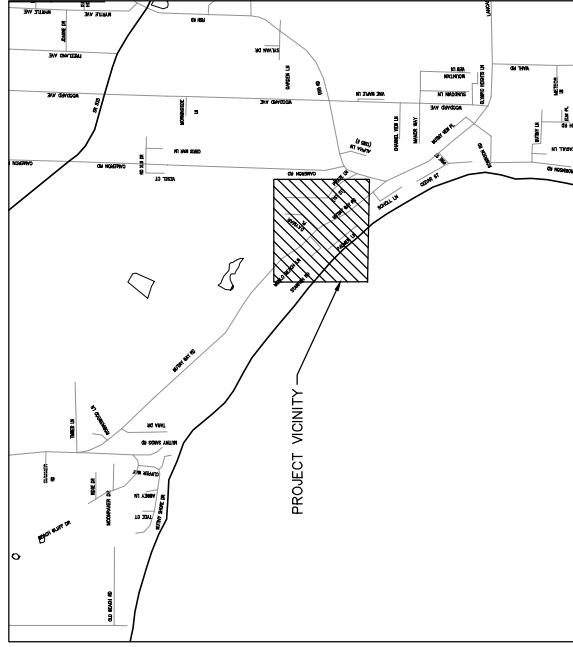
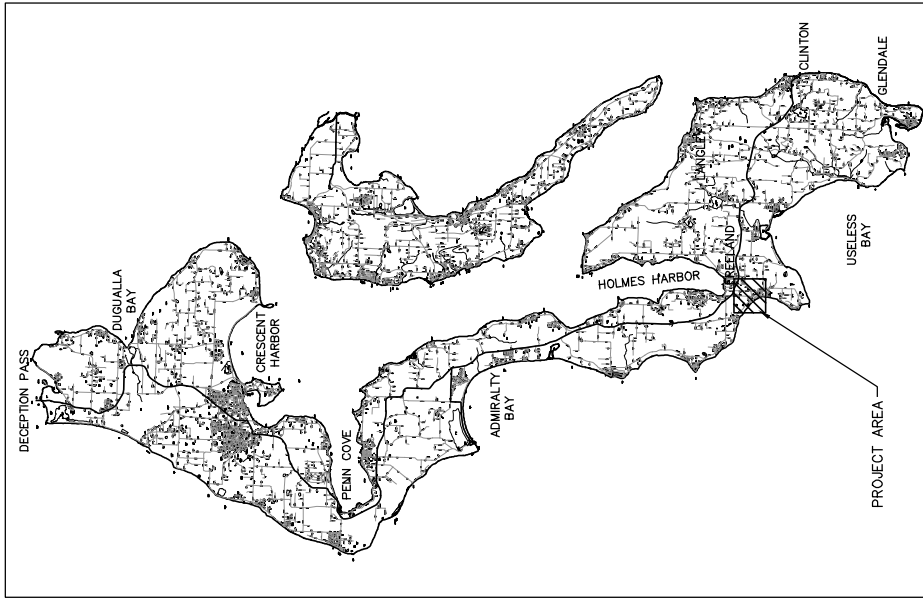


PALMERS MUTINY BAY WATER ASSOCIATION WATER SYSTEM IMPROVEMENTS FREELAND, WA



500 0 500 1000
SCALE IN FEET

VICINITY MAP
SCALE AS SHOWN

SHEET INDEX:
 C100 - COVER SHEET
 C101 - NOTES
 C200 - DETAILS
 C300 - DETAILS
 C301 - DETAILS

PROJECT INFORMATION:
 ARCHITECT:
 RON SANFORD
 PALMERS MUTINY BAY WATER ASSOC.
 P.O. BOX 1323
 FREELEND, WA 98249
 CIVIL ENGINEER:
 JEFFREY M. JIMENEZ, P.E.
 DAVIDO CONSULTING GROUP, INC.
 P.O. BOX 1132
 FREELEND, WA 98249
 PR: 360.531.4151
 LAND SURVEYOR:
 JEFFREY M. JIMENEZ, P.L.S.
 TMI LAND SURVEYING, INC.
 P.O. BOX 101
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 PR: 360.531.7350

CALL 2 BUSINESS DAYS
 BEFORE YOU DIG
 1-800-424-5555
 (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

DAVIDO CONSULTING GROUP, INC. Civil • Structural • Land Use INCORPORATED 15029 Bushell Way NE, Suite 600 Lake Forest Park, WA 98133 206.523.0004		JEFFREY M. JIMENEZ P.E. License No. 15477 State of Washington		JEFFREY M. JIMENEZ P.L.S. License No. 15477 State of Washington		JEFFREY M. JIMENEZ P.E. License No. 15477 State of Washington	
JOB NO. DESIGNER: AS SHOWN PROJECT ENGINEER: OC/JMT DRAWN BY: OC/DS CHECKED BY: OC DATE: 9/22/2014	SCALE: AS SHOWN PROJECT ENGINEER: OC APPROVED BY: JMT DATE: 9/22/2014	PALMERS MUTINY BAY WATER ASS. P.O. BOX 1323 FREELEND, WA 98249 SYSTEM IMPROVEMENT PLAN	WATER SYSTEM IMPROVEMENTS COVER SHEET DRAWING NUMBER: C100 - COVER	SHEET C100	REV. A	NO. DESCRIPTION OF REVISION BY: DATE:	SH1 OF 5

WATER NOTES

1. WATER MAINS, VALVES, FITTINGS, HYDRANTS, SERVICES, AND ALL OTHER COMPONENTS SHALL BE INSTALLED AND PRESSURE TESTED IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS.
2. THE CONTRACTOR SHALL GIVE THE OWNERS A MINIMUM OF 72 HOURS NOTICE OF ANY PLANNED CONNECTION TO AN EXISTING PRELINE. THIS INCLUDES LIVE TAPS. NOTICE IS REQUIRED SO ANY DISRUPTIONS TO EXISTING SERVICES CAN BE SCHEDULED. THE CONTRACTOR SHALL NOTIFY THE OWNERS OF ANY DISRUPTIONS TO EXISTING SERVICES AS EARLY AS POSSIBLE. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO SCHEDULE WATER MAIN CONSTRUCTION WITH A MINIMUM INTERRUPTION OF WATER SERVICE.
3. IN CERTAIN SITUATIONS, THE WATER ASSOCIATION MAY DICTATE SCHEDULING OF WATER MAIN SHUTDOWNS SO AS NOT TO IMPOSE UNNECESSARY SHUTDOWNS DURING SPECIFIC PERIODS TO EXISTING CUSTOMERS.
4. ALL WATER MAINS SHALL BE AS SPECIFIED ON THE PLANS.
5. WATER MAIN FITTINGS, FLANGES AND OVERS SHALL BE DUCTILE IRON, DUCTILE IRON FITTINGS SHALL MEET THE REQUIREMENTS OF THE FOLLOWING:
 - A. AWWA C111. DUCTILE IRON FITTINGS SHALL BE CEMENT MORTAR LINED, MEETING THE REQUIREMENTS OF AWWA C104. GASKETS FOR FLAT FACED OR RAISED FACED FLANGED SHALL BE 1/8-INCH THICK NITRILE HAVING A DIAMETER OF 80 PLUS OR MINUS 5 OR 1/16-INCH OVER THE DIAMETER OF THE FITTING. THE GASKETS SHALL BE OF SIMILAR MATERIALS. STEEL BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A 307 OR ASTM F 568 FOR CARBON STEEL OR ASTM F 593 OR ASTM F 593 FOR CARBON STEEL OR ASTM F 594 OR ASTM F 536 FOR STAINLESS STEEL. IRON BOLTS AND NUTS SHALL MEET THE REQUIREMENTS OF ASTM A 536, GRADE 85-45-12.
 - B. ALL NON-METALLIC PIPE AND SERVICES SHALL BE INSTALLED WITH CONTINUOUS TRACER TAPE INSTALLED 12 TO 18 INCHES UNDER THE FINAL GROUND SURFACE. NO BREAKS OR SPLICES WILL BE ALLOWED. A CONTINUOUS LOOP SHALL BE PLACED FROM THE MAIN LINE TO THE METER BOX AND SHALL BE INSTALLED WITH A STANDARD METAL DETECTOR. TAPE SHALL BE TERRA TAPE "D" OR APPROVED EQUAL. IN ADDITION TO TRACER TAPE, INSTALL 14 GAUGE COATED COPPER WIRE, TAPED TO THE TOP OF PIPE, BROUGHT UP AND TIED OFF AT VALVE BODY.
6. THE MINIMUM COVER FOR ALL WATER MAINS FROM TOP OF PIPE TO FINISH GRADE SHALL BE 36 INCHES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
7. ALL VALVES AND FITTINGS 4-INCHES AND OVER SHALL BE DUCTILE IRON WITH ANSI FLANGES OR MECHANICAL JOINT ENDS. ALL EXISTING VALVES SHALL BE OPERATED BY WATER COMPANY PERSONNEL. VALVE BOXES SHALL BE INSTALLED ON ALL BURIED VALVES. THE BOX SHALL BE OF THE TYPE APPROVED BY THE WATER ASSOCIATION. THE COVER SHALL HAVE THE WORD "WATER" CAST IN IT. THE VALVE BOX SHALL BE A TYLER PIPE 6665 SERIES OR EQUAL APPROVED BY THE WATER ASSOCIATION. THE COVER SHALL BE A TYLER PIPE STANDARD DROP LID 143525 OR EQUAL APPROVED BY THE WATER ASSOCIATION.
8. VALVE BOX. ALL VALVES SHALL HAVE A STANDARD CAST IRON WATER VALVE BOX SET TO GRADE. IF VALVES ARE NOT SET IN PAVED AREA, A 3 FOOT BY 3 FOOT BY 4 INCH CONCRETE PAD SHALL BE INSTALLED UNDER THE VALVE BOX. ALL VALVE BOXES SHALL BE GRADED BEFORE PLACING ASPHALT OR CONCRETE PAD.
9. VALVE MARKER POST. VALVE MARKER POSTS SHALL BE 4 INCH X 4 INCH BENCHMARK CONCRETE OR SCHEDULE 40 STEEL POSTS 5 FEET LONG, WITH 2 FOOT MINIMUM BURY. STAMPED WITH "W" AND DISTANCE TO VALVE. POST SHALL BE PAINTED WITH 1 BASE COAT AND 2 COATS BLUE OIL BASE ENAMEL.

EROSION AND SEDIMENTATION CONTROL (ESC) NOTES:

1. THE CONTRACTOR SHALL MEET ISLAND COUNTY STANDARDS AND REQUIREMENTS BY USING APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs) FOR EROSION AND SEDIMENTATION CONTROL.
2. MINIMIZE ON- AND OFF-SITE. DURING AND AFTER CONSTRUCTION, THE CONTRACTOR SHALL EROSION AND SEDIMENTATION ON-SITE AND SHALL PROTECT PROPERTIES AND WATER COURSES DOWNSTREAM FROM THE SITE FROM EROSION DUE TO INCREASES IN THE FLOWS AND PEAK FLOW RATE OF STORM WATER RUNOFF FROM THE SITE.
3. TRANSPORT OF SEDIMENT. THE CONTRACTOR SHALL PREVENT THE TRANSPORT OF SEDIMENT FROM THE CONSTRUCTION SITE TO ADJACENT AREAS AND WATERWAYS. THE CONTRACTOR SHALL:
 - A. INSTALL AND MAINTAIN EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO: SEDIMENT TRAPS, SETTLING POND, BRUSH BARRIER, GRAVEL FILTER BERM, SEDIMENT TRAP, TEMPORARY SEDIMENT POND, PRESERVING NATURAL VEGETATION, AND/OR BUFFER ZONES.
 - B. MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD AS TRANSPORTED INTO A PAVED SURFACE. THE PAVED SURFACE SHALL BE CLEANED AT THE END OF EACH DAY IN ACCORDANCE WITH BMPs IN THE DRAINAGE MANUAL, OR APPROVED BY THE DIRECTOR.
4. STABILIZING EXPOSED SOIL. THE CONTRACTOR SHALL PREVENT ON-SITE EROSION BY STABILIZING ALL SOILS THAT ARE TEMPORARILY EXPOSED AND NOT BEING ACTIVELY WORKED. THE CONTRACTOR SHALL APPLY ONE OR MORE OF THE FOLLOWING TEMPORARY ESC COVERING. CONTRACTOR SHALL APPLY ONE OR MORE OF THE FOLLOWING TEMPORARY ESC BMPs: TEMP SEEDING, MULCHING AND MATTING, CLEAR PLASTIC COVERING, AND/OR DUST CONTROL.
5. DEGRADED AREAS SHALL BE STABILIZED AND SOIL STOCKPILES AS ESTABLISHED IN THE DRAINAGE MANUAL.
6. NO MORE THAN THREE HUNDRED (300) FEET OF TRENCH MAY REMAIN OPEN AT ONE TIME. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES, UNLESS INCONSISTENT WITH SAFETY OR SITE CONSTRAINTS.
7. MAINTENANCE AND REPAIR OF EROSION AND SEDIMENTATION CONTROL MEASURES. THE CONTRACTOR SHALL MAINTAIN AND REPAIR AS NECESSARY ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL BMPs TO ASSURE THEIR CONTINUED PERFORMANCE.
8. TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION.

GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE WATER ASSOCIATION A MINIMUM OF 24 HOURS PRIOR TO STARTING ANY WORK.
2. THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND UTILITY LOCATE CENTER AT 1-800-424-5555 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES, STRUCTURES AND FEATURES, WHETHER OR NOT SHOWN ON THESE PLANS. ANY DAMAGE TO EXISTING UTILITIES OR FEATURES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. LOCATIONS OF EXISTING FEATURES AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE DETERMINED AND BASED ON THE BEST AVAILABLE INFORMATION. ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS, METHODS AND SEQUENCE OF CONSTRUCTION.
6. ALL WORK SHALL CONFORM TO ATTACHED DETAILS AND WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION.
7. THE CONTRACTOR SHALL BE REQUIRED TO KEEP APPROPRIATE AS-BUILT DRAWINGS AND DELIVER THIS INFORMATION TO THE OWNER FOR PREPARATION OF AS-BUILT DRAWINGS.
8. UTILITY SERVICE INTERRUPTIONS SHALL NOT EXCEED TWO HOURS.
9. 24 HOUR NOTICE SHALL BE PROVIDED TO ALL PROPERTY OWNERS/OCCUPANTS OF ANY UTILITY SERVICE OR ACCESS INTERRUPTIONS.
10. ONE LANE TRAFFIC MUST BE MAINTAINED AT ALL TIMES ON COUNTY ROADS. ROAD CLOSURES WILL NOT BE ALLOWED UNLESS EXPRESSLY AUTHORIZED AND APPROVED BY ISLAND COUNTY.
11. PROPER SIGNAGE AND FLASERS ARE REQUIRED PER THE MOTOR FLASERS SHALL HAVE CURRENT CARDS INDICATING THAT THEY ARE QUALIFIED TO PERFORM THE REQUIRED TRAFFIC CONTROL.
12. ACCESS TO PRIVATE PROPERTY SHALL BE RESTORED DAILY.
13. STREETS SHALL BE SWEEP DAILY OR AS NEEDED.

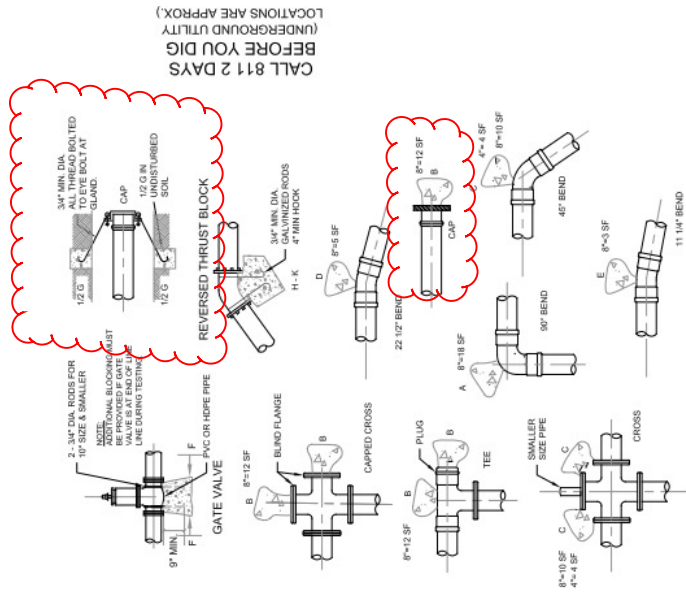
UNANTICIPATED DISCOVERY PLAN:

IF EARTH DISTURBING ACTIVITIES DURING PROJECT CONSTRUCTION UNCOVER CULTURAL MATERIALS (I.E. STRUCTURAL REMAINS, HISTORIC ARTIFACTS, OR PREHISTORIC ARTIFACTS), ALL WORK SHALL CEASE AND THE WASHINGTON STATE ARCHAEOLOGIST AT THE DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION (DAPH) AND THE INTERESTED TRIBES (SWINOMISH AND TULUCH TRIBES) SHALL BE NOTIFIED IMMEDIATELY.

IF HUMAN REMAINS ARE UNCOVERED, ALL WORK SHALL CEASE IMMEDIATELY IN ACCORDANCE WITH THE WASHINGTON STATE ARCHAEOLOGIST AND THE INTERESTED TRIBES (SWINOMISH AND TULUCH TRIBES) SHALL BE NOTIFIED IMMEDIATELY. THE WASHINGTON STATE ARCHAEOLOGIST AT THE DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION (DAPH) AND THE INTERESTED TRIBES SHALL BE NOTIFIED IMMEDIATELY.

CALL 2 BUSINESS DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

NO. DESCRIPTION OF REVISION BY DATE	JOB NO. SCALE AS SHOWN PROJECT ENGINEER QC	DESIGNED DRAWN BY CHECKED BY DATE	1509 Robson Way, Ste 600 Bellevue, WA 98005 206.453.0024		DAVIDO CONSULTING GROUP, INC. Civil + Structural + Land Use Jeffrey M. Davido 2016.09.01 15:48:00 Frederick, MD 20730 301.331.4131			WATER SYSTEM IMPROVEMENTS	SHEET C101
								PALMERS MUTINY BAY WATER ASS. P.O. BOX 1523 FREELAND, WA 98249	DRAWING NUMBER: C101 - NOTES



CALL 811 2 DAYS BEFORE YOU DIG (UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

2000 PSI CONCRETE THRUST BLOCK - TABLE

PIPE SIZE	MIN BEARING AREA AGAINST UNDISTURBED SOIL		REV. TB		VERTICAL THRUST BLOCKING	
	A (SF)	B (SF)	F (SF)	G (SF)	H (CT)	I (CT)
4"	4	4	4	4	6	2
6"	18	12	10	5	13	4
8"	24	14	8	5	22	2
10"	24	14	8	5	34	6
12"	36	21	12	7	48	8
14"	48	28	16	9	66	10
16"	60	35	20	11	84	12
18"	72	42	24	13	102	14
20"	84	49	28	15	120	16
24"	108	65	36	19	156	20
30"	144	84	48	25	204	26
36"	180	105	60	31	252	32
42"	216	126	72	37	300	38
48"	252	147	84	43	348	44
54"	288	168	96	49	396	50
60"	324	189	108	55	444	56
72"	396	231	132	67	540	68
84"	468	273	156	79	636	80
96"	540	315	180	91	732	92
108"	612	357	204	103	828	104
120"	684	399	228	115	924	116
132"	756	441	252	127	1020	128
144"	828	483	276	139	1116	140
156"	900	525	300	151	1212	152
168"	972	567	324	163	1308	164
180"	1044	609	348	175	1404	176
192"	1116	651	372	187	1500	188
204"	1188	693	396	199	1596	200
216"	1260	735	420	211	1692	212
228"	1332	777	444	223	1788	224
240"	1404	819	468	235	1884	236
252"	1476	861	492	247	1980	248
264"	1548	903	516	259	2076	260
276"	1620	945	540	271	2172	272
288"	1692	987	564	283	2268	284
300"	1764	1029	588	295	2364	296
312"	1836	1071	612	307	2460	308
324"	1908	1113	636	319	2556	320
336"	1980	1155	660	331	2652	332
348"	2052	1197	684	343	2748	344
360"	2124	1239	708	355	2844	356
372"	2196	1281	732	367	2940	368
384"	2268	1323	756	379	3036	380
396"	2340	1365	780	391	3132	392
408"	2412	1407	804	403	3228	404
420"	2484	1449	828	415	3324	416
432"	2556	1491	852	427	3420	428
444"	2628	1533	876	439	3516	440
456"	2700	1575	900	451	3612	452
468"	2772	1617	924	463	3708	464
480"	2844	1659	948	475	3804	476
492"	2916	1701	972	487	3900	488
504"	2988	1743	996	499	3996	500
516"	3060	1785	1020	511	4092	512
528"	3132	1827	1044	523	4188	524
540"	3204	1869	1068	535	4284	536
552"	3276	1911	1092	547	4380	548
564"	3348	1953	1116	559	4476	560
576"	3420	1995	1140	571	4572	572
588"	3492	2037	1164	583	4668	584
600"	3564	2079	1188	595	4764	596
612"	3636	2121	1212	607	4860	608
624"	3708	2163	1236	619	4956	620
636"	3780	2205	1260	631	5052	632
648"	3852	2247	1284	643	5148	644
660"	3924	2289	1308	655	5244	656
672"	3996	2331	1332	667	5340	668
684"	4068	2373	1356	679	5436	680
696"	4140	2415	1380	691	5532	692
708"	4212	2457	1404	703	5628	704
720"	4284	2499	1428	715	5724	716
732"	4356	2541	1452	727	5820	728
744"	4428	2583	1476	739	5916	740
756"	4500	2625	1500	751	6012	752
768"	4572	2667	1524	763	6108	764
780"	4644	2709	1548	775	6204	776
792"	4716	2751	1572	787	6300	788
804"	4788	2793	1596	799	6396	800
816"	4860	2835	1620	811	6492	812
828"	4932	2877	1644	823	6588	824
840"	5004	2919	1668	835	6684	836
852"	5076	2961	1692	847	6780	848
864"	5148	3003	1716	859	6876	860
876"	5220	3045	1740	871	6972	872
888"	5292	3087	1764	883	7068	884
900"	5364	3129	1788	895	7164	896
912"	5436	3171	1812	907	7260	908
924"	5508	3213	1836	919	7356	920
936"	5580	3255	1860	931	7452	932
948"	5652	3297	1884	943	7548	944
960"	5724	3339	1908	955	7644	956
972"	5796	3381	1932	967	7740	968
984"	5868	3423	1956	979	7836	980
996"	5940	3465	1980	991	7932	992
1008"	6012	3507	2004	1003	8028	1004
1020"	6084	3549	2028	1015	8124	1016
1032"	6156	3591	2052	1027	8220	1028
1044"	6228	3633	2076	1039	8316	1040
1056"	6300	3675	2100	1051	8412	1052
1068"	6372	3717	2124	1063	8508	1064
1080"	6444	3759	2148	1075	8604	1076
1092"	6516	3801	2172	1087	8700	1088
1104"	6588	3843	2196	1099	8796	1100
1116"	6660	3885	2220	1111	8892	1112
1128"	6732	3927	2244	1123	8988	1124
1140"	6804	3969	2268	1135	9084	1136
1152"	6876	4011	2292	1147	9180	1148
1164"	6948	4053	2316	1159	9276	1160
1176"	7020	4095	2340	1171	9372	1172
1188"	7092	4137	2364	1183	9468	1184
1200"	7164	4179	2388	1195	9564	1196
1212"	7236	4221	2412	1207	9660	1208
1224"	7308	4263	2436	1219	9756	1220
1236"	7380	4305	2460	1231	9852	1232
1248"	7452	4347	2484	1243	9948	1244
1260"	7524	4389	2508	1255	10044	1256
1272"	7596	4431	2532	1267	10140	1268
1284"	7668	4473	2556	1279	10236	1280
1296"	7740	4515	2580	1291	10332	1292
1308"	7812	4557	2604	1303	10428	1304
1320"	7884	4599	2628	1315	10524	1316
1332"	7956	4641	2652	1327	10620	1328
1344"	8028	4683	2676	1339	10716	1340
1356"	8100	4725	2700	1351	10812	1352
1368"	8172	4767	2724	1363	10908	1364
1380"	8244	4809	2748	1375	11004	1376
1392"	8316	4851	2772	1387	11100	1388
1404"	8388	4893	2796	1399	11196	1400
1416"	8460	4935	2820	1411	11292	1412
1428"	8532	4977	2844	1423	11388	1424
1440"	8604	5019	2868	1435	11484	1436
1452"	8676	5061	2892	1447	11580	1448
1464"	8748	5103	2916	1459	11676	1460
1476"	8820	5145	2940	1471	11772	1472
1488"	8892	5187	2964	1483	11868	1484
1500"	8964	5229	2988	1495	11964	1496
1512"	9036	5271	3012	1507	12060	1508
1524"	9108	5313	3036	1519	12156	1520
1536"	9180	5355	3060	1531	12252	1532
1548"	9252	5397	3084	1543	12348	1544
1560"	9324	5439	3108	1555	12444	1556
1572"	9396	5481	3132	1567	12540	1568
1584"	9468	5523	3156	1579	12636	1580
1596"	9540	5565	3180	1591	12732	1592
1608"	9612	5607	3204	1603	12828	1604
1620"	9684	5649	3228	1615	12924	1616
1632"	9756	5691	3252	1627	13020	1628
1644"	9828	5733	3276	1639	13116	1640
1656"	9900	5775	3300	1651	13212	1652
1668"	9972	5817	3324	1663	13308	1664
1680"	10044	5859	3348	1675	13404	1676
1692"	10116	5901	3372	1687	13500	1688
1704"	10188	5943	3396	1699	13596	1700
1716"	10260	5985	3420	1711	13692	1712
1728"	10332	6027	3444	1723	13788	1724
1740"	10404	6069	3468	1735	13884	1736
1752"	10476	6111	3492	1747	13980	1748
1764"	10548	6153	3516	1759	14076	1760
1776"	10620	6195	3540	1771	14172	1772
1788"	10692	6237	3564	1783	14268	1784
1800"	10764	6279	3588	1795	14364	1796
1812"	10836	6321	3612	1807	14460	1808
182						