LOCUS

Project Report

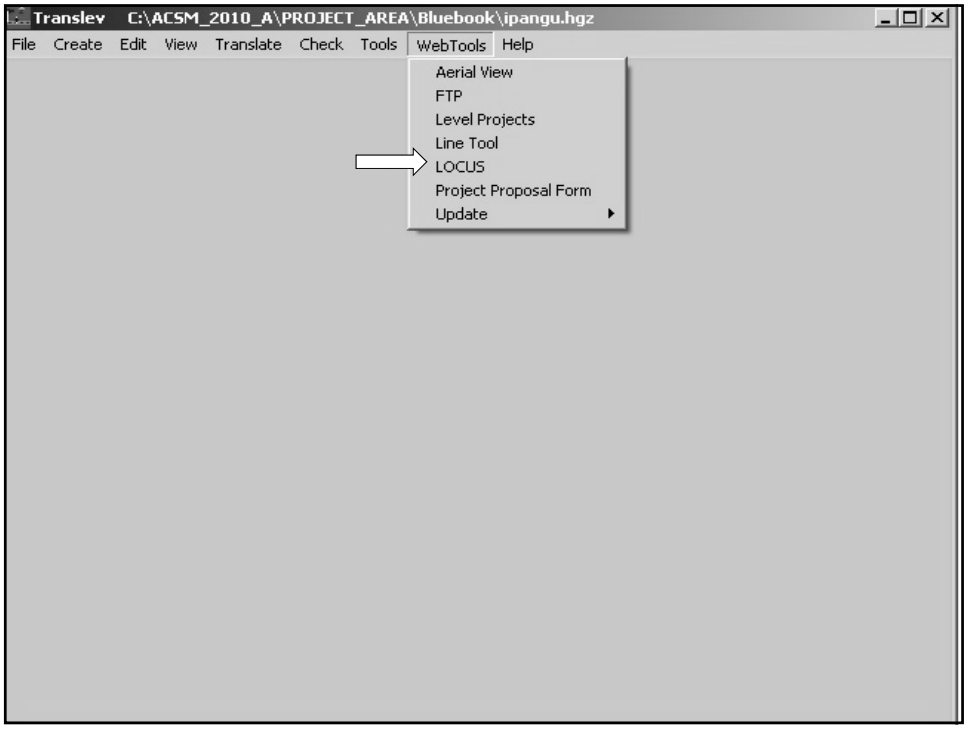
Submission of Project To NGS

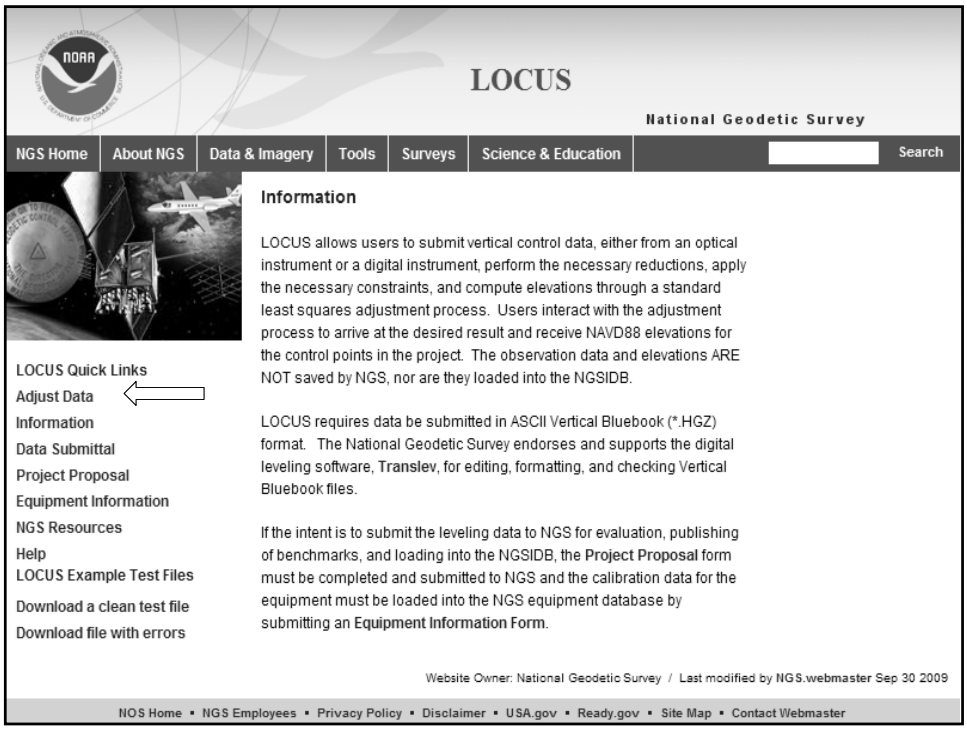
What is LOCUS?

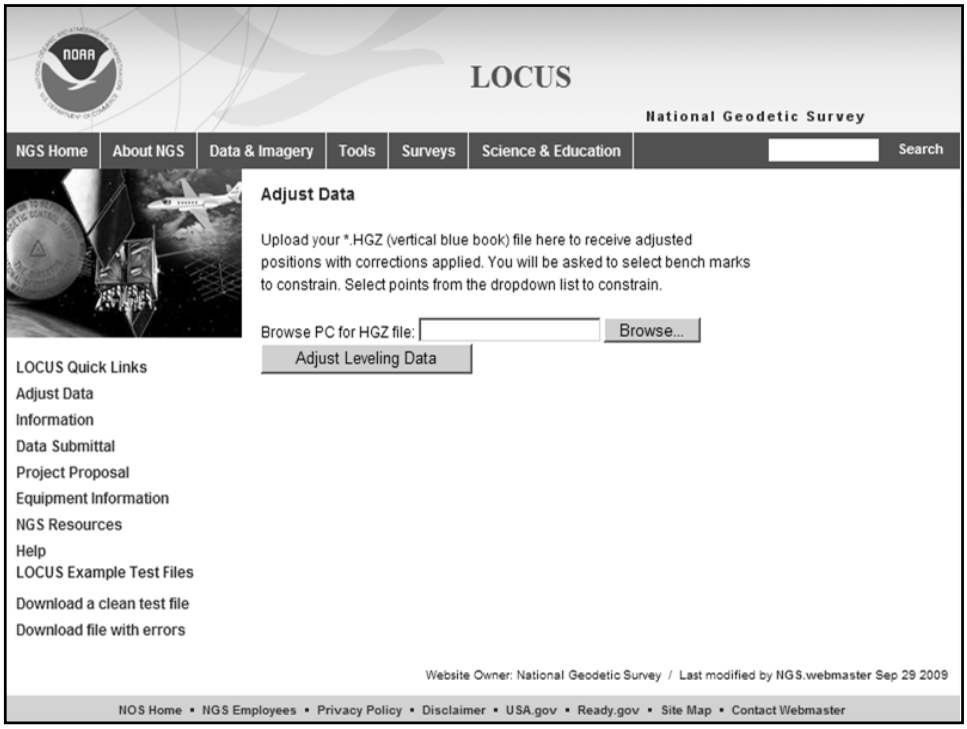
LOCUS (Leveling Online Calculations User Service)

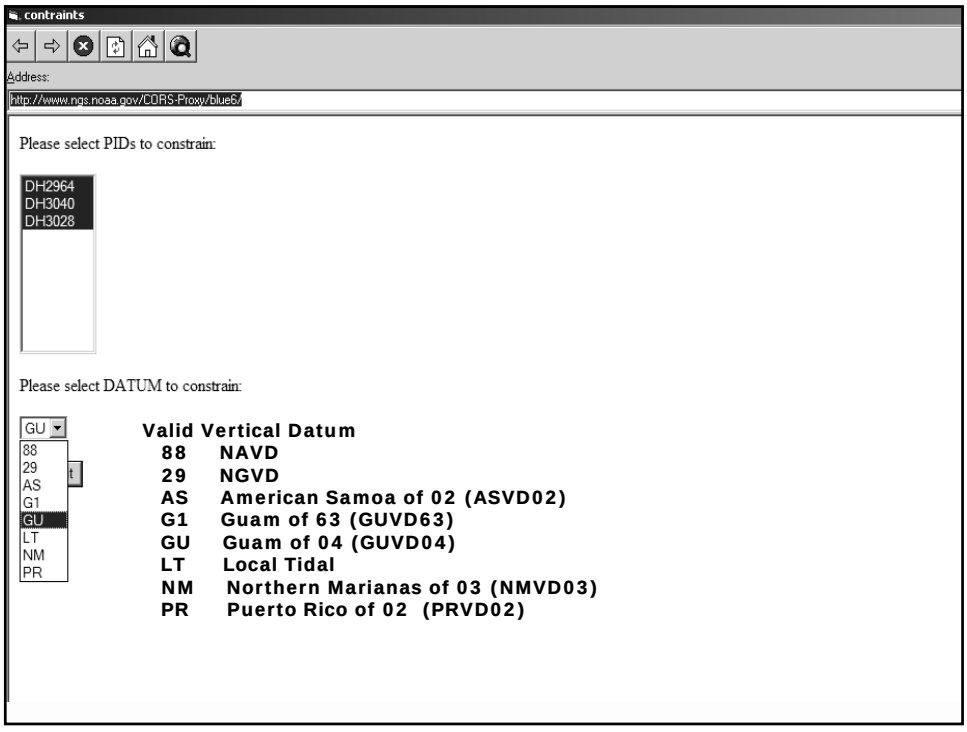
Provides tools for users to submit vertical control data, either from an optical or digital instrument, perform the necessary reductions, apply the needed constraints, and compute elevations through a standard least squares adjustment process.




Translev C:\ACSM_2010_A\PROJECT_AREA\Bluebook\ipangu.hgz
File Create Edit View Translate Check Tools WebTools Help
Aerial View
FTP
Level Projects
Line Tool
LOCUS
Project Proposal Form
Update


LOCUS
National Geodetic Survey
NGS Home
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Data Submittal
Project Proposal
Equipment Information
NGS Resources
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LOCUS Example Test Files
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Information
LOCUS allows users to submit vertical control data, either from an optical instrument or a digital instrument, perform the necessary reductions, apply the necessary constraints, and compute elevations through a standard least squares adjustment process. Users interact with the adjustment process to arrive at the desired result and receive NAVD88 elevations for the control points in the project. The observation data and elevations ARE NOT saved by NGS, nor are they loaded into the NGSIDB.
LOCUS requires data be submitted in ASCII Vertical Bluebook (*.HGZ) format. The National Geodetic Survey endorses and supports the digital leveling software, Translev, for editing, formatting, and checking Vertical Bluebook files.
If the intent is to submit the leveling data to NGS for evaluation, publishing of benchmarks, and loading into the NGSIDB, the Project Proposal form must be completed and submitted to NGS and the calibration data for the equipment must be loaded into the NGS equipment database by submitting an Equipment Information Form.
Website Owner: National Geodetic Survey / Last modified by NGS.webmaster Sep 30 2009
NOS Home ▪ NGS Employees ▪ Privacy Policy ▪ Disclaimer ▪ USA.gov ▪ Ready.gov ▪ Site Map ▪ Contact Webmaster


LOCUS
National Geodetic Survey
NGS Home
About NGS
Data & Imagery
Tools
Surveys
Science & Education
Search
Adjust Data
Upload your *.HGZ (vertical blue book) file here to receive adjusted positions with corrections applied. You will be asked to select bench marks to constrain. Select points from the dropdown list to constrain.
Browse PC for HGZ file:
Browse...
Adjust Leveling Data
LOCUS Quick Links
Adjust Data
Information
Data Submittal
Project Proposal
Equipment Information
NGS Resources
Help
LOCUS Example Test Files
Download a clean test file
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contraints
Address:
http://www.ngs.noaa.gov/CORS-Proxy/blue6/
Please select PIDs to constrain:
DH2964
DH3040
DH3028
Please select DATUM to constrain:
GU
88
29
AS
G1
GU
LT
NM
PR
Valid Vertical Datum
88 NAVD
29 NGVD
AS American Samoa of 02 (ASVD02)
G1 Guam of 63 (GUVD63)
GU Guam of 04 (GUVD04)
LT Local Tidal
NM Northern Marianas of 03 (NMVD03)
PR Puerto Rico of 02 (PRVD02)

If there is no a window popup, click here to save the output zip file.

Click here to run LOCUS again.

The upload file is R6_ipanusace.hgz

The upload file is saved to /tmp/

Below is blue6 and r6run running message

Blue6 output:

R6run output:

Blue6 error message:

R6run error message:.....

Below is asta running message

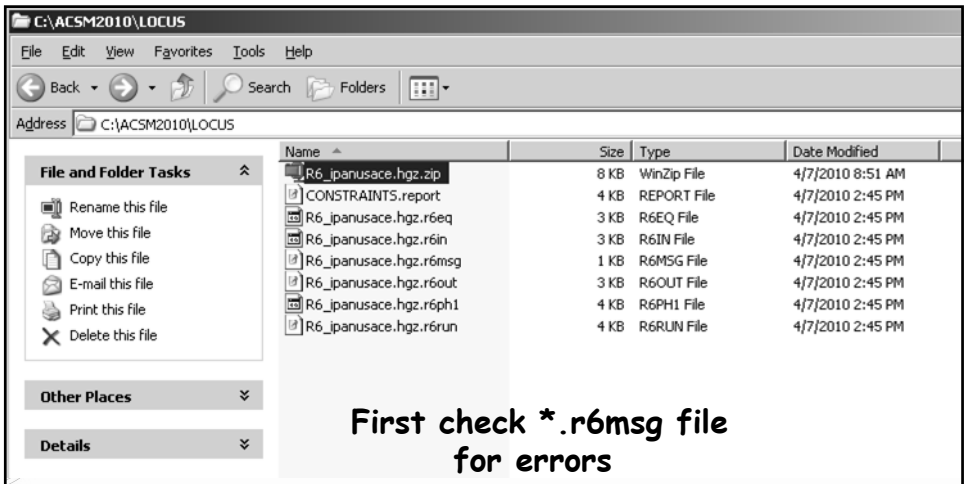
ASTA output:
Wednesday, April 07, 2010 14:45:31 EDT
Command file: /tmp/CONSTRAINTS

Input directory: /tmp/input
Output directory: /tmp/results

Finding BMs ..... done.
Loading BMs ..... done.
Loading sections ..... done.
Organizing normals .... done.
Forming normals ..... done.
Solving normals ..... done.
Computing inverse ..... done.
Loop analysis ..... done.
Writing output ..... done.

updating: R6_ipanusace.hgz.r6in (deflated 67%)
updating: R6_ipanusace.hgz.r6eq (deflated 69%)
updating: R6_ipanusace.hgz.r6msg (deflated 56%)
updating: R6_ipanusace.hgz.r6out (deflated 65%)
updating: R6_ipanusace.hgz.r6ph1 (deflated 73%)
updating: R6_ipanusace.hgz.r6run (deflated 71%)
updating: CONSTRAINTS.report (deflated 73%)





First check *.r6msg file for errors

File Edit View Insert Format Help

```
<reduc6.C ver 6.6>

Input file:  /tmp/R6_ipanusace.hgz.r6in
Output file: /tmp/R6_ipanusace.hgz.r6out


Messages for line L12345

   17:40*20070904243334391   39630847   39630850   140140050      .048K1030
   17:no stadia constant prior to run date
   19:43*20070904010101031030 32.0 31.8     C00   0.027F                                  -57.390
   19:partially computed refraction ignored
   30:40*20070907243334391   39630847   39630850   140140050      .046K0925
   30:no stadia constant prior to run date
   33:40*20070907243334391   39630847   39630850   140140050     -.046K1105
   33:no stadia constant prior to run date
Warnings = 0
Fatal    = 0

End reduc6

real           0.54
user           0.08
sys            0.11
```

```
  Leveling             Run Date:  07 Apr 2010    Time:  14:45            Page 1              20100407 1445
IPAN USACE CLQT - GGN 2455                                               HGZ L12345
                                                                         4.C MN 1st-Order/Class II
JDP/USACE                       04 Sep 2007        07 Sep 2007

Inst/Rods  Obs Diff   Level    Rod      Temp  Mean  Magnet  Refrac   Corr Diff   Dist          YYYYMMDD 40*
    Designation       Corr     Corr     Corr  Temp   Corr    Corr    Mean Diff   Min           From-To


 1/ 1 B   3.63075      -NC-     0.02     0.02  32.3    -NC-    0.03*   3.63082   0.152         20070904   1
 1/ 1 F  -3.63092      -NC-    -0.02    -0.02  31.8    -NC-    0.03*  -3.63093   0.152         20070904   1
CLQT                      -To-> BIRU                                  -3.63087   0.152           101- 1C3

 1/ 1 B  -0.48091      -NC-    -0.00    -0.00  31.9    -NC-   -0.00*  -0.48092   0.040         20070904   1
 1/ 1 F   0.48023      -NC-     0.00     0.00  32.4    -NC-    0.00*   0.48026   0.040         20070904   1
BIRU                      -To-> NUTZ                                   0.48055   0.040           103- 1C4

 1/ 1 B  -8.09485      -NC-    -0.04    -0.04  30.8    -NC-   -0.16*  -8.09510   0.897         20070907   2
 1/ 1 B  -8.08350      -NC-    -0.04    -0.04  32.2    -NC-   -0.25*  -8.08384   0.903 XR      20070904   1
 1/ 1 F   8.09249      -NC-     0.04     0.05  32.4    -NC-    0.13*   8.09273   0.899         20070904   1
NUTZ                      -To-> GGN 2669                               8.09391   0.897           104- 1C2

 1/ 1 B  -0.09915      -NC-    -0.00    -0.00  30.0    -NC-   -0.06*  -0.09921   0.663         20070907   3
 1/ 1 F   0.09897      -NC-     0.00     0.00  30.4    -NC-    0.01*   0.09895   0.665         20070907   3
GGN 2669                  -To-> GGN 2455                               0.09910   0.663           102- 1C5


  Leveling             Run Date:  07 Apr 2010    Time:  14:45            Page  2             20100407 1445
IPAN USACE CLQT - GGN 2455                                               HGZ L12345
                                                                         4.C MN 1st-Order/Class II
JDP/USACE                       04 Sep 2007        07 Sep 2007

Flag Definitions

*      correction taken from 43* record

-NC-   correction not computed/applied

CCL    collimation correction exceeds 0.30 mm

DST    running distances differ by more than 0.05 km

MAG    magnetic correction exceeds 2.00 mm
```

```
Adjustment Report  Wednesday, April 07, 2010  14:45:31 EDT

Input directory:  /tmp/input
Output directory: /tmp/results
Command file:     /tmp/CONSTRAINTS


================================================================================

Command file contents:

   1:dir     input
   2:outdir  results
   3:
   4:File  R6_ipanusace.hgz.r6out
   5:
   6:Datum GU
   7:
   8:CONSTRAIN PID DH2964      7.425  0.01
   9:CONSTRAIN PID DH3040  12.36546   0.01
  10:CONSTRAIN PID DH3028  12.46452   0.01
  11:
  12:Group On
  13:Loop  On
  14:Flag  Tau  0.05
  15:Flag  Norm 2.50
  16:Flag  V    5.00

================================================================================
L12345            - gravity value(s) missing!
================================================================================
```

```
Command file contents:

   1:dir     input
   2:outdir  results
   3:
   4:File  R6_ipanusace.hgz.r6out
   5:
   6:Datum GU
   7:
   8:CONSTRAIN PID DH2964      7.425  0.01
   9:CONSTRAIN PID DH3040  12.36546   0.01
  10:CONSTRAIN PID DH3028  12.46452   0.01
  11:
  12:Group On
  13:Loop  On
  14:Flag  Tau  0.05
  15:Flag  Norm 2.50
  16:Flag  V    5.00

================================================================================
L12345            - gravity value(s) missing!
================================================================================

Variance      =       8.69
v'pv          =      17.37
Critical tau  =       1.41
Deg freedom   =       2
Observations  =       4
Rejections    =       0
Constraints   =       3
BMs dropped   =       0
BMs floated   =       0
Unknowns      =       5
Singularities =       0

================================================================================


Benchmark Group Analysis

Benchmarks are in 1 group
```

Adjusted Geopotential Numbers/Elevations by Line

Line/Part: L12345 SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark ID	SSN	PID	Designation	Geopotential	Elevation	Codes
0	0101*	DH2964	CLQT	7.27650	7.42500	
1	0103		BIRU	3.71784	3.79371	
2	0104		NUTZ	4.18854	4.27402	
3	0102*	DH3040	GGN 2669	12.11816	12.36546	
4	0105*	DH3028	GGN 2455	12.21524	12.46452	

Sections in input order

SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark IDs from	to	Line/Part	from SSN	to SSN	Runs	km	Year	OC	Geopotential Difference	Sigma Prior	Sigma Post	Residual Stats V	Norm	Tau	Flags
0	1	L12345	101*	103	2	0.15	2007	12	-3.55826	0.3	0.3	-0.41	-1.55	-7.66*	+ + +T+ +
1	2	L12345	103	104	2	0.04	2007	12	0.47097	0.2	0.2	-0.27	-1.25	-9.57*	+ + +T+ +
2	3	L12345	104	102*	2	0.90	2007	12	7.93204	0.7	0.3	-2.42	-3.76*	-2.40*	+ +N+T+ +
3	4	L12345	102*	105*	2	0.66	2007	12	0.09712	0.6	0.0	-0.04	-0.07	-0.03	

Sections with multiple levelings

SSN+: mark floated, SSN*: mark constrained, SSN#: mark floated & constrained

Mark IDs from	to	Line/Part	from SSN	to SSN	Runs	km	Year	OC	Geopotential Difference	Sigma Prior	Sigma Post	Residual Stats V	Norm	Tau	Flags

Flag	Count
Residual	0
Normalized Residual	1
Tau	3

Who to Contact About LOCUS

If you have any questions or problems, please contact:

Ajit Singh at (301) 713-3182 x109 or
Frank Mowry (301) 713-3260 x157

Mail: National Geodetic Survey,
N/NGS12
1315 East West Highway
Silver Spring, MD 20910

Project Report



U. S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
National Geodetic Survey

Middleton, Idaho, Bench Mark Resets, 2003
Second Order, Class I Digital Levels

L26572

Project Report

Horizontal Datum:	NAD 83 (1999)
Vertical Datum:	NAVD 88
State:	Idaho
Survey Type:	Second Order, Class I Digital Levels
Locality:	Middleton, Canyon County, Idaho
Dates of Mark Setting:	March 3 through March 7, 2003
Dates of Observations:	March 27 through March 30, 2003
Dates of Computation:	April 15 through April 10, 2003
Project Advisor:	Curtis L. Smith, NGS
Project Observers:	Idaho Transportation Department
Computed by:	Curtis L. Smith, NGS

Sample Project Report Title Page

B. Scope

1. Purpose. State the purpose of the survey and the extent to which the requirements were satisfied.

2. Specifications. State the specifications which were followed and the methods used.

3. Monumentation. Describe the monumentation that was established and recovered.

4. Instrumentation. Describe the equipment, including a list of instruments, rods (including calibration information), and recording equipment. Include model and serial numbers of all equipment and the dates they were in use. Note the reasons for return of equipment for repairs or adjustment.

For rod calibrations, cite which previously submitted calibration data are to be used to process the project. If none was submitted previously, include such calibration data with the leveling data submitted with this report.

NOAA's National Geodetic Survey Positioning America for the Future www.ngs.noaa.gov

C. Comments (THE MOST IMPORTANT SECTION OF THE REPORT)

1. Reconnaissance. If a reconnaissance plan was submitted and approved by NGS prior to beginning the field measurements, describe any changes from the original reconnaissance and the reasons for the changes.

2. Specifications. Describe any deviations from the specifications used and the reason for such deviations.

3. Routes. Briefly describe each line, including line number or other identification, topography and climate, features of the routing such as control point spacing and frequency of connections, unusual points leveled, unusual procedures, river or valley crossings, and ties established.

4. Problems. Describe all problems encountered, such as: moved or "suspect" marks, systematic new-minus-old comparisons, poor ground or atmospheric conditions, etc.

5. Recommendations. Mention specific sections that required additional work as a result of preliminary analysis. Describe areas which may require additional leveling in the future.

D. Statistics

1. Closures. List loop closures for all loops of concurrent surveys. State the accumulated forward-backward difference for each line.

2. Check-measurements. Compute and list new-minus-old tabulations for all releveling of previously leveled lines. Also, list the average and maximum disagreements.

3. Progress. (Needed only if submitting organization is supported by NGS funding and/or equipment). Total progress along lines, double-run progress, single-run progress, total distance leveled, distance leveled as reruns, and number of sections.

4. Reruns. For all sections that were releveled for any reason other than those exceeding the tolerance limit, list the sections and the reasons for releveling.

E. Status

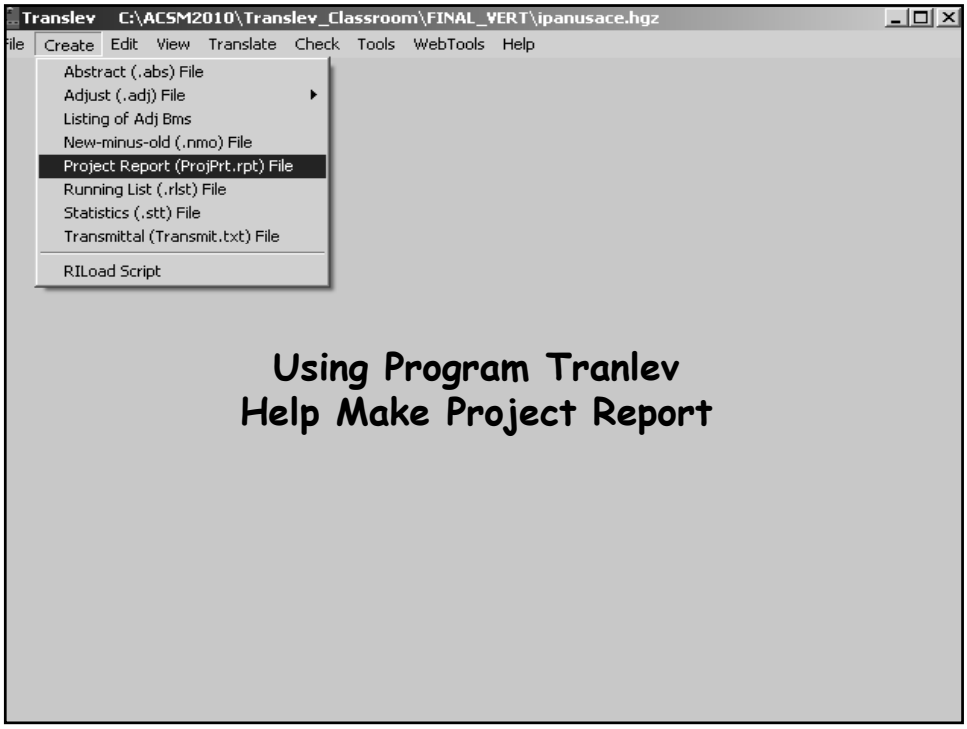
1. Records. Describe the current status and future disposition of the station and observation records. If submitted to NGS, they will be archived in a Federal records center.

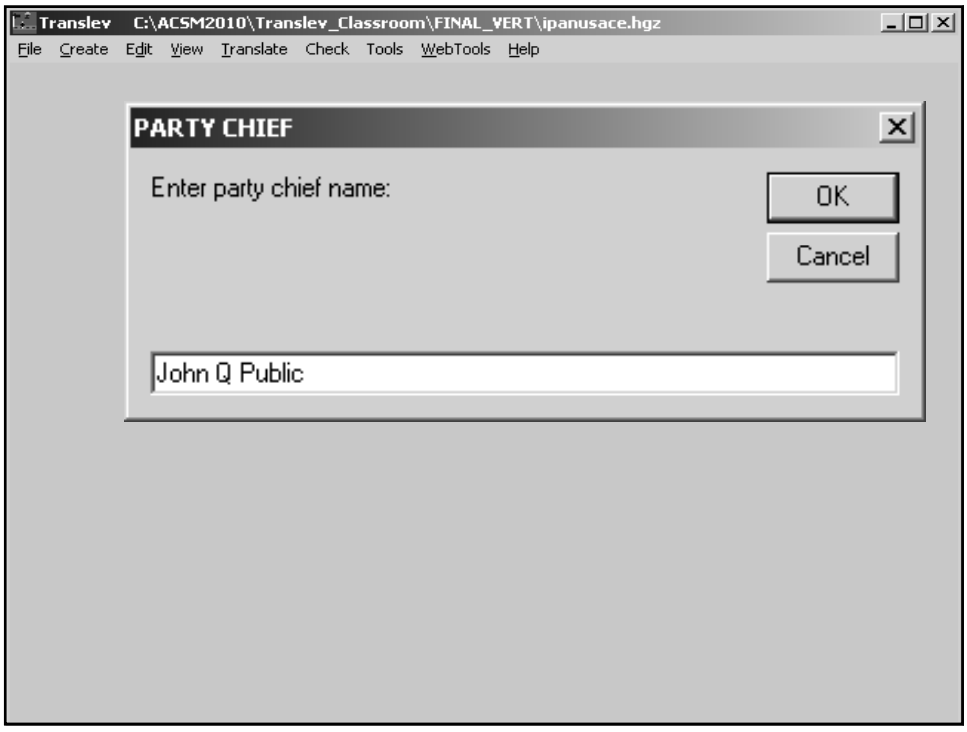
2. Contact. Provide the name and telephone number of a person to contact regarding questions which may arise during NGS processing of the data.

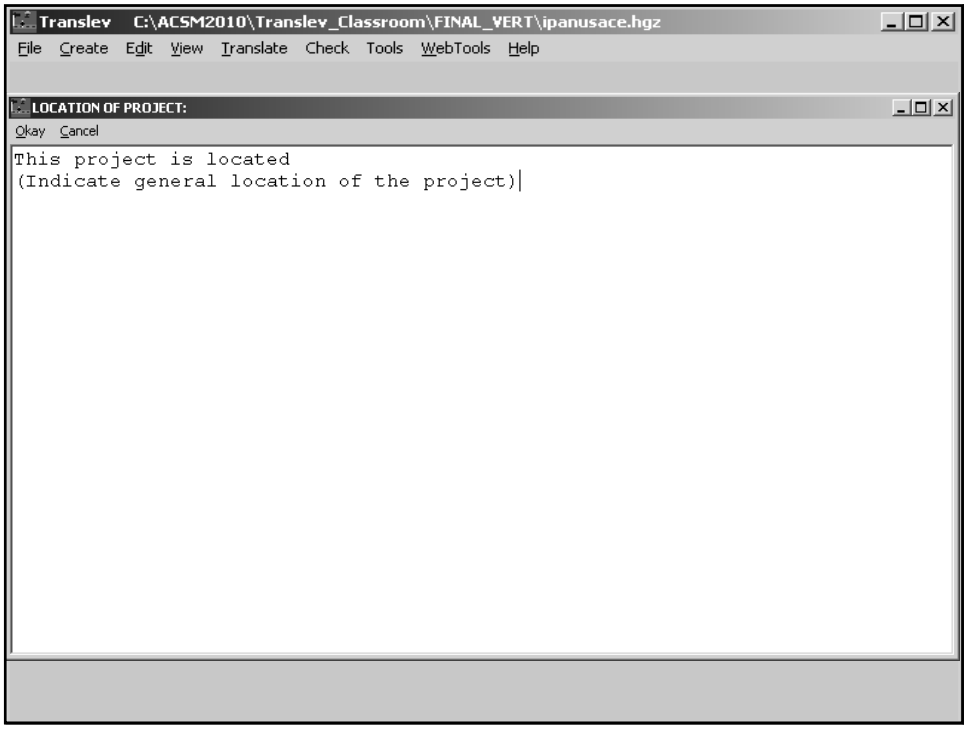
III. Attachments to the report. Include as an attachment to the report a simple sketch of the project area showing completed lines, junctions, and loops. A section of the State Index Map of Control Leveling is sufficient with progress marked and lines clearly labeled. Also, attach copies of sketches showing loop closure computations.

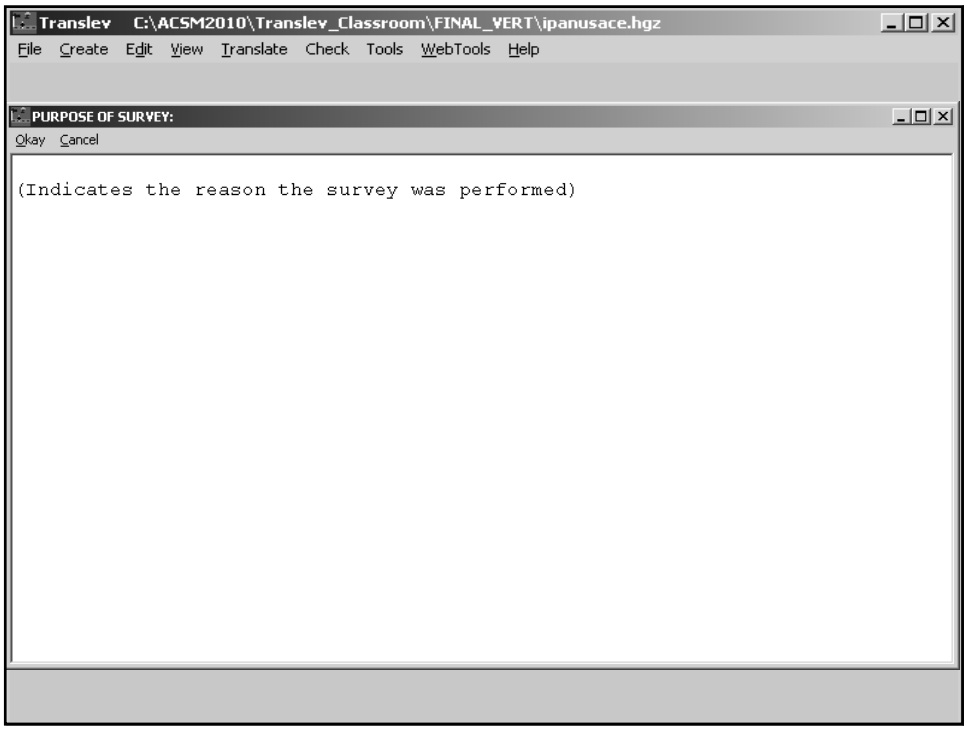
Suggested Attachments:

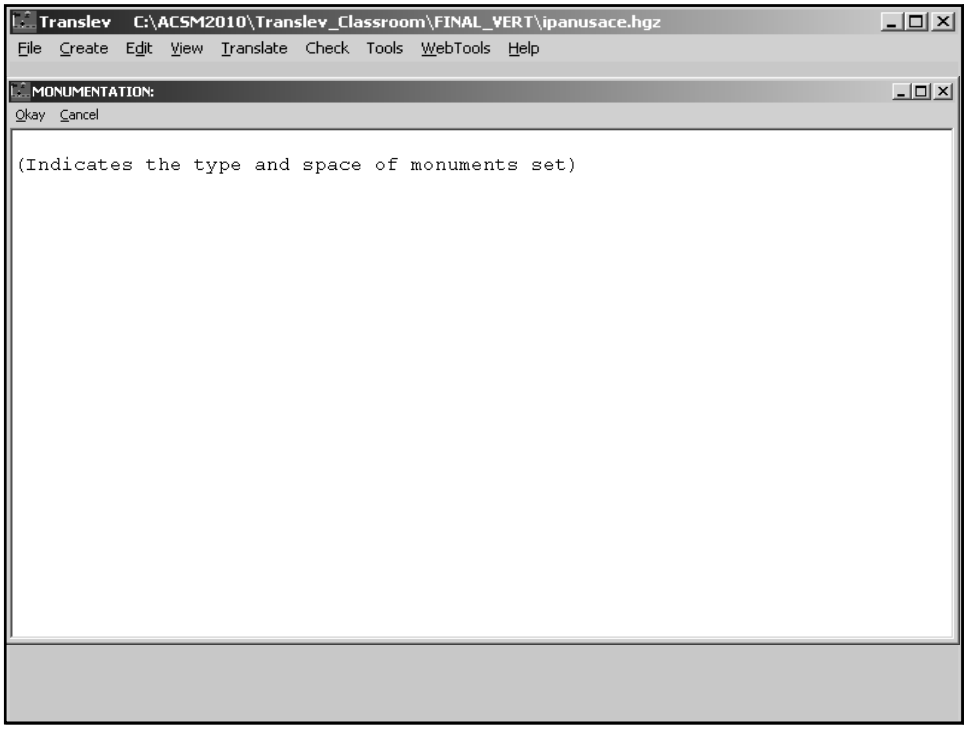
- **A. Project Map**
- **B. Station List**
- **C. New Minus Old Computations**
- **D. Equipment Calibration Reports**
- **E. Backup Recording Sheets**

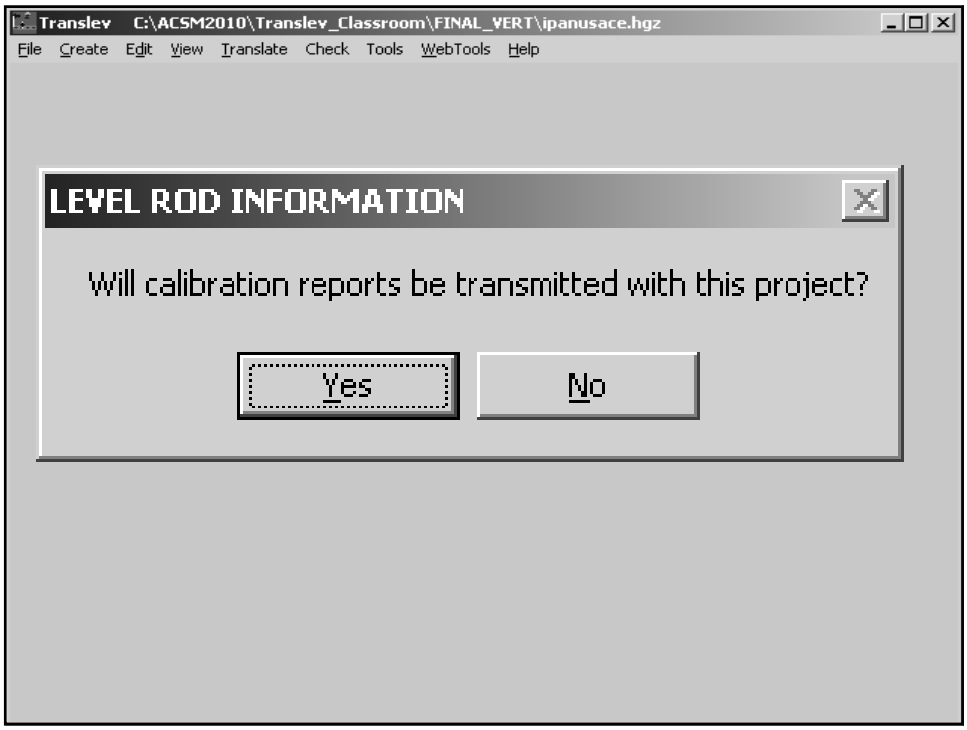

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
Abstract (.abs) File
Adjust (.adj) File
Listing of Adj Bms
New-minus-old (.nmo) File
Project Report (ProjPrt.rpt) File
Running List (.rlst) File
Statistics (.stt) File
Transmittal (Transmit.txt) File
RILoad Script
Using Program Tranlev
Help Make Project Report

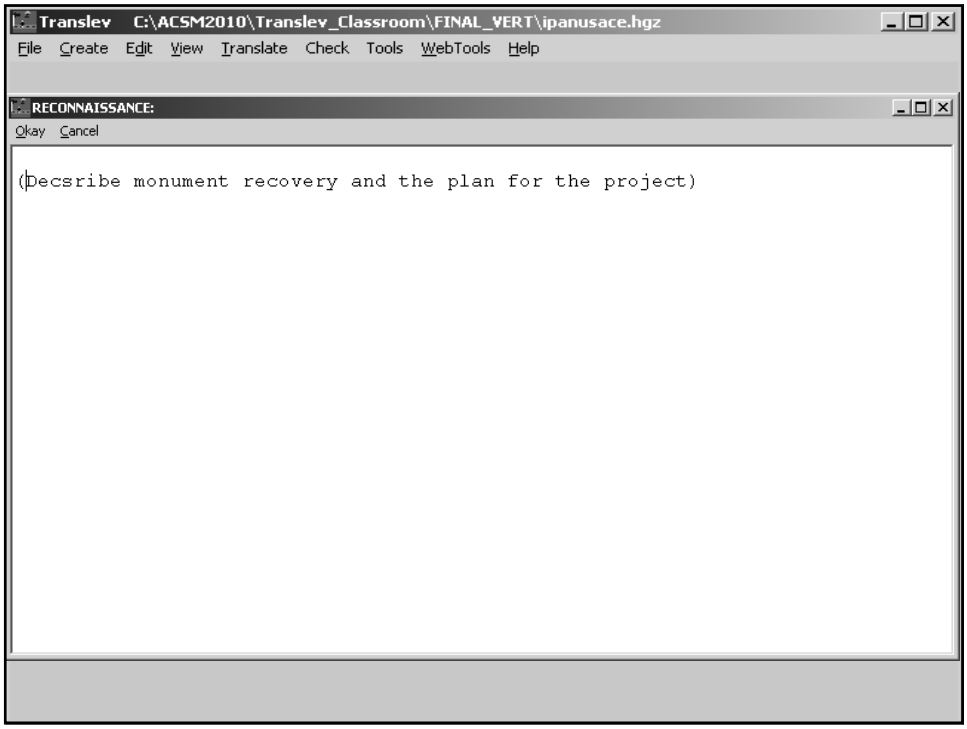

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
PARTY CHIEF
Enter party chief name:
OK
Cancel
John Q Public

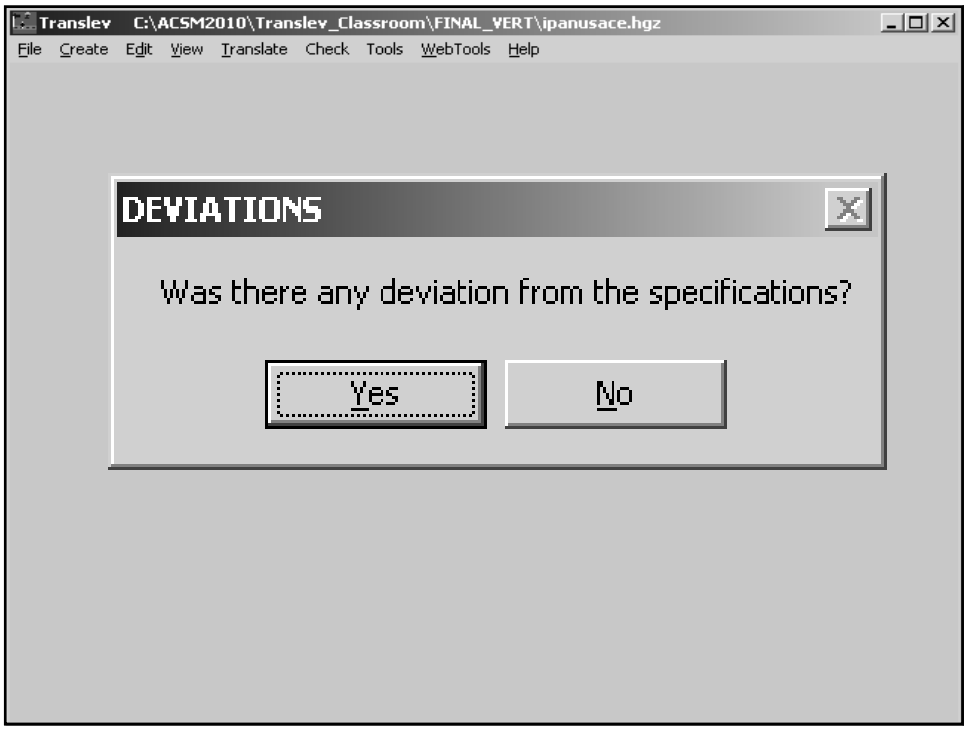

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
LOCATION OF PROJECT:
Okay Cancel
This project is located
(Indicate general location of the project)

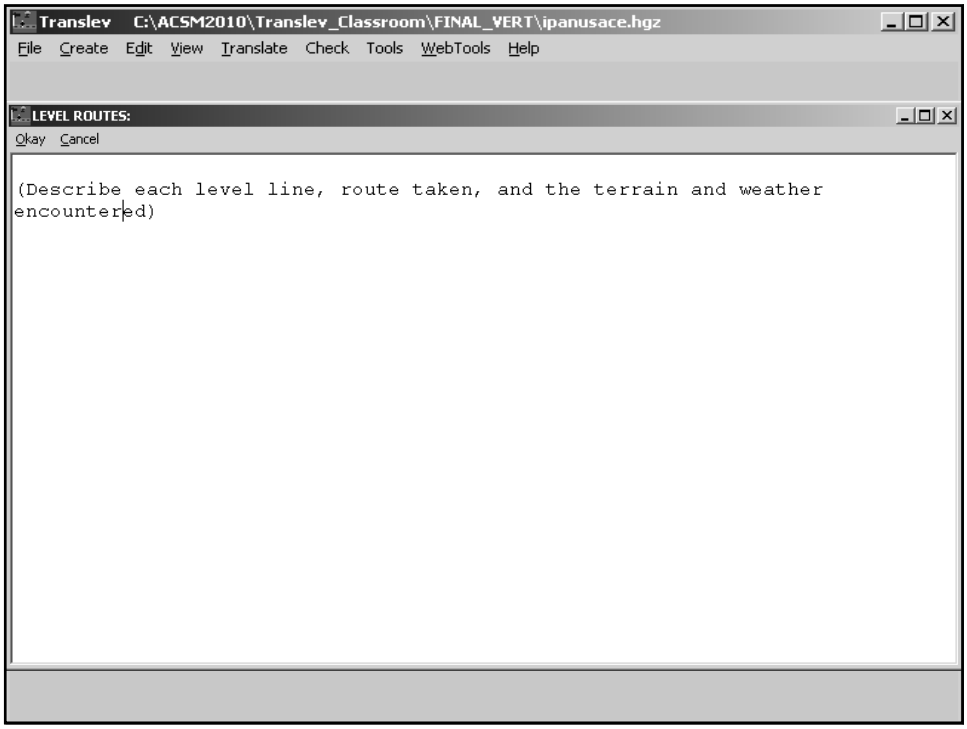

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
PURPOSE OF SURVEY:
Okay Cancel
(Indicates the reason the survey was performed)

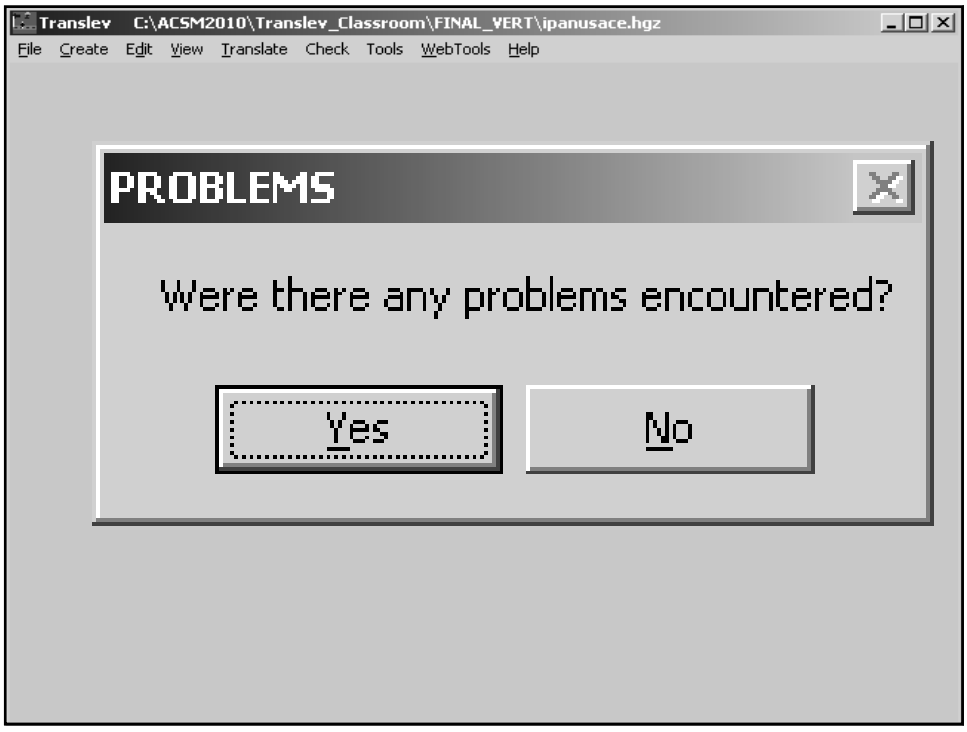

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
MONUMENTATION:
Okay Cancel
(Indicates the type and space of monuments set)

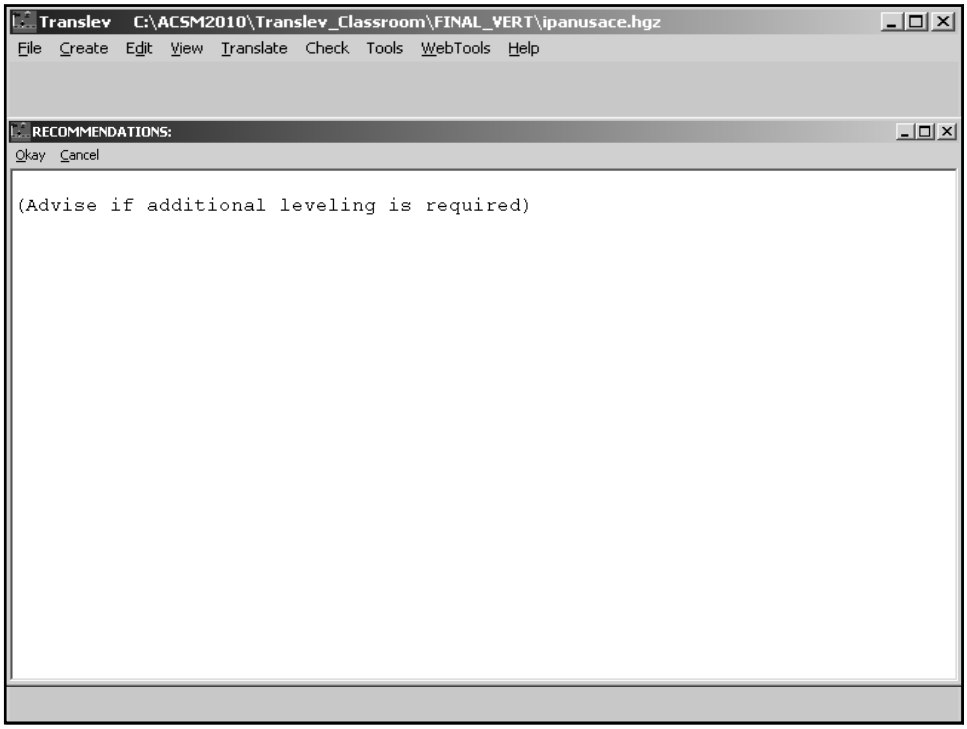

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
LEVEL ROD INFORMATION
Will calibration reports be transmitted with this project?
Yes
No

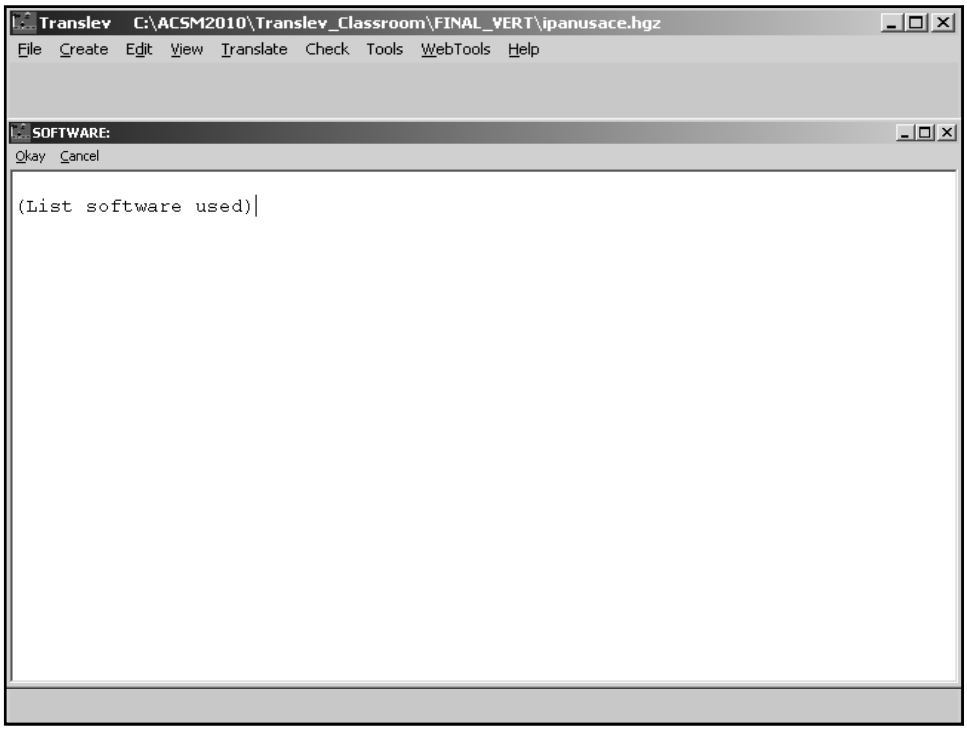

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
RECONNAISSANCE:
Okay Cancel
(Decsribe monument recovery and the plan for the project)

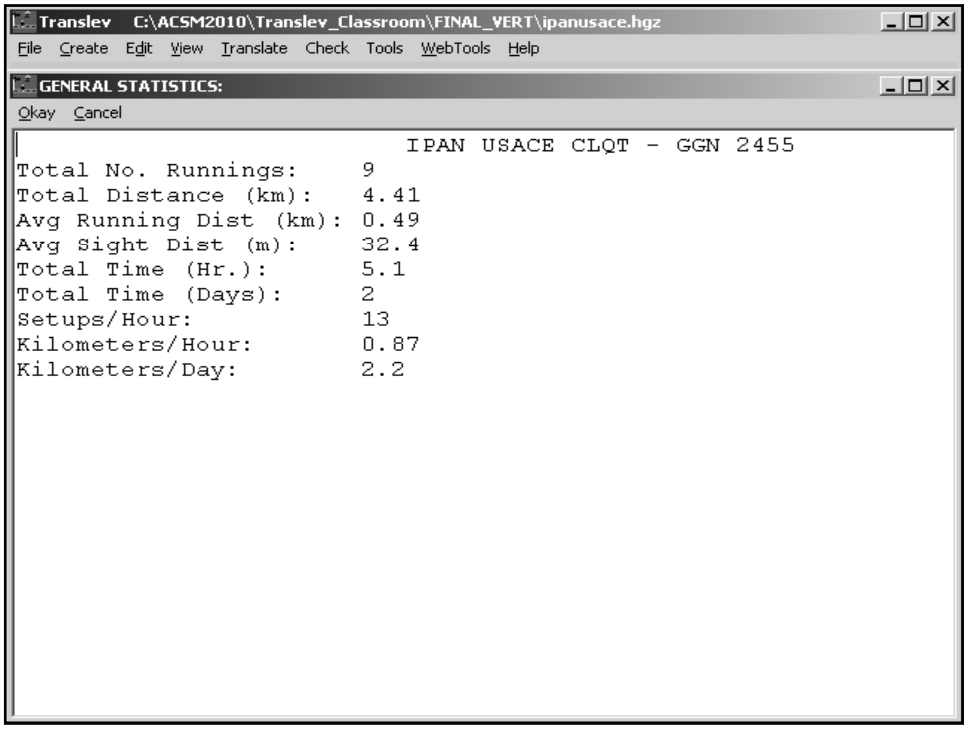

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
DEVIATIONS
Was there any deviation from the specifications?
Yes
No

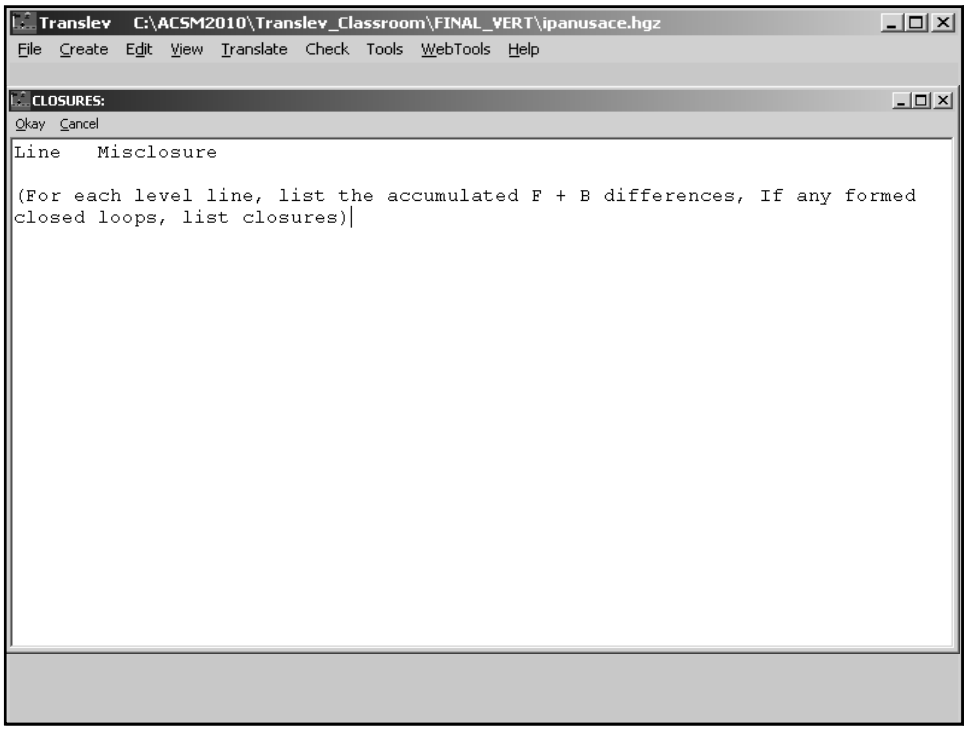

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
LEVEL ROUTES:
Okay Cancel
(Describe each level line, route taken, and the terrain and weather encountered)

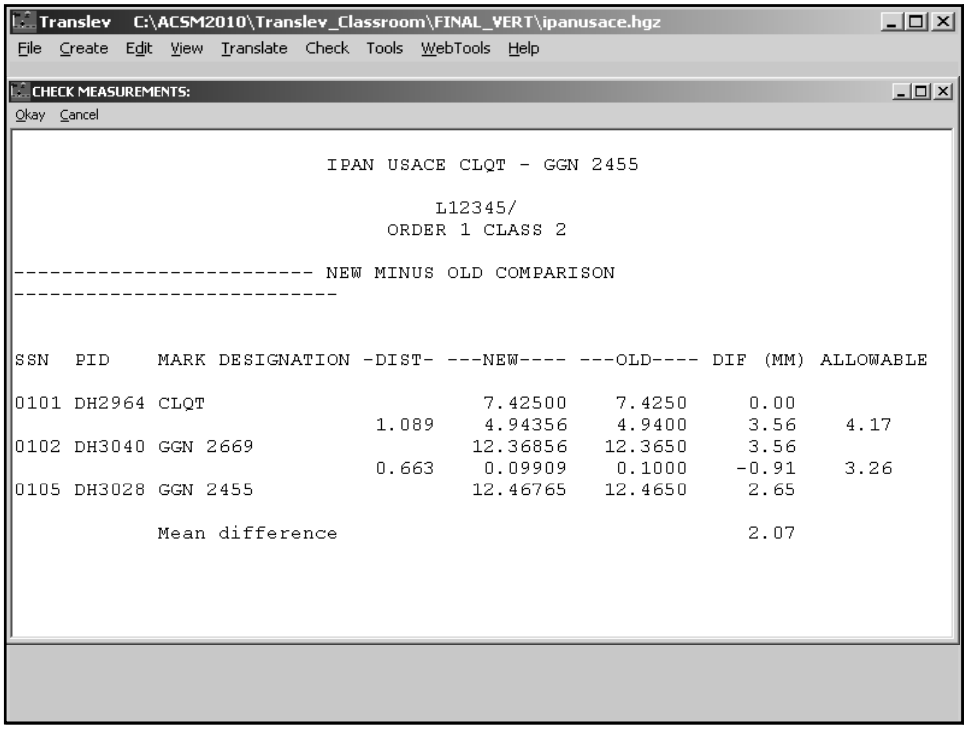

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
PROBLEMS
Were there any problems encountered?
Yes
No

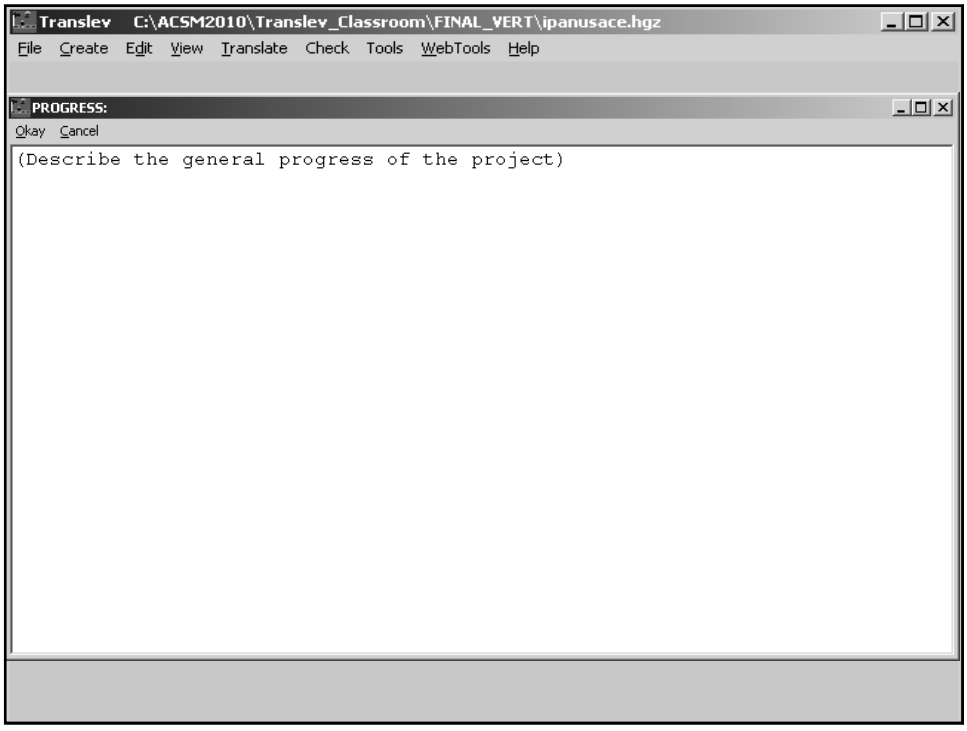

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
RECOMMENDATIONS:
Okay Cancel
(Advise if additional leveling is required)

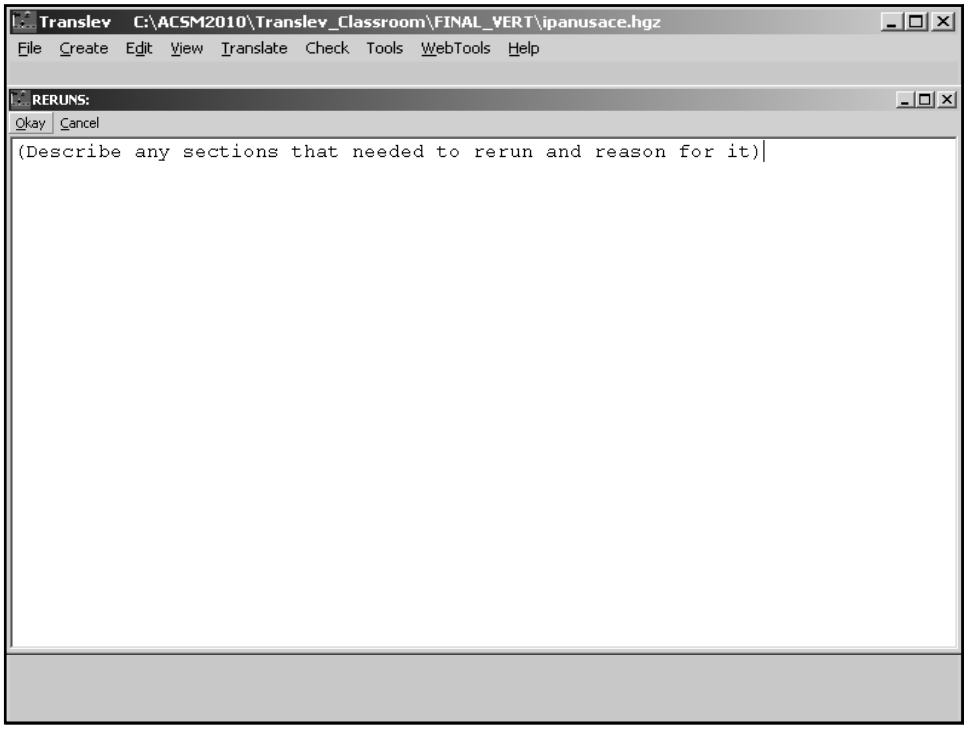

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
SOFTWARE:
Okay Cancel
(List software used)

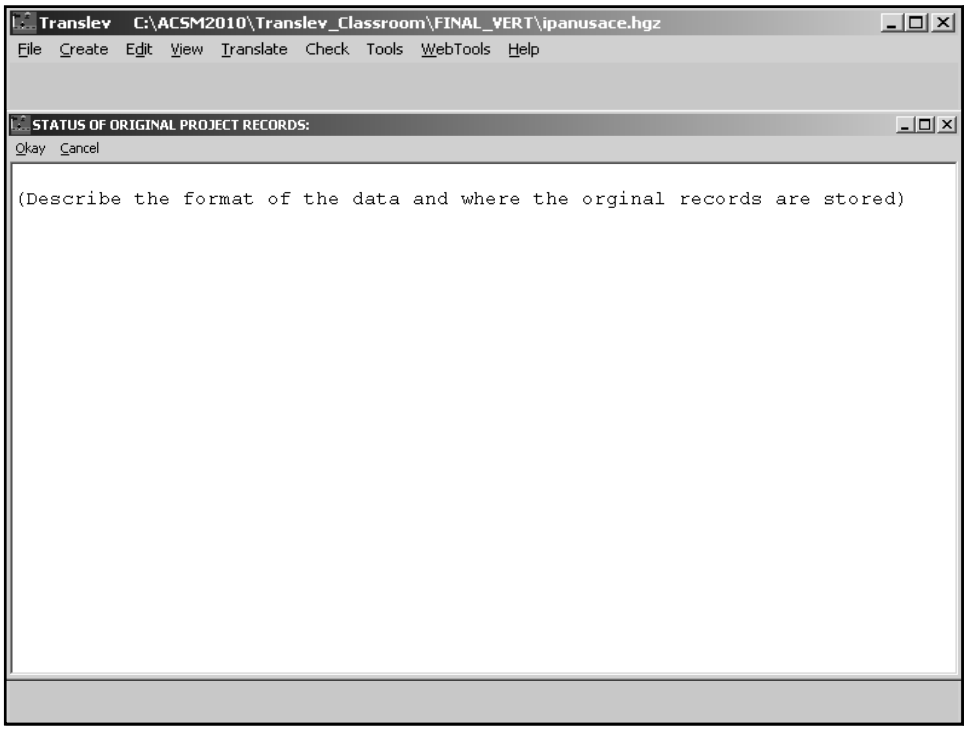

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
GENERAL STATISTICS:
Okay Cancel
IPAN USACE CLQT - GGN 2455
Total No. Runnings: 9
Total Distance (km): 4.41
Avg Running Dist (km): 0.49
Avg Sight Dist (m): 32.4
Total Time (Hr.): 5.1
Total Time (Days): 2
Setups/Hour: 13
Kilometers/Hour: 0.87
Kilometers/Day: 2.2

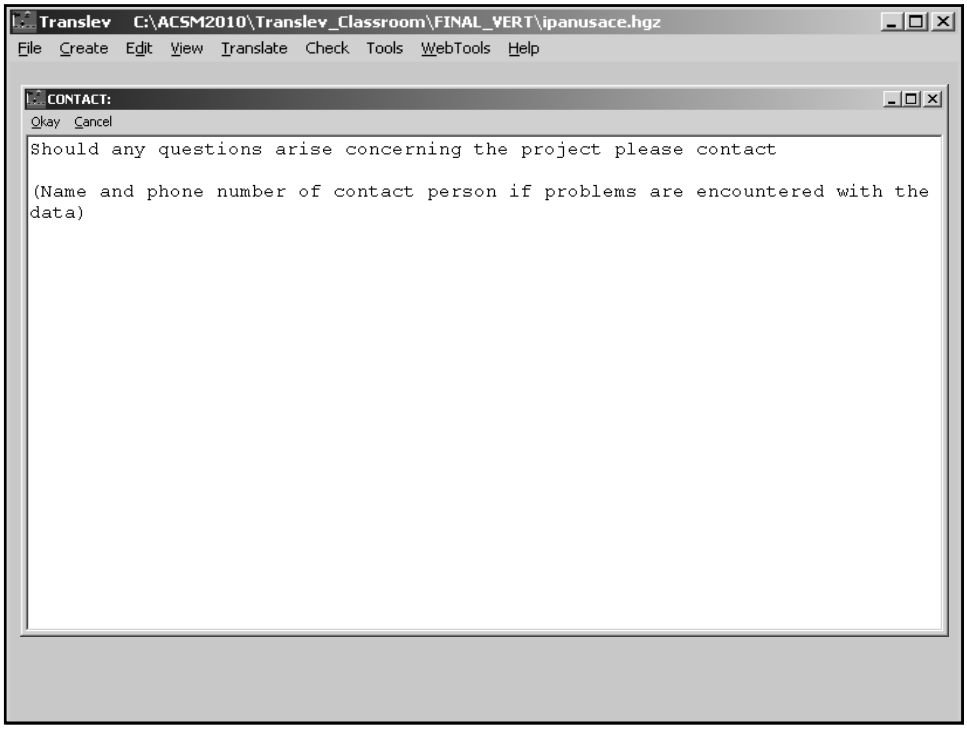

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
CLOSURES:
Okay Cancel
Line Misclosure
(For each level line, list the accumulated F + B differences, If any formed closed loops, list closures)

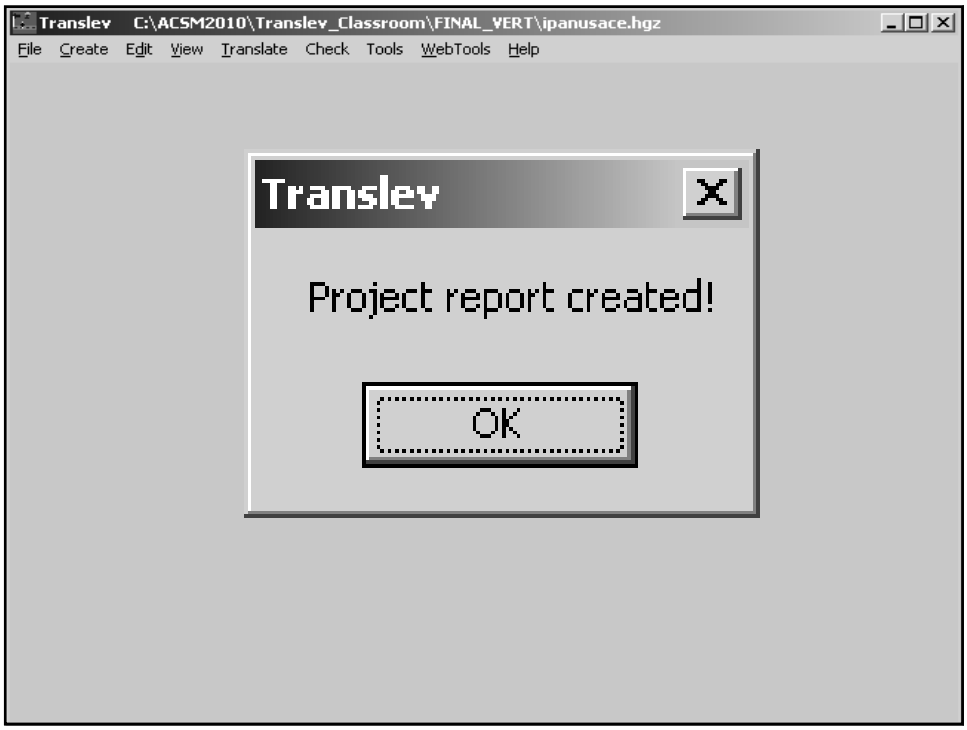

Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
CHECK MEASUREMENTS:
Okay Cancel
IPAN USACE CLQT - GGN 2455
L12345/
ORDER 1 CLASS 2
---------- NEW MINUS OLD COMPARISON
SSN PID MARK DESIGNATION -DIST- ---NEW---- ---OLD---- DIF (MM) ALLOWABLE
0101 DH2964 CLQT 7.42500 7.4250 0.00
1.089 4.94356 4.9400 3.56 4.17
0102 DH3040 GGN 2669 12.36856 12.3650 3.56
0.663 0.09909 0.1000 -0.91 3.26
0105 DH3028 GGN 2455 12.46765 12.4650 2.65
Mean difference 2.07


Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
PROGRESS:
Okay Cancel
(Describe the general progress of the project)


Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
RERUNS:
Okay Cancel
(Describe any sections that needed to rerun and reason for it)


Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
STATUS OF ORIGINAL PROJECT RECORDS:
Okay Cancel
(Describe the format of the data and where the orginal records are stored)


Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
CONTACT:
Okay Cancel
Should any questions arise concerning the project please contact
(Name and phone number of contact person if problems are encountered with the data)


Translev C:\ACSM2010\Translev_Classroom\FINAL_VERT\ipanusace.hgz
File Create Edit View Translate Check Tools WebTools Help
Translev
Project report created!
OK

US ARMY CORPS OF ENGINEERS

PROJECT REPORT

IPAN USACE CLQT - GGN 2455

L12345

JOHN Q PUBLIC - CHIEF OF PARTY

FIRST ORDER, CLASS TWO LEVELING

09/04/2007 TO 09/07/2007

A. Location

This project is located at south end on the island of Guam at IPAN beach

B. Scope

1. Purpose

To level the Corps of Engineers shore protection wall at IPAN beach.

2. Specifications

First order class two specifications were followed during the execution of this of this project.

3. Monumentation

All monuments were set in the concrete wall and are standard USACE bench marks

B. Instrumentation

The following electronic levels were used on this project:

Make	Model	Serial
LEICA	DNA03	334391

The following rods were used on this project:

Make	Model	Serial
LEICA	INVAR	30847
LEICA	INVAR	30850

Copies of rod calibration will be transmitted with this project

C. Comments

1. Reconnaissance

Reconnaissance was done on May 15,20xx and the following bench marks were found in good condition:

CLQT
GGN 2455
GGN 2669

2. Deviation from specifications

No deviation from specifications was made.

3. Routes

Leveled on the road from CLQT to GGN2455. The terrain was a slight hill.

4. Problems

5. Recommendations

None

6. Software used

Windesc for writing the descriptions, Translev for the processing of leveling data

D. Statistics

1. Monuments recovered, set, and km of leveling

IPAN USACE CLQT - GGN 2455
Total No. Runnings: 9
Total Distance (km): 4.41
Avg Running Dist (km): 0.49
Avg Sight Dist (m): 32.4
Total Time (Hr.): 5.1
Total Time (Days): 2
Setups/Hour: 13
Kilometers/Hour: 0.87
Kilometers/Day: 2.2

2. Closures

Line Misclosure

3. Check measurements

IPAN USACE CLQT - GGN 2455

L12345/
ORDER 1 CLASS 2

---------- NEW MINUS OLD COMPARISON ----------

SSN	PID	MARK DESIGNATION	-DIST-	---NEW----	---OLD----	DIF (MM)	ALLOWABLE
0101	DH2964	CLQT		7.42500	7.4250	0.00	
			1.089	4.94356	4.9400	3.56	4.17
0102	DH3040	GGN 2669		12.36856	12.3650	3.56	
			0.663	0.09909	0.1000	-0.91	3.26
0105	DH3028	GGN 2455		12.46765	12.4650	2.65	
		Mean difference				2.07	

4. Progress

(Describe the general progress of the project)

5. Reruns

(Describe any sections that needed to rerun and reason for it)

E. Status

1. Records

(Describe the format of the data and where it will be keep)

2. Contact

Should any questions arise concerning the project please contact

(Name and phone number of contact person if problems are encountered with the data)

Data Submission



Submission Checklist - Page 1

Item	Program	File Format
Project Report and Attachments	Hardcopy	paper
Project Report and Attachments	Word	.doc
Survey Plan Diagram	Map program	.pdf or .jpg
Station List	Word, Excell	.doc or .xls
CD Containing Final Photographs	Camera	.jpg
Descriptions and Recovery Notes - D-file	WinDesc	.des & .dsc
Description (D-file) Check/Error File	WinDesc	.err
Original Raw Files (daily)	varies by equip. type	varies by equip. type
Edited Raw Files (daily)	varies by equip. type	varies by equip. type
Combined Edited Raw Files	Translev	varies by equip. type
Translated Observation (daily)	Translev	.lvl
Combined Level Runs File	Translev	.bok
Field Abstract File	Translev	.abs
Vertical Observation File	Translev	.hgz
Vertical Observation Check/Error File	Translev	.err

Submission Checklist - Page 2

Item	Program	File Format
New Minus Old File	Translev	.nmo
Level Run Statistics File	Translev	.stt
Back-up Recording Sheets (daily)	Original Field	paper
Back-up Recording Sheets (daily)	Scanned	.pdf or .jpg
Bench Mark Plots on USGS Quad Maps	Original	paper

Leveling Projects - Project Submission

NGS, Project Analysis Branch
Deb Brown
301-713-3186 ext. 128
Deb.Brown@noaa.gov

Questions?

On Anything Covered Today

Mahalo
and have a great day

