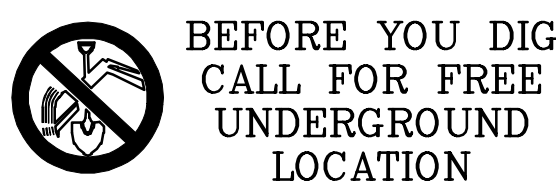


CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE INSTALLED AS SPECIFIED IN THE 2015 EDITION OF THE MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS FOR STREETS-DRAINAGE-UTILITIES-PARKS (MASS), THE AWWU DESIGN AND CONSTRUCTION PRACTICES MANUAL (DCPM), AND THE SPECIAL PROVISIONS.
- MAINTAIN A MINIMUM OF TEN (10) FEET HORIZONTAL AND EIGHTEEN (18) INCHES VERTICAL SEPARATION BETWEEN WATER AND SANITARY OR STORM SEWER MAINS AND SERVICES. SANITARY AND STORM SEWER PIPE JOINTS SHALL BE PLACED AT LEAST NINE (9) FEET FROM ANY WATERLINE CROSSING.
- MAINTAIN A MINIMUM OF 36-INCHES OF VERTICAL SEPARATION BETWEEN ANY STORM SEWER (STORM DRAIN OR FOOTING DRAIN) AND WATERLINE (MAINS OR SERVICES) OR SANITARY SEWER (MAINS OR SERVICES). IF 36-INCHES CANNOT BE MAINTAINED, PROVIDE A MINIMUM OF 4-INCH THICK INSULATION AND 4-FOOT WIDE.
- ALL WATER/SEWER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE, MIN. 60 P.S.I., FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.
- CONTRACTOR SHALL VERIFY AND RECORD THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD AND RECORD ANY CHANGES ON THE CONTRACTOR RECORD DRAWINGS.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED PROPERTY, INCLUDING DRAINAGE SWALES, DISTURBED BY CONTRACT ACTIVITIES TO PRECONSTRUCTION CONDITION OR AS INDICATED ON THE PLANS.
- IN CASE OF CONFLICT BETWEEN STATIONING LOCATION OF PIPE OR FITTINGS, USE DIMENSIONED LOCATIONS RELATIVE TO THE CENTERLINE AND PROPERTY LINE, THE DIMENSIONED LOCATIONS SHALL GOVERN.
- THE CONTRACTOR SHALL RECORD SURVEY NOTES, SIMILAR TO MASS, DIVISION 65 FOR SUBMITTAL WITH RECORD DRAWING PLANS PRIOR TO CONTRACT FINAL PAYMENT.
- CONTRACTOR SHALL FIELD INSTALL RESTRAINED FITTINGS ON ALL MECHANICAL JOINTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS AS NECESSARY TO COMPLY WITH FEDERAL, STATE, AND MUNICIPAL LAWS THAT PROHIBIT UNPERMITTED DISCHARGE OF POLLUTANTS, INCLUDING SEDIMENTS, THAT ARE A RESULT OF EROSION AND OTHER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONDUCT ALL WORK SO SEDIMENT IS NOT TRANSPORTED ONTO THE ROADWAY OR ADJACENT PROPERTY. AT A MINIMUM, THE CONTRACTOR SHALL SWEEP UP ANY SEDIMENT TRACKED ONTO PAVED SURFACES IN PUBLIC RIGHT-OF-WAY WITHIN 24 HOURS OF THE TRACKING TO MINIMIZE THE WASH-OFF OF SEDIMENT INTO THE STORM DRAINS OR WATERWAYS.
- WATER RESULTING FROM CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS UNLESS PERMITS ARE OBTAINED BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, THOSE REQUIRED BY THE MUNICIPALITY OF ANCHORAGE STORM WATER PLAN REVIEW OFFICE. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED TO DIVERT WATER FROM AN EXCAVATION ONTO ROADWAYS. CONTRACTOR SHALL PROVIDE A DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND APPROVALS. CONTRACTOR SHALL PROVIDE COPIES OF NECESSARY PERMITS AND APPROVALS TO THE MOA RIGHT OF WAY PERMIT OFFICE.
- ALL DUCTILE AND CAST IRON PIPE AND FITTINGS SHALL BE ENCASED IN 8-MILS OF POLYETHYLENE WRAP, AS PER MASS SECTION 60.07 "POLYETHYLENE ENCASEMENT" FOR FITTINGS USED ON PVC LINES, EPOXY COATING MAY BE USED AS DESCRIBED IN DCPM 20.11
- CONTRACTOR SHALL MAINTAIN "REDLINE" RECORD DRAWINGS ON A CLEAN SET OF CONSTRUCTION DRAWINGS. THE "REDLINES" SHALL BE KEPT CURRENT ON A DAILY BASIS AND SHALL BE AVAILABLE FOR INSPECTION ON THE JOB SITE.
- CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT (ROADS, PARKING AREAS, DRIVEWAYS, ETC.) TO A LINE TWO (2) FEET BEYOND THE PROPOSED IMPROVEMENTS, AND MORE IF NECESSARY, DURING THE INITIAL EXCAVATION OPERATIONS. IF EXISTING PAVEMENT HAS BEEN LIFTED, IF EDGE DOES NOT OCCUR IN UNDISTURBED MATERIAL, OR IF EDGE IS LOCATED WITHIN A TRAVEL LANE, FURTHER REMOVAL MAY BE REQUIRED TO PROVIDE A PROPER TRANSITION BETWEEN NEW AND EXISTING PAVEMENT.
- TACK COAT SHALL BE APPLIED TO THE SAWN FACE OF ASPHALT.
- THE CONTRACTOR SHALL FOLLOW ALL MOA REGULATIONS FOR NOISE, HOURS OF OPERATIONS, AND DUST CONTROL.
- ANODE REQUIRED FOR ALL METALLIC FITTINGS OR EPOXY COATING IS REQUIRED.

SHEET INDEX

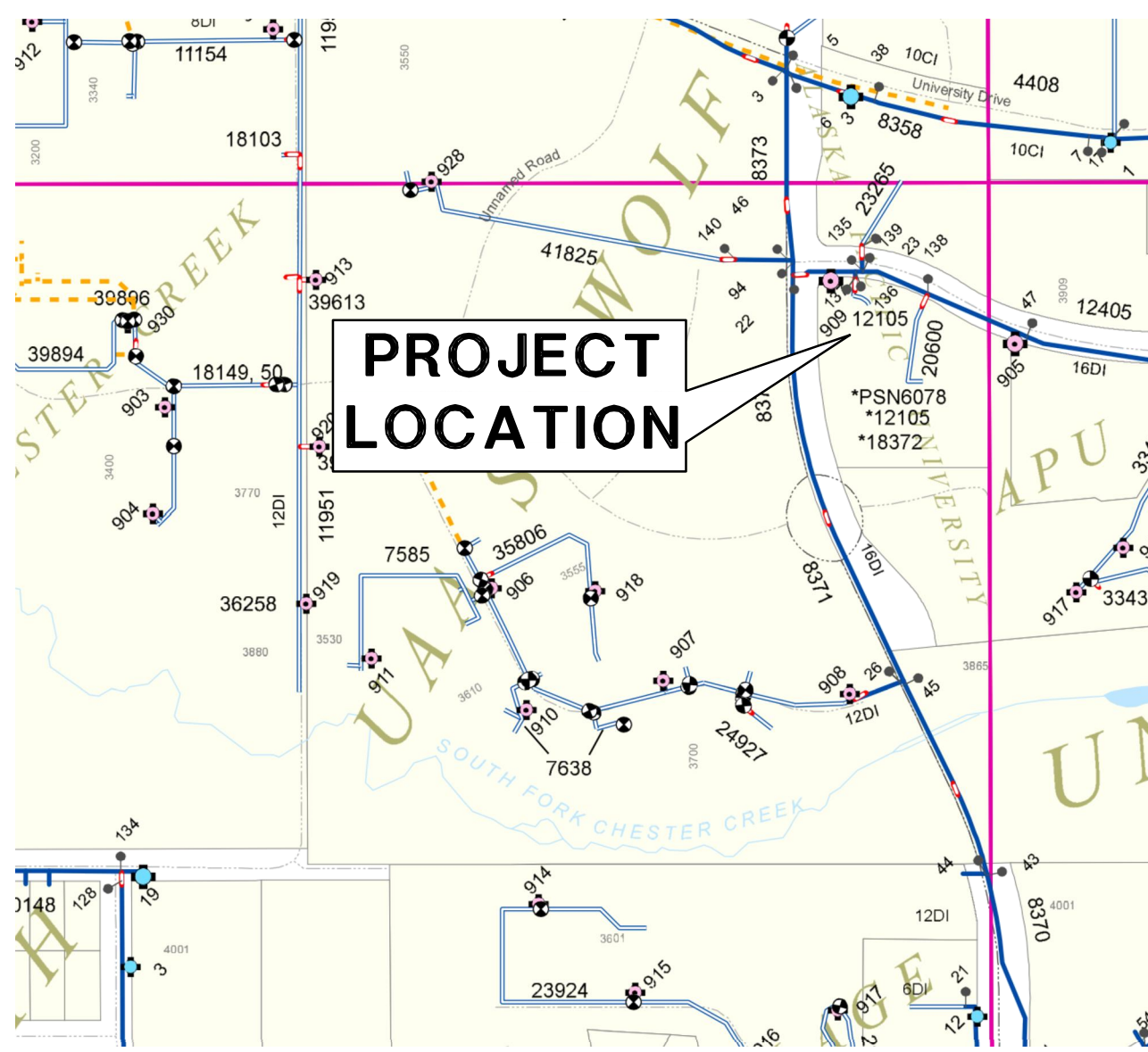
SHEET NO.	SHEET TITLE
1	NOTES, LEGEND, AND ABBREVIATIONS
2	WATER PLAN AND PROFILE



Locate Call Center of Alaska
Anchorage Area.....278-3121
Statewide.....800-478-3121
who will notify subscribed utilities only.
Other utilities need to be contacted individually.

WATER NOTES

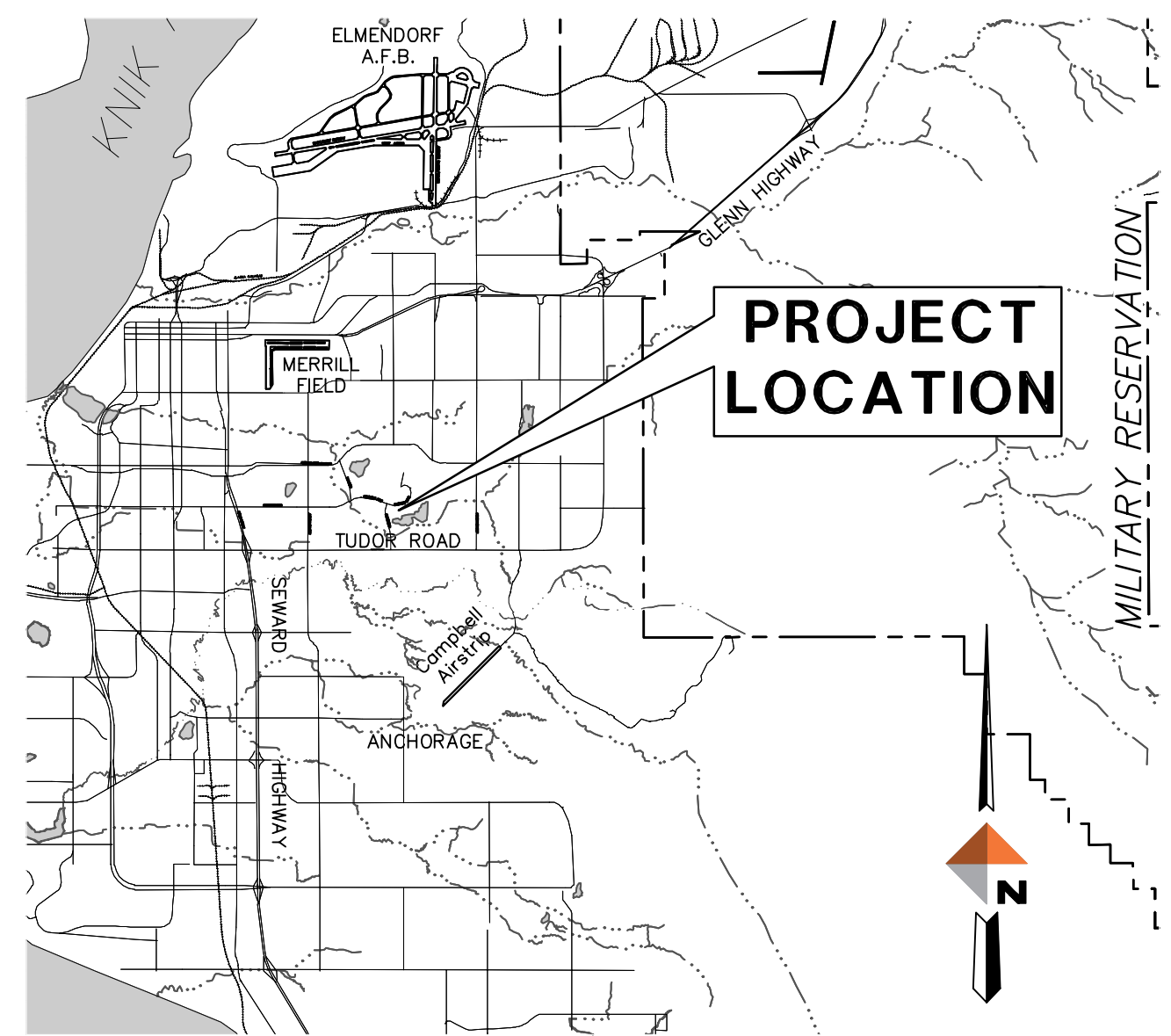
- HYDRANTS WILL BE ADJUSTED TO FINAL GRADE BY AWWU O&M DIVISION. THE CONTRACTOR'S ENGINEER SHALL GIVE A MINIMUM FORTY-EIGHT (48) HOURS WRITTEN NOTICE TO AWWU ENGINEERING INDICATING THE TYPE OF FIRE HYDRANT AND THE AMOUNT OF VERTICAL ADJUSTMENT. ALL HYDRANTS ADJUSTED BY AWWU ARE ON A REIMBURSABLE BASIS, EXCEPT AWWU CAPITAL PROJECTS.
- AWWU, AFD AND EXISTING CUSTOMERS SHALL BE NOTIFIED SEVENTY-TWO (72) HOURS IN ADVANCE OF WATER SERVICE INTERRUPTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY WATER SERVICE TO THE EXISTING CUSTOMERS IF THE OUTAGE EXCEEDS 6-HOURS OR IF DEEMED NECESSARY BY THE ENGINEER. THE CONTRACTOR SHALL HAVE A TEMPORARY WATER SERVICE PLAN REVIEWED AND APPROVED BY ADEC.
- ALL WATER MAINS SHALL BE PVC DR18 RJB.
- ALL BENDS, TEES, FIRE HYDRANTS, AND DEAD-ENDS SHALL HAVE RESTRAINED FITTINGS.
- NO PIPE LENGTH LESS THAN EIGHT (8) FEET SHALL BE INCORPORATED IN THE WATER SYSTEM EXCEPT FOR THOSE NECESSARY FOR FIRE HYDRANTS OR VALVE LOCATIONS UNLESS RESTRAINED BY USE OF FIELD-LOK GASKETS (OR EQUAL) OR MEG-A-LUG FITTINGS (OR EQUAL).
- THRUST RESTRAINT SHALL BE PROVIDED BY USE OF FIELD-LOK GASKETS (OR EQUAL) OR MEG-A-LUG FITTINGS (OR EQUAL) ON ALL MECHANICAL JOINTS. THE USE OF THRUST BLOCKS WILL NOT BE ALLOWED FOR DUCTILE IRON PIPE, BUT ARE REQUIRED FOR PVC PIPE (DIP FITTINGS).
- THE CONTRACTOR SHALL PROVIDE ALL SETUP AND TEAR DOWN REQUIRED TO OPEN BORE FLUSH NEWLY INSTALLED WATER PIPE. AWWU WILL PROVIDE FLUSH WATER FROM THE AWWU WATER DISTRIBUTION SYSTEM. THE CONTRACTOR MUST REQUEST WATER AT LEAST 48 HOURS PRIOR TO OPEN BORE FLUSHING. OPEN BORE FLUSHING MUST TAKE PLACE PRIOR TO INSTALLATION OF WATER SERVICES.
- ALL WATER MAIN TRENCHES AND BEDDING SHALL BE COMPACTED TO A MINIMUM OF 95% OF MAXIMUM DENSITY.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF 10 FEET OF BURY AT ALL POINTS.
- ALL PIPE BEDDING SHALL BE CLASS E AS SPECIFIED IN MASS.
- THE CONTRACTOR SHALL RELOCATE ANY WATER SERVICE CONNECTIONS INSTALLED WITH LESS THAN MINIMUM STANDARD DISTANCES PRIOR TO ACCEPTANCE BY AWWU.
- INSTALL DETECTABLE WARNING TAPE AND TRACER WIRE OVER ALL WATER LINES PER MASS.
- CONTRACTOR SHALL INSTALL CATHODIC PROTECTION IN ACCORDANCE WITH SECTION 20.10 OF THE AWWU DESIGN AND CONSTRUCTION PRACTICES MANUAL.
- WATER SERVICE SHALL BE 6" UNLESS NOTED ON PLANS.
- WATER SERVICES SHALL BE PLACED NO CLOSER THAN: 15 FEET HORIZONTALLY MEASURED TO ANY FIRE HYDRANT OR FIRE HYDRANT LEG; 10 FEET HORIZONTALLY MEASURED TO ANY SANITARY SEWER MAIN, SANITARY SEWER SERVICE, STORM SEWER, FOOTING DRAIN, STREET LIGHT, TRANSFORMER PAD, ELECTRICAL/TELEPHONE/CABLE BOX; AND 5 FEET HORIZONTALLY MEASURED TO ANY SIDE LOT LINE.
- NO DEFLECTION ALLOWED ON PVC WITHOUT USE OF DEFLECTION COUPLER.
- ALL FITTINGS SHALL BE FUSION BONDED EPOXY COATED DIP INSTALLED WITH BLUE FLUOROPOLYMER COATED CARBON STAINLESS STEEL NUTS & BOLTS.



WATER KEY MAP
SCALE: 1"=300'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		SURVEY MONUMENT
		SURVEY POINT NUMBER
		DECIDUOUS TREE
		CONIFEROUS TREE
		GAS METER
		WATER VALVE
		STORM CATCH BASIN IN CURB
		STORM MAN HOLE
		SEWER CLEANOUT
		SEWER MANHOLE
		ELECTRIC METER
		LIGHT POLE
		ELECTRIC JUNCTION BOX
		ELECTRIC MANHOLE
		COMMUNICATION JUNCTION BOX
		FIRE HYDRANT
		END CAP
		TEST BORING
		SIGN
		BOLLARD
		MAJOR CONTOUR (5 FOOT)
		MINOR CONTOUR (1 FOOT)
		FENCE LINE
		EDGE OF VEGETATION/TRAIL
		CURB AND GUTTER
		EDGE OF ASPHALT
		ELECTRIC LINE
		GAS LINE
		STORM DRAIN LINE
		WATER LINE
		SEWER LINE
		COMMUNICATION LINE
		TELEPHONE LINE
		PROPERTY LINE
		EASEMENT
		ADJACENT PROPERTY LINE
		RIGHT OF WAY CENTERLINE
		CONCRETE
		BUILDING OUTLINE



VICINITY MAP
SCALE: NTS

ABBREVIATIONS

AC - ASPHALT CONCRETE	MASS - MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS
AFD - ANCHORAGE FIRE DEPARTMENT	MAX - MAXIMUM
ALCAP - ALUMINUM CAP	MIN - MINIMUM
ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS	MOA - MUNICIPALITY OF ANCHORAGE
ARFS - AS REQUIRED FOR SAFETY	MON - MONUMENT
AWWU - ANCHORAGE WATER & WASTEWATER UTILITY	PSI - POUNDS PER SQUARE INCH
BOP - BOTTOM OF PIPE	PVC - POLYVINYL CHLORIDE
CL - CLASS OR CENTERLINE (SURVEY)	RJB - RESTRAINED JOINT INTEGRAL BELL
DIP - DUCTILE IRON PIPE	ROW - RIGHT OF WAY
E - ELECTRIC	S - SEWER
FDC - FIRE DEPARTMENT CONNECTION	SD - STORM DRAIN
GV - GATE VALVE	STA - STATION
INV - INVERT	SWPPP - STORM WATER POLLUTION PREVENTION PLAN
LF - LINEAR FEET	VB - VALVE BOX
	W - WATER

MASS DETAILS

SHEET NO.	DESCRIPTION
20-8	TRENCH BACKFILL AND BEDDING LAYOUT
60-5	TYPICAL PIPE ANGLE MARKER
60-8	TYPICAL VALVE BOX
60-20	ANODE DETAIL

SURVEY CONTROL POINTS

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
716	329323.99	361974.03	164.31	ALCAP
721	329285.43	362317.05	166.31	ALCAP
750	329449.24	361518.81	161.51	ALCAP
751	329450.25	361618.80	161.63	ALCAP

SURVEY CONTROL NOTES

COORDINATE SYSTEM
THIS PROJECT IS LOCATED ENTIRELY WITHIN THE ANCHORAGE BOWL 2000 ADJUSTMENT, A LOCAL SURFACE GRID COORDINATE SYSTEM EXPRESSED IN U.S. SURVEY FEET UNITS DEVELOPED BY THE ALASKA DEPARTMENT OF TRANSPORTATION.

BASIS OF COORDINATES

THE BASIS OF COORDINATES IS NGS STATION O'MALLEY, LOCATED NEAR THE INTERSECTION OF THE NEW SEWARD HIGHWAY AND O'MALLEY ROAD. SAID STATION HAS ANCHORAGE BOWL 2000 COORDINATES OF 303939.2310 N, 353362.5446 E. U.S. SURVEY FEET.

BASIS OF BEARINGS

THE BASIS OF BEARINGS IS A LOCAL PLANE BEARING BETWEEN NGS STATION O'MALLEY AND NGS STATION LOOP 2 USE RM 3 1964. NGS STATION LOOP 2 USE RM 3 1964 BEARS N 01°43'26.4"E A DISTANCE OF 49488.4476 FEET FROM NGS STATION O'MALLEY. NGS STATION LOOP 2 USE RM 3 1964 HAS ANCHORAGE BOWL 2000 COORDINATES OF 353405.2778 N, 354851.3982 E. U.S. SURVEY FEET.

TRANSLATION PARAMETERS

TO CONVERT THE LOCAL COORDINATES TO NAD83 (92) STATE PLANE COORDINATES EXPRESSED IN U.S. SURVEY FEET, TRANSLATE USING +2296868.6878 N USF, +1312517.4904 E USF, AND SCALE USING 0.9998910192.

VERTICAL CONTROL

ELEVATIONS ARE BASED ON THE MUNICIPALITY OF ANCHORAGE VERTICAL CONTROL NETWORK IN U.S. FEET. THE BASIS OF ELEVATIONS IS BENCHMARK "GAAB-4" HAVING A VALUE OF 254.31 FEET. THE DATUM IS NGS 1972 ADJUST.

SURVEY NOTES

- THE INFORMATION SHOWN HEREON IS BASED ON A FIELD BOOK SURVEY PERFORMED BY DOWL IN MARCH 2016. FIELD SURVEY INFORMATION IS LOCATED IN DOWL FIELD BOOK 2569, PGS 69-76. BACKGROUND INFORMATION DEPICTED IS SHOWN FOR ORIENTATION PURPOSED ONLY AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- MANHOLE LOCATIONS ARE SHOWN TO APPROXIMATE CENTER OF STRUCTURE
- UNDERGROUND NATURAL GAS, TELEPHONE, ELECTRIC, AND CABLE TV LINES WERE FIELD LOCATED. PRIVATE SERVICE LINES WERE NOT FIELD LOCATED. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY LOCATIONS BY OBTAINING UTILITY LOCATES PRIOR TO BEGINNING CONSTRUCTION. EXERCISE CAUTION DURING CONSTRUCTION.
- THE LOCATION OF WATER UTILITY LINES ARE APPROXIMATE. THEY ARE DRAWN FROM VALVE TO VALVE USING AS-BUILT INFORMATION AND WERE NOT FIELD LOCATED.
- UNDERGROUND STREET LIGHTING LINES EXITS WITHIN THE PROJECT AREA.
- UNDERGROUND NATURAL GAS, TELEPHONE, ELECTRIC, AND CABLE TV LINE CROSSINGS IN THE PROFILE ARE SHOWN AT AN ASSUMED VERTICAL LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTION, AND PREPARING THE UTILITIES.
- IT IS THE CONTRACTORS RESPONSIBILITY TO WORK AROUND ALL CENTERLINE MONUMENTS WITHOUT DISTURBING THE MONUMENT OR CASE. NEITHER THE MONUMENT NOR CASE IS TO BE REMOVED ON THIS PROJECT. MONUMENT CASES SHALL HAVE RISERS ADDED TO MATCH THE FINAL GRADE IF NEEDED.
- WHETHER LISTED OR NOT, ALL MONUMENTS OR PROPERTY MARKERS, CORNERS, OR ACCESSORIES, WHICH WILL BE DISTURBED OR BURIED, SHALL BE REFERENCED AND RE-ESTABLISHED IN THEIR ORIGINAL POSITION IN ACCORDANCE WITH SPECIAL PROVISION 65.02, ARTICLE 2.1 PROJECT CONTROL AND (A.S. 19.10.230) AND RECORDED (A.S. 35.65.040).
- ALL DIMENSIONS AND COORDINATES SHOWN ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
- CONTRACTORS RESPONSIBILITY TO VERIFY ALL SURVEY CONTROL BEFORE USE.

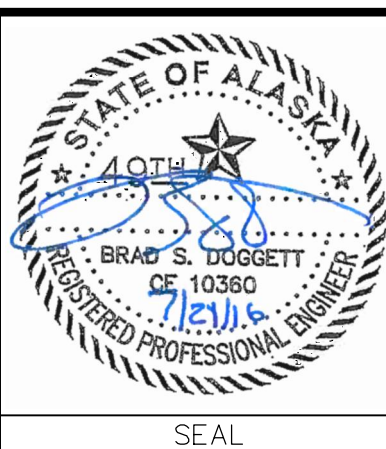
PS # 00-000

VERIFY SCALE		THIS BAR REPRESENTS ONE INCH ON ORIGINAL DRAWING.		0" = 1"		IF BAR IS NOT ONE INCH, ADJUST DRAWING SCALE ACCORDINGLY.		FULL SIZE SCALE	
DATA	DRAWN BY	CHECKED BY	DATE	REV	DATE	DESCRIPTION	SCALE	BY	DATE
BASE									
TOPOGRAPHY									
PROFILE									
SANITARY SEWER									
STORM SEWER									
WATER									
IGAS									
PLAN CHECK					REVISIONS				

RECORD DRAWING	Note: To be filled out on original drawings upon project completion.
1. DATA PROVIDED BY:	This will serve to certify that these Record Drawings are a true and accurate representation of the project as constructed. CONTRACTOR: _____ DATE: _____
2. DATA TRANSFERRED BY:	DATE: _____
3. Based on periodic field observations by the Engineer (or an individual under his/her direct supervision), the Contractor-provided data appears to represent the project as constructed. DATA TRANSFER CHECKED BY: _____ COMPANY: _____ DATE: _____	

REUSE OF DOCUMENTS
THIS DOCUMENT AND THE IDEAS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF AWWU AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF AWWU.

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UAA UPD RELOCATION	
UAA UPD RELOCATION TRACT 1A ANCHORAGE, ALASKA	
NOTES, LEGEND, AND ABBREVIATIONS	
SW 1/4 SECTION 28, T13N, R3W, S.M., AK	
HORIZ SCALE: NTS	DATE: 07/20/2016
VERT SCALE: NTS	GRID: SW1735
PS # XX-XXX	
SHEET 1 of 2	