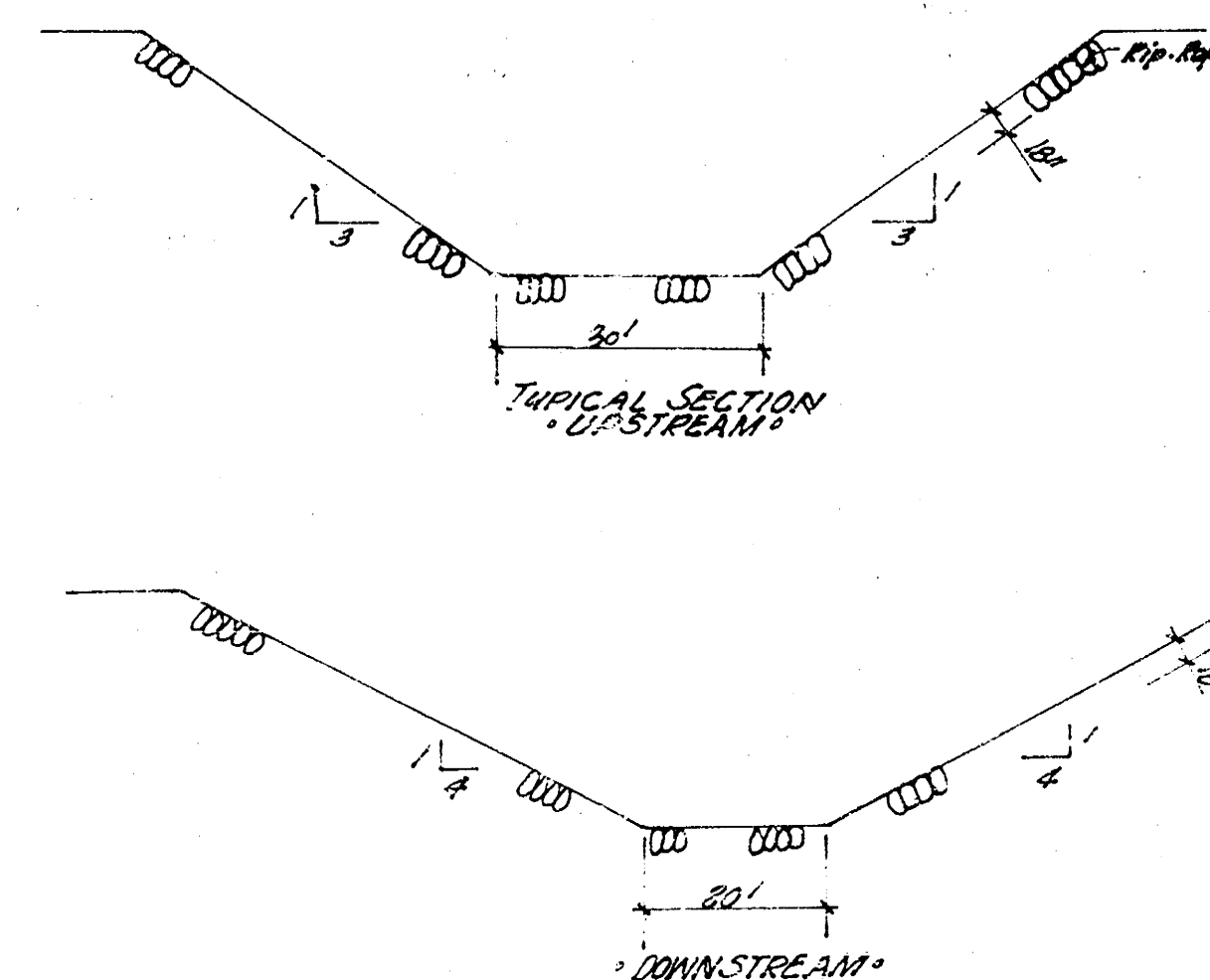
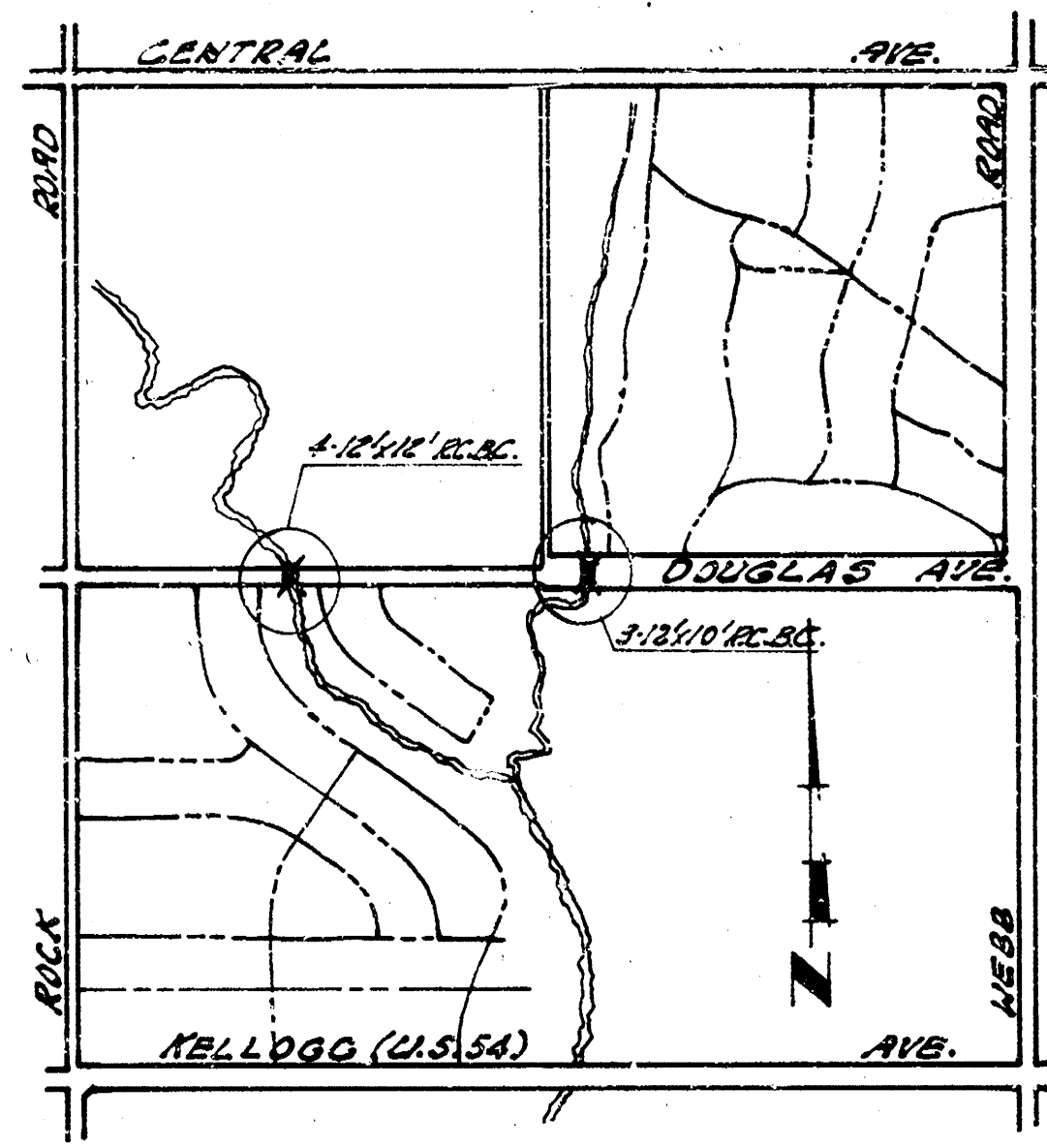
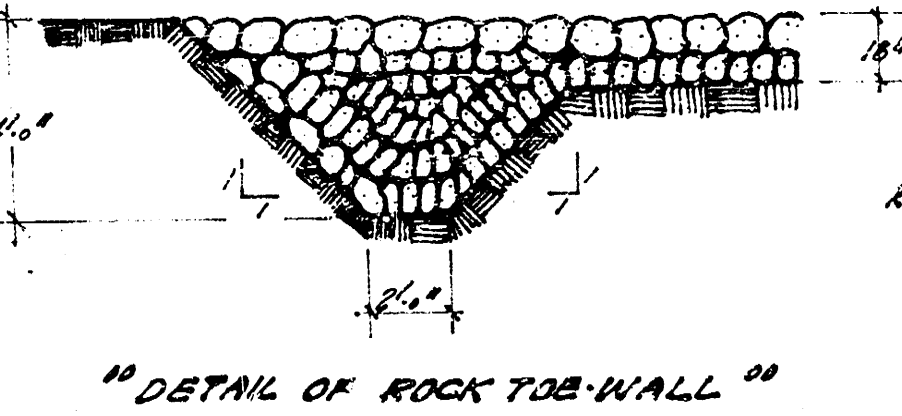


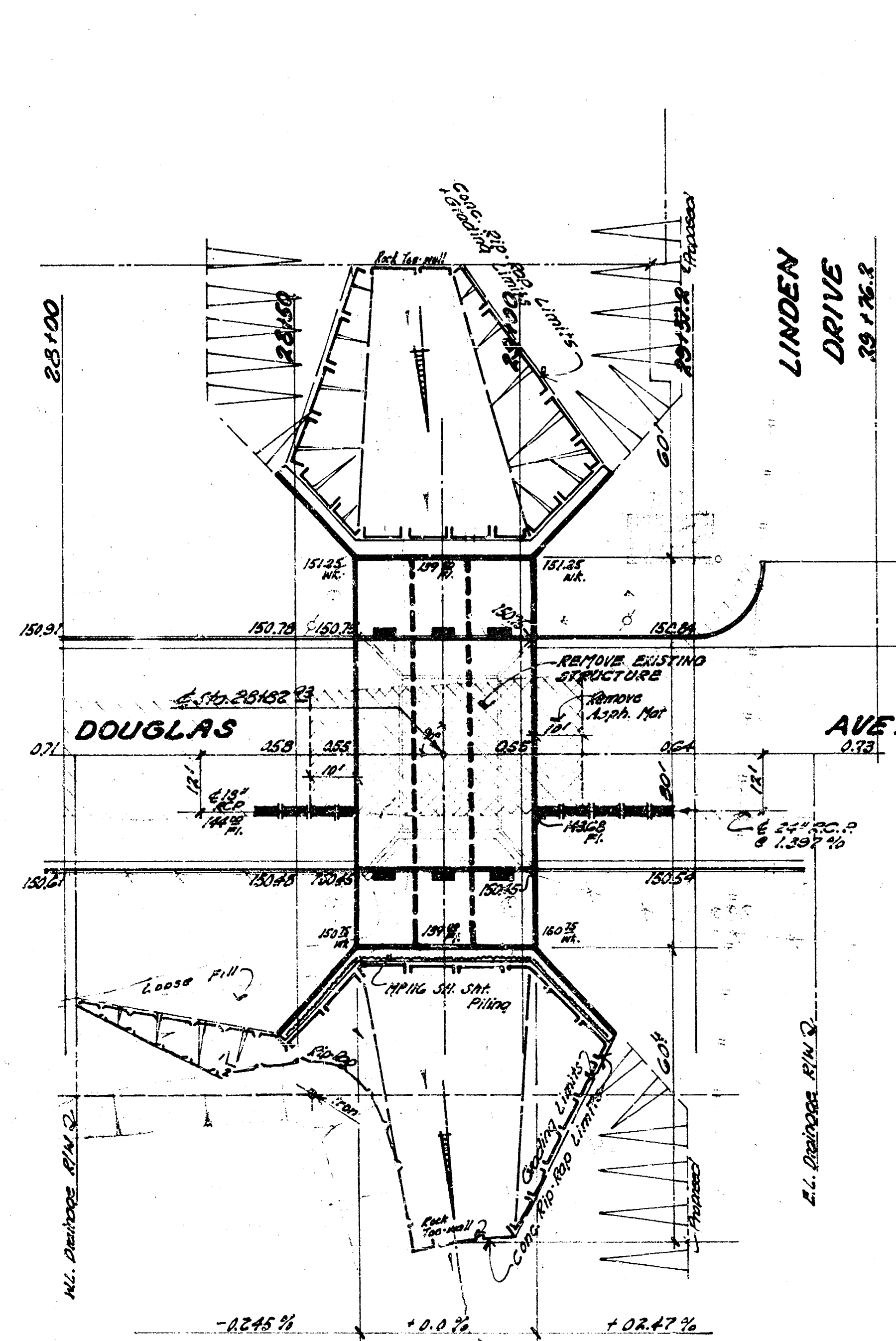
Plan - See



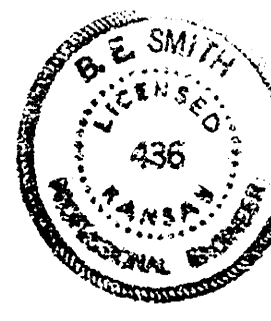
3-1/2' Conc. Rip-Rap in downstream area to be determined by the amount of material furnished by "OTHERS".



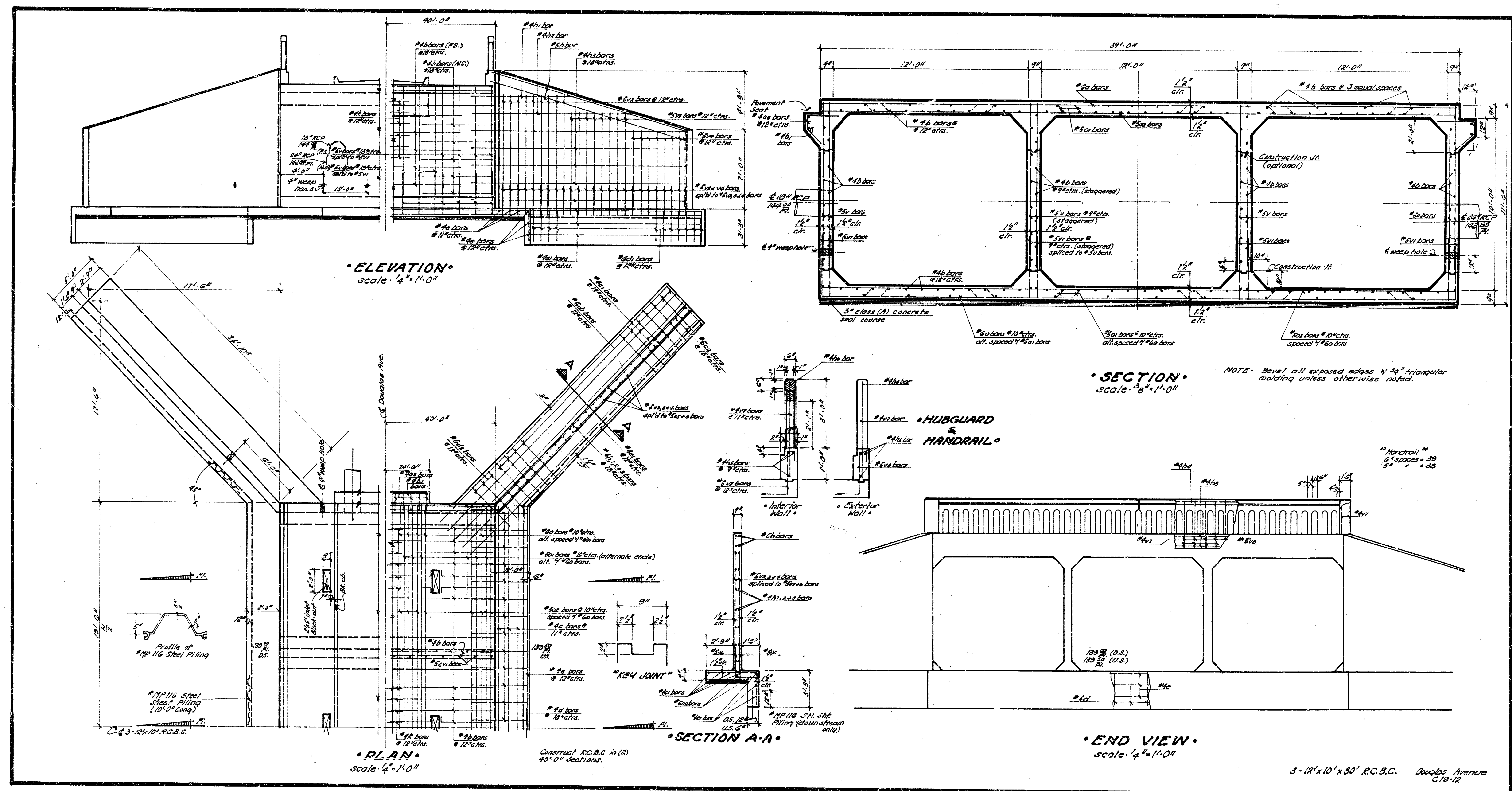
Rip-Rap - To be of broken concrete with max. size stone of 30 pounds; avg. size 30 to 50 pounds; not more than 10% of material composed of pieces which are less than 10 pounds. Neither depth nor the thickness of any piece shall be less than 1/8 its length.

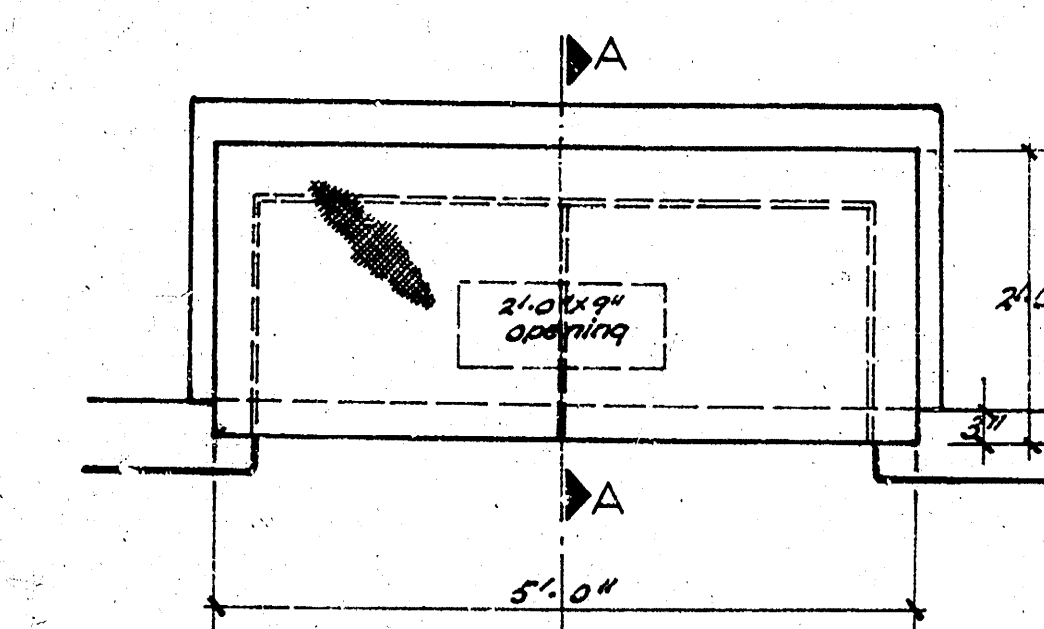


NOTE TO CONTRACTOR & ENGINEER: This Project to be cross-sectioned before and after to determine final quantities for earthwork. Having Contractor to fill area below c.s. & subgrade across R.C.B.C.'s

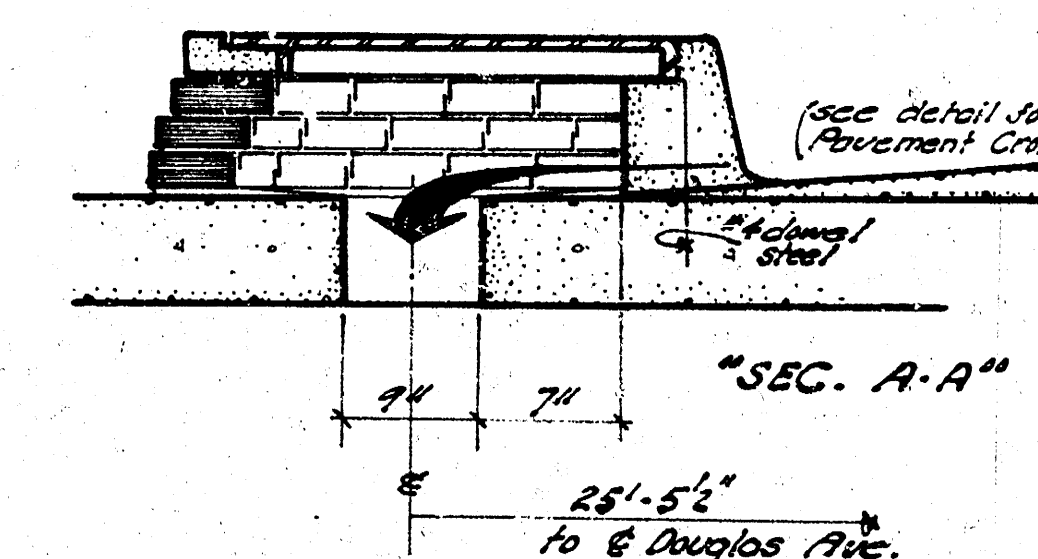


3-12x10' R.C.B.C. in Connection With
 City of Wichita, Kansas
 B.E. Smith City Engineer
 Date: Sept. 1969 Project No. C19-12





.. PLAN ..



B.A.R. SCHEDULE							
Lot	Size	Length	No.	Location	Shape	Spacing	Weight
3	#6	38'-9"	192	box	—	10"	1177.80
4	#6	40'-8"	190	"	—	10"	2726.00
5	#6	38'-0"	176	"	—	10"	2727.90
6	#6	40'-0"	180	box	—	10"	946.36
7	#6	38'-9"	320	"	—	9 1/2"	1536.36
8	#6	25'-2"	8	box	—	9"	185.31
9	#6	38'-9"	6	ocean	—	10"	316.30
10	#6	20'-0"	16	Waquell	—	12"	354.07
11	#6	20'-0"	8	ocean	—	10"	277.83
12	#6	71'-0"	98	Waquell	—	12"	1070.93
13	#6	41'-0"	12	ocean	—	12"	85.61
14	#6	22'-7"	12	Waquell	—	12"	179.04
15	#6	27'-0"	16	"	—	12"	350.58
16	#6	12'-0"	8	"	—	10"	66.13
17	#6	14'-3"	8	"	—	10"	103.12
18	#6	20'-0"	40	"	—	10"	712.53
19	#6	18'-3"	4	handrail	—	9"	51.84
20	#6	28'-9"	8	hubbard	—	10"	185.31
21	#6	3'-0"	164	box	—	12"	240.50
22	#6	9'-6"	424	"	—	12"	460.120
23	#6	3'-0"	72	Waquell	—	9"	1421.68
24	#6	9'-2"	64	"	—	10"	75.19
25	#6	6'-8"	64	"	—	12"	144.00
26	#6	2'-0"	200	"	—	12"	545.08
27	#6	2'-0"	200	"	—	12"	546.87
28	#6	3'-0"	80	handrail	—	12"	200.00
29	#6	4'-0"	72	hubbard	—	12"	328.40

*CLASS A-AZ Concrete shall be used throughout this project. All Reinforcing Steel shall conform to A.S.T.M. Specifications.

* EARTHWORKS - all earthwork shall be considered as "Common Excavation" except for the footwall. Footwall excavation shall be included in "Camp Sum Aid."

excavation to extend to (2) beyond sides of both wingwalls. Loose fill of bents to be included in Lump Sum Bid.
 (3) (4) (5) (6) (7) (8) (9) (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)

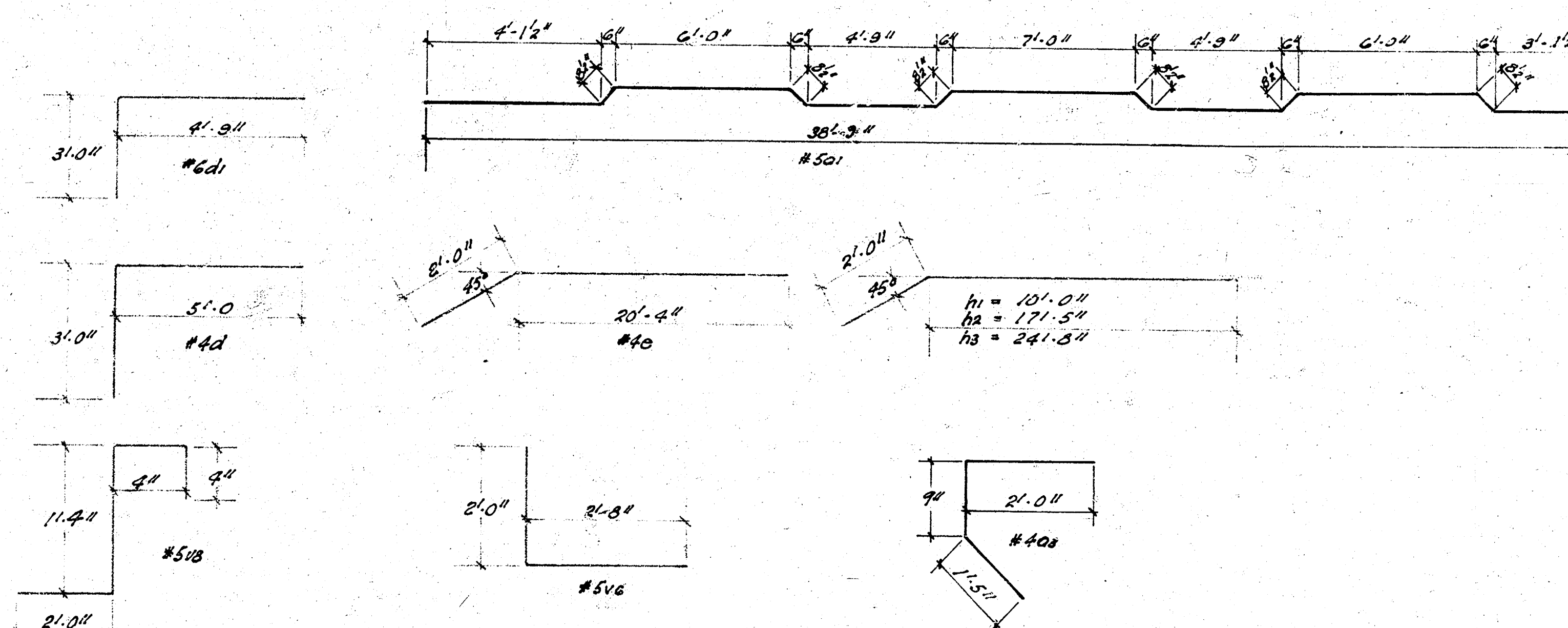
but shall be considered a part of the excavation work.

8.3.2.1. SEAL COURSE: A seal course consisting of (3%) class (A) concrete shall be constructed only where specified on the Plans or by the Engineer. No reinforcing shall be placed until the seal course has gained sufficient strength to permit working upon it without injury.

8.3.2.2. BIDDING OFFICERS shall be Civil and Mechanical Engineers.

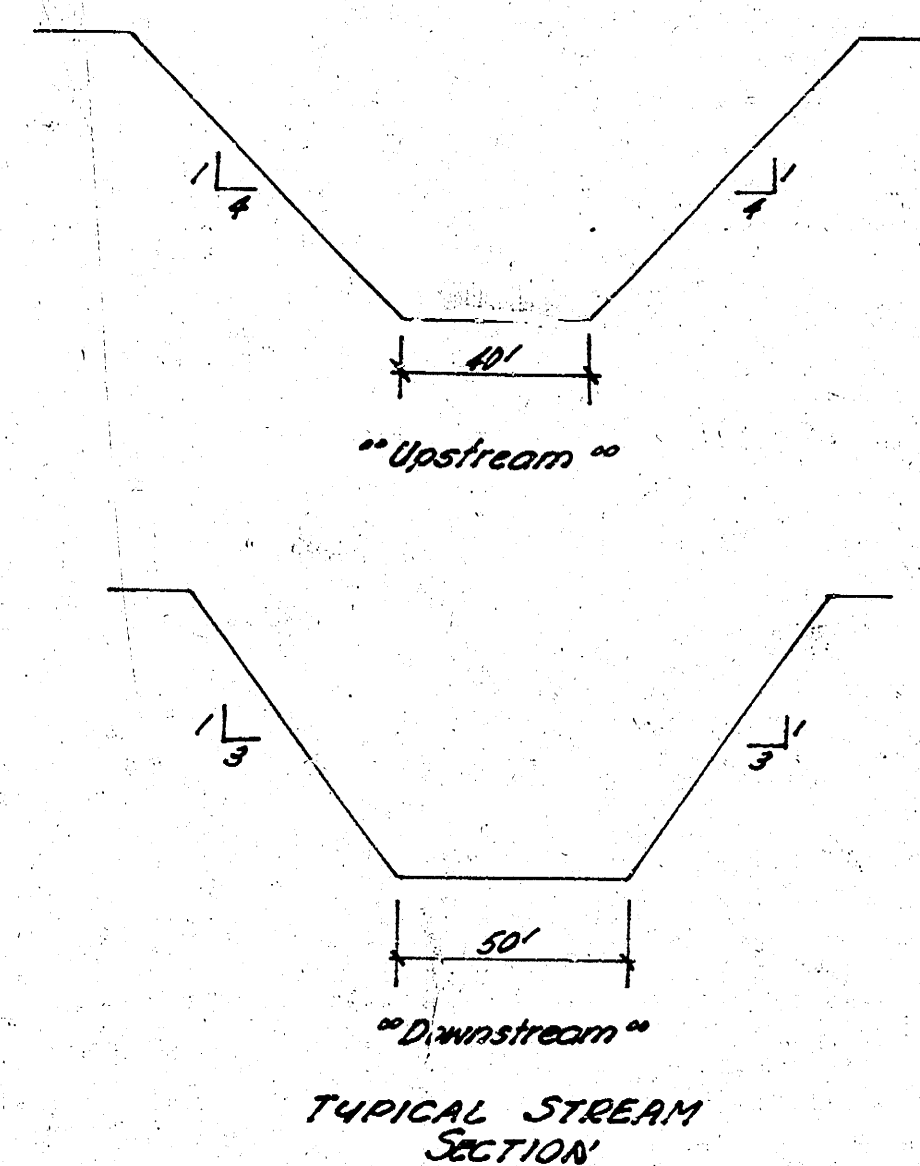
The Contractor shall be liable as a "Lump-Sum Bid" except for the following items: Inter-
Area Common Elevation, Compacted Fill. Quantities shown in the "Bill of Materials" or items which are listed
in the "Bill of Materials" of the Contract are for information only. The Contractor must satisfy himself as to the
quantities and the Engineer assumes no responsibility for their accuracy. The Contractor will have full re-
sponsibility for providing all materials shown in the detailed plans necessary to complete this project.

Bill # R747261423	QTY	UNIT	
CLASS 9.45 concrete	466.8	CUYDTS	4.5
reinforcing steel	466.8	LB	1.00 Lump Sum Bid = 2.5
concrete noncrust	78.0	LF	0.5
rod excavation	116.8	CUYDTS	0.5
MPDG Steel Sheet Piling	644.0	SQ.FT	21.5
IMP curb	78.0	LF	76.5
CLASS 9 Concrete	164.4	CUYDTS	0.1
EXST Inlets	5	PCS	1.00 YOT. 30' = 3.1
18" RCP	5	CP	0.5
IN "	5	"	0.5
CURB 18" x 20"	280	SQ.	0.1
High 100' rem.	100	SQ.	0.5
EXIST Structure Rem.		SD	0.5
Clearing 10'		Lump Sum	4.5
common excavation	854	CUYDTS	0.1
compacted fill	1700	CUYDTS	0.1
loose fill	854	CUYDTS	4.5

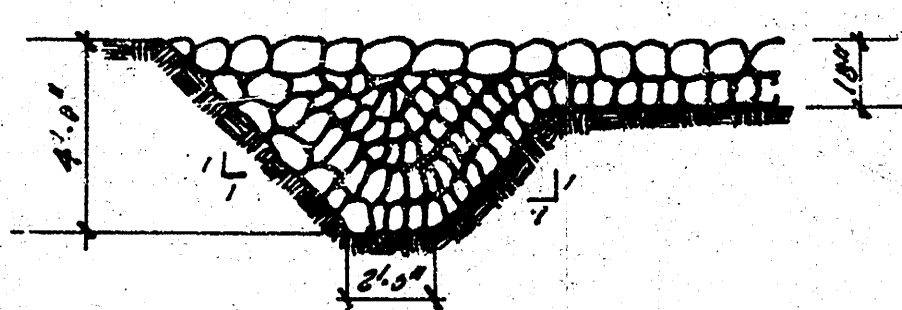


•• BEND DIAGRAM ••

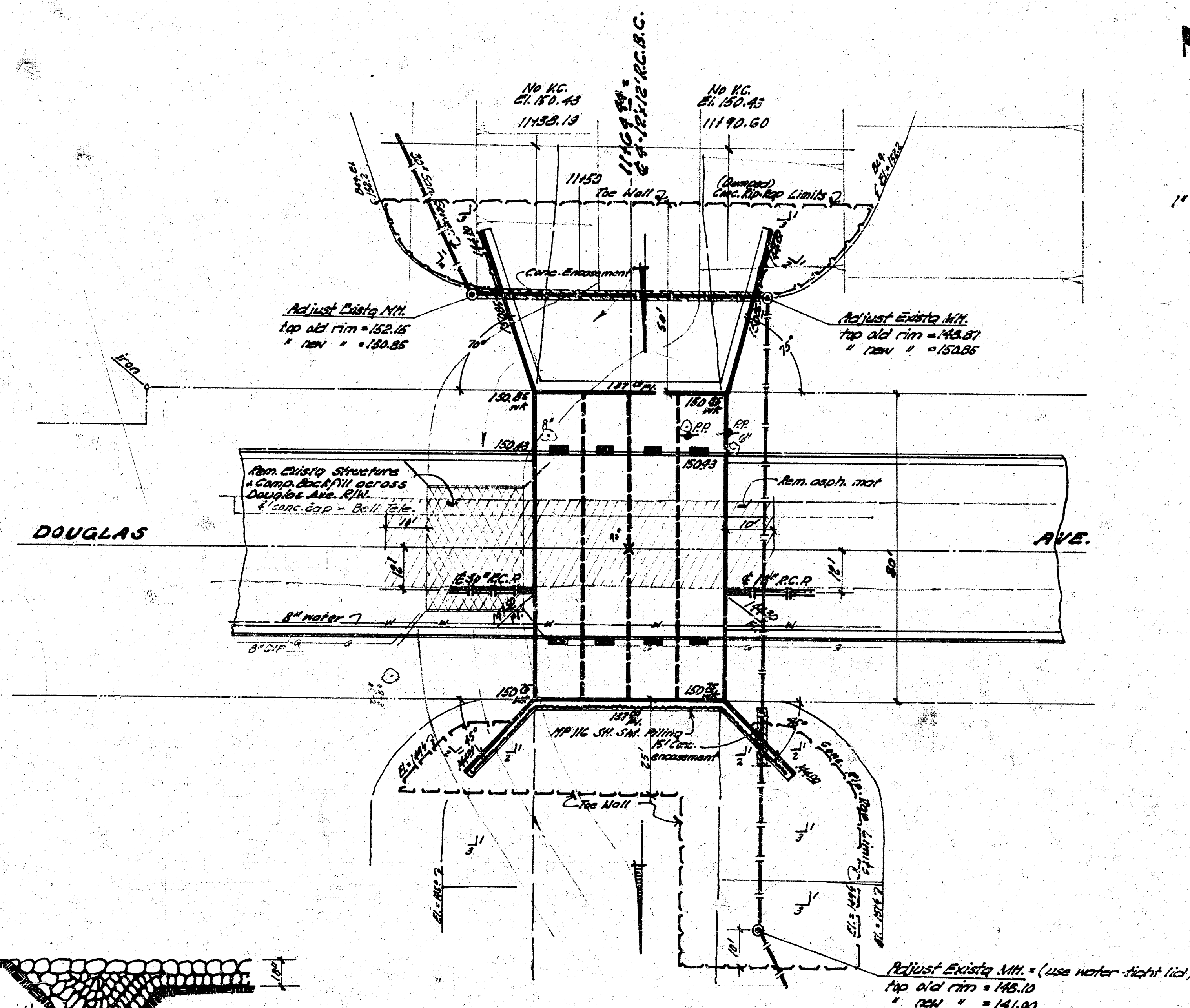
Survey
Plan
Scale
1" = 20'



5X Conc. Rip-Rap in down stream area to be determined by the amount of material furnished by "Others" in Culvert Contractor to place material furnished by "Others"



Rip-Rap to be of broken conc. 4" max size stone of 150 pounds; average size 30 to 50 pounds; not to have more than 80% by weight consisting of pieces weighing less than 10 pounds. Neither depth nor thickness of any piece shall be less than 1/3 its length.

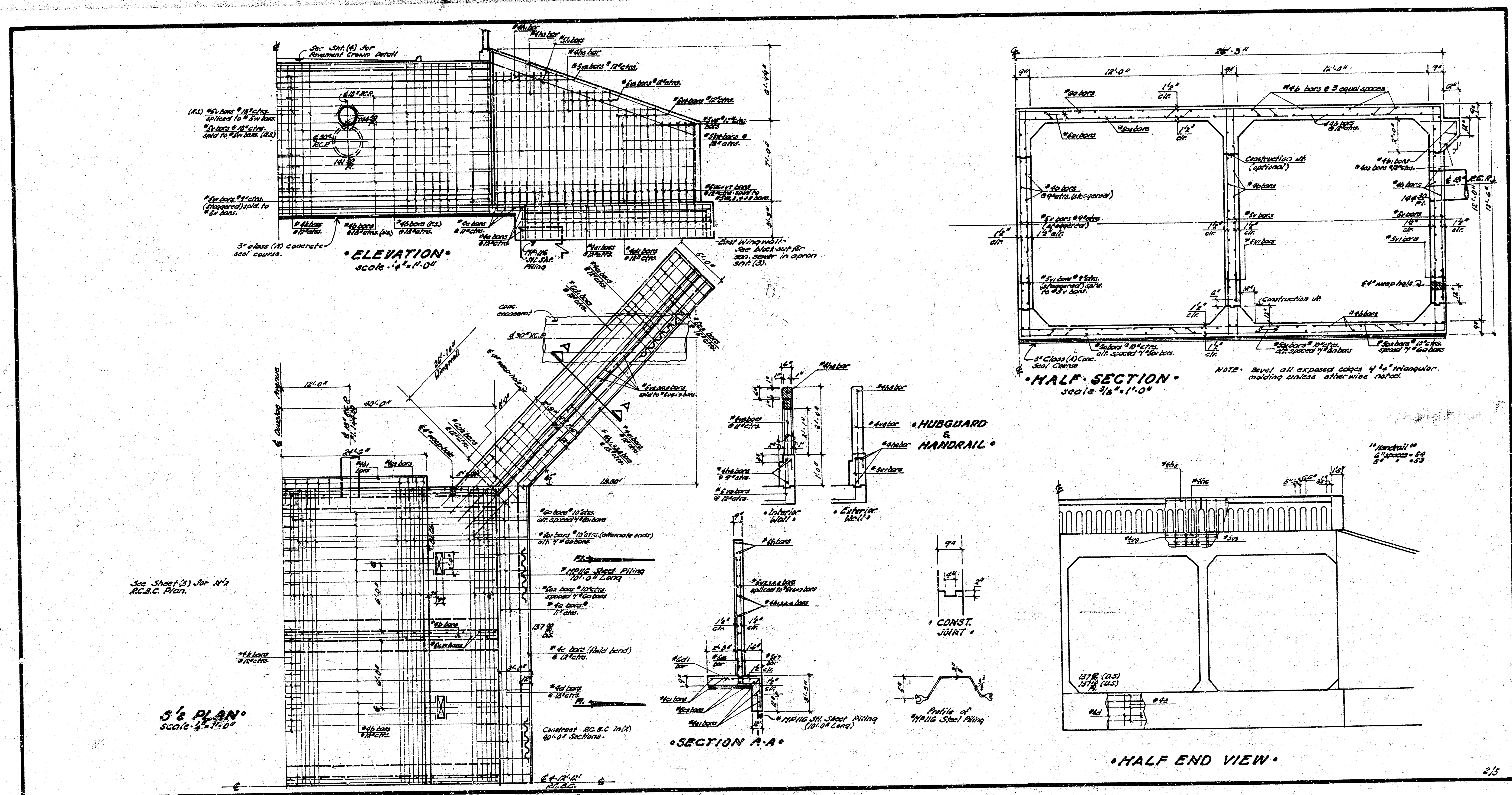


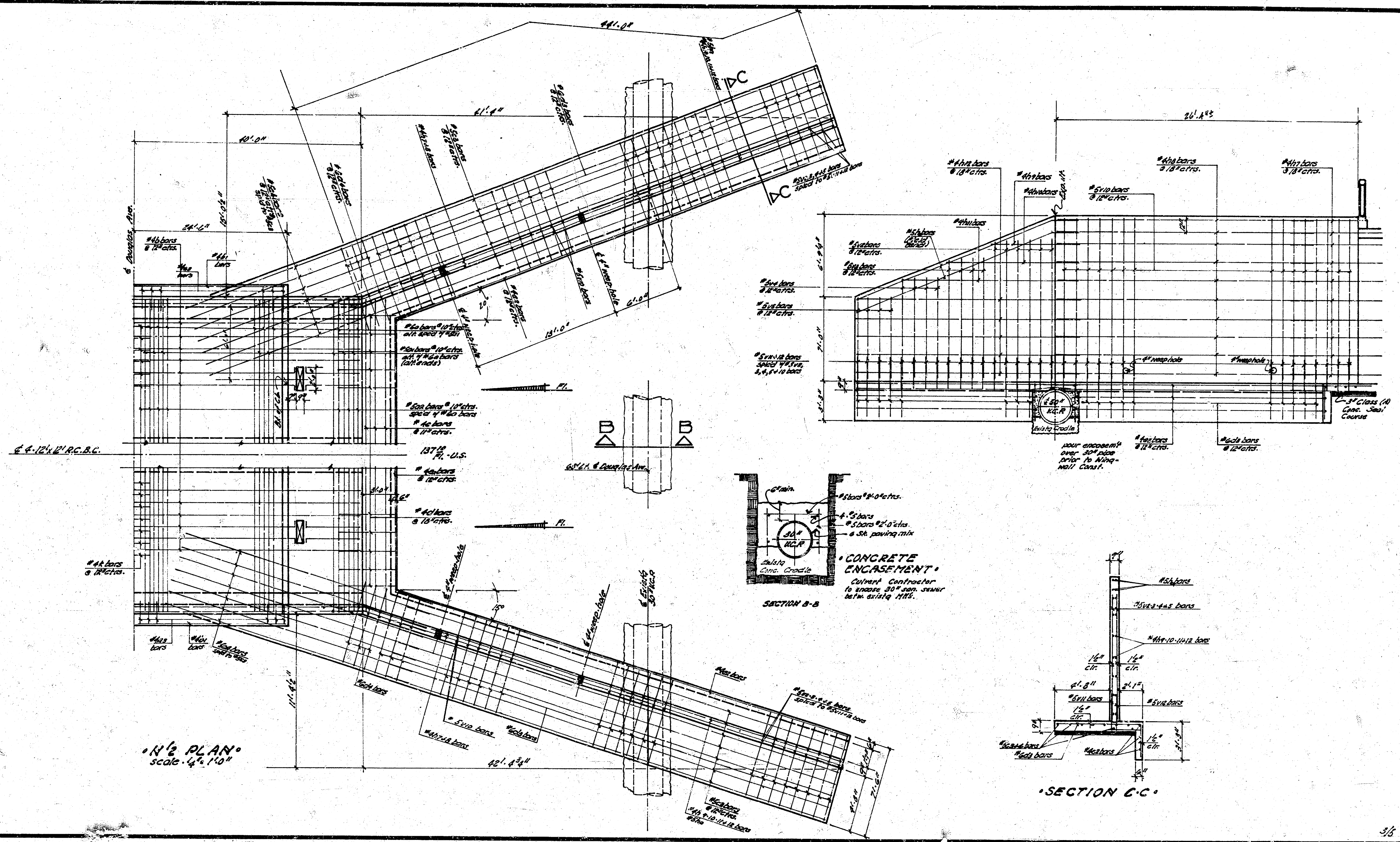
NOTE TO CONTRACTOR & ENGINEER: Shaping of "New" Channel to 60" Channel as 1/4" slope of R.C.B.C. to be determined by 5000 CONCRETE. Before Engineer is cross-section before a after re-alignment is established. Excavation Quantities for final plan to be based on these Prior. See Notes. Loose fill areas in Drain R.H. only. Loose fill will be included in Lump Bid.

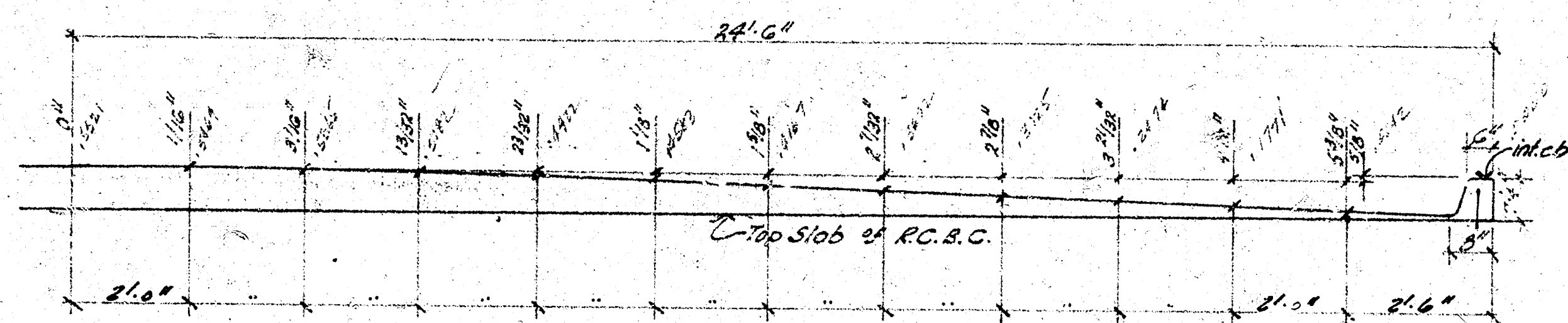
NOTE: All excavated material in new channel change to be used in filling old channel. Contractor may use approved roll type compaction of 4" max. lifts in loose fill areas. Sheep-foot type roller to be used thru compacted fill areas as per City Specs.

During Contractor to make fill across R.C.B.C. below Arch & MUDROCK.

City of Wichita, Kansas
B.C. Smith
Date: _____
City Engineer
Proj. No. C12-12 115







BAR SCHEDULE

Bar	Size	Length	No.	Location	Shape	Spacing	Weight
a	#5	26'-0"	364	box	—	12"	16,975.91
b	#5	26'-10"	380	"	~	10"	10,636.11
cd	#5	26'-0"	364	"	—	10"	10,613.31
ea	#5	35'-3"	460	box	~	18"	27,91.94
fb	#5	35'-3"	460	"	—	3"	12,645.69
gc	#5	25'-2"	8	box	—	9"	1,311.11
hd	#5	26'-0"	12	garage	—	11"	200.46
ie	#5	31'-5"	4	windwall	—	24"	167.89
jf	#5	31'-5"	4	"	—	18"	120.15
kg	#5	2'-3"	78	garage	—	12"	1,311.11
lh	#5	7'-3"	50	windwall	—	24"	200.46
mi	#5	4'-3"	6	"	—	12"	66.81
nj	#5	10'-3"	84	"	—	18"	2,188.88
ok	#5	7'-3"	6	"	—	12"	66.81
pl	#5	26'-3"	6	garage	—	12"	1,311.11
qm	#5	26'-3"	6	windwall	—	12"	1,311.11
ra	#5	40'-0"	6	"	—	18"	160.33
sb	#5	58'-4"	4	"	—	—	155.88
tc	#5	11'-0"	4	"	—	—	24.54
td	#5	17'-0"	4	"	—	—	65.46
te	#5	63'-0"	4	"	—	—	66.12
uf	#5	20'-0"	8	"	—	18"	200.46
vg	#5	12'-10"	8	handrail	—	12"	200.46
wh	#5	12'-10"	24	handguard	—	9"	200.46
xj	#5	20'-0"	40	windwall	—	18"	819.74
yk	#5	7'-0"	40	"	—	18"	596.52
zl	#5	11'-5"	4	"	—	—	30.73
am	#5	15'-5"	4	"	—	—	40.97
bn	#5	19'-4"	20	"	—	18"	200.46
co	#5	3'-0"	124	bar	—	12"	368.24
cp	#5	11'-5"	640	"	—	9"	7,700.47
dq	#5	20'-0"	40	"	—	18"	200.46
er	#5	11'-0"	40	windwall	—	18"	200.46
fs	#5	2'-0"	80	"	—	18"	200.46
gt	#5	2'-0"	80	"	—	18"	200.46
hu	#5	2'-0"	80	"	—	18"	200.46
iv	#5	3'-0"	116	handrail	—	12"	200.46
jw	#5	3'-0"	116	handguard	—	12"	200.46
ky	#5	18'-0"	108	windwall	—	12"	1,311.11

BILL OF MATERIALS			QUAN	UNIT
ITEM				
class A.R.C concrete			559.0	CU.YD.
reinforcing steel			72,288.66	LBS.
concrete formwork			185.6	S.F.
hand excavation			14.80	CU.YD.
HPing 10" Short Piling			1020.0	S.F.
cast in place fill	est		23,540.0	CU.YD.
common excavation	est		17,840.0	CU.YD.
class A concrete			474.08	CU.YD.
24" inlets			8	EA.
16" R.C.P.			6	S.F.
36" A			5	LF.
asph. mat rem.			272.44	SQ.
existing structure rem.			-	EO.
clearing of R/W			-	Linear Feet
6 inch concrete (non-satur encasement)			46.0	CU.YD.
5" R.C.P.			106.0	CU.YD.
10" curb			106.0	S.F.
loose fill			364.0	CU.YD.
Manhole Adjustments	est		2	NO.

00 GENERAL NOTES 00

CLASS A-AB CONCRETE Shall be used throughout this Project. All Reinforcing Steel Shall conform to A.S.T.M. Specifications.

*"EARTHWORK" all earthwork shall be considered as "Common Excavation" except for the forewall.
Forewall Excavation shall be included in "Cump Sum Bid"

* BACKFILL shall be compacted to the bottom of new pavement grade. All backfill & excavation to extend to (2) beyond sides of box manholes. Loose fill of banks to be in Lump Sum Bid.

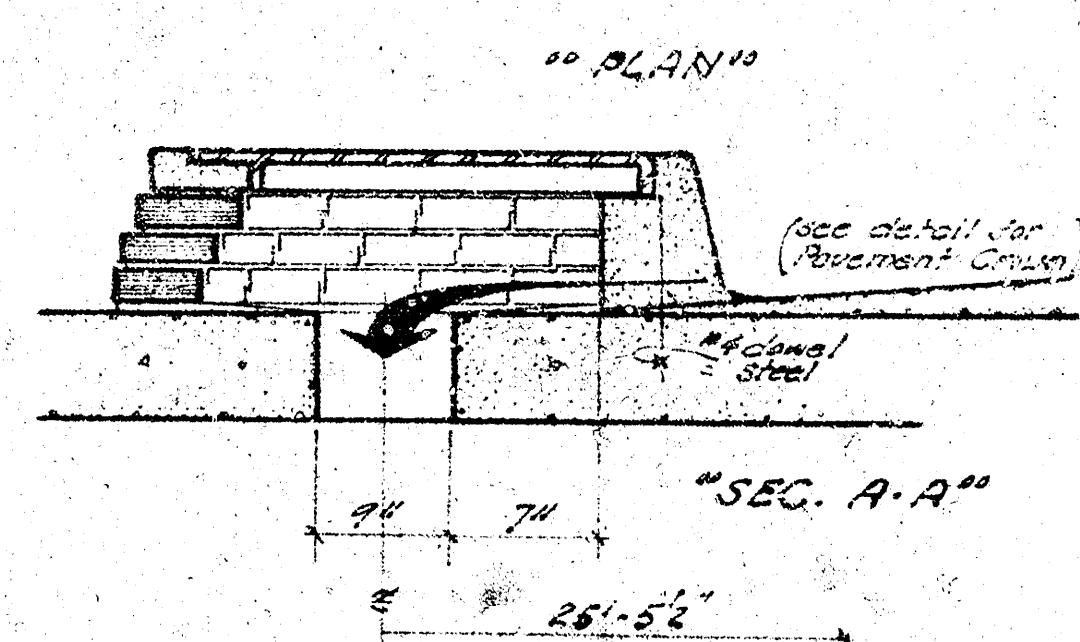
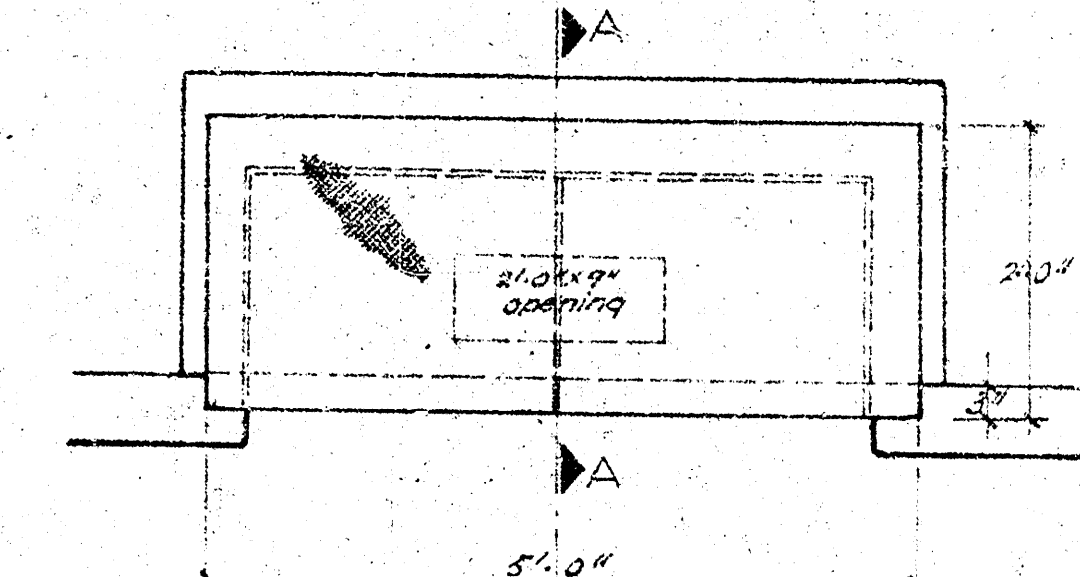
extending (5') in all directions above weep hole. This Work shall not be paid for directly but shall be considered a part of the excavation work.

specified on the Plans or by the Engineer. No reinforcing shall be placed until the seal course has gained sufficient strength to permit working upon it without injury.

intest, Campy. Fill, Common Excav, Glass A conc, ~~44~~ 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,

In the "ump-sum bid" or "lump-sum" contract, the Contractor must satisfy himself to the quantities and the Engineer assumes no responsibility for their accuracy. The Contractor will have full responsibility for providing all materials shown on the detailed plans necessary to complete the project.

YR	25'	21' 7"	84	Wingsall	12"	287.11
C3	25'	40'-0"	18	"	12"	750.96
C4	25'	22'-3"	18	"	12"	417.72
						286.65



"2'x5' INLET DETAIL"

