CITY OF HERCULES

DRAFT

TRAFFIC CALMING WORKSHOP REPORT

CITIZEN DESIGN SESSION ON SEPTEMBER 30, 2006

City of HERCULES

INC 1900

Prepared by:

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City of Hercules Traffic Calming Workshop
Saturday, September 30, 2006
Hercules Civic Center

The Local Government Commission and Walkable Communities were hired to conduct a public design workshop with City of Hercules staff and community members in late September, 2006. The purposes of the workshop were to:

- Identify traffic problems on selected streets in Hercules.
- Discuss issues that have surfaced at these locations.
- Examine each problem area on a bus and foot tour with workshop participants and the design team.
- Identify possible solutions with workshop participants.
- Present those recommendations.
- Prepare a final report for implementation.

This report is the final step in that process. It is intended to be used by City staff as they move forward with final design, engineering, and construction work on the recommended modifications to streets in the target areas.

Workshop Process

Over 30 people gathered at the Hercules Civic Center on the morning of Saturday, September 30, 2006 for the public design workshop. The workshop began with introductions. Participants included City staff and department heads, elected and appointed officials, and residents.

A presentation by nationally renowned street design expert Dan Burden followed. Dan gave participants an overview of traffic calming issues, and techniques that can be used where appropriate to:

- Improve safety for all users of the street.
- Reduce vehicle speeds.
- Accommodate bicyclists and pedestrians
- Provide for the access and setup needs of emergency responders.
- Generally improve the environment on and alongside the street.

With this information fresh in their minds, participants boarded a City-provided bus for a tour of problem areas City staff wanted to target for solutions. Those locations are detailed below.

Upon returning to the Civic Center and a short break for lunch, participants were given a brief presentation by Dan Burden that focused on the locations the tour visited. Those images highlighted the issues the group had discussed, and possible solutions.

Workshop participants then broke out into two table groups to discuss design alternatives and draw recommendations on large scale aerial maps of the locations visited on the tour. The workshop ended with the presentation of those recommendations by the table groups.

Field Tour

Each location visited by workshop participants is characterized below. At several locations the group disembarked from the bus to measure lanes and streets and observe traffic close at hand. Comments made by participants and the design team are also paraphrased.

Sycamore Avenue and San Pablo Avenue

This intersection was at the top of staff's list of problems because of the high volume of traffic it carries, impatience displayed by drivers headed for the Interstate 80 onramps, and the high risk to pedestrians created by the double right turn lanes from northbound Sycamore to eastbound San Pablo. This was clearly demonstrated by the refusal of numerous drivers to yield to members of the workshop group trying to cross San Pablo on foot, in the crosswalk, with the pedestrian light showing green. Further evidence was provided by a local teenager performing a Daytona-worthy burnout in front of the group as he rounded the corner.

Turquoise Drive, from Sycamore Avenue to the top of the hill near Diamond Court

This street has multiple problems, exacerbated by the poor sight lines created by the hilly topography and the meandering nature of the roadway. Drivers routinely "roll" the stop signs at Cinnabar Way, and exceed the 25 MPH speed limit all along the street. Additionally, there are no bike lanes striped on the street, and only a handful of marked crosswalks, all near Ohlone Park. Residents commented on a number of recent crashes involving impacts into parked cars on the upper sections of Turquoise. Workshop participants were given another visual demonstration of the problems--observing a pickup truck driver run a stop sign and make an illegal U-turn directly in front of the tour bus.

The bus parked at locations on lower Turquoise for discussions, and participants disembarked at the upper end of the street. At that location they formed a human circle where Lapis Court and Diamond Court intersect Turquoise Drive. With this technique, Dan Burden demonstrated the size and effectiveness of mini roundabouts at low-volume intersections.

Refugio Valley Road from Sycamore Avenue to Bonaire Avenue

This long arterial roadway is similar to Sycamore Avenue, but generally flatter and straighter. It has nearly continuous center landscaping, and is striped for bike lanes from Sycamore Avenue to the middle school and high school complex, but not beyond. Problems with this street include speeding, haphazard

pedestrian crossings at the middle school and high school complex, and missing pedestrian and bicycle features.

Workshop participants discussed these issues at several locations along Refugio Valley Road, disembarking at two locations on the upper section. They did not observe any irresponsible driver behavior directly, but did see "doughnut" tire marks precisely where Dan Burden suggested a mini circle be installed in the middle of the intersection with Coronado Street.

Lupine Road and Redwood Road Area

In this neighborhood, workshop participants focused on the area near Lupine Hills Elementary School on Lupine Road. Workshop participants disembarked at this location, after observing the dangerous curves and poor sight lines on Sequoia Road. Additional issues that came to light: a problematic bus stop at the school, and the need for safer pedestrian facilities for children crossing streets there.

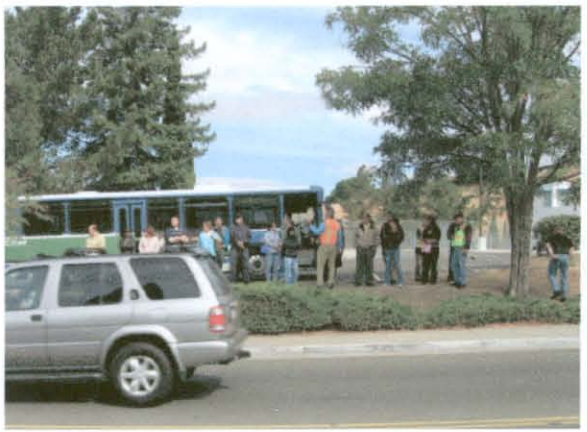
Civic Drive and Sycamore Avenue

Workshop participants disembarked for one last stop to observe and discuss this low-volume but high-speed location. Safety at this critical access point is a high priority. Comments focused on bike lanes, reducing pedestrian vulnerability, and maybe adding angled parking (which will also slow vehicle speeds). Participants then walked up the hill to the Civic Center for lunch and the design table sessions.

Design Table Sessions

After lunch, workshop participants received a short refresher presentation on traffic calming tools and the locations visited on the bus tour.

Two design table groups were formed, and each assigned specific street segments. Each group was provided with markers and large-scale aerial photographs of the street sections they were assigned. Their recommendations follow.



Design Table 1

Refugio Valley Road (Note: north is down on the photos)

Entire Length of Street.

- Restripe for 10 foot wide vehicle travel lanes and 10 foot wide pigmented bike lanes.
- Add 25 MPH signs.

High School Area.

- Create student drop-off area on south side before main driveway.
- Long term, create drop-off area on campus.
- Install crosswalk with curb extensions between east end of drop-off area and west side of main driveway with highly visible markings and signs.
- Create exit driveway from east end of street-side parking lot by the administration building out to Refugio Valley Road (see map).
- Leave bus loading zone intact.
- Design Table Notes: North side student drop-off is a problem, because students run across the street. Group 1 would like to see an on-campus drop-off to remedy this.
- Dan Burden's recommendation: Install a highly visible crosswalk west of main driveway with curb extensions to reduce vehicle speeds.

Middle School Area.

- Mark drop-off area on south side of Refugio Valley Road.

Redwood Road/Falcon Way Intersection.

- Move crosswalks much closer to roundabout (approx. 100 feet from center).
- Add truck apron to existing roundabout.
- Extend curbs at corner to tighten turn, slowing vehicles.
- Broaden median triangles and extend towards circle to match extended curbs.
- Install dense or thorned landscaping to discourage pedestrian shortcuts away from crosswalks.
- Possibly install tree wells in curb extensions.

Coronado Street.

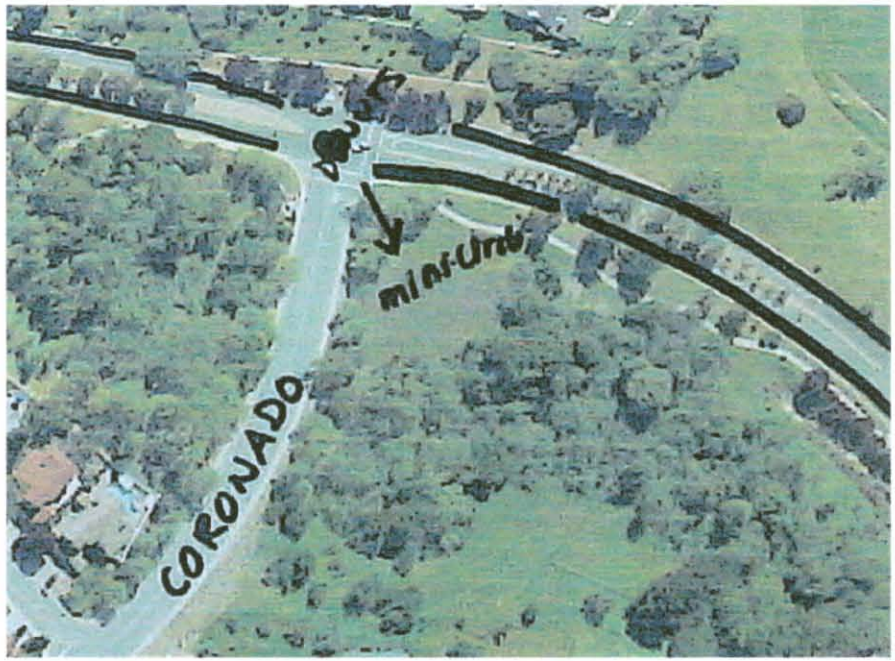
- Add mini-circle (approximately conforming to the donut skid marks in the intersection).

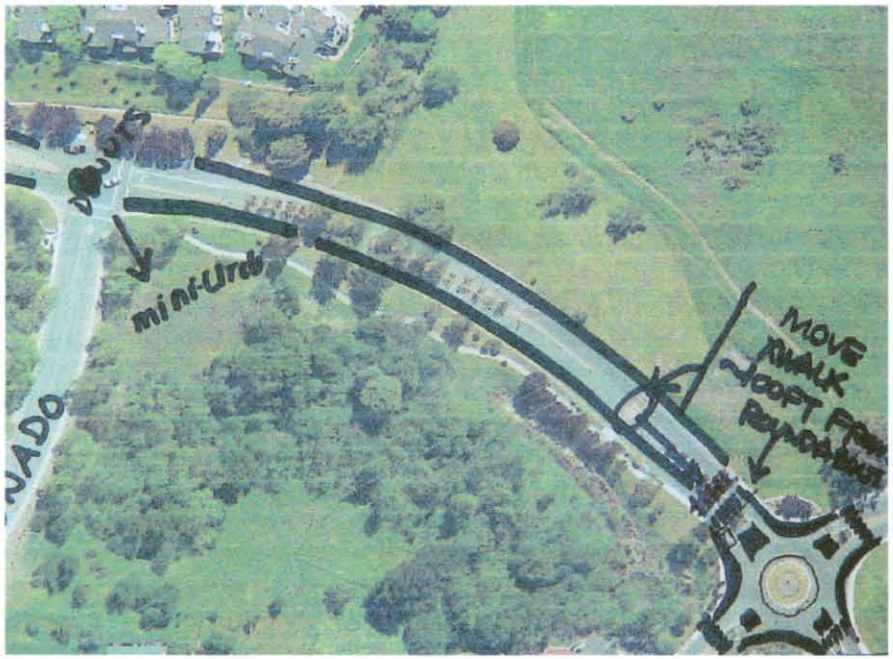
Baypointe Access: Southwind Court, Midship Drive, Malibu Drive.

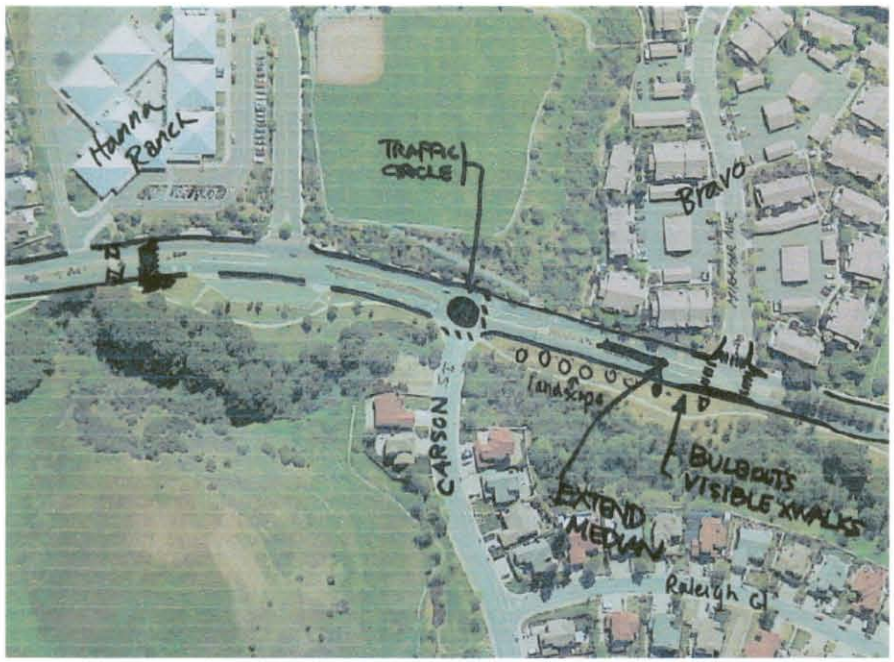
- Install curb extensions and highly visible crosswalks on east and west sides of all three intersections.

Miramar Avenue.

- Install curb extensions and highly visible crosswalks on south, east, and west sides of intersection.
- Extend median on east side of intersection to shorten westbound to eastbound left turn lane.
- Landscape barren north side of Refugio Valley Road between Miramar Avenue and Carson Street.







Carson Street.

- Install mini-circle with highly visible crosswalks in intersection. (Possible omission--The Table 1 drawing shows crosswalks only on the north and west sides of this intersection. The proximity of the Hannah Ranch School begs an additional crosswalk east of the intersection, closest to the school.)

Hannah Ranch Elementary School.

- Improve visibility of ONE crosswalk in front of school. Possibly eliminate the western crosswalk.
  (Possible omissions—No crosswalk to get across Refugio Valley Road at school driveway, and no mention of improving visibility of existing crosswalk parallel to Refugio Valley Road at mouth of school driveway.)

Mandalay Avenue.

- Install highly visible crosswalks at both the north and east sides of the intersection.

Bonaire Avenue.

- Install traffic circle in center of intersection.

Lupine Road Neighborhood. (Note: north is down on the photos)

Sequoia Road at Lupine Hills Elementary School.

- Install narrow median all the way around downhill curve on Lupine Road leading to Sequoia Road.
- Install either 1. A raised table intersection to highlight children crossing, or 2. Curb extensions with raised center islands.

Lupine Road Between Sequoia Road and Violet Road.

- Install raised center median in front of ball field.

Lupine Road at Violet Road.

- Add highly visible crosswalks at all three crossing points in the intersection.

Lupine Road Between Violet Road and Manzanita Place.

- Install a raised center median around curve.

Redwood Road Neighborhood. (Note: north is down on the photo)

Redwood Road at Maple Court and Hemlock Court.

- Install a traffic circle.

Redwood Road at Sequoia Road.

- Install a traffic circle.

Redwood Road at Pepperwood Street.

- Install a traffic circle.

& REDWOOD

LUPINE & REDWOOD
OR 1. RAISED TABLE INT'N
2. CURB EXT. MEDIAN (BULBOUT)

Design Table 2

Turquoise Drive, North to South. (Note: north is left on the photos)

Entire Length of Street.

- Double stripe a center line to the top of the hill past Diamond Court.
- Add colorized bike lanes.
- Add intermittent center medians on hills and curves, with paint at first.

Turquoise Avenue at Sycamore Avenue.

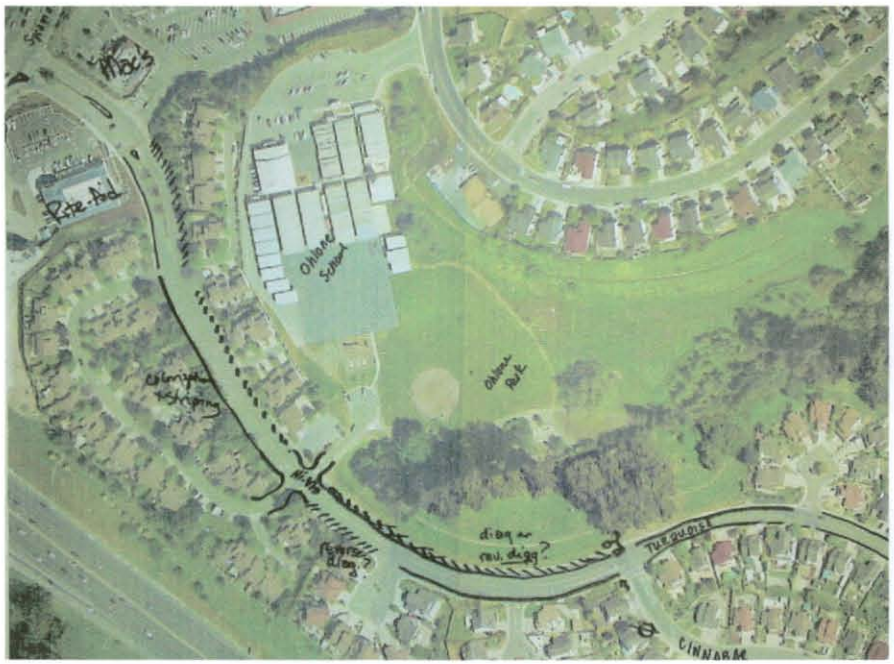
- Install pork chop island at southwest corner by right turn lane.

Turquoise Avenue at Albertson's/Rite Aid driveways.

- Extend medians to create pedestrian refuges.

Ohlone Center Area--Rite Aid/Albertson's Driveway to Cinnabar Way.

- Reduce to two lanes from here up the hill and past Diamond Court.
- Add angle parking, possibly reversed.



- Install curb extensions and high visibility crosswalks at intersection with Crystal Circle and the Ohlone Center driveway.

Note: The group was undecided about reverse or front-in diagonal parking, due to poor visibility around the curve.

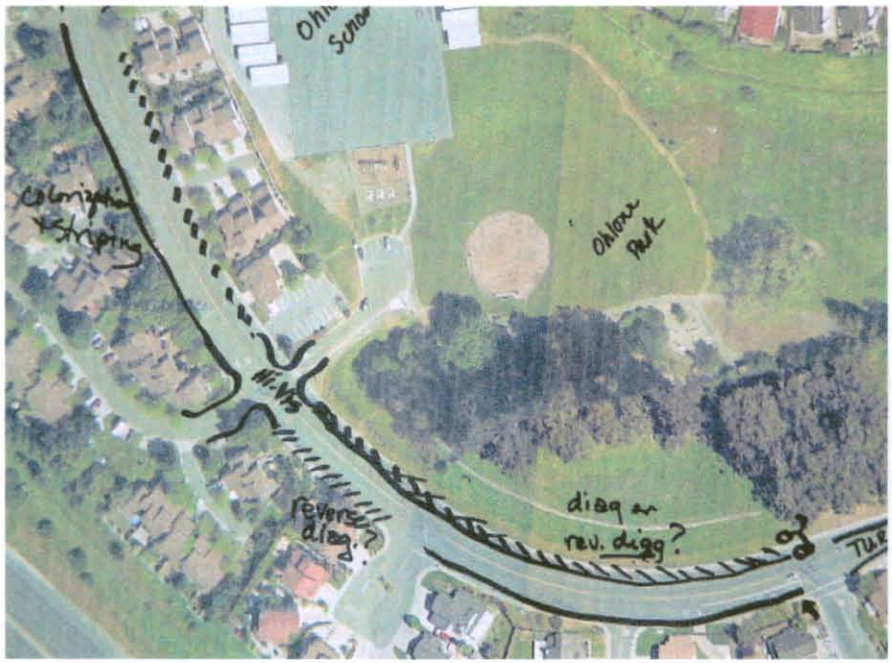
Turquoise Avenue at Cinnabar Way and Beyond. (North is down)

- Reduce lane width to 10 feet, and mark bike lane with 10 inch stripe.
- Remove stop requirement for southbound right turn to Cinnabar Way.

Turquoise Avenue near Marsden Ranch Water Tank. (North is down)

- Install intermittent raised center medians where necessary to define lanes on curves.
- Install mini-circles at intersections as a second phase after results of medians are reviewed.

Note: The group was unclear on the use of center striping for upper Turquoise Drive, even where medians are to be installed.



San Pablo Avenue and Sycamore Avenue. (Note: north is up)

Northbound Sycamore Eastbound San Pablo Double Right Turn.

This is one of the most prominent and heavily used intersections in Hercules, and one of the most troublesome. An ongoing safety problem is evidenced by the accident history at this location. Short term remedies must be implemented as soon as possible. The citizen design team, city staff, and the consultants all focused on the double right turn lane as the most immediate problem.

A quick, but partial, solution is cheap and easy to install. It involves a simple alteration in the green "go" cycle for pedestrians, to activate it a few seconds ahead of the green arrow for right turning vehicles. This allows pedestrians to claim the crosswalk before vehicles intrude.

A second phase is shown in the image below. It includes curb extensions and islands, and a complete separation of the problematic right turn lane.

A better, and long term, option for this intersection is a full-scale roundabout with raised tables at crosswalks.

CONCLUSION

Once the citizen design groups had finished discussing and drawing out their recommended traffic calming improvements on the aerial photographs, they rejoined as a larger group and shared their information. Local Government Commission and Glatting Jackson staff then reviewed this material and prepared this report.

Recommendations made by the workshop participants have been reviewed by City of Hercules staff and officials. Their preliminary analysis is attached to this report as Appendix A. It lays out the details of each recommendation, issues, and a rough schedule. Most of the recommended improvements can be done at minimal expense, in the short term. Some of those improvements can later be upgraded when additional funds are available. For example, traffic circles can at first be created with paint and cement bumpers. Later, they can be completed with full curbing, aprons, and landscaping features.

This collection of small projects will bring a large improvement in the safety, appearance, and function of the targeted locations. These streets will then better serve all residents of the City of Hercules--including those using bikes wheelchairs, or their own two feet.

Appendix A--Hercules Traffic Calming Project Matrix

Project Code	Location	Perceived Problem(s)	Metric of Problem	Description of Complete Project Proposed	Estimated Level of Effort 1=In-House, 2=Some Help, 3=Peer Engineering	Estimated Time to Accomplish Action 1=Weeks, 2=Months, 3=Years	Estimated Neighborhood Support 1=High, 2=Moderate, 3=Low	Estimated Neighborhood or Motorist Opposition 1=Low, 2=Moderate, 3=High	Total Score
1	*Upper Turquoise*	speed	3 departures from ROW in 24 months	narrow lanes with paint	1	1	1	1	4
32	*Upper Turquoise top of hill near water tank*	speed		install intermittent raised center medians where needed to define lanes on curves	2	2	2	3	9
31	*Upper Turquoise at Cinnabar intersection and beyond*	speed		reduce vehicle lane width to 10 feet, and mark bike lane with 10 inch stripe	1	2	1	1	5
cc	*Promenade*			stripe to create chicane parking	1	2	2	1	6
2	*Upper Turquoise*	speed	3 departures from ROW in 24 months	install mini-circles	2	2	2	2	8
3	*Lower Turquoise*	speed	tickets?	narrow lanes with paint	1	1			
4	*Lower Turquoise*	speed	tickets?	narrow lanes and install reverse angle parking	2	2			
BB	*Lower Turquoise*			install 35 mph speed limit signs	1	1			
5	*Fronting Lupine Hills Elementary School*	crossing and child drop-off safety		install new crosswalks	2	1			
6	*Fronting Herc MHS*	crossing and child drop-off safety		install new crosswalks	2	1			
7	*RVR from Coronado to Mandalay*	speed; crossing safety		narrow lanes with paint	1	1			
8	*Library: Sycamore & Civic*	speed, ped xing safety		narrow lanes with paint and install new crosswalks	2	1			
18	*Hanna Ranch School*			improve visibility of one crosswalk in front of school	1	1	1	1	4
14	*Coronado RVR*			add mini-circle at donut marks	2	2	3	2	9
AA	*Coronado Street*			striping	1	1			2
9	*San Pablo & Sycamore*	speed, illegal turns, ped xing safety		introduce Ped Delay to signal timing; restribe to zebra	3	2	1	1	7
11	*San Pablo & Sycamore*	speed, illegal turns, ped xing safety		reduce two Right Turn lanes to one; install porkchop; restripe ped xing	3	2	3	3	11
12	*San Pablo & Sycamore*	speed, illegal turns, ped xing safety		re-engineer to include Boulevard Traffic Circle	3	3	2	2	10

TRAFFIC CALMING PROJECT EVALUATION SHEET

Engineering Evaluation	Easy	Difficult
Expensive		
Cheap		

Political Evaluation	Popular	Controversial
Lengthy and Permanent		
Easy and Reversable		

To use this sheet, place each project's code into the appropriate box in each four-box matrix. Project codes can be found in the spreadsheet on the previous page. This provides a picture of your personal views on each project's cost, effectiveness, simplicity, and acceptance. Bear in mind that this evaluation does not include factors such as the magnitude of potential safety improvements, or the number of individuals benefiting from each project.

Pelikan Productions