

Airport Way/Cushman Intersection

8.18.15:

- City of Fairbanks Contacts
 - Jeff Whipple – jfwhipple@ci.fairbanks.ak.us – 459-6743
 - Bill Rogers – wkrogers@ci.fairbanks.ak.us – 459-6744
 - Jackson Fox – jcfox@ci.fairbanks.ak.us – 459-6758
- Materials we need from City
 - SI Control drawings for Rickert & Gateway Subdivisions between Gillam on West to East Gateway boundary on East; Gaffney on North and 16th ave on south.
 - As-builts/survey control for 2014 construction of Cushman resurfacing and sidewalks.
 - Design and survey control for ongoing construction of Cushman north of Airport.
 - Gaffney from Gillam to Noble – 2005 General Fund project through DOT – ROW plans(?), survey control, as-builts.
- DOT&PF – Tim Sprout
 - Requested as-builts for Airport Way from Gillam to Richardson for survey control.
 - Need to request Noble street ROW plans, Survey control and design plans.

12.8.15:

- Visit R&M Survey Crew in field (Ben Holmstrom & ?) at SI 11th & Noble. GPS Static setup. Good traffic control, signs out; van parked in center turn lane with light bar running. Ben says they have tied about 15 monuments so far. Yesterday I responded by phone to his question of whether it was acceptable to dig through the asphalt to access SI monuments. I said that the City had elected to patch SI holes rather than install monument cases so it was pretty much expected. Discussed the issue with the Cushman No. of Airport section (“Complete Streets”). Several SI’s that we would want to tie will not be reset by the City’s contractor until next summer. We will tie into as many of the off project monuments cited in the coordinate table to orient our project to the “Complete Streets” project.

1.6.16:

- Chad sent up “ADSAS 64078 Airport Way Cushman ROW Mapping.dwg” and pointed me to filed book files. The drawing includes all of the recovered and set monuments.

Basis of Coordinates: Chad will be using a modified (local) ASP Zone 3 coordinate system in feet. All prior projects are on various local systems. The Thomas ROS, PDC ROS and COF S. Cushman projects are all on the Thomas system which started with a purported ASP coordinate on the section corner of 14/15/23/22 as shown on sheet 2 of the Mitchell Expwy East as-builts. The northing appears within reason but the easting is oddly truncated so these projects can be considered to be local systems without a direct relationship to ASP coordinates.

1.7.16:

- *Prior projects:* The following projects used the monument coordinates.

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- Thomas Engineering ROS 96-93 (August 6, 1996): Prepared for Project No. RS-M-0663(5)/63216 “South Cushman Street Improvements. The intent of this ROS as stated in Note No. 3 is “...to define the positions of SI monuments, DOT monuments, and lot corners affected by the proposed widening of Cushman Street between Van Horn Road and Gaffney Road.”
- PDC, Inc. 2007 ROS (Unrecorded): Prepared for Project STP-RS-M-0663(5)/63216, “South Cushman Improvements” PDC developed a Scoping Report concluding that the Thomas ROS coordinates could be used for parcel calculations.

“South Cushman Scoping Report – May 2002” – Introduction: “The Department proposes to construct improvements to South Cushman Street from Gaffney Road to 18th Avenue. The South Cushman project was developed to the preliminary PS&E level in 1996.”

P.3 – “A horizontal traverse survey was performed and oriented to ROS monumentation. Selected monuments were tied in order to compare record and field monument coordinate values.”

P.14 – “The control check traverse showed good agreement with the coordinates of twelve selected control monuments (SI’s and property corners) as listed in the ROS tables.”

P.17 – “Based on the field check performed for this project, the coordinates listed in the recorded Record of Survey can be entered and used for parcel calculations. Additional field checks to existing monumentation should be incorporated into the future survey work as required to meet DOT standards.”

- City of Fairbanks Project FB-14-02/62532 (2014), “South Cushman Sidewalk and Drainage Improvements” – Survey Control Sheets 3.01-3.03
- Import PDC 2007 ROS
 - Opened L0000rsF01095.dwg
 - Used EATTEXT command to export both recovered and calculated monument coordinates
 - Exported to PENZD PDC 2007 ROS.csv
 - Opened CSV file in Excel and edited out all extraneous columns and rows
 - Inserted PDC ROS points into our Cushman/Airport ROW working drawing on the V-RWAY-WORK layer and verified that the imported coordinates arrived intact. (Insert/Points from File – make sure point numbers are integers!)

1.8.16

- City of Fairbanks “Complete Streets” Project No. FB-15-07; 2015-2016 construction for Cushman Street North of Airport Way between Gaffney Street and 1st Avenue. At the time of our survey (December 2015), all of the centerline monuments along Cushman north of Airport Way had been removed by construction activities and are not to be reset until spring-summer 2016. The “Complete Streets” project plans includes survey control sheets 3.01 & 3.02 that provide coordinates for all of the centerline monuments located prior to construction. The control sheets

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state that the coordinate system is “local”. R&M located and tied 4 monuments that are off the Cushman Street centerline but common to the Cushman project coordinate system. We will use this relationship as the “best evidence” of the Cushman Street centerline monument location prior to construction.

- DOT&PF Project No. STP-000S(413)/61725 “Fairbanks Noble Street Upgrade” Unrecorded Record of Survey as Survey Control Drawing. This project was developed by PDC. R&M tied 7 monuments also recovered by PDC. While this project is on a different local coordinate system and basis of bearing than the previously referenced PDC South Cushman Improvements ROS, a comparison of common monument ties (Airport Road Centerline between Gillam/New Steese and Cushman between 15th /12th Avenue) will likely indicate that they are related. More review is necessary but this may provide the best basis for the project.

1.12.16

- The primary ROW control for the project is along Airport Way. The R&M survey tied 4 monuments on Airport way including the offset monuments Gillam, Cushman, Noble and Steese/Richardson. The PDC Noble Street project indicates either through the Survey Control Drawing/ROW Basemap or the AutoCad Files that they tied the monuments at Cushman, Noble and Steese/Richardson while the PDC Cushman ROS (unrecorded 2007) indicate that they tied the Gillam, Cushman and Noble monuments.
- A comparison between the current R&M survey and the unrecorded PDC record of survey for Cushman Widening suggests that there is a fairly good relationship between the two. Note that while the bearings are close, it is because both surveys are based on modified Alaska state plane coordinates and that

Airport Road Offset Monuments – (PDC Cushman Widening)						
Gillam			Cushman			Noble
PDC	S78°05'02"E	1300.68		S79°13'55"E	760.14	
R&M	S78°05'24"E	1300.61		S79°13'50"E	760.06	
R&M	S78°30'38"E			2060.58		
PDC	S78°30'27"E			2060.72		

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Noble Street Centerline Control – (PDC Noble Street)							
	Airport		Noble CL		12 th Ave		11 th Ave
R&M	#742 (AlCap)		#714 (BC)		#713 (BC)		#715 (BC)
		N2°13'38"W		N6°42'59"W		N6°43'01"W	
		505.83		335.64		221.26	
				556.90			
PDC	#535		#20158 (BC)		#448 (BC)		#449
		N3°46'48"W		N8°16'49"W		N8°16'15"W	
		505.89		335.80		221.13	
				556.93			

Based on this reasonably good relationship between the R&M and PDC surveys and the fact that most of the Cushman St. centerline monuments are currently missing or have been disturbed, I intend to import the monument points from the PDC Cushman and Noble Street projects to supplement the R&M survey.

- Record of Survey Survey Control Project No. STP-000S(413)/61725 “Fairbanks Noble Street Upgrade” These files were provided to me on 1.11.16 by Tim Sprout at DOT. Using xref file “LXREF-ROW_ - 11100FB.dwg” I exported all of the points to a CSV file with a PNEZD format. All points other than recovered monuments were removed from the file. The point numbering ranged from points under 100,000 and those over 100,000. I adjusted all points under 100,000 by adding 100,000 to them. All points imported from the Noble Street ROS can be identified by point numbers between 100432 and 120290.
- ROW Base Map for South Cushman Street Improvements – 18th Avenue to 12th Avenue. This is not a Civil3D drawing so the points were exported using the EATTEXT command to a CSV file. All columns except Point number, Northing, Easting, Z and description were deleted. All rows except recovered monuments were deleted. The exported coordinates were validated by comparing them to the recovered monument and control coordinate tables for the:
 - 2007 PDC unrecorded Base Map for S. Cushman Street Improvements
 - 1996 Thomas Engineering Amended ROS (96-93) for South Cushman Street
 - 2014 City of Fairbanks Survey Control Sheet coordinate tables for S. Cushman Sidewalk & Drainage Improvements