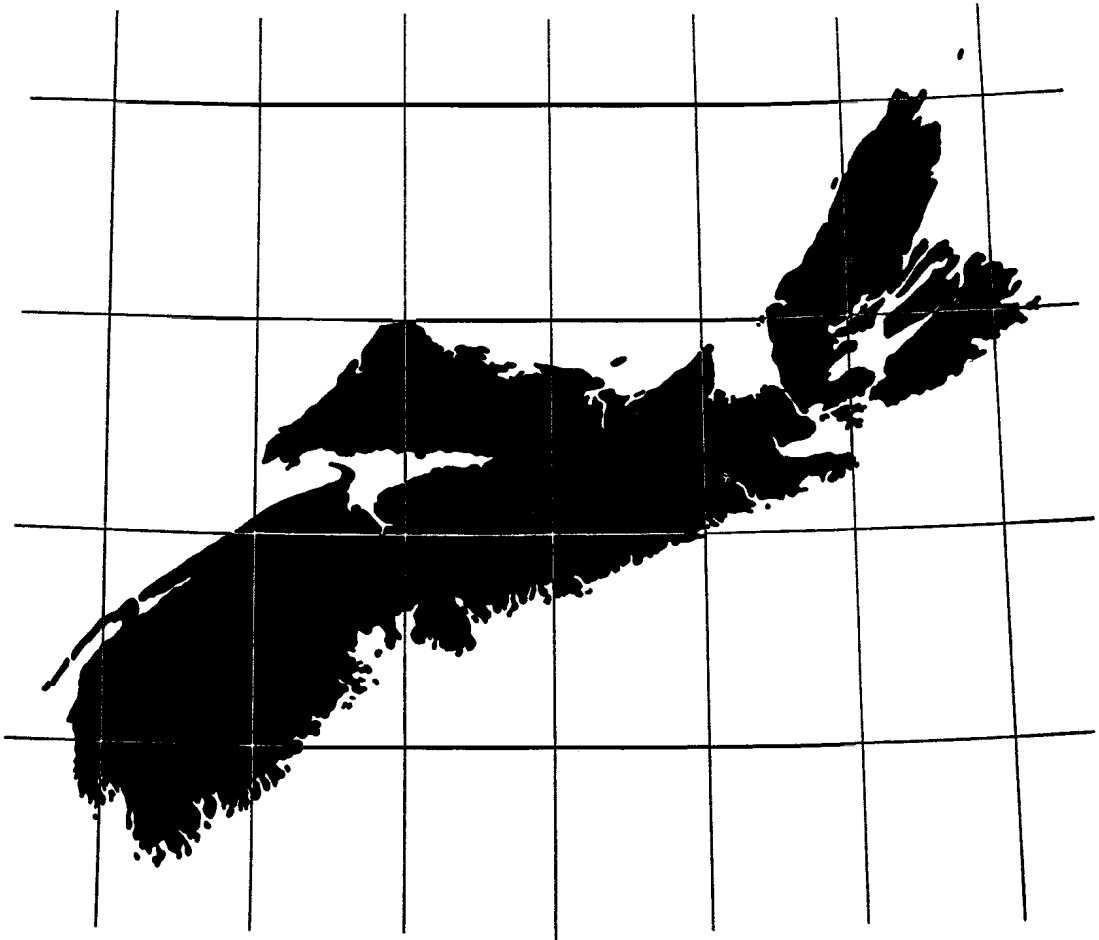


# The NOVA SCOTIAN SURVEYOR



*Published by  
The Association of Provincial Land Surveyors  
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# The NOVA SCOTIAN SURVEYOR

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## COMPUTER SPEEDS FIELD SURVEY

### Co-ordinate system with computer data eliminates chaining

by E. R. BENNETT, De Leuw, Cather & Co. of Canada Ltd.

and M. P. SMITH, Department of Highways of Ontario.

With today's unparalleled growth of vehicular traffic, many inadequate arterial roads are being reconstructed as multi-lane, high-speed, controlled access routes. These require more complex interchanges and the layout of these interchanges in the field is itself complicated. When high-speed, high volume traffic must be maintained at the site, the complications increase.

If an interchange is being reconstructed, it probably already is overloaded and the effect of a survey party stopping traffic, even briefly, to chain across the highway would be unacceptable. Since chaining in travelled areas is the main reason for physical interference with traffic, the basic problem of laying out these interchanges is to eliminate chaining.

Use of a co-ordinate system, while not new, is the most practical solution. Modern interchange design uses a co-ordinate system in the alignment of complex ramps and structures anyway, and the co-ordinates of the main points are shown on the drawings. If these points can be transferred from the drawings to the field without chaining, a quick and accurate system of layout results.

The first step is to establish in the field an accurate grid of co-ordinated control points. This can best be done without interfering with traffic by triangulation from any two monuments of known co-ordinates. The grid could also be laid out by means of a closed traverse using electronic surveying, which would not require chaining across roads.

To decide where the control points should be located, a knowledge of the site topography is necessary, and a controlled plan showing the features to be laid out and the co-ordinated grid is invaluable. Each control point must be visible from at least two others.

An effort should also be made to place a series of bars around the perimeter of the site with subsidiary bars located from these in the body of the job. The main control bars may also be placed along the centre lines of the two main intersecting highways and subsidiary bars, which probably will be more permanent, set from these.

A high degree of accuracy is required when establishing control points. The ideal equipment is a one-second transit and targets on optically plumbed tripods, although De Leuw Cather have also obtained good results with three 20-second transits. Because of the accuracies required, adjustment of small errors using the method of least squares may be necessary.

The next step is to correlate the control points in the field to each other and to the points on the drawings which are to be established on the ground.

Given the co-ordinates of any two points, both the distance between them and the azimuth of a line joining them can be calculated. However each calculation will take about 10 minutes, and for a short ramp of, say 1,000 ft., about 200 of these calculations would be required for a layout.

This adds up to 34 man hours, and since complete accuracy is necessary, another 25 man hours would be required for checking. Therefore it is obvious that to make the system practical, calculations must be done by electronic computer.

To prepare layout information for a ramp, the co-ordinates of the points on that ramp must be known. Most design programs give co-ordinates of such main points as beginnings of curve, spiral points, etc., and these can be laid out from the control bars.

The detail layout can then be completed by conventional methods, but it usually is better to use these main points to obtain from the computer the co-ordinates of 25-ft. and 50-ft. stations on the ramp. The computer will relate each control point to each required station and to the remaining control points in the area by azimuth and distance, and record this data in any way required.

Pages produced by the computer for each control point are bound into books, each covering a specific layout, and given to the survey crew.

Ideally, the layout of a ramp requires a four-man crew; three transit men with 20-second instruments, and a point man. Each man should have a two-way radio, especially where the points are far apart, and traffic noise is heavy. The transits are set up over control points so they can cover the ramp area.

Each transit sights another control point and sets the appropriate azimuth on the vernier. With the bottom plate clamped, each instrument turns to the azimuth designated in the layout book for the point being established. The point man, directed by one transit, paces out the approximate distance from the transit to the point. The second transit then takes over, and a stake is placed at the intersection of these two lines. If the line from the third transit confirms this intersection, the point is good.

It cannot be stressed enough that at least three operations are required to insure accuracy. These can be the intersection of three lines; the intersection of two lines plus a check chainage, where this is possible, from a control point; or the intersection of two lines followed by an instrument setup on the intersection to check the back azimuths to the control points from which the intersecting lines emanated. With three instruments, radios, and well-sited control points, layout is quick and accurate.

Another advantage of the co-ordinate method is that isolated points in the middle of ramps, to which separate structures like sewers are to be referenced, can be laid out independently of the rest of the ramp. This eliminates time-consuming approach layout which probably would be lost before it was required for the ramp construction.

In addition where such isolated points do not have to be laid out with great accuracy, their co-ordinates can be obtained by scaling. This can be dangerous however, and scaling should only be done with great care from large scale plans, which have been spot-checked to insure that they are true to scale.

A big advantage of the co-ordinate method is that errors are not cumulative, provided, of course, that the system of co-ordinated bars is accurate.

Control points for future phases of construction can be located on the plans, assigned co-ordinates, and included on the computer input sheet for processing. When these bars are required, they can be established by intersection from adjacent points. Any layout point can be used as a control point simply by designating it as such on the computer input sheet.

If an interchange has not been designed using the co-ordinate system, it can be adapted for a computer co-ordinate field layout by arbitrarily assigning co-ordinates to a known point that can be located on the ground and related to the alignment on the drawings.

One of the most successful examples of the use of the computer co-ordinate system was on the construction of the intersection at Highway 401 and 400 in Toronto. This is a directional interchange between two controlled access highways, one of 12 lanes, the other, four. De Leuw Cather planned from the first to use the method on this job.

Having used it once, it is easy to become carried away and think that all layout should be done this way. However it is important to examine each case on its merits, and compare the preparatory work and computer time involved against the extra field work and traffic disruption of conventional methods. Fortunately, the decision will seldom be a borderline one.

**HIGHWAY NO. 401 AND 400 INTERCHANGE  
DISTANCE - AZIMUTH CALCULATIONS  
CONTROL POINT 59**

<b>36674.063</b>	<b>27879.049</b>					
<b>North</b>	<b>East</b>	<b>Distance</b>	<b>Azimuth</b>			<b>Identification</b>
<b>This Point Is The Same As The Control Point</b>						
37057.044	27877.412	382.98	359	45	18	37
36977.843	27990.962	323.74	20	13	26	54
36848.010	28057.760	249.39	45	46	26	55
36425.000	27525.000	432.88	234	52	29	69
36453.932	27777.899	242.26	204	40	44	60
36401.788	27864.471	272.66	283	3	53	0011B332
36449.910	27806.957	235.46	197	49	44	0011B333
36536.951	27716.601	212.58	229	50	4	0011B334
36631.173	27634.520	248.26	260	3	6	0011B335
36398.523	27868.600	275.74	182	10	18	19650.00
36414.157	27849.092	261.63	186	34	30	19675.00
36430.129	27829.860	248.84	11	24	3	19700.00
36446.435	27810.910	237.61	196	39	53	19725.00
36463.068	27792.247	228.15	202	21	43	19750.00
36480.025	27773.876	220.71	208	27	31	19775.00
36497.299	27755.805	215.49	214	53	6	19800.00
36514.887	27738.038	212.65	221	32	14	19825.00
36532.782	27720.581	212.30	228	16	54	19850.00
36550.979	27703.438	214.45	234	58	26	19875.00
36569.472	27686.616	219.02	241	28	30	19900.00
36588.256	27670.120	225.86	247	40	19	19925.00
36697.325	27653.953	234.78	253	29	8	19950.00
36626.673	27638.122	245.54	258	52	19	19975.00
36646.294	27622.631	257.92	263	49	9	20000.00

Engineering and Contact Record - April, 1965

**ALBERTA LAND SURVEYORS' GOLF TOURNAMENT**

**Rules of Play and Etiquette**

The Canadian Surveyor, March, 1965 Supplement

1. The tournament shall be played annually, winds weather and work permitting, between two teams of registered Alberta land surveyors representing the North and South Alberta Land Registration Districts respectively; provided that any Red Deer surveyor entering the fray may play on either team but not both.

2. Each team shall consist of six persons, hereinafter euphemistically referred to as "players."

3. Each team shall appoint a captain who shall -

(a) see that the members of his team are reasonably able-bodied and sober, properly equipped with clubs, balls, carts compasses, stoves, tents and such other impedimenta as are deemed necessary, and suitably clad in warm, clean underwear and other outdoor garments;

(b) maintain proper discipline among the members of his team;

(c) settle with the other captain and without resort to fisticuffs, all disputes, differences and points of order that may arise between the teams; provided that if the captains cannot agree the matter shall be decided by the President of the Association or, if the President is a player, by a majority vote at the next annual meeting;

4. (a) Each player may choose his own weapons, but the use of range-finders and theodolites for determining distances and bearings is hereby prohibited and no player whose ball is in the rough shall use any axe, brushhook or bulldozer for clearing line;

(b) The Association shall not invest any of its funds in this affair, but will provide each player with one (1) wooden tee from a stock donated by a generous life member who has given up golf; any such tee that becomes broken in play or a fit of temper shall be mended and used over again and shall be returned in good condition to the Secretary-Treasurer at the tournament.

5. There shall be three matches, each consisting of eighteen holes, between two pairs of players and the senior member of each pair of players shall make true and accurate field notes of his own and his partner's score, keeping in mind his oaths of office and allegiance, the Association's code of ethics, the disciplinary provisions of the Act and his mother's advice about honesty.

6. Opposing players need not be courteous to one another, but abusive or foul language, smiting an opponent with a club or any other unprovoked physical assault may be deemed to be conduct unbecoming a land surveyor.

7. In addition to the team members, other land surveyors and articted students may tag along as caddies, score-checkers or bird-watchers or as participants in comparatively friendly games of their own, and they shall assist in keeping the peace, discovering lost balls, gathering up broken clubs, replacing divots and generally promoting the interests of the profession and the game of golf.

8. The persons referred to in clause 7 shall constitute a reserve force from which substitutes may be drawn to replace official players who become exhausted, injured or lost in the woods.

9. The tournament shall be deemed to have been won by that team -

(a) on which two or three pairs of players have lower scores than their opponents, or

(b) whose total aggregate score is less than that of the other team, or

(c) both,

or, if one team is the winner pursuant to sub-clause (a) and the other team is the winner pursuant to sub-clause (b), the result shall be declared a draw.

10. The result of the tournament shall be published in the next ensuing issue of the A. L. S. News and the Alberta Gazette.

11. No trophies or prizes shall be awarded and no player shall be entitled to any monetary award or pecuniary gain in recognition of his activities, but reasonable bets or wagers are not forbidden and the losing team shall at the nineteenth hole purchase for the winning not more than one round of alcoholic liquor, candy floss or salted peanuts, as the winning team may decide.

12. The tournament shall be followed by a dinner, and all players and others concerned shall then go on home and be of good behaviour until the Xmas holidays.

**THE CHRONICAL OF BILL**  
**Episode VIII: The Inverting Eye-piece**

The summer's operation had got well started and the crew was finishing supper at the end of the first day of observing angles. Barry, the youngest student assistant, broke the silence as the meal reached the cigarettes-and-coffee stage. "I was surprised when I looked through Sam's instrument today and found everything upside down," he said. "I thought inverting eye-pieces were a thing of the past."

"Past and present," said the chief. "Sam has used that old K & E for many years now and has got attached to it. He could have a modern instrument with an erecting eye-piece at any time if he wanted it. But you don't really notice the inversion when you are used to it. In fact, a sudden change to right-side-up images can be a bit disconcerting at first."

"Besides." said Bill thoughtfully, "the upside-down image can lead to interesting situations when there are amateurs around. There was that summer in Nova Scotia, for example."

Barry was still full of his first day's observing and the novelty of the inverted images. "What I don't understand -" he began, but stopped abruptly as a tea spoon smote him sharply on the hand holding his cigarette. "Quiet, Son," said Sam, "or we'll all miss the important events that took place in Nova Scotia. The optics can keep."

We were running a traverse along a country road late one afternoon (said Bill) and were at the forward hub on an unusual long tangent, when things took an interesting turn. There happened to be three of us around the station at the time - Fred, our chief, doing the instrument work himself; Frank, the handsome and likeable young student, front chainman; and myself, rear chain. Fred had given the signal to Sandy, the rear picket man, to move forward. We paused for a moment to light a cigarette, when Frank stepped to the transit for a casual look down the road in Sandy's direction. No sooner had he got lined up and focused than a look of intense interest came over his face, and he proceeded to adjust the focus as minutely as possible. Sensing Fred approaching to pick up the instrument for the move forward, he held up a restraining hand. "Better take a look at this first, Fred," he said.

Fred applied his eye to the eye-piece, and he too showed amused interest in whatever the instrument was focused on and adjusted the focus so as to get the sharpest possible image. Looking down the nearly-half-mile stretch of straight road myself to see what was causing all the interest, I could see that there were, not one, but two figures moving towards us, but the road was bordered on both sides by dense stands of evergreens, and the dark shadows hid most of the details from my unaided eye. Presently, however, Fred moved aside and motioned me to the instrument for a look.

The amusement and interest shown by Fred and Frank were immediately explained, for the telescope showed Sandy making his leisurely way toward us and ahead of him a very curvacious young lady tripping gracefully and lightly in our direction. Sandy, a taciturn soul, was plainly determined to stay behind and enjoy the view rather than catch up and enjoy the conservation.

Turning, reluctantly, from the instrument, I found Fred glancing along the quite short forward course with a calculating air. "Hmm, it should work out about right, with a little judicious manoeuvring," he said, as he loosened the tripod shoes from the ground suction, gently folded the tripod, and laid it over his shoulder for the walk to the next station.

The picket man must have been amazed at the length of time it took Frank and me to chain that short traverse leg, the leisurely manner in which Fred, ordinarily a pretty brisk mover, strolled forward, and the painstaking manner in which he centered and levelled the instrument. But it worked out, even as Fred had said, for the young lady, Frank, and I all arrived at the station just as Fred finished setting up and began to peer through the telescope, ostensibly taking his first shot.

The lady had improved with closer approach, and Frank had taken advantage of several easily arranged opportunities to study the subject while carrying on the chaining. About twenty, medium height, dark hair, round smooth face. friendly smiling blue eyes, a figure that came closer to perfection than is usually given to mortal woman, and a quick and graceful walk that detracted nothing from her other charms. As she came abreast of us she showed every sign of a lively interest in the instrument and the group standing around it, not excluding our handsome young front chainman. Recognizing Frank's obvious qualifications for the honor of establishing lines of communication, Fred and I looked meaningfully at him. Nothing loath, Frank removed his hat and looked directly at his quarry.

"Good afternoon, Miss," he said respectfully. "Would you like to see what we are doing?"

"Oh yes, please," said the lady, with a radiant smile. "You see, I am the teacher in that little school down the road, and I was wondering whether what you are doing might be of interest to some of my older students."

"I am certain it would be," said Frank, "and we'll be glad to tell you what it is all about." And with occasional assistance from Fred and me, and interruptions in the form of very intelligent questions from his fair pupil, he became engrossed in an animated explanation of the traverse as applied to mapping.

This was all very interesting to everyone but it was holding up the work and Fred began to get restless. "Perhaps," he suggested, "the young lady would like to see how things look through the instrument." The lady expressed eagerness to do so, and with considerable close assistance from Frank she presently found Sandy, standing at the rear station waiting for a signal to hold the picket on the hub. "Why," she exclaimed, "he's upside down."

Fred looked at her with a speculative gleam in his eye. "That," he said, "is the way you were when we were watching you walk up the road."

The reaction was instantaneous. The beautiful face turned crimson, and with a dismayed gasp the embarrassed girl made a frantic gesture of smoothing her skirt downward. Without a word of farewell she broke away from the group and continued homeward at the fastest walk she could muster, and as she went she glanced over her shoulder to see whether we were again playing peeping toms. Mercifully, we stood away from the instrument until she disappeared around the near bend.

"Sorry," said Fred to Frank, "but we couldn't hold up any longer, even with such a fair excuse."

"Never mind," said Frank philosophically. "She is sure to be at the dance tomorrow night. She will have realized the true state of affairs by then, and I'll be able to continue the lesson."

He did, too.

There was an amused grin on Sam's face as Bill ended his story, but Barry was looking dubious. "Do you really mean to say," he asked, "that a schoolteacher could be so stupid as to think what that one appeared to think?"

"Sure," said Bill. "She had never looked through a telescope before, and, the feminine mind being what it is, the conclusion she jumped to was a very natural one. And she wasn't the only one. The story seems to have got around and several of the young locals came around hoping for invitations to look through the instrument when we were in an area where young ladies frequently walked by. But we never took any hints. After all, why spoil such a magnificent illusion?"

From The Canadian Surveyor Supplement, March 1965

**A TALE OF A SURVEYOR OR  
RUSTY'S RETIREMENT WING-DING**

After 34 years of loyal and devoted service in the Nova Scotia Department of Lands and Forests, Mr. J. E. R. (Rusty) March retired as Director of Surveys on March 31st, 1965. A large number of friends and associates met on April 10th, and Rusty was the Guest of Honour at a testimonial dinner. The following is an account of the dinner, written as it might have been reported in the press of about two hundred years ago.

"On Saturday last, the 10th instant (April) a brilliant assemblage gathered to do honour to a long-time friend and associate, Mr. John Edgar Ruskin (Corroded) March, who recently retired from the Nova Scotia Department of Lands and Forests. The assembly met at half after six at that well known hostelry, the Citadel Inn Motel, located in its beautiful setting at the northeast corner of the Citadel Glacis. A pleasurable and social hour was spent, renewing old acquaintances and making new ones, while sipping the delightful concoctions so cunningly and cleverly prepared especially for the delectation of the guests. The ladies in their brilliant gowns, the gentlemen caparisoned in the latest London styles, and the air of genteel good humour which pervaded the circular reception room was a delight to the ear and the eye, and pleased the more delicate senses.

Dinner was announced in the most romantic manner by the sudden opening of the door that separated the dining room from the reception room. The astonished guests beheld numerous tables arrayed in spotless white napery, and adorned with gleaming silver and dishes that gave promise of what was to come, while the walls were elegantly decorated with banners and streamers appropriate to the occasion. Many and varied were the exclamations of surprise and delight as the enraptured guests strolled in. As soon as all were in their appointed places, the Guest of Honour was led in, accompanied by a number of distinguished personages and principal citizens. Among these were to be seen The Honourable E. D. Haliburton, Minister of Lands and Forests of the Province of Nova Scotia, and Mrs. Haliburton; Dr. G. W. I. Creighton, the scholarly Deputy Minister of Lands and Forests whose lady, due to a sudden malaise, was unable to be with him; Mr. Samuel G. Gamble the distinguished Director of the Surveys and Mapping Branch, in the Federal Department of Mines and Technical Surveys at Ottawa; Colonel Willis F. Roberts, Vice President of the world renowned Canadian Institute of Surveying, who was accompanied by his lady; Mr. Errol B. Hebb, worthy President of the Association of Provincial Land Surveyors of Nova Scotia, and his helpmeet, Mrs. Hebb; Miss Nina March, of Bridgewater, Nova Scotia, beloved sister of the Guest of Honour, and Mr. George T. Bates. (I'm from Nova Scotia), Chairman of the Local Branch of the Canadian Institute of Surveying, and who functioned as Master of Ceremonies for this most auspicious occasion.

Arriving at their places of honour, the guests stood behind their chairs while the assemblage was officially convened and welcomed, after which Mr. (Corroded) March was requested to deliver his now internationally famous "Grace". Following a protracted period of what sounded like guttural grumbling and grunting, it was discovered that the Guest of Honour had delivered his Grace, which was the Lord's Prayer, in the original tongue of that erstwhile denizen of the forest primeval, the Micmac Indian. Whereupon the entire company was seated and the repast was begun.

All was proceeding well, when suddenly what at first appeared to be a most unseemly interruption occurred. Babbling incoherently, and approaching the Guest of Honour, mayhem seemed imminent as an intruder tore at the neck of the venerable Mr. March, who remonstrated mildly. A number of stalwarts nearest at hand were poised ready to pounce at a propitious moment, when the interloper appeared satisfied with having removed the cravat from the remarkably calm and benign Guest of Honour.



Still muttering incoherently, during which the words "New Brunswick" and "tartan" appeared with somewhat startling clarity, a long reddish concoction was produced and savagely knotted in Windsorian manner around the neck of Mr. March. Watching warily, the Stalwarts were still poised to pounce. Suddenly turning, the alien brusquely ordered the distaff side of the March menage to empty the contents of her pocketbook on the table, with utter and complete disregard and unconcern for any possible embarrassment that compliance with such an order might entail. Mrs. March, with that complete *savoir faire* and gentle graciousness so inherent in her nature, did as requested, whereupon was produced another reddish concoction, not so long as the other, but somewhat short and stubby, and thrust roughly into the trembling hand of the startled recipient, who dangled it daintly, much in the manner that one might dangle a savagely severed sow's ear. Glancing wildly around, the intruder smiled smugly, and with a leer of satisfaction, slouched back to whence he came. As soon as it appeared safe, the chairman reappeared from under the table, and rising to his feet, announced that an alien element was apparent. He exhorted the guests to remember that the alien was presumed also, to be a guest, and therefore entitled to extraordinary latitude in personal, if somewhat peculiar behaviour. They were entreated to regard the entire proceeding with that elegant gentility and delicate decorum for which Nova Scotians were so justly famous. Provincial pride being thus invoked, the guests subsided, the personal safety of the alien was thus secured, and the banquet proceeded.

The main course concluded, a hush fell over the expectant gathering, as the Chairman rose to propose a toast to Her Gracious and Sovereign Majesty, Queen Elizabeth II. In deference to several visitors from the former colonies, now an Independence, a moment of silent prayer was also observed: Whereupon a number of pagans sacrificed previously prepared burnt offerings, and clouds of delicately tinted blue smoke billowed towards the lofty ceiling.

A pale pink parfait, served with a delicious dark brown concoction of cacao as a companion piece, brought the repast to a triumphal gustatory conclusion. A crash of crockery towards the rear of the banquet hall indicated the continued presence of the alien influence, which was, however, ignominiously ignored. The happy guests, replete with satisfaction, breathlessly awaited the onset of the events that were the occasion for the gathering, and the room was charged with a spirit of expectant goodwill.

Again the Chairman rose, and gripping the sturdy banquet board for support, introduced the distinguished personages and principal citizens who graced the head table. Appreciative and prolonged applause burst forth as the last guest was introduced, they being the same as were mentioned previously.

Although the head table was adequate as to height and width, its length was sadly inadequate to accommodate all of the distinguished personages who appeared to pay tribute to the Guest of Honour, and a number of these were prominently seated in front of, and almost adjacent to the head table itself. Cautiously conserving his vocal chords for the long evening ahead, the Chairman craftily called upon Mr. Horace B. Robertson to introduce those prominent persons seated at his table, a request with which he (Mr. Robertson) promptly and graciously complied. Messrs. Stephen and Henry March, brothers of the Guest of Honour, accompanied by their ladies, arose as their names were announced, upon which the Guest of Honour was heard to remark darkly that, quote, "the end of March was certainly not the end of March," a remark which brought forth a ripple of mirth from those in the immediate vicinity. Continuing with his introductions, Mr. Robertson then called upon Mr. A. H. Anderson, Woodlands Manager of the renowned Nova Scotia Pulp Limited, who, accompanied by his lovely lady had journeyed far to attend the occasion. Next was introduced Mr. A. W. McLaughlin, Master Mathematician, and Assistant Director of Surveys, Department of Lands and Mines in that former portion of Nova Scotia, so sadly severed and set apart in

1784, and now struggling under the approbrium of New Brunswick. Lastly but by no means leastly, was presented the lovely lady of Canary Crescent, Mrs. Horace B. Robertson. Yet again, appreciative applause resounded and re-echoed, which was graciously acknowledged by the gentle exercising of the risible faculties of the recipients.

As the accolade slowly subsided, the Chairman rose once more, this time exhorting Mr. S. E. (Al) Daykin, the vigorous Secretary of the Halifax Branch of the Canadian Institute of Surveying, to present the guests gracing his board for the delection of the anxiously awaiting assemblage. In tones that tingled with timbre worthy of a lyric tenor, Mr. Daykin plunged fearlessly into his task, presenting Mr. Richard P. (the well-known Dick) Shaw, immediate past President of the aforementioned world renowned Canadian Institute of Surveying. Next was Colonel George Streb, savant of surveying and Principal of the Nova Scotia Land Survey Institute at Lawrencetown, located near the heart of the beautiful Annapolis Valley in Nova Scotia. He was followed by a distinguished honorary Nova Scotian, Mr. Brenton V. Schofield a Past President of the Massachusetts Association of Land Surveyors and Civil Engineers, who, aided and abetted by three doughty brothers, is earnestly engaged in a militant, though somewhat surreptitious mission, among the miserable but affluent masses of Massachusetts. Accompanying the expatriate to the land of his adoption was the Lady Bea, not to be confused with a notorious character of somewhat similar appellation. Mr. Robert Burgess, doughty Director of Forestry in this fair province, was next to rise, followed by his winsome wife, and to complete the circle, the Madonna of Murray Hill, Mrs. S. E. Daykin. Once again the welkin rang, and the banquet hail resounded to the gladsome sounds of approbation. It needed but a fleeting glance to decry a liberal and generous besprinkling of various and sundry other distinguished and distinctive personages present, who, for this occasion at least, apparently preferred to attend incognito, a most gracious and generous gesture withal so typical of the gentry of the 'Warden of the Honour of the North.'

Rising again reluctantly, as if loath to disturb the prevailing air of good will, the Chairman delivered of himself a mild and modest biographical peroration, in which the Guest of Honour was gently eulogised. At an early point in the peroration it was discovered to the amazement of several present, including the Honourable the Minister of Lands and Forests, that the subject of the biography had been born, and not quarried, an amusing but erroneous belief that long had existed in certain sections of his Department, and one indeed to which he (the Minister) himself had been an unwitting subscriber.

Having set the record straight in this and other matters, and it being increasingly obvious that others were both willing and anxious to enlarge upon that record, the Chairman exhibited amazing tact and diplomacy by inviting first the Honourable Minister of Lands and Forests to address the slightly restive throng. Now was displayed the oratory, the masterful command of the spoken word, pervaded by a common kinship between man and man, that had so successfully wooed and won the confidence of the populace in the hustings. The audience basked in the congratulatory condolences and eulogistic expressions of good will that flowed so easily and effortlessly from the lips of the Minister, as he described his relations with the Guest of Honour, and the esteem in which he was held. Pausing dramatically, he produced and demonstrated a singular mark of distinction in the form of an embossed and framed, long service testimonial parchment certificate, signed and sealed by himself and his Deputy, which he thereupon presented to the Guest of Honour in recognition of his thirty-four years of loyal and devoted service with the Department. Having delivered the certificate, the Honourable gentleman next produced a veritable masterpiece of the silver-smith's art, a wonderfully engraved silver salver, as a token of the personal esteem in which he held his good friend and associate. Visibly affected by the pathos and emotion of the moment, the Minister resumed his seat, leaving the Guest of Honour bereft and alone,

holding the salver, and struggling to regain the calm composure that till now, had been his constant comfort and standby. It was not to be, and trying vainly to swallow the lump that threatened to entirely engulf his tonsillitory area, the Guest of Honour breathed deeply and announced, "All I can say just now, is Thank you!" whereupon he also sat down.

Thinking to restore the meeting to its former feeling of light-hearted fellowship, the Chairman rose and in the emotion of the moment, paused briefly, and then called upon a former associate of the Guest of Honour, the scintillating star of the Secretarial Section, Miss Maxine Bradley, to perform a prearranged function. Responding nobly, Miss Bradley rose and tripped daintly to the rostrum, her arms filled with a large bouquet of red roses. Approaching Mrs. March, she held them out in an appealing gesture, and the assembly witnessed a most touching and delightful demonstration of the art of embracing and osculation.

Precisely at this point, the alien made his third determined attempt to disturb the equanimity of the proceedings. He was evidently equipped with a record of sounds familiar to him in his homeland, as well as a small machine of extraordinary volume (knowing full well the soporific effects of even a short sojourn in this fair land) and suddenly there rose to the rafters the long extinct call of a large wolf pack. Miss Bradley paled, but proceeded pertly to her place, and amid a cacaphony of wolf calls, resumed her seat. The volume faded, and finally died, as the Chairman rose once more.

It was evident that the Deputy Minister, Dr. G. W. I. Creighton, was prepared to usurp the rights of the Chairman, in his obvious anxiety to follow the Minister with his own additions to the record of the Guest of Honour, so with deft dexterity and diplomatic decency, the scholarly Deputy was invited to speak. Rushing to the rostrum, he spoke feelingly of his youth, recalling several boyish escapades in which the Guest of Honour was an unwitting participant, and which involved prohibition, car theft, and one hundred paces (which had nothing at all to do with military manoeuvres). The speaker's imagination ran riot, and although no one present believed for a single moment that such things had actually and really happened, yet the recounting demonstrated a remarkable camaraderie between the scholarly Deputy and the distinguished Guest of Honour. In due course, the Deputy paused, and reaching down, produced a tastefully decorated parcel which he presented to the Guest of Honour on behalf of the staff of his Department. It was later discovered that the parcel contained the ultimate in long and short wave table model radios, with many an accessory designed to assist in the fullest enjoyment of this most fascinating memento of a long and truly beautiful friendship. After thanking his friend with a deep and sincere gratitude, the Guest of Honour hastened to reveal the real truth behind the allegorical remarks of the Deputy, and so the record was put right and the whimsy removed.

By this time, the meeting was in full swing, and the real purpose for which it was convened was well under way. The guests relaxed in the spirit of fellowship that seeped into every nook and cranny of the commodious hall. The Deputy was followed by Mr. Samuel G. Gamble, the distinguished and gentlemanly Director of the Surveys and Mapping Branch, Department of Mines and Technical Surveys. Mr. Gamble recalled a long and pleasant association with the Guest of Honour, an association that extended well beyond the bounds of officialdom, and that continued to grow as the years went by. His admiration and respect for the Guest of Honour knew no bounds, and this was patently apparent as he conveyed the greetings of a host of friends and associates who were most anxious to make the trip from Ottawa in his stead. Mr. Gamble was swiftly followed by Colonel (Willis) Roberts, vice President of the renowned Canadian Institute of Surveying, and Director of Surveys in the New Brunswick section of erstwhile Nova Scotia. Obviously incoherent with emotion, Colonel Roberts managed to convey that he brought greetings from the august Council

of the Institute, and personal good wishes from all of its members, before he sank sickly into his seat. He subsequently made several weak attempts to rise again, but was distraught beyond words, and his obvious agony was alleviated in some degree when the Chairman, watchful master of the situation, called upon Mr. Errol B. Hebb, that stalwart President of the Association of Provincial Land Surveyors of Nova Scotia, who thereupon restored the meeting to its former genteel quality. Mr. Hebb described his own association with the Guest of Honour at some length, after which he was pleased and proud to convey the kindly good wishes of the Association that he had the honour to represent. He closed his remarks by extending the right hand of fellowship to the Guest of Honour, and remarked that his hand was symbolic of the hand of each and every member of the Association, extended ever in friendship to their former President and Council Member.

Subtly sensing a seeming satiation in the audience from the richness of the oratory, the personal testimonials of good will, and the deep emotion thereby evoked, the Chairman produced a goodly sheaf of papers which were, in fact, congratulatory messages and telegrams sent by other friends and associates of the Guest of Honour in high government departments and professional associations, who found it impossible to attend. As a variation from the rich fare of personal praise, next was heard the prosaic prose of the telegram and the written word from such places as Ottawa, Washington, New York, Massachusetts, Stockholm in Sweden, Fredericton, and a host of provincial points and places. Names famous in the surveying profession rolled out in rich profusion, including those of Lilly, Tuttle, Higbee, Refoy, and Konecny. The Guest of Honour was deeply touched by the congratulatory message from far away Sweden, signed simply "Hans". The interlude was well received and much appreciated, and the audience again settled back as Mr. Brenton Schofield readily responded to his name. He mentioned his mission in the hinterlands of Massachusetts, the cooperation of his brothers, and the seemingly impossible task before him. He talked at length on the comfort he derived from the knowledge that Nova Scotia was but a short flight away, and this, coupled with a fact that there were friends of the calibre of (and here he lapsed into the vernacular,) "Rusty", made the load he bore much lighter. As a token of appreciation, he brought a few items of personal jewellery for the Guest of Honour. It must be remarked here that these were not the cheap trade goods commonly used 'on location', but rare and precious gems, a worthy tribute to the esteem in which the venerable March was held.

Next rose Mr. Walter E. Servant, who was the first Chairman of the newly formed Halifax Branch of the Canadian Institute of Surveying, the formation of which the Guest of Honour had played a leading role. Mr. Servant described in detail the nursemaid role played by the Guest of Honour to that puny and puling infant, and ascribed much of the credit to him for the lusty, healthy youth it now enjoyed. A large pyramidal box, metal bound and heavily padlocked, was conveyed to the rostrum by Mr. Servant, and delivered to the Guest of Honour as a token of appreciation from the Halifax Branch.

Colonel George Streb had long been awaiting an opportunity to have his say, and Mr. Servant was barely back to his place before he was on his feet, screaming and clamouring for attention. Graciously he was permitted the floor, upon which he excitedly announced that the Loyal and Ancient Order of the Lawrencetown Hand Level, being met in special session, had been pleased to grant membership in that Order to the Guest of Honour. Colonel Streb thereupon read the citation from a beautifully embossed parchment, creating the distinguished gentleman "Lawrencetown Hand Level Genius First Class (Halifax Division)". Following the citation, which was beautiful in its simple and direct prose, the insignia of the Order was pinned upon the lapel of the recipient. This appeared to be of gold, and was an ornament worthy of Cellini himself, a masterpiece in miniature, the whole of which was not more than six inches in diameter.

After the "pinning on" ceremony, which affected the Guest of Honour visibly, he appeared somewhat bowed under the weight of the honours heaped upon him, and remained bowed for the rest of the evening.

Next rose in praise and blessing Andy Anderson, of the Nova Scotia Pulp Limited. He recounted a long and pleasant association with the Guest of Honour, and again was apparent the personal regard so often expressed before. Concluding his peroration, he advanced to the rostrum and presented a token of the esteem in which the Guest of Honour was held by his Company. Fittingly, this was a product of the forest, being the boles of several native trees laid endwise on a plank, cunningly connected and being surmounted with an ancient botanical sign representing the female bloom, the insignia of the Company. Suitably engraved plates were affixed fore and aft on the plank, and the whole was a fitting desk ornament for the use and delight of the recipient.

The applause was at its height when the mighty Dick (yclept Shaw), supine and slightly somnolent till now, was observed to stir. Rising slowly as the accolade abated, he was the cynosure of every eye in the room as he stood magnificently erect. An expectant hush fell on the assembly as this marvel of masculinity made his way front and centre. There was a dramatic pause, followed by the imperious command, "Bring out the box."

A large carton, much travelled and battered, was conveyed to the rostrum and carefully deposited before the genial and now smiling Mr. Shaw. As he commenced to speak, a hand was seen to approach and enter the carton, whereupon a sharp admonitory slap was administered on a wrist where no sharp admonitory slap had been administered in many a year, together with a word of admonition to the Minister to keep his cotton-picking hand out of there. Smiling broadly to cover his confusion, and blushing profusely, the surprised but repentant Minister readily admitted the offense, offering both as excuse and explanation that he could hardly wait to see what was in the box. Being thus gently chided, he retired to his seat, and Mr. Shaw proceeded.

He related that during his recent travels far and wide, he found that interest in the retirement of the Guest of Honour, and the testimonial dinner, was exceedingly high, and there was widespread regret on the part of many at their inability to attend in person, due to reasons of state and other trivial causes. Mr. Shaw appeared as the representative of many of these, in the dual role of bearer of greetings and good wishes, and as the bearer of gifts, many and varied. These he proceeded forthwith to withdraw from the travelled and battered carton, which proved to be a veritable Cornucopia.

First was the 'Boundary Marker' of the Canadian Institute of Surveying, a symbol of distinction granted but once before by that venerable Institute, and now conferred upon the Guest of Honour. An awesome hush descended as the assembly realized the full import of the solemn and magnificent honour accorded Mr. March as the 'Marker' was placed in his trembling hands. A mighty roar arose, and a standing ovation, the like of which was not seen or heard before, threatened to disrupt the rest of the proceedings. After a decent interval, however, Mr. Shaw allowed his hand to steal once more in the direction of the carton, seeing which the guests once more subsided in anticipation of withdrawal of the hand.

A further honour from the Institute was next displayed. This was the new Certificate of the Institute, recently designed and approved by that august body, a special copy of which had been issued for this occasion, and amended but slightly in order to suit appropriately the circumstances in which it was presented. A similar Certificate was presented also to Mrs. March, and again, the plaudits rose in panegyric acclamation.

Once more, Mr. Shaw allowed the paeans of praise to run a decent course, after which his hand again stole towards the carton. Again, the suspenseful hush descended as the hand slowly reappeared.

A tiny camera, developed and produced primarily for a secret experiment in aerial photography, and now known as Project Duck (Genus *Anas* Airy) was presented to the Guest of Honour as a memento of his great interest in that most important branch of his profession. This was followed by another miniature, a pair of binoculars of extreme power and range, commensurate with their size, in consideration of the spare-time proclivity for bird watching of the patriarchal Mr. March. A companion piece for the binoculars was provided in an aerial photograph of Nova Scotia, unique in that it showed a birds eye view of the province, amazingly clear despite a huge accumulation of cumulus, and marked with directional arrows for the assistance of errant and straying migratory aves rara. As a testimonial of his own regard and esteem for the Guest of Honour, Mr. Shaw next drew forth a magnificent volume, the absolute ultimate in bird books, which included every known bird from the *Acanthus hornemanni* exilipes through to *Zonotrichia querula*.

To complement these several aids to the art and science of Bird-watching, to which the Guest of Honour was addicted in spare moments, next was added a periodical of paramount interest to every red-blooded male present, a veritable storehouse of facts and figures calculated to whet the appetite of the watcher waiting for the 'Birds' to appear.

It was a sublime and beauteous conclusion and as Mr. Shaw made this final presentation, the tears of affection flowed freely down the ruddy cheeks and off the dimpled chin. It was a moment long to be remembered and cherished by all who were in attendance and as Mr. Shaw shook the hand of the Guest of Honour and made his way back to his seat, it was evident on the faces of everyone that this was the way it should be. Approval was again indicated, and the applause continued far into the night.

Sanity was restored when the Chairman announced that Mr. Al Daykin wished to make acknowledgements, and again the tenor timbre was heard, to thank several commercial companies for assistance and donations, including Charles Bruning, Hughes-Owens, Tellurometer, and Wild of Canada, Keuffel and Esser and Atlantic Air Survey, not to mention the splendid cooperation received from the management and staff of the Inn.

Before closing the proceedings, the Chairman announced for the benefit of any late comers that the Guest Book was still available for the signature of those who wished to add their names. He then thanked all who had played a part, however small, in the proceedings, and the meeting was adjourned while the banquet hall was cleared for dancing.

Spontaneously and without pre-arranged, a line was formed, and everyone shook hands with the Guest of Honour, during which further words of personal praise were said and additional gifts conveyed to him. For several days afterwards the right hand of Mr. March was seen to be shaking vertically, so warmly was it pumped on this occasion.

Soon was heard the warm and delightful strains of music from the latest electronic improvement on Mr. Edison's device, and a pleasurable hour was spent in terpsichorean delight. At the conclusion of the fourth country dance, the Sabbath being imminent, the guests took their leave, again expressing their approval and appreciation and congratulations to the Guest of Honour. In passing, it might be noted that many out-of-the province guests expressed a fervent hope that some day, their own groups would learn to conduct such affairs with the same simple, unaffected and quiet elegance that seemed so typical of Nova Scotia, a hope to which we would add, simply, "Here, here! a laudable ambition."

NOTE: The Tale Of A Surveyor or Rusty's Wing Ding was written for Publication in the Nova Scotian Surveyor by George T. Bates, N. S. P. L. S.

## THE SURVEYOR - HIS PROFESSIONAL IMAGE

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By WALTER S. DIX, President, American Congress on Surveying and mapping

ONCE UPON A TIME - before contemporary use of the word "image" came into vogue - "reputation" was the thing. It was the accepted measure of men. Well-known men, manufacturers, institutions - as well as professions - had either good or bad reputations, never mediocre, for if mediocre they were unknown.

Reputation is generally accepted as reality and truth. "Image" seems more vague, because, contrary to the old saying, "seeing is believing," we do not always believe we see - or what we hear - but all too often we are influenced by it. Whether good or bad, however, a reputation may not always be real. Some reputations have been achieved by word-of-mouth, testimonials, or publicity not attested by performance or based on the whole truth. However sincere individuals, institutions, and professions of integrity, strive always to be known by their well attested good reputations.

The good image or good reputation usually takes longer to build than does the bad. This, no doubt, is due to the lack of "gossip value" of good things about people, whereas those conversational tidbits that assassinate character and tarnish escutcheons, seem to travel with the speed of sound to fall upon willing ears.

The idea of getting good public gossip to travel as fast and far as bad public gossip attracted the attention of a few men of enterprise, and from this effort to give scope and momentum to the good about things and people was born our modern advertising and public relations industry, whose own profession is to create the good image for their clients.

In the matter of public relations and creating an image, it is important to be critically aware of the vast difference between commercialism's and professionalism's approaches to public relations.

Commercialism condones self and product laudation.

Professionalism does not condone either self or product laudation.

Professionalism and professionalism's public relations must be quietly and unobtrusively communicated by reflection to the public. A profession's public relations must reflect an image or attitude of service to the public.

A professional surveyor's public image must be based on merit - an image based on reflected character, capability, and reputation. He may not, in the ethical sense, hawk his wares in the advertising-marketing sense. He must rely upon the theory of paths being beaten to the door of the builder of exemplary mouse traps, as it were.

Acting conservatively, with dignity and good taste, a public relations counsel, or a good public relations-advertising man can say and do things for a client that in the bounds of propriety the client might not very well express for himself without embarrassment. In similar good taste, one professional surveyor may praise another professional surveyor, but not himself. He may praise another surveyor's work, whereas he would be in bad taste to praise his own. But, of course, he must not disparage a fellow professional's work or reputation. These points are salient and quite important to good professional and public relations by surveyors who are in effect actually applying public relations with each contact with the public or in view of the public. It is for this reason that the individual professional surveyor must by his manner and decorum, and by his good work, project an image to impress the public on merit alone. That is why careful monitoring of the surveyor's reflected image to the public is so important to him and to the profession as a whole.

The surveyor must even exercise care in selecting suitable dignified media in which to publicize any ethically allowable professional card, lest by careless association his public image and the profession's public image become vulnerable to tarnish.

Those who walk in the public eye are under scrutiny and are being judged at all times, and, where individuals can be identified with a group or profession, the group or profession is also under scrutiny at the same time.

The good professional image does not just happen. Whether it be personal or professional, the image is always created - created by the desire to appear to others in the very best light. There is always a public image. The point to remember is that to gain support and recognition in professional status, you - the profession - as a group must have a good public image. You are seen. You are heard. You are being evaluated constantly in the public eye. To have the best possible image, you must be presenting your best possible self in review.

This is a challenge in itself, calling for constant alertness and striving for good reflection and countering of adverse publicity.

NOW - lest we become too enthused about hiring public relations experts - let me give a word of caution about public relations, other than your own. Since we have touched on the matter of public relations and public relations counseling, let me tell you of the experience of one-well-known statewide civil engineer and surveyor organization:

This professional body retained a public relation counsel and projected a public relations program. The first cast was in the historic vein - in very good taste and subtly attractive to public interest. The second cast was also within the bounds of professional propriety - BUT - by the time the third cast was made, hard on the apparent successes of the first two, the public relations counsel's professional restraint had given way to advertising and over-enthusiasm, and the client's professional ethical decorum had been breached. Immediately the public relations program was abandoned as a more or less embarrassing adventure.

To achieve professional image, as in achieving professional objectives, the surveying profession must have group consciousness or unity. That is why you associate with and why you join your professional surveying group.

You seek common agreement in aims and purposes to further your professional objectives, and you seek implementation by cooperation in such endeavors. You learn about your professional self and your group, and then you tell others about your profession. Each time you do this, you are promoting your professional image - you are promoting your group-conscious image.

In addition to the group consciousness required to achieve good professional image, you also need group conscientiousness. To have group conscientiousness, it is imperative to have more conscientious members in the group than nonconscientious ones - and by a considerable majority.

However, we must not lose individuality. We must not lose our own personal professional image by over indulgence in the group conscious or unit image.

Over protection by a parent, a union, or an association can destroy individual initiative and individual characteristics. Over protection by a professional society or an association can weaken the individual's public image, and, therefore, weaken the group image for obvious reasons. Thus, just to pay dues to an association, on a "Let George do it - or get it done for you" basis, is not enough to create a good public image for the surveying profession. Neither is just repeating in the Madison Avenue public-relations fashion, over and over again, that, as group or as individuals, we recognize ourselves as good.

Individuality would be lost. Individual characteristics would be lost, and the public image would be weakened because instead of many individual reflections for public analysis and selection, a parrot-like slogan, or a mask-like image, would be presented from "this is our image" indoctrination, rather than a true image from which the public could form its own opinion from the "that is how you impress us" viewpoint.

It must be presumed that the images of the surveyor and the surveying profession are not clearly in focus in the eyes of the general public, including the eyes of many other professionals. We must, therefore, continuously attempt to interpret,



and communicate realistically and dramatically to the public, the place of surveying and the surveyor in contemporary society.

### **Molding or Forging an Image**

Molding or forging a professional image is most honorably done when done unconsciously, as when pursuing a humane or patriotic cause, or simply in selfless offering of your professional resources and talents. The reflected spirit of the second mile, or the extra care in a client's behalf, helps create the good professional image.

Bringing exceptional professionals into the public spotlight, and into more frequent contact with other segments of society, will help to build a favorable professional image.

Your image is sensitive to your public relations. Your image is also sensitive to your professional relations. For best relations, be fair in your evaluations and judgements of others. Be aware of your own faults as well as the shortcomings of others. Do not condemn whole groups because of some individuals in them. Also, do not ride to glory on the shoulders of the top few in your own group.

Be professionally aware that all engineers are not incapable of being good surveyors, just because some you may know may not be. Be just as aware that all surveyors are not necessarily good surveyors, just because of a license. Evaluate truth and facts and equate differences, and then improve your public and professional relations. Improved relations will improve your image. If other professionals see you in good image, the public will too.

### **Monitoring the Image**

In creating, and in preserving, your professional and good public image, you must zealously guard against detracting from the image by carelessness in spoken or written words. Especially you must be constantly alert to the proper usage of the words surveyor, surveyman, survey, and surveying. One of the worst surveyor images created in the public or the professional eye, is from careless reference to any surveying group or party as surveyors.

The professional surveyor is obligated in his own best interest in his public image, to monitor zealously against the use of the term surveyor unless the professional surveyor identification is meant.

It is important for a professional image, to be able to identify the professional. It is also important to create a good identifiable technician image. The public should be made cognizant that there are lesser survey aids, and that all personnel on a surveying party are not necessarily surveyors, just because they are out surveying. The public needs to be made aware of the difference between a surveyor and a surveyman.

All too often a surveying party or group engaged in surveying is referred to as surveyors, whereas actually only one or two, or possibly none, may be surveyors. A definite public-image distinction between the surveyor who is the professional; the surveyman who is the technician; and the surveying party's labor aids; is essential to focusing the surveying profession's image clearly in the public eye.

All men in field clothes, with mud on their boots, look alike to the public, and often look alike to other professionals. So, if we carelessly continue to refer loosely to all field personnel as surveyors, the most unqualified member in a party might well be mistaken in the public's eye for a surveyor, which most likely would not enhance any image of the professional surveyor or his profession, but more likely would lessen or weaken the image.

Public education in these salient differences in image reflection is up to each one of you professionals. The correct use of the word surveyor is yours to monitor alertly and zealously to insure your brightest reflected professional image. And in this guardianship, look also into thy own house.

A very important item of public relations, of tremendous impact on the professional surveyor's public image, would be the monitoring - or successfully communicating to the public understanding - of the matter of charging lot owners so-much-each-per-lot-corner-marker as is done by some subdividers. The neighboring lot owners compare notes sooner or later, only to deduce that outside corners are paid for once; adjacent front corners paid for twice; and interior back corners are paid for four times. If you could eavesdrop on such neighborly comparisons, your professional image face might reflect bright and embarrassing red. Good public relations and communication of proper understandings in such contact areas are tremendously important to creating and preserving your good public and professional images.

#### **Image of Maximum Brightness**

It is essential in your best professional interests to project the brightest possible image, so that it can be identified in the multiplicity of other bright images. Just as it is difficult to distinguish traffic stop-and-go lights in the myraid of bright and multicolored neon signs along our streets and highways, so is it difficult for the public, and even for other professionals, to distinguish the images of closely associated walks of life.

To project the identity in maximum brightness of professional image for the surveyor in the myraid of images of the professional engineer, the civil engineer, the architect, and the planner - as well as the title lawyer and the adjudicator - requires a lot of careful focusing.

First, to compare in brightness, we need to assemble our strongest elements - not our weakest. We need to project the image of our foremost professional surveyors, who more often than not are those who are practicing under both surveyor and engineer licenses, and whose work is known from major surveying and subdivision operations rather than from simple lot surveying. This projects an image that fifty years ago the public might well have visualized as an image of a civil engineer. In fact, the image of the surveyor in United States history was pretty much the image of the civil engineer of those days, who surveyed and built the canals, highways, and railroads to open up the West, and who often surveyed and laid out the towns along the way; and who was taught to survey in his university classrooms. There are many today who visualize the surveyor as a civil engineer. In fact, the American Society of Civil Engineers publicity declares land surveying to be intrinsically civil engineering.

A most important public and professional relations job, then, is to project the identifiable image of the land surveyor into focus in the professionally recognized strata of the civil engineer. To do this we must first educate the public and other engineers to recognize that more than one kind of civil engineer exists; that the one whose image has become in the public eye an image of the steel and concrete construction industry, is not the only civil engineer; and that there does still exist the kind who are associated with land use, land planning, and the laying out and location of the works and property lines of man.

There are few of you today, those of you whose practice embraces the design of subdivisions, who are not half-in land use planning already, and in my opinion the image of the future land surveyor should well reflect him fully into land planning and as a part of the over-all planning team.

In the British reflected image of their surveyors, they visualize three professions pre-eminent on the planning team - the professionally recognized planner, architect, and surveyor - to which, to name but five, should be added the geographer, the traffic expert, the engineer, the economist, and the sociologist. The British surveyor takes the position that while not claiming monopoly for town or country planning, neither do they concede monopoly to any other profession.

In such a civil surveyor-engineer-planner maximum image, the future land surveyor's image should be well distinguishable among the facets of other reflections along the way.

### **Professional and Technological Publicity**

In any new and accelerated activity of developing and improving a profession and its technologies, a close communion between professionals and technologists within the field, and with other fields, is necessary. Communication with each other - between professionals, technologists, technicians, and others - is essential. Communication with the layman, the public, the client, the administrators, and governors is also essential. This is not easy.

It takes alertness to timed opportunity, plus effort, for publicity. It takes constant alertness to present the favorable. It requires equal vigilance to monitor and counteract the unfavorable. We must not be boastful, neither must we hide our light under a bushel.

Professional and technological publicity requires wisdom and applied relations via many avenues and media. Some avenues are:

Societies themselves - their meetings, conferences, reports, newsletters, and journals.

Public appearance - via newspapers, magazines, public meetings, public hearings, schools, clubs, television, and radio.

Education - public and professional relations in the public service spirit, advice, counsel, cooperative participation.

University conferences - faculty and student relationship, extension courses, refresher short courses, and summer institutes.

Monitor curriculums - publicize your profession as a career, and recruit potential student interest.

Scholarships and awards.

### **Professional Image**

Some ways to reflect and project the surveyor image are:

Reflecting contributions and associations of past history and heritage, and projecting the place of surveying in the future. Some good reflective images are George Washington, Thomas Jefferson, Abraham Lincoln - all surveyors.

Reflect education and/or respect for education.

Improve technological and philosophical competence by continued study both formal and informal. Seminars, refresher short courses, institutes, extension courses, and in professional association by participation in committee and panel programs in the professional interest.

Recognize and encourage development of highly skilled technicians as key members of the surveying team in support of the professional and the profession.

In employment, offer opportunity and encourage development of the technician to further professional development.

Develop adequate recognition both for professional importance and achievement, for the encouragement of efforts in professional endeavor, and for informing the public of dignified means.

By press releases on meetings, forums, etc., in newspapers, newsletters, journals, etc., create an image of public service. Advise the public in its best interest about professional surveying and the surveyor's service to a client.

Be active in civic participation. Help local civic or historic societies locate, re-determine location, and monument, historic survey markers.

Be forcefully unified in monitoring the position of the profession and its professional interest. Praise where due, protest where due, and suggest where indicated.

Adopt and publicize unified canons of practice and ethics.

Create and preserve for the surveying profession, and for its members, a deserved position of highest esteem for exemplary public service.

### **The Public Image**

Affects and effects from the public view:

The November 22, 1963 tragedy in Dallas, Texas, had several opposite effects on image:

The image of Dallas was blackened, as were the images of the Dallas police department and the FBI.

The image of John F. Kennedy was enhanced and immortalized.

The image of Mrs. Kennedy was to become the public image of feminine stamina and dignity, an image given to the world of womanhood that will live on and on.

In Britain, the Profumo case was harmful to the image of Number 10 Downing Street, and to Prime Minister MacMillan.

In the United States, the images of Capitol Hill and the page boy have been badly tarnished by the Bobby Baker incident.

As this political year rolls on, you will witness "image making" and "image breaking" as candidates and their supporters exhort their virtues in hopes of creating the good image, while the opposition slings the proverbial political mud to smear and deface in the hope of creating the bad image.

It is imperative, therefore, for images to be created strong enough to endure and withstand the shock of adversity. Images can be made and images may be broken. At best, the public image is subject to the whims and fancies of the public.

### **Image sensitivity**

As an example of the sensitivity of the public image and as a reason to have the best foot forward, or to present the best possible appearance, so to speak, take the case of those who take a sociable drink now and then and, as often is the case, perhaps stray a bit over their capacity limits. It is then when people notice, and it means much to have that best foot forward in the public eye. Take these situations:

1. The staggering one, neatly dressed and in respectable surroundings, with a moderately toned voice and Chesterfieldian manners, is said to be "slightly inebriated" or "under the weather."

2. The same fellow in rather raucous voice and devil-may-care attitude is most likely to be evaluated as "a few too many" or "over celebrating."

3. The same chap in the same voice and attitude, but in careless attire, and in a less pretentious "pub" most likely would be rated a "noisy roisterer" or even a "loud-mouth drunk."

4. A similar staggerer, unshaven, unkempt, and in a run down section of town, or in a lesser joint or dive would, without much doubt, be quickly tagged as a "rum bum."

This, my friends, is scrutiny and evaluation in the public's eye. Your bright shining image, so hard to keep polished, is also easily tarnished. For example: Take a family - boys and girls - with highly respected parents and forebears. All may be humanly frivolous up to a point without marring the family crest or escutcheon, but let anyone of them overstep the bounds of propriety, or even teeter on the narrow edge, and wagging tongues will drag the family name down into the mud and mire regardless of previous esteem.

It takes long, and it takes a lot, to build a good image, but just a flash and mighty little to lose it.

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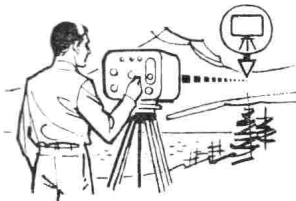
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