

Hazardous Assessment Approach to Trespass Management –High Security Fence



Prioritization Algorithm

- Consideration of past incidents – rolling 4 years
 - Fatalities – Accident and Suicides
 - Trespass
 - Debris Strikes
- Segmentation of entire system into 4 mile blocks
 - Branch and Mile Post
- Critical Nature of Data Collection
 - Daily transportation log
 - Police Reports
 - Public Affairs / Letters / Field Audits



Prioritization Algorithm

Assigning the appropriate weight

- Fatality – Accidental 10 Points
- Fatality – Suicide 5 Points
- Debris Strikes 2 Points
- Trespass Reports 1 Point

Formula – for each segment

$$\underline{\text{FA}(10) + \text{FS}(5) + \text{DS}(2) + \text{TR} = \text{PS}}$$



Prioritization Algorithm

Typical Resultant Priority Scale

ROW TASK FORCE - FENCING HAZARD MITIGATION PRIORITY SCALE (2008-2011)										
BRANCH		Fatal Accidental and Undetermined	Fatal Suicide		Debris Strike		Trespasser Report	Priority Scale	Priority Level	
		Hazardous Scale per Incident	X10		X5		X2			I = highest IV = Lowest
Mainline	MilePost									
	0-4	3	30	2	10	5	10	22	72	I
	4*8	1	10	2	10	12	24	35	79	I
	8*12	0	0	0	0	10	20	9	29	III
	12*16	0	0	0	0	4	8	8	16	IV
	16*20	1	10	1	5	14	28	12	55	II
	20*24	1	10	1	5	12	24	16	55	II
	24*28	2	20	1	5	4	8	9	42	II
	28*32	0	0	1	5	5	10	10	25	III
	32*36	1	10	2	10	3	6	8	34	III
	36*40	1	10	1	5	5	10	19	44	II
	40*44	6	60	4	20	17	34	21	135	I
	44*48	1	10	0	0	2	4	3	17	IV
	48*52	0	0	0	0	6	12	0	12	IV
	52*56	0	0	0	0	3	6	4	10	IV
	56*60	0	0	0	0	2	4	0	4	IV
	60*64	0	0	0	0	1	2	1	3	IV
	64*68	0	0	0	0	0	0	0	0	IV
	68*72	0	0	0	0	1	2	1	3	IV
	72*76	0	0	0	0	4	8	0	8	IV
	76*80	0	0	0	0	1	2	1	3	IV
	80*84	0	0	0	0	0	0	2	2	IV
	84*88	1	10	0	0	0	0	0	10	IV
	88*92	0	0	0	0	0	0	0	0	IV
	92*95	0	0	0	0	0	0	0	0	IV
Level 1	>60	Level III	21-40		Reduced 1 Level				Reduced 2 Levels	
Level II	41-60	Level IV	0-20		Increased 1 Level				Reduced 3 Levels	

Prioritization Algorithm

Typical Resultant Priority Scale – Now What?

Level I > 60

Level II 41-60

Level III 21-40

Level IV 0-20

Quantitative Review → Qualitative Review

- Within the 4 mile section of Level I
 - Areas of greater concern
 - Schools
 - Parks
 - Frequent Breach
 - Homeless
 - Graffiti
 - Gathering points – trails –etc.



Prioritization Algorithm

Fencing Strategies

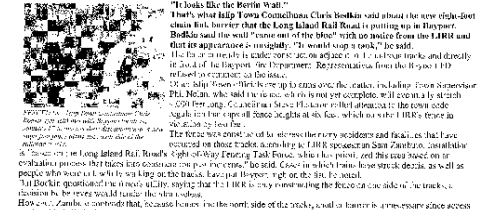
- 3rd Party Access Agreements
- Municipal Agreements
- Grants – Homeland Security
- Target Hardening
- Single or Both Sides
- Channelization at Xings
- Emergency Response and Maintenance Access Points.



Prioritization Algorithm

Consensus Building - Expectations

- Aesthetics vs. Safety
- Emergency Access
- Emergency Egress
- Maintenance Int./Ext.
- ROW Clearance!



travel for students

Prioritization Algorithm

Final Thoughts – Thank You

