TOWN OF ADDISON

PUBLIC WORKS DEPARTMENT (214) 450-2871
Post Office Box 144 Addison, Texas 75001 16801 Westgrove

MEMORANDUM

11-25-96
John,
Let's visit
about this
RW

October 28, 1996

To: Ron Whitehead
City Manager

From: John R. Baumgartner, P.E.
Director of Public Works JRB

Re: Proton/Jogging Trail Intersection

On October 8, 1996 the Council tabled action on the agenda item concerning engineering a "narrowed roadway section" to provide a larger pedestrian refuge area at the trail crossing of Proton Drive.

There was some discussion of using road humps as a more effective method of mitigating the conflicts between the trail and roadway users. Our current policy regarding road humps requires a "super majority" of neighborhood support prior to a public hearing and consideration by the Council.

As supplemental studies, the Public Works Department has conducted a traffic count and speed analysis at this intersection. A summary of the results are as follows:

	Westbound	Eastbound	Combined
Average daily traffic	1406	1339	2745
Peak hour trafic	285	298	342
Time	5 to 6 p.m.	7 to 8 a.m.	7 to 8 a.m.
85 percentile	37 mph	30 mph	37 mph
Range	10 to 60 mph	11 to 40 mph	10 to 60 mph

To minimize the potential for conflicts between the pedestrian/vehicular traffic at this intersection, staff recommends the installation of the "narrowed roadway section" in lieu of the roadhumps on this collector street. Please call me if you desire additional action on this project.

Report of Speed by Lane

Date: 10/18/1996

ocation: PROTON AT TRAIL WB
eather : CLEAR
udy ID: ID # 00112
erial #: 230 Operator: C.Mitchell

Start Day : 10/17/96 End Day : 10/18/96
Start Time: 00:00:00 End Time: 00:00:00
Interval : 15 min Intervals: 96
Type: Speed.none.none

ne/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
: 10/17/1996																			
00:00am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
00:15am WB	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
00:30am WB	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
00:45am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0%	0%	0%	1%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%
01:00am WB	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:15am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30am WB	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
01:45am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0%	0%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
02:00am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
03:00am WB	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
03:15am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30am WB	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45am WB	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour total	0%	0%	0%	1%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	3%
04:00am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
05:00am WB	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15am WB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30am WB	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45am WB	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hour total	0%	0%	0%	0%	1%	1%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
06:00am WB	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
06:15am WB	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:30am WB	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
06:45am WB	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour total	0%	0%	0%	0%	4%	3%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%
07:00am WB	0	0	0	2	7	1	0	0	0	0	0	0	0	0	0	0	0	0	10

Report of Speed by Lane

Date: 10/18/1996

Location: PROTON AT TRAIL WB
Weather : CLEAR
Study ID: ID # 00112
Serial #: 230
Operator: C.Mitchell
Start Day : 10/17/96 End Day : 10/18/96
Start Time: 00:00:00 End Time: 00:00:00
Interval : 15 min Intervals: 96
Type: Speed.none.none

Lane/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
Thu 10/17/1996																			
07:15am WB	0	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	6
07:30am WB	0	0	0	4	10	1	0	0	0	0	0	0	0	0	0	0	0	0	15
07:45am WB	0	0	0	5	7	1	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour total	0*	0*	0*	13*	28*	3*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	44*
08:00am WB	0	0	0	4	6	2	0	0	0	0	0	0	0	0	0	0	0	0	12
08:15am WB	0	0	1	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0	10
08:30am WB	0	0	0	0	6	5	0	0	0	0	0	0	0	0	0	0	0	0	11
08:45am WB	0	0	1	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	5
Hour total	0*	0*	2*	6*	20*	10*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	38*
09:00am WB	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	0	0	0	10
09:15am WB	0	0	2	2	7	5	0	0	0	0	0	0	0	0	0	0	0	0	16
09:30am WB	0	1	0	0	5	2	0	0	0	0	0	0	0	0	0	0	0	0	8
09:45am WB	0	0	0	2	7	2	1	0	0	0	0	0	0	0	0	0	0	0	12
Hour total	0*	1*	2*	7*	21*	14*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	46*
10:00am WB	0	0	1	2	4	2	0	0	0	0	0	0	0	0	0	0	0	0	9
10:15am WB	0	0	2	5	8	2	1	0	0	0	0	0	0	0	0	0	0	0	18
10:30am WB	0	0	1	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	10
10:45am WB	0	1	0	2	6	5	0	0	0	0	0	0	0	0	0	0	0	0	14
Hour total	0*	1*	4*	14*	22*	9*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	51*
11:00am WB	0	0	1	0	9	3	2	0	0	0	0	0	0	0	0	0	0	0	15
11:15am WB	0	0	0	1	10	4	2	0	0	0	0	0	0	0	0	0	0	0	17
11:30am WB	0	0	0	1	12	9	0	0	0	0	0	0	0	0	0	0	0	0	22
11:45am WB	0	0	1	4	13	12	0	0	0	0	0	0	0	0	0	0	0	0	30
Hour total	0*	0*	2*	6*	44*	28*	4*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	84*
12:00pm WB	0	0	1	7	7	9	0	0	0	0	0	0	0	0	0	0	0	0	24
12:15pm WB	0	0	0	4	10	6	0	0	0	0	0	0	0	0	0	0	0	0	20
12:30pm WB	0	1	1	4	16	5	0	0	0	0	0	0	0	0	0	0	0	0	27
12:45pm WB	0	0	0	3	6	5	1	0	0	0	0	0	0	0	0	0	0	0	15
Hour total	0*	1*	2*	18*	39*	25*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	86*
13:00pm WB	0	1	0	2	12	10	0	0	0	0	0	0	0	0	0	0	0	0	25
13:15pm WB	0	0	0	4	10	2	0	0	0	0	0	0	0	0	0	0	0	0	16
13:30pm WB	0	1	1	0	6	3	0	0	0	0	0	0	0	0	0	0	0	0	11
13:45pm WB	0	0	2	6	2	2	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour total	0*	2*	3*	12*	30*	17*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	64*
14:00pm WB	0	0	0	6	9	2	0	0	0	0	0	0	0	0	0	0	0	0	17
14:15pm WB	0	0	0	1	5	0	1	0	0	0	0	0	0	0	0	0	0	0	7

Report of Speed by Lane

Date: 10/18/1996

ocation: PROTON AT TRAIL WB
eather : CLEAR
udy ID: ID # 00112
rial #: 230 Operator: C.Mitchell

Start Day : 10/17/96 End Day : 10/18/96
Start Time: 00:00:00 End Time: 00:00:00
Interval : 15 min Intervals: 96
Type: Speed.none.none

ne/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
10/17/1996																			
4:30pm WB	0	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	7
4:45pm WB	0	0	3	0	6	5	1	0	0	0	0	0	0	0	0	0	0	0	15
Hour total	0*	0*	4*	7*	25*	8*	2*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	46*
5:00pm WB	0	0	1	3	5	7	2	0	0	0	0	0	0	0	0	0	0	0	18
5:15pm WB	0	0	1	6	5	5	0	1	0	0	0	0	0	0	0	0	0	0	18
5:30pm WB	0	2	1	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	11
5:45pm WB	0	0	1	7	19	8	1	0	0	0	0	0	0	0	0	0	0	0	36
Hour total	0*	2*	4*	17*	32*	24*	3*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	83*
16:00pm WB	0	1	2	4	5	8	1	0	0	0	0	0	0	0	0	0	0	0	21
16:15pm WB	0	1	1	3	16	8	1	0	0	0	0	0	0	0	0	0	0	0	30
16:30pm WB	0	0	1	6	14	16	1	0	0	0	0	0	0	0	0	0	0	0	38
16:45pm WB	0	0	2	9	19	10	1	0	0	0	0	0	0	0	0	0	0	0	41
Hour total	0*	2*	6*	22*	54*	42*	4*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	130*
17:00pm WB	0	1	0	8	43	20	0	0	0	0	0	0	0	0	0	0	0	0	72
17:15pm WB	0	0	0	4	52	22	4	0	0	0	0	0	0	0	0	0	0	0	82
17:30pm WB	0	0	0	8	28	14	7	0	0	0	0	0	0	0	0	0	0	0	57
17:45pm WB	0	0	1	14	34	20	5	0	0	0	0	0	0	0	0	0	0	0	74
Hour total	0*	1*	1*	34*	157*	76*	16*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	285*
18:00pm WB	0	0	0	4	22	13	2	0	0	0	0	0	0	0	0	0	0	0	41
18:15pm WB	0	0	3	7	17	8	0	0	0	0	0	0	0	0	0	0	0	0	35
18:30pm WB	1	1	1	6	18	3	2	0	0	0	0	0	0	0	0	0	0	0	32
18:45pm WB	0	0	3	10	10	6	0	0	0	0	0	0	0	0	0	0	0	0	29
Hour total	1*	1*	7*	27*	67*	30*	4*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	137*
19:00pm WB	0	1	3	5	12	6	2	0	0	0	0	0	0	0	0	0	0	0	29
19:15pm WB	0	0	0	4	13	8	0	0	0	0	0	0	0	0	0	0	0	0	25
19:30pm WB	0	0	1	5	6	2	2	0	0	0	0	0	0	0	0	0	0	0	16
19:45pm WB	0	0	2	5	9	8	1	0	0	0	0	0	0	0	0	0	0	0	25
Hour total	0*	1*	6*	19*	40*	24*	5*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	95*
20:00pm WB	0	0	0	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	17
20:15pm WB	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	8
20:30pm WB	0	0	0	3	8	5	0	0	0	0	0	0	0	0	0	0	0	0	16
20:45pm WB	0	0	0	5	14	5	0	0	0	0	0	0	0	0	0	0	0	0	24
Hour total	0*	0*	0*	9*	36*	20*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	65*
21:00pm WB	0	0	1	7	7	4	1	0	0	0	0	0	0	0	0	0	0	0	20
21:15pm WB	0	0	0	2	8	8	0	0	0	0	0	0	0	0	0	0	0	0	18
21:30pm WB	0	0	1	3	4	6	0	0	0	0	0	0	0	0	0	0	0	0	14

Report of Speed by Lane

Date: 10/18/1996

cation: PROTON AT TRAIL WB — Start Day : 10/17/96 End Day : 10/18/96
ather : CLEAR — Start Time: 00:00:00 End Time: 00:00:00
udy ID: ID # 00112 — Interval : 15 min Intervals: 96
rial #: 230 — Operator: C.Mitchell — Type: Speed.none.none

e/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
10/17/1996																			
1:45pm WB	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour total	0*	0*	2*	14*	24*	18*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	59*
2:00pm WB	0	0	0	5	7	2	0	0	0	0	0	0	0	0	0	0	0	0	14
2:15pm WB	0	0	0	5	0	4	0	0	0	0	0	0	0	0	0	0	0	0	9
2:30pm WB	0	0	0	4	6	4	0	0	0	0	0	0	0	0	0	0	0	0	14
2:45pm WB	0	0	1	3	6	1	1	1	0	0	0	0	0	0	0	0	0	0	13
Hour total	0*	0*	1*	17*	19*	11*	1*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	50*
3:00pm WB	0	0	1	1	3	4	0	0	0	0	0	0	0	0	0	0	0	0	9
3:15pm WB	0	0	0	2	4	3	1	0	0	0	0	0	0	0	0	0	0	0	10
3:30pm WB	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
3:45pm WB	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour total	0*	0*	2*	3*	8*	7*	2*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	22*
Day total	1*	12*	48*	248*	675*	372*	46*	3*	0*	1*	0*	0*	0*	0*	0*	0*	0*	0*	1406*
Percent	0.1%	0.9%	3.4%	17.6%	48.0%	26.5%	3.3%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Report of Speed by Lane Date: 10/18/1996

cation: PROTON AT TRAIL WB Start Day : 10/17/96 End Day : 10/18/96
ather : CLEAR Start Time: 00:00:00 End Time: 00:00:00
udy ID: ID # 00112 Interval : 15 min Intervals: 96
rial #: 230 Operator: C.Mitchell Type: Speed.none.none

e/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
Grand Total	1*	12*	48*	248*	675*	372*	46*	3*	0*	1*	0*	0*	0*	0*	0*	0*	0*	0*	1406*
Percent	0.1%	0.9%	3.4%	17.6%	48.0%	26.5%	3.3%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Accrued	1*	13*	61*	309*	984*	1356*	1402*	1405*	1405*	1406*									
Accrued %	0.1%	0.9%	4.3%	22.0%	70.0%	96.4%	99.7%	99.9%	99.9%	100.0%									

SPEED STATISTICAL SUMMARY

Vehicle Total	Average Speed	Percentile 15th	Percentile 50th	Percentile 85th	Speeds in excess of)35	)45	)55	)65	)75
1406	33.2	29.0	33.0	37.0	422	4	1	0	0
					30.0%	0.3%	0.1%	0.0%	0.0%

(Peak hour analysis)

Start Date	Start Time	Peak Count	Peak Factor
10/17/96 A.M. Peak starts	11:00	84	0.70
10/17/96 P.M. Peak starts	17:00	285	0.87

(High hour useage times)

	Time	Date	Hour	Date	Count
Highest hours from	00:00	10/17/96			
to	00:00	10/18/96			
Highest			17:00	10/17/96	285
2nd Highest			18:00	10/17/96	137
3rd Highest			16:00	10/17/96	130

Graph of Total Vehicles per Speed

Date: 10/18/1996

cation: PROTON AT TRAIL WB — Start Day : 10/17/96 End Day : 10/18/96

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udy ID: ID # 00112 — Interval : 15 min Intervals: 96

rial #: 230 — Operator: C.Mitchell — Type: Speed.none.none

Speed	Count	Percent	
			170 340 510 680
1 to 10	1	0.1%	*
1 to 20	12	0.9%	*
1 to 25	48	3.4%	****
6 to 30	248	17.6%	**********
1 to 35	675	48.0%	**********
6 to 40	372	26.5%	**********
1 to 45	46	3.3%	****
6 to 50	3	0.2%	*
1 to 55	0	0.0%	
6 to 60	1	0.1%	*
1 to 65	0	0.0%	
6 to 70	0	0.0%	
1 to 75	0	0.0%	
6 to 80	0	0.0%	
1 to 85	0	0.0%	
6 to 90	0	0.0%	
1 to 95	0	0.0%	
6 to 101	0	0.0%	
Total	1406	100.0%	
			170 340 510 680

Report of Speed by Lane

Date: 10/18/1996

cation: PROTON EB AT TRAIL Start Day : 10/17/96 End Day : 10/18/96

ather : CLEAR Start Time: 00:00:00 End Time: 00:00:00

udy ID: ID # 00111 Interval : 15 min Intervals: 96

rial #: 231 Operator: C.Mitchell Type: Speed.none.none

e/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
10/17/1996																			
0:00am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:15am EB	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0:30am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:45am EB	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour total	0*	0*	1*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	2*
1:00am EB	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0*	0*	0*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	1*
2:00am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
3:00am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30am EB	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hour total	0*	0*	0*	0*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	1*
4:00am EB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15am EB	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30am EB	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:45am EB	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hour total	0*	0*	2*	2*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	4*
5:00am EB	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15am EB	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:30am EB	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:45am EB	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Hour total	0*	1*	10*	3*	2*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	16*
6:00am EB	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
6:15am EB	0	0	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
6:30am EB	0	1	3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	12
6:45am EB	0	1	16	8	9	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Hour total	0*	2*	25*	17*	15*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	59*
7:00am EB	0	3	11	11	8	1	0	0	0	0	0	0	0	0	0	0	0	0	34

Report of Speed by Lane

Date: 10/18/1996

cation: PROTON EB AT TRAIL
Start Day : 10/17/96 End Day : 10/18/96
ather : CLEAR
Start Time: 00:00:00 End Time: 00:00:00
udy ID: ID # 00111
Interval : 15 min Intervals: 96
rial #: 231
Operator: C.Mitchell
Type: Speed.none.none

e/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
10/17/1996																			
7:15am EB	0	3	28	28	8	0	0	0	0	0	0	0	0	0	0	0	0	0	67
7:30am EB	0	2	45	38	10	0	0	0	0	0	0	0	0	0	0	0	0	0	95
7:45am EB	0	2	48	34	18	0	0	0	0	0	0	0	0	0	0	0	0	0	102
Hour total	0*	10*	132*	111*	44*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	298*
8:00am EB	0	0	32	28	7	0	0	0	0	0	0	0	0	0	0	0	0	0	67
8:15am EB	0	1	30	42	15	0	0	0	0	0	0	0	0	0	0	0	0	0	88
8:30am EB	0	0	23	29	7	0	0	0	0	0	0	0	0	0	0	0	0	0	59
8:45am EB	0	1	14	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Hour total	0*	2*	99*	118*	30*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	249*
9:00am EB	0	0	7	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	21
9:15am EB	0	0	8	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
9:30am EB	0	3	4	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	15
9:45am EB	0	1	14	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Hour total	0*	4*	33*	27*	9*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	73*
10:00am EB	0	0	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
10:15am EB	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
10:30am EB	0	2	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
10:45am EB	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Hour total	1*	3*	16*	13*	2*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	35*
11:00am EB	0	1	10	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
11:15am EB	0	1	7	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	16
11:30am EB	0	2	5	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	14
11:45am EB	0	0	10	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Hour total	0*	4*	32*	18*	9*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	63*
12:00pm EB	0	1	6	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10
12:15pm EB	0	0	7	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
12:30pm EB	0	1	10	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19
12:45pm EB	0	2	11	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Hour total	0*	4*	34*	19*	6*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	63*
13:00pm EB	0	1	6	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	22
13:15pm EB	0	1	7	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
13:30pm EB	0	0	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	10
13:45pm EB	0	2	6	8	5	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Hour total	0*	4*	23*	26*	11*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	64*
14:00pm EB	0	0	12	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	19
14:15pm EB	0	1	11	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	18

Report of Speed by Lane Date: 10/18/1996

cation: PROTON EB AT TRAIL Start Day : 10/17/96 End Day : 10/18/96
ather : CLEAR Start Time: 00:00:00 End Time: 00:00:00
udy ID: ID # 00111 Interval : 15 min Intervals: 96
rial #: 231 Operator: C.Mitchell Type: Speed.none.none

e/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
10/17/1996																			
4:30pm EB	0	0	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10
4:45pm EB	0	0	3	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Hour total	0*	1*	32*	20*	7*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	60*
5:00pm EB	0	0	10	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	16
5:15pm EB	0	0	4	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
5:30pm EB	0	0	7	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	19
5:45pm EB	0	1	7	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Hour total	0*	1*	28*	20*	13*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	62*
6:00pm EB	0	1	7	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	13
6:15pm EB	0	1	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	10
6:30pm EB	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
6:45pm EB	0	2	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Hour total	0*	5*	19*	12*	6*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	42*
7:00pm EB	0	0	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	9
7:15pm EB	0	0	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	7
7:30pm EB	0	3	2	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
7:45pm EB	0	0	10	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Hour total	0*	3*	19*	15*	8*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	45*
8:00pm EB	0	0	10	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15
8:15pm EB	0	0	12	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	20
8:30pm EB	0	2	4	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	13
8:45pm EB	0	0	9	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	17
Hour total	0*	2*	35*	17*	11*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	65*
9:00pm EB	0	1	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
9:15pm EB	0	0	9	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	18
9:30pm EB	0	0	9	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
9:45pm EB	0	1	7	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	15
Hour total	0*	2*	32*	15*	6*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	55*
0:00pm EB	0	1	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	8
0:15pm EB	0	0	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
0:30pm EB	0	0	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7
0:45pm EB	0	3	6	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Hour total	0*	4*	15*	7*	5*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	31*
1:00pm EB	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:15pm EB	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1:30pm EB	0	0	5	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8

Report of Speed by Lane

Date: 10/18/1996

Location: PROTON EB AT TRAIL
Start Day : 10/17/96 End Day : 10/18/96
Weather : CLEAR
Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00111
Interval : 15 min Intervals: 96
Serial #: 231
Operator: C.Mitchell
Type: Speed.none.none

Lane/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
10/17/1996																			
21:45pm EB	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour total	0*	0*	12*	2*	5*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	19*
22:00pm EB	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22:15pm EB	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
22:30pm EB	0	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
22:45pm EB	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Hour total	0*	5*	14*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	20*
23:00pm EB	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
23:15pm EB	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
23:30pm EB	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
23:45pm EB	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hour total	0*	3*	6*	3*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	12*
Day total	1*	60*	619*	468*	190*	1*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	1339*
Percent	0.1%	4.5%	46.2%	35.0%	14.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Report of Speed by Lane Date: 10/18/1996

Location: PROTON EB AT TRAIL Start Day : 10/17/96 End Day : 10/18/96
Weather : CLEAR Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00111 Interval : 15 min Intervals: 96
Serial #: 231 Operator: C.Mitchell Type: Speed.none.none

Lane/Channel	1-10	11-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95	96-101	Total
Grand Total	1	60	619	468	190	1	0	0	0	0	0	0	0	0	0	0	0	0	1339
Percent	0.1%	4.5%	46.2%	35.0%	14.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Accrued	1	61	680	1148	1338	1339													
Accrued %	0.1%	4.6%	50.8%	85.7%	99.9%	100.0%													

SPEED STATISTICAL SUMMARY

Vehicle Total	Average Speed	Percentile 15th	Percentile 50th	Percentile 85th	Speeds in excess of)35	)45	)55	)65	)75
1339	25.9	23.0	25.0	30.0	1	0	0	0	0
					0.1%	0.0%	0.0%	0.0%	0.0%

(Peak hour analysis)

Start Date	Start Time	Peak Count	Peak Factor
10/17/96 A.M. Peak starts	07:30	352	0.86
10/17/96 P.M. Peak starts	12:15	75	0.82

(High hour useage times)

	Time	Date	Hour	Date	Count
Highest hours	from 00:00	10/17/96			
	to 00:00	10/18/96			
	Highest		07:00	10/17/96	298
	2nd Highest		08:00	10/17/96	249
	3rd Highest		09:00	10/17/96	73

Graph of Total Vehicles per Speed

Date: 10/18/1996

cation: PROTON EB AT TRAIL
ather : CLEAR
udy ID: ID # 00111
rial #: 231 Operator: C.Mitchell

Start Day : 10/17/96 End Day : 10/18/96
Start Time: 00:00:00 End Time: 00:00:00
Interval : 15 min Intervals: 96
Type: Speed.none.none

Speed	Count	Percent	160 320 480 640
1 to 10	1	0.1%	*
.1 to 20	60	4.5%	*****
21 to 25	619	46.2%	**********
26 to 30	468	35.0%	*********
31 to 35	190	14.2%	****
36 to 40	1	0.1%	*
41 to 45	0	0.0%	
46 to 50	0	0.0%	
51 to 55	0	0.0%	
56 to 60	0	0.0%	
61 to 65	0	0.0%	
66 to 70	0	0.0%	
71 to 75	0	0.0%	
76 to 80	0	0.0%	
81 to 85	0	0.0%	
86 to 90	0	0.0%	
91 to 95	0	0.0%	
96 to 101	0	0.0%	
Total	1339	100.0%	

160 320 480 640

TOWN OF ADDISON

PUBLIC WORKS DEPARTMENT
Post Office Box 144 Addison, Texas 75001

(214) 450-2871
16801 Westgrove

October 2, 1996

MEMORANDUM

TO: Ron Whitehead, City Manager

FROM: John Baumgartner, Director of Public Works

SUBJECT: Engineering Services Agreement with Shimek, Jacobs & Finklea
Paving Improvements on Proton Drive at the Crossing
of the Easement Park Jogging Trail

Attached is an engineering services agreement with Shimek, Jacobs & Finklea (SJF) to study and design paving improvements on Proton Drive at the crossing of the Easement Park jogging trail. SJF proposes to provide the services as outlined in the proposal for a times and materials fee not to exceed $9,500.

The existing parkway between the screening wall and the back of curb is approximately 9.5 feet wide. Staff recommends that this area be widened to provide users of the trail more room to stop when they exit the Easement Park. The additional space will also provide a better opportunity for the pedestrians to see and be seen by vehicles on Proton Drive. Staff proposes to increase the parkway width to approximately 16 feet by narrowing Proton Drive, at the crossing, from its present 37 feet to 24 feet.(See attached sketch)

In addition to providing a larger "safe" area for pedestrians and cyclists, the reduced pavement width should reduce the speed of cars traveling through this section of Proton Drive. It has been documented that motorists tend to naturally reduce their speed when they are approaching a narrowed or constricted portion of a roadway.

Shimek, Jacobs & Finklea was selected to design the Town's capital improvement projects with fees less than $30,000. Staff has been very pleased with the performance and service of Shimek, Jacobs & Finklea on the previous projects they have done for the Town.

This project is an unbudgeted item. Staff proposes to fund this project with monies from the street maintenance budget, which has $20,000 identified for City Manager/Council initiated projects. A budget amendment may be necessary to fund additional City Manager/Council initiated projects. An estimate of the construction cost won't be known until the preliminary plans have been completed.

Staff recommends that the Council authorize the City Manager to enter into the agreement with Shimek, Jacobs & Finklea for a fee not to exceed $9,500.

SHIMEK, JACOBS & FINKLEA, L.L.P.
CONSULTING ENGINEERS

8333 Douglas Avenue, #820 Dallas, Texas 75225-5816 Fax (214) 361-0204 Phone (214) 361-7900

ROSS L. JACOBS, P.E.
RONALD V. CONWAY, P.E.
JOHN W. BIRKHOFF, P.E.
JOE R. CARTER, P.E.
GARY C. HENDRICKS, P.E.
J. C. FINKLEA, P.E.

October 3, 1996

Mr. John Baumgartner, P.E.
Director of Public Works
Town of Addison
Post Office Box 144
Addison, Texas 75001-0144

Re: Engineering Services Agreement
Proton Drive Calming

Dear Mr. Baumgartner:

In accordance with your request, we propose to furnish engineering services for the preparation of plans and specifications for the calming of traffic along Proton Drive. This project will consist of narrowing the existing roadway at a jogging path crossing in an attempt to slow traffic and provide greater sight distances for a pedestrian at this crossing to see vehicles. This project is generally located along Proton Drive between Lexus Avenue and Les Lacs Avenue.

Our services will include design surveys, establishment of existing horizontal geometrics, modification of those geometrics to narrow the roadway from approximately 36 feet in width to approximately 24 to 26 feet in width for a design speed of 35 to 40 mph, pavement markings, signage, review street drainage to provide positive drainage in the narrowed section (this may require pavement grinding or the replacement of pavement slabs), miscellaneous details, establishment of landscaping with the assistance of the Town's Park Director, quantity take-off and formulation of an opinion of probable construction cost, meetings with staff, specifications, the preparation of bidding documents of change order, and assistance during the bidding and construction phases.

We propose to be compensated for our services on a hourly basis. The charges will be based on a salary cost times a multiplier of 2.3, expenses times 1.15 and field survey crew at $85.00 per hour. We suggest that the Town budget $9,500.00 for these services. If you are in agreement with our proposal, please have the Town of Addison execute one copy of this letter agreement and return it to us. Services will commence upon receipt of this executed letter agreement. We are available at your convenience to discuss any questions you may have.

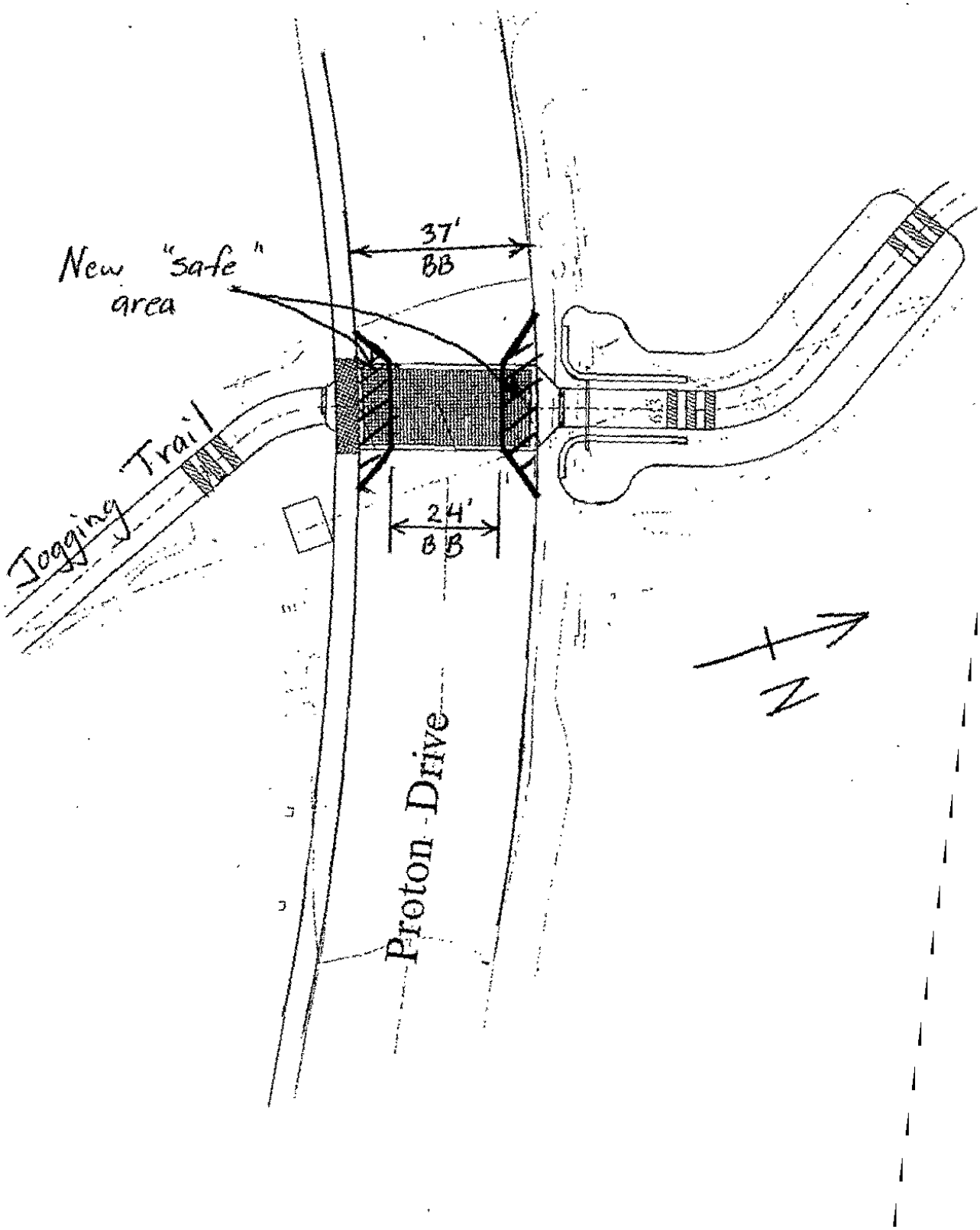
Sincerely,

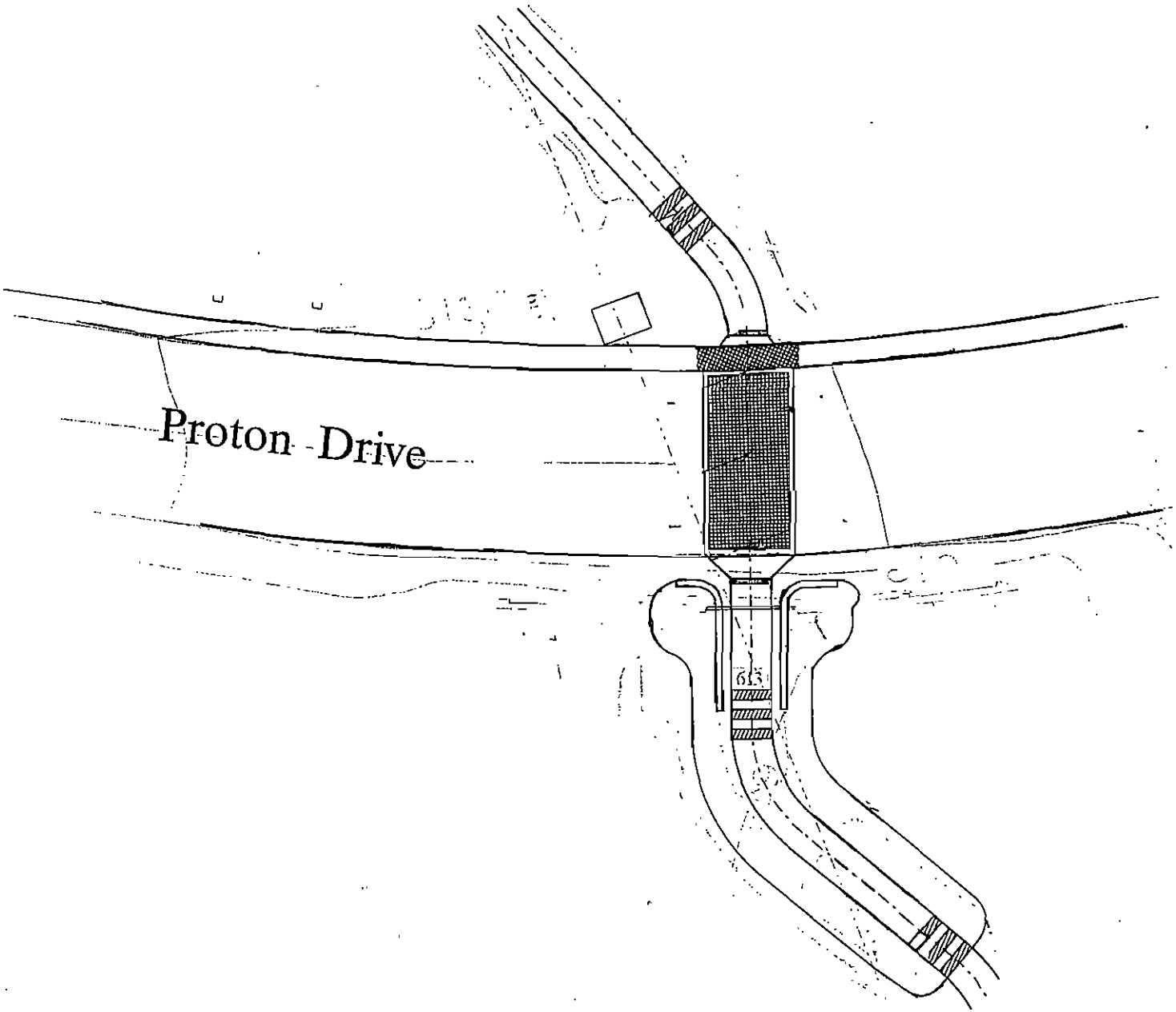
John W. Birkhoff, P.E.

APPROVED FOR THE TOWN OF ADDISON

By: _____

Date: _____


New "safe" area
37'
BB
24'
BB
Jogging Trail
Proton Drive
N


Proton Drive

TOWN OF ADDISON

PUBLIC WORKS DEPARTMENT (214) 450-2871

Post Office Box 144 Addison, Texas 75001 16801 Westgrove

January 9, 1996

Mr. Loyd Dickens
Cook Consultants, Inc.
12250 Inwood Rd., Suite 10
Dallas, Texas 75244

Re: Addison Town homes - Proton Drive

Dear Loyd:

We have reviewed the proposal to relocate the eastern driveway associated with the referenced project.

The current proposal is acceptable if the following conditions are satisfied:

1. The existing homeowners do no object to the realignment.

2. Adequate site visibility (300 feet) is provided to see vehicular traffic approaching from the west and east. It appears that the existing planter/wall in front of the club house requires modification.

3. The Proton median/turn lane shall be designed in accordance with our traffic engineers recommendation.

Please call me if you have any questions or need additional information.

Sincerely,

John R. Baumgartner, P.E.
Director of Public Works

JRB/amh

TOWN OF
ADDISON PUBLIC WORKS

To: Loyd Dickens

Company: Cook Consultants

FAX #: 387-8210

Date: 1/10/96

# of pages (including cover): 2

From: John Baumgartner, P.E.
Director
Phone: 214/450-2886
FAX: 214/931-6643

16801 Westgrove
P.O. Box 144
Addison, TX 75001

☒ Original in mail ☐ Per your request ☐ FYI ☐ Call me

Comments:

Stop signs are located at the intersections of Les Lacs Ave. and Azure Dr. with Proton. The northern approach of the trail to Proton has a wall located approximately 12 feet from the street with a 15 foot opening. This configuration makes it difficult for vehicles to see the pedestrians approaching the intersection and for pedestrians to see the vehicles. Once the pedestrians emerge from behind the wall and prior to entering the street they can see and be seen.

Traffic at this intersection consists of 3052 vehicles (count taken on 10\5\95) and 200 pedestrians (estimated when the trail is completed to Marsh Lane.) on a good weather day.

Options: There are several alternatives or combination of alternatives to mitigate the concerns regarding this intersection. Below are some of the proposals.

A. Do nothing.

1. Pro's
   a. No immediate expense.
   b. No impact to vehicular traffic.

2. Con's
   a. Requires pedestrians to yield to traffic. A deliberate stop is required prior to crossing Proton from north to south.
   b. Potentially dangerous for the inexperienced pedestrian.
   c. Potentially dangerous for the pedestrian distracted by the environment.

B. Install stop signs on Proton.

1. Pro's
   a. Pedestrians could cross without yielding to cars.
   b. Low cost.

2. Con's
   a. Unconventional installation of a stop sign. May be difficult to warrant.
   b. May create a false sense of security for pedestrians that expect all vehicles to come to a complete stop.
   c. May require very regular enforcement of traffic laws.
   d. Adversely impacts all vehicular traffic.
   e. It is recommended that the pedestrians also have a required stop.

C. Construct two fences (similar to a pool enclosure) with self latching gates to segregate the trail from the road.

1. Pro's
   a. Creates an environment conducive to providing a crossing where pedestrians will stop prior to proceeding across the street. This allows them to see and be seen.
   b. Small children will not be able to enter the street unassisted.
   c. The facility is primarily self policing.
   d. Relatively inexpensive.
   e. No impact to vehicular traffic.

2. Con's
   a. Requires pedestrians to stop and open gates to cross the street.
   b. Pedestrians must yield to traffic.
   c. Difficult for bicyclists.

D. Improve the visibility of/for the pedestrians. This option would require the realignment of the trail approaches and relocation of the walls. (See schematic.)

1. Pro's
   a. Provides a more conventional approach.
   b. Provides better visibility of/for pedestrians and vehicles.
   c. No impact to vehicular traffic.

2. Con's
   a. Pedestrians (including children) must yield to traffic.
   b. Moderately expensive.

E. End the trail at the wall and complete the wall.

1. Pro's
   a. Fail safe for children approaching from the north.
   b. Provides for crossing Proton at locations with controlled access.
   c. Does not affect vehicular traffic.
   d. Moderate cost.

2. Con's
   a. Requires residents to travel Azure to access the southern part of the trail.
   b. The landscaped trail would become discontinuous.

F. Other alternatives could include a pedestrian underpass, making Proton discontinuous, or the installation of a pedestrian signal.

cc: Slade Strickland

Report of Volume by Lane

Date: 10/05/1995

Location: PROTON PED XING
Start Day : 10/04/95 End Day : 10/05/95
Weather : Clear, Dry
Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00101
Interval : 30 min Intervals: 96
Serial #: 231 Operator: C. Mitchell Type: Volume.none.none

Interval Time	WB	EB	Total
Wed 10/04/1995			
12:00am	6	4	10
12:30am	1	2	3
Hour total	7*	6*	13*
1:00am	1	1	2
1:30am	1	0	1
Hour total	2*	1*	3*
2:00am	3	3	6
2:30am	0	0	0
Hour total	3*	3*	6*
3:00am	1	0	1
3:30am	1	2	3
Hour total	2*	2*	4*
4:00am	1	5	6
4:30am	0	3	3
Hour total	1*	8*	9*
5:00am	2	1	3
5:30am	3	7	10
Hour total	5*	8*	13*
6:00am	5	21	26
6:30am	10	40	50
Hour total	15*	61*	76*
7:00am	21	115	136
7:30am	19	161	180
Hour total	40*	276*	316*
8:00am	31	144	175
8:30am	21	95	116
Hour total	52*	239*	291*
9:00am	21	55	76
9:30am	20	28	48
Hour total	41*	83*	124*
10:00am	15	27	42
10:30am	27	34	61
Hour total	42*	61*	103*

Report of Volume by Lane Date: 10/05/1995

Location: PROTON PED XING Start Day : 10/04/95 End Day : 10/05/95
Weather : Clear, Dry Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00101 Interval : 30 min Intervals: 96
Serial #: 231 Operator: C. Mitchell Type: Volume.none.none

Interval Time	WB	EB	Total
Wed 10/04/1995			
11:00am	32	27	59
11:30am	67	47	114
Hour total	99*	74*	173*
12:00pm	83	65	148
12:30pm	45	64	109
Hour total	128*	129*	257*
1:00pm	40	65	105
1:30pm	35	41	76
Hour total	75*	106*	181*
2:00pm	20	37	57
2:30pm	29	27	56
Hour total	49*	64*	113*
3:00pm	44	33	77
3:30pm	31	33	64
Hour total	75*	66*	141*
4:00pm	45	27	72
4:30pm	115	45	160
Hour total	160*	72*	232*
5:00pm	129	52	181
5:30pm	137	51	188
Hour total	266*	103*	369*
6:00pm	81	46	127
6:30pm	50	35	85
Hour total	131*	81*	212*
7:00pm	40	24	64
7:30pm	36	22	58
Hour total	76*	46*	122*
8:00pm	32	27	59
8:30pm	24	23	47
Hour total	56*	50*	106*
9:00pm	28	11	39
9:30pm	19	13	32
Hour total	47*	24*	71*

Report of Volume by Lane

Date: 10/05/1995

Location: PROTON PED XING
Start Day : 10/04/95 End Day : 10/05/95
Weather : Clear, Dry
Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00101
Interval : 30 min Intervals: 96
Serial #: 231 Operator: C. Mitchell Type: Volume.none.none

Interval Time	WB	EB	Total
Wed 10/04/1995			
10:00pm	15	6	21
10:30pm	17	11	28
Hour total	32*	17*	49*
11:00pm	32	29	61
11:30pm	5	2	7
Hour total	37*	31*	68*
Day total	1441*	1611*	3052*
Percent	47.2%	52.8%	100.0%

Report of Volume by Lane

Date: 10/05/1995

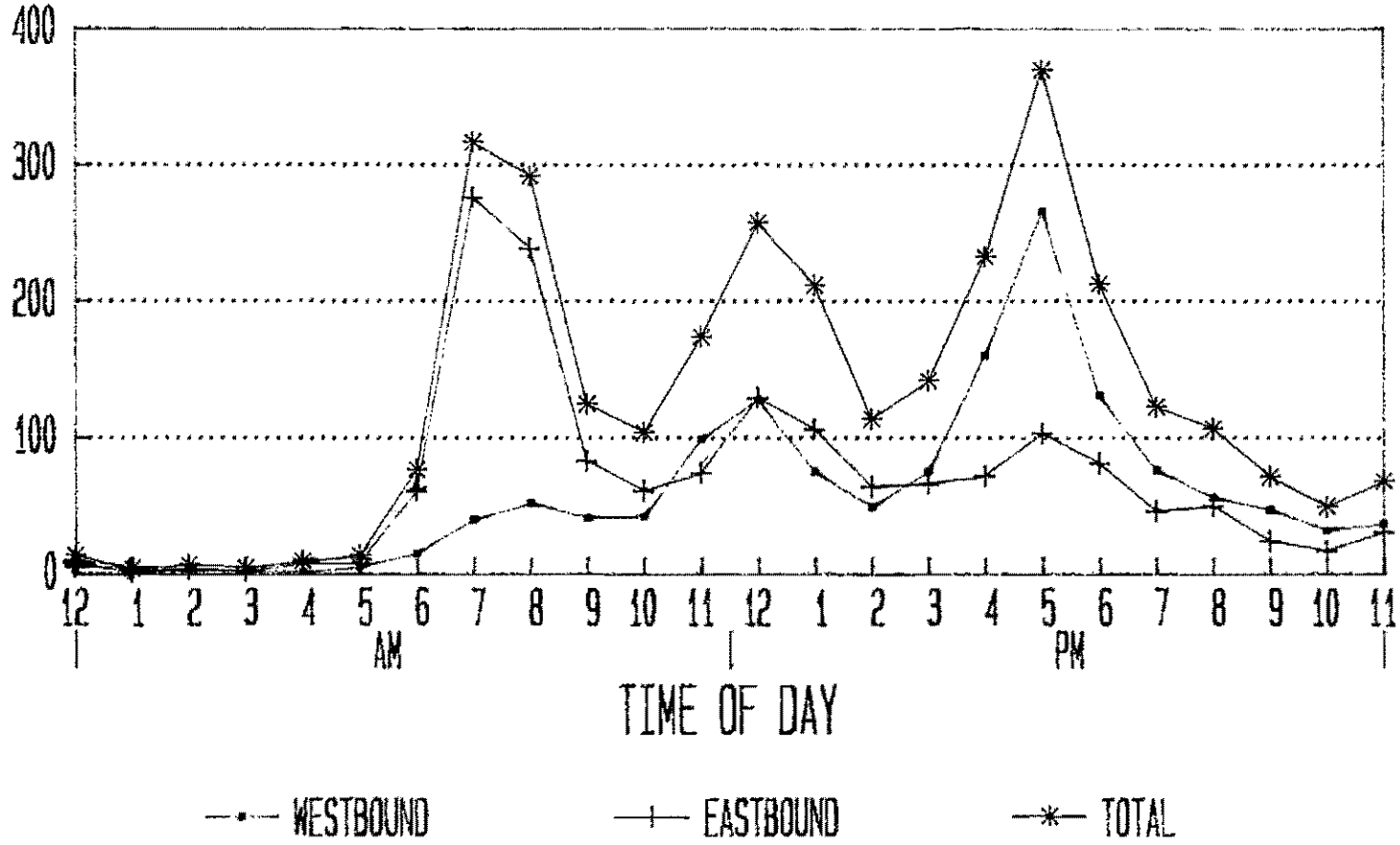
Location: PROTON PED XING
Start Day : 10/04/95 End Day : 10/05/95
Weather : Clear, Dry
Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00101
Interval : 30 min Intervals: 96
Serial #: 231 Operator: C. Mitchell Type: Volume.none.none

Interval Time	WB	EB	Total
Grand Total	1441*	1611*	3052*
Percent	47.2%	52.8%	100.0%

<High hour useage times>

	Time	Date	Hour	Date	Count
Highest hours from	00:00	10/04/95			
to	00:00	10/05/95			
Highest			17:00	10/04/95	369
2nd Highest			07:00	10/04/95	316
3rd Highest			08:00	10/04/95	291

TRAFFIC STUDY
PROTON PEDESTRIAN XING



TUESDAY 10/04/95

Graph of Volume by Hour

Date: 10/05/1995

Location: PROTON PED XING
Start Day : 10/04/95 End Day : 10/05/95
Weather : Clear, Dry
Start Time: 00:00:00 End Time: 00:00:00
Study ID: ID # 00101
Interval : 30 min Intervals: 96
Serial #: 231 Operator: C. Mitchell Type: Volume.none.none

Hour	Count	Percent	95 190 285 380
Wed 10/04/1995			
12:00am	13	0.4%	**
1:00am	3	0.1%	*
2:00am	6	0.2%	*
3:00am	4	0.1%	*
4:00am	9	0.3%	**
5:00am	13	0.4%	**
6:00am	76	2.5%	**********
7:00am	316	10.4%	**********
8:00am	291	9.5%	**********
9:00am	124	4.1%	**********
10:00am	103	3.4%	**********
11:00am	173	5.7%	**********
12:00pm	257	8.4%	**********
1:00pm	181	5.9%	**********
2:00pm	113	3.7%	**********
3:00pm	141	4.6%	**********
4:00pm	232	7.6%	**********
5:00pm	369	12.1%	**********
6:00pm	212	6.9%	**********
7:00pm	122	4.0%	**********
8:00pm	106	3.5%	**********
9:00pm	71	2.3%	**********
10:00pm	49	1.6%	*******
11:00pm	68	2.2%	**********
Thu 10/05/1995			
Total -	3052	100.0%	

95 190 285 380