

# SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION

**JULY 2014**

MAYOR  
BETH WYTHE

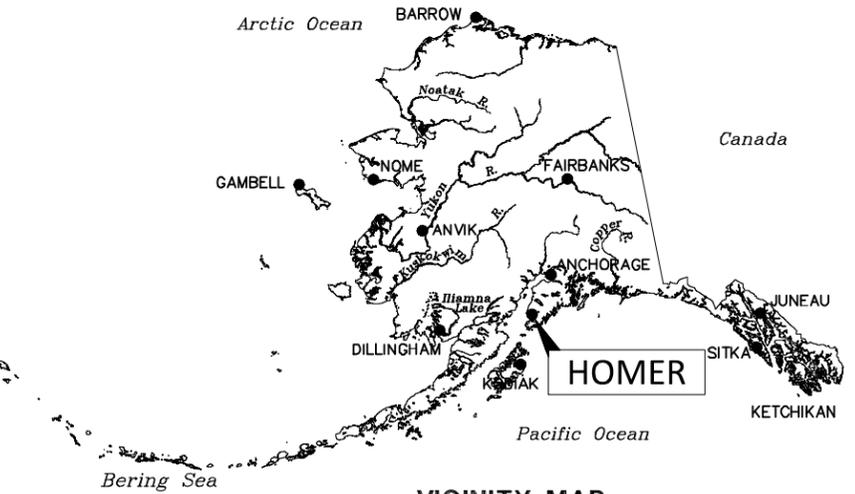
CITY COUNCIL MEMBERS  
DAVID LEWIS  
FRANCIE ROBERTS  
BARBARA HOWARD  
BRYAN ZAK  
BEAUREGARD BURGESS  
GUS VAN DYKE

CITY MANAGER  
WALT WREDE

PUBLIC WORKS DIRECTOR  
CAREY S. MEYER, P.E.

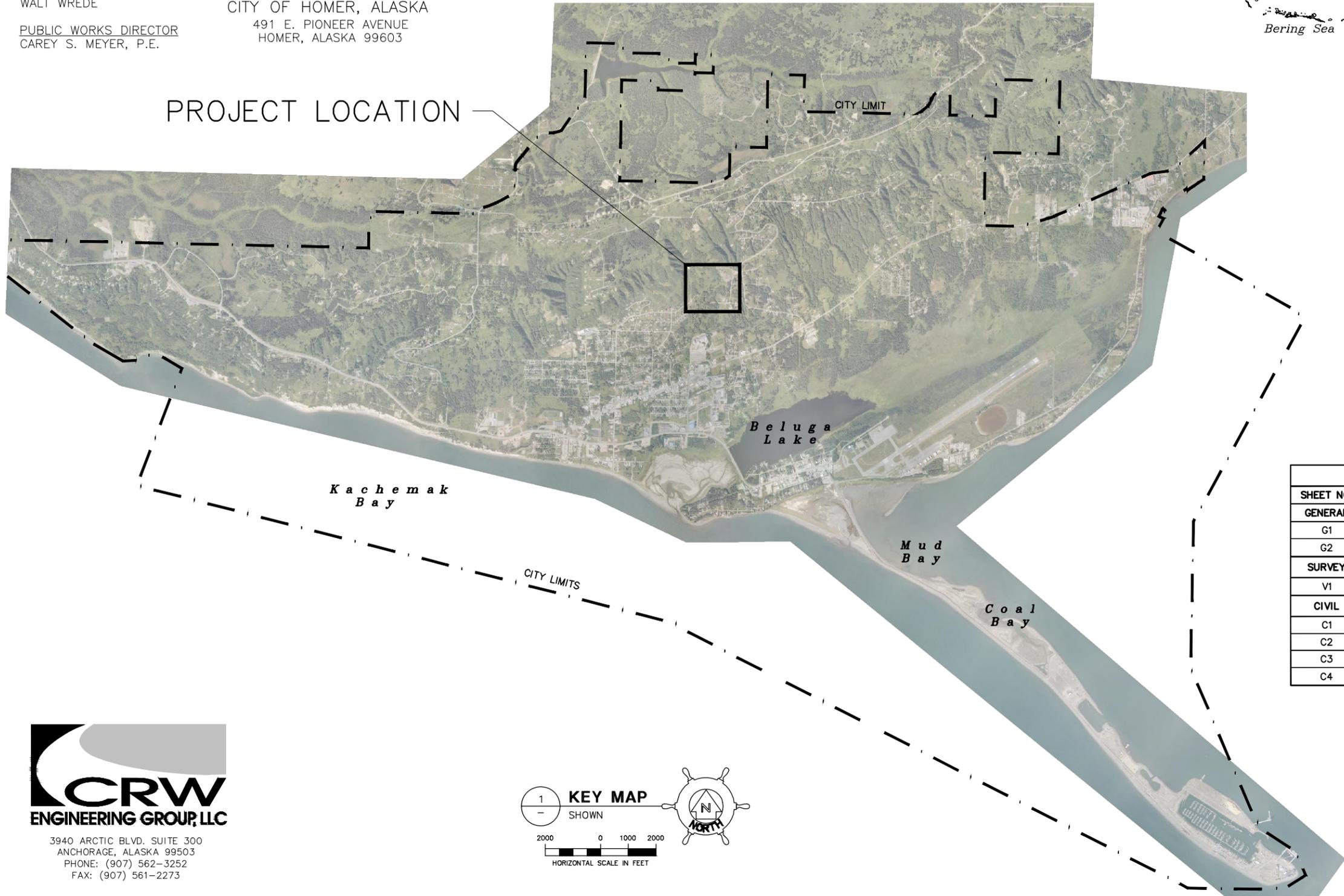


CITY OF HOMER, ALASKA  
491 E. PIONEER AVENUE  
HOMER, ALASKA 99603



**VICINITY MAP**  
NTS

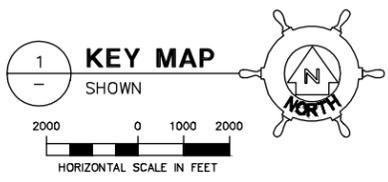
PROJECT LOCATION



SHEET INDEX	
SHEET NO.	SUBJECT
<b>GENERAL</b>	
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G2	ABBREVIATIONS, NOTES, LEGEND, & WATER SERVICE SCHEDULE
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C2	WATER PLAN & PROFILE - STATION 9+50.00 TO 21+92.72
C3	WATER PLAN & PROFILE - STATION 21+92.72 TO 27+58.36
C4	DETAILS



3940 ARCTIC BLVD. SUITE 300  
ANCHORAGE, ALASKA 99503  
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**ABBREVIATIONS**

AC = ASBESTOS CONCRETE  
 ACP = AC PAVEMENT  
 A.D. = ALGEBRAIC DIFFERENCE  
 ADOT&PF = ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
 APPROX = APPROXIMATE  
 AWU = ANCHORAGE WATER & WASTEWATER UTILITY  
 BM = BENCH MARK  
 BOP = BOTTOM OF PIPE  
 BV = BUTTERFLY VALVE  
 CPEP = CORRUGATED POLYETHYLENE PIPE  
 CB = CATCH BASIN  
 CHSCS = CITY OF HOMER STANDARD CONSTRUCTION SPECIFICATIONS  
 CL = CENTERLINE  
 DIA = DIAMETER  
 DIP = DUCTILE IRON PIPE  
 E = ELECTRICAL, EAST  
 ELEV = ELEVATION  
 E.O.P. = END OF PAVEMENT  
 E.O.S. = EDGE OF SHOULDER  
 ESMT = EASEMENT  
 FH = FIRE HYDRANT  
 FL = FLANGE  
 FT = FEET  
 F&I = FURNISH & INSTALL  
 GB = GRADE BREAK  
 GV = GATE VALVE  
 I.A.W = IN ACCORDANCE WITH  
 I.D. = INNER DIAMETER  
 IE = INVERT ELEVATION  
 INV = INVERT  
 LF = LINEAR FEET  
 LT = LEFT  
 MASS = MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS  
 MAX = MAXIMUM  
 MFR = MANUFACTURER  
 MH = MANHOLE  
 MIN = MINIMUM  
 MJ = MECHANICAL JOINT  
 N = NORTH  
 NO. = NUMBER  
 N.T.S. = NOT TO SCALE  
 N/A = NOT APPLICABLE  
 O.C. = ON CENTER  
 OG = ORIGINAL GROUND (ELEV.)  
 OHE = OVERHEAD ELECTRIC  
 P.C. = POINT OF CURVATURE  
 P.I. = POINT OF INTERSECTION  
 PL = PROPERTY LINE  
 PP = POWER POLE  
 P.T. = POINT OF TANGENCY  
 PVI = POINT OF VERTICAL INTERSECTION  
 R = RADIUS (LENGTH)  
 RC = REINFORCED CONCRETE  
 R.P. = RADIUS POINT  
 RT = RIGHT  
 R/W OR ROW = RIGHT-OF-WAY  
 S = SEWER, SOUTH  
 SD = STORM DRAIN  
 SF = SQUARE FEET  
 S.I. = STREET INTERSECTION  
 SHLDR = SHOULDER  
 SS = SANITARY SEWER  
 S.S. = STAINLESS STEEL  
 STA = STATION  
 STD = STANDARD  
 T = TANGENT (LENGTH)  
 TBM = TEMPORARY BENCHMARK  
 TCP = TEMPORARY CONSTRUCTION PERMIT  
 TWSP = THIN WALL STEEL PIPE  
 T.O.C. = TOP OF CONCRETE  
 TYP = TYPICAL  
 U/G = UNDER GROUND  
 VB = VALVE BOX  
 VC = VERTICAL CURVE  
 VPC = VERTICAL POINT OF CURVATURE  
 VPI = VERTICAL POINT OF INTERSECTION  
 VPT = VERTICAL POINT OF TANGENT  
 W = WATER, WEST

**LEGEND**

PLAN		
PROPOSED (P)	EXISTING (E)	DESCRIPTION
	----	RIGHT OF WAY
	----	PROPERTY LINE
----	----	EASEMENT LINE
----	----	ROADWAY CENTERLINE
----	----	EDGE OF PAVEMENT
----	----	EDGE OF GRAVEL
.....		FILL LIMITS
----		CUT LIMITS
----		WETLAND BOUNDARY
----	----	SWALE
→		DRAINAGE ARROW
10+00		PROJECT BASELINE STATION
		WATER VALVE
		WATER KEYBOX
		FIRE HYDRANT
		REDUDER
[		BLIND FLANGE
	○	SANITARY SEWER MANHOLE
	□	CULVERT
	⊞	ELECTRIC VAULT
	⊞	LIGHTING VAULT
	□U.C.	UTILITY CABLE PEDESTAL
	⊕	UTILITY TELEPHONE PEDESTAL
	○	UTILITY POLE
— x — x —	— x — x —	FENCE
	←	GUY ANCHOR
	☆	LIGHT POLE
	⊖	SIGN
		SIGN CALLOUT
	●	CONIFEROUS TREE OR BUSH
	~~~~~	TREE OR BRUSH LINE
	—OHE/T—	OVERHEAD ELECTRIC & TELEPHONE
	—OHE—	OVERHEAD ELECTRIC LINE
	—E—	UNDERGROUND ELECTRIC LINE
	—T—	UNDERGROUND TELEPHONE LINE
	—G—	UNDERGROUND GAS LINE
	—C—	UNDERGROUND CABLE LINE
	—S—	UNDERGROUND SANITARY SEWER LINE
—W—	—W—	UNDERGROUND WATER LINE
	—SD—	UNDERGROUND STORM DRAIN LINE
	⊙	STORM DRAIN MANHOLE
	⊕ #	SOIL TEST BORING

PROFILE		
PROPOSED (P)	EXISTING (E)	DESCRIPTION
----	----	CENTERLINE GRADE
----	----	EXISTING GRADE OVER PIPE
----	----	FINISHED GRADE OVER PIPE
		SEWER MANHOLE

**GENERAL NOTES**

- CAUTION!! UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT AREA. CONTRACTOR SHALL CALL FOR UTILITY LOCATES PRIOR TO BEGINNING CONSTRUCTION.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE 2011 CITY OF HOMER STANDARD CONSTRUCTION SPECIFICATIONS (CHSCS).
- THE LOCATION OF THE EXISTING FEATURES AND UTILITIES SHOWN IN THESE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES ENCOUNTERED AND RECORD THEIR LOCATION ON THE CONTRACT RECORD DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. CONTRACTOR SHALL ADJUST ALIGNMENT OR GRADE OF PROPOSED PIPING AS NECESSARY TO AVOID CONFLICTS WITH EXISTING UTILITIES.
- CONTRACTOR SHALL POST CORPS OF ENGINEERS PERMIT PLACARD AT CONSTRUCTION SITE. PLACARD WILL BE PROVIDED BY THE CITY OF HOMER.
- ALL WORK IN CLOSE PROXIMITY TO EXISTING OVERHEAD TELEPHONE AND ELECTRIC UTILITIES SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, CODES AND GUIDELINES AND THE CLEARANCE REQUIREMENTS OF THE SERVING UTILITY.
- LIMITS OF EXCAVATION SHOWN ON THE DRAWINGS ARE APPROXIMATE. ACTUAL LIMITS WILL BE DETERMINED BY THE ENGINEER BASED ON FIELD CONDITIONS.
- ALL ORGANIC MATERIAL SHALL BE REMOVED FROM THE SUBGRADE TO A DEPTH TO BE DETERMINED BY THE ENGINEER. NO ORGANIC MATERIAL OR OTHER DELETERIOUS MATERIAL SHALL BE UTILIZED FOR BACKFILL.
- ALL WORK SHALL BE PERFORMED WITHIN PUBLIC RIGHT-OF-WAY, PUBLIC USE EASEMENT, UTILITY EASEMENT, DRAINAGE EASEMENT, OR TEMPORARY CONSTRUCTION PERMIT AREA. ALL DISTURBED PROPERTY BEYOND THE SLOPE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROVIDE RECORD DRAWING OF THE CONSTRUCTED UTILITIES. THE CONTRACTOR SHALL SUBMIT RECORD SURVEY NOTES WITH THE RECORD DRAWINGS.
- ALL WATER AND SEWER STATIONING IS PIPE STATIONING.
- "BOP" IS DEFINED AS THE OUTSIDE BOTTOM OF PIPE. "INV" IS DEFINED AS THE INSIDE BOTTOM OF PIPE.
- WATER RESULTING FROM THE CONTRACTOR'S DEWATERING EFFORT MAY NOT BE PUMPED OR OTHERWISE DIVERTED INTO EXISTING STORM DRAINS UNLESS REQUIRED PERMITS INCLUDING, BUT NOT LIMITED TO, THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION ARE OBTAINED BY THE CONTRACTOR. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE ALLOWED TO DIVERT WATER FROM EXCAVATION ONTO ROADWAYS. THE CONTRACTOR SHALL PROVIDE DISPOSAL SITE FOR EXCESS WATER AND SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL PROVIDE COPIES OF PERMITS AND APPROVALS TO THE ENGINEER PRIOR TO BEGINNING DEWATERING.
- ANY EXISTING SURVEY MONUMENTATION DISTURBED BY CONTRACTOR OPERATIONS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE BY SURVEYOR LICENSED TO PRACTICE IN THE STATE OF ALASKA.
- ALL WATER PIPE INSULATION SHALL BE RIGID BOARD, HIGH DENSITY EXTRUDED POLYSTYRENE, MIN 60 P.S.I. COMPRESSIVE STRENGTH, FOR UNDERGROUND INSTALLATIONS EQUIVALENT TO R-20 PER FOUR (4) INCH THICK INSULATION.

**WATER NOTES**

- ALL WATER MAINS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE, SDR 11.
- BEDDING FOR HDPE MAINS SHALL BE CLASS B PIPE BEDDING.
- MINIMUM ALLOWABLE BENDING RADIUS FOR HDPE, SDR 11 PIPE SHALL BE GREATER THAN 25 TIMES THE OUTSIDE DIAMETER.
- ALL VALVES SHALL HAVE FLANGED CONNECTIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
- ALL DUCTILE IRON FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES VERTICAL SEPARATION BETWEEN WATER AND SEWER MAINS AND SERVICES. WHERE WATER AND SEWER MAINS CROSS, SEWER MAIN JOINTS SHALL BE AT LEAST 9 FEET FROM WATER JOINTS.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES VERTICAL SEPARATION BETWEEN WATER MAINS AND STORM DRAINS. WHERE WATER AND STORM DRAINS CROSS, STORM DRAIN JOINTS SHALL BE AT LEAST 9 FEET FROM WATER JOINTS.
- WHERE PROPOSED WATER MAIN CROSSES AN EXISTING SEWER MAIN, CONTRACTOR SHALL REPLACE A SEGMENT OF THE EXISTING SEWER MAIN WITH A NEW STICK OF DIP SUCH THAT THE SEWER MAIN JOINTS ARE A MINIMUM OF 9 FEET FROM THE WATER MAIN.
- WHERE PROPOSED WATER MAIN CROSSES AN EXISTING STORM DRAIN PIPE, CONTRACTOR SHALL REPLACE A SEGMENT OF THE EXISTING STORM DRAIN WITH A NEW STICK OF CPEP SUCH THAT THE STORM DRAIN JOINTS ARE A MINIMUM OF 9 FEET FROM THE WATER MAIN.
- ALL WATER MAINS SHALL HAVE A MINIMUM OF 7 FEET OF BURY (TOP OF PIPE) AT ALL POINTS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS. AT LOCATIONS WHERE THERE IS LESS THAN 7 FEET OF BURY, PIPE INSULATION SHALL BE INSTALLED.
- CONTRACTOR SHALL VERIFY SIZE AND TYPE OF PIPE AT PROPOSED TIE-IN TO EXISTING WATER MAIN LOCATIONS.
- ALL PIPING, FLUX, AND SOLDER SHALL BE LEAD FREE.
- ALL MATERIALS IN DIRECT CONTACT WITH POTABLE WATER SHALL BE APPROVED FOR THAT USE BY NSF IN ACCORDANCE WITH STANDARD 61.

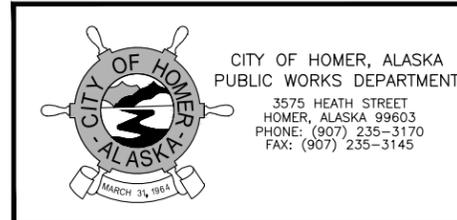
**WATER SERVICE SCHEDULE**

LEGAL DESCRIPTION	STATION AT MAIN	OFFSET (LT/RT)	SIZE (INCHES)	LENGTH (FEET)
BARNETT'S SOUTH SLOPE SUBD ANNIE'S ADDN TRACT A	1+08.85	RT	1	18
BARNETT SUBDIVISION UNIT 2, TRACT 3	5+86.78	LT	1	42
BARNETT'S SOUTH SLOPE SUBD BLK 4, LT 5	18+45.72	LT	1	18
BARNETT'S SOUTH SLOPE SUBD BLK 3, LT 4	21+12.02	RT	1	17
BARNETT'S SOUTH SLOPE SUBD BLK 4, LT 4	21+87.31	LT	1	42
BARNETT'S SOUTH SLOPE SUBD BLK 3, LT 3	22+89.08	RT	1	17

File: J:\Subdata\20501.04\_Shellfish-South\_Slope\_Water\_Main\00\_CADD\01\_Working\_Set\01\_Civil\_Scope\_And\_Notes.dwg



REVISION			
REV	DATE	DESCRIPTION	BY



SCALE	HOR. N/A VER. N/A
DESIGNED BY	JCH
DRAWN BY	KB
CHECKED BY	JCH
APPROVED BY	PAB

CITY OF HOMER, ALASKA  
 HOMER WATER SYSTEM IMPROVEMENTS  
 SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION  
**ABBREVIATIONS, NOTES, LEGEND,  
 & WATER SERVICE SCHEDULE**

STATUS: FINAL DESIGN      DATE: JULY 2014

PROJECT NO.	20501.04
CITY GRID	
WATER GRID	
SEWER GRID	
SHEET	G2
OF	G2

HORIZONTAL CONTROL				
Point #	Northing	Easting	Elevation	Description
1804	1010.77	-395.28	367.59	Found Mon.
1805	1040.32	44.42	352.23	Found 5/8" dia. Rebar
1806	980.28	124.95	344.24	Found 5/8" dia. Rebar
2289	959.78	1097.95	352.81	Found 2" dia. Al. Cap
2548	1493.93	1173.66	--	Found 1 1/2" dia. Al. Cap
2831	1246.91	1111.77	--	Found 1 1/2" dia. Al. Cap
3029	1743.51	1444.41	--	Found Al. Cap Mon. Lid
3037	1039.95	483.99	339.60	Found 5/8" dia. Rebar

VERTICAL CONTROL				
Point #	Northing	Easting	Elevation	Description
1956	573.8	-363.4	331.60	Top Nut of Water Shut Off Valve
1991	843.5	-365.3	351.34	Spike in Power Pole
2344	1767.7	1374.7	404.86	Top Nut of Water Shut Off Valve
2629	1793.5	1098.2	419.65	Sanitary Sewer Manhole Lid
2631	1814.8	1121.3	420.18	"X" Chiseled in Westerly Top Flange Bolt of Fire Hydrant

**NOTES**

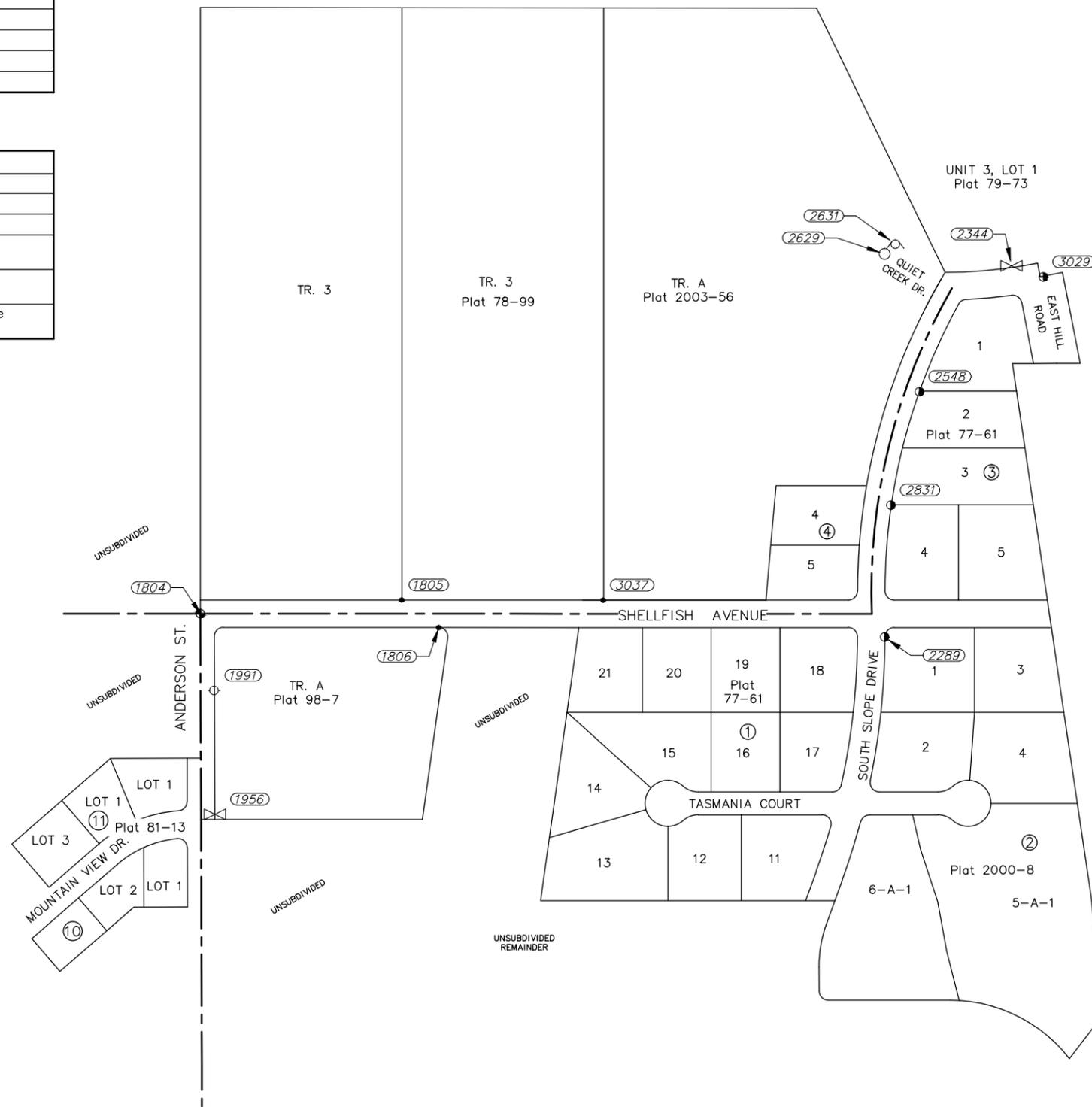
1. ALL FIELD SURVEY DATA AND COMPUTATIONS WERE PROVIDED TO CRW ENGINEERING GROUP, LLC, BY GARY NELSON, PLS (#7610) WITH ABILITY SURVEYS (907) 235-8440.
2. ALL COORDINATES AND DIMENSIONS SHOWN ARE IN U.S. SURVEY FEET.
3. WHETHER LISTED OR NOT, ALL MONUMENTS OR PROPERTY MARKERS, CORNERS, OR ACCESSORIES, WHICH WILL BE DISTURBED OR BURIED, SHALL BE REFERENCED OR RE-ESTABLISHED IN THEIR ORIGINAL POSITION (A.S. 19.10.260) AND RECORDED (A.S. 34.65.040).
4. THE BACKGROUND LOT INFORMATION SHOWN IS FOR ORIENTATION PURPOSES ONLY AND DOES NOT REPRESENT A BOUNDARY SURVEY. NO TITLE SEARCH WAS PREFORMED, OTHER EASEMENTS MAY EXIST.

**HORIZONTAL CONTROL STATEMENT**

COORDINATES ARE BASED ON A LOCAL (PROJECT AREA) COORDINATE SYSTEM.

**VERTICAL CONTROL STATEMENT**

VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM (NAVD 1988) BASED UPON PID TT0213, A BRASS DISK AT DON JOSE'S RESTAURANT, HAVING A PUBLISHED ELEVATION OF 150.74 (FEET). PER ABILITY SURVEYS.



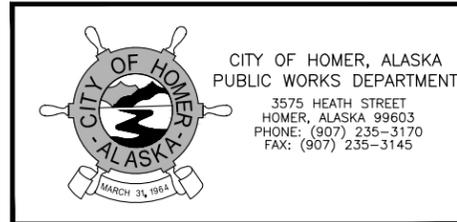
**PROJECT LEGEND**

- FOUND BRASS CAP
- FOUND ALUMINUM CAP
- FOUND REBAR
- ⑤00 CONTROL POINT NUMBER
- POWER/UTILITY POLE
- SEWER MANHOLE
- ⊗ WATER VALVE

File: L:\Jobsdata\20501.04\_Shellfish-South Slope Water Main\00\_CADD\01\_Working Set\02\_Survey\03\_Survey Control\4893\_SCD\_MLA\_082213.dwg



REVISION			
REV	DATE	DESCRIPTION	BY



SCALE	HOR. 1" = 150'
	VER. N/A
DESIGNED BY	
DRAWN BY	JG
CHECKED BY	TDS
APPROVED BY	MLJ

CITY OF HOMER, ALASKA  
HOMER WATER SYSTEM IMPROVEMENTS  
SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION  
**SURVEY CONTROL SHEET**

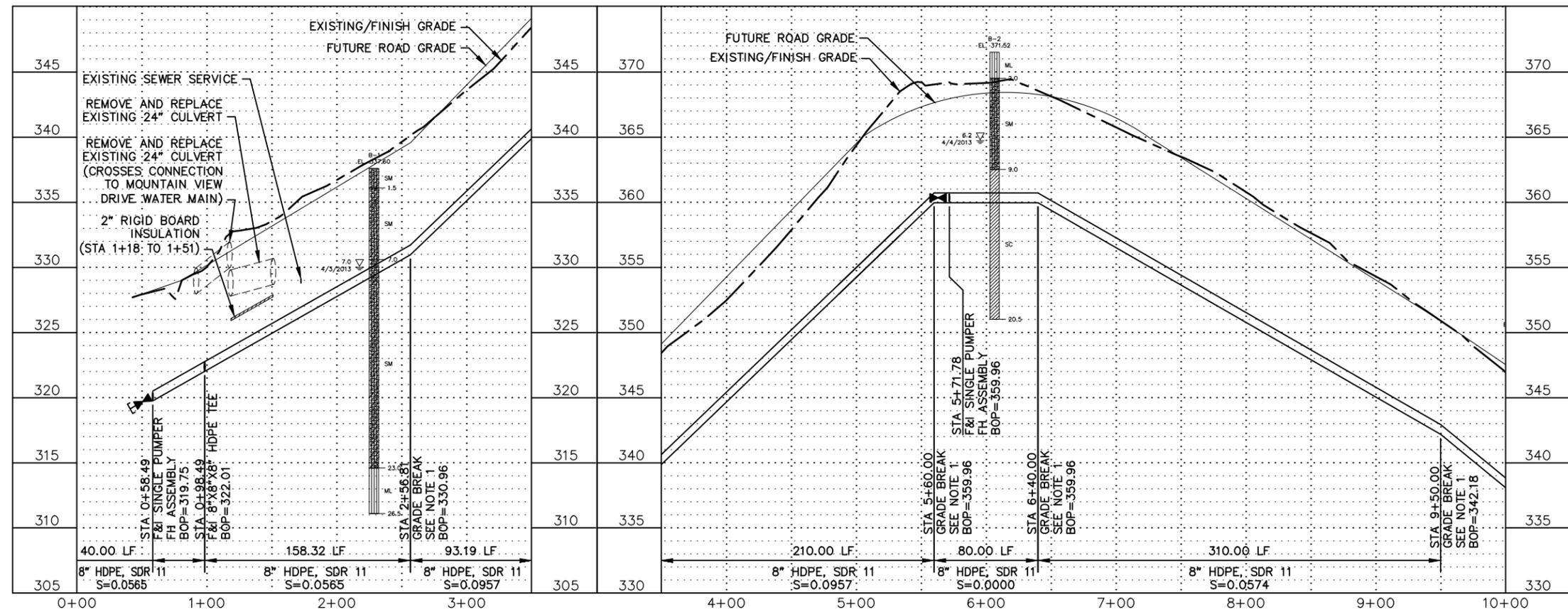
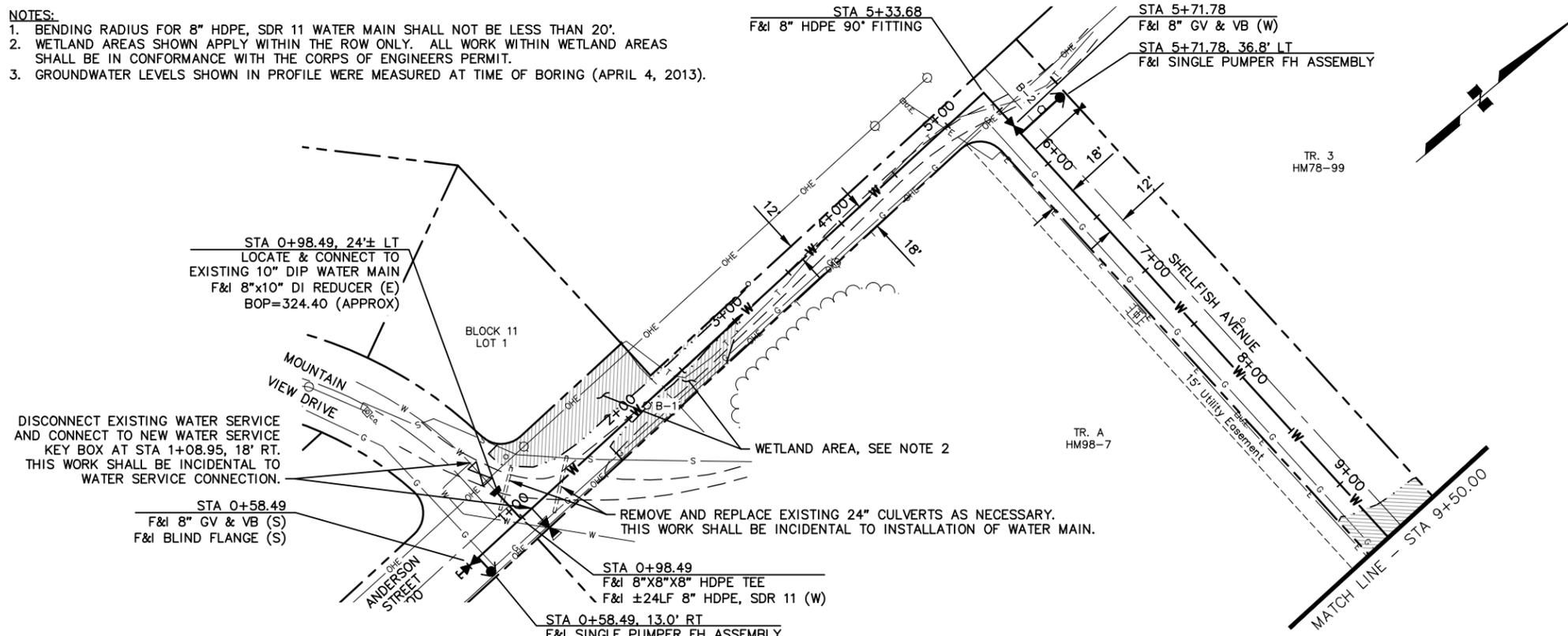
SHELLFISH AVENUE MAPPING

STATUS: FINAL DESIGN      DATE: JULY 2014

PROJECT NO.	
CITY GRID	
WATER GRID	
SEWER GRID	
SHEET	V1
OF	V1

- NOTES:
1. BENDING RADIUS FOR 8" HDPE, SDR 11 WATER MAIN SHALL NOT BE LESS THAN 20'.
  2. WETLAND AREAS SHOWN APPLY WITHIN THE ROW ONLY. ALL WORK WITHIN WETLAND AREAS SHALL BE IN CONFORMANCE WITH THE CORPS OF ENGINEERS PERMIT.
  3. GROUNDWATER LEVELS SHOWN IN PROFILE WERE MEASURED AT TIME OF BORING (APRIL 4, 2013).

WATER MAIN DESIGN ALIGNMENT			
NORTHING	EASTING	C/L PIPE STATION	DESCRIPTION
523.41	-381.67	0+58.49	TEE - FIRE HYDRANT
998.59	-383.16	5+33.68	8" HDPE 90° FITTING



File: J:\data\20501.04\_Shellfish-South\_Slope\_Water\_Main\00\_CADD\01\_Working\_Set\01\_Civil\_Water\_P&P.dwg

3940 ARCTIC BLVD, SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
FAX: (907) 561-2273

GRAPHIC SCALE

REV	DATE	DESCRIPTION	BY

CITY OF HOMER, ALASKA  
PUBLIC WORKS DEPARTMENT  
3575 HEATH STREET  
HOMER, ALASKA 99603  
PHONE: (907) 235-3170  
FAX: (907) 235-3145

SCALE  
HOR. 1"=50'  
VER. 1"=5'

DESIGNED BY	JCH
DRAWN BY	JCH
CHECKED BY	PAB
APPROVED BY	PAB

CITY OF HOMER, ALASKA  
HOMER WATER SYSTEM IMPROVEMENTS  
SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION

**WATER PLAN & PROFILE**  
STATION 0+58.49 TO 9+50.00

STATUS: FINAL DESIGN      DATE: JULY 2014

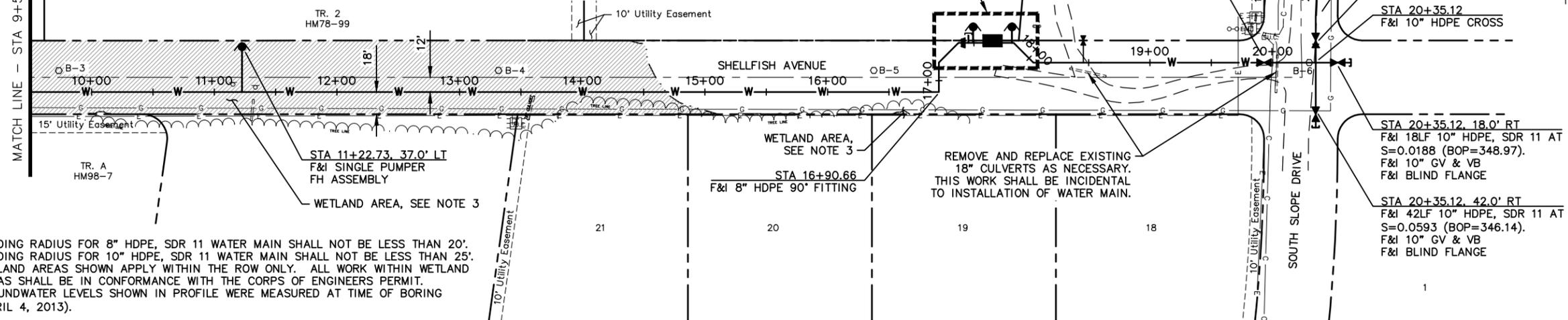
PROJECT NO.	20501.04
CITY GRID	
WATER GRID	
SEWER GRID	
SHEET	C1
OF	C4

WATER MAIN DESIGN ALIGNMENT			
NORTHING	EASTING	C/L PIPE STATION	DESCRIPTION
998.24	773.82	16+90.66	8" HDPE 90° FITTING
1022.24	773.82	17+14.67	8" HDPE 45° FITTING - SEE SEPARATE PRV PLAN SET
1038.26	789.85	17+37.32	8" HDPE 45° FITTING - SEE SEPARATE PRV PLAN SET
1038.24	834.91	17+82.38	10" HDPE 45° FITTING - SEE SEPARATE PRV PLAN SET
1022.21	850.94	18+05.05	10" HDPE 45° FITTING - SEE SEPARATE PRV PLAN SET
1022.14	1081.01	20+35.12	10" HDPE CROSS
1059.74	1081.02	20+72.72	3' BEND
1179.61	1086.50	21+92.72	5' BEND

TR. A  
HM2003-56

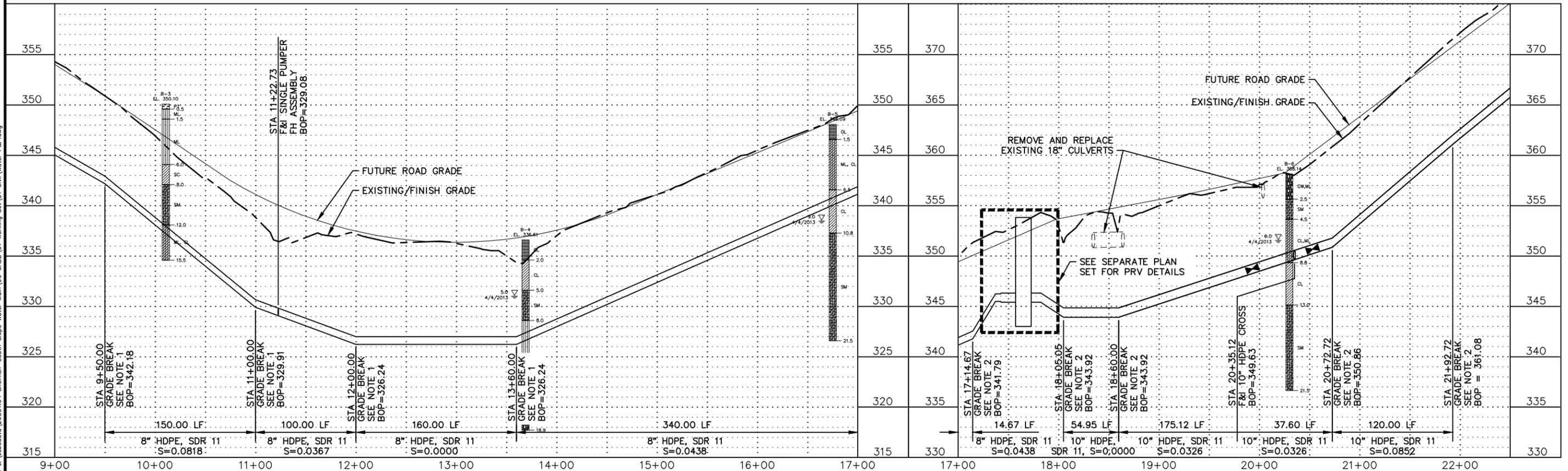
MATCH LINE - STA 9+50.00

MATCH LINE - STA 21+92.72



**NOTES:**

- BENDING RADIUS FOR 8" HDPE, SDR 11 WATER MAIN SHALL NOT BE LESS THAN 20'.
- BENDING RADIUS FOR 10" HDPE, SDR 11 WATER MAIN SHALL NOT BE LESS THAN 25'.
- WETLAND AREAS SHOWN APPLY WITHIN THE ROW ONLY. ALL WORK WITHIN WETLAND AREAS SHALL BE IN CONFORMANCE WITH THE CORPS OF ENGINEERS PERMIT.
- GROUNDWATER LEVELS SHOWN IN PROFILE WERE MEASURED AT TIME OF BORING (APRIL 4, 2013).

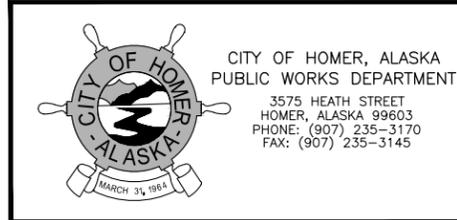


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GRAPHIC SCALE 0 50 100 150

REV	DATE	DESCRIPTION	BY



SCALE  
HOR. 1"=50'  
VER. 1"=5'

DESIGNED BY	JCH
DRAWN BY	JCH
CHECKED BY	PAB
APPROVED BY	PAB

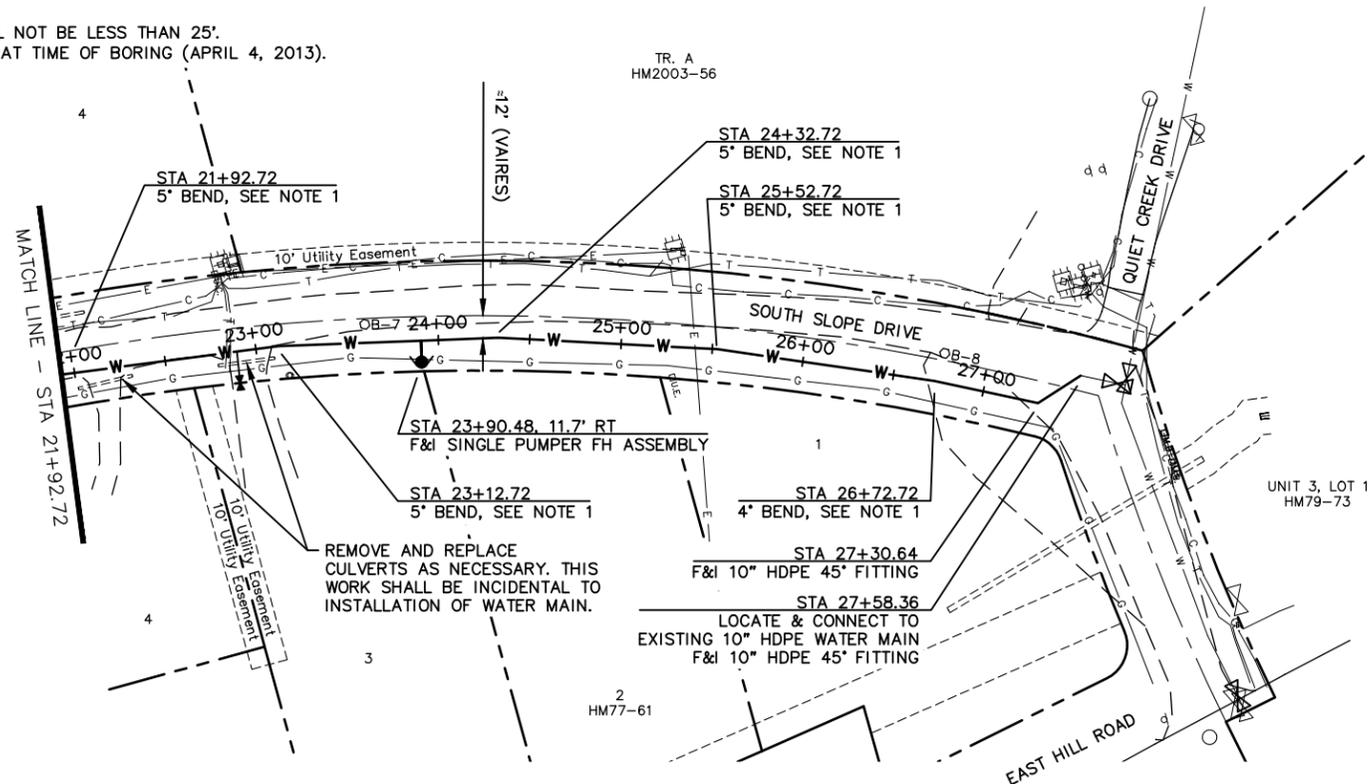
CITY OF HOMER, ALASKA  
HOMER WATER SYSTEM IMPROVEMENTS  
SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION

**WATER PLAN & PROFILE**  
STATION 9+50.00 TO 21+92.72

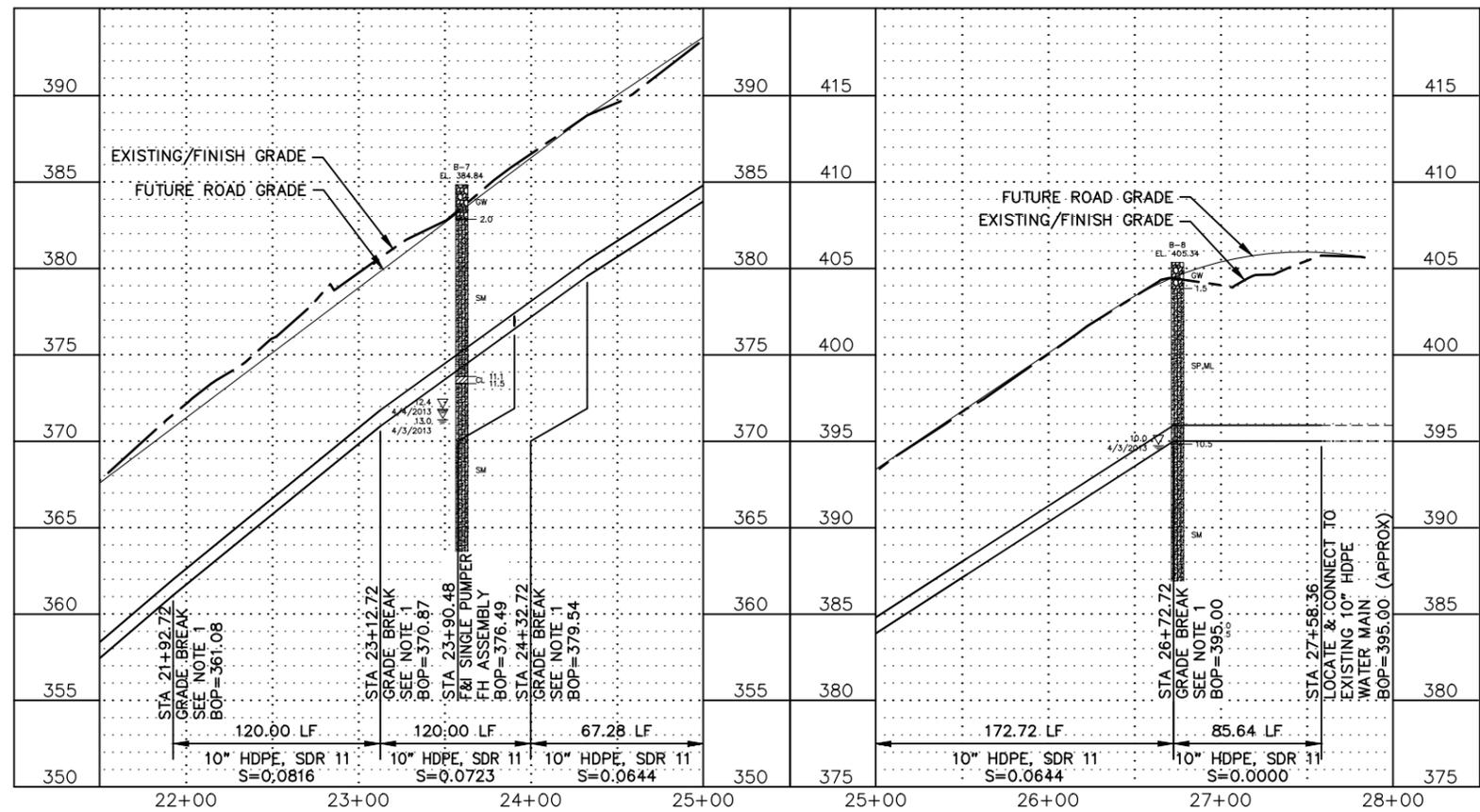
STATUS: FINAL DESIGN      DATE: JULY 2014

PROJECT NO.	20501.04
CITY GRID	
WATER GRID	
SEWER GRID	
SHEET	C2
OF	C4

- NOTE:**
- BENDING RADIUS FOR 10" HDPE, SDR 11 WATER MAIN SHALL NOT BE LESS THAN 25'.
  - GROUNDWATER LEVELS SHOWN IN PROFILE WERE MEASURED AT TIME OF BORING (APRIL 4, 2013).



WATER MAIN DESIGN ALIGNMENT			
NORTHING	EASTING	C/L PIPE STATION	DESCRIPTION
1298.49	1102.89	23+12.72	5' BEND
1415.38	1130.04	24+32.72	5' BEND
1529.30	1167.75	25+52.72	5' BEND
1639.31	1215.68	26+72.72	4' BEND
1242.36	1690.72	27+30.64	10" HDPE 45" FITTING
1234.02	1717.16	27+58.36	CONNECT TO EXISTING 10" HDPE WATER MAIN



File: J:\data\20501.04\_Shellfish-South\_Slope\_Water\_Main\00\_CADD\01\_Working\_Set\01\_Civil\Water\_P&P.dwg

**CRW**  
ENGINEERING GROUP, LLC

3940 ARCTIC BLVD, SUITE 300  
ANCHORAGE, ALASKA 99503  
PHONE: (907) 562-3252  
FAX: (907) 561-2273

GRAPHIC SCALE: 0, 50, 100, 150

REV	DATE	DESCRIPTION	BY



CITY OF HOMER, ALASKA  
PUBLIC WORKS DEPARTMENT

3575 HEATH STREET  
HOMER, ALASKA 99603  
PHONE: (907) 235-3170  
FAX: (907) 235-3145

SCALE  
HOR. 1"=50'  
VER. 1"=5'

DESIGNED BY	JCH
DRAWN BY	JCH
CHECKED BY	PAB
APPROVED BY	PAB

CITY OF HOMER, ALASKA  
HOMER WATER SYSTEM IMPROVEMENTS  
SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION

**WATER PLAN & PROFILE**  
STATION 21+92.72 TO 27+58.36

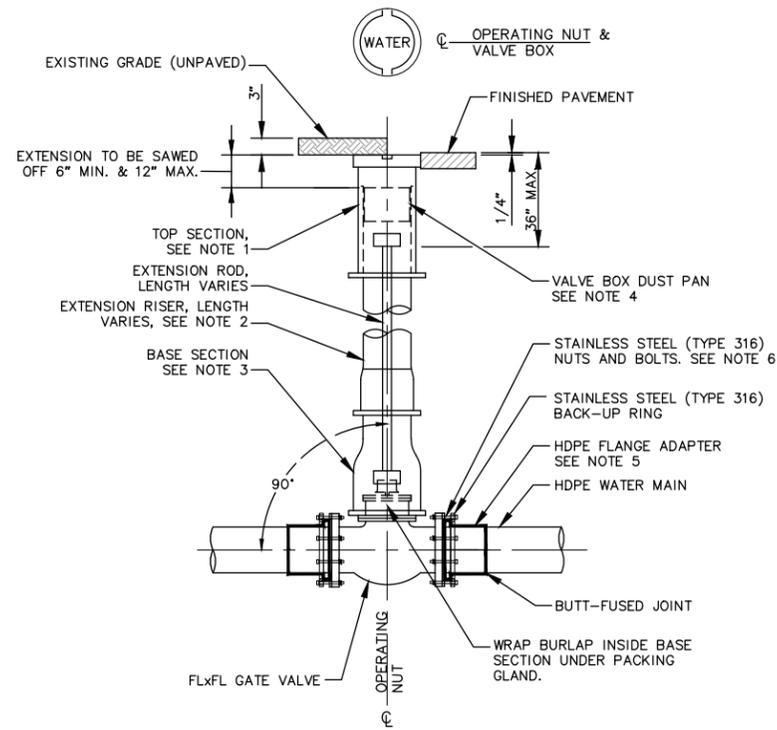
STATUS: FINAL DESIGN      DATE: JULY 2014

PROJECT NO.	20501.04
CITY GRID	
WATER GRID	
SEWER GRID	
SHEET	C3
OF	C4

File: J:\Subdata\20501.04\_Shellfish-South\_Slope\_Water\_Main\00\_CADD\01\_Working\_Set\01\_Civil\_Details.dwg

**VALVE INSTALLATION NOTES:**

1. LID AND TOP SECTION SHALL BE OLYMPIC FOUNDRY TYPE C OR APPROVED EQUAL.
2. EXTENSION RISER SHALL BE OLYMPIC FOUNDRY TYPE A, 7 FOOT SECTION OF 5" DIAMETER SINGLE HUB SOIL PIPE OR APPROVED EQUAL.
3. BASE SECTION SHALL BE OLYMPIC FOUNDRY TYPE B OR APPROVED EQUAL.
4. VALVE BOX DUST PAN SHALL BE CAST IRON AND BE THE PRODUCT OF THE VALVE BOX MANUFACTURER.
5. FURNISH AND INSTALL US PIPE FULL FACE FLANGE-TYTE GASKET BETWEEN ALL FLANGES.
6. ALL STAINLESS STEEL BOLT THREADS SHALL BE COATED WITH TS MOLY-LUBRICANTS TS-74 STAINLESS ANTISEIZE, OR APPROVED EQUAL, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

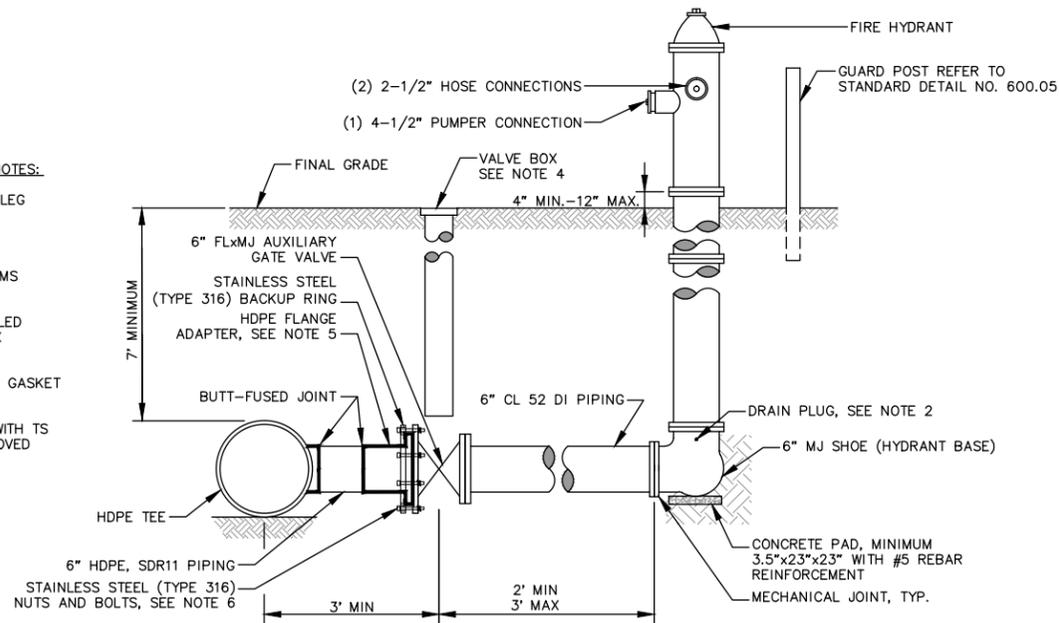


**TYPICAL VALVE & VALVE BOX ASSEMBLY DETAIL**

N.T.S.

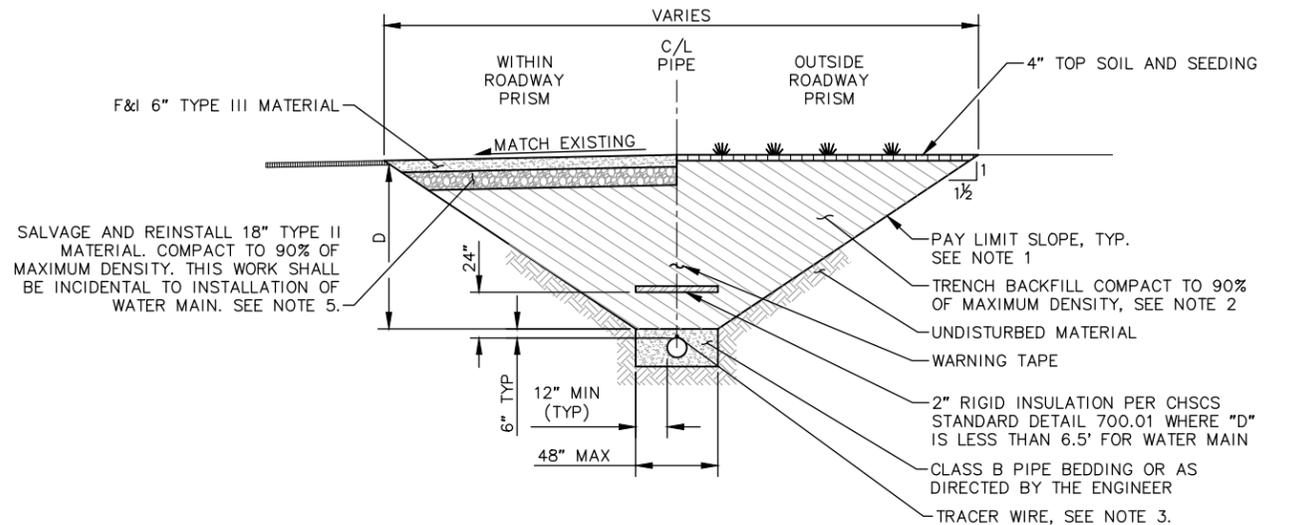
**SINGLE PUMPER 'L' BASE HYDRANT ASSEMBLY INSTALLATION NOTES:**

1. HYDRANT BARREL SHALL BE INSTALLED PLUMB AND THE LEG SHALL BE INSTALLED LEVEL.
2. DRAIN PLUG SHALL BE INSTALLED BY CONTRACTOR.
3. ALL HYDRANTS SHALL BE PAINTED WITH SHERWIN/WILLIAMS YELLOW (FEDERAL SPECIFICATION #13538)
4. AUXILIARY GATE VALVE & VALVE BOX SHALL BE INSTALLED ACCORDING TO DETAIL FOR TYPICAL VALVE & VALVE BOX ASSEMBLY.
5. FURNISH AND INSTALL US PIPE FULL FACE FLANGE-TYTE GASKET BETWEEN ALL FLANGES.
6. ALL STAINLESS STEEL BOLT THREADS SHALL BE COATED WITH TS MOLY-LUBRICANTS TS-74 STAINLESS ANTISEIZE, OR APPROVED EQUAL, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. USE MEGALUG RESTRAINTS ON ALL MECHANICAL JOINTS.



**SINGLE PUMPER 'L' BASE HYDRANT ASSEMBLY DETAIL**

N.T.S.



**NOTES:**

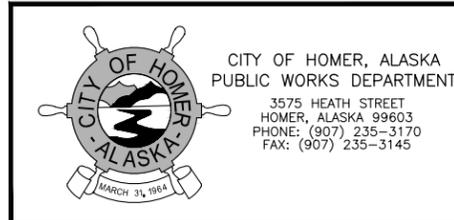
1. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH ALL LOCAL, STATE AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATIONS ONLY.
2. TRENCH BACKFILL SHALL BE NATIVE MATERIAL AS APPROVED BY ENGINEER.
3. NO BELOW GRADE SPLICES SHALL BE ALLOWED FOR TRACER WIRE. CONTRACTOR SHALL SUBMIT A PLAN FOR LAYOUT OF TRACER WIRE, AND PROPOSED LOCATIONS OF ALL TRACER WIRE TERMINATIONS.
4. COMPACTION TESTING PROVIDED BY CITY OF HOMER.
5. UPON APPROVAL OF ENGINEER, THE CONTRACTOR MAY IMPORT TYPE II (BID ITEM 6) TO AUGMENT SALVAGE TYPE II.

**TYPICAL TRENCH SECTION FOR HDPE PIPE**

N.T.S.



REVISION				
REV	DATE	DESCRIPTION	BY	



SCALE	HOR. N/A	VER. N/A
DESIGNED BY	JCH	
DRAWN BY	KB	
CHECKED BY	JCH	
APPROVED BY	PAB	

CITY OF HOMER, ALASKA  
HOMER WATER SYSTEM IMPROVEMENTS  
SHELLFISH/SOUTH SLOPE WATER MAIN EXTENSION

**DETAILS**

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