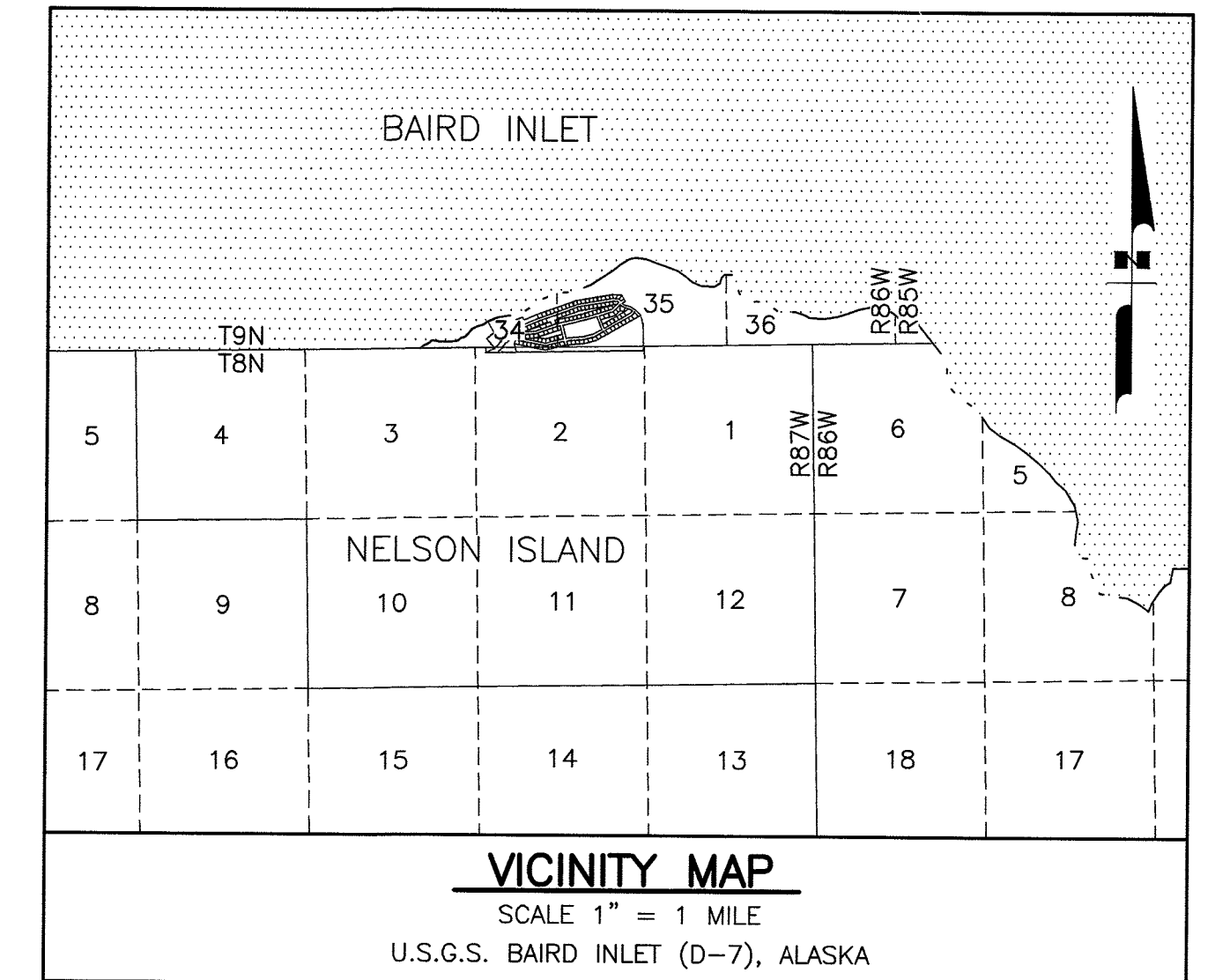
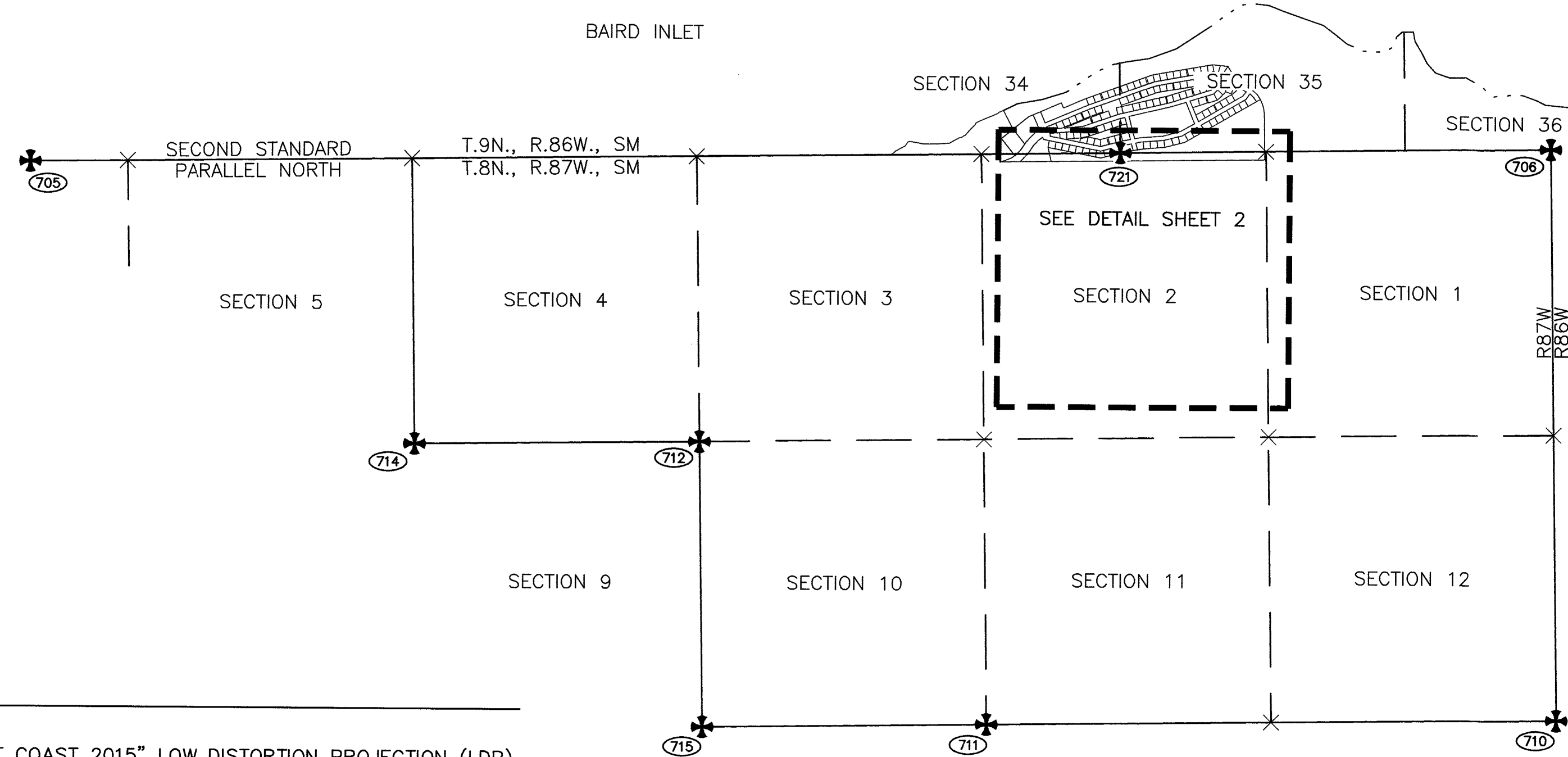


MAGNETIC DECLINATION:
10°04' EAST ±0'24', CHANGING 0'17" W PER YEAR
OCTOBER 2018, NOAA WMM(2015)



NOTES

1. SEE SHEET 3 FOR GENERAL SURVEY NOTES AND MONUMENT DETAILS.

HORIZONTAL CONTROL STATEMENT

COORDINATE SYSTEM:
THIS PROJECT IS LOCATED ENTIRELY WITHIN THE "AK WEST COAST 2015" LOW DISTORTION PROJECTION (LDP), WHICH WAS DEVELOPED BY THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (AKDOT&PF).

AK WEST COAST 2015 LDP DEFINITION:
LINEAR UNITS: U.S. SURVEY FEET (USFt)
DATUM: NAD83(2011) EPOCH 2010.0000
PROJECTION: TRANSVERSE MERCATOR
LATITUDE OF LOCAL ORIGIN: 61°00'00" NORTH (61.0°)
LONGITUDE OF LOCAL ORIGIN: 165°30'00" WEST (-165.5°)
FALSE NORTHING: 300,000.0000 USFt
FALSE EASTING: 400,000.0000 USFt
GRID SCALE FACTOR: 0.99999
SEMI-MAJOR AXIS (M): 6,378,137.0
INVERSE FLATTENING: 298.257222101

THE BASIS OF COORDINATES IS POINT NO. 551, A SET 9/16" STAINLESS STEEL ROD, ENCASED IN A 6" PVC PIPE WITH AN ALUMINUM LOGO CAP STAMPED "R&M CONSULTANTS, INC. EWU D, SURVEY MARK 2018". THE GEODETIC POSITION WAS ESTABLISHED BY AVERAGING SEVEN OPUS SOLUTIONS, ALL OF WHICH BASED UPON AT LEAST 8-HOURS OF STATIC GPS OBSERVATION TIME. SAID BASIS OF COORDINATES HAS THE FOLLOWING COORDINATES:

NAD83(2011) EPOCH 2010.0000 GEODETIC COORDINATES (AVERAGED):
LAT.=60°48'47.12421" NORTH,
LONG.=164°30'14.23504" WEST,
ELLIPSOID HEIGHT = 366.94 USFt

PROJECT COORDINATES:
N=233,020.6877 USFt
E=577,847.1948 USFt

BASIS OF BEARINGS:
PROJECT BEARINGS ARE AK WEST COAST 2015 LDP GRID BEARINGS.

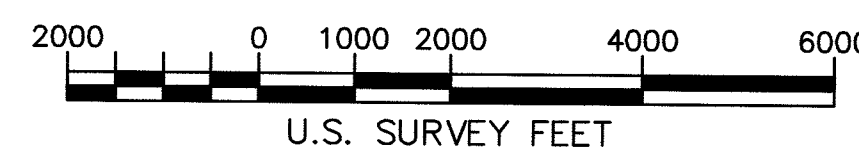
VERTICAL CONTROL STATEMENT

THE VERTICAL DATUM FOR THIS SURVEY IS NAVD88 (GEOID12B). THE BASIS OF VERTICAL CONTROL IS THE BASIS OF COORDINATES AS DESCRIBED ABOVE. THE ORTHOMETRIC HEIGHT FOR THIS POINT WAS ESTABLISHED BY AN AVERAGE OF SEVEN OPUS SOLUTIONS, ALL OF WHICH HAD A MINIMUM OF 8-HOURS OF STATIC GPS OBSERVATIONS. THE NAVD88 ORTHOMETRIC HEIGHT IS BASED UPON THE GEOID12B MODEL AND WAS AVERAGED AS 335.54 USFt.

PREVIOUS SURVEYS IN THE AREA USED THE MEAN LOWER LOW WATER (MLLW) DATUM WHICH WAS DETERMINED BY NINE DAYS OF TIDAL OBSERVATIONS BY R&M CONSULTANTS, INC. BETWEEN JUNE 9 AND JUNE 17, 2008. OBSERVATIONS WERE CORRELATED TO NOAA TIDE STATION "VILLAGE COVE 946-4212", LOCATED IN ST. PAUL ALASKA, AND PROCESSED BY JOHN OSWALD AND ASSOCIATES, LLC.

MHHW = 4.96'
MHW = 4.81'
MLW = 0.50'
MLLW = 0.00'

MLLW ELEVATIONS CAN BE OBTAINED BY SUBTRACTING 0.72 FEET FROM THE NAVD88 (GEOID12B) ELEVATIONS. SEE RECORD OF SURVEY TITLED "MERTARVIK TOWNSITE SUBDIVISION - SURVEY CONTROL", RECORDED AS PLAT NO. 2018-2, IN THE BETHEL RECORDING DISTRICT.



LEGEND

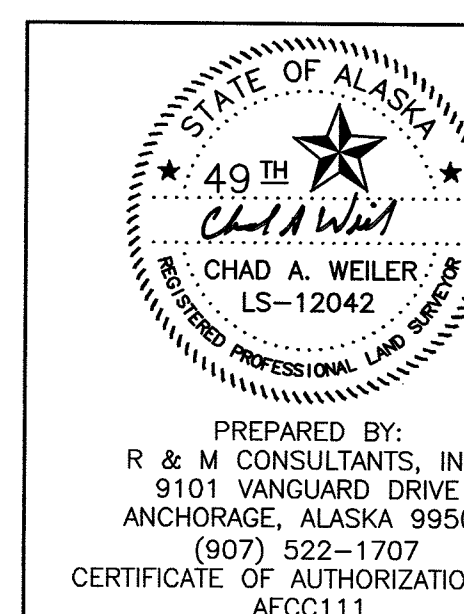
- ✦ PRIMARY GOVERNMENT MONUMENT
- × COMPUTED POSITION, NOTHING SET
- ⓧ MONUMENT POINT NUMBER

FOUND MONUMENTATION - THIS SHEET			
POINT	NORTHING	EASTING	DESCRIPTION
705	235053.6147	557922.1381	Fd AC[BLM]: WCMC S31 *T9N R86W
706	235473.7756	586123.1867	Fd AC[BLM]: CC S1 S6 *T8N R86W & R87W
710	224909.3280	586291.8644	Fd BC[BLM]: S12 S7/S13 S18 *T8N R86W & R87W
711	224745.9135	575732.7439	Fd AC[BLM]: S10 S11/S15 S14 *T8N R87W
712	229947.2793	570369.1369	Fd AC[BLM]: S4 S3/S9 S10 *T8N R87W
714	229871.6756	565088.6392	Fd BC[BLM]: S5 S4/S8 S9 *T8N R87W
715	224668.3330	570454.7466	Fd AC[BLM]: S9 S10/S16 S15 *T8N R87W
721	235342.8869	578141.0549	Fd AC[BLM]: SC S34 S35 *T9N R86W

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM PROPERLY REGISTERED AND LICENSED TO PRACTICE LAND SURVEYING IN THE STATE OF ALASKA, AND THAT THIS DRAWING REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECT SUPERVISION, AND THAT THE MONUMENTS SHOWN HEREON ACTUALLY EXIST AS DESCRIBED, AND THAT ALL DIMENSIONS AND OTHER DETAILS ARE CORRECT TO THE EXTENT SHOWN HEREON.

Chad A. Weiler
CHAD A. WEILER LS-12042 DATE 12/20/2018



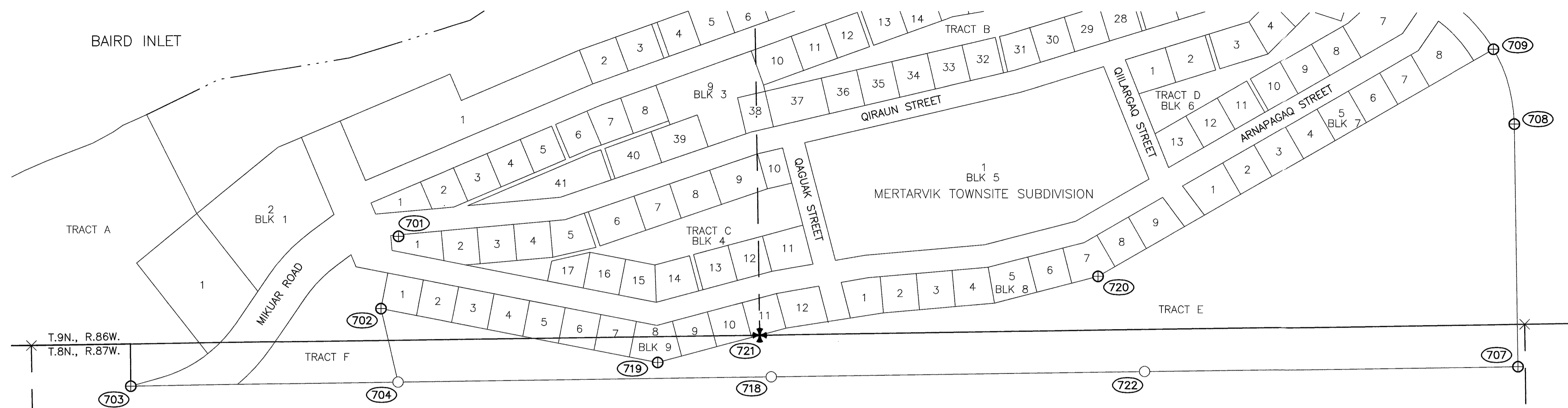
RECORD OF SURVEY
THIS SURVEY DOES NOT CONSTITUTE
A SUBDIVISION AS DETERMINED BY AS 40.15.900(5).
BETHEL RECORDING DISTRICT
STATE BUSINESS NO FEE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
Survey Control Diagram

STATE PROJECT NO. / FEDERAL PROJECT NO.
CFAPTO0310 / AIP 3-02-0194-XXX-20XX
NEWTOK AIRPORT RELOCATION DESIGN SERVICES
LOCATED WITHIN: SECTIONS 1,2,3,10,11,12 T.8N., R.87W., S.M., ALASKA

DRAWN	CAW	DATE	OCTOBER 2018	SCALE	1" = 2000'
CHECKED	WNP	DATE	OCTOBER 2018	SHEET	1 OF 3

Bethel 2018-15



FOUND MONUMENTATION - THIS SHEET			
POINT	NORTHING	EASTING	DESCRIPTION
3	234635.3347	580532.3772	Fd BC[R&M]: MERT 3
4	233157.9644	576973.5525	Fd BC[R&M]: MERT 4
701	235689.9504	576862.5983	Fd AM[7537-S]: WC2 MC1
702	235435.4768	576801.0351	Fd AM[7839-S]: AP TRE/L1B9
703	235160.9887	575918.0918	Fd AM[7839-S]: AP TRA
704	235175.6193	576861.7558	Fd PC/Rbr[7839-S]: SW TRE
707	235236.8023	580821.3754	Fd AM[7839-S]: SE TRE
708	236092.4758	580807.3336	Fd AM[7839-S]: AP TRE
709	236356.8554	580733.1744	Fd AM[7839-S]: AP TRE
718	235196.0082	578181.6981	Fd PC/Rbr[7839-S]: WP TRE
719	235245.7811	577780.5844	Fd AM[7839-S]: AP L8B9/TRE
720	235551.4978	579336.8091	Fd AM[7839-S]: AP L7B8/TRE
722	235216.4299	579501.5071	Fd PC/Rbr[7839-S]: WP TRE

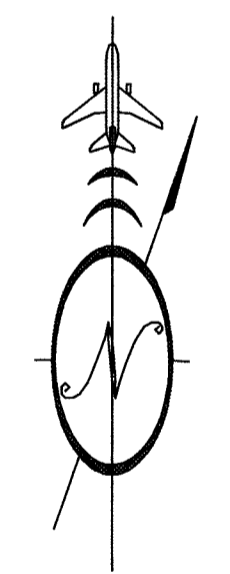
NOTE - SEE SHEET 1 FOR POINT NUMBER 721 COORDINATES.

POINT	PRIMARY CONTROL						DESCRIPTION
	NAD83(2011) EPOCH 2010			LOCAL		ELEVATION	
	N. LATITUDE	W. LONGITUDE	ELLIPSOID HEIGHT	NORTHING	EASTING		
551	60°48'47.12421"	164°30'14.23504"	366.94	233020.6877	577847.1948	335.54	SET SS ROD/DATUM PT[R&M]: EWU D
552	60°48'36.00882"	164°29'47.64404"	352.37	231912.1443	579183.2458	320.95	SET SS ROD/DATUM PT[R&M]: EWU E
553	60°48'42.03714"	164°30'34.30609"	377.70	232489.0884	576859.5569	346.31	SET SS ROD/DATUM PT[R&M]: EWU F

- LEGEND**
- ⊕ PRIMARY GOVERNMENT MONUMENT
 - ⊕ PROPERTY PRIMARY MONUMENT
 - ⊕ GPS CONTROL POINT
 - PROPERTY MISCELLANEOUS CORNER
 - × COMPUTED POSITION, NOTHING SET
 - ⓧ MONUMENT POINT NUMBER

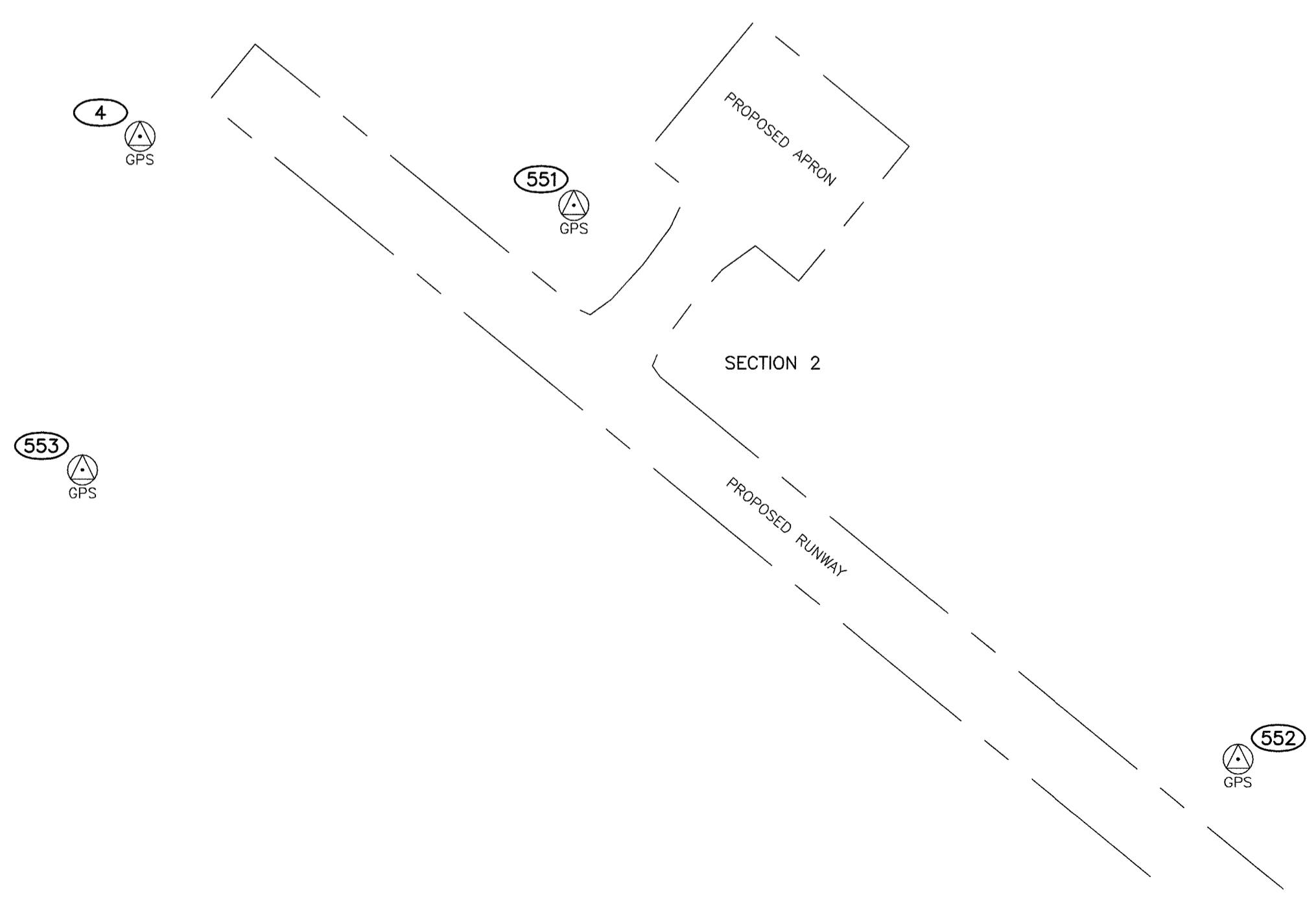
NOTES

- SEE SHEET 3 FOR GENERAL SURVEY NOTES AND MONUMENT DETAILS.



MAGNETIC DECLINATION:
 10°04' EAST ±0'24", CHANGING 0'17" W PER YEAR
 OCTOBER 2018, NOAA WMM(2015)

250 0 125 250 500 750
 U.S. SURVEY FEET



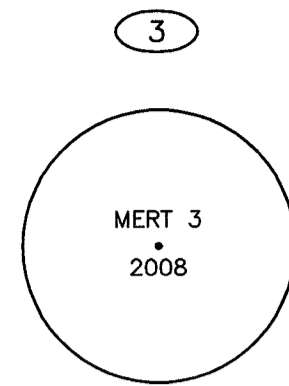
RECORD OF SURVEY
 THIS SURVEY DOES NOT CONSTITUTE
 A SUBDIVISION AS DETERMINED BY AS 40.15.900(5).
 BETHEL RECORDING DISTRICT
 STATE BUSINESS NO FEE



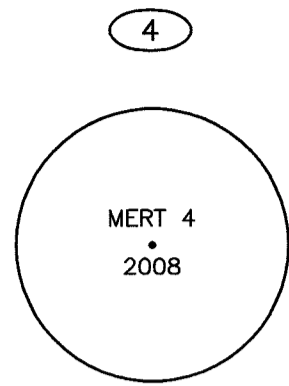
PREPARED BY:
 R & M CONSULTANTS, INC.
 9101 VANGUARD DRIVE
 ANCHORAGE, ALASKA 99507
 (907) 522-1707
 CERTIFICATE OF AUTHORIZATION No. AECC111

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES Survey Control Diagram STATE PROJECT NO. / FEDERAL PROJECT NO. CFAPT00310 / AIP 3-02-0194-XXX-20XX NEWTOK AIRPORT RELOCATION DESIGN SERVICES LOCATED WITHIN: SECTIONS 1,2,3,10,11,12 T.8N., R.87W., S.M., ALASKA			
DRAWN	CAW	DATE	OCTOBER 2018
CHECKED	WNP	DATE	OCTOBER 2018
SCALE		1" = 250'	
SHEET		2 OF 3	

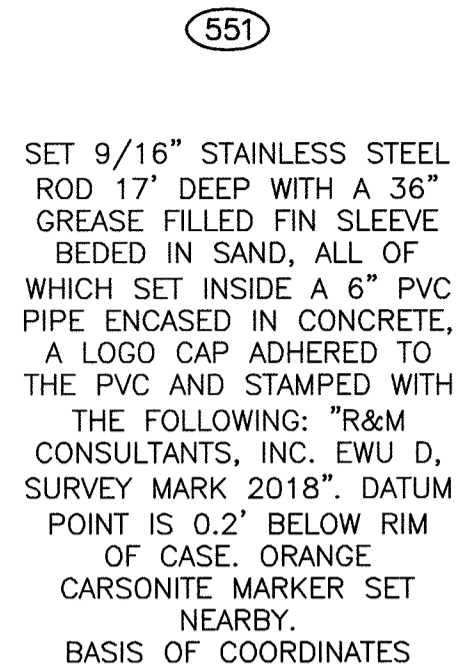
Bethel 2018-15



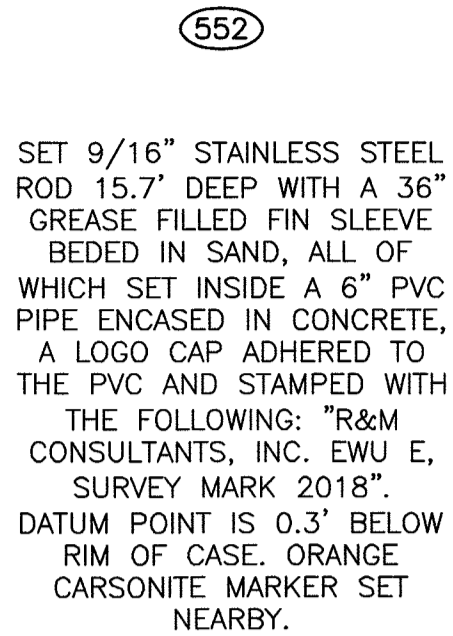
FOUND 3-1/4" BRASS CAP ON STAINLESS STEEL ROD INSIDE A PVC PIPE.



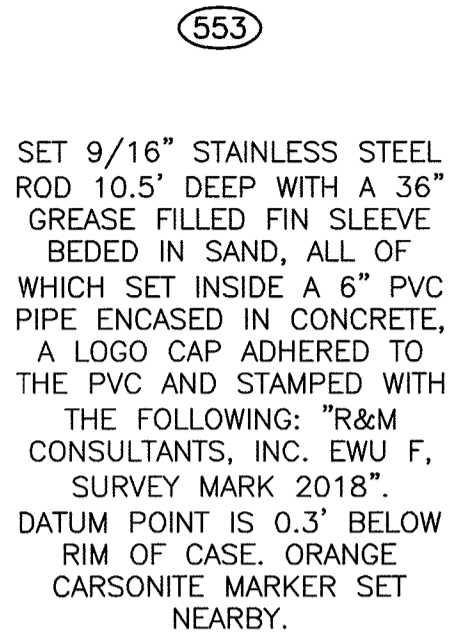
FOUND 3-1/4" BRASS CAP ON STAINLESS STEEL ROD 0.5' ABOVE GRADE. ORANGE CARSONITE MARKER 0.4' IN A SOUTHEASTERLY DIRECTION.



SET 9/16" STAINLESS STEEL ROD 17" DEEP WITH A 36" GREASE FILLED FIN SLEEVE BEDED IN SAND, ALL OF WHICH SET INSIDE A 6" PVC PIPE ENCASED IN CONCRETE, A LOGO CAP ADHERED TO THE PVC AND STAMPED WITH THE FOLLOWING: "R&M CONSULTANTS, INC. EWU D, SURVEY MARK 2018". DATUM POINT IS 0.2' BELOW RIM OF CASE. ORANGE CARSONITE MARKER SET NEARBY. BASIS OF COORDINATES



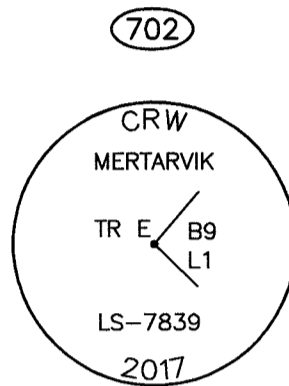
SET 9/16" STAINLESS STEEL ROD 15.7" DEEP WITH A 36" GREASE FILLED FIN SLEEVE BEDED IN SAND, ALL OF WHICH SET INSIDE A 6" PVC PIPE ENCASED IN CONCRETE, A LOGO CAP ADHERED TO THE PVC AND STAMPED WITH THE FOLLOWING: "R&M CONSULTANTS, INC. EWU E, SURVEY MARK 2018". DATUM POINT IS 0.3' BELOW RIM OF CASE. ORANGE CARSONITE MARKER SET NEARBY.



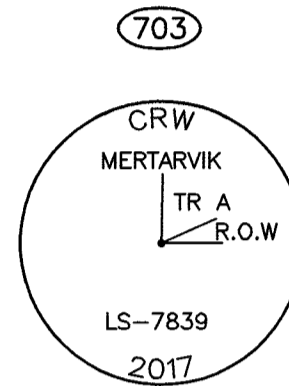
SET 9/16" STAINLESS STEEL ROD 10.5" DEEP WITH A 36" GREASE FILLED FIN SLEEVE BEDED IN SAND, ALL OF WHICH SET INSIDE A 6" PVC PIPE ENCASED IN CONCRETE, A LOGO CAP ADHERED TO THE PVC AND STAMPED WITH THE FOLLOWING: "R&M CONSULTANTS, INC. EWU F, SURVEY MARK 2018". DATUM POINT IS 0.3' BELOW RIM OF CASE. ORANGE CARSONITE MARKER SET NEARBY.



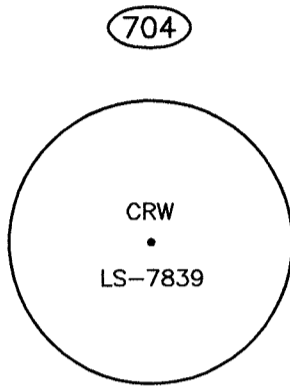
FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.3' ABOVE GRADE. ORANGE CARSONITE MARKER 1' NORTH FROM MONUMENT.



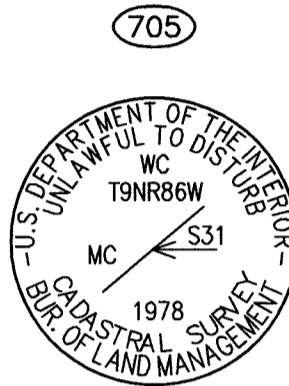
FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.7' ABOVE GRADE. ORANGE CARSONITE MARKER 1' NORTH FROM MONUMENT.



FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST FLUSH WITH GRADE. ORANGE CARSONITE MARKER 1' NORTH FROM MONUMENT.



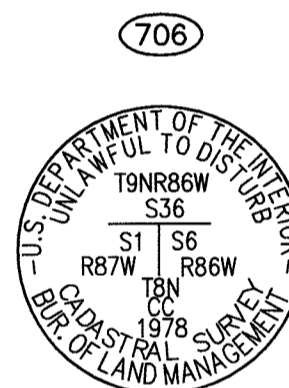
FOUND 1-1/4" YELLOW PLASTIC CAP ON 5/8" REBAR 0.2' ABOVE GRADE.



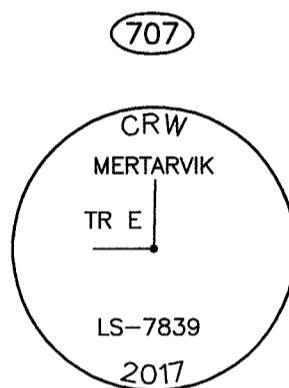
FOUND 3-1/4" ALUMINUM CAP ON 5/8" ALUMINUM ROD, 8' OF ROD PROTRUDING AND BENT IN A SOUTHERLY DIRECTION, TIED POINT OF ENTRY.

NOTES

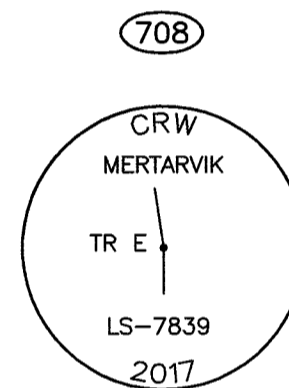
1. THE INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY R&M CONSULTANTS, INC. (R&M) AUGUST 16, 2018 THRU AUGUST 23, 2018. FIELD SURVEY INFORMATION CAN BE FOUND IN R&M FIELD BOOK NO. 2652.01, PAGES 1 THRU 26.
2. HORIZONTAL POSITIONS OF CONTROL POINTS WERE DETERMINED BY A CONSTRAINED LEAST-SQUARES ADJUSTED GNSS NETWORK UTILIZING TRIMBLE R10 MULTI-FREQUENCY GNSS RECEIVERS IN TRIMBLE BUSINESS CENTER VER. 4.10.
3. ALL DIMENSIONS, COORDINATES, AND ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET, UNLESS OTHERWISE NOTED.
4. ALL COORDINATES AND DIMENSIONS SHOWN HEREON SHOULD BE VERIFIED IN THE FIELD BEFORE USE.
5. ALL BOUNDARY LINES SHOWN HEREON ARE FOR ORIENTATIONAL PURPOSES ONLY.
6. SEE REFERENCE RECORDED IN BRISTOL BAY RECORDING DISTRICT: SURVEY CONTROL DIAGRAM, RECORD OF SURVEY MERTARVIK BARGE LANDING SITE, RECORDED AS PLAT NO. 2008-13.
7. SEE REFERENCES RECORDED IN BETHEL RECORDING DISTRICT: SURVEY CONTROL DIAGRAM, RECORD OF SURVEY MERTARVIK WATERFRONT DEVELOPMENT HYDROGRAPHIC SURVEY, RECORDED AS PLAT NO. 2012-36; RECORD OF SURVEY ADL 230403, MERTARVIK BARGE LANDING SITE PUBLIC ACCESS EASEMENT, RECORDED AS PLAT NO. 2013-13; RECORD OF SURVEY, MERTARVIK TOWNSITE SUBDIVISION SURVEY CONTROL, RECORDED AS PLAT NO. 2018-2; PLAT OF MERTARVIK TOWNSITE SUBDIVISION, RECORDED AS PLAT NO. 2018-7.



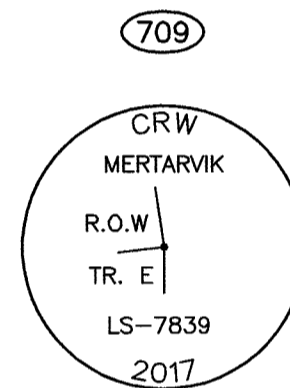
FOUND 3-1/4" ALUMINUM CAP ON 5/8" ALUMINUM ROD 0.3' ABOVE GRADE.



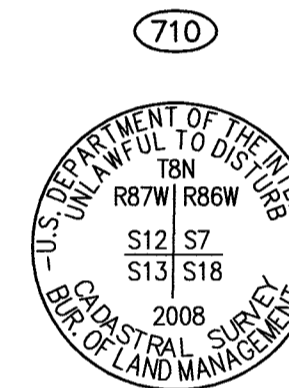
FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.3' ABOVE GRADE AND SLIGHTLY LEANING IN A SOUTHERLY DIRECTION. ORANGE CARSONITE MARKER NEARBY.



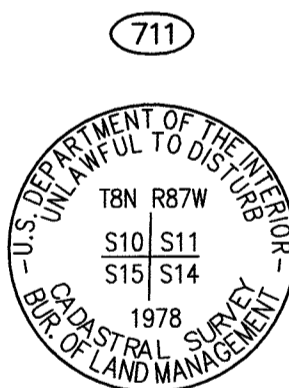
FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.3' ABOVE GRADE AND SLIGHTLY LEANING IN A WESTERLY DIRECTION. ORANGE CARSONITE MARKER NEARBY.



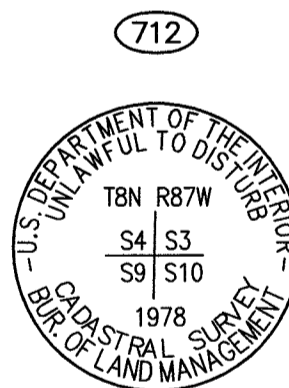
FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.2' ABOVE GRADE WITH ROCK CAIRN SET AT BASE OF CAP. ORANGE CARSONITE MARKER NEARBY.



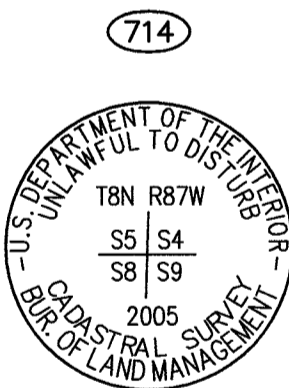
FOUND 3-1/4" BRASS CAP ON 2-1/2" STAINLESS STEEL POST 0.4' ABOVE GRADE.



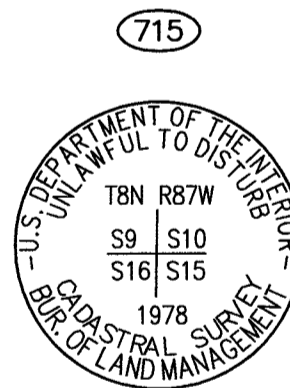
FOUND 3-1/4" ALUMINUM CAP ON 5/8" ALUMINUM ROD, THE TOP 5± OF THE ROD IS PROTRUDING FROM THE GROUND, SIGHTED POINT OF ENTRY.



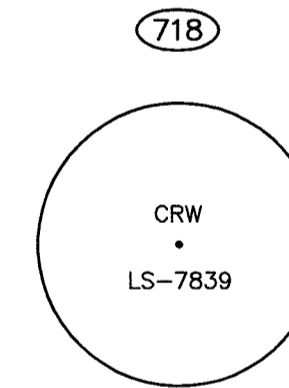
FOUND 3-1/4" ALUMINUM CAP ON 5/8" ALUMINUM ROD 0.2' ABOVE GRADE.



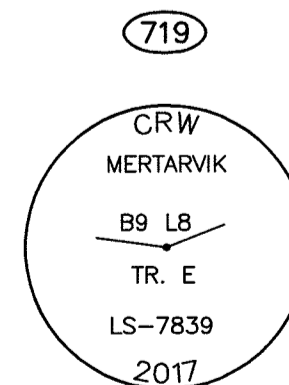
FOUND 3-1/4" BRASS CAP ON 2-1/2" STAINLESS STEEL POST 0.5' ABOVE GRADE.



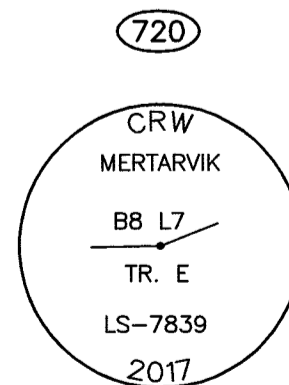
FOUND 3-1/4" ALUMINUM CAP ON 5/8" ALUMINUM ROD, THE TOP 4± OF THE ROD IS PROTRUDING FROM THE GROUND, SIGHTED POINT OF ENTRY.



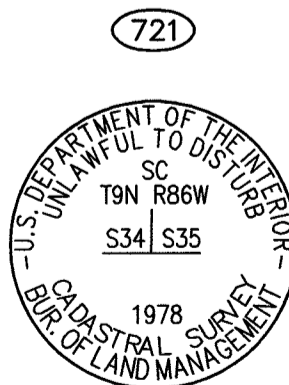
FOUND 1-1/4" YELLOW PLASTIC CAP ON 5/8" REBAR 0.3' ABOVE GRADE.



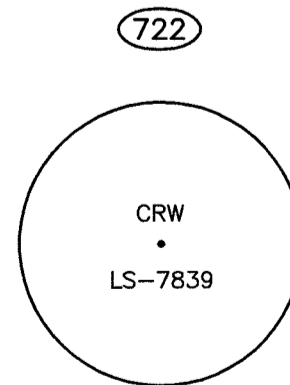
FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.3' ABOVE GRADE. ORANGE CARSONITE MARKER NEARBY.



FOUND 3-1/4" ALUMINUM CAP ON 2-1/2" ALUMINUM POST 0.4' ABOVE GRADE. ORANGE CARSONITE MARKER NEARBY.

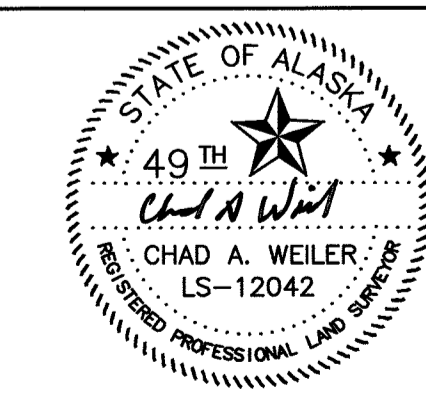


FOUND 3-1/4" ALUMINUM CAP ON 5/8" ALUMINUM ROD 1.0' ABOVE GRADE.



FOUND 1-1/4" YELLOW PLASTIC CAP ON 5/8" REBAR 0.3' ABOVE GRADE.

2018-15
Plat #
Bethel
Rec Dist
12/28 2018
Date
Time 1:26 P.M.



PREPARED BY:
R & M CONSULTANTS, INC.
9101 VANGUARD DRIVE
ANCHORAGE, ALASKA 99507
(907) 522-1707
CERTIFICATE OF AUTHORIZATION No. AEC0111

RECORD OF SURVEY
THIS SURVEY DOES NOT CONSTITUTE
A SUBDIVISION AS DETERMINED BY AS 40.15.900(5).
BETHEL RECORDING DISTRICT
STATE BUSINESS NO FEE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
Survey Control Diagram
STATE PROJECT NO. / FEDERAL PROJECT NO.
CFAPT00310 / AIP 3-02-0194-XXX-20XX
NETWOK AIRPORT RELOCATION DESIGN SERVICES
LOCATED WITHIN: SECTIONS 1,2,3,10,11,12 T.8N., R.87W., S.M., ALASKA

DRAWN	CAW	DATE	OCTOBER 2018	SCALE	N/A
CHECKED	WNP	DATE	OCTOBER 2018	SHEET	3 OF 3