

CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 2

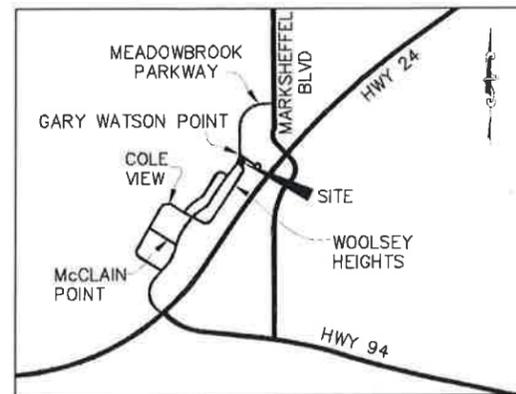
EL PASO COUNTY, STATE OF COLORADO
UTILITY SERVICE PLAN

7735 GARY WATSON Pk

WATER AND SANITARY SEWER SERVICE INSTALLATIONS GENERAL NOTES:

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS AND THE CITY OF COLORADO SPRINGS CONSTRUCTION STANDARDS UNLESS OTHERWISE NOTED. IN THE EVENT OF CONFLICTING STANDARDS CHEROKEE METROPOLITAN DISTRICT STANDARDS SHALL GOVERN.
- ALL WATER SYSTEM MAINS PIPE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) CLASS 200 (DR-14) PER AWWA C-900 AND ASTM D241 SPECIFICATIONS, EXCEPT WHERE NOTED. SPECIFICALLY, SECTIONS OF WATER PIPE THAT CROSS UNDER MAJOR DRAINAGE WAYS (SAND CREEK) OR MAJOR THOROUGHFARES SHALL BE DUCTILE IRON PIPE.
- ALL FITTINGS SHALL BE CONSTRUCTED OF GRAY-IRON MATERIAL AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL HAVE A MINIMUM PRESSURE RATING OF 250 PSI AND SHALL BE WRAPPED WITH A 9-MIL THICKNESS POLYETHYLENE MATERIAL PER AWWA STANDARD C105.
- ALL WATER PIPES SHALL BE INSTALLED AT A MINIMUM DEPTH OF FIVE (5) FEET BELOW FINISHED GRADE.
- ALL BENDS, TEES, FIRE HYDRANTS, BLOW-OFF, AND PLUGS AT DEAD END MAINS SHALL BE INSTALLED WITH CONCRETE THRUST BLOCKS.
- VALVE BOXES SHALL BE TYLER SLP, TYPE "C" CAST IRON VALVE BOX ASSEMBLY SERIES 8850 WITH NO. 160 OVAL BASE OR APPROVED EQUAL.
- ALL WATER SYSTEM COMPONENTS SHALL BE FLUSHED AND CHLORINATED PER AWWA C-601, "DISINFECTING WATER MAINS" PRIOR TO ACCEPTANCE. THE CONTRACTOR SHALL PRODUCE A 25 MG/L SOLUTION BY ADHERING CHLORINE TABLETS TO THE PIPE SECTION WITH PERMATEX CLEAR TRY INSIDE THE SYSTEM. CHLORINATION SHALL OCCUR PRIOR TO HYDROSTATIC TESTING. THE CONTRACTOR SHALL OBTAIN A BACTERIOLOGICAL SAMPLE AFTER THE SYSTEM HAS BEEN FLUSHED. A CLEAN BACTERIOLOGICAL SAMPLE MUST BE OBTAINED PRIOR TO THE SYSTEM BEING PLACED INTO SERVICE.
- HYDROSTATIC TESTING: ALL WATER SYSTEM MAINS SHALL BE FILED PRESSURE TESTED TO A MINIMUM OF 150 PSI OR 1 1/2 TIMES THE STATIC OPERATING PRESSURE, WHICHEVER IS GREATER. MAXIMUM ALLOWABLE LEAKAGE FOR EACH SECTION OF PIPE BETWEEN LINE VALVES SHALL NOT EXCEED THE FOLLOWING: 110 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY.
- ALL VALVES SHALL CONFORM TO OPEN LEFT CONVENTION PER CHEROKEE METROPOLITAN DISTRICT STANDARDS.
- WHEN IT IS NECESSARY TO RAISE OR LOWER WATER MAINS AT OTHER UTILITY CROSSINGS THE CONTRACTOR SHALL INSURE A MINIMUM CLEARANCE OF 18" WHERE POSSIBLE BETWEEN THE OUTSIDE DIAMETERS OF PIPES.
- WHILE CONSTRUCTING THE WATER AND WASTE WATER SYSTEM THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT LEAST ONE "APPROVED FOR CONSTRUCTION" SET OF UPDATED PLANS AT ALL TIMES. APPROVED FIELD MODIFICATIONS TO THE PLAN SETS SHALL BE CLEARLY IDENTIFIED IN RED INK ON THE PLANS BY THE CONTRACTOR PER FIELD CONSTRUCTION. THESE AS-BUILT CHANGES SHALL BE DATED AND SUBMITTED TO THE ENGINEER OF RECORD. THE ENGINEER OF RECORD SHALL PREPARE A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS AND DELIVER THE SETS TO THE CHEROKEE METROPOLITAN DISTRICT PRIOR TO FINAL ACCEPTANCE OF THE WATER SYSTEM.
- PRIOR TO TAPPING ANY EXISTING WATER MAIN THE CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL FOR SAID TAP IN ACCORDANCE WITH THE CHEROKEE METROPOLITAN DISTRICT STANDARDS.
- ALL NONMETALLIC PIPES SHALL HAVE TRACER WIRE ATTACHED TO ITS TOP DURING CONSTRUCTION. THE TRACER WIRE SHALL BE #12 AWG INSULATED COPPER WIRE WITH NO. 12 COPPER CONNECTIONS AND SHALL BE PERMANENTLY AFFIXED TO THE TOP OF THE PIPE USING TAPE AT 4' INTERVALS. TRACER WIRE SHALL BE JOINED 3-WAY OR 4-WAY LOCKABLE MECHANICAL CONNECTORS SPECIFICALLY MANUFACTURED FOR USE IN UNDERGROUND TRACER WIRE INSTALLATIONS; NON-LOCKING FRICTION FIT, TWIST-ON, OR TAPED CONNECTIONS ARE NOT PERMITTED. THE TRACER WIRE SHALL ALSO BE CORROSION BY EPOXY OR SILICON COATING. ROUTE TRACER WIRES TO SURFACE AT ALL VALVE BOXES.
- THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING THE WORK. PRIOR TO EXCAVATION, CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT (800) 922-1887 AT LEAST TWO WORKING DAYS PRIOR TO DIGGING.
- SANITARY SEWER PIPE SHALL CONFORM TO ASTM D3034 SDR35 PVC.
- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF NEW SANITARY SEWER SYSTEM.
- ALL SANITARY SEWER MANHOLES, LIDS, BASES AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH CHEROKEE METROPOLITAN DISTRICT STANDARD MANHOLE DETAILS (5' MIN DIAMETER), EXCEPT AS NOTED ON THESE PLANS. WHERE REQUIRED ON THESE PLANS, WATER TIGHT MANHOLES, LIDS AND CONNECTIONS SHALL BE PROVIDED BY COLORADO SPRINGS STANDARDS.
- SANITARY SEWER SERVICE LINES SHALL BE LOCATED PER THE DETAIL ON THE UTILITY SERVICE PLAN, OR AT THE DIRECTION OF THE INSPECTOR.
- OVERLOT GRADING AND STREET SUB-GRADE MUST BE WITHIN +/- ONE (1) FOOT PRIOR TO ANY UTILITY INSTALLATION.
- TRACER WIRE IS TO BE INSTALLED WITH ALL SANITARY SEWER MAIN LINES AND SERVICES (FROM THE MAIN LINE TO THE BUILDING STRUCTURE), AS OUTLINED IN COMMENT #13.
- MINIMUM DEPTH OF SANITARY SEWER IS 6 FEET OF COVER. IF THIS MINIMUM CANNOT BE ACHIEVED DUE TO SHALLOW SEWER STUB THEN THE FOLLOWING APPLIES: OTHERWISE THE SEWER SERVICE MUST HAVE 6 FEET OF COVER.
DEPTH GREATER THAN 6 FEET: MATERIAL TYPE SDR 35
DEPTH BETWEEN 4 FEET AND 6 FEET: MATERIAL TYPE SCH 40 OR CAST IRON (CIP)
DEPTH LESS THAN 4 FEET: MATERIAL TYPE SCH 40 OR CIP WITH CONCRETE CAP.
- WATER SERVICE MUST BE OVER THE SEWER AT ALL TIMES (MINIMUM 18" INCHES) OTHERWISE STEEL CASING MUST BE USED. SEWER SERVICE PIPE LOCATED WITHIN ONE FOOT OF THE WATER SERVICE LINE MUST BE CONSTRUCTED WITH SCH 40 PIPE OR CIP.
- ALL EXTERIOR SEWER CLEAN OUTS (CO) MUST HAVE A CAST IRON, TRAFFIC RATED COVER, OR EQUIVALENT CONCRETE COLLAR.
- UPON COMPLETION OF CONSTRUCTION AND PRIOR TO ACCEPTANCE BY THE DISTRICT, TWO (2) COPIES OF "AS-CONSTRUCTED" PLANS AND TWO (2) SETS OF ELECTRONIC DATA FILES OF THE PLANS SHALL BE SUBMITTED TO THE DISTRICT FOR RECORD.
 - THE TWO (2) COPIES SHALL BE COMPLETE WITH ALL "AS-CONSTRUCTED" INFORMATION TOGETHER WITH A CERTIFICATION BY THE PARTY RESPONSIBLE FOR CONSTRUCTION THAT ALL DATA THEREON IS ACCURATE AND REPRESENTS ACTUAL CONSTRUCTED CONDITIONS.
 - THE TWO PLAN SETS SHALL BE SUBMITTED ON SHEETS THAT ARE 24" X 36" IN SIZE.
 - THE PLAN SET SHALL BE ON A DURABLE MEDIA THAT CAN BE RUN THROUGH PHOTOCOPIING EQUIPMENT.
 - THE TWO ELECTRONIC DATA FORMATS SHALL BE SUBMITTED. THE FIRST ELECTRONIC DATA FILE SET SHALL BE IN AUTOCAD 2006 OR NEWER FORMAT WITH NO EXTERNAL REFERENCE DRAWINGS. ALL EXTERNAL REFERENCES MUST BE BOUND INTO THE DRAWING SET. THE SECOND SET OF ELECTRONIC DATA FILES SHALL BE IN ADOBE ACROBAT .PDF FORMAT.
- "AS-CONSTRUCTED" PLANS SHALL BE SUBMITTED WITHIN TWO WEEKS OF COMPLETION OF THE WATER AND/OR SANITARY SEWER UTILITIES.
- NO AUTHORIZATION TO CONNECT TO THE SYSTEM OR DISCHARGE TO THE SYSTEM WILL BE ALLOWED UNTIL THE "AS-CONSTRUCTED" DOCUMENTS HAVE BEEN RECEIVED AND ACCEPTED BY THE DISTRICT.
- ALL PLANS, SPECIFICATIONS AND SUPPORTING DOCUMENTS SHALL BE PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF COLORADO. ALL PLANS AND SPECIFICATIONS SHALL BEAR THE SEAL AND SIGNATURE OF SAID LICENSED PROFESSIONAL ENGINEER.

*- COAT EXTERIOR SURFACE WITH
COAL TAR EPOXY (45 MILS) &
WRAP JOINTS W/ 12" ESTOMERIC
JOINT WRAP.*



VICINITY MAP
N.T.S.

CONTACTS

OWNER	HAMMERS CONSTRUCTION INC. 1411 WOOLSEY HEIGHTS COLORADO SPRINGS, CO 80915
CIVIL ENGINEER	M & S CIVIL CONSULTANTS, INC. 102 E. PIKES PEAK AVE. ST 500 COLORADO SPRINGS, CO 80903 VIRGIL A. SANCHEZ, P.E. 719-597-0918
WATER AND WASTEWATER	CHEROKEE METROPOLITAN DISTRICT 6250 PALMER PARK BOULEVARD COLORADO SPRINGS, CO 80915-1721 JOE WANGER 719-597-5080
FIRE DEPARTMENT	CIMARRON HILLS FIRE DEPARTMENT 1835 TUSKEGEE PLACE COLORADO SPRINGS, CO 80915 719-591-0900
TELEPHONE COMPANY	U.S. WEST COMMUNICATIONS (LOCATORS) 800-922-1987 ATA&I (LOCATORS) 719-636-3674

WATER INSTALLATION CORROSION CONTROL REQUIREMENTS

REQUIRED, DESCRIBED AS FOLLOWS: PROVIDE CATHODIC PROTECTION & WRAP ALL METAL JOINTS, VALVES, PIPES AND HYDRANTS.

CHEROKEE METROPOLITAN DISTRICT WATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: _____ DATE: _____

CHEROKEE METROPOLITAN DISTRICT WASTEWATER PLAN APPROVAL

THE CHEROKEE METROPOLITAN DISTRICT RECOGNIZES THE DESIGN PROFESSIONAL OF RECORD AS THE LICENSED ENGINEER HAVING RESPONSIBILITY FOR THE SUBMITTED DESIGN AND THE DISTRICT HAS LIMITED ITS SCOPE OF REVIEW ACCORDINGLY. AS SUCH, THE APPROVAL GRANTED HEREIN IS FOR THE CONSTRUCTION OF THE FACILITIES AS REPRESENTED ON THESE DOCUMENTS. APPROVAL EXPIRES ONE (1) YEAR FROM THE DATE BELOW AND RESUBMITTAL OF THESE PLANS FOR REVIEW AND APPROVAL IS REQUIRED IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

APPROVED BY: _____ DATE: _____

CIMARRON HILLS FIRE DEPARTMENT

ACCORDING TO THE MODELED CALCULATIONS REVIEWED BY THE GOVERNING WATER DISTRICT AND/OR COLORADO REGISTERED CIVIL ENGINEER/DESIGNER, THE THEORETICAL AVAILABLE FIRE FLOW AT NODE "A" IS 0000 GALLONS AT NODE "B" IS 0000 GALLONS PER MINUTE UNDER MAXIMUM DAILY DEMAND CONDITIONS AT 20PSI RESIDUAL. THE ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS UPON DETAILED REVIEW OF THE AVAILABLE WATER SUPPLY, FIRE HYDRANT LOCATIONS AND HOSE LAY DISTANCES. THESE PLANS ARE HEREBY CONSIDERED APPROVED.

FIRE DEPARTMENT SIGNATURE: _____ DATE: _____

PRIVATE WATER MAIN EXTENSIONS

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THE INSTALLATION OF THESE PROPOSED WATER FACILITIES WILL BE MADE IN ACCORDANCE WITH THE DISTRICT'S SPECIFICATIONS AND SHALL PROVIDE A MINIMUM OF FIVE FEET (5' 0") AND A MAXIMUM OF SIX (6' 0") OF COVER OVER THE WATER MAINS. THE UNDERSIGNED UNDERSTANDS THAT ALL WATER MAINS, FIRE HYDRANTS, AND APPURTENANCES AS INDICATED ON THIS INSTALLATION PLAN SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE MAINTAINED BY THE OWNER.

SIGNED: _____ DATE: _____

DBA: HAMMERS CONSTRUCTION

ADDRESS: 1411 WOOLSEY HEIGHTS, COLORADO SPRINGS, CO 80915

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLANS HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE CHEROKEE METROPOLITAN DISTRICT. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY NEGLIGENCE, ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS REPORT.

VIRGIL A. SANCHEZ, COLORADO P.E. #37160
FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC. DATE: _____



UTILITY SERVICE PLAN
CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 2
JOB NO. 44-037
DATE PREPARED: OCTOBER 9, 2020
DATE REVISED:

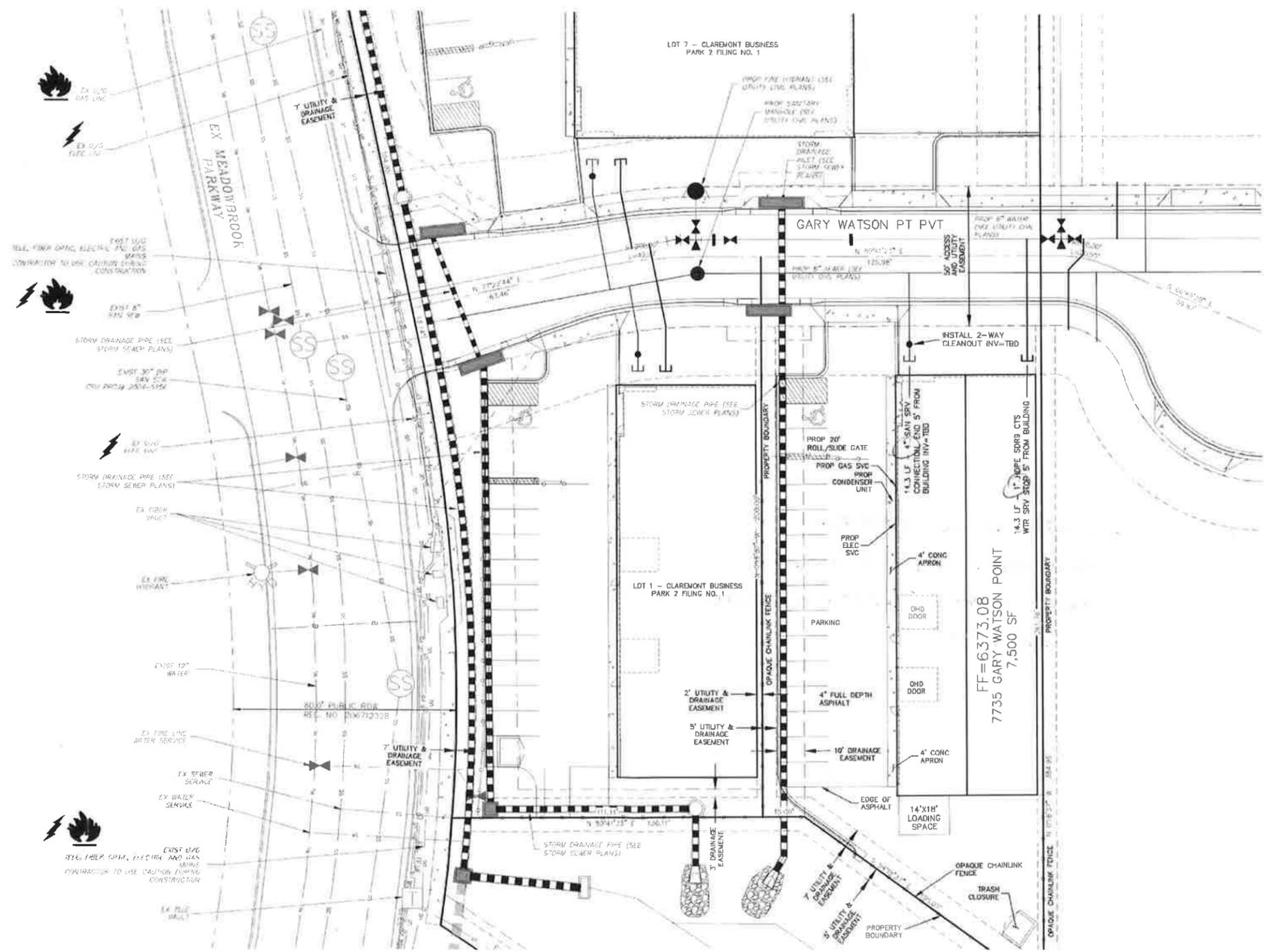
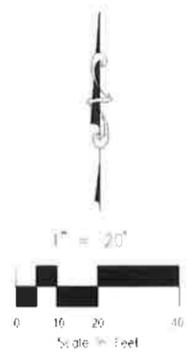
EL PASO COUNTY FILE NO. PPR 000



102 E. PIKES PEAK AVE. SUITE 500
COLORADO SPRINGS, CO 80903
PHONE: 719.955.5485

CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 2

EL PASO COUNTY, STATE OF COLORADO
UTILITY SERVICE PLAN



FOR SUPPLEMENTARY INFORMATION
SEE SHEETS 01-02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

UTILITY SERVICE PLAN
CLAREMONT BUSINESS PARK 2 FIL. NO. 1 - LOT 2
JOB NO. 44-037
DATE PREPARED: OCTOBER 9, 2020
DATE REVISED:



102 E. Pikes Peak Ave. Suite 500
Colorado Springs, CO 80903
Phone: 719.555.5485

EL PASO COUNTY FILE NO. PPR 000

SHEET 2 OF 2

GENERAL NOTES

- CONTRACTOR SHALL VERIFY DIMENSIONS IN FIELD PRIOR TO PROCEEDING WITH ANY WORK.
- THESE DOCUMENTS HAVE BEEN PRODUCED TO THE BEST OF THE ENGINEER'S ABILITY FROM AVAILABLE EXISTING INFORMATION AND/OR SURVEY OF FIELD CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTING FIELD CONDITIONS PRIOR TO BID AND PROVIDE A WRITTEN SUBMITTAL TO ENGINEER IDENTIFYING ANY DISCREPANCIES OR VARIANCES FOUND. THE SUBMITTAL MUST ALSO INCLUDE ANY COSTS REQUIRED FOR THE CONTRACTOR'S WORK TO MEET EXISTING CONDITIONS.
- ALL WORK SHALL BE PERFORMED WITH QUALITY WORKMANSHIP, TO THE APPROVAL AND SATISFACTION OF THE ENGINEER.
- ALL WORK, MATERIAL AND INSTALLATION SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES AND ORDINANCES.
- CONTRACTOR TO VERIFY ANY CHANGES TO THIS SCOPE OF WORK WITH ENGINEER PRIOR TO ROUGH-IN OR INSTALLATION.**

POST CONSTRUCTION PHASE GENERAL NOTES

CONTRACTOR SHALL PROVIDE RECORD DRAWINGS TO ENGINEER. DRAWINGS SHALL INCLUDE ALL ADDENDUM ITEMS, ACCEPTED REQUESTS FOR INFORMATION (RFIs), CHANGE ORDERS, ALTERATIONS, REROUTING, FIELD SKETCHES, MARK-UPS ETC.

SYSTEMS SHALL BE TESTED FOR PROPER OPERATION IF TESTS SHOW THAT WORK IS DEFECTIVE. CONTRACTOR SHALL MAKE CORRECTIONS NECESSARY AT NO COST TO OWNER.

CONTRACTOR'S FAILURE TO ORDER OR RELEASE ORDER FOR MATERIALS AND/OR EQUIPMENT WILL NOT BE ACCEPTED AS A REASON TO SUBSTITUTE ALTERNATE MATERIALS OR EQUIPMENT.

SYSTEMS AND THEIR COMPONENTS SHALL BE COMPLETE, OPERABLE AND READY FOR CONTINUOUS OPERATION.

SCOPE

THE SCOPE OF WORK COVERED HEREIN CONSISTS OF FURNISHING ALL LABOR, MATERIALS, NECESSARY EQUIPMENT, AND SERVICES TO COMPLETE THE DESIGN AND RELATED WORK IN FULL ACCORDANCE WITH THESE DRAWINGS AS SPECIFIED HEREIN, OR BOTH, AND IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT.

CODES, RULES, PERMITS, AND FEES

THE CONTRACTOR (MECHANICAL, ELECTRICAL AND PLUMBING) IS GENERALLY RESPONSIBLE TO ENSURE ALL WORK, BOTH OLD AND NEW, COMPLIES WITH THE APPLICABLE CODE (SPECIFIED BY THE JURISDICTION IN WHICH THE WORK IS BEING COMPLETED) AS WELL AS ANY APPLICABLE LOCAL CODES, STATE CODES, ADDENDUMS, AND ORDINANCES.

SHOP DRAWINGS

SHOP DRAWINGS FOR MATERIALS OR PRODUCTS SPECIFIED HEREIN AND/OR INDICATED ON DRAWINGS BY TRADE NAME, MANUFACTURER'S NAME OR CATALOG NUMBER SHALL BE PROVIDED AS SPECIFIED.

SUBSTITUTIONS FOR EQUIPMENT SPECIFIED IN THIS SCOPE OF WORK MUST BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK.

COOPERATION WITH OTHER TRADES

THE SUBCONTRACTOR SHALL GIVE FULL COOPERATION TO OTHER TRADES AND SHALL FURNISH, IN WRITING, TO THE CONTRACTOR, WITH COPIES TO THE ENGINEER (OR ARCHITECT), ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY. COORDINATE ALL INFORMATION ON EQUIPMENT FURNISHED BY OTHERS BEFORE BEGINNING INSTALLATION.

CUTTING, PATCHING AND FINISHING

UNLESS NOTED OTHERWISE THE CONTRACTOR SHALL DO ALL CUTTING, DRILLING, ETC. REQUIRED FOR WORK UNDER THIS SECTION OF THE SPECIFICATION, INSIDE THE BUILDING.

MATERIAL AND WORKMANSHIP

ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK SHALL BE NEW UNLESS INDICATED OTHERWISE IN THE PLANS.

RECORD DRAWINGS

THE CONTRACTOR SHALL KEEP ACCURATE RECORDS OF CHANGES OR ALTERATIONS DURING THE ACTUAL CONSTRUCTION PROCESS IF DIFFERENT FROM THE PLANS.

THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A REPRODUCIBLE SET OF PLANS FOR EACH DISCIPLINE OF THE COMPLETE INSTALLATION ALONG WITH FIRE ALARM SYSTEM, AS INSTALLED. THE SCALE ON THESE DRAWINGS SHALL BE NO SMALLER THAN THE SCALE USED ON THE ORIGINAL PLANS.

TESTING

FINAL TESTS SHALL BE MADE ONLY AFTER THE ENGINEER IS SATISFIED THAT ALL WORK HAS BEEN COMPLETED.

FINAL ACCEPTANCE

AFTER TESTING, A FINAL INSPECTION SHALL BE MADE BY THE ENGINEER AND OTHER AUTHORIZED PERSONS WITH THE CONTRACTOR.

FINAL ACCEPTANCE OF THE PROJECT SHALL NOT SUPERSEDE THE OWNERS RIGHT TO REQUIRE REPLACEMENT AND/OR REPAIR ANY DEFECTIVE WORK OR MATERIALS.

PLUMBING GENERAL NOTES

- REFER TO AND COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT PLUMBING FIXTURES, LOCATIONS, AND MOUNTING HEIGHTS.
- NEW WORK, ALTERATIONS OR ADDITIONS TO PLUMBING SYSTEMS ARE SUBJECT TO FIELD INSPECTION.
- CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF EXISTING UNDERGROUND UTILITIES UNOBSERVABLE IN FIELD PRIOR TO COMMENCING WORK. CONTRACTOR TO COORDINATE WITH OWNER AND ENGINEER ON ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND DRAWINGS.
- ALL PLUMBING FIXTURES IN NEW CONSTRUCTION SHALL MEET THE FLOW AND PRESSURE REQUIREMENTS OF IPC TABLES 604.3 & 604.4.
- VENTS THROUGH ROOF SHALL BE A MINIMUM 10'-0" FROM OUTSIDE AIR INTAKES. THIS IS TO BE COORDINATED WITH MECHANICAL FOR THIS SCOPE OF WORK.
- OPEN VENTS SHALL TERMINATE NOT LESS THAN 12 INCHES ABOVE ROOF AND COMPLY TO SIZE AND LOCATION REQUIREMENTS OF IPC 903, DBC/IPC 903.1, AND IPC 904.
- VERIFY LOCATION AND ORIENTATION OF ADA COMPLIANT FIXTURES WITH ARCHITECTURAL DRAWINGS.
- PROVIDE CHROME PLATED ESCUTCHEONS AT PIPE SLEEVES FOR EXPOSED BARE PIPE.
- PROVIDE 12" X 12" MINIMUM ACCESS DOOR IN INACCESSIBLE CEILINGS AND WALLS FOR EQUIPMENT REQUIRING ACCESS OR ADJUSTMENT. PROVIDE LOCKING ACCESS DOORS IN GYPSUM BOARD CEILINGS AND INACCESSIBLE WALLS FOR VALVES AND CLEAN OUTS.
- PLUMBING FIXTURES SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING. CONTRACTOR SHALL SUBMIT PLUMBING FIXTURES TO ARCHITECT, ENGINEER AND OWNER PRIOR TO BID FOR FINAL REVIEW AND ACCEPTANCE.
- AT ADA COMPLIANT LAVATORIES AND SINKS, COVER OFFSET WASTE, P-TRAP, HOT AND COLD-WATER ANGLE STOPS AND SUPPLIES WITH SKAL GUARD MODEL SC-102, 103, AND 104 OR APPROVED EQUAL.
- ARRANGE WATER HEATERS TO PROVIDE EASE OF DISASSEMBLY, MAINTENANCE, VENDOR RECOMMENDATIONS AND REPLACEMENT.
- PIPES PASSING THROUGH 1 HOUR FIRE RATED WALLS AND FLOORS SHALL BE SEALED WITH U.L. LISTED MATERIAL 2M FIRE BARRIER, CAULK OR PUTTY OR ENGINEERING APPROVED EQUAL.
- EQUIPMENT START UP SHALL BE BY MANUFACTURER'S AUTHORIZED REPRESENTATIVES.
- SHOWER HEAD ESCUTCHEONS SHALL BE RIGIDLY ATTACHED TO THE WALL USING "POLYSEAM SEAL" CAULKING MATERIAL OR APPROVED EQUAL.
- FLOOR SINKS SHALL BE LOCATED SO AS NOT TO CREATE TRIPPING HAZARDS WHEN ROUTING DRAINING LINES AT FLOOR LEVEL. VERIFY EXACT DRAIN LINE ROUTING PRIOR TO FLOOR SINK ROUGH-IN.
- PROVIDE WALL CLEANOUTS AT SINKS AND URINALS IN ACCORDANCE WITH APPLICABLE SECTION OF THE INTERNATIONAL PLUMBING CODE.
- PLUMBING RISER ISOLATION AND DRAIN VALVES, HOT WATER RE-CIRCULATION (HWC) THROTTLING VALVES (CIRCUIT SETTERS), AND HOT AND COLD WATER SHUT OFF VALVES SHALL BE LOCATED WITHIN EASY REACH OF CEILING, WHERE CEILINGS OCCUR, OR BELOW AND DROPPED TO WITHIN A MAXIMUM 10'-0" ABOVE FINISHED FLOOR WHERE NO CEILING OCCURS.
- WHERE ADA COMPLIANT WATER CLOSET IS INDICATED (VERIFIED WITH ARCHITECTURAL DRAWINGS), LOCATE WATER VALVE ABOVE TOILET (OR OPTIONAL ON WIDE SIDE OF STALL) PER ADA STANDARDS.
- INSULATED PIPING EXPOSED TO VIEW THROUGHOUT THE FACILITY SHALL BE COVERED AND FINISHED WITH PVC JACKETING EQUAL TO "PERMAPIPE" USING 30 MIL THICK JACKET OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS WITH SEAM ON TOP OF PIPE.
- ALL UNDERSLAB PIPING SHALL HAVE NO JOINTS AND SHALL BE CONTINUOUS. PROVIDE A 6-MIL POLYETHYLENE SLEEVE SYSTEM EQUAL TO IPS WATERFIT FOR COPPER DOMESTIC WATER PIPE BELOW SLAB.
- HOT AND COLD WATER SHUT OFF VALVES AND HOT WATER RETURN CIRCUIT SETTERS SHALL BE LOCATED FOR EASY ACCESS.
- FOR ALL FLUSH VALVE TOILETS, PROVIDE WATER HAMMER ARRESTORS EQUAL TO WATTS REGULATOR #15 SERIES, AS REQUIRED. PROVIDE ON HOT AND COLD-WATER PIPING SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS. DEVICES SHALL BE PDI CERTIFIED AND ANSI APPROVED.
- TRAP GUARDS, EQUAL TO PROSET, SHALL BE INSTALLED FOR FLOOR SINKS AND FLOOR DRAINS IN MECHANICAL ROOMS, FLOOR DRAINS IN TOILET ROOMS, AND INSTALLED PER MANUFACTURER'S REQUIREMENTS.
- WATER PIPING SHALL BE ROUTED AROUND ELECTRICAL ROOMS. WATER PIPING SHALL NOT BE INSTALLED IN ELECTRICAL ROOM, IF NO OTHER ROUTING IS AVAILABLE. CONTRACTOR TO COORDINATE WITH ENGINEER PRIOR TO PROCEEDING WITH WORK.
- PROVIDE CLEAN OUTS IN WASTE PIPING PER IPC SECTION 708, IPC SECTIONS 708.1.3 AND IPC SECTION 708.1.4, AND PER LOCAL JURISDICTION CODE AND AMENDMENTS.
- PROVIDE BACKFLOW ASSEMBLIES PER IPC SECTION 608.1 AND IPC SECTION 608.1 AND PER ALL LOCAL JURISDICTION CODE AND AMENDMENTS.
- INDIRECT WASTE PIPING SHALL CONFORM TO IPC CHAPTER 8 AS WELL AS ALL LOCAL JURISDICTION CODE AND AMENDMENTS.
- PROTECT ALL PIPES FROM FREEZING PER IPC SECTION 305.4 AS WELL AS ALL LOCAL JURISDICTION CODE AND AMENDMENTS.
- ALL MATERIALS WITHIN THE CEILING PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 80 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL723 PER SECTION 602.2.1 OF THE 2015 IMC.

CODES

WHERE APPLICABLE, THE GUIDANCE SET FORTH IN THE 2015 IECG CODE SHALL GOVERN THE SCOPE OF WORK UNDER THIS CONTRACT. THE CODE SECTIONS RELATING TO THE PLUMBING SCOPE OF WORK INCLUDE, BUT ARE NOT LIMITED TO:

- SECTION 303 - MATERIALS, SYSTEMS AND EQUIPMENT
- SECTION 303.3 - MAINTENANCE INFORMATION
- SECTION 404 - SERVICE WATER HEATING
- SECTION 406 - ADDITIONAL EFFICIENCY PACKAGE OPTIONS
- SECTION 406.1 - REQUIREMENTS
- SECTION 406.5 - ON-SITE RENEWABLE ENERGY
- SECTION 406.7 - REDUCED ENERGY USE IN SERVICE WATER HEATING
- SECTION 407 - TOTAL BUILDING PERFORMANCE
- SECTION 408 - SYSTEM COMMISSIONING
- SECTION 408.1 - GENERAL
- SECTION 408.2 - MECHANICAL SYSTEMS AND SERVICE WATER-HEATING SYSTEMS COMMISSIONING AND COMPLETION REQUIREMENTS
- SECTION 501 - GENERAL
- SECTION 502 - ADDITIONS
- SECTION 503 - ALTERATIONS
- SECTION 503.5 - SERVICE HOT WATER SYSTEMS
- SECTION 505 - CHANGE OF OCCUPANCY OR USE

LEGEND AND SYMBOLS

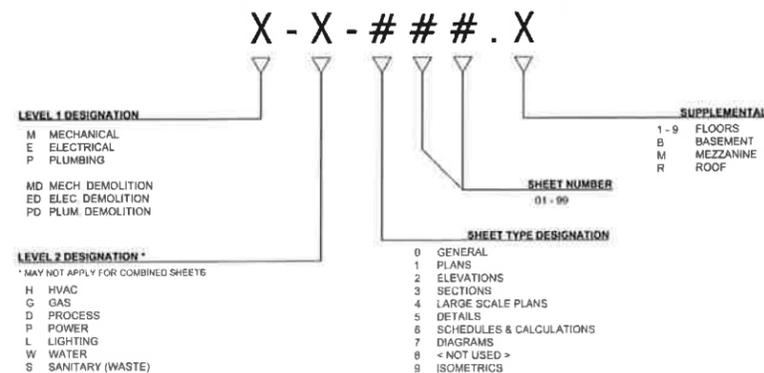
- TRANSITIONS**
- PIPE CAP
 - PIPE TRANSITION UP
 - PIPE TRANSITION DOWN
 - PIPE TAP/TEE DOWN
- DOMESTIC WATER SYSTEM**
- REDUCED PRESSURE BACKFLOW PREVENTER
 - RE-CIRCULATION PUMP
 - GLOBE VALVE
 - ANGLE VALVE
 - ISOLATION VALVE
 - CHECK VALVE
 - WATER METER
 - WALL HYDRANT
 - DOMESTIC COLD WATER (CW)
 - DOMESTIC HOT WATER (HW)
 - DOMESTIC HOT WATER RECIRCULATION (HWC)
 - KHW - KITCHEN HOT WATER (140°)
 - TW - TEMPERED WATER
 - FCW - FILTERED COLD WATER
 - FLOOR CLEANOUT (FCO)
 - GRADE CLEANOUT (GCO)
 - WALL CLEANOUT (WCO)
 - FLOOR DRAIN (FD)
 - FLOOR SINK (FS)
 - AIR ADMITTANCE VALVE (AAV)
 - WASTE (W)
 - GREASE WASTE (GW)
 - VENTING (V)
 - CONDENSATE DRAIN (DRN)
- WASTE AND VENT SYSTEM**

- AIR SEPARATOR
- BACKFLOW PREVENTOR
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- UNION
- FLEXIBLE PIPE CONNECTOR
- PUMP
- ISOLATION VALVE
- GATE VALVE
- PRESSURE REGULATING VALVE
- CHECK VALVE
- TEMP & PRESSURE RELIEF VALVE
- GLOBE VALVE
- MIXING VALVE
- THREE-WAY VALVE
- STRAINER

- GENERAL**
- KEY NOTE
 - FEEDER TAG
 - GENERAL EQUIPMENT TAG
 - ME/P EQUIPMENT TAG
 - POINT OF CONNECTION
 - NOT IN CONTRACT
 - DEMOLITION

- ABBREVIATIONS**
- GENERAL**
- AC ABOVE COUNTER
 - AFF ABOVE FINISHED FLOOR
 - AG ABOVE GRADE
 - DN DOWN
 - EC ELECTRICAL CONTRACTOR
 - GC GENERAL CONTRACTOR
 - MC MECHANICAL CONTRACTOR
 - MEP MECHANICAL, ELECTRICAL, PLUMBING MANUFACTURER
 - MFR MANUFACTURER
 - NIC NOT IN CONTRACT
 - NTS NOT TO SCALE
 - POC POINT OF CONNECTION
 - QTY QUANTITY
 - TCC TEMPERATURE CONTROL CONTRACTOR
 - W WITH
 - WO WITHOUT
 - WD WALL OPENING (ABOVE CEILING)
- SCOPE**
- (E) EXISTING
 - (N) NEW
 - (R) RELOCATED
 - (V) VENDOR
- PLUMBING**
- CW COLD WATER
 - DRN DRAIN
 - FCW FILTERED COLD WATER
 - GW GREASE WASTE
 - HW HOT WATER
 - HWC HOT WATER RE-CIRCULATION
 - IE INVERT ELEVATION
 - ORD OVERFLOW ROOF DRAIN
 - RD ROOF DRAIN
 - RFBFP REDUCED PRESSURE BACKFLOW PREVENTER
 - TW TEMPERED WATER
 - V VENT
 - VTR VENT THROUGH ROOF
 - W WASTE

SHEET NOMENCLATURE



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CBP 2-1, LOT 2
7735 GARY WATSON POINT
COLORADO SPRINGS, CO 80915
EL PASO COUNTY, COLORADO

REV.	DESCRIPTION	DRAWN	CHECK	APPR	DATE

ISSUANCE:
ISSUED FOR REVIEW

CLIENT:
HAMMERS CONSTRUCTION
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915

ARCHITECT:

PROJECT NO:
5151-20-05C

TITLE:
LEGEND, NOTES AND SPECIFICATIONS

SHEET NO:
P-001

PROJECT: 5151-20-05C-001 - 01 - 01 - 2024
 DRAWN BY: J. WATSON
 CHECKED BY: J. WATSON
 DATE: 01/01/24



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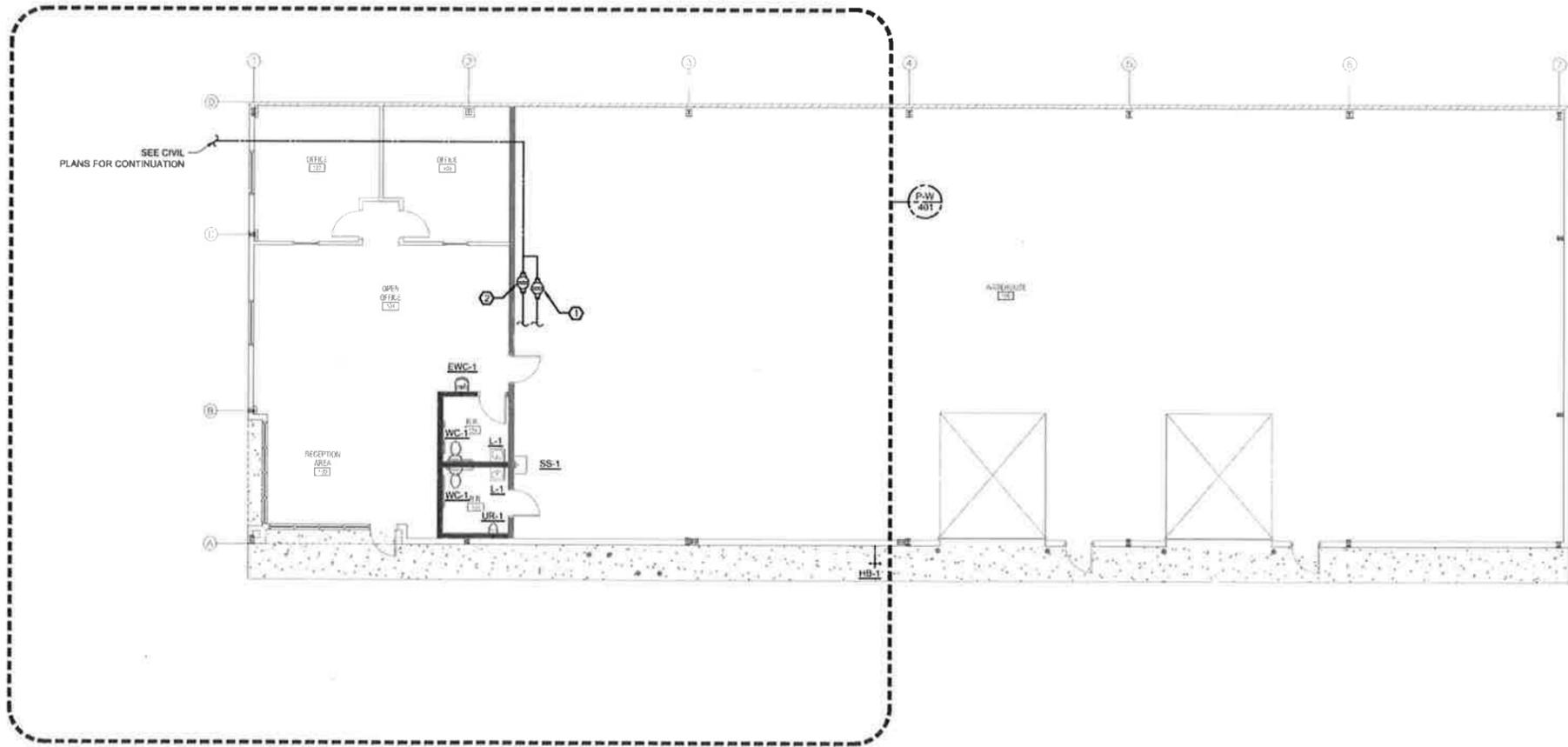
ISSUANCE:
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CLIENT:
HAMMERS CONSTRUCTION
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915

ARCHITECT:
PROJECT NO:
5151-20-05C

TITLE:
**WATER PIPING
NEW WORK PLAN**

SHEET NO:
P-W-101



GENERAL NOTES:

ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ARE TO BE SEALED AND PROTECTED BY FIRE RESISTANT CAULKING.

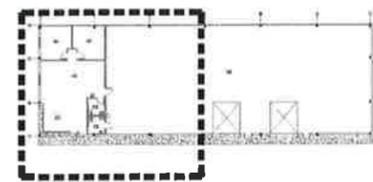
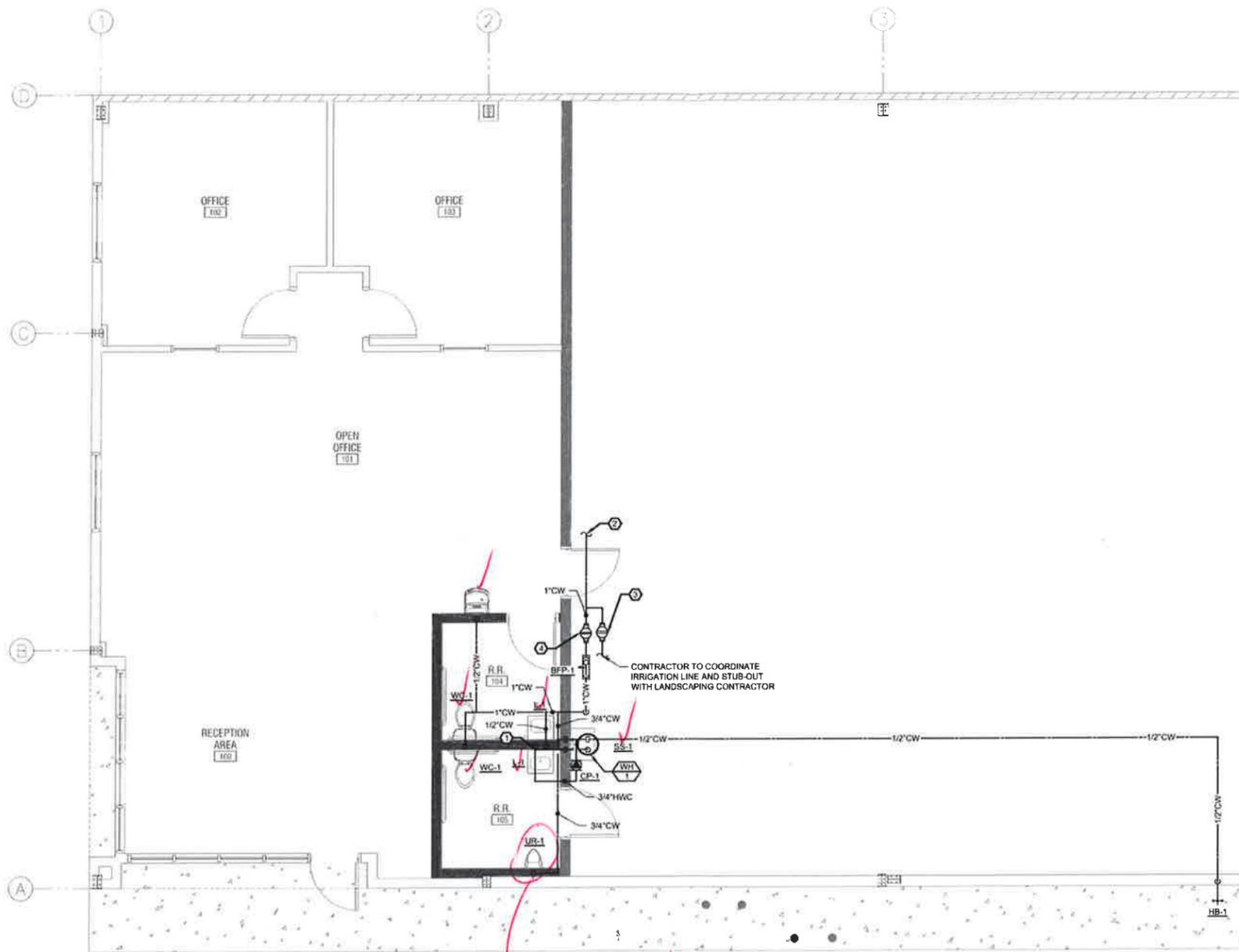
NEW WORK KEY NOTES:

- ① LOCATE AND CONNECT IRRIGATION METER (PROVIDED BY OTHERS) PER DISTRICT STANDARDS. SEE IRRIGATION METER DETAIL ON SHEET P-501.
- ② PROVIDE WATER METER PER DISTRICT STANDARDS. SEE SHEET P-601 FOR ADDITIONAL INFORMATION AND SEE SHEET P-501 FOR DISTRICT STANDARD INSTALLATION DETAIL.

WATER PIPING NEW WORK PLAN
SCALE: 1/8" = 1'-0"



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AREA OF WORK

NOT LISTED ON APPLICATION FOR WASTEWATER SERVICE FORM

GENERAL NOTES:

ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ARE TO BE SEALED AND PROTECTED BY FIRE RESISTANT CAULKING

NEW WORK KEY NOTES:

- ① CONNECT 1/2" HWC TO 1/2" HW PIPING WITHIN 2 FEET OF FIXTURE
- ② SEE SHEET P-W-101 FOR CONTINUATION OF MAIN DISTRIBUTION
- ③ LOCATE AND CONNECT IRRIGATION METER (PROVIDED BY OTHERS) PER DISTRICT STANDARDS. SEE IRRIGATION METER DETAIL ON SHEET P-501
- ④ PROVIDE 1" WATER METER PER DISTRICT STANDARDS. SEE SHEET P-601 FOR ADDITIONAL INFORMATION AND SEE SHEET P-501 FOR DISTRICT STANDARD INSTALLATION DETAIL

ENLARGED WATER PIPING NEW WORK PLAN

SCALE: 1/4" = 1'-0"



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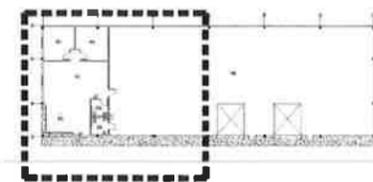
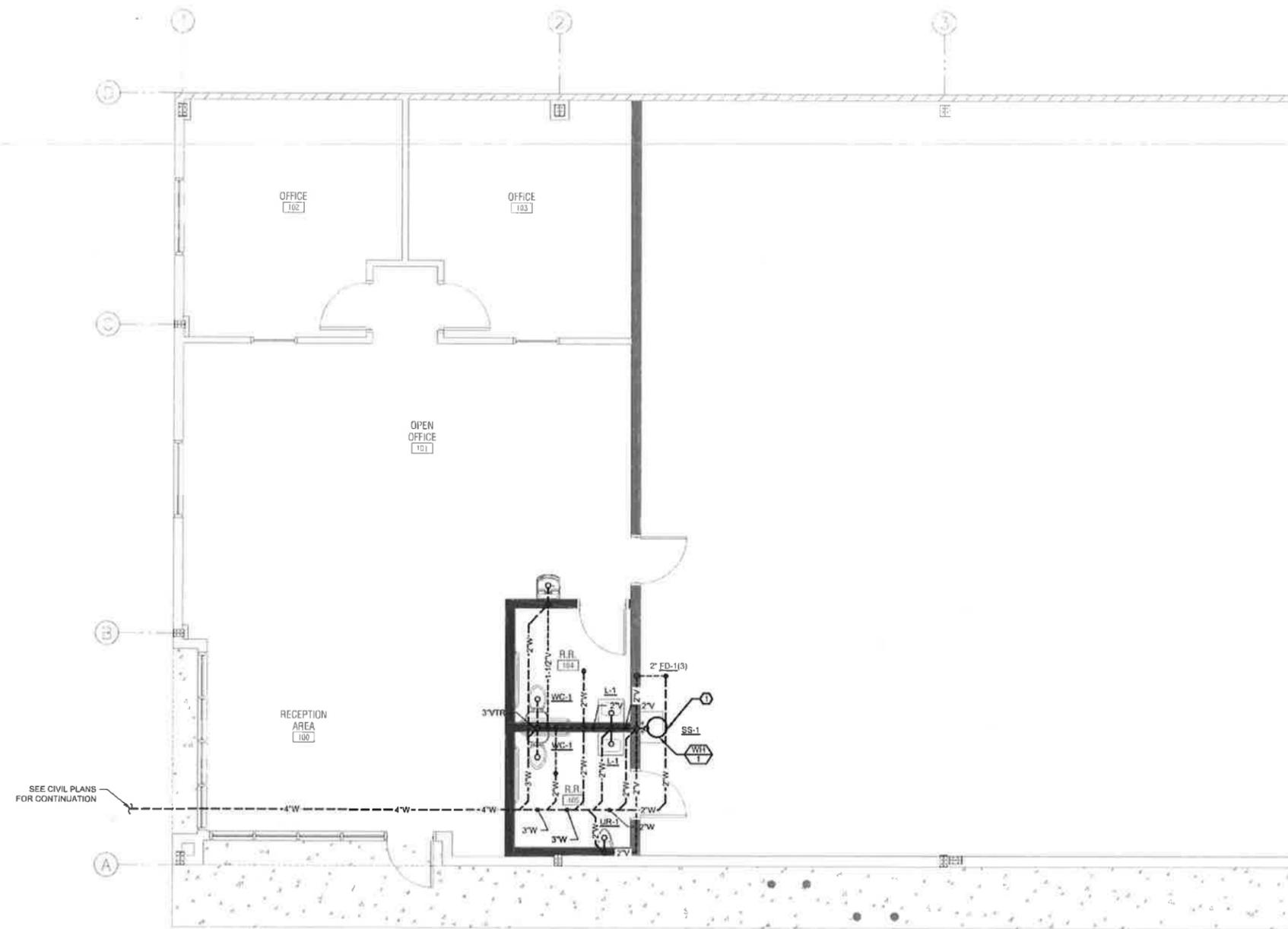
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 EL PASO COUNTY, COLORADO

REV	DESCRIPTION	DRAWN	CHECK	APPR	DATE

ISSUANCE:
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 CLIENT:
 HAMMERS CONSTRUCTION
 1411 WOOLSEY HEIGHTS
 COLORADO SPRINGS, CO 80915
 ARCHITECT:
 PROJECT NO:
 5151-20-05C
 TITLE:
 ENLARGED WATER PIPING
 NEW WORK PLAN
 SHEET NO:
P-W-401

PLOT DATE: 03/17/21 09:52 AM BY: JSDN PROJ. FILE: P:\Hammers Construction\Drawings - 5151\5151-20-05C.dwg Lot 2 - Hamberg.dwg

PROJ: 5151-20-05C HAMMERS CONSTRUCTION COMPANY 7735 GARY WATSON POINT COLORADO SPRINGS, CO 80915
 DATE: 08/17/23 08:52 AM BY: JUDIN



AREA OF WORK

GENERAL NOTES:

CONTRACTOR TO INSTALL CLEANOUTS AT NEW FIXTURES AND WASTE PIPING AS REQUIRED BY SECTION 708 OF THE 2015 IPC. REFER TO FIXTURE SCHEDULE ON SHEET P-601 FOR CLEANOUT INFORMATION.

ALL PIPING PENETRATIONS THROUGH RATED ASSEMBLIES ARE TO BE SEALED AND PROTECTED BY FIRE RESISTANT CAULKING.

NEW WORK KEY NOTES:

① CONNECT DRAIN FOR WATER HEATER (LOCATED ABOVE CEILING) TO TAIL PIPE OF NEAREST DRAIN. SEE SHEET P-601 FOR ADDITIONAL INFORMATION.

ENLARGED WASTE & VENT NEW WORK PLAN
 SCALE: 1/4" = 1'-0"

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 COLORADO SPRINGS, CO 80915
 EL PASO COUNTY, COLORADO

REV	DESCRIPTION	DRAWN	CHECK	APPR	DATE

ISSUANCE:
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 HAMMERS CONSTRUCTION
 1411 WOOLSEY HEIGHTS
 COLORADO SPRINGS, CO 80915

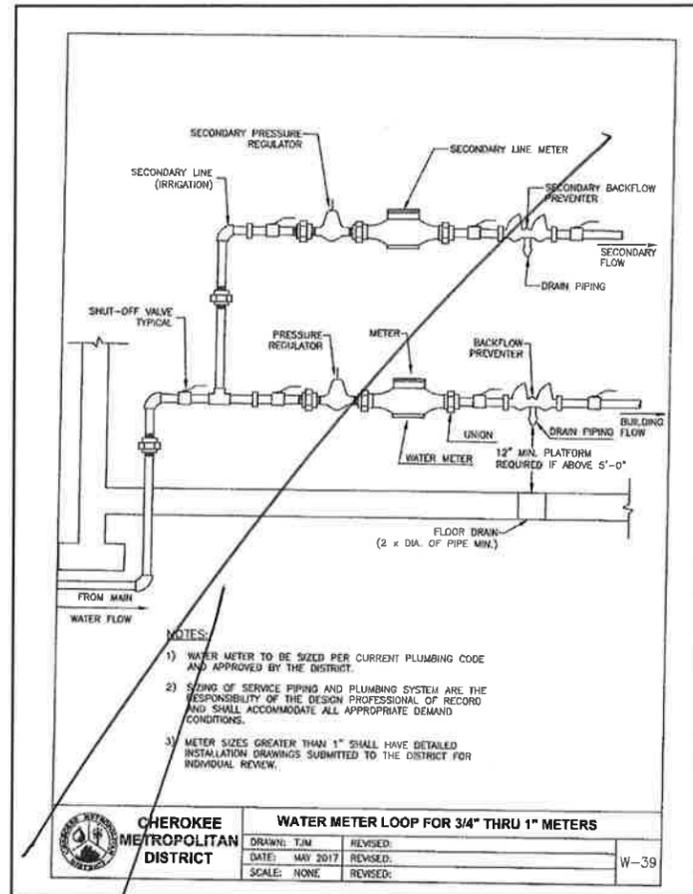
ARCHITECT:

PROJECT NO:
 5151-20-05C

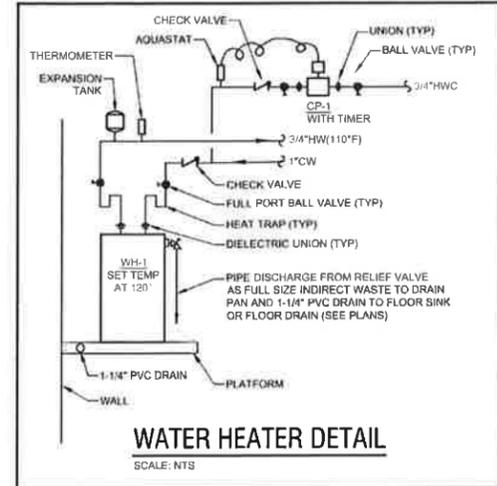
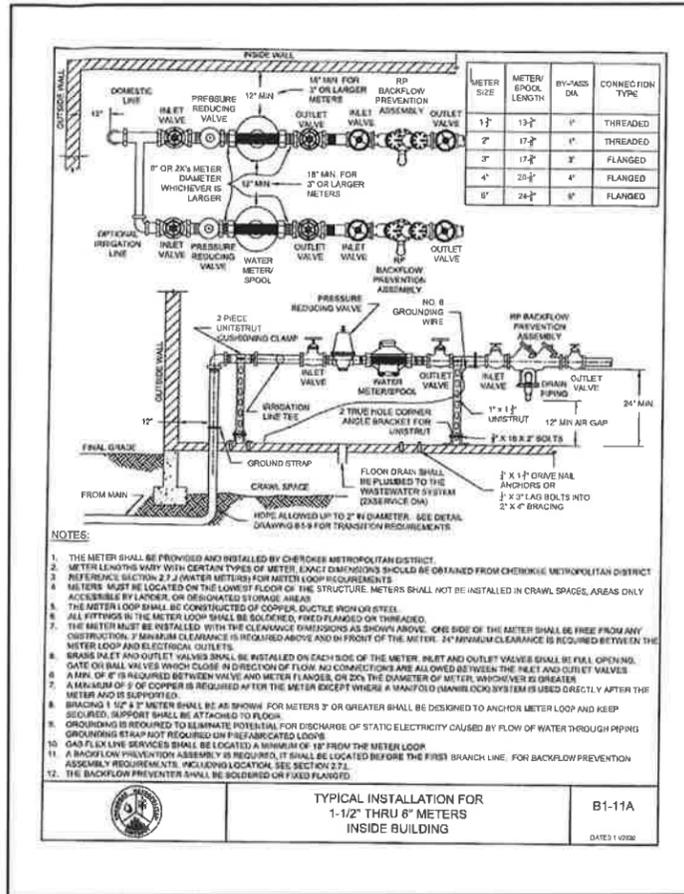
TITLE:
ENLARGED WASTE & VENT NEW WORK PLAN

SHEET NO:
P-S-401

PLD DATE: 03/17/21 08:53 AM BY: JDS/BN PROJ: PLS: PLS\Hammers Construction\Cherokee Tractor\5150\5150.dwg Title: 2 - Plumbing.dwg



Replace with CMO STD B1-7



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CBP 2-1, LOT 2
7735 GARY WATSON POINT
COLORADO SPRINGS, CO 80915
EL PASO COUNTY, COLORADO

REV.	DESCRIPTION	DRAWN	CHECK	APPR.	DATE

ISSUANCE:
ISSUED FOR REVIEW

CLIENT:
HAMMERS CONSTRUCTION
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915

ARCHITECT:

PROJECT NO:
5151-20-05C

TITLE:
DETAILS

SHEET NO:
P-501

WATER HEATER SCHEDULE (ELECTRIC)

MARK	MFR	MODEL #	WEIGHT (FULL)	HEIGHT	STORAGE	INPUT	VOLTS / Ø	DISCHARGE TEMPERATURE	RECOVERY (@ 80°F RISE)	WATER CONNECTION	RE-CIRCULATION PUMP	REMARKS
WH-1	RHEEM	EGSP20	232 LBS	25-1/8"	20 GALLONS	3 KW	208-240V/1Ø	110°	15 GALLONS	3/4"		1
REMARKS:												
1	PROVIDE EXPANSION TANK EQUAL TO AMTROL THERM-X-TROL MODEL # ST-5											

WATER PIPE SIZE ANALYSIS

WATER SUPPLY FIXTURE UNITS (WSFU) - PER 2015 IPC TABLE 103.3(2)			
FIXTURE	QTY	WSFU	TOTAL
WATER CLOSET (FLUSH TANK)	2	5.00	10.00
URINAL (3/4" FLUSH VALVE)	1	5.00	5.00
LAVATORY	2	2.00	4.00
SERVICE SINK / MOP SINK BASIN	1	3.00	3.00
DRINKING FOUNTAIN	1	0.25	0.25
HOSE BIBB / WALL HYDRANT (1/2")	1	5.00	5.00
TOTAL FIXTURE UNITS			27.25
FLOW RATE INFORMATION			
DOMESTIC FLOW RATE PER 2015 IPC TABLE E103.3(3) [GPM]			21.5
IRRIGATION FLOW RATE PER LANDSCAPING CONTRACTOR [GPM]			10.0
TOTAL SYSTEM FLOW RATE [GPM]			31.5
SERVICE PRESSURE			
MAXIMUM STATIC PRESSURE AVAILABLE AT THE DOMESTIC WATER ENTRY (PER 2015 IPC SECTION 604.8, DOWNSTREAM OF THE REQUIRED PRESSURE REGULATOR) [PSI]			90
SYSTEM LOSSES			
METER LOSS [PSI]			7.3
LOSS THROUGH RPZ BACKFLOW PREVENTER [PSI]			12.0
STATIC HEAD LOSS DUE TO ELEVATION (VERTICAL LENGTH * 0.43 PSI/GFT) [PSI]	15		6.45
LOSS IN HORIZONTAL LENGTH OF PIPING (LONGEST DISTANCE) (FT) * (1.2) (FITTING FACTOR) [FT]	40		48.0
DISTRIBUTION PIPE LOSSES PER FIGURE E103.3(3) (LONGEST LENGTH OF PIPING) * (PRESSURE DROP / 100 FT) [PSI]	2		1.0
TOTAL PRESSURE LOSSES FOR THE PROPOSED SYSTEM [PSI]			26.71
MINIMUM PRESSURE REQUIRED FOR PROPER FIXTURE OPERATION (PER 2015 IPC TABLE 804.3) [PSI]			20
TOTAL SYSTEM PRESSURE REQUIREMENT FOR THE PROPOSED SYSTEM (LOSSES) + (FIXTURE REQUIREMENTS) [PSI]			46.71
NET POSITIVE SYSTEM PRESSURE AVAILABLE (MAXIMUM STATIC PRESSURE) - (SYSTEM PRESSURE REQUIREMENT) [PSI]			33.29
SUMMARY			
PER THE REQUIREMENTS OF 2015 IPC TABLE E201.1, WHEN 27.25 WSFUS ARE APPLIED TO THE 40 LINEAR FOOT COLUMN IN THE TABLES, A 3/4" WATER METER IS REQUIRED WITH 1" DISTRIBUTION PIPING IN ORDER TO ACCOMMODATE THE DEMAND ON THE DOMESTIC WATER SYSTEM IMPOSED BY THE FIXTURES IN THIS CONTRACT.			

PIPING MATERIALS SCHEDULE

ALL PIPE AND FITTINGS LISTED ARE ONLY TO BE USED WHERE PERMITTED BY CODE	
SANITARY WASTE & VENT (W & V)	SCHEDULE 10 CAST IRON WITH NO HUB OR BANDED CONNECTIONS AND FITTINGS ALTERNATE: SCHEDULE 40 PVC, WITH PRIMED AND GLUED CONNECTIONS AND FITTINGS
DOMESTIC COLD WATER (CW) DOMESTIC HOT WATER (HW) HOT WATER RECIRCULATION (HWC)	TYPE "L" COPPER PIPING, WITH SOLDERED OR BRAZED FITTINGS, SOFT COPPER UNDERSLAB WITH NO JOINTS. ALTERNATE: PEX TUBING WITH BANDED CONNECTIONS AND FITTINGS
DRAINAGE (ORDL & RDL)	SCHEDULE 40 PVC, PRIMED AND GLUED OR THREADED CONNECTIONS AND FITTINGS.

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	WASTE	VENT	COLD	HOT
WC-1	WATER CLOSET (ADA COMPLIANT) EQUAL TO AMERICAN STANDARD MODEL #2487.018, "CADE1 RIGHI HEIGHT", FLOOR MOUNTED, PRESSURE ASSISTED FLUSH TANK TYPE TOILET, WHITE, VITREOUS CHINA WITH ELONGATED BOWL. PROVIDE OPEN FRONT SEAT LESS COVER, BOLT COVERS AND ANGLE SUPPLY VALVES WITH STOP SEAT HEIGHT SHALL BE BETWEEN 17" AND 19" ABOVE FINISHED FLOOR FOR ADA COMPLIANCE. FIXTURE SHALL BE 1.6 GPF.	3"	1-1/2"	1/2"	---
UR-1	URINAL (ADA COMPLIANT, WALL MOUNT) EQUAL TO AMERICAN STANDARD MODEL #601.511, "WASHBROOK", 1.0 GPF EXPOSED TOP SPUD URINAL AND MANUAL PISTON-TYPE URINAL FLUSH VALVE, WALL MOUNTED, VITREOUS CHINA, ELONGATED 14" RIM FROM FINISHED WALL, EXTENDED SIDES FOR PRIVACY, 3/4" INLET SPUD, SECURE ROUGH-INS TO WALL STRUCTURE, MOUNT AT 16" RIM HEIGHT WITH 30" CLEAR FROM SIDE TO SIDE.	2"	2"	3/4"	---
L-1	LAVATORY (ADA COMPLIANT, WALL MOUNT) EQUAL TO AMERICAN STANDARD MODEL #0356.027, "LUCERNE" 20"x18" WALL-HUNG LAVATORY, VITREOUS CHINA, FRONT OVERFLOW, D-GI IAPCD BOWL, 4" CENTER HOLE, WITH AMERICAN STANDARD MODEL #0174.110, SINGLE HANDLE LEVER FAUCET WITH VANDAL RESISTANT AERATOR. PROVIDE OPEN GRID STRAINER WITH OFFSET TAILPIECE, CAST BRASS 1/2" TRAP, TRAP ARM AND 3/8" FLEX, SUPPLY VALVES, AND STOPS, SECURE ROUGH-INS TO WALL STRUCTURE AND INSULATE EXPOSED DRAIN AND HOT WATER PIPING WITH BROCAR OR APPROVED EQUAL. MAXIMUM FLOW RATE OF 0.5 GPM AND PROVIDE TEMPERING VALVE EQUAL TO WATTS MODEL #LFMMV, SET @ 110° F.	2"	1-1/2"	1/2"	1/2"
SS-1	SERVICE SINK EQUAL TO FIAT MODEL #TAT1 "LAUNDRY TUB TO GO", SINGLE BOWL LAUNDRY TUB WITH LEGS, 20"x23-7/8" HEAVY DUTY POLYETHYLENE MATERIAL, SUPPLIED WITH FIAT MODEL #A1 DECK MOUNTED SERVICE SINK FAUCET WITH WRIST BLADE HANDLES, INTEGRAL STOPS, VACUUM BREAKER, HOSE AND CONNECTION.	2"	2"	1/2"	1/2"
CP-1	HOT WATER RE-CIRCULATION PUMP EQUAL TO BELL & GOSSETT MODEL #NRF-25, 1/15 HP, 115V/1Ø, 1.20 FLA, RATED FOR 50GPM @ 10FT TDH. CONTROL WITH AQUASTAT AND TIMER.	---	---	---	3/4"
EW-1	ELECTRIC WATER COOLER (TWO-LEVEL, ADA COMPLIANT) EQUAL TO ELKAY MODEL #EZSTL8LC, TWO-LEVEL DRINKING FOUNTAIN (ADA COMPLIANT), LIGHT GRAY, INCLUDING ELECTRONIC BUBBLER PUSHBARS, FLEX-GUARD BUBBLERS, 8 GPH CHILLING, AND 115V/1Ø, 5A FLA, RATED AT 370 WATTS. INSTALL WITH 20A MOCB AND GFCI PROTECTION. INCLUDE WALL PLATE ACCESSORY #100000453.	2"	1-1/2"	1/2"	---
FD-1	FLOOR DRAIN EQUAL TO JAY R SMITH MODEL #2005-A, CAST IRON BODY, NICKEL BRONZE STRAINER. PROVIDE CAST IRON P-TRAP AND TRAP GUARD EQUAL TO PROSET.	SEE PLAN	2"	---	---
WCO	WALL CLEAN OUT EQUAL TO SIOUX CHIEF #70-040 ROUND 20 GAUGE STAINLESS STEEL WALL CLEANOUT COVER.	SEE PLAN	---	---	---
BFP-1	BACKFLOW PREVENTER EQUAL TO WATTS MODEL #LF919QT, 1" REDUCED PRESSURE BACKFLOW PREVENTER.	---	---	1"	---
HB-1	HOSE BIBB EQUAL TO WOODFORD MODEL # B24 ANTI-SIPHON, VACUUM BREAKER PROTECTED WALL FAUCET ENCLOSED IN A FLUSH MOUNTED WALL BOX.	---	---	1/2"	---

PIPE INSULATION SCHEDULE

FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL PIPING SIZE			
	$\frac{(R)U \cdot (H)}{(H) \cdot (T) \cdot (F)}$	AIRGAS RATING TEMP, °F	≤ 1"	1" TO ≤ 1-1/2"	1-1/2" TO < 4"	4" TO < 8"
> 350	0.32 - 0.34	250	4.5"	6.0"	5.0"	5.0"
251 - 350	0.29 - 0.32	200	3.0"	4.0"	4.5"	4.5"
201 - 250	0.27 - 0.30	150	2.5"	2.6"	2.5"	3.0"
141 - 200	0.25 - 0.29	125	1.5"	1.5"	2.0"	2.0"
105 - 140	0.21 - 0.28	100	1.0"	1.0"	1.5"	1.5"
40 - 60	0.21 - 0.27	75	0.5"	0.5"	1.0"	1.0"
≤ 40	0.20 - 0.26	50	0.5"	1.0"	1.0"	1.0"



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CBP 2-1, LOT 2
7735 GARY WATSON POINT
COLORADO SPRINGS, CO 80915
EL PASO COUNTY, COLORADO

REV	DESCRIPTION	DRAWN	CHECK	APPR	DATE

ISSUANCE:
ISSUED FOR REVIEW

CLIENT:
HAMMERS CONSTRUCTION
1411 WOOLSEY HEIGHTS
COLORADO SPRINGS, CO 80915

ARCHITECT:

PROJECT NO:
5151-20-05C

TITLE:
SCHEDULES AND CALCULATIONS

SHEET NO:
P-601