

CONTENTS

No.		PAGE
2907	STABILIZATION OF MATERIALS BY COMPACTION BY WILLARD J. TURNBULL AND CHARLES R. FOSTER.....	1
	DISCUSSION:	
	By GERALD A. LEONARDS.....	16
	JOHN A. FOCHT, JR.....	19
	EDMUND J. ZEGARRA.....	20
	KAZUO B. HIRASHIMA.....	23
	WILLARD J. TURNBULL AND CHARLES R. FOSTER.....	25
2908	TRENDS IN HYDRAULIC GATE DESIGN BY DOW A. BUZZELL.....	27
	DISCUSSION:	
	By ABRAHAM STREIFF.....	33
	GEORGE R. LATHAM.....	35
	WILLIAM G. H. HOLT.....	36
	KANDASWAMI S. CHETTY.....	36
	WILLIAM GUSTAVE WEBER.....	38
	DOW A. BUZZELL.....	40
2909	TRANSITION PROFILES IN NONUNIFORM CHANNELS BY FRANCIS F. ESCOFFIER.....	43
	DISCUSSION:	
	By ACHILLE LAZARD.....	57
	LÉON J. TISON.....	58
	FRANCIS F. ESCOFFIER.....	63
2910	MINIMUM-WEIGHT DESIGN OF A PORTAL FRAME BY WILLIAM PRAGER.....	66
	DISCUSSION:	
	By ROBERT L. KETTER.....	75
	WILLIAM PRAGER.....	76
2911	DEVELOPMENTS IN SEPTIC TANK SYSTEMS BY JOHN E. KIKER, JR.....	77
2912	COST ALLOCATION FOR MULTIPLE-PURPOSE WATER PROJECTS BY NEWCOMB B. BENNETT, JR.....	85
	DISCUSSION:	
	By FREDERICK L. HOTES.....	93
	EUGENE W. WEBER.....	95
	WENDELL E. JOHNSON AND CHARLES A. COCKS.....	96
	NEWCOMB B. BENNETT, JR.....	99
2913	DESIGN OF STABLE CANALS AND CHANNELS IN ERODIBLE MATERIAL BY PETE W. TERRELL AND WHITNEY M. BORLAND.....	101
2914	SOIL LYSIMETERS IN WASTE WATER RECLAMATION STUDIES BY GERALD T. ORLOB AND ROBERT G. BUTLER.....	116
	DISCUSSION:	
	By RALPH STONE.....	137
	GERALD T. ORLOB AND ROBERT G. BUTLER.....	137
2915	WAVE RUN-UP ON SHORE STRUCTURES BY THORNDIKE SAVILLE, JR.....	139
2916	EXPERIENCES WITH LOESS AS FOUNDATION MATERIAL BY WILLIAM A. CLEVINGER.....	151
	DISCUSSION:	
	By HARRY R. CEDERGREN.....	170
	RALPH B. PECK AND HERBERT O. IRELAND.....	171
	WILLIAM A. CLEVINGER.....	179

IV

No.		Page
2917	A FLOODWAY FOR HOUSTON, TEX. BY KENNETH HEAGY.....	181
2918	SEDIMENT-TRANSPORT MECHANICS IN STABLE-CHANNEL DESIGN BY EMMETT M. LAURSEN.....	195
	DISCUSSION:	
	By SAM SHULITS.....	204
	EMMETT M. LAURSEN.....	206
2919	MORRO BAY STEAM ELECTRIC PLANT BY J. GEORGE THON AND GORDON L. COLTRIN.....	207
	DISCUSSION:	
	By GLENN B. WOODRUFF.....	233
	JACOB FELD.....	233
	WILLIAM W. MOORE.....	234
	GEORGE L. JORDY.....	235
	J. GEORGE THON AND GORDON L. COLTRIN.....	237
2920	DEVELOPING PORT FACILITIES ON HOUSTON'S SHIP CHANNEL BY FRANK H. NEWNAM, JR.....	239
	DISCUSSION:	
	By ERSEL G. LANTZ.....	258
	AUSTIN E. BRANT, JR.....	260
	FRANK H. NEWNAM, JR.....	263
2921	DYNAMIC STRESSES IN CONTINUOUS PLATE-GIRDER BRIDGES BY ROY C. EDGERTON AND GORDON W. BEECROFT.....	266
	DISCUSSION:	
	By ROBERT K. L. WEN.....	287
	ROY C. EDGERTON AND GORDON W. BEECROFT.....	290
2922	THE VISCOUS SUBLAYER ALONG A SMOOTH BOUNDARY BY HANS A. EINSTEIN AND HUON LI.....	293
	DISCUSSION:	
	By EDWARD SILBERMAN.....	314
	NICOLS N. AMBRASEYS.....	315
	HANS A. EINSTEIN AND HUON LI.....	316
2923	MOMENT-DISTRIBUTION CONSTANTS FROM MODELS BY OTAKAR ONDRA.....	318
	DISCUSSION:	
	By JOHN C. MURPHY.....	344
	THOMAS D. Y. FOK.....	345
	FRANK J. CAIN AND GERALD LUCK.....	350
	OTAKAR ONDRA.....	353
2924	TRANSPORTATION PLANNING: A SYMPOSIUM	
	FOREWORD.....	360
	THE PORT, A FOCAL POINT BY ROGER H. GILMAN.....	361
	THE AIRPORT, A NATIONAL FACILITY BY WILFRED M. POST, JR.....	370
	PROSPECTS FOR COORDINATION BY BURTON W. MARSH.....	377
2925	EVAPORATION FROM FREE WATER SURFACES AT HIGH ALTITUDES BY HARRY F. BLANEY.....	385
	DISCUSSION:	
	By CARL ROHWER.....	396
	KENNETH M. TURNER.....	397
	IRVIN M. INGERSON AND JOHN W. SHANNON.....	401
	HARRY F. BLANEY.....	402

No.		Page
2926	AN IMPROVED DILUTION METHOD FOR FLOW MEASUREMENTS BY WILLIAM A. CAWLEY AND JACK W. WOODS.....	405
2927	ANCHORAGES FOR LARGE TAINTER GATES BY ALEXANDER H. KENIGSBERG.....	409
	DISCUSSION:	
	By STEPHEN WEARNE.....	417
	ALEXANDER H. KENIGSBERG.....	417
2928	EFFECTS OF STORAGE IMPOUNDMENTS ON WATER QUALITY BY MILO A. CHURCHILL.....	419
2929	CONTROL OF HIGHWAY ACCESS: A SYMPOSIUM FOREWORD BY CURTIS J. HOOPER.....	466
	EXPERIENCES IN NEW YORK BY BERTRAM D. TALLAMY.....	467
	ECONOMIC EFFECTS OF THE GULF FREEWAY BY DEWITT C. GREER.....	472
	EXPERIENCES IN INDIANA BY CARL E. VOGELGESANG.....	477
	EXPERIENCES IN LOS ANGELES BY HUGO H. WINTER.....	486
	USER BENEFITS IN CALIFORNIA BY RALPH A. MOYER.....	499
2930	PLASTICS: ENGINEERING MATERIALS BY C. HOWARD ADAMS.....	511
2931	MECHANICS OF STREAMS WITH MOVABLE BEDS OF FINE SAND BY NORMAN H. BROOKS.....	526
	DISCUSSION:	
	By THOMAS BLENCH.....	550
	JAMES R. BARTON.....	550
	HANS A. EINSTEIN AND NING CHIEN.....	553
	ENOS J. CARLSON AND M. GAMAL MOSTAFA.....	563
	HSIN-KUAN LIU.....	565
	PIN-NAM LIN.....	569
	NORMAN H. BROOKS.....	572
2932	MUNICIPAL ORDINANCES FOR INDUSTRIAL WASTES BY JULIAN R. FLEMING.....	595
2933	SIMPLIFICATION OF DESIGN BY ULTIMATE STRENGTH PROCEDURES BY PHIL M. FERGUSON.....	602
	DISCUSSION:	
	By TUNG AU.....	629
	HERMAN S. SCHICK.....	630
	ZDENĚK SOBOTKA.....	633
	MILAN SPANOVICH.....	637
	SYLVESTER M. ULICNY.....	637
	PHIL M. FERGUSON.....	639
2934	MECHANISM OF REAERATION IN NATURAL STREAMS BY DONALD J. O'CONNOR AND WILLIAM E. DOBBINS.....	641
	DISCUSSION:	
	By THOMAS R. CAMP.....	667
	ALEXANDER N. DIACHISHIN.....	672
	AALE PASVEER.....	677
	MYRTON C. RAND.....	679
	DONALD J. O'CONNOR AND WILLIAM E. DOBBINS.....	679

VI

No.		Page
2935	OPEN-CHANNEL FLOW AT SMALL REYNOLDS NUMBERS BY LORENZ G. STRAUB, EDWARD SILBERMAN, AND HERBERT C. NELSON.....	685
	DISCUSSION:	
	By WALLACE M. LANSFORD AND JAMES M. ROBERTSON.....	707
	CHESLEY J. POSEY.....	712
	LORENZ G. STRAUB, EDWARD SILBERMAN, AND HERBERT C. NELSON.....	713
2936	PILE TESTS, LOW-SILL STRUCTURE, OLD RIVER, LOUISIANA BY CHARLES I. MANSUR AND ROBERT I. KAUFMAN.....	715
	DISCUSSION:	
	By YOSHICHIKA NISHIDA.....	744
	STANLEY F. GIZIENSKI.....	744
	CHARLES I. MANSUR AND ROBERT I. KAUFMAN.....	746
2937	DESIGN OF VENTURI FLUMES IN CIRCULAR CONDUITS BY EDWIN A. WELLS, JR., AND HAROLD B. GOTAAS.....	749
	DISCUSSION:	
	By KEENO FRASCHINA.....	772
	EDWIN A. WELLS, JR., AND HAROLD B. GOTAAS.....	774
2938	IMPORTANCE OF GROUND WATER IN THE NATIONAL ECONOMY BY ALBERT G. FIEDLER.....	776
2939	EARTHQUAKE RESISTANCE OF ROCK-FILL DAMS BY RAY W. CLOUGH AND DAVID PIRTZ.....	792
	DISCUSSION:	
	By NICOLS N. AMBRASEYS.....	811
	JOHN V. SPIELMAN.....	813
	RAY W. CLOUGH AND DAVID PIRTZ.....	814
2940	HARRISON COUNTY (MISSISSIPPI) ARTIFICIAL BEACH BY FRANCIS F. ESCOFFIER.....	817
2941	MOMENTS IN FLAT SLABS BY MARK W. HUGGINS AND WATONE L. LIN.....	824
	DISCUSSION:	
	By JAMES CHINN.....	842
	MARK W. HUGGINS AND WATONE L. LIN.....	844
2942	RELATIONSHIP OF IRRIGATION TO PUBLIC HEALTH BY LLOYD E. MYERS, JR.....	846
2943	SHORESIDE FACILITIES FOR SPECIAL-PURPOSE SHIPS BY HOWARD J. MARSDEN.....	851
2944	OPERATION PROBLEMS ON CONTROLLED-ACCESS HIGHWAYS BY CHARLES M. NOBLE.....	858
2945	LABORATORY AND IN-SITU PERMEABILITY OF SAND BY CHARLES I. MANSUR.....	868
2946	A FLOW CONTROLLER FOR OPEN OR CLOSED CONDUITS BY VICTOR L. STREETER.....	883
2947	HYDRAULIC MODEL STUDY OF HYPERION SEWER INTERCHANGE BY ALFRED C. INGERSOLL AND HAJIME TANAKA.....	908
2948	BRIDGE CLEARANCES: A SYMPOSIUM	
	FOREWORD.....	926
	POLICIES AND PRACTICE BY EUGENE W. WEBER.....	927
	THE INTEREST OF THE BUREAU OF PUBLIC ROADS BY WALTER KURYLO.....	932

VII

No.		Page
	NEED FOR A REALISTIC APPROACH BY WILLIAM E. CLEARY.....	942
	THE OPERATOR'S VIEW BY NICKLES L. CARUTHERS.....	946
	PROBLEMS IN NORTHEASTERN UNITED STATES BY ERHARD E. DITTBRENNER.....	949
2949	BEARING-RATIO EFFECT ON STRENGTH OF RIVETED JOINTS BY JONATHAN JONES.....	964
2950	THE APALACHICOLA RIVER BASIN PROJECT BY CLEMENT P. LINDNER.....	973
2951	SHELLS OF DOUBLE CURVATURE BY ALFRED L. PARME.....	989
	Discussion:	
	By Tung Au.....	1014
	W. WATTERS PAGON.....	1015
	SANTI P. BANERJEE.....	1016
	MARIO G. SALVADORI.....	1018
	ALFRED L. PARME.....	1021
2952	BUREAU OF PUBLIC ROADS EXPERIENCES IN HIGHWAY SURVEYS BY WILLIAM T. PRYOR.....	1026
2953	A PRESSURE-LINE CONCEPT FOR INELASTIC BENDING BY FRANK BARON.....	1039
	Discussion:	
	By JOHN A. HRIBAR.....	1047
	FRANK BARON.....	1047
2954	SOIL MODULUS FOR LATERALLY LOADED PILES BY BRAMLETTE McCLELLAND AND JOHN A. FOCHT, JR.....	1049
	Discussion:	
	By RALPH F. REUSS.....	1064
	RALPH B. PECK, MELVIN T. DAVISSON, AND VELLO HANSEN.....	1065
	RAYMOND LUNDGREN.....	1069
	LYMON C. REESE.....	1071
	EUGENE A. RIPPERGER.....	1074
	HUDSON MATLOCK.....	1077
	BRAMLETTE McCLELLAND AND JOHN A. FOCHT, JR.....	1081
2955	BEHAVIOR OF RIVETED TRUSS-TYPE CONNECTIONS BY EUGENE CHESSON, JR., AND WILLIAM H. MUNSE.....	1087
	Discussion:	
	By ARTHUR J. FRANCIS.....	1127
	EUGENE CHESSON, JR., AND WILLIAM H. MUNSE.....	1128
2956	OLD RIVER DIVERSION CONTROL: A SYMPOSIUM	
	FOREWORD.....	1130
	THE GENERAL PROBLEM BY JOHN R. HARDIN.....	1131
	HYDRAULIC REQUIREMENTS BY EUGENE A. GRAVES.....	1142
	FOUNDATION DESIGN BY WILLARD J. TURNBULL AND WOODLAND G. SHOCKLEY.....	1160
	STRUCTURES REQUIRED BY NORMAN R. MOORE.....	1172
2957	TRUSS ANALYSIS BY STIFFNESS CONSIDERATIONS BY HAROLD C. MARTIN.....	1182

VIII

No.		Page
2958	MOBILE (ALA.) HARBOR AND SHIP CHANNEL BY HAROLD E. BISBORT.....	1195
2959	SURFACE WATER RESOURCES BY JOSEPH V. B. WELLS.....	1206
2960	LOAD DISTRIBUTION IN HIGHWAY BRIDGE DECKS BY ARNOLD W. HENDRY AND LESLIE G. JAEGER.....	1214
	Discussion:	
	By PRANAB KUMAR CHAUDHURI.....	1245
	ARNOLD W. HENDRY AND LESLIE G. JAEGER.....	1246
2961	FRICTION MEASUREMENTS IN THE APALACHIA TUNNEL BY REX A. ELDER.....	1249
2962	THE ENGINEER'S PLACE IN THE SECOND CENTURY OF TECHNOLOGY: ANNUAL ADDRESS AT THE SUMMER CONVENTION, PORTLAND, ORE., JUNE 25, 1958 BY LOUIS R. HOWSON, PRESIDENT.....	1275
	MEMOIRS OF DECEASED MEMBERS: ABSTRACTS.....	1283
	SUBJECT INDEX.....	1312
	AUTHOR INDEX.....	1352