportation
- Metropolitan Transit Development Board
- North San Diego County Transit Development Board
- United States Department of Defense
- San Diego Unified Port District
- San Diego County Water Authority
- Tijuana/Baja California/Mexico

Dear Steve

The SANDAG Bicycle-Pedestrian Advisory Committee, at its December 2001 meeting reviewed the City of Carlsbad Bikeway Master Plan. The committee found that the plan is complete consistent with the 2020 Regional Transportation, and coordinated with adjacent jurisdictions' bicycle plans.

I am forwarding a copy of this letter to the state Bicycle Program Manager. Please let me know if you need additional assistance with your Bicycle Transportation Account application.

Sincerely,

STEPHAN M VANCE
Senior Transportation Planner

SV/jdk



City of Carlsbad

Public Works – Engineering

May 16, 2002

Mr David Priebe
Bicycles Facilities Unit, MS-1
Division of Local Assistance
California Department of Transportation
P O Box 942874
Sacramento CA 94274-0001

CITY OF CARLSBAD BIKEWAY MASTER PLAN

Pursuant to the provisions of Streets and Highways Code Section 891 2, the City of Carlsbad respectfully submits the Carlsbad Bikeway Master Plan for your consideration

The Carlsbad Bikeway Master Plan was developed through a coordinated approach with the adjacent Cities of Encinitas, Oceanside, San Marcos and Vista to ensure compliance with their bikeway circulation plans The proposed facilities were compared and evaluated based on adopted goals and policies within each city's General Plan Review of their Circulation Elements, Pedestrian and Trails Elements, and Land Use Elements were crucial to ensure compatibility

The San Diego Bicycle Coalition also reviewed the Master Plan and specific comments were included in the final document The public was given opportunities to provide input into the Master Plan through public workshops and the completion of a bicycle user questionnaire

Enclosed, for your review and consideration, are the following

- 1 Carlsbad Bikeway Master Plan
- 2 Carlsbad City Council Agenda Bill and Resolution No 2001-313 accepting the Carlsbad Bikeway Master Plan
- 3 A letter from the San Diego Association of Governments Bicycle-Pedestrian Advisory Committee confirming their action relative to the Carlsbad Bikeway Master Plan

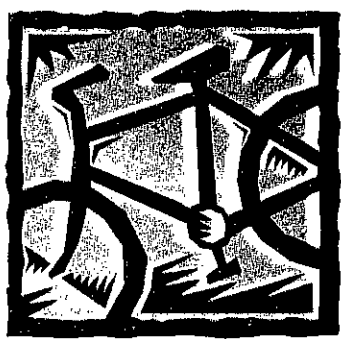
The City of Carlsbad feels that this document complies with the provisions of Streets and Highways Code Section 891 2 If you have any questions or would like further clarification of the Master Plan, please feel free to contact me at (760) 602-2738

Sincerely,

A handwritten signature in black ink, appearing to read "Steven C Jantz".

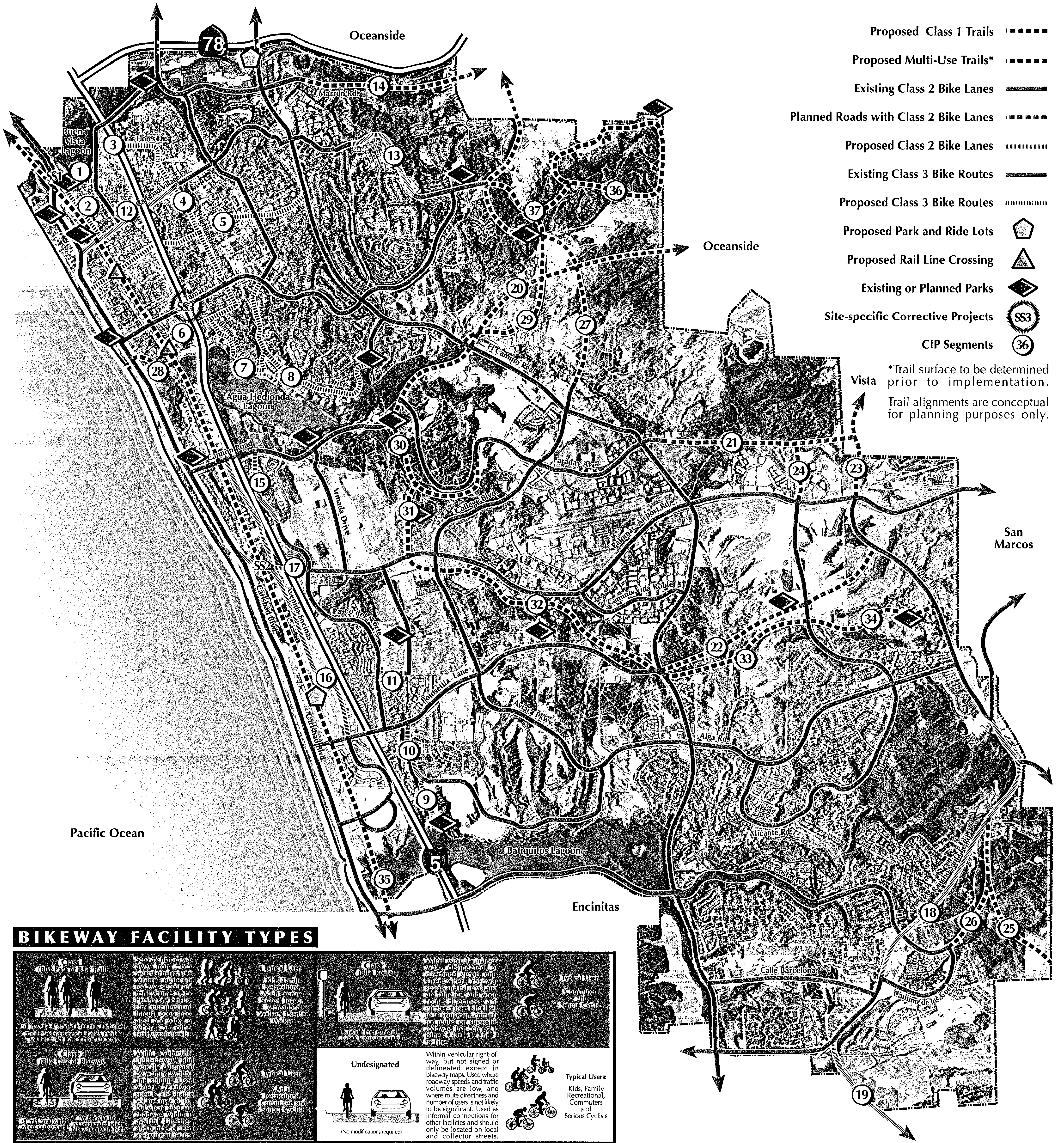
STEVEN C JANTZ
Associate Engineer



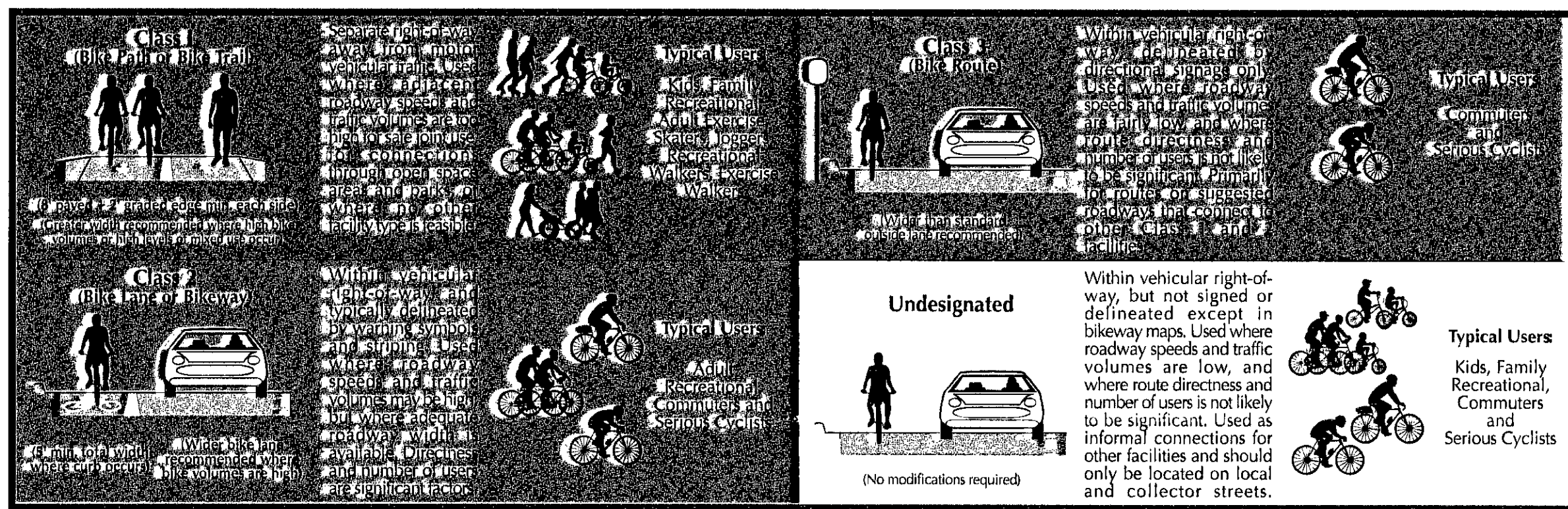


PROPOSED CIP PROJECT SEGMENTS CITY OF CARLSBAD BIKEWAY MASTER PLAN

Pocket
Map



BIKEWAY FACILITY TYPES



CAPITAL IMPROVEMENT PROJECTS

Proj. Seg.	Class*	Feet	Miles	Description	Notes	Seg. Costs	Proj. Totals
1	Prop. 3	1,485	0.28	Laguna Drive from State Street to Jefferson Street		\$1,449	
2	Prop. 3	2,484	0.47	State Street from Grand Avenue to Carlsbad Boulevard		\$1,449	
3	Prop. 3	3,150	0.60	Las Flores Drive from Jefferson Street to Highland Drive		\$1,449	
4	Prop. 3	6,643	1.26	Highland Drive from Las Flores Drive to Chiquapien Avenue		\$3,382	
5	Prop. 3	10,302	1.95	Chestnut Street from Carlsbad Boulevard to El Camino Real		\$4,831	
6	Prop. 3	3,690	0.70	Chiquapien Avenue from Coastal Rail Trail to Highland Drive		\$1,932	
7	Prop. 3	4,435	0.84	Adams Street from Chiquapien Avenue to Park Drive		\$1,932	
8	Prop. 3	9,163	1.74	Park Drive from Tamarack Avenue to Kelly Drive		\$4,348	
9	Prop. 3	1,718	0.33	Batiquitos Drive to end of Caballero Lane		\$966	
10	Prop. 2	2,500	0.47	Batiquitos Drive from Palisadia Lane to Caballero Lane		\$12,191	
11	Prop. 2	1,030	0.20	Camino de los Cochinos from Hidden Valley Rd. to Paseo del Norte		\$6,456	\$20,597
12	Prop. 2	4,082	0.77	Carlsbad Village Drive from Carlsbad Boulevard to Highland Drive		\$32,421	
13	Prop. 2	4,069	0.77	Carlsbad Village Drive from Olympia Drive to Victoria Avenue		\$32,421	
14	Prop. 2	6,394	1.32	Maron Road from Avenida de Arta to City of Encinitas		\$7,518	\$7,518
15	Prop. 2	3,167	0.60	Paseo del Norte from Car County Drive to Cannon Road		\$23,781	
16	Prop. 2	4,927	0.93	Avenida Encinas from Palisadia Lane to Cannon Road		\$37,051	\$60,832
17	Prop. 2	3,677	0.70	Palomar Airport Road from Paseo del Norte to Carlsbad Boulevard		\$27,694	
18	Prop. 2	12,936	2.45	Rancho Santa Fe Road from Camino de los Cochinos to Melrose Drive		\$97,097	
19	Prop. 2	3,612	0.68	Rancho Santa Fe Road from Olivewood Road to City of Encinitas		\$27,216	\$124,313
20	Plan 2	21,336	4.04	Cannon Road from Paseo del Norte to City of Encinitas		\$136,960	
21	Plan 2	9,100	1.72	Fantasy Avenue from current east end to City of Vista		\$49,488	
22	Plan 2	11,880	2.25	Polisemia Lane from El Camino Real to Melrose Drive		\$68,007	
23	Plan 2	2,545	0.48	Melrose Avenue from Palomar Airport Road to City of Vista		\$19,528	
24	Plan 2	1,848	0.35	El Fairie Street from current north end to Faraday Avenue		\$14,400	
25	Plan 2	2,465	1.41	Planned road from Rancho Santa Fe Road to City of Encinitas		\$55,481	
26	Plan 2	4,186	0.79	La Costa Ave from Rancho Santa Fe Road to planned road		\$37,117	
27	Plan 2	10,425	1.97	College Boulevard from El Camino Real to Tamarack Avenue		\$72,820	
28	Paved 1	1,635	0.31	Connection between Carlsbad Blvd. and Rail Trail along Agua Hedionda Lagoon		\$29,647	
29	Paved 1	6,721	1.27	Agua Hedionda Creek drainage from El Camino Real to College Blvd.		\$442,360	
30	Paved 1	6,270	1.37	Class 1 path along west end of Faraday Avenue alignment		\$54,643	\$545,643
31	Paved 1	4,460	0.85	Class 1 route from Faraday Avenue alignment to Palomar Airport Road		\$28,523	
32	Paved 1	12,857	2.44	Class 1 route paralleling Palomar Airport Rd. from College Blvd. to El Camino Real		\$84,364	
33	Paved 1	7,110	1.35	Class 1 route paralleling Polisemia Lane from El Camino Real to El Fairie St.		\$468,598	\$1,611,225
34	Paved 1	4,870	0.92	Class 1 route from El Fairie Street to Melrose Drive		\$32,966	\$301,966
35	Rail Trail	35,564	6.64	Class 1 route paralleling rail line from Encinitas to Vista		\$1,097,230	\$3,091,310
36	Multi-Use	10,909	2.07	Lake Calaveras loop		\$420,324	
37	Multi-Use	4,578	0.87	End of Carlsbad Village Drive at College Boulevard to Lake Calaveras loop		\$301,722	\$722,046
SS1	Site-specific			Intersection of State Street and Carlsbad Boulevard		0	
SS2	Site-specific			Intersection of Palomar Airport Road and Carlsbad Boulevard		0	
SS3	Site-specific			Intersection of Tamarack Avenue, Pio Pico Drive and I-5		0	
Total:							\$7,111,555

Legend:
 Paved 1: Proposed paved Class 1 path
 Unpaved 1: Proposed multi-use trail
 Prop. 2: Proposed Class 2 lanes on existing roads
 Plan 2: Class 2 lanes on planned roads
 Prop. 3: Class 3 routes on existing roads
 Rail Trail: Planned Class 1 trail to rail ROW

Notes:
 (1) Route may be partially within Oceanside.
 (2) Some parallel Class 2 routes may be built in place of these Class 1 routes.
 (3) Class 1 route from Rancho Santa Fe Road to planned road.
 (4) Currently in design.
 (5) *P* Intersection planned. Improvements temporary.
 (6) May require structural work, though restriping could be sufficient. Lower priority.

SIGNIFICANT FINDINGS

Virtually all of Carlsbad's existing major arterials have Class 2 facilities, and virtually all proposed major roadways to be extended in Carlsbad are also planned to include Class 2 bicycle facilities. There are currently no designated Class 1 facilities, though several existing unpaved paths along the lagoons fulfill the purpose of unpaved off-street trails. Class 3 facilities also exist in Carlsbad, but few are likely to be proposed in the future.

Carlsbad's roadway system currently serves the vehicular and bicycle needs of residents within the developed portions of the city. However, there are still sizable areas, especially in the eastern half of the city, where paved roadway access has not been provided. Because the city is not yet built out, the roadway system is not complete. There are undeveloped areas that create considerable blocks of open space between the more distinct developed areas that make up Carlsbad. This is one of Carlsbad's distinguishing characteristics, and is primarily the result of local topography and managed growth policies. Land form also tends to limit the number of major north-south routes through the city, primarily due to the occurrence of lagoons that stretch a considerable distance inland from the coast.

These connectivity gaps may be particularly inconvenient for bicycle commuters because they do not have direct routes to their destinations. This lack of roadways also limits bicycle access to and from communities adjoining Carlsbad's eastern limits. It is likely that motorists do not feel particularly inconvenienced by the present roadway system. However, the available routes around and through the hilly steep topography of the eastern half of the city almost certainly deters some users from other than recreational cycling.

Because the overall configuration of the City of Carlsbad is a series of separated neighborhoods distributed across the city limits, topographic constraints and limited bicycle facilities also restrict transportation between these neighborhoods. In many cases, bicycle transportation means riding on high speed, high volume arterials when traveling any significant distance east-west or north-south. Intractable traffic converges on the existing arterials, where the existing bicycle facilities are also located.

Another issue is the rail line, especially between Carlsbad Village Drive and Tamarack Avenue. Though the line traverses some of Carlsbad's most densely populated areas, no streets cross the tracks between Carlsbad Village Drive and Tamarack Avenue and access to the rail right-of-way is prohibited. There are some illegal crossing points in regular use now, but they are convenient to pedestrians, not cyclists. I-5 also creates significant connectivity problems. Limited crossing points force cyclists to plan east-west trips based on a few locations. Even where underpasses and overpasses are available, the roadway is often narrow and cyclists are confronted with motor vehicles going to and from high speed vehicular off and on-ramps.

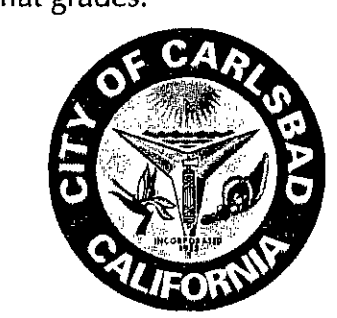
From a bicycle commuting perspective, Class 2 lanes are usually preferred over Class 1 or 3 facilities. Bicycle commuters often complain of debris in Class 2 lanes that forces them out into the motor vehicle travel lane. However, Class 1 trails are also generally in use by walkers, joggers, skaters, cyclists with limited experience, and often have difficult roadway crossings. All of this combines to make Class 1 trails less desirable for commuting. Class 1 facilities are also more difficult and expensive to build, which has typically resulted in phased and piecemeal trails.

Class 1 facilities, however, are important to non-commuting cyclists. They are perceived to be safer facilities which may encourage people to use their bikes, even if at first they are using the trails only for recreational purposes. These individuals may, in time, decide to use other bikeway facilities for commuting purposes. Also, a trail system like the Coastal Rail Trail may actually provide a more direct and faster route for commuters due to the limited number of roadway crossings, minimal traffic control devices and relatively flat grades.

The primary recommendations for this study include: (1) providing improved connectivity via increased access points across the rail right-of-way, (2) providing improved connectivity via increased access points across I-5, (3) adding several Class 1 off-street routes in the undeveloped areas of Carlsbad, (4) completing the Class 2 system as a normal part of roadway extension projects.

The programmed roadways with associated Class 2 lanes should be implemented as soon as possible. Additional Class 1 facilities may play an important part in providing more direct connections throughout the community. Due to the topography and natural open spaces in Carlsbad, cyclists face a large number of bikeway system gaps. Class 1 trails may provide the only possible short cuts between some Class 2 lanes. Some of these off-street routes could be implemented in conjunction with Carlsbad's programmed trails. According to responses to a survey questionnaire distributed as part of this study and observation of current user patterns, there is considerable demand for this type of route.

The questionnaire also revealed that the respondents' primary concerns were about safety. Most often mentioned were limited roadway widths, parked cars on streets, high speed vehicular traffic and high speed off-ramps and merge lanes. Field experience indicates that general safety priorities should include adequate roadway widths over freeway and rail line bridges, as well as the elimination of angled vehicular parking. Other priorities should include solving the problem areas shown on this map as "site-specific corrective projects."



Prepared for the
City of Carlsbad
 by
Kawasaki Thelacker Ueno + Associates
 Planning + Landscape Architecture

