

APPENDIX C

Miscellaneous Check Lists

Superseded

Geodetic Survey Quality Assurance Checklist

*******Sample*******

Job No./ Project No. **2200168**

Project Description and Location: **Route 72 Evacuation Route Roadway Improvements GPS Project**

Date(s) Survey Performed: **11/18/2005, 02/22/2006, 02/23/2006, 03/06/2006 and 03/07/2006**

	Yes	No	N/A
1. NAD 83 Horizontal Datum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Existing NGS Data base utilized	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. NAVD 88 Vertical Datum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Existing NGS Data base utilized	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Horizontal Control meets 1st Order FGCC requirements	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Horizontal adjustment method utilized Least Squares	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Vertical Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. GPS derived Orthometric Heights	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Differential Leveling derived Orthometric Heights	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Control meets 2nd Order Class 1 FGCC requirements for Order of Control utilized	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Vertical adjustment method utilized Least Squares	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Data Files in ASCII format of Intergraph Standard	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Interchange Format (ISIF) version 8.8	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14. Control Diagram (Horizontal and Vertical control identified)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. State Plane Coordinates List for Horizontal Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Survey Report

16. Quality Control Checklist

Yes	No	N/A
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: Explanation must be provided for all items checked N/A.

Certification:

Supervising Engineer II

Geodetic Survey Quality Control Checklist

*******Sample*******

Job No./Project No. **2200168**

Project Description and Location: **Route 72 Evacuation Route**
Roadway
Improvements GPS Project

Date(s) Survey Performed: **11/18/2005, 02/22/2006, 02/23/2006, 03/06/2006 and 03/07/2006**

	Yes	No	n/a
FGCC Guidelines "Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques" Version 5.0 dated May 11, 1988; reprinted with corrections, August 1, 1989 utilized for project or most current edition.	x		
FGCC Guidelines "Standards and Specifications for Geodetic Control Networks", September 1984 utilized for project or most current edition.	x		

<u>Equipment Utilized</u>	<u>Model No.</u>	<u>Serial No.</u>
Sensor	Leica Geosystems SR 530	0037050
Sensor	Leica Geosystems SR 530	0037051
Sensor	Leica Geosystems SR 530	0037074
Sensor	Leica Geosystems SR 530	0037123
Sensor	Leica Geosystems SR 530	133646
Antenna	Leica Geosystems AT 502	7816
Antenna	Leica Geosystems AT 502	8061
Antenna	Leica Geosystems AT 502	8092
Antenna	Leica Geosystems AT 502	8094
Antenna	Leica Geosystems AT 502	14856

Seco 2 Meter fixed-height poles (1)

Pacific Crest RTK Radios (2)

<u>Project Personnel</u>	<u>Name</u>	<u>Title</u>	<u>Position</u>
	Frederick A. Czepiga	Principal Engineer	Analysis/Project Report
	Ronald J. Kuzma	Principal Engineer	Operator
	Edward Berchtold	Eng. Technician	Operator
	Michael V. Iorio	Eng. Technician	Operator
	Edward Ogonowski	Eng. Technician	Operator
	Steve Miller	Eng. Technician	Operator

Project Control Monumentation

	Yes	No	n/a
Permanent	x		
Semi-Permanent	x		
Outside Future Construction Limits	x		
Within R.O.W.	x		
3 Reference Ties			x
Intervisible Pair at Project Limits	x		

Comments:

Survey Report QA Check List

		YES	NO	N/A
1	Survey Report signed and sealed by licensed surveyor			
2	Supplemental Survey Report signed and sealed by licensed surveyor			
3	Prime consultant has reviewed and concurs with sub-consultant's Survey Report			
4	Point of Contact supplied in Survey Report			
5	Regional Survey Office contacted for any existing control in project area			
6	Copy of Article 44 was supplied to field personnel			
7	Scope of work included in Survey Report			
8	Equipment service record included in Survey Report			
9	Equipment serial numbers included in Survey Report			
10	Horizontal datum used is New Jersey State Plane Coordinate System (NJSPCS)			
11	List of horizontal monuments with stations and coordinates			
12	Year of last adjustment included in horizontal datum description			
13	Vertical datum used is North American Vertical Datum of 1988 (NAVD88)			
14	List of vertical benchmarks with stations and elevations			
15	Control traverse submitted and approved by NJDOT prior to commencing survey for base map, and the survey traverse and control network meet 2nd Order requirements			
16	Survey Report explains how road baseline(s) were re-established			
17	Survey Report explains how ROW was established			
18	Existing road baselines and ROW tied to project control			
19	All measurements are to a minimum of two (2) decimal points			
20	Height set above ground of ties shown on tie sketch			
21	Data processing software identified in Survey Report			
22	All minimum standards, as outline in NJDOT Survey Manual have been met or exceeded			

NOTE: All no and N/A require an explanation.
