FEDERAL ROAD DISTRICT NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	"F" 391(4)	1956	1	197

R/W Design Dept. 13, 14, 18, 20, 21
Dist. R/W ... Dept. 8, 24

5/1/58	Quantity	48 A

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SHEET			STANDARD CROSS SECTIONS
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SHEET	NO.		STD. REINF. CONC. CULV. SLAB AND GIRDER WITHOUT FILL (20'-0" SPAN)
SHEET	NO.		STD. REINF. CONC. CULV. SLAB TOP TYPE WITHOUT FILL (10'-0" TO 20'-0" SPAN) 15° SKEW.
SHEET	NO.		STD. REINF. CONC. CULV. SLAB TOP TYPE UNDER FILL 1'-0" TO 5'-0" (10'-0" TO 20'-0" SPAN) 15° SKEW.
SHEET	NO.		STD. REINF. CONC. CULV. SLAB TOP TYPE WITHOUT FILL (10'-0" TO 20'-0" SPAN) 30° SKEW.
SHEET	NO.		STD. REINF. CONC. CULV. SLAB TOP TYPE UNDER FILL 1'-0" TO 5'-0" (10'-0" TO 20'-0" SPAN) 30° SKEW.
SHEET	NO.		STD. REINF. CONC. CULV. SLAB TOP TYPE WITHOUT FILL (10'-0" TO 20'-0" SPAN) 45° SKEW.
SHEET	NO.		STD. FLEXIBLE STEEL PLATE GUARD RAIL.
SHEET	NO.		STD. CONC. SLAB RAILROAD GRADE CROSSING.
SHEET	NO.		ALTERNATE STD. CONC. RAILROAD GRADE CROSSING.
SHEET	NO.		
SHEET	NO.	64 & 65	STANDARD HEADWALLS (REV. JUNE 16, 1950)
SHEET	NO.		
SHEET	NO.		
SHEET	NO.	66	DATA FOR SUPERELEVATING AND WIDENING OF CURVES. SEPT. 1932
SHEET	NO.	67,68	STD. DETOUR SIGNS SHEET 1 (REV. FEB. 11, 1954); SHEET 2 (REV. MAY 1, 1951)
SHEET	NO.	69-197	CROSS SECTIONS.

STATE OF INDIANA

STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED

STATE HIGHWAY

"F" PROJECT NO. 391 (4)

MUNCIE-WINCHESTER ROAD

BEGINNING AT A POINT ON STATE ROAD NO. 32, APPROXIMATELY 1375.0 FEET WEST OF THE SOUTHEAST CORNER OF SECTION 11, T20N - R10E, AND RUNNING IN AN EASTERLY DIRECTION A DISTANCE OF 27,111.0 FEET TO A POINT ON STATE ROAD NO. 32 APPROXIMATELY 729.0 FEET WEST OF THE SOUTHEAST CORNER OF SECTION 10, T20N - R11 E, ALL IN DELAWARE COUNTY.

GROSS LENGTH:- 5.134 MI.
NET LENGTH: 5.129 MI.
SCALES:-
PLAN { LONG:- 1"=50' ; TRANS:-1"=50' } PROFILE { HORIZ:-1"=50' ; VERT:- 1"=10' }

MAX. GRADE: 2.52 %

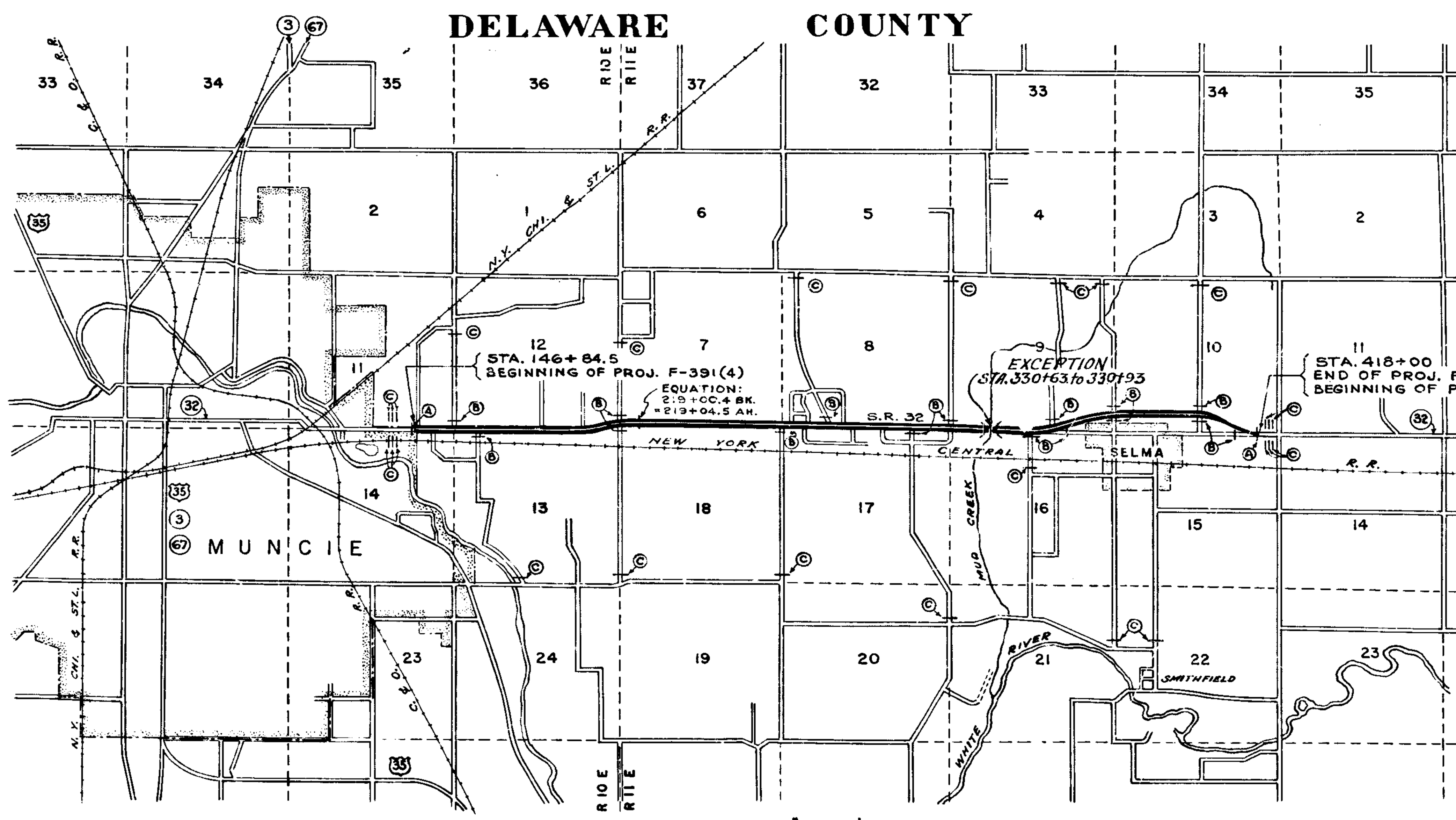
TRAFFIC DATA

PRESENT	1958	5600
FUTURE	1978	8975
TRUCKS %		19%
DHV.		900
DIR.		54%
DESIGN SPEED		70 M.P.H.
ACCESS		PARTIALLY CONTROLLED

LEGEND - DETOUR SIGNS

Ⓐ	Standard Barricades Type "A"	(2)
Ⓑ	Standard Barricades Type "B"	(16)
Ⓒ	Warning Signs	(27)

DELAWARE COUNTY



SCALE: 1" = 3000'

APPROVED AND ADOPTED 4/18/58
BY STATE HIGHWAY DEPARTMENT OF INDIANA
John Peters
CHAIRMAN STATE HIGHWAY DEPARTMENT OF INDIANA
APPROVED 4-18-58
Carl E. Vogelgesang
CHIEF ENGINEER STATE HIGHWAY DEPARTMENT OF INDIANA

~~APPROVED AND ADOPTED 2-3-56~~
~~BY STATE HIGHWAY DEPARTMENT OF INDIANA~~
~~Virgil W. Smith~~
~~CHAIRMAN STATE HIGHWAY DEPARTMENT OF INDIANA~~
~~APPROVED 1-9-56~~
~~Carl E. Vogelgesang~~
~~CHIEF ENGINEER STATE HIGHWAY DEPARTMENT OF INDIANA~~

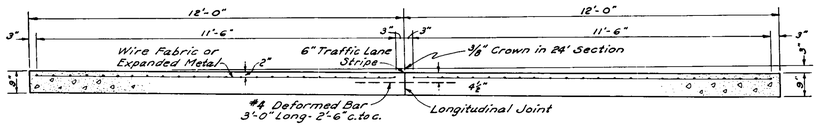
STATE HIGHWAY DEPARTMENT OF INDIANA
STANDARD SPECIFICATIONS DATED 1957
TO BE USED WITH THESE PLANS

PREPARED AND RECOMMENDED FOR APPROVAL BY
SHAFFER, PARRETT AND ASSOCIATES
CONSULTING ENGINEERS, MANSFIELD, OHIO
Meredith P. Lichtenwalter 8-26-55
PARTNER

RECOMMENDED FOR APPROVAL 4-18-58 ~~1-7-56~~
W.H. Behrens
ENGINEER OF ROAD DESIGN STATE HIGHWAY DEPARTMENT OF INDIANA

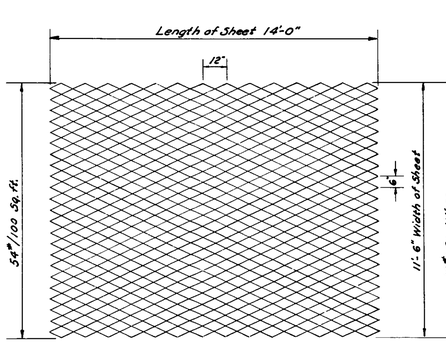
DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED:
[redacted] [redacted]
DISTRICT ENGINEER DATE

FED. ROAD DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	2	197



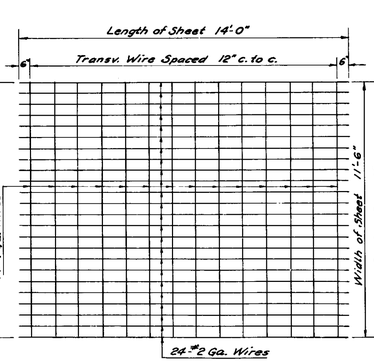
REINFORCED CONCRETE PAVEMENT

Scale: ½"=1'-0"



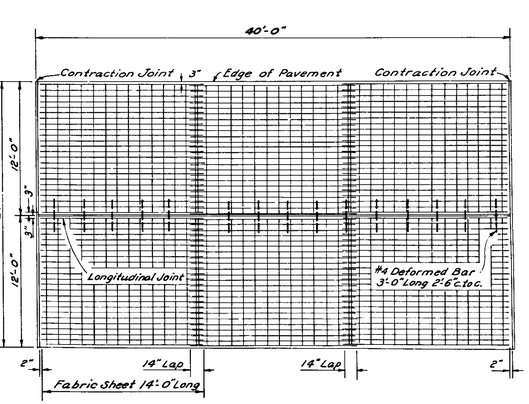
TYPICAL SHEET
EXPANDED WIRE FABRIC

Scale: 3/8"=1'-0"



TYPICAL SHEET
WIRE FABRIC

Scale: 3/8"=1'-0"



PLAN OF REINFORCED CONCRETE SLAB

Scale: 3/16" = 1'-0"

Note: Where it be necessary to make a longitudinal lap of fabric sheet due to widened pavement, the mesh shall be lapped not less than 6 ins.

Note: For widths of pavement slabs other than 12'-0" width of fabric sheet, shall be 6" less than the width of the slab with the weight and spacing as shown.

Pavement offsets for 24' pavement to be as shown on Misc. Std. Sheet "A" for half 48 ft. pavement.

TYPICAL CROSS SECTIONS

SCALE: AS SHOWN

PREPARED AND RECOMMENDED FOR APPROVAL BY
SHAFFER, PARRETT AND ASSOCIATES
CONSULTING ENGINEERS, MANSFIELD, OHIO

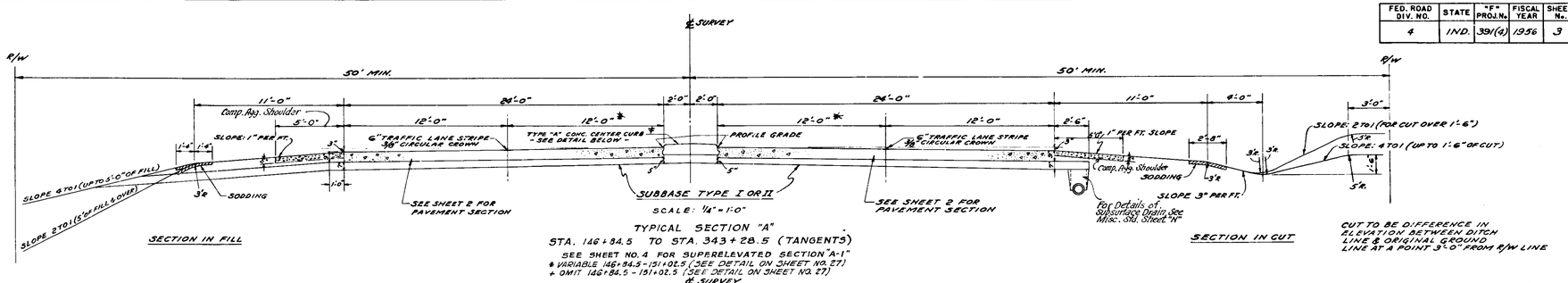
Meredith P. Richtenwalter 8-26-55
PARTNER

APPROVED Chairman, State Highway Dept. of Indiana
APPROVED Chairman, State Highway Dept. of Indiana
APPROVED Chief Engineer, State Highway Dept. of Indiana
APPROVED Chief Engineer, State Highway Dept. of Indiana

RECOMMENDED FOR APPROVAL 4-18-58

Engineer of Road Design, State Highway Dept. of Indiana

FED. ROAD DIV. NO.	STATE	"F" PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
4	IND.	391(4)	1956	3	197



SECTION IN FILL

SECTION IN CUT

CUT TO BE DIFFERENCE IN ELEVATION BETWEEN DITCH LINE & ORIGINAL GROUND LINE AT A POINT 3'-0" FROM R/W LINE

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

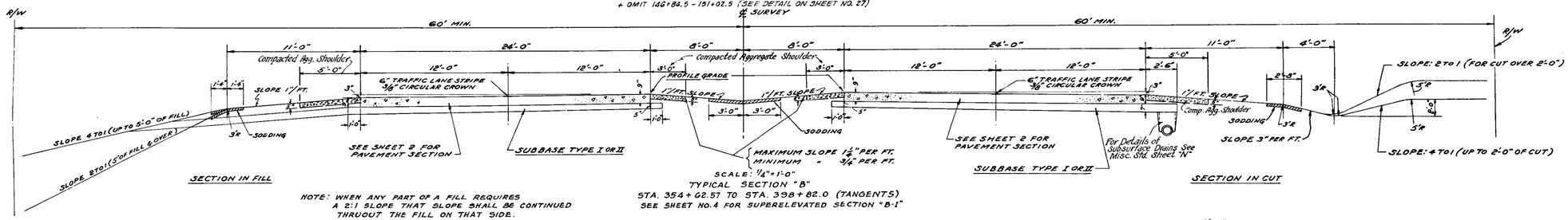
TYPICAL SECTION "A"

STA. 146+84.5 TO STA. 343+28.5 (TANGENTS)

SEE SHEET NO. 4 FOR SUPERELEVATED SECTION "A-1"

* VARIABLE 146+84.5 - 151+02.5 (SEE DETAIL ON SHEET NO. 27)

\+ OMIT 146+84.5 - 151+02.5 (SEE DETAIL ON SHEET NO. 27)



SECTION IN FILL

SECTION IN CUT

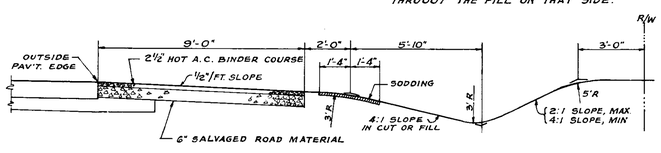
NOTE: WHEN ANY PART OF A FILL REQUIRES A 2:1 SLOPE THAT SLOPE SHALL BE CONTINUED THRUOUT THE FILL ON THAT SIDE.

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

TYPICAL SECTION "B"

STA. 354+62.57 TO STA. 398+82.0 (TANGENTS)

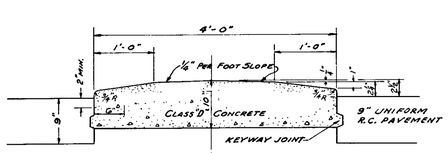
SEE SHEET NO. 4 FOR SUPERELEVATED SECTION "B-1"



DETAIL OF PAVED SHOULDER

SEE PLANS FOR LOCATIONS

SCALE: 3/8" = 1'-0"



For other Details See Misc. Std. Sheet "J"

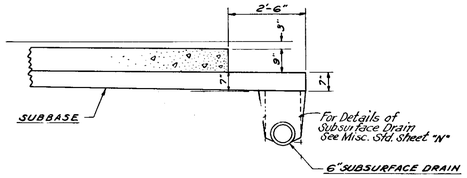
TYPE "A" CONCRETE CENTER CURB

SCALE: 1" = 1'-0"

STA. 151+02.5 TO STA. 343+07.58 (4'-0" WIDTH) EXCEPT AT INTERSECTING ROADS

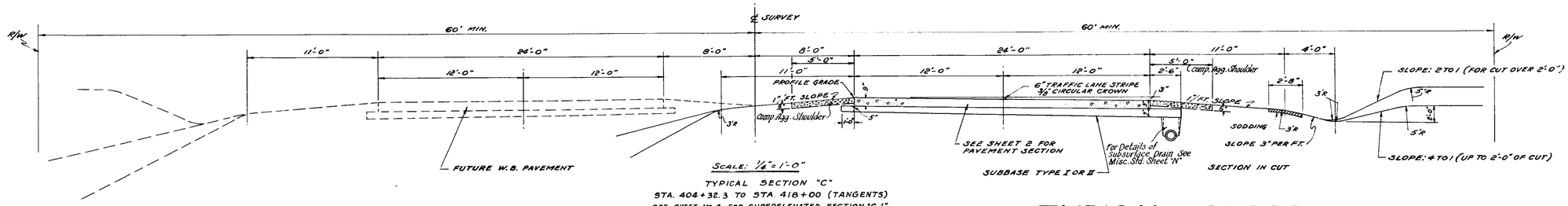
STA. 343+07.58 TO STA. 345+12.8 (4'-0" TO 6'-0" WIDTH)

STA. 402+06 TO STA. 402+84 (4'-0" TO 6'-0" WIDTH)



DETAIL OF DRAIN IN CUT SECTION

SCALE: 1/2" = 1'-0"



SCALE: 1/2" = 1'-0"

TYPICAL SECTION "C"

STA. 404+32.3 TO STA. 418+00 (TANGENTS)

SEE SHEET NO. 4 FOR SUPERELEVATED SECTION "C-1"

SECTION IN CUT

TYPICAL CROSS SECTIONS

SCALE: AS SHOWN

PREPARED AND RECOMMENDED FOR APPROVAL BY
SHAFFER, PARRETT AND ASSOCIATES
CONSULTING ENGINEERS, MANSFIELD, OHIO
Meredith P. Shaffer 8-26-55
PARTNER

APPROVED [signature] CHAIRMAN - STATE HIGHWAY DEPT. OF INDIANA

APPROVED [signature] CHAIRMAN - STATE HIGHWAY DEPT. OF INDIANA

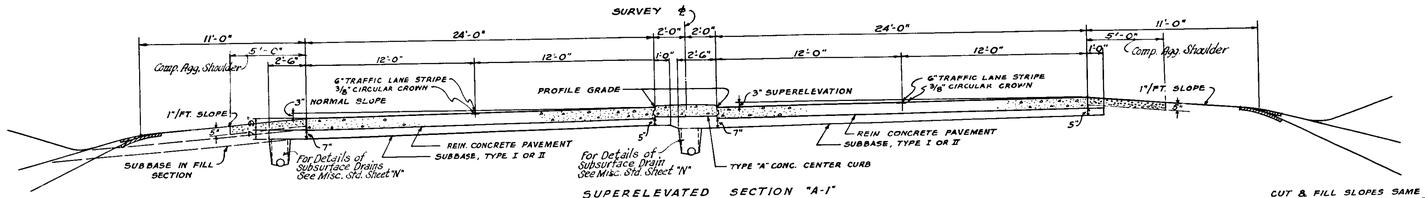
APPROVED Carl E. Vogelgesang CHIEF ENGINEER - STATE HIGHWAY DEPT. OF INDIANA

APPROVED Carl E. Vogelgesang CHIEF ENGINEER - STATE HIGHWAY DEPT. OF INDIANA

RECOMMENDED FOR APPROVAL 4-18-58

[signature] ENGINEER OF ROAD DESIGN - STATE HIGHWAY DEPT. OF INDIANA

FED. ROAD DIV. NO.	STATE	"F" PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	4	197



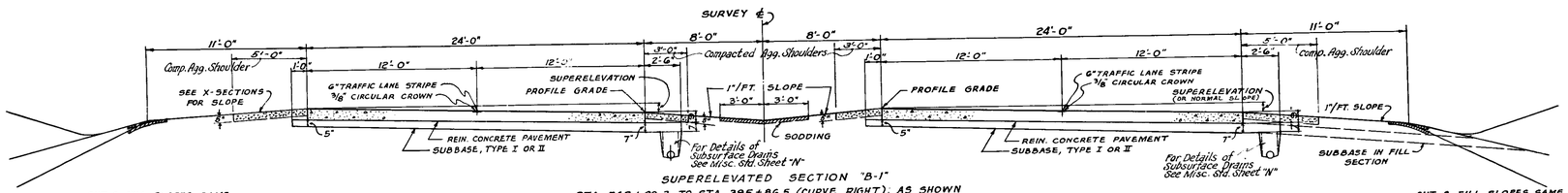
CUT & FILL SLOPES SAME AS FOR TYPICAL SECTION "A"

SUPERELEVATED SECTION "A-1"

STA. 196+05.1 TO STA. 207+11.1 (CURVE LEFT) AS SHOWN

STA. 208+91.1 TO STA. 218+40.4 (CURVE RIGHT) PAVEMENT & SUBBASE SLOPES REVERSED

CUT & FILL SLOPES SAME AS FOR TYPICAL SECTION "A"



CUT & FILL SLOPES SAME AS FOR TYPICAL SECTION "B"

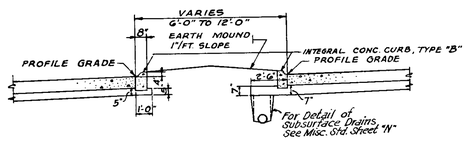
SUPERELEVATED SECTION "B-1"

STA. 362+98.3 TO STA. 395+86.5 (CURVE RIGHT): AS SHOWN

STA. 398+26.5 TO STA. 400+88 (CURVE RIGHT) PAVEMENT WIDTHS & MEDIAN WIDTH VARY; SLOPES AS SHOWN

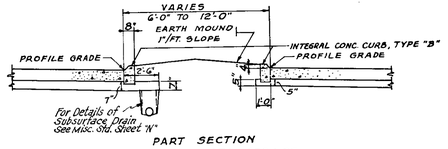
STA. 400+88 TO STA. 402+06 (CURVE RIGHT) PAVEMENT & MEDIAN WIDTHS VARY; SLOPES AS SHOWN; SEE MEDIAN DETAIL AT LEFT

STA. 345+12.8 TO STA. 353+56.63 (CURVE LEFT) PAVEMENT & SUBBASE SLOPES REVERSED; MEDIAN WIDTH VARIES, SEE DETAIL AT LEFT



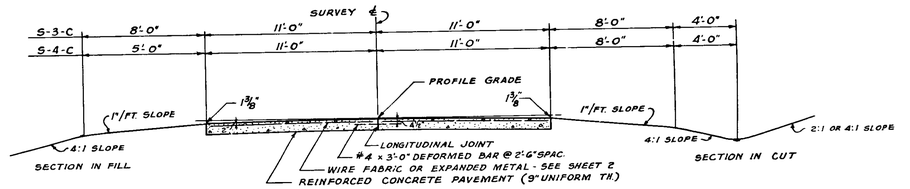
PART SECTION

STA. 345+12.8 TO STA. 350+52.42



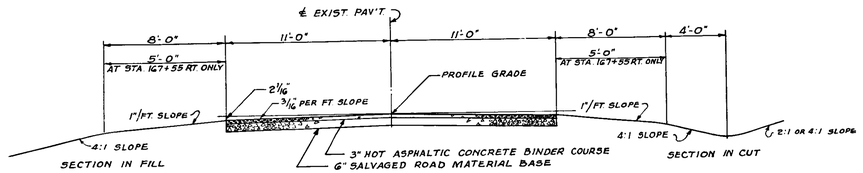
PART SECTION

STA. 400+88 TO STA. 402+06



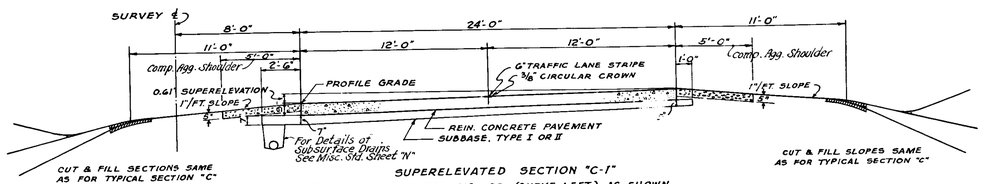
TYPICAL SECTION

PUBLIC ROAD APPROACHES S-3-C AND S-4-C



TYPICAL SECTION - PUBLIC ROAD APPROACHES

(EXCEPT S-3-C & S-4-C)



CUT & FILL SECTIONS SAME AS FOR TYPICAL SECTION "C"

SUPERELEVATED SECTION "C-1"

STA. 413+85.4 TO STA. 418+00 (CURVE LEFT) AS SHOWN

STA. 404+32.3 TO STA. 408+88.7 (CURVE RIGHT) PAVEMENT & SUBGRADE SLOPES REVERSED

CUT & FILL SLOPES SAME AS FOR TYPICAL SECTION "C"

TYPICAL CROSS SECTIONS

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

PREPARED AND RECOMMENDED FOR APPROVAL BY
SHAFFER, PARRETT AND ASSOCIATES
CONSULTING ENGINEERS, MANSFIELD, OHIO
Meredith P. Lichtenwalter 8-26-55
PARTNER

APPROVED [signature] CHAIRMAN STATE HIGHWAY DEPT. OF INDIANA

APPROVED [signature] CHAIRMAN STATE HIGHWAY DEPT. OF INDIANA

APPROVED Carl E. Vogelgesang CHIEF ENGINEER STATE HIGHWAY DEPT. OF INDIANA

APPROVED Carl E. Vogelgesang CHIEF ENGINEER - STATE HIGHWAY DEPT. OF INDIANA

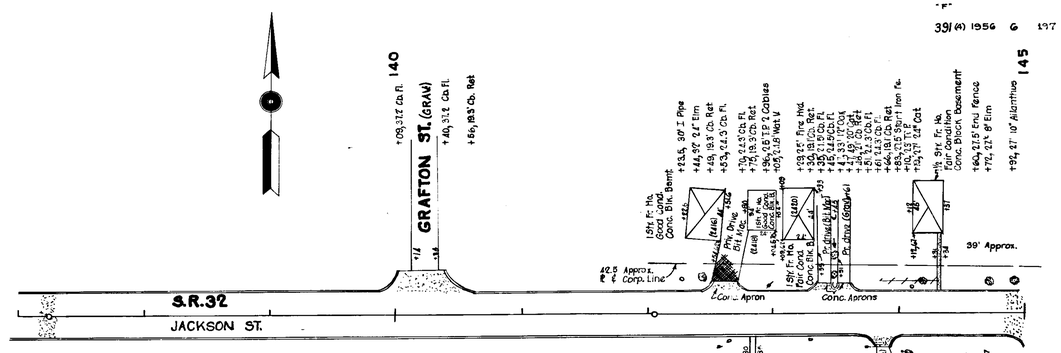
RECOMMENDED FOR APPROVAL 4-18-58

W.H. Behrens
ENGINEER OF ROAD DESIGN - STATE HIGHWAY DEPT. OF INDIANA

SHEET

MISSING

391(4) 1956 G 137



Bearing Equation:
N 89° 20' E Line "B" Proj. 391
N 89° 24' E Line "A" Proj. 391

— GENERAL NOTES —

TYPICAL CROSS SECTIONS AS SHOWN ON SHEETS 2,3 & 4 TO BE USED ON THIS PROJECT.
State Highway Commission of Indiana Standard Specifications dated 1952 to be used with these plans.
Standards under dates as listed in Index of Title Sheet to be used on this project.
Grade line as shown on Profile represents top of finished surface.
All ditches of 1% and over shall be sodded except where ditch is in rock cut or where Paved Side ditch is to be constructed.
All shoulders, cut and fill slopes shall be plain or mulch seeded except where sodding is specified.
Shoulders are to be sodded as shown on Miscellaneous Standard Sheet "B."
Sodding shall be placed along paved side ditch as shown on Miscellaneous Sheet "E."
Excavation quantities as shown on Plan and Profile sheets include estimated excavation for Private and Public approaches
Quantities for Pipe Culvert Headwalls are based on using Standard Headwalls for retaining 2:1 slopes and Private Drive Headwalls for retaining 4:1 slopes.
Private Drive and Mail Box Approaches shall be constructed to a depth of 6 inches. The top 3 inches shall consist of Hot Asphaltic Concrete Binder and the bottom 3 inches shall consist of Salvaged Road Material. Other details to be the same as shown on Miscellaneous Std. Sheet "B & H"

Commercial private drives shall be constructed to a depth of 8 inches. The top 3 inches shall consist of Hot Asphaltic Concrete Binder and the bottom 5 inches shall consist of Salvaged Road Material. Other details to be the same as shown on Miscell. Standard Sheet "H."

Public Road Approaches (except at S-3-C & S-4-C) exclusive of the 12 foot R.C. Apron shall be constructed to a depth of 9 inches. The top 3 inches shall consist of Hot Asphaltic Concrete Binder and the bottom 6 inches shall consist of compacted aggregate. Other details to be the same as shown on Misc. Std. Sheet "I."

Public Road Approaches S-3-C & S-4-C shall be constructed of reinforced concrete pavement to a depth of 9 inches. Other details to be the same as shown on Miscell. Std. Sheet "I" and Typical Section Sheets Nos. 2 and 4.

For kinds of pipe permitted for each size and classification as shown on Structure Notes, see Miscell. Standard Sheet "P."

The pavement slope is to be reversed in the direction of the curve for all curves of $D_c = 0°30'$ and greater. For curves of $D_c = 0°30'$ to $D_c = 0°59.99'$ the pavement slope will be 0.25 (3"); for curves $D_c = 1°00'$ to $D_c = 1°29.99'$ the slope will be 0.48"; for curves of $D_c = 1°30'$ to $D_c = 2°00'$ the slope will be 0.61."

Paved shoulders, where called for on the Plans, shall be constructed 9 feet wide and to a depth of 8½ inches. The top 2½ inches shall consist of Hot Asphaltic Concrete Binder and the bottom 6 inches shall consist of Salvaged Road Material. Shoulder slope shall be ½ per ft.

Inv. 4.0 N- Newby

W. N. Frick — 3-56
B. N. Ley — 7-56
MC - B. N. Ley — 7-56
7287-L

NOTE: FOR DETAILS OF CLASS IV DRAINAGE SEE SHEETS NO. 21, 28 & 29

PUBLIC ROAD APPROACH TYPE "D" REQD. LT STA 147+16

STRUCTURE NO. 11 STD. TYPE A-I INLET & 6'-12" CLASS I PIPE REQD. CONNECT TO 3'-2" BOX IN PLACE

STRUCTURE NO. 13 48"-12" CMP REQD.

STRUCTURE NO. 14 & 24" CMP REQD CONNECT TO STRUCTURE IN PLACE.

STRUCTURE NO. 16 44"-12" CMP REQD.

DRAINS ½ AC. C-10.3 STRUCTURE NO. 15 48"-12" CMP REQD. REMOVE STRUCTURE IN PLACE

STRUCTURE NO. 19 48"-12" CMP REQD.

DRAINS ½ AC. C-10.3 STRUCTURE NO. 21 48"-15" CMP REQD. REMOVE STRUCTURE IN PLACE

PUBLIC ROAD APPROACH TYPE "D" REQD. LT STA. 150+65

STRUCTURE NO. 23 48"-12" CMP REQD.

35 SY. PAVEMENT REMOVAL REQD

STRUCTURE NO. 25 48"-12" CMP REQD.

PUBLIC ROAD APPROACH TYPE "D" REQD. LT STA 153+98

STRUCTURE NO. 27 12" C.M.P. in Place No Change Reqd.

STRUCTURE NO. 29 24"-12" CMP REQD. REMOVE STRUCTURE IN PLACE

PUBLIC ROAD APPROACH TYPE "D" REQD. LT STA. 157+23

STRUCTURE NO. 32 28"-12" CMP REQD. REMOVE PIPE IN PLACE

STRUCTURE NO. 30 48"-12" CMP REQD. REMOVE PIPE IN PLACE

DRAINS 3½ AC. C-10.3 STRUCTURE NO. 33 48"-18" CLASS 5 PIPE REQD REMOVE PIPE IN PLACE

50 LF CONC. CURB REMOVAL REQD

"F" PROJ. NO. 4 IND 391(4) 1956 7 19/7

DRAINS 4.66 AC. C-10.3 STRUCTURE NO. 35 66-33"R 8'-4" RC. BOX CULV. REQD SKEW 115° RT., WINGS TYPE A & B SEE DETAIL SHEET NO. 42

STRUCTURE NO. 37 48"-12" CLASS 5 PIPE REQD.

STRUCTURE NO. 11 STD. TYPE A-I INLET & 6'-12" CLASS I PIPE REQD. CONNECT TO 3'-2" BOX IN PLACE

20 LF INTERGAL CONC CURB REQD. 8.13 L.F. SONIC CURB REQD. SEE DETAIL SHEET NO.

20 LF CONC. CURB REMOVAL REQD.

Approx. R/W Corp. Line

SIDNEY LAWRENCE HOPPER

S.A. HALE

RUSSELL O. & LILLIA FITCH LOT 297

GEORGE & ELIZABETH WYE LOT 298

CHESTER & EDNA LONG LOT 299

ALBERT J. JUELK LOT 301

EDNA M. FELIX LOT 302

CARL H. & SHIRLEY W. LEACH LOT 303

WILMORE ALE (Gone)

DELAWANDA WE (Gone)

Gulf Oil Co.

WM. E. & DEMARIS SMITH LOT 307

DONALD C. TROXELL LOT 306

HARLAN C. & WILLAMINE MILLS

VERNON E. & ABIGAIL BILBY

RALPH J. & GERTRUDE KEM

LOT 308

LOT 309

LOT 310

LOT 311

LOT 312

LINE "B"

SR. 32

Rock asphalt over brick / Dirt over Bit. Mac. Strip

Dirt Covered Strips

Approx. R/W

Dirt Covered Bit. Mac. Only Brick strip

STRUCTURE NO. 36 24"-12" CMP. REQD.

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY

OSCAR D. & REVA FAYE WOODS

MUNCIE - POP. 58,279

ALBERT W. GARRINGER

HUGH SNYDER

ROBT. ROBINSON

WILLIAM J. & ROSA B. RAHE

Field (Weeds)

34 L.F. CONC. CURB REMOVAL REQD.

DRAINS 5 AC. C-10.3 STRUCTURE NO. 12 24"-15" C.M.P. REQD.

DRAINS 2 AC. C-10.3 STRUCTURE NO. 17 28"-18" C.M.P. REQD.

DRAINS 1.8 AC. C-10.3 STRUCTURE NO. 20 24"-12" CMP. REQD.

NOTE: FOR DETAILS OF TRANSITION STA. 146+84.5 TO STA. 150+37.22 FROM 38' TO 52' SEE SHEET NO. 27

STRUCTURE NO. 18 6'-12" PIPE REQD.

4.17 S.Y. CONC. SIDEWALK REQD. REMOVE WALK IN PLACE

TYPE "A" CONC. STEPS REQD. (0.77 C.Y. CONC.) 2 RISERS @ 7" TREADS @ 14"

CHAS. & VIVA L. KALIL

ARLIE & MARIE FORD

JAMES & FERN BOLDING

EUGENE & FLORENCE SCOTT (2711)

JOHN B. & JOSEPHINE CLEVENGER

JENNIE TROXELL Etal.

JOSEPH H. TROXELL

STRUCTURE NO. 34 36"-12" CMP REQD.

STRUCTURE NO. 31 24"-12" CMP. REQD.

STRUCTURE NO. 26 6'-12" PIPE REQD.

3.13 S.Y. CONC. SIDEWALK REQD. REMOVE WALK IN PLACE

TYPE "A" CONC. STEPS REQD. 1.2 C.Y. CONC. 3 RISERS @ 7" TREADS

40 L.F. CONC. CURB REMOVAL REQD.

STRUCTURE NO. 22 48"-12" CMP. REQD.

STRUCTURE NO. 24 48"-12" CMP. REQD.

STRUCTURE NO. 28 36"-12" CMP REQD

PUBLIC ROAD CROSSOVER REQD. STA. 153+98, SEE DETAIL SHEET NO. 41

PUBLIC ROAD CROSSOVER REQD. STA. 157+23 SEE DETAIL SHEET NO. 41

BEGINNING OF "F" PROJECT 391 (4) STA 146+84.5

P.C. 151+09.1 (A.N.F.)

B.M. "2" Elev. 960.32 Br. Spk. N.E. Side 18" cal. 2'up 110' Rt. sta. 152+82

P.I. 146+75 EL. 953.10 CORR. +0.85' 250' V.C.

P.I. 153+00 EL. 960.10 CORR. = -0.96' 400' V.C.

P.I. 158+00 EL. 956.10 CORR. +0.96' 400' V.C.

100 C.Y. SALVAGED ROAD MATERIAL REQUIRED THIS BALANCE

BALANCE NO. 1

CUT = 4,636 C.Y.
FILL + 25% = 1,062 C.Y.
OVERHAUL = 3,574 C.Y.
ADDED HAUL = 7,148 UNITS

DISTRIBUTION: 3,574 C.Y. TO BALANCE NO. 4

970
960
950
940

9'-0" WIDE PAVED SHOULDER RIGHT (6" SALVAGED ROAD MATERIAL BASE + 2½" HOT A.C. BINDER)

P.V.C. P.V.T. P.V.C. P.V.T. P.V.C. P.V.T.

-1.60 % +1.12 % +0.23% -0.80 %

951.46 LT. 955.94 LT. 956.57 RT. 956.99 LT. 956.96 RT. 954.19 LT. 954.32 LT. 954.88 RT. 954.63 RT. 953.61 LT. 949.11 RT. 949.47 LT.

SIDEROAD LEFT

91 S.Y. SODDING REQD RIGHT HOUSE

303 S.Y. SODDING REQD RIGHT

241 S.Y. SODDING REQD LEFT

490 S.Y. SODDING REQD. RIGHT HOUSES

138 S.Y. SODDING REQD LT. HOUSES

23 S.Y. SOD. REQD. LEFT

125 S.Y. SOD. REQD. LT. HOUSE

173 S.Y. SODDING REQD RIGHT HOUSE

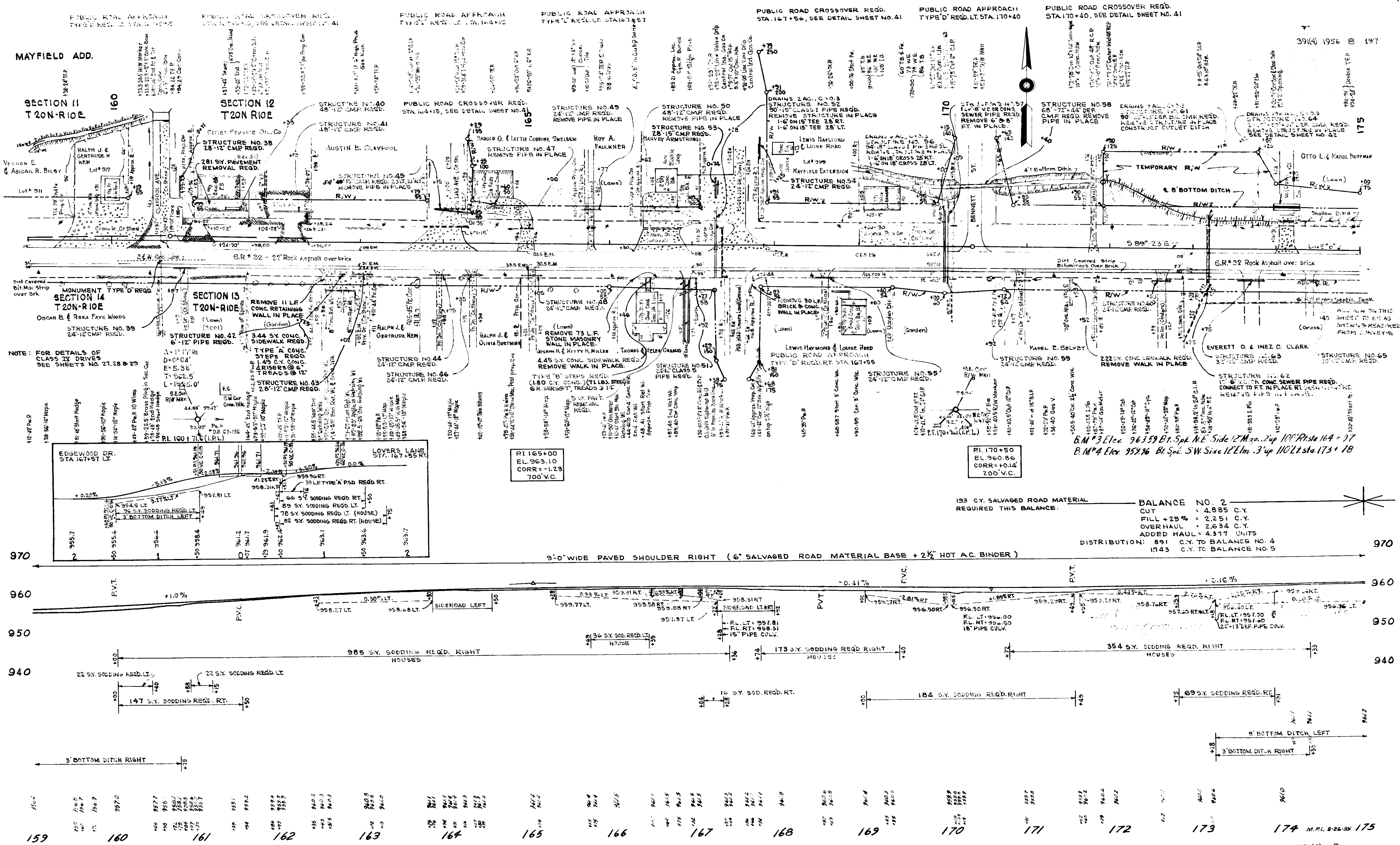
50 L.F. TYPE A 250 REQD. LT. 12 S.Y. SOD REQD LT.

50 L.F. TYPE A 250 REQD. RT. 12 S.Y. SODDING REQD. RIGHT.

3' BOTTOM DITCH RIGHT

144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160

M.P.L. 8-26-53


MAYFIELD ADD.
SECTION 11 T20N-R10E
SECTION 12 T20N R10E
SECTION 13 T20N-R10E
SECTION 14 T20N-R10E
PUBLIC ROAD CROSSOVER REQD. STA.164+15, SEE DETAIL SHEET NO.41
PUBLIC ROAD APPROACH TYPE "L" REQD. LT. STA.167+57
PUBLIC ROAD CROSSOVER REQD. STA.167+56, SEE DETAIL SHEET NO.41
PUBLIC ROAD APPROACH TYPE "D" REQD. LT. STA.170+40
PUBLIC ROAD CROSSOVER REQD. STA.170+40, SEE DETAIL SHEET NO.41
STRUCTURE NO.38 28'-12" C.M.P. REQD.
281 S.Y. PAVEMENT REMOVAL REQD.
STRUCTURE NO.40 48'-12" C.M.P. REQD.
STRUCTURE NO.41 48'-12" C.M.P. REQD.
STRUCTURE NO.45 54' 15" C.M.P. REQD. 23 LT., 21 RT. REMOVE PIPE IN PLACE
STRUCTURE NO.47 REMOVE PIPE IN PLACE
STRUCTURE NO.49 24'-12" C.M.P. REQD. REMOVE PIPE IN PLACE
STRUCTURE NO.50 48'-12" C.M.P. REQD. REMOVE PIPE IN PLACE
STRUCTURE NO.53 28'-15" C.M.P. REQD.
DRAINS 2 AC., C=0.3 STRUCTURE NO.52 90'-15" CLASS I PIPE REQD. REMOVE STRUCTURE IN PLACE 1-6" ON 15" TEE 28' RT. 1-6" ON 15" TEE 28' LT.
STRUCTURE NO.54 24'-12" C.M.P. REQD.
STRUCTURE NO.56 94'-18" CLASS I PIPE REQD. REMOVE STRUCTURE IN PLACE 1-6" ON 18" CROSS 28' RT. 1-6" ON 18" CROSS 28' LT.
STRUCTURE NO.57 8" V.C. OR CONC. SEWER PIPE REQD. REMOVE 6" & 8" F.T. IN PLACE.
STRUCTURE NO.58 68'-72"x44" DEF. C.M.P. REQD. REMOVE PIPE IN PLACE
DRAINS 9 AC., C=0.3 STRUCTURE NO.61 90' DEF. B.C. C.M.P. REQD. REMOVE STRUCTURE IN PLACE CONSTRUCT OUTLET DITCH
DRAINS 196 AC., C=0.3 STRUCTURE NO.64 DEF. C.M.P. REQD. REMOVE STRUCTURE IN PLACE SEE DETAIL SHEET NO.42
Vernon E. & Abigail R. Bilby
Ralph J. & Gertrude M Kem
Lot # 312
Lot # 311
Cities Service Oil Co.
Austin B. Claypool
Claypool Ave.
Harold O. & Lettie Corrine Smelser
Roy A. Faulkner
Harvey Armstrong
Auto Electric Shop
Edgewood Dr.
Lewis Haylond & Louise Reed
Lot # 399
Mayfield Extension
Bennett St.
4' Bottom Ditch
TEMPORARY R/W
℄ 8' BOTTOM DITCH
(Pasture)
Otto L. & Mabel Huffman
(Lawn)
Shallow Ditch
S 89°-23' E
Line "B"
S.R. # 32 - 22' Rock Asphalt over brick
S.R. # 32 Rock Asphalt over brick
Dirt Covered Strip Bituminous Over Brick
Dirt Covered Bit. Mac Strip over Brk.
E & W Sec. Line
MONUMENT TYPE "D" REQD.
Oscar B. & Rena Faye Woods
STRUCTURE NO.39 24'-12" C.M.P. REQD.
STRUCTURE NO.42 6'-12" PIPE REQD.
REMOVE 11 L.F. CONC. RETAINING WALL IN PLACE
3.44 S.Y. CONC. SIDEWALK REQD.
TYPE "A" CONC. STEPS REQD. 1.49 C.Y. CONC. 4 RISERS @ 6" TREADS @ 12"
STRUCTURE NO.43 28'-12" C.M.P. REQD.
Ralph J. & Gertrude Kem
STRUCTURE NO.44 24'-12" C.M.P. REQD.
STRUCTURE NO.46 24'-12" C.M.P. REQD.
Ralph J. & Olivia Bretmier
STRUCTURE NO.48 24'-12" C.M.P. REQD.
REMOVE 73 L.F. STONE MASONRY WALL IN PLACE.
Joseph H. & Kitty H. Miller
Thomas & Helen Chamas
4.45 S.Y. CONC. SIDEWALK REQD. REMOVE WALK IN PLACE.
TYPE "B" STEPS REQD. (1.80 C.Y. CONC.) (71 LBS. STEEL) 6 RISERS @ 7", TREADS @ 14"
5 S.Y. PAV'T. REMOVAL REQD.
STRUCTURE NO.51 24'-12" CLASS 5 PIPE REQD.
REMOVE 30 L.F. BRICK & CONC. WALL IN PLACE
Pub. Road Lovers Lane (Gravel)
Lewis Haymond & Louise Reed
PUBLIC ROAD APPROACH TYPE "D" REQD. RT. STA. 167+55
STRUCTURE NO.55 24'-12" C.M.P. REQD.
(Garden)
Mabel E. Selvey
STRUCTURE NO.59 24'-12" C.M.P. REQD.
STRUCTURE NO.60 24'-12" C.M.P. REQD.
2.22 S.Y. CONC. SIDEWALK REQD. REMOVE WALK IN PLACE
Everett O. & Inez C. Clark
STRUCTURE NO.63 32'-12" C.M.P. REQD.
STRUCTURE NO.62 6" V.C. OR CONC. SEWER PIPE REQD. CONNECT TO F.T. IN PLACE RT. REMOVE PIPE IN PLACE.
STRUCTURE NO.65 20'-12" C.M.P. REQD.
6" F.T. From Septic Tank
ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄
(Grass)
NOTE: FOR DETAILS OF CLASS IV DRIVES SEE SHEETS NO. 27, 28 & 29
Δ = 1° 17' Rt. D = 0° 04' E = 5.36' T = 962.5' L = 1925.0'
P.I. 160 + 71.6 (I.P.L.)
S.E. Cor. R/W Mkr.
S.W. Cor. Conc. Blk.
P.T. 170+34 (I.P.L.)
EDGEWOOD DR. STA 167+57 LT.
LOVERS LANE STA. 167+55 RT.
39 L.F. TYPE "A" P.S.D. REQD. RT.
96 S.Y. SODDING REQD. LT.
3' BOTTOM DITCH LEFT
66 S.Y. SODDING REQD. RT.
89 S.Y. SODDING REQD. LT.
78 S.Y. SODDING REQD. LT. (HOUSE)
82 S.Y. SODDING REQD. RT. (HOUSE)
P.I. 165+00 EL. 963.10 CORR = -1.23 700' V.C.
P.I. 170+50 EL. 960.86 CORR = +0.14' 200' V.C.
B.M. #3 Elev. 963.59 Bt. Spk. N.E. Side 12" Map. 2' up 100' Rt. sta. 164+97
B.M. #4 Elev. 959.96 Bt. Spk. S.W. Side 12" Elm. 3' up 110' Lt. sta. 173+78
193 C.Y. SALVAGED ROAD MATERIAL REQUIRED THIS BALANCE.
BALANCE NO. 2
CUT = 4,885 C.Y.
FILL + 25% = 2,251 C.Y.
OVERHAUL = 2,634 C.Y.
ADDED HAUL = 4,377 UNITS
DISTRIBUTION: 891 C.Y. TO BALANCE NO. 4
1,743 C.Y. TO BALANCE NO. 5
9'-0" WIDE PAVED SHOULDER RIGHT (6" SALVAGED ROAD MATERIAL BASE + 2½" HOT A.C. BINDER)
970
960
950
940
+1.0%
-0.41%
+0.16%
P.V.T.
P.V.C.
SIDEROAD LEFT
SIDEROAD LT. & RT.
F.L. LT. = 957.81
F.L. RT. = 958.31
15" PIPE CULV.
F.L. LT. = 956.00
F.L. RT. = 956.50
18" PIPE CULV.
F.L. LT. = 957.00
F.L. RT. = 957.60
22"-13" DEF. PIPE CULV.
985 S.Y. SODDING REQD. RIGHT HOUSES
36 S.Y. SOD. REQD. LT. HOUSE
173 S.Y. SODDING REQD. RIGHT HOUSES
354 S.Y. SODDING REQD. RIGHT HOUSES
22 S.Y. SODDING REQD. LT.
147 S.Y. SODDING REQD. RT.
16 S.Y. SOD. REQD. RT.
184 S.Y. SODDING REQD. RIGHT
69 S.Y. SODDING REQD. RT.
8' BOTTOM DITCH LEFT
3' BOTTOM DITCH RIGHT
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
M.P.L. 8-26-55
175

"F"
391 (4) 1956 9 137

STRUCTURE NO. 66
REMOVE STRUCTURE IN PLACE

ROBT. & LOIS E. DILLION

OTTO & MABELL HUFFMAN

Graded Lawn

TEMPORARY R/W

& S' BOTTOM DITCH

Shallow Ditch

R/W

17"x0.145 5¾" High Press. Gas Main

DRAINS 1.60 AC., C 0.3
STRUCTURE NO. 68
24"-36° SMP REQD.
REMOVE STRUCTURE IN PLACE
SEE DETAIL SHEET NO. 42

CORA MAY GUTHRIE
Field (Wheat)

PUBLIC ROAD APPROACH
TYPE 'D' REQD. LT. STA. 182+90

DRAINS 1.8 AC., C 0.3
STRUCTURE NO. 72
48"-24° SMP REQD.
REMOVE PIPE IN PLACE

CORA MAY GUTHRIE
Lot 32

PUBLIC ROAD CROSSOVER REQD.
STA. 182+90 SEE DETAIL SHEET NO. 41

STRUCTURE NO. 73
18"-0.109 CONC. SEWER PIPE REQD.
FROM R/W LT. TO DITCH
REMOVE PIPE IN PLACE

LOWELL & MAY T. BARNETT
Lot 1

GRACE H. CAMPBELL
(Weeds)

STRUCTURE NO. 76
24"-12° CMP REQD.
REMOVE STRUCTURE IN PLACE

PUBLIC ROAD APPROACH
TYPE 'B' REQD. LT. STA. 188+37.5

PUBLIC ROAD CROSSOVER REQD.
STA. 188+37.5, SEE DETAIL SHEET NO. 41

STRUCTURE NO. 82
58"-15" CMP REQD.

STRUCTURE NO. 78
24"-12" CMP REQD.
REMOVE PIPE IN PLACE

Lawn

DAVID & FRANCES B. HUNTER

HUBERT & PAULINE GABBERT
(Lawn)

E½ Lot 1

W½ Lot 1

189+00 17.0 Lt.
5" High Press. Gas Main

LINE "B"

D.A. RUPP 9-54

INK 27 30 40

S 89° 23' E

S.R. 32

Rock Asph. Dirt Covered Strip Bit. Mac. Over Brick

Rock Asph. Over Brick

Fe. Broken Down

Approx. R/W

67' 6" F.T. From Septic Tank

Rock Asphalt Over Brick

30' Unexposed Strip

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄

EVERETT O. & INEZ D. CLARK
(Grass) (Weeds)

RAYMOND E. & ANDREA K. PINER

STRUCTURE NO. 67
120°-37" CLASS C PIPE
SKEW = 68°LT. CONNECT TO F.T. IN PLACE R/W LT. & R/W RT., REMOVE F.T. IN PLACE.

CLAUDE & CLARA HADLEY

Trailer Lourt (3707)
ILLE CONC. CURB REMOVAL REQD.

HARRY A. & JEANETTE BATTY

STRUCTURE NO. 69
52-12" CMP REQD.

Charles A. Penzel

STRUCTURE NO. 70
24"-12" CMP REQD.

STRUCTURE NO. 71
24"-12" CMP REQD.

STRUCTURE NO. 75
24"-12" CMP REQD.

FRED C. & LA RHUE JEWETT

H. KAY & JAMES P. NICE WANNER

Wooded Lawn

STRUCTURE NO. 77
24"-12" CMP REQD.

CLYDE Y. & GEORGE L. DIXON

STRUCTURE NO. 80
36"-12" CMP REQD.

STRUCTURE NO. 79
6"-12" PIPE REQD.

31 SY. CONC. SIDEWALK REQD. & REMOVE WALK IN PLACE.

TYPE 'A' CONC. STEPS REQD. 0.63 CY. CONC. & RISERS @ 6" TREADS @ 12"

SAMUEL E. & EFFIE MAY NORRIS

STRUCTURE NO. 81
6"-12" CMP REQD.

2.77 SY. CONC. SIDEWALK REQD. REMOVE WALK IN PLACE.

STRUCTURE NO. 83
24"-12" CMP REQD.
REMOVE STR. IN PLACE

(FIELD)

P.O.T. 183+00 C (I.P.L.)

B.M. "S" Elev. 962.15 Bl. Spk. N.E. Side 30" Mpl. 3' up 30.7' Ft. sta. 184+31

P.I. 184+50
EL. 963.10
CORR. +0.25'
400' V.C.

TYPICAL SECTION OF EXISTING PAVEMENT
STA. 146+84.5 to STA. 201+00.0

3½" BITUMINOUS MACADAM
4" WATERBOUND MACADAM
3½" WATERBOUND MACADAM
¾" ROCK ASPHALT
SAND
BRICK WITH BLACKTOP TREATMENT
DIRT COVERED STRIP
22'-0"
7'-6"
14'-6"
3'-0"

3-54 7-54 7-64

W.H. Frick B.A. Loy mc. B.A. Loy

9'-0" WIDE PAVED SHOULDER RIGHT (6" SALVAGED ROAD MATERIAL BASE + 2½" HOT A.C. BINDER)

150' TAPER

+0.16%
-0.26%
0.20% LT.
+0.66%
0.30% LT.
2.74% LT.
0.52% LT.
0.56% RT.

P.V.C.
P.V.T.

SIDEROAD LEFT
SIDEROAD LEFT
SPILLOUT RT.

762 S.Y. SODDING REQ'D. LEFT
HOUSE

254 S.Y. SODDING REQ'D. RIGHT
HOUSES

851 S.Y. SODDING REQ'D. RIGHT
HOUSES

237 S.Y. SOD. REQ'D LEFT
HOUSE

154 S.Y. SOD. REQ'D. LT.
HOUSE

57 S.Y. SOD. REQ'D. LT.

219 S.Y. SOD. REQ'D. LT.

175 S.Y. SOD. REQ'D. RT.

117 S.Y. SOD. REQ'D. RT.

39 LF TYPE 'A' P.S.D. & 9 S.Y. SOD. REQ'D. LT.

39 LF TYPE 'A' P.S.D. & 9 S.Y. SOD. REQ'D. LT.

44 LF TYPE 'A' P.S.D. REQ'D. RT.

10 S.Y. SOD. REQ'D. RT.

5 S.Y. SODDING REQ'D LT. @ PIPE OUTLET

8' BOTTOM DITCH LEFT

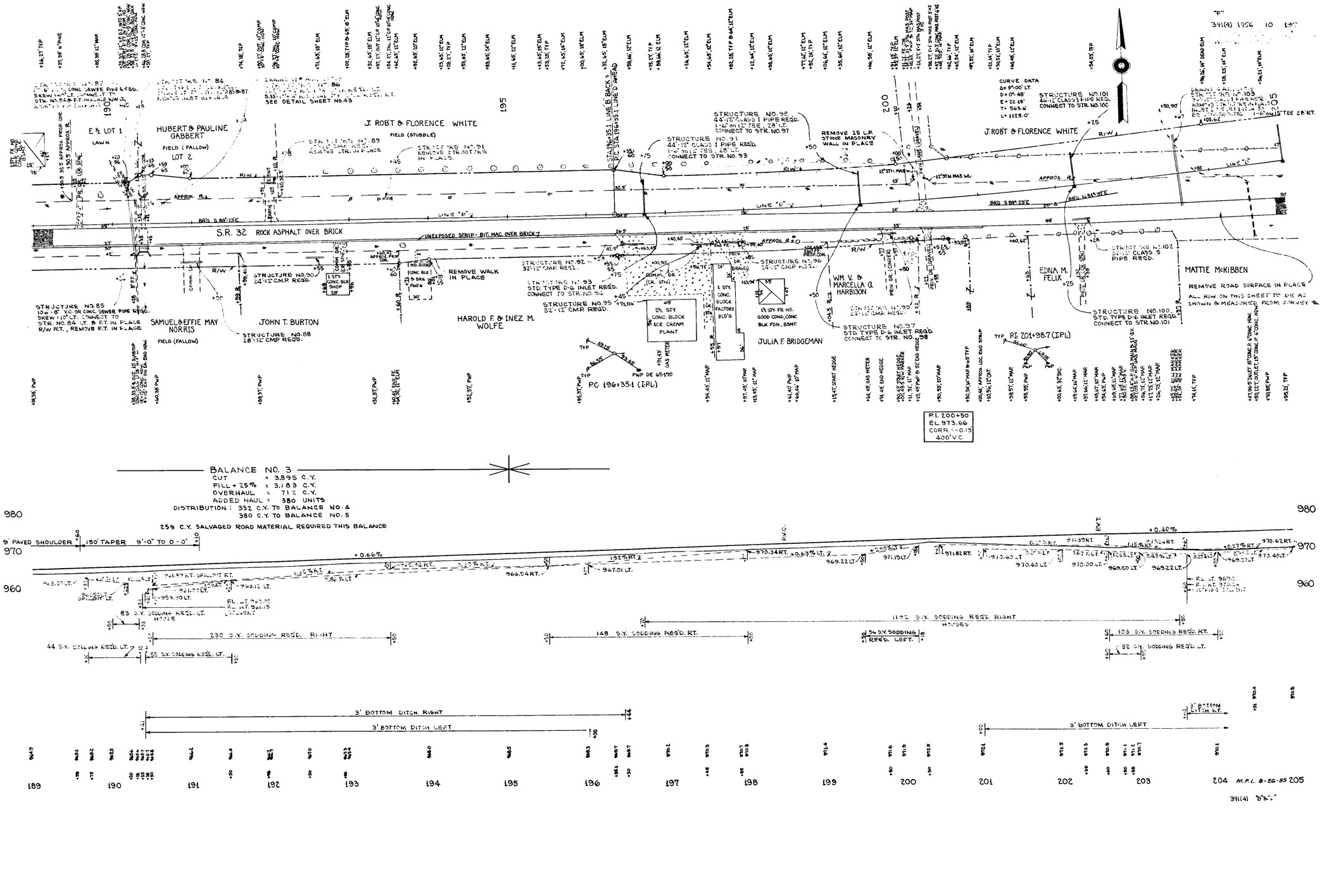
3' BOTTOM DITCH RIGHT

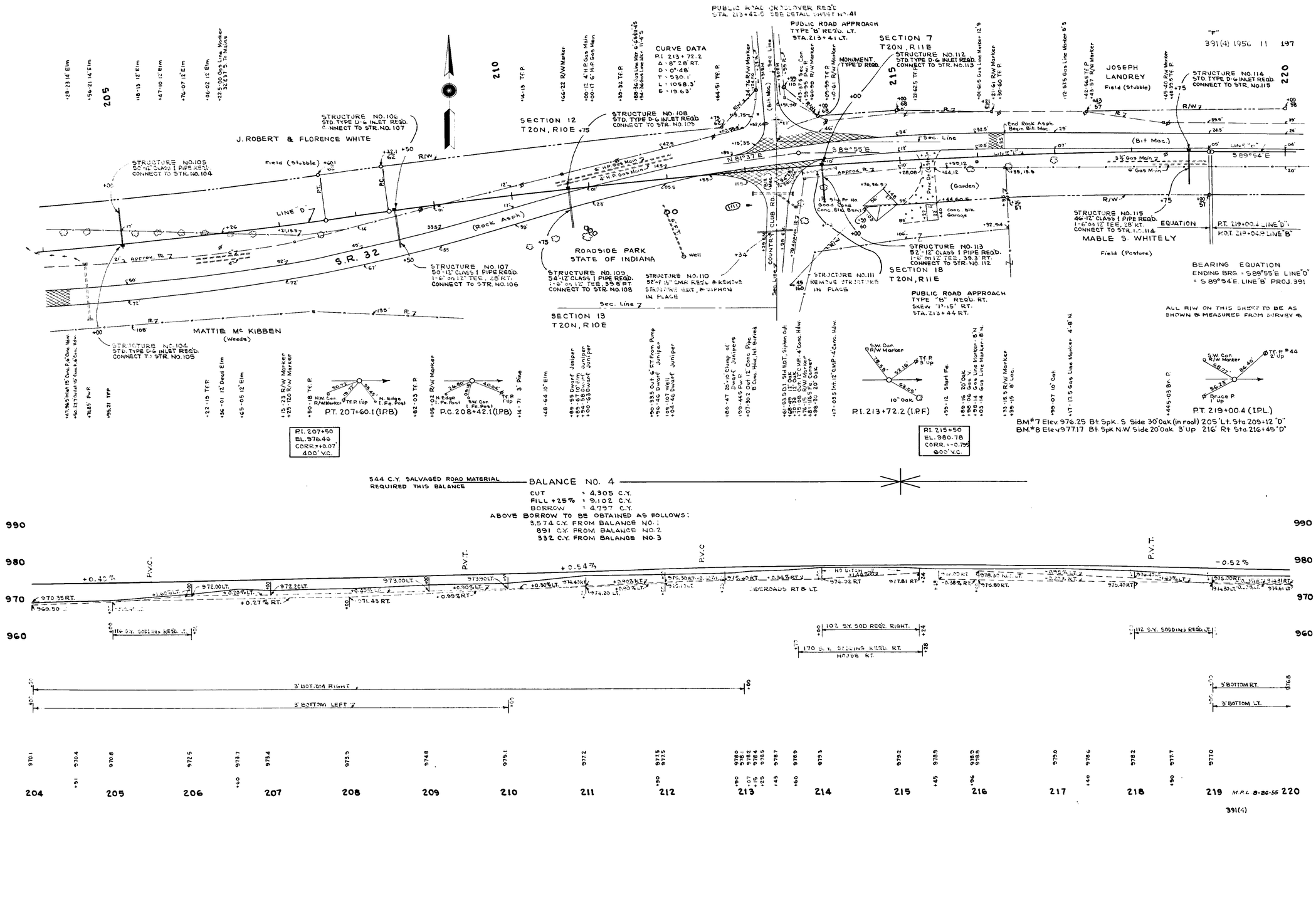
3' BOTTOM DITCH LEFT

3' BOTTOM DITCH RIGHT

174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 M.P.L. 8-26-55 190

39/(4) B


E ½ LOT 1
LAWN
HUBERT & PAULINE GABBERT
FIELD (FALLOW)
LOT 2
J. ROBT & FLORENCE WHITE
FIELD (STUBBLE)
J. ROBT & FLORENCE WHITE
S.R. 32 ROCK ASPHALT OVER BRICK
UNEXPOSED STRIP - BIT. MAC. OVER BRICK
LINE "B"
BRG. S 88°-23'E
BRG. N 84°-37'E
APPROX. R/W
R/W
STRUCTURE NO. 85
10-0" - 8" V.C. OR CONC. SEWER PIPE REQD.
SKEW 110° LT. CONNECT TO STR. NO. 84 & FIT IN PLACE
R/W R.T., REMOVE F.T. IN PLACE
SAMUEL & EFFIE MAY NORRIS
FIELD (FALLOW)
STRUCTURE NO. 90
24"-12" CM.P. REQD.
JOHN T. BURTON
STRUCTURE NO. 88
28"-12" CMP REQD.
STRUCTURE NO. 89
ASSUME STR. IN PLACE
STRUCTURE NO. 91
REMOVE STRUCTURE IN PLACE
REMOVE WALK IN PLACE
STRUCTURE NO. 92
32"-12" CMP. REQ'D.
STRUCTURE NO. 93
STD. TYPE D-6 INLET REQD.
CONNECT TO STR. NO. 94
STRUCTURE NO. 95
32"-12" CMP. REQ'D.
HAROLD F. & INEZ M. WOLFE
2½ STY. CONC. BLOCK ICE CREAM PLANT
1 STY. CONC. BLOCK FACTORY BLD'G
1½ STY. FR. NO. GOOD COND. CONC BLK FDN., BSMT.
JULIA F. BRIDGEMAN
STRUCTURE NO. 96
24"-12" CMP REQ'D.
STRUCTURE NO. 97
STD. TYPE D-6 INLET REQD.
CONNECT TO STR. NO. 98
WM. V. & MARCELLA G. HARBISON
STRUCTURE NO. 98
44"-12" CLASS I PIPE REQD.
1-60° on 12" TEE - 28" LT.
CONNECT TO STR. NO. 97
REMOVE 25 LF STONE MASONRY WALL IN PLACE
STRUCTURE NO. 91
44"-12" CLASS I PIPE REQD.
1-90° WYE & TEE - 28" LT.
CONNECT TO STR. NO. 93
STRUCTURE NO. 99
24"-12" CMP. REQ'D.
EDNA M. FELIX
STRUCTURE NO. 100
STD. TYPE D-6 INLET REQD.
CONNECT TO STR. NO. 101
STRUCTURE NO. 101
44"-12" CLASS I PIPE REQD.
CONNECT TO STR. NO. 100
STRUCTURE NO. 102
CLASS 5 PIPE REQD.
MATTIE McKIBBEN
REMOVE ROAD SURFACE IN PLACE
ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY
CURVE DATA
Δ = 9°-00' LT.
D = 0°-48'
R = 12,418'
T = 563.6
L = 1125.0'
STRUCTURE NO. 103
STD. TYPE D-6 INLET REQD.
CONNECT TO STR. NO. 102
1-60° WYE & TEE 28' RT.
SEE DETAIL SHEET NO. 43
P.C. STA. 196+35.1 LINE B BACK = LINE D AHEAD
P.C. 196+35.1 (I.P.L.)
TYP. P.I. 201+98.7 (I.P.L.)
P.I. 200+50
EL. 973.66
CORR. -0.15
400' V.C.
P.V.C.
P.V.T.
+0.66%
-1.52%
-0.86%
+0.40%
-0.27%
-0.63%
+2.00%
-1.15%
-0.47%
-0.03%
970.34 RT.
969.22 LT.
967.01 LT.
966.54 RT.
971.19 LT.
971.82 RT.
970.40 LT.
970.00 LT.
969.50 LT.
969.22 LT.
973.40 LT.
970.62 RT.
969.53 LT.
959.90 LT.
963.12 LT.
963.03 LT.
963.03 RT.
963.12 RT.
FL. LT. 960.05
FL. RT. 960.05
(SLOPE)
FL. LT. 969.22
FL. RT. 970.04
(SLOPE)
83 S.Y. SODDING REQ'D. LT.
HOUSE
44 S.Y. SODDING REQ'D. LT.
230 S.Y. SODDING REQ'D. RIGHT
55 S.Y. SODDING REQ'D. LT.
148 S.Y. SODDING REQ'D. RT.
54 S.Y. SODDING REQ'D. LEFT
1142 S.Y. SODDING REQ'D. RIGHT
HOUSES
103 S.Y. SODDING REQ'D. RT.
32 S.Y. SODDING REQ'D. LT.
3' BOTTOM DITCH RIGHT
3' BOTTOM DITCH LEFT
3' BOTTOM DITCH R.T.
3' BOTTOM DITCH LEFT
BALANCE NO. 3
CUT = 3,895 C.Y.
FILL + 25% = 3,183 C.Y.
OVERHAUL = 712 C.Y.
ADDED HAUL = 380 UNITS
DISTRIBUTION: 332 C.Y. TO BALANCE NO. 4
380 C.Y. TO BALANCE NO. 5
259 C.Y. SALVAGED ROAD MATERIAL REQUIRED THIS BALANCE
9' PAVED SHOULDER
150' TAPER
9'-0" TO 0'-0"
980
970
960
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
M.P.L. 8-26-55
391(4) "B" & "L"
391(4) 1956 10 197


"F"
391(4) 1956 11 197
PUBLIC ROAD CROSSOVER REQ'D
STA. 213+42.5 SEE DETAIL SHEET NO. 41
PUBLIC ROAD APPROACH
TYPE "B" REQ'D. LT.
STA. 213+41 LT.
SECTION 7
T 20 N., R 11 E
CURVE DATA
P.I. 213+72.2
D = 9°28.8' RT.
D' = 9°48'
T = 530.1'
L = 1058.3'
E = 19.63'
STRUCTURE NO. 112
STD. TYPE D-6 INLET REQ'D.
CONNECT TO STR. NO. 113
STRUCTURE NO. 114
STD. TYPE D-6 INLET REQ'D.
CONNECT TO STR. NO. 115
STRUCTURE NO. 106
STD. TYPE D-6 INLET REQ'D.
CONNECT TO STR. NO. 107
STRUCTURE NO. 108
STD. TYPE D-6 INLET REQ'D.
CONNECT TO STR. NO. 109
STRUCTURE NO. 105
60"-12" CLASS I PIPE REQ'D.
CONNECT TO STR. NO. 104
STRUCTURE NO. 107
50"-12" CLASS I PIPE REQ'D.
1-6" on 12" TEE, 28° RT.
CONNECT TO STR. NO. 106
STRUCTURE NO. 109
54"-12" CLASS I PIPE REQ'D.
1-6" on 12" TEE, 39.5° RT.
CONNECT TO STR. NO. 108
STRUCTURE NO. 110
52"-5" CMP REQ'D. & REMOVE
STRUCTURE NO. 1 & SIPHON
IN PLACE
STRUCTURE NO. 111
REMOVE STRUCTURE
IN PLACE
STRUCTURE NO. 113
52"-12" CLASS I PIPE REQ'D.
1-6" on 12" TEE, 39.5° RT.
CONNECT TO STR. NO. 112
STRUCTURE NO. 115
46"-12" CLASS I PIPE REQ'D.
1-6" on 12" TEE, 28° RT.
CONNECT TO STR. NO. 114
SECTION 12
T 20 N., R 10 E
SECTION 13
T 20 N., R 10 E
SECTION 18
T 20 N., R 11 E
J. ROBERT & FLORENCE WHITE
Field (Stubble)
MATTIE Mc KIBBEN
(Weeds)
JOSEPH LANDREY
Field (Stubble)
MABLE S. WHITELY
Field (Pasture)
ROADSIDE PARK
STATE OF INDIANA
S.R. 32
(Rock Asph)
(Bit Mac.)
(Garden)
LINE "D"
LINE "B"
Sec. Line
COUNTY CLUB RD.
Well
Conc. Blk. Garage
End Rock Asph
Begin Bit. Mac.
6" Gas Main
4" H.P. Gas Main
6" H.P. Gas Main
Approx. R/Z
R/W
N 61°37' E
S 89°55' E
S 89°54' E
EQUATION
P.T. 219+00.4 LINE "D"
P.O.T. 219+04.9 LINE "B"
PUBLIC ROAD APPROACH
TYPE "B" REQ'D. RT.
SKEW "13-15" RT.
STA. 213+44 RT.
BEARING EQUATION
ENDING BRG. = S 89°55'E LINE "D"
= S 89°54'E LINE "B" PROJ. 391
ALL R/W ON THIS SHEET TO BE AS
SHOWN & MEASURED FROM SURVEY ℄
P.I. 207+50
EL. 976.46
CORR. = +0.07'
400' V.C.
P.I. 215+50
EL. 980.78
CORR. = -0.79'
600' V.C.
P.I. 213+72.2 (I.P.F)
P.T. 207+60.1 (I.P.B)
P.C. 208+42.1 (I.P.B)
P.T. 219+00.4 (I.P.L)
BM #7 Elev. 976.25 Bt Spk. S. Side 30" Oak (in roof) 205' Lt. Sta 209+12.0"
BM #8 Elev. 977.17 Bt Spk N.W. Side 20" Oak 3' Up 216' Rt Sta 216+45.0"
544 C.Y. SALVAGED ROAD MATERIAL
REQUIRED THIS BALANCE
BALANCE NO. 4
CUT = 4,305 C.Y.
FILL +25% = 9,102 C.Y.
BORROW = 4,797 C.Y.
ABOVE BORROW TO BE OBTAINED AS FOLLOWS:
3,574 C.Y. FROM BALANCE NO. 1
891 C.Y. FROM BALANCE NO. 2
332 C.Y. FROM BALANCE NO. 3
+0.45%
-0.54%
-0.52%
P.V.C.
P.V.T.
970.35 RT.
971.43 RT.
974.20 LT.
976.32 RT.
976.80 RT.
975.80 RT.
974.61 LT.
114 S.Y. SODDING REQ'D. LT.
102 S.Y. SOD REQ'D. RIGHT.
170 S.Y. SODDING REQ'D. RT.
HOUSE RT.
112 S.Y. SODDING REQ'D. LT.
3' BOT. DIA RIGHT
3' BOTTOM LEFT
3' BOTTOM RT.
3' BOTTOM LT.
SIDEROADS RT & LT.
204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220
M.P.L. 8-26-55
391(4)

"F"

391(4) 1956 12 197

W.H. Frick
C.C. Ziegle
W.E. Snyder
I.H.K.
7286 F

B-54

EQUATION PT. 219+00.4 LINE "D" BACK
POT. 219+04.9 LINE "C" AHEAD

220 | 225 | 230 | 235

+80.38 T.P. | +10.38 T.P. | +41.38 T.P. | +89.38 T.P. | +18.28 S.Inl. 12"C.& M.R. 8'+0.5' Conc. Hdw. | +00.38 T.P. | +39.38 T.P. | +60.38 T.P. | +88.38 T.P. | +82.305 Inl. 12"C.P. & 6'x10' Conc. Hdw. | +18.38 T.P. | +3.38 T.P. | +5.36 24" Cot. +5.55 20" Maple | +41.40 Old Steel Cor. F.P. | +75.39 T.P. | +94.32 32" Elm +08.10 S.Inl. 12"C.& M.R. 4'x4'x12" C.P. | +22.32 26" Elm | +01.39 T.P.

STRUCTURE NO. 117
20' of 12" CLASS 5
PIPE REQ'D.

DRS. 14 AC. C=0.8
STRUCTURE NO. 118
90' of 24" CLASS 1 PIPE REQ'D
41' RT, 48' LT & REMOVE STRUCTURE IN PLACE. 6" on 24" CROSS 28' LT

DRS. 18 AC. C=0.8
STRUCTURE NO. 121
98' of 24" CLASS 1 PIPE REQ'D
50' RT, 48' LT & REMOVE STRUCTURE IN PLACE

DRS. 12 AC. C=0.4
STRUCTURE NO. 126
90' of 24" CLASS 1 PIPE REQ'D
50' RT, 40' LT. 6" on 24" TEE
28' LT.

JOSEPH LANDREY
Field (Stubble)

Field (Stubble)

23 Sty. Ft. Horse Pour Cond. Conc. Found. No Bsmt

Hd. Field Dr.

Light Drop

Approx. R

S.R. 32 (Bit. Mac.)

S.R. 32

S.R. 32 (Bit. Mac.)

LINE "D"

S 89° 54' E

MABLE S. WHITELY
(Field)

ROY C. & CLEO MAY
NORTHCUTT
(Apple Orchard)

DELAWARE COUNTRY CLUB
(Gross & Weeds)

Field (Wheat)

STRUCTURE NO. 119
4' of 6" F.T. REQ'D & REMOVE 6" F.T. IN PLACE FROM EX. DITCH LINE TO RT. R/W

STRUCTURE NO. 120
24' of 12" CMP REQ'D

STRUCTURE NO. 123
4' of 8" V.C. or CONC. SEWER PIPE REQ'D & CONNECT TO STR. NO'S 122 & 124

STRUCTURE NO. 122
CONSTRUCT 18" PIPE C.B. & REMOVE 18" F.T. INLET CONNECT TO STR. NO. 123

STRUCTURE NO. 124
193' of 8" V.C. or CONC. SEWER PIPE REQ'D & CONNECT TO F.T. IN PLACE. 8" on 8" TEE REQ'D 56' RT. CONNECT T'S STR. NO. 123. REMOVE 8" F.T. IN PLACE R/W T' R/W.

STRUCTURE NO. 125
REMOVE STRUCTURE IN PLACE

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY &.

STRUCTURE NO. 116
28' of 12" CLASS 5
PIPE REQ'D.

5 SQ. YDS. CONC. SIDEWALK (3' WIDTH) REQ'D RT. & REMOVE WALK IN PLACE.

REMOVE 64 LIN. FT. OF STONE MASONRY WALL

12" S. Trees Prune & Cut Approx

70' 14" R/W Trees

Private Dr. (Gravel)

S.W. Cor. Conc. Step & bott.

S.E. Cor. Porch Found.

T.P. No Number

P.O.T. 232 + 22.3 (T.P.L.)

B.M. #9 Elev. 976.30 Bt. Spk. NW Side 18" Cot. 3'up 69' Rt. sta. 226+30
B.M. #10 Elev. 981.60 Bt. Spk. S. Side 18" Map (inroot) 94' Lt. sta. 231+73

BALANCE NO. 5

CUT	2288 CYS.
FILL +25%	6548 CYS.
BORROW	2123 CYS.
SPECIAL BORROW	2137 CYS.

ABOVE BORROW TO BE OBTAINED AS FOLLOWS:
1743 CYS. FROM BALANCE NO. 2
380 CYS. FROM BALANCE NO. 3
373 CYS SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

PI 224+00
EL. 976.38
400' V.C.
CORR.= +0.46

PI 234+00
EL 980.38
400' V.C.
C=+0.66

W.H. Frick
B.A. Lyon
Inst. W.E. Snyder

3-54
7-54
B-54

990 | 980 | 970 | 960

-0.52% | P.V.C. | P.V.T. | +0.40% | P.V.C. | +5.72%

F/L LT. 972.10
F/L RT. 971.08
24" PIPE CULVERT

F/L LT. 972.78
F/L RT. 972.19
24" PIPE CULVERT

SPILL OUT RT.

F/L LT. 977.03
F/L RT. 974.26
24" PIPE CULVERT

4 PAIR LUGS REQ'D

116 SQ. YDS. SODDING REQ'D RT.

111 SQ. YDS. SODDING REQ'D RT. HOUSE RT.

3' BOTTOM RIGHT

3' BOTTOM LEFT

203 SQ. YDS. SODDING REQ'D RT.

309 SQ. YDS. SODDING REQ'D LT.

80 SQ. YDS. SODDING REQ'D RT. HOUSE RT.

165 SQ. YDS. SODDING REQ'D RT.

246 SQ. YDS. SODDING REQ'D LT.

166 SQ. YDS. SODDING REQ'D LT. HOUSE LT.

176 SQ. YDS. SODDING REQ'D RT.

193 SQ. YDS. SODDING REQ'D LT.

219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 M.P.L. 8-26-55 | 235

391(4) B

W.H. Frick 3-54
C.E. Hoyas 3-54
R.L. Marlow 9-54
INK

"E"
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STRUCTURE NO. 130
24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 131
24' of 12" CMP REQ'D

STRUCTURE NO. 132
24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 134
REMOVE PIPE IN PLACE

STRUCTURE NO. 136
24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 137
24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 138
24' of 12" CLASS 5 PIPE REQ'D REMOVE PIPE IN PLACE

STRUCTURE NO. 141
REMOVE PIPE IN PLACE

STRUCTURE NO. 140
8' of 6" VCP or CONC. SEWER PIPE REQ'D & REMOVE F.F. EX. DITCH LINE TO R/W

JOSEPH LANDREY (Field- stubble)

WILBERT L. GRAY MUTUAL HOME & SAV. ASSN SUBD.

CARL J. & MARY ELLEN CONKLE Lot #3

EDWIN & LOIS M. BRUNER Lot #1

BEN F. & ETHEL MILLS Lot #5

HOMER & MARIE SUTTON Lot #7

IRA L. & GRETCHEN F. HASKINSON

CLAUDE B. & HELEN M. LEE Lot #9

LENNIE A. & LENA G. BRADBURN Lot #11

WILBERT L. GRAY (Pasture)

OLD CEMETERY (No Tombstones, No Indications of Graves)

(Pasture)

S.R. 32 Bit. Mac.

BRG. S. 89° 54' E

BRG. N 89° 55' E

LINE "B"

ARLO A. & DOROTHY E. KIRKPATRICK (Field- Stubble)

ARLO & DOROTHY KIRKPATRICK

DELAWARE COUNTRY CLUB

DRS. SAC C+0.3
STRUCTURE NO. 127
110' of 15" CLASS 1 PIPE REQ'D
30° RT. SKEW., 53' RT., 57' LT.
& REMOVE STRUCTURE IN PLACE
6" on 15" TEE 25' RT., 6" on 15" TEE 28' LT.

DRS. SAC C+0.3
STRUCTURE NO. 139
50' of 15" CLASS 5 PIPE REQ'D
50' RT, 52' LT & REMOVE STRUCTURE IN PLACE

STRUCTURE NO. 128
24' of 12" CMP REQ'D

STRUCTURE NO. 129
24' of 12" CMP REQ'D

STRUCTURE NO. 133
20' of 12" CMP REQ'D

STRUCTURE NO. 135
24' of 12" CMP REQ'D

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY

P.I. 244+38.7 (I.P.L.)
Δ = 0°11' Lt. No Curve Run.

B.M. #11 Elev 988.59 Br. Spk. N. Side 16" Elm (in road) 135' Rt. sta 243+21

P.I. 242+00
EL. 984.14
1200' V.C.
C= -4.08
SD = 1260'

P.I. 250+00
EL. 986.14
400' V.C.
C= -0.57

150' TAPER 0'-0" to 9'-0"
9'-0" WIDE PAVED SHOULDER LEFT (6" SALVAGED ROAD MATERIAL BASE + 2½" HOT A.C. BINDER)
150' TAPER 9'-0" to 0'-0"
P.V.T. P.V.C.
-1.00%
+1.72%
SPILL OUT LT.
SPILL OUT RT.
35 SQ. YDS. SODDING REQ'D RT.
HOUSE RT.
15" PIPE CULVERT
812 SQ. YDS. SODDING REQ'D LT.
HOUSES LT.
414 SQ. YDS. SODDING REQ'D RT.
F/L LT. 984.34
F/L RT. 980.91
120 SQ. YDS. SODDING REQ'D LT.
107 SQ. YDS. SODDING REQ'D RT.
107 SQ. YDS. SODDING REQ'D LT.
DESIGN R.S.Q. RT. SEE PRECEDING SHEET
PERM. SEEDING RT. SEE PRECEDING SHEET
PERM. SEEDING LT. SEE PRECEDING SHEET
67 SQ. YDS. SODDING REQ'D RT.
143 SQ. YDS. SODDING REQ'D LT.
74 SQ. YDS. SODDING REQ'D RT.
62 LIN. FT. TYPE A 30" CURB REQ'D RT.
15 SQ. YDS. SODDING REQ'D RT.
16 SQ. YDS. SODDING REQ'D LT.
105 SQ. YDS. SODDING REQ'D LT.

234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 M.P.L. 0+26.55 250

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WILBERT L. GRAY
(Pasture)

REMOVE 85 LIN. FT. 12" STN. MASONRY WALL

5-28 SQ.YDS. CONC. SIDEWALK REQ'D

STRUCTURE NO. 144
64' of CMP REQ'D

DRS. 8%AC. C+0.4
STRUCTURE NO. 145
24' of 12" CLASS 5 PIPE REQ'D.

STRUCTURE NO. 147
4' of 24" CMP REQ'D &
CONSTRUCT SPECIAL HEADWALL
SEE DETAIL ON SHEET NO. 44
REMOVE 16' of 24" CGMP WILBERT L. GRAY
IN PLACE & REMOVE EXIST'G HEADWALL.

DRS 13.2DAC C+0.35
STRUCTURE NO. 146
16' R.C. CULVERT EXTENSION (SLABTOP UNDER FILL)
REQ'D. L=78'-4½" H=8'-0"
SEE DETAILS ON SHEET NO. 44
REMOVE EXISTING WINGWALLS, RAILINGS & SLABS. ABUTMENTS TO REMAIN. EXISTING FILL IS TO BE EXTENDED THRU NEW ABUTMENTS

CHAS. C. JONES

STRUCTURE NO. 149
32' of 15" CLASS 5 PIPE REQ'D

FERN & DONALD COOPER
(Pasture)

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY #

Sec.7-T20N-RIIE
LIBERTY TWP.
DELAWARE CO.

(Garden)

S.R.32 (Bit.Mac.)

N 89° 55'E

LINE "B"

ARLO A. & DOROTHY E. KIRKPATRICK
Field (Stubble)

Abandoned Gravel Pit Depression

STRUCTURE NO. 142
20' of 12" CMP REQ'D

Field (Stubble)

DRS. 5AC C+0.4
STRUCTURE NO. 143
96' of 18" CLASS 5 PIPE REQ'D
30° LT SKEW, 47' LT, 49' LT &
REMOVE STRUCTURE IN PLACE
6" on 15" TEE 28' LT. "L" HDWLS ON LT

REMOVE TRACTION ABUTMENTS IN PLACE

SYLVIA & NORA GRAHAM
Field (Stubble)

Field (Corn Stubble)
DRS 7AC C+0.35
STRUCTURE NO. 148
22' of 18" CLASS 5 PIPE REQ'D

(Weeds)

(Lawn)

Field (Plowed)

DRS. 6AC C+0.35
STRUCTURE NO 150
24' of 18" CMP REQ'D &
REMOVE PIPE IN PLACE

Sec.18-T20N-RIIE
LIBERTY TWP.
DELAWARE CO.

P.O.T. 258+ 85.0 (I.P.L.)

B.M. #12 Elev. 978.68 Br. Spk. SW Side 36' E/m (inroad) 36' Lt. sta 255 + 98
B.M. #13 Elev. 983.29 Br. Spk. S Side 18' E/m 5' up 157' Lt. sta 264 + 98

BALANCE NO. 6

CUT	4,744	CYS.
FILL +25%	5791	CYS.
SPECIAL BORROW	1047	CYS.

202 CYS. SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

P.I. 250+00
EL. 986.14
400' V.C.
G1 -G2 5.7

P.I. 258+00
EL. 966.88
600' V.C.
CORR. +3.495

FOR SODDING RT. SEE PRECEDING SHEET

FOR SODDING LT. SEE PRECEDING SHEET

39 SQ. YDS. SODDING REQ'D RT.

220 SQ. YDS. SODDING REQ'D LT.

129 SQ. YDS. SODDING REQ'D LT.

30 SQ. YDS. SODDING REQ'D LT.

15 SQ. YDS. SODDING REQ'D LT.

12" Stn. mas. wl. 3" Conc. Slab on top

12" PIPE CULVERT

18" PIPE CULVERT

74 SQ. YDS. SODDING REQ'D LT.

36 LIN. FT. TYPE "A" PSD REQ'D RT.
6 PAIRS LUGS REQ'D
24 SQ YDS SODDING REQ'D RT.

160 LIN. FT. TYPE "A" PSD REQ'D RT.
45 SQ. YDS. SODDING REQ'D RT.

96 LIN. FT. TYPE "A" PSD REQ'D LT.
4 PAIRS LUGS REQ'D
24 SQ. YDS. SODDING REQ'D LT.

1275 SQ. YDS SODDING REQ'D RT.
HOUSE RT.

173 SQ. YDS. SODDING REQ'D RT.

96 SQ. YDS. SODDING REQ'D LT.

67 SQ. YDS. SODDING REQ'D LT.

85 SQ. YDS. SODDING REQ'D LT.

3' BOTTOM RT.

3' BOTTOM LT.

249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265

M.P.L. 8-26-55

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STRUCTURE NO. 152
24' of 12" CMP REQ'D &
REMOVE PIPE IN PLACE

PUBLIC ROAD APPROACH
TYPE "D" REQ'D LT.
STA. 268+01.5 LT.

PUBLIC ROAD CROSSOVER REQ'D
SEE SHEET NO. 41 FOR DETAIL
STA 268+01.5

STRUCTURE NO. 154
48' of 15" CMP REQ'D

STRUCTURE NO. 156
24' of 12" CMP REQ'D

PUBLIC ROAD CROSSOVER REQ'D
SEE SHEET NO. 41 FOR DETAIL
STA 274+01

STRUCTURE NO. 157
24' of 12" CMP REQ'D

STRUCTURE NO. 158
48' of 15" CMP REQ'D

PUBLIC ROAD APPROACH
TYPE "D" REQ'D LT.
STA. 274+01 LT.

REMOVE 49 LIN. FT. OF 6"
CONC. CURB

STRUCTURE NO. 160
24' of 12" CMP REQ'D

STRUCTURE NO. 162
24' of 12" CMP REQ'D

STRUCTURE NO. 164
24' of 12" CMP REQ'D

STRUCTURE NO. 166
24' of 12" CMP REQ'D

STRUCTURE NO. 167
54' of 15" CMP REQ'D

PUBLIC ROAD APPROACH
TYPE "B" REQ'D LT. STA.
278+55 LT. SKEW 24° LT.

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WOODLAND PARK

S.R. 32 Bit. Mac.

Brg. N89° 55' E

Brg. S89° 16' E

LAFAYETTE DR.

LINE "B"

PUBLIC ROAD CROSSOVER
REQ'D SEE
SHEET NO. 41
FOR DETAIL
STA 278+55

PUBLIC ROAD APPROACH
TYPE "B" REQ'D RT.
STA 265+24.5 RT.

PUBLIC ROAD CROSSOVER
REQ'D SEE SHEET NO. 41
FOR DETAIL STA 265+24.5

STRUCTURE NO. 151
52' of 15" CMP REQ'D.

STRUCTURE NO. 153
24' of 12" CMP REQ'D &
REMOVE PIPE IN PLACE

STRUCTURE NO. 155
24' of 12" CMP REQ'D
REMOVE PIPE IN PLACE

PUBLIC ROAD APPROACH
TYPE "D" REQ'D RT.
STA. 273+19 RT.

PUBLIC ROAD CROSSOVER REQ'D
SEE SHEET NO. 41 FOR DETAIL
STA 273+19

ALL R/W ON THIS SHEET
TO BE AS SHOWN &
MEASURED FROM SURVEY

STRUCTURE NO. 159
24' of 12" CMP REQ'D

STRUCTURE NO. 161
24' of 12" CMP REQ'D &
REMOVE STRUCTURE
IN PLACE, CONNECT
TO STR. NO. 163

STRUCTURE NO. 163
58' of 12" W.C. or CONC. SEWER PIPE REQ'D
& REMOVE PIPE IN PLACE.
CONNECT TO STR. NO. 161

STRUCTURE NO. 165
24' of 12" CMP REQ'D &
REMOVE PIPE IN PLACE

STRUCTURE NO. 168
24" of 12" CMP REQ'D &
REMOVE PIPE IN PLACE

P.I. 278+76.0 (A.P.F.)

Δ = 0°49'.2
D = 0°04'
T = 6.125'
L = 12.25.0'
E = 02.18'

T.F.P. 191

P.C. 272+63.5 (A.R.L.)

B.M. #13 Elev. 983.29 Brk. Spk. S. Side 18"E Elm 5' Up 15'? Lt. Sta. 264+98
B.M. #14 Elev. 989.01 Brk. Spk. N. Side 24" Trip W. Chy. 5' Up 02' Rt. Sta. 274+91

BALANCE NO. 7

CUT	3609 CYS
FILL +25%	5887 CYS
BORROW	1531 CYS
SPECIAL BORROW	747 CYS.

ABOVE BORROW TO BE OBTAINED AS FOLLOWS:
1531 CYS FROM BALANCE NO. 8

244 CYS. SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

PI 267+00
EL. 987.04
800' V.C.
CORR. = -2.04

PI 275+50
EL. 991.12
400' V.C.
C = -0.68
S.D. = 1520'

9' WIDE PAVED SHOULDER RIGHT (6" SALVAGED ROAD MATERIAL BASE + 2½" HOT A.C. BINDER)

SIDE ROAD RIGHT

SIDE ROAD LEFT

288 SQ. YDS. SODDING REQ'D RT.

276 SQ YDS SODDING REQ'D RT.

736 SQ. YDS. SODDING REQ'D RT.

239 SQ. YDS SODDING REQ'D RT.

254 SQ. YDS SODDING REQ'D RT.

84 SQ. YDS SODDING REQ'D LT.

65 SQ. YDS. SODDING REQ'D LT.

143 SQ. YDS. SODDING REQ'D LT.

242 SQ. YDS. SODDING REQ'D LT.

160 SQ. YDS. SODDING REQ'D LT.

77.50 YDS SODDING REQ'D LT.

13 SQ. YDS. SODDING REQ'D LT.

3' BOTTOM RT.

3' BOTTOM LT.

3' BOTT. LT.

264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280

M.P.L. 8-24-55

39 (19) B

PUBLIC ROAD APPROACH TYPE "D" REQ'D LT. STA. 279+55 LT. SKEW 24° LT.

PUBLIC ROAD CROSSOVER REQ'D SEE SHEET NO. 41 FOR DETAIL STA 279+25

STRUCTURE NO. 167 SEE PRECEDING SHEET.

PUBLIC ROAD CROSSOVER REQ'D STRUCTURE NO. 169 84'-0 18" CMP'S & PIPE REQ'D 42°RT, 42°LT. & REMOVE STRUCTURE IN PLACE

PUBLIC ROAD APPROACH TYPE "D" REQ'D LT. STA. 282+94 LT.

STRUCTURE NO. 175 24'-0 12" CMP REQ'D

PUBLIC ROAD CROSSOVER REQ'D SEE SHEET NO. 41 FOR DETAIL STA. 282+94

PUBLIC ROAD APPROACH TYPE "D" REQ'D RT. STA. 286+25 RT.

STRUCTURE NO. 177 24'-0 12" CMP REQ'D & REMOVE PIPE IN PLACE

PUBLIC ROAD CROSSOVER REQ'D SEE SHEET NO. 41 FOR DETAIL. STA 289+25

STRUCTURE NO. 178 24'-0 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 176 24'-0 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 179 48'-0 15" CMP REQ'D

REMOVE 28 LIN. FT. CONC. CURB

COOK ACRES SUBD.

VIRGIL A. & ALICE P. VAN MATRE (LAWN) LOT 1

BESSIE G. HOWELL (WEEDS) LOT 2

RUSSEL H. LAWSON (WEEDS) LOT 3

MILES A. HERNLEY (WEEDS) LOT 4

HERBERT D. & WORMA BOGART STEWART LOT 5

MUNCIE FEDERAL SAVINGS & LOAN ASSOC. LOT 6

COOK RD. (GRAVEL)

DELAWARE COUNTY HOME (Pasture)

FIELD (CORN STUBBLE)

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄

391(4) 1956 16 197

S.R. 32 (BIT. MAC.)

S 89° 16' E LINE "B"

DANIEL & NELLIE COWELL LOT 2

GUY H. & CATHENNE L. POWERS LOT 3

LEWIS C. JR. & ESTER S. DINGLEDINE LOT 4

DALE C. DICKOVER LOT 5

HUGH & RUTH Mc LACHLAN LOT 6 (LAWN)

LOT 7 (WEEDS)

VAUGHAN C. & JUNE E. MILLER LOT 8 (LAWN)

BENROD RD. (GRAVEL)

JAMES A. & DELNA BRIGHT LOT 9

ROGER L. & ALICE MAE KONZ LOT 10

GEO. F. & CARRIE KONZ LOT 11

WM. HOWARD BARTH LOT 12

RAYMOND MILDRED MUMMERT LOT 13

FLOYD R. & BLANCHE RAWLINGS (GRASS)

(GARDEN)

OUTLOT 1

STRUCTURE NO. 168 SEE PRECEDING SHEET

DRS. 5AC C=0.3 STRUCTURE NO. 170 40'-0 15" CMP REQ'D & REMOVE PIPE IN PLACE

DRS. 5AC C=0.3 STRUCTURE NO. 171 24'-0 15" CMP REQ'D & REMOVE PIPE IN PLACE

DRS. 4.4AC C=0.3 STRUCTURE NO. 172 24'-0 18" CMP REQ'D & REMOVE PIPE IN PLACE

DRS. 4AC C=0.3 STRUCTURE NO. 174 24'-0 15" CMP REQ'D & REMOVE PIPE IN PLACE

DRS 5AC C=0.3 STRUCTURE NO. 179 48'-0 15" CMP REQ'D & REMOVE PIPE IN PLACE

P.T. 284+88.5 (I.P.L.)

STRUCTURE NO. 180 24'-0 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 181 24'-0 12" CMP REQ'D & REMOVE PIPE IN PLACE

STRUCTURE NO. 182 REMOVE PIPE IN PLACE

STRUCTURE NO. 183 24'-0 12" CMP REQ'D

STRUCTURE NO. 184 24'-0 12" CMP REQ'D

STRUCTURE NO. 185 6'-0 12" PIPE REQ'D

4.89 SQ. YDS. CONC. SIDEWALK REQ'D & REMOVE WALK IN PLACE

STRUCTURE NO. 186 24'-0 12" CMP REQ'D

TYPE "A" STEPS REQ'D, (4) 9 CYS CONC. THEAD 14" 3 RISERS @ 7"

HYDE PARK ADDITION (ALL LOTS RT of LINE)

BM. #15 Elev. 993.30 Br. Spk. N.E. side 12" Elm. 5'up 105' Rt. Sta 288+35

461 CYS. SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

P.C. 294+470 (I.P.L.)

BALANCE NO. 8

CUT	4019	CYS
FILL + 25%	2488	CYS
OVERHAUL	1531	CYS

DISTRIBUTION: 1531 CY. TO BALANCE NO. 7

P.I. 282+00 EL. 985.30 400' V.C. C= + 1.18

P.I. 288+00 EL. 994.28 600' V.C. C= -1.44 S.D. = 1240'

8' WIDE PAVED SHOULDER RIGHT (6" SALVAGED ROAD MATERIAL BASE + 2½" HOT A.C. BINDER)

150' TAPER 8'-0" TO 0'-0"

SIDE ROAD LEFT

SIDE ROAD RIGHT

440 SQ. YDS. SODDING REQ'D RT. HOUSES RT.

3650 SQ. YDS SODDING REQ'D HOUSE RT.

1008 SQ. YDS SODDING REQ'D RT. HOUSE RT.

1245 SQ. YDS. SODDING REQ'D HOUSE LT.

878 SQ. YDS. SODDING REQ'D RT.

272 SQ. YDS. SODDING REQ'D LT.

SEE PRECEDING SHEET FOR SODDING REQ'D RT. & LT.

33 SQ. YDS. SODDING REQ'D LT. HOUSES LT.

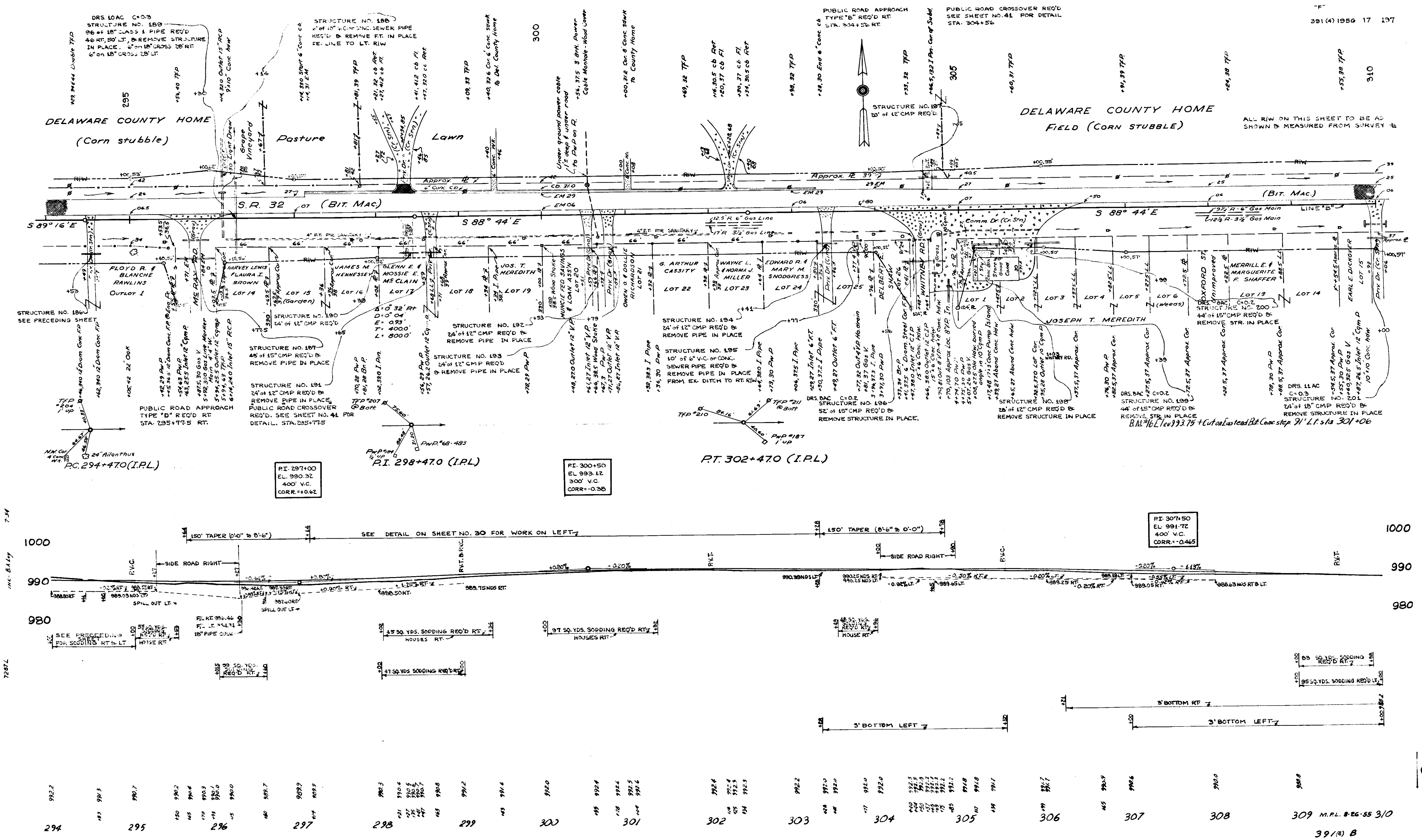
350 SQ. YDS SODDING REQ'D LT.

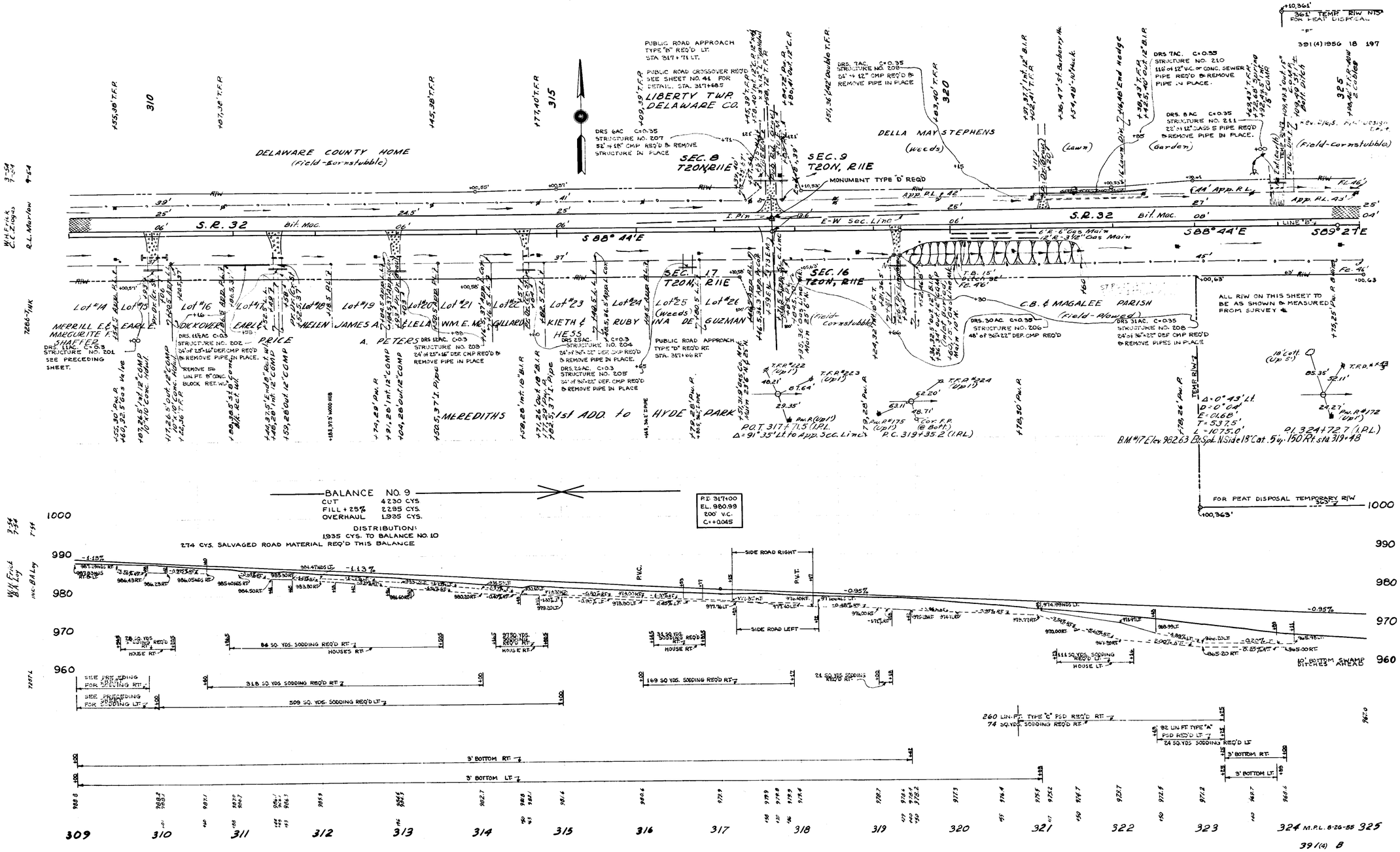
82 SQ. YDS SODDING REQ'D LT.

5' BOTTOM LEFT

279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 M.P.L. 8-28-85 295

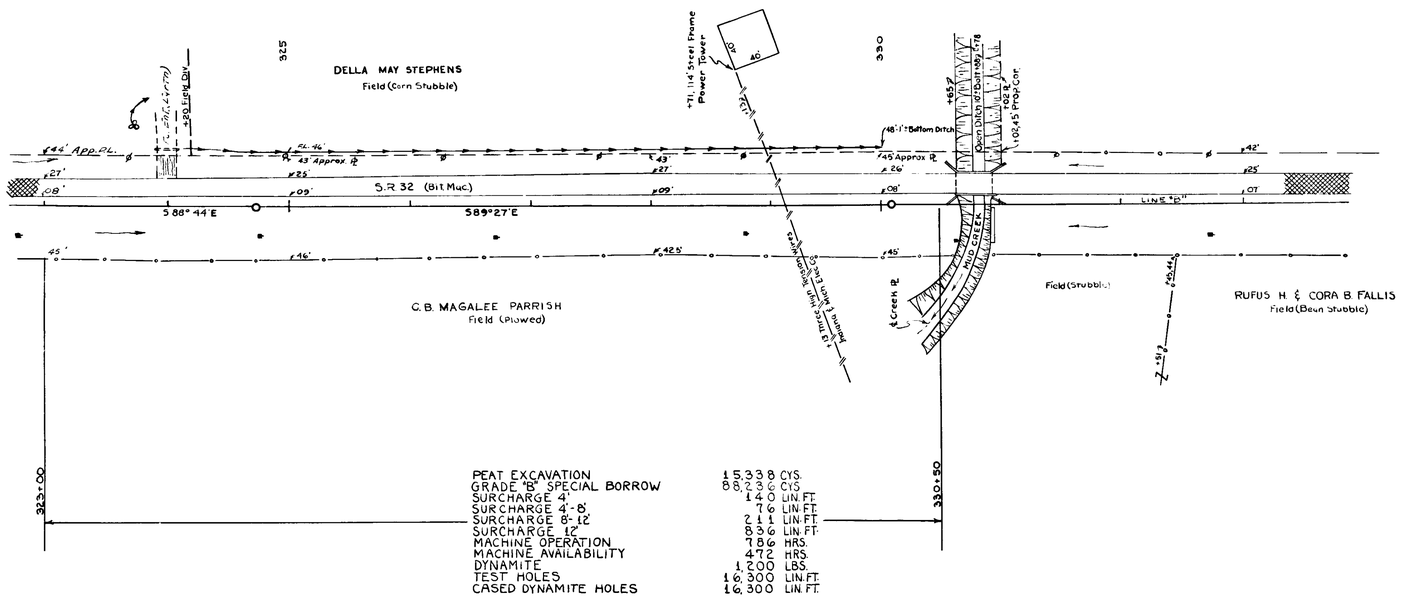
39(a) B


"F"
391 (4) 1956 17 197
DELAWARE COUNTY HOME
(Corn stubble)
Pasture
Lawn
Grape Vineyard
DELAWARE COUNTY HOME
FIELD (CORN STUBBLE)
ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄
S.R. 32 (BIT. MAC.)
(BIT. MAC.)
S 89° 16' E
S 88° 44' E
S 88° 44' E
LINE "B"
DRS. 10 AC C=0.3
STRUCTURE NO. 189
96' of 18" CLASS 1 PIPE REQ'D
46' RT., 50' LT., & REMOVE STRUCTURE IN PLACE. 6" on 18" CROSS 28' RT. 6" on 18" CROSS 28' LT.
STRUCTURE NO. 188
6' of 10" V.C. or CONC. SEWER PIPE REQ'D & REMOVE F.T. IN PLACE FE. LINE TO LT. R/W
PUBLIC ROAD APPROACH TYPE "B" REQ'D RT. STA. 304+56 RT.
PUBLIC ROAD CROSSOVER REQ'D SEE SHEET NO. 41 FOR DETAIL STA. 304+56
STRUCTURE NO. 197
20' of 12" CMP REQ'D.
Under ground power cable 1' ± deep ℄ under road to PwP on R.
+56, 37.5 3' Brk. Power Cable Manhole - Wood Cover
FLOYD R. & BLANCHE RAWLINS OUTLOT 1
M^c RAY RD.
HARVEY LEWIS & LAURA I. BROWN LOT 14
LOT 15 (Garden)
JAMES M. HENNESSEY LOT 16
GLENN E. & MOSSIE E. M^c CLAIN LOT 17
LOT 18
JOS. T. MEREDITH LOT 19
MUNCIE FED SAVINGS & LOAN ASS'N LOT 20
OWEN O. & DOLLIE RICHARDSON LOT 21
G. ARTHUR CASSITY LOT 22
WAYNE L. & NORMA J. MILLER LOT 23
EDWARD R. & MARY M. SNODGRESS LOT 24
LOT 25
DELBERT L. SHAW LOT 26
WHITNEY RD.
Comm. Dr. (Cr. Stn)
1 Sty Conc. Blk. Store Good Cond.
LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 (Weeds)
JOSEPH T. MEREDITH
OXFORD ST. Unimproved
MERRILL E. & MARGUERITE F. SHAFFER LOT 13
LOT 14
EARL E. DICKOVER LOT 15
12.5' R 6" Gas Line
17' R 3½" Gas Line
9½' R - 6" Gas Main
12½' R - 3½" Gas Main
4" F.T. FOR SANITARY
Δ = 0° 32' Rt
D = 0° 04'
E = 0.93'
T = 400.0'
L = 800.0'
STRUCTURE NO. 186 SEE PRECEDING SHEET
STRUCTURE NO. 190 24' of 12" CMP REQ'D
STRUCTURE NO. 187 48' of 15" CMP REQ'D & REMOVE PIPE IN PLACE
STRUCTURE NO. 191 24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE.
PUBLIC ROAD CROSSOVER REQ'D. SEE SHEET NO. 41 FOR DETAIL. STA. 295+77.5
PUBLIC ROAD APPROACH TYPE "D" REQ'D RT. STA. 295+77.5 RT.
STRUCTURE NO. 192 24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE
STRUCTURE NO. 193 24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE
STRUCTURE NO. 194 24' of 12" CMP REQ'D & REMOVE PIPE IN PLACE
STRUCTURE NO. 195 10' of 6" V.C. or CONC. SEWER PIPE REQ'D & REMOVE PIPE IN PLACE FROM EX. DITCH TO RT. R/W
DRS. BAC C=0.2 STRUCTURE NO. 196 52' of 15" CMP REQ'D & REMOVE STRUCTURE IN PLACE.
STRUCTURE NO. 198 28' of 12" CMP REQ'D & REMOVE STRUCTURE IN PLACE
DRS. BAC C=0.2 STRUCTURE NO. 199 44' of 15" CMP REQ'D & REMOVE STR. IN PLACE
DRS. BAC C=0.2 STRUCTURE NO. 200 44' of 15" CMP REQ'D & REMOVE STR. IN PLACE
DRS. 11 AC C=0.3 STRUCTURE NO. 201 24' of 18" CMP REQ'D & REMOVE STRUCTURE IN PLACE
B.M. #16 Elev. 993.75 + Cut on East end Bst. Conc. step. 91' Lt. sta. 301+06
P.C. 294+47.0 (I.P.L.)
P.I. 298+47.0 (I.P.L.)
P.T. 302+47.0 (I.P.L.)
TFP #204 1' up
N.W. Cor. 4' Conc. Wk.
24" Ailanthus
TFP #207 @ Bott.
PwP #184 ½' up
PwP #68-483
TFP #210
TFP #211 @ Bott
PwP #187 1' up
P.I. 297+00 EL. 990.32 400' V.C. CORR.=+0.62
P.I. 300+50 EL 993.12 300' V.C. CORR=-0.38
P.I. 307+50 EL. 991.72 400' V.C. CORR.=-0.465
150' TAPER (0'-0" to 8'-6")
SEE DETAIL ON SHEET NO. 30 FOR WORK ON LEFT
150' TAPER (8'-6" to 0'-0")
SIDE ROAD RIGHT
SIDE ROAD RIGHT
P.V.C.
P.V.T. & P.V.C.
P.V.T.
P.V.C.
P.V.T.
1000
990
980
-0.44%
+0.80%
+0.80%
-0.20%
-0.20%
-1.13%
SPILL OUT LT.
FIL. RT. 986.46
FIL. LT. 984.74
18" PIPE CULV.
SEE PRECEEDING SHEET FOR SODDING RT. & LT.
55 SQ. YDS. SODDING REQ'D RT. HOUSE RT.
59 SQ. YDS. SODDING REQ'D RT.
45 SQ. YDS. SODDING REQ'D RT. HOUSES RT.
47 SQ. YDS. SODDING REQ'D RT.
97 SQ. YDS. SODDING REQ'D RT. HOUSES RT.
48 SQ. YDS. SODDING REQ'D RT. HOUSE RT.
83 SQ. YDS. SODDING REQ'D RT.
95 SQ. YDS. SODDING REQ'D LT.
3' BOTTOM RT.
3' BOTTOM LEFT
3' BOTTOM LEFT
W. H. Frick
B. A. Loy
INK - B. A. Loy
294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310
M.P.L. 8-26-55
391(4) B

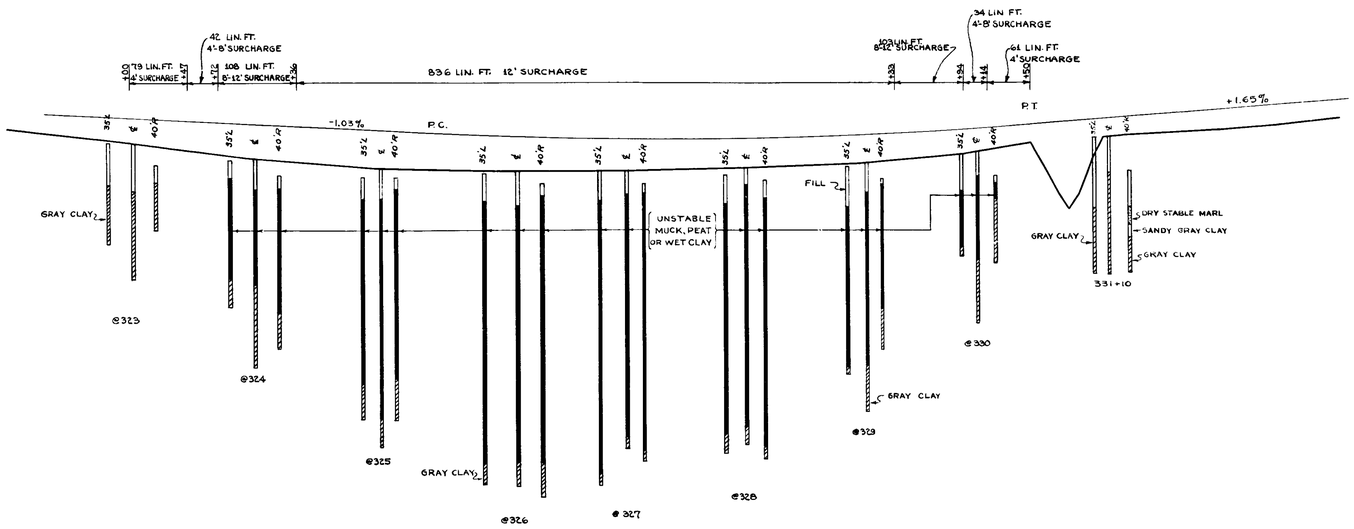

DELAWARE COUNTY HOME
(Field-Cornstubble)
LIBERTY TWP.
DELAWARE CO.
SEC. 8 T20N R11E
SEC. 9 T20N, R11E
SEC. 17 T20N, R11E
SEC. 16 T20N, R11E
MONUMENT TYPE "D" REQ'D
DELLA MAY STEPHENS
(weeds)
(lawn)
(Garden)
(Field-Cornstubble)
S.R. 32 Bit. Mac.
S 88° 44' E
S 89° 27' E
E-W Sec. Line
E. Pin
PUBLIC ROAD APPROACH TYPE "B" REQ'D LT. STA. 317+71 LT.
PUBLIC ROAD CROSSOVER REQ'D SEE SHEET NO. 44 FOR DETAIL. STA. 317+68.8
DRS 6AC C+0.35 STRUCTURE NO. 207 52'-0" 18" CMP REQ'D & REMOVE STRUCTURE IN PLACE
DRS 7AC. C+0.35 STRUCTURE NO. 208 24'-0" 12" CMP REQ'D & REMOVE PIPE IN PLACE
DRS 7AC. C+0.35 STRUCTURE NO. 210 116'-0" 12" W.C. OF CONC. SEWER PIPE REQ'D & REMOVE PIPE IN PLACE.
DRS. 8 AC. C+0.35 STRUCTURE NO. 211 22'-0" 12" CLASS 5 PIPE REQ'D & REMOVE PIPE IN PLACE.
DRS 8AC C+0.35 STRUCTURE NO. 202 24'-0" 25"-46" DEF. CMP REQ'D & REMOVE PIPE, IN PLACE.
DRS 11AC C+0.3 STRUCTURE NO. 203 24'-0" 25"-46" DEF. CMP REQ'D & REMOVE PIPE IN PLACE.
DRS 12AC. C+0.3 STRUCTURE NO. 209 24'-0" 25"-46" DEF. CMP REQ'D & REMOVE PIPE IN PLACE.
DRS 25AC. C+0.3 STRUCTURE NO. 204 24'-0" 36"-22" DEF. CMP REQ'D & REMOVE PIPE IN PLACE.
DRS 25AC. C+0.3 STRUCTURE NO. 205 24'-0" 36"-22" DEF. CMP REQ'D & REMOVE PIPE IN PLACE
DRS 30 AC. C+0.35 STRUCTURE NO. 206 48'-0" 36"-22" DEF. CMP REQ'D
DRS 31AC. C+0.35 STRUCTURE NO. 208 24'-0" 36"-22" DEF CMP REQ'D & REMOVE PIPES IN PLACE
Lot #14
Lot #15
Lot #16
Lot #17
Lot #19
Lot #20
Lot #21
Lot #22
Lot #23
Lot #24
Lot #25
Lot #26
MERRILL E.E. & MARGUERITE F. SHAFFER
EARL E. DICKOVER
EARL PRICE
HELEN JAMES A. PETERS
LELA WM. E. MC GILLARD
KIETH & HESS
RUBY IVA DE GUZMAN
MEREDITHS 1st ADD. to HYDE PARK
C.B. & MAGALEE PARISH
(Field-Mowed)
(Field-Cornstubble)
ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY
TEMP. R/W
FOR PEAT DISPOSAL TEMPORARY R/W
Δ = 0°43' Lt.
D = 0°04'
E = 0.68'
T = 537.5'
L = 1075.0'
P.I. 324+12.7 (I.P.L.)
P.C. 319+35.2 (I.P.L.)
P.O.T. 317+11.5 (I.P.L.)
Δ = 91°35' Lt. to App. Sec. Line
B.M. #17 Elev. 962.63 Bit. Spk. N. Side 18" Cat. 54' y. 150' Rt. sta 319+48
391(4) 1956 18 197
3621 TEMP. R/W N.S. FOR PEAT DISPOSAL "F"
325
Wheelock C.E. Riggs
R.L. Morrow
INC. BAILEY
W.K. Frick

BALANCE NO. 9
CUT 4230 CYS.
FILL + 25% 2285 CYS.
OVERHAUL 1935 CYS.
DISTRIBUTION:
1935 CYS. TO BALANCE NO. 10
274 CYS. SALVAGED ROAD MATERIAL REQ'D THIS BALANCE
P.I. 317+00
EL. 980.99
200' V.C.
C = +0.045
SIDE ROAD RIGHT
SIDE ROAD LEFT
P.V.C.
P.V.T.
-4.15%
-1.13%
-0.95%
78 SQ. YDS. SODDING REQ'D RT.
84 SQ. YDS. SODDING REQ'D RT.
318 SQ. YDS. SODDING REQ'D RT.
509 SQ. YDS. SODDING REQ'D LT.
169 SQ. YDS. SODDING REQ'D RT.
111 SQ. YDS. SODDING REQ'D LT.
24 SQ. YDS. SODDING REQ'D RT.
260 LIN. FT. TYPE "C" PSD REQ'D RT.
74 SQ. YDS. SODDING REQ'D RT.
82 LIN. FT. TYPE "A" PSD REQ'D LT.
24 SQ. YDS. SODDING REQ'D LT.
3' BOTTOM RT.
3' BOTTOM LT.
10' BOTTOM, SWAMP DITCHES AHEAD
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324 M.P.L. 8-26-55 325
391(4) B

"F"
391(4) 1956 19 197



PEAT EXCAVATION	15,338 CYS.
GRADE "B" SPECIAL BORROW	88,238 CYS.
SURCHARGE 4'	140 LIN. FT.
SURCHARGE 4'-8'	76 LIN. FT.
SURCHARGE 8'-12'	211 LIN. FT.
SURCHARGE 12'	836 LIN. FT.
MACHINE OPERATION	786 HRS.
MACHINE AVAILABILITY	472 HRS.
DYNAMITE	1,200 LBS.
TEST HOLES	16,300 LIN. FT.
CASED DYNAMITE HOLES	16,300 LIN. FT.



M.P.L. 8-26-55

391(4)

"F"
39(4) 1956 20 197

363' R/W NTS & FOR PEAT DISPOSAL

STRUCTURE NO. 1
F. Proj. 391(5)
To be Included in this Contract

STRUCTURE NO. 212
54' of 42" CMP REQ'D
& REMOVE PIPE IN PLACE

DELLA MAY STEPHENS
Field (Corn Stubble)

EDNA MARTIN
Field (Plowed)

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄

S. R. 32 (Bit. Mac.)

S88° 44' E — S89° 27' E

C.B. MAGALEE PARRISH
Field (Plowed)

RUFUS H. & CORA B. FALLIS
Field (Bean Stubble)

PEAT TO BE SPREAD TO A UNIFORM DEPTH OVER THE AREA OF TEMPORARY R/W.

DETAIL 10' BOTTOM SWAMP DITCH

SEE SHEET NO. 19 FOR TEST BORINGS IN PEAT AREA.

STRUCTURE NO. 213
320' of 6" F.T. REQ'D
& CONNECT TO 4" F.T. AFTER REMOVING ALL 4" F.T. WITHIN R/W

STRUCTURE NO. 214
REMOVE PIPE IN PLACE

DRS. 10 AC. C+0.4
STRUCTURE NO. 215
86' of 24" CLASS 2 PIPE REQ'D
46' RT., 50' LT., & REMOVE
STRUCTURE IN PLACE, 1-6" on 24" TEE 28' RT., 1-6" on 24" TEE 28' LT.

B.M. #18 Elev. 968.17 Hi Point Top Bolt W Side of S.W. Steel Legor Tower. Yellow Paint around Bolt: 115' Lt. sta 328+78
B.M. #19 Elev. 971.71 Pk. Spk. N. Side 24" Cot ½ up 119' Rt. sta 332+32

363' TEMPORARY R/W & FOR PEAT DISPOSAL

FOR PEAT QUANTITIES SEE SHEET NO. 19

BALANCE NO. 10

CUT	11788	CYS.
FILL +25%	17388	CYS
BORROW	1935	CYS.
SPECIAL BORROW	3655	CYS.

59 CYS. SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

ABOVE BORROW TO BE OBTAINED AS FOLLOWS:
1935 CYS. FROM BALANCE NO. 9

For Peat Quantities See Sheet No. 19

BRIDGE EXCEPTION

For Bal. No 11 See Following Sheet

See F. Proj. 391(5) To be Included in this Contract

P.I. 328+00
EL. 970.54
500' V.C.
C = +1.65

SEE PROCEEDING SHEET FOR PSD REQ'D RT.

223 SQ. YDS. SODDING REQ'D RT.
93 SQ. YDS. SODDING REQ'D LT.
25 SQ. YDS. SODDING REQ'D RT.
347 LIN. FT. TYPE "A" PSD REQ'D RT.
100 SQ. YDS SODDING REQ'D RT.
347 LIN FT. TYPE "A" PSD REQ'D LT.
100 SQ. YDS SODDING REQ'D LT.
174 SQ. YDS. SODDING REQ'D RT. HOUSE RT.
10' BOTTOM SWAMP DITCH RIGHT
10' BOTTOM SWAMP DITCH LEFT

324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 M.P.L. 8-26-55 340

39(4) B

STRUCTURE NO. 217
24' of 12" CMP REQ'D

STRUCTURE NO. 218
24' of 12" CMP REQ'D

PUBLIC ROAD CROSSOVER REQ'D
SEE SHEET NO. 41 FOR DETAIL
STA. 344+17

STRUCTURE NO. 219
6' of 12" PIPE REQ'D

STRUCTURE NO. 221
28' of 12" CMP REQ'D
& REMOVE PIPE IN PLACE

TYPE "B" PUBLIC ROAD APPROACH
REQ'D LT. SKEW 11°-30' RT. STA. 350+95.5

PUBLIC ROAD CROSSOVER
TYPE "2" REQ'D STA. 350+95.5

SEE SHEET NO. 82 FOR STRUCTURES
NO. 232, 233, 234, 235, 236, 237 & 238

CURVE DATA
P.I. STA 348+88.0
Δ = 16°40' L Brg. N 73° 59' E.
D = 1°-30'
E = 40.78'
T = 559.5'
L = 1111.1'

STRUCTURE NO. 225
9' of 12" CLASS 1 PIPE
1-45° ELBOW, CONNECT
TO STR. NO'S. 224, 226

STRUCTURE NO. 224
2- TYPE D-6 INLET'S & 4' of 12" CLASS
1 PIPE REQ'D, CONNECT TO STR. NO. 225

STRUCTURE NO. 226
600' of 12" CLASS 1 PIPE
REQ'D., 350.69' RT, 48.39' LT.
& 12" on 12" TEE on ℄
CONNECT TO STR. NO. 225 &
REMOVE STR. IN PLACE

DRS 2.80 AC C+0.35
STRUCTURE NO. 228
REMOVE STRUCTURE IN PLACE.

DRS 6 AC C+0.35
STRUCTURE NO. 229
52' of 18" CMP REQ'D

STRUCTURE NO. 230
STD. 6-7 INLET REQ'D
CONNECT TO STR. NO. 231

STRUCTURE NO. 231
48' of 12" CLASS 1
PIPE REQ'D. CONNECT
TO STRUCTURE NO. 230

DRS 3½ AC C+0.4
STRUCTURE NO. 227
24' of 15" CMP REQ'D & REMOVE
PIPE IN PLACE.

STRUCTURE NO. 222
24' of 12" CMP REQ'D
& REMOVE PIPE IN PLACE

STRUCTURE NO. 223
24' of 12" CLASS 5 PIPE
REQ'D. & REMOVE
STRUCTURE IN PLACE.

STRUCTURE NO. 220
REMOVE 130' of 4" R.T.
IN PLACE.

STRUCTURE NO. 215
SEE PRECEEDING
SHEET

STRUCTURE NO. 216
24' of 29"×18" DEF. CMP REQ'D
& REMOVE PIPE IN
PLACE.

1080 LF TYPE "B" INTEGRAL
CONC. CURB REQ'D
SEE DETAIL SHEET NO. 31

PUBLIC ROAD
APPROACH TYPE "B"
REQ'D. RT.
STA. 344+87

3-11 SQ. YDS. CONC. SIDEWALK REQ'D
& REMOVE WALK IN PLACE.

REMOVE TRACTION STRUCTURE IN PLACE

EDNA MARTIN
Abandoned Orchard
(Weeds)

JOSEPH S. & MARY ELLEN MURPHY
Lawn

SYLVIA N. ARBOGAST
Field
(Weeds & Grass)

RUTH ELLEN JONES
Field (Corn)

Field (Fallow)

Apple Orchard
Poor Cond.

RUFUS H. & CORA B. FALLIS

GEO. R. & MIRIAM HANDLEY

RAYMOND C. MORRETT

MUTUAL HOME & SAVINGS ASSOC.

JOHN R. & PEARL A. GAUGHRAN

MERLE E. & FREDA E. SCHULTZ

MUNCIE FEDERAL & LOAN ASSOC

JESSIE O. & HAZEL E. FISHER

NEAL RD. (Gravel)

S.R. 32 (Rock Asphalt)

LINE "A" BACK
LINE "B" AHEAD
LINE "C"
LINE "D"
LINE "E"
LINE "F"

S 89°-27 E.

Drive (Gravel)

Priv. Walk (Concrete)

Priv. Dr. (Gravel)

Priv. Dr. (C. Stn)

Priv. Dr. (C. Slag)

Priv. Dr. (C. Wall)

Priv. Dr. (C. Rest. Wall)

Priv. Dr. (C. Mas. Wall)

Priv. Dr. (Gravel)

WINDSOR AVENUE

Very Light Brow

Fe. Div.

Fe. Post

Fe. Car, Prop Cor.

Approx. Prop. Cor.

Approx. Loc. 3" Gas Line

Approx. Prop. R/W

Approx. R/W

Approx. Pole

Approx. Pipe

Approx. Ditch

Approx. Fill

Approx. Cut

Approx. Lawn

Approx. Field

Approx. Mas. Wall

Approx. Rest. Wall

Approx. Slag

Approx. Gravel

Approx. Asphalt

Approx. Concrete

Approx. Corn

Approx. Weeds

Approx. Grass

Approx. Brick

Approx. Stone

Approx. Wood

Approx. Metal

Approx. Plastic

Approx. Rubber

Approx. Glass

Approx. Paper

Approx. Cloth

Approx. Leather

Approx. Fur

Approx. Hair

Approx. Skin

Approx. Bone

Approx. Tooth

Approx. Nail

Approx. Claw

Approx. Horn

Approx. Hoof

Approx. Feather

Approx. Scale

Approx. Shell

Approx. Coral

Approx. Sponge

Approx. Worm

Approx. Insect

Approx. Spider

Approx. Crab

Approx. Lobster

Approx. Shrimp

Approx. Clam

Approx. Oyster

Approx. Snail

Approx. Slug

Approx. Jellyfish

Approx. Starfish

Approx. Sea Urchin

Approx. Sea Cucumber

Approx. Sea Anemone

Approx. Sea Lily

Approx. Sea Pen

Approx. Sea Whip

Approx. Sea Fan

Approx. Sea Rod

Approx. Sea Plume

Approx. Sea Feather

Approx. Sea Star

Approx. Sea Urchin

Approx. Sea Cucumber

Approx. Sea Anemone

Approx. Sea Lily

Approx. Sea Pen

Approx. Sea Whip

Approx. Sea Fan

Approx. Sea Rod

Approx. Sea Plume

Approx. Sea Feather

P.C. 343+28.5 (I.P.L.)

P.I. 348+88 (I.P.L.)

P.T. 354+39.6 (I.P.B.)

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY OF LIMITED ACCESS PROVISIONS APPLY BEGINNING AT STA. 350+17

BALANCE NO. 11

CUT	2,784 CYS.
FILL + 25%	5,506 CYS.
BORROW	1,622 CYS.
SPL. BORROW	1,100 CYS.

ABOVE BORROW TO BE OBTAINED AS FOLLOWS:
1,622 CYS. FROM BALANCE NO. 12

385 CYS SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

P.I. 340+50
EL. 991.16
1000' V.C.
C = -2.81

P.I. 349+00
EL. 986.06
400' V.C.
C = +1.01

-0.60%

+1.65%

-0.40%

+1.42%

+0.40%

+0.80%

+0.30%

-0.53%

-0.82%

-2.02%

+2.40%

+2.10%

+0.80%

P.V.C.

P.V.T.

SIDE ROAD HIGH

SIDE ROAD LEFT

SPILL OUT LT.

SPILL LT.

OLD DITCH RT.

F/L RT. 982.37
F/L LT. 978.40
24" PIPE CULVERT

F/L RT. 974.84
F/L LT. 974.00
12" PIPE CULVERT
@ 347+30

8450 YDS. SODDING REQ'D RT.
HOUSE RT.

235 SQ. YDS. SODDING REQ'D LT.
HOUSE LT.

171 SQ. YDS. SODDING REQ'D RT.

130 SQ. YDS. SODDING REQ'D RT.
HOUSE RT.

245 SQ. YDS. SODDING REQ'D RT.

463 SQ. YDS. SODDING REQ'D LT.

285 SQ. YDS. SODDING REQ'D LT.

8750 YDS. SODDING REQ'D LT.

SEE PRECEEDING SHEET FOR SODDING REQ'D LT & RT.

396 LIN. FT. R/W FENCE REQ'D LT.

3' BOTTOM RT.

3' BOTTOM LT.

339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355

M.R.L. 8-26-55

"F"
391(4) 1956 22 197

SEE SHEET NO. 32 FOR STRUCTURE NO.'S 232, 233, 234, 235, 236, 237 & 238

STRUCTURE NO. 239
STD TYPE E-7 INLET REQ'D.
CONNECT TO STR. NO. 240

STRUCTURE NO. 240
48' of 12" CLASS 1 PIPE REQ'D. CONNECT TO STR. NO. 239
6" on 12" TEE 24' LT.

P.O.T. 357+55.1 (I.P.B.) N.P.A.

DRS 3AC C+0.3
STRUCTURE NO. 241
100' of 15" CLASS 1 PIPE REQ'D
48' RT, 52' LT., 12" on 15" TEE ON ℄
6" on 15" TEE 24' RT., 6" on 15" CROSS 24' LT. CONNECT TO STR. NO. 242

STRUCTURE NO. 243
STD TYPE E-7 INLET REQ'D
CONNECT TO STR. NO. 242

STRUCTURE NO. 242
8' of 12" CLASS 1 PIPE REQ'D
CONNECT TO STRUCTURE NOS 241 & 243

DRS 6AC C+0.4
STRUCTURE NO. 246
102' of 18" CLASS 1 PIPE REQ'D
54' RT, 54' LT, 12" on 18" TEE on ℄
CONNECT TO STR. NO. 245

STRUCTURE NO. 244
STD E-7 INLET REQ'D
CONNECT TO STR. NO. 245

STRUCTURE NO. 245
8' of 12" CLASS 1 PIPE REQ'D. CONNECT TO STR. NO'S 244 & 246

RUTH ELLEN JONES
Field (Corn)

Field (Soy Bean)
Field (Grass)
Field (Stubble)
Field (Corn)
Field (Stubble)

POT. 355+55.39 LINE "C"
P.O.T. 0+00 LINE "S-4-C"

N 73°-53' E

LINE "S-4-C"

LINE "C"

SEE DETAILS ON SHEET NO. 32

PUBLIC ROAD APPROACH
TYPE "B" REQ'D RT.
STA 355+55.39 RT.
SKEW 25° LT.

PUBLIC ROAD CROSSOVER
TYPE "D" REQ'D STA 355+55.59

LESLIE JR. & MARGIE M. JONES
1 Sty. Fr. No. Good Cond. Conc. Blk. Found.

ERNEST L. & EVELYN S. COSTIN

3" Gas Line

Gas Value

Light Pole

S.R. 32 (Rock Asph.)

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄
LIMITED ACCESS PROVISIONS APPLY

P.C. 362+38.3 (I.P.B.)(N.R.A)

P.I. 357+00
EL. 997.42
600' V.C.
CORR. = -0.96

1286 LIN. FT. R/W FENCE REQ'D RT.
1500 LIN. FT. R/W FENCE REQ'D LT.

SIDE ROAD RIGHT

P.V.C. +1.42% ... +0.14% ... P.V.T.

F/L LT. 992.86
F/L RT. 992.26
18" PIPE CULVERT

F/L RT. 994.51
F/L LT. 994.10
15" PIPE CULVERT

157 SQ. YDS. SODDING REQ'D RT.
63.30 YDS. SODDING REQ'D RT.
215 SQ. YDS. SODDING REQ'D LT.
185 SQ. YDS. SODDING REQ'D LT.
138 SQ. YDS. SODDING REQ'D RT.
148 SQ. YDS. SODDING REQ'D LT.

3' BOTTOM RIGHT
3' BOTTOM LEFT
3' BOTTOM RT.
3' BOTTOM LT.
3' BOTTOM RT.
3' BOTTOM LT.

BALANCE NO. 12

CUT	9209	CYS.
FILL + 25%	7093	CYS.
OVERHAUL	2116	CYS.

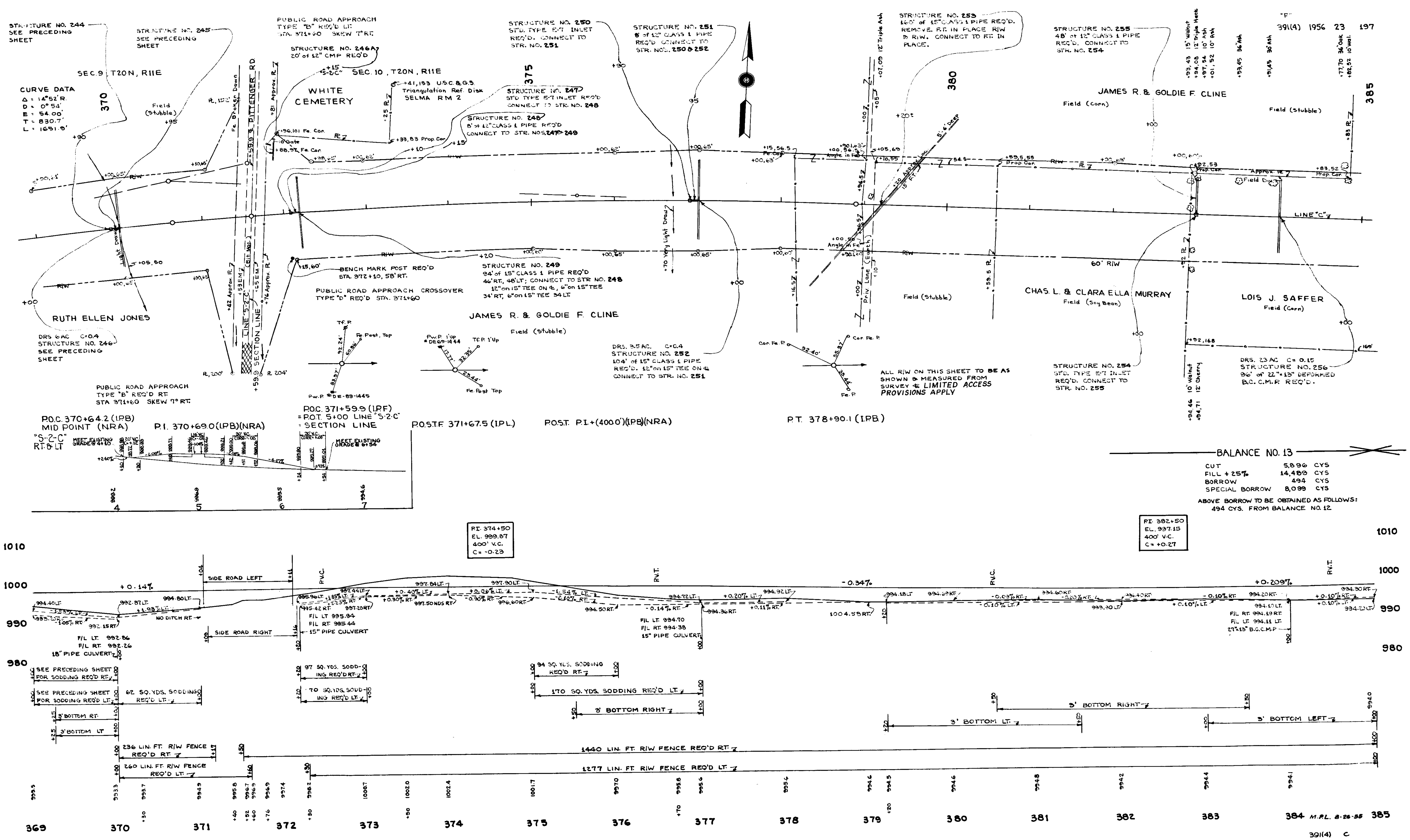
DISTRIBUTION:
1,622 C.Y. TO BALANCE NO. 11
494 C.Y. TO BALANCE NO. 13

100 CYS. SALVAGED ROAD MATERIAL REQ'D THIS BALANCE

354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370

M.R.L. 8-26-55

391(4) C


"F"
391(4) 1956 23 197
STRUCTURE NO. 244 SEE PRECEDING SHEET
STRUCTURE NO. 245 SEE PRECEDING SHEET
PUBLIC ROAD APPROACH TYPE "B" REQ'D LT. STA. 371+60 SKEW 7° RT.
STRUCTURE NO. 246A 20' of 12" CMP REQ'D
SEC. 9, T20N, R11E
SEC. 10, T20N, R11E
CURVE DATA
Δ = 14°52' R.
D = 0°54'
E = 54.00'
T = 830.7'
L = 1651.9'
WHITE CEMETERY
+41,153 U.S.C.&G.S. Triangulation Ref. Disk SELMA RM 2
STRUCTURE NO. 247 ST'D TYPE E-7 INLET REQ'D CONNECT TO STR. NO. 248
STRUCTURE NO. 248 8' of 12" CLASS 1 PIPE REQ'D CONNECT TO STR. NOS. 247 & 249
STRUCTURE NO. 250 ST'D. TYPE E-7 INLET REQ'D. CONNECT TO STR. NO. 251
STRUCTURE NO. 251 8' of 12" CLASS 1 PIPE REQ'D CONNECT TO STR. NOS. 250 & 252
STRUCTURE NO. 253 160' of 15" CLASS 1 PIPE REQ'D. REMOVE F.T. IN PLACE R/W TO R/W. CONNECT TO F.T. IN PLACE.
STRUCTURE NO. 255 48' of 12" CLASS 1 PIPE REQ'D. CONNECT TO STR. NO. 254
+93,43 15" Walnut
+94,08 12" Triple Hack
+97,54 10" Ash
+01,52 10" Ash
+53,45 36" Ash
+91,45 30" Ash
+77,70 36" Oak
+82,52 10" Wal.
370
375
380
385
Field (Stubble)
Fe. Broken Down
+59.9 & PITTENGER RD
+81 Approx. ℄
+96,101 Fe. Cor.
+10 Gate
+88,97 Fe. Cor.
+33,83 Prop. Cor.
+07,09 12" Triple Ash
5'-6' Deep
+20 Approx. Loc. 15" F.T.
JAMES R. & GOLDIE F. CLINE
Field (Corn)
Field (Stubble)
LINE "C" ℄
60' R/W
Light Draw
+70 Very Light Draw
Priv. Lane (Earth)
Angle in Fe.
Field Dit.
+92,53 Prop. Cor.
+83,52 Prop. Cor.
+59,5,58 Prop. Cor.
BENCH MARK POST REQ'D STA. 372+10, 58' RT.
PUBLIC ROAD APPROACH CROSSOVER TYPE "D" REQ'D STA. 371+60
STRUCTURE NO. 249 94' of 15" CLASS 1 PIPE REQ'D 46' RT., 48' LT; CONNECT TO STR NO. 248 12" on 15" TEE ON ℄, 6" on 15" TEE 34' RT, 6" on 15" TEE 34 LT.
RUTH ELLEN JONES
DRS 6AC C=0.4 STRUCTURE NO. 246 SEE PRECEDING SHEET
LINE "S-2-C"
SECTION LINE
+42 Approx. ℄
+53 EM
(Bit. Mac.)
+65 EM
+76 Approx. ℄
R, 200'
R. 204'
PUBLIC ROAD APPROACH TYPE "B" REQ'D RT. STA 371+60 SKEW 7° RT.
JAMES R. & GOLDIE F. CLINE
Field (Stubble)
T.F.P. Fe. Post, Top 92.24' 60.86' 83.97' Pw.P. # DE-89-1445
Pw.P. 1'Up # DE69-1444 T.F.P. 1'Up 17.77' 32.35' 23.44' Fe. Post Top
DRS. 3.5 AC. C=0.4 STRUCTURE NO. 252 104' of 15" CLASS 1 PIPE REQ'D. 12" on 15" TEE ON ℄ CONNECT TO STR. NO. 251
Cor. Fe. P. 92.40' 55.37' 35.44' Fe. P.
ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄ LIMITED ACCESS PROVISIONS APPLY
CHAS. L. & CLARA ELLA MURRAY
Field (Soy Bean)
LOIS J. SAFFER
Field (Corn)
STRUCTURE NO. 254 ST'D. TYPE E-7 INLET REQ'D. CONNECT TO STR. NO. 255
+94,46 10" Walnut
+94,71 12" Cherry
+92,168
165'
DRS. 23 AC C= 0.15 STRUCTURE NO. 256 96' of 22"×13" DEFORMED B.C.C.M.P. REQ'D.
P.O.C. 370+64.2 (I.P.B.) MID POINT (N.R.A.)
P.I. 370+69.0 (I.P.B.)(N.R.A.)
P.O.C. 371+59.9 (I.P.F.) = P.O.T. 5+00 LINE "S-2-C" = SECTION LINE
P.O.S.T.F. 371+67.5 (I.P.L.)
POST. P.I.+(400.0')(I.P.B.)(N.R.A.)
P.T. 378+90.1 (I.P.B.)
"S-2-C" RT. & LT.
MEET EXISTING GRADE @ 4+10
MEET EXISTING GRADE @ 6+54
BALANCE NO. 13
CUT 5,896 CYS
FILL + 25% 14,489 CYS
BORROW 494 CYS
SPECIAL BORROW 8,099 CYS
ABOVE BORROW TO BE OBTAINED AS FOLLOWS: 494 CYS. FROM BALANCE NO. 12
P.I. 374+50 EL. 999.87 400' V.C. C= -0.23
P.I. 382+50 EL. 997.15 400' V.C. C= +0.27
1010
1000
990
980
+0.14%
-0.34%
+0.209%
SIDE ROAD LEFT
SIDE ROAD RIGHT
NO DITCH RT.
F/L LT. 992.86 F/L RT. 992.26 18" PIPE CULVERT
F/L LT 995.94 F/L RT. 995.44 15" PIPE CULVERT
F/L LT. 994.70 F/L RT. 994.38 15" PIPE CULVERT
F/L RT. 994.19 RT. F/L LT. 994.11 LT. 27"×13" B.C.C.M.P.
SEE PRECEDING SHEET FOR SODDING REQ'D RT.
SEE PRECEDING SHEET FOR SODDING REQ'D LT.
62 SQ. YDS. SODDING REQ'D LT.
97 SQ. YDS. SODDING REQ'D RT.
70 SQ. YDS. SODDING REQ'D LT.
94 SQ. YDS. SODDING REQ'D RT.
170 SQ. YDS. SODDING REQ'D LT.
3' BOTTOM RT.
3' BOTTOM LT.
3' BOTTOM RIGHT
3' BOTTOM LT.
3' BOTTOM RIGHT
3' BOTTOM LEFT
236 LIN. FT. R/W FENCE REQ'D RT.
260 LIN. FT. R/W FENCE REQ'D LT.
1440 LIN. FT. R/W FENCE REQ'D RT.
1277 LIN. FT. R/W FENCE REQ'D LT.
369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385
M.P.L. 8-26-55
391(4) C

"F"
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STRUCTURE NO. 256
SEE PRECEDING SHEET

JAMES R & GOLDIE F. CLINE

+77.70 36" Oak
+82.52 10" Walnut
+83 Rt. Z
+92.19 10" Walnut

385

+00

STRUCTURE NO. 258
48" or 15" CLASS 1 PIPE
REQ'D. CONNECT TO
STR. NO. 257

+83.52 Prop. Cor.

+00 ℄ R/W Z

Field (Corn)

390

+00.60

60' R/W Z

N88° 45'E.

395

+00.60

60' R/W Z

Low Ground

+60 Approx. Rt. Z

PUBLIC ROAD APPROACH
TYPE "B" REQ'D LT.
STA. 398+10

STRUCTURE NO. 260
52' of 15" CLASS 1 PIPE
REQ'D. CONNECT TO
STR. NO. 259

STRUCTURE NO. 262
54' of 15" CLASS 5
PIPE REQ'D & REMOVE
PIPE IN PLACE

+10

+50

End R/W Fence

Approx. Rt. Z

+60.141 Approx. Prop. Cor.

+93.140 Approx. Prop. Cor.

JAMES C. & EDNA SMIDLEY

+46.5 68'

+25 Rt.

+96.85 Int 12" CMP

+25.98 Dia 12" CMP

+27.98 Prop. Cor.

STRUCTURE NO. 264
20' of 12" CMP REQ'D

℄ 100.160

R. 142'

+30

Draw

Begin R/W Fence

+80.70' Field (Soy Bean)

R/W

400

1/4 SEC. LINE

Approx. Rt. Z

+93

+02.5 E&W

+19.5 E&W

LINE "C"

End R/W Fence

+93.58 Approx. Prop. Cor.

+46.5 68'

+93.58 Approx. Prop. Cor.

EVERETT E. & BETTY DUDLEY

1 STY. Rk. Ins. good Cond. Conc. Blk. Bsmt. Fr.

ALBANY RD (Bit. Mac.)

+80.60' R/W

Begin R/W Fence

JAMES O. MURRAY

R. 142'

+60.159 Approx. Prop. Cor.

+93.158 Approx. Prop. Cor.

Approx. Rt. Z

+30

STRUCTURE NO. 263
20' of 12" CMP REQ'D

+10

NW Cor. 32.24

NE Cor. No. Conc. Blk. Pwt.

30.81

30.80

T.P.

P.C. 397+46.5 (IPB)

I.P.P.

Pwp DE 69-200

23.36

22.78

30.18

T.P.

+10

58.1 I Pin
58.1 I Pin
61.2 RR Spike

℄ Sec. Cor.

P.O.S.T. 398+10.3 (I.P.F.)

Field (Plowed)

+00

PUBLIC ROAD APPROACH
CROSSOVER TYPE "D"
REQ'D STA. 385+53

STRUCTURE NO. 257
STD TYPE E-7 INLET
REQ'D. CONNECT TO
STR. NO. 258

+46 Field Div Z

+00.60

60' R/W Z

+93 Field Div Z

FRANK E. WRIGHT

60' R/W Z

Field (Plowed)

STRUCTURE NO. 259
STD TYPE E-7 INLET
REQ'D CONNECT TO
STR. NO. 260

+50

10

STRUCTURE NO. 261
52' of 18" CMP REQ'D

PUBLIC ROAD APPROACH CROSSOVER
TYPE "D" REQ'D, STA. 398+10

PUBLIC ROAD APPROACH
TYPE "B" REQ'D RT. STA. 398+10

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY & *LIMITED ACCESS PROVISIONS APPLY*

LOIS J. SAFFER
Field (Corn)

+52.13 24" Walnut
+52.28 10" Walnut
+52.28 10" Walnut
+52.61 10" Walnut

+93 Rt. Z

+00

60' R/W Z

1246 LIN. FT. R/W FENCE REQ'D RT. Z

1383 LIN FT. R/W FENCE REQ'D LT. Z

165 LIN. FT. R/W FENCE REQ'D RT. Z

157 LIN. FT. R/W FENCE REQ'D LT. Z

P.I. 390+00
EL. 998.72
400' V.C.
C = -0.18

P.V.C.

P.V.I.

+0.20%

+0.10% RT.

+0.10% LT.

+0.63% LT. & RT.

-0.29% RT. & LT.

-0.20 % RT.

-0.20 % RT.

-0.16%

SIDE ROAD RT. & LT. Z

994.20 RT

994.10 LT

994.20 LT

994.47 LT

996.00 LT

996.29 NDS LT & RT

994.80 LT

994.48 LT

994.08 LT

994.25 RT

994.40 LT

993.99 LT

993.60 LT

994.20 RT
994.10 F/L RT
994.11 F/L LT
LT. 18" B.C.M.P.

1010
1000
990
980

3' BOTTOM RT. Z

3' BOTTOM LT. Z

3' BOTTOM RIGHT Z

3' BOTTOM LEFT Z

9941 9941 9948 9950 9957 9966 9973 9966 9968 9970 9967 9962 9957 9957 9951 9956 9960 9964 9965 9956 9954

+45 +85 +10 +30

384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400

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391(4) C

"F"
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STRUCTURE NO. 266
46' of 12" CMP & PIPE REQ'D. CONNECT TO STR. NO. 265 6" on 12" TEE REQ'D L RT.

STRUCTURE NO. 265
STD. TYPE EXT INLET REQ'D. CONNECT TO STR. NO. 266

FOR DETAILS OF TRANSITION FOUR-LANE PAV'T. TO TWO-LANE PAV'T. STA. 398+82.0 TO STA. 404+32.3 SEE SHEET NO. 33

P.I. 403+65.3 (IPL)
Δ = 22°00' Rt., Brg. S 69°15'E
D=1°48', E=59.55', T=618.8', L=1222.2'

JAMES D. MURRAY (Oats)

JAMES D. MURRAY

STRUCTURE NO. 267
125' of 8" W.C. OR CONC. SEWER PIPE REQ'D. R/W & R/W NOTE: LOCATION IS APPROX. EXISTING TILE NOT FOUND.

STRUCTURE NO. 268
68' of 42" CP DEPRESSED B.C.C.M.P REQ'D. NO HEADWALL ON LT.

DRS. 3.8 AC. C=0.2

P.T. 409+68.7 (I.P.B.)(N.R.A.)

P.T. 409+68.7
Brg. S 69° 15' E

P.C. 413+25.4 (I.P.B.)

EQUATION
P.O.T. 412+05.4 (I.P.B.)
=P.O.T. 0+00 "S-3-C"
Δ=110°00' RT.

P.C. 1+60.3 (I.P.B.)(NORA)
(Line "S-3-C")

PUBLIC ROAD APPROACH
TYPE "B" REQ'D. STA 412+05.4 RT.
SKEW 20°

STRUCTURE NO. 269
SEE SHEET NO. 34

FOR DETAILS OF SIDEROAD
"S-B-C" RT., STA. 412+05.4
SEE SHEET NO. 34

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄
LIMITED ACCESS PROVISIONS APPLY

THOMAS L. & HATTIE NEW (Weeds)
CHICKEN HO.
BARN
(Barn Lot)
1½ Sty Fr. Ho. Good Cond Conc. Blk. Fnd.
SR 32 (B.T. Mac.)

1181 LIN. FT. R/W FENCE REQ'D RT.
1600 LIN. FT. R/W FENCE REQ'D LT.
410 LIN. FT. R/W FENCE REQ'D RT.

BALANCE NO. 14
CUT 1085 C.Y.S.
FILL +25% 7825 C.Y.S.
SPECIAL BORROW 6840 C.Y.S.

P.I. 406+00
EL. 996.19
600' V.C.
C=+0.68

P.I. 415+00
EL. 1002.91
400' V.C.
C=-0.06

-0.16%
-0.20% RE
-0.80% LE
+0.75%
+0.90%
+0.06%
P.V.C.
P.V.T.
NO DITCH RT.
NO DITCH LT.
-0.10% RT 992.75 RT.
F/L RT 992.70
F/L LT 992.60
48"ø CP DEP. B.C.C.M.P
SIDE ROAD RIGHT
119 SQ. YDS. SODDING REQ'D LT.
3' BOTTOM RIGHT
3' BOTTOM LEFT

400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416
995.7	994.8	993.8	993.3	992.8	992.8 992.4	992.6	992.8	992.9	992.8	993.7	996.3	997.4	998.9	999.1	999.2 999.1	999.0	999.5	1002.3	1003.4	1003.9

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391(4) C

"F"
391(4) 1956 26 197

STA. 419+00
END OF "F" PROJ. 391(4)
= BEGINNING OF "F" PROJ. 391(6)

THOMAS L. & HATTIE NEW

STRUCTURE NO. 272
24'-12" C.M.P. REQ'D.

CARRIE H. LEWIS

SEC. 10, T. 20N, R 11E
LIBERTY TWP.
DELAWARE CO.

CONCO MANUFACTURING CORP. INC.

SEC. 11, T 20N, R 11E
LIBERTY TWP.
DELAWARE CO.

DELLA MAY KING
(Corn Stubbles)

(Weeds)

SR. 32 (BIT. MAC.)

DEG. S 89° 45' E. LINE "C"

INCIDENTAL CONSTRUCTION
STA. 418+00 TO STA. 423+80.9 ℄ EASTBOUND LANE
SEE DETAIL ON SHEET NO. 31

STRUCTURE NO. 270
135' - 8" V.C. OR CONC. SEWER
PIPE REQ'D R/W TO R/W LINE
REMOVE FIELD TILE IN PLACE.

DRS. 17 A C = 0.3
STRUCTURE NO. 271
68'-24" CLASS 1 PIPE REQ'D. 15° SKEW.
15° SKEW. NO HEADWALLS
REMOVE STRUCTURE IN PLACE

P.I. 419+01.5 (I.P.F.)
Δ = 20°31' Lt. Brg. S 89°46' E
D = 1°48', E = 51.72, T = 576.1, L = 1139.8

P.T. 424+65.2 (I.P.L.)

SEC. 15, T 20N, R 11E
LIBERTY TWP.
DELAWARE CO.

SEC. 14, T 20N, R 11E
LIBERTY TWP.
DELAWARE CO.

209A E. CLARK
(Soy Beans)

ROY V. & DAISY JEWELL GILLETTE

LOT #1 LOT #2 LOT #4 LOT #5

ALL R/W ON THIS SHEET TO BE AS SHOWN & MEASURED FROM SURVEY ℄
LIMITED ACCESS PROVISIONS APPLY TO STA. 425+14

Selma Azimuth Marker 1934 EL. 397.80 Std. Disc set in Conc. Fo st 31' Lt. Sta. 359+98
Line "B" Proj. 391 - 300' Rt. Sta. 359+80 Line "C" Proj. 391(4).
B.M. No.1 Elev. 985.26 □ cut in S.E. Cor. of S. Nelson 39.5' Rt. Sta. 438+45
B.M. No.2 Elev. 996.11 Bf. Spk. in N. Side 14" Lco. up 2' 135 Rt. Sta. 382+91
B.M. No.3 Elev. 997.13 □ Cut in S.E. Cor. Conc. Porch 128' Rt. Sta. 397+57
Perm. ⊙ Elev. 993.59 R.N. in S.W. Side F.P. up 1' 92' Lt. Sta. 404+45
B.M. No.4 Elev. 989.50 Bf. Spk. in S. Side 14" Hick up 1'-135' Lt. Sta. 411+25
B.M. No.5 Elev. 1003.78 Bf. Spk. in S. Side 24" Oak Up 1'-47' Lt. Sta. 419+55
B.M. No.30 "B" Elev. 1007.12 Bf. Spk. in N.E. Side 12" Maple up 5' 80' Rt. Sta. 426+22

E.G. MILLER 2-55

INCIDENTAL CONSTRUCTION STA 418+30 TO STA. 423+80.8
SEE DETAIL ON SHEET NO. 31

PROFILE GRADE FOR INCIDENTAL CONSTRUCTION

P.I. 422+00
EL. 1007.25
180' V.C.
C = -0.07

STA 418+00
END OF "F" PROJ. 391(4)
= BEGINNING OF "F" PROJ. 391(6)

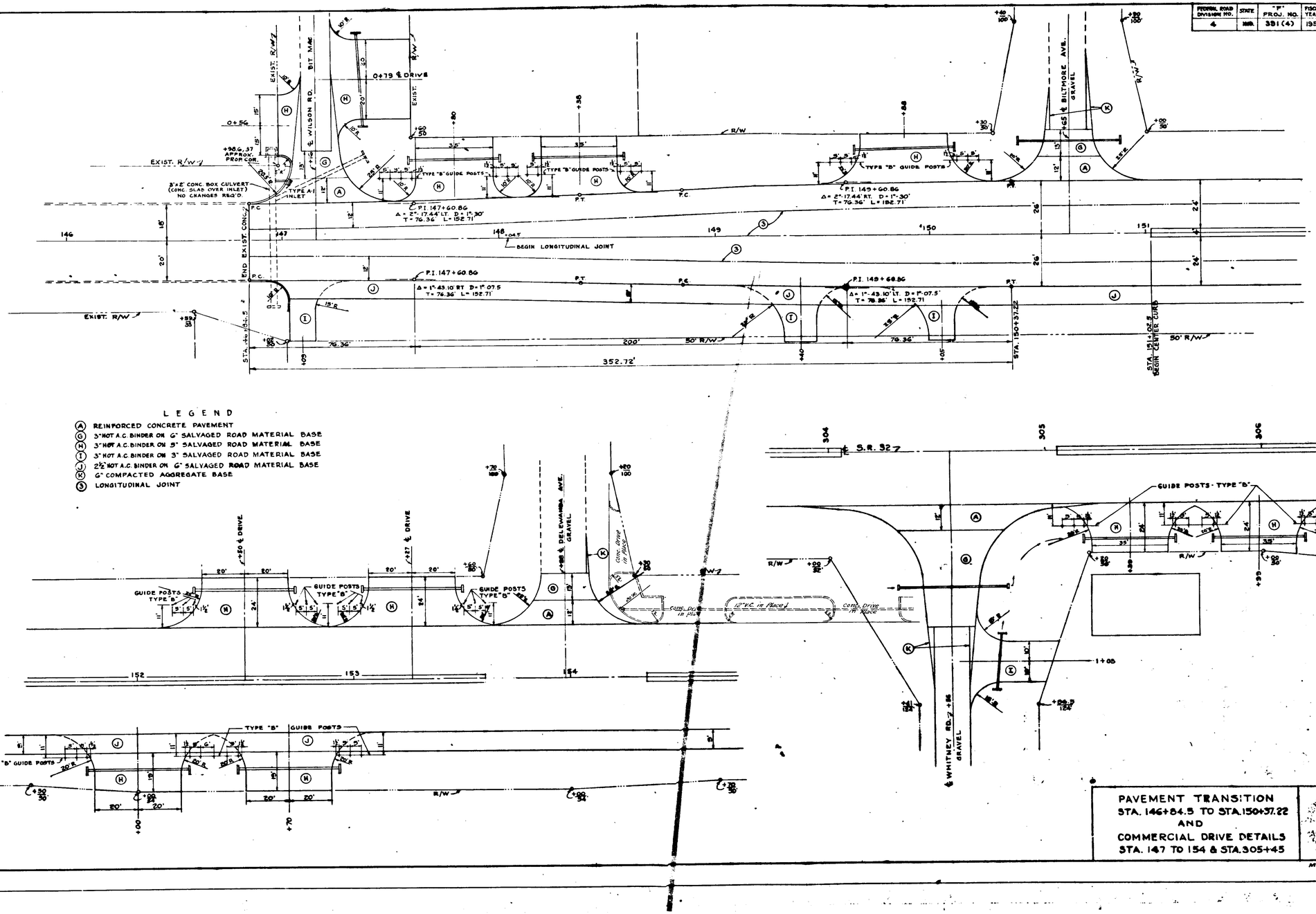
BALANCE NO. 15

CUT	1747	CYS.
FILL + 25%	6017	CYS.
SPECIAL BORROW =	4270	CYS.

914 Lin. Ft. R/W Fence Req'd. on Rt.
882 Lin. Ft. R/W Fence Req'd. on Lt.

391(4) C

FEDERAL ROAD DIVISION NO.	STATE	"F" PROJ. NO.	FISCAL YEAR NO.	SHEET NO.	TOTAL SHEETS
4	MAR.	381(4)	1956	27	



LEGEND

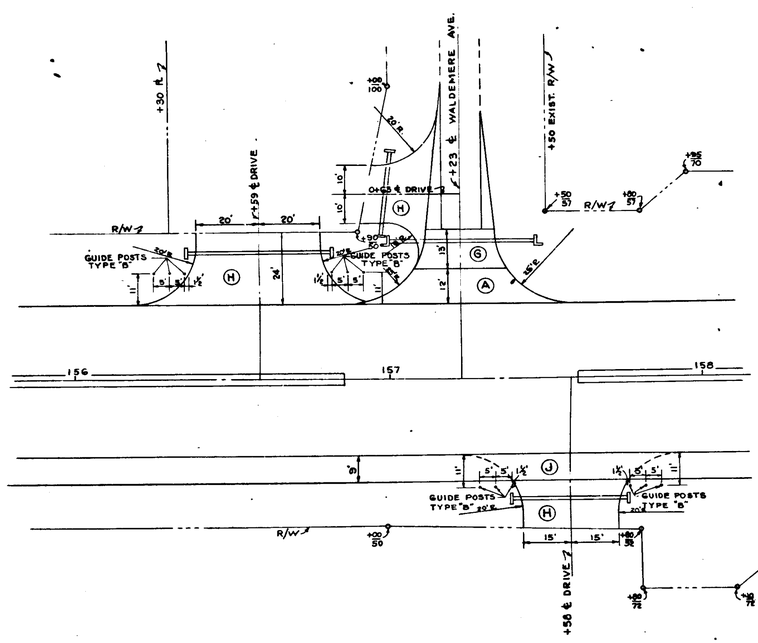
- (A) REINFORCED CONCRETE PAVEMENT
- (G) 3" HOT A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE
- (H) 3" HOT A.C. BINDER ON 5" SALVAGED ROAD MATERIAL BASE
- (I) 3" HOT A.C. BINDER ON 3" SALVAGED ROAD MATERIAL BASE
- (J)(L) 2½" HOT A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE
- (K) 6" COMPACTED AGGREGATE BASE
- (3) LONGITUDINAL JOINT

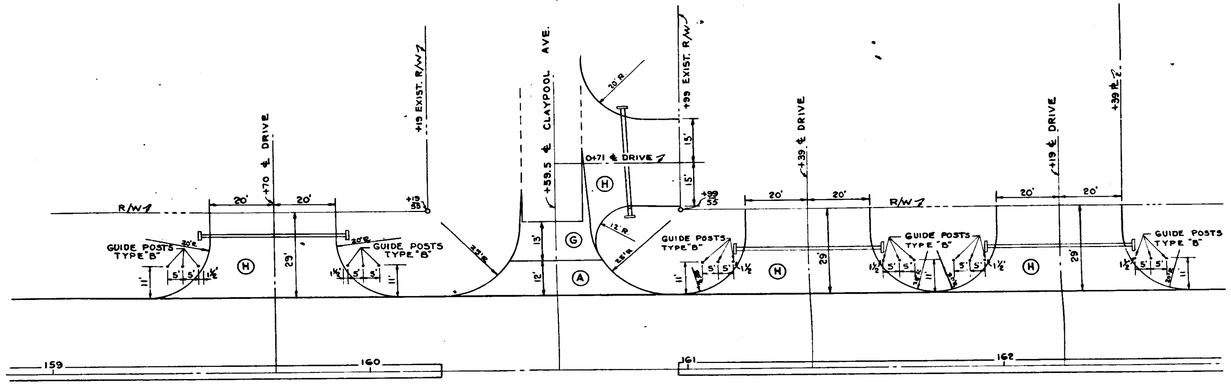
PAVEMENT TRANSITION
STA. 146+84.5 TO STA. 150+37.22
AND
COMMERCIAL DRIVE DETAILS
STA. 147 TO 154 & STA. 305+45

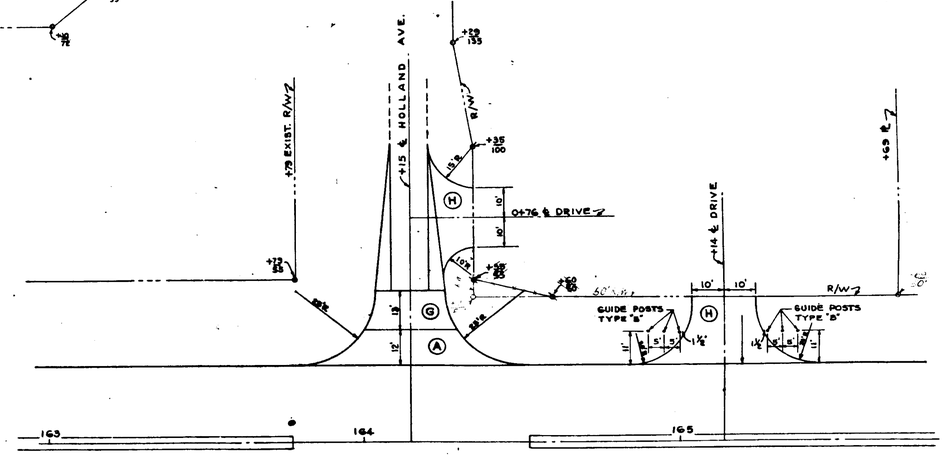
M.P.L. 8-26-58

FEDERAL ROAD DIVISION NO.	STATE	F.P. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	28	197

R/W rev 1c 3-57







- LEGEND

(A) REINFORCED CONCRETE PAVEMENT
(G) 3" A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE
(H) 3" A.C. BINDER ON 5" SALVAGED ROAD MATERIAL BASE
(I) 3" A.C. BINDER ON 3" SALVAGED ROAD MATERIAL BASE
(J) 2½" A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE

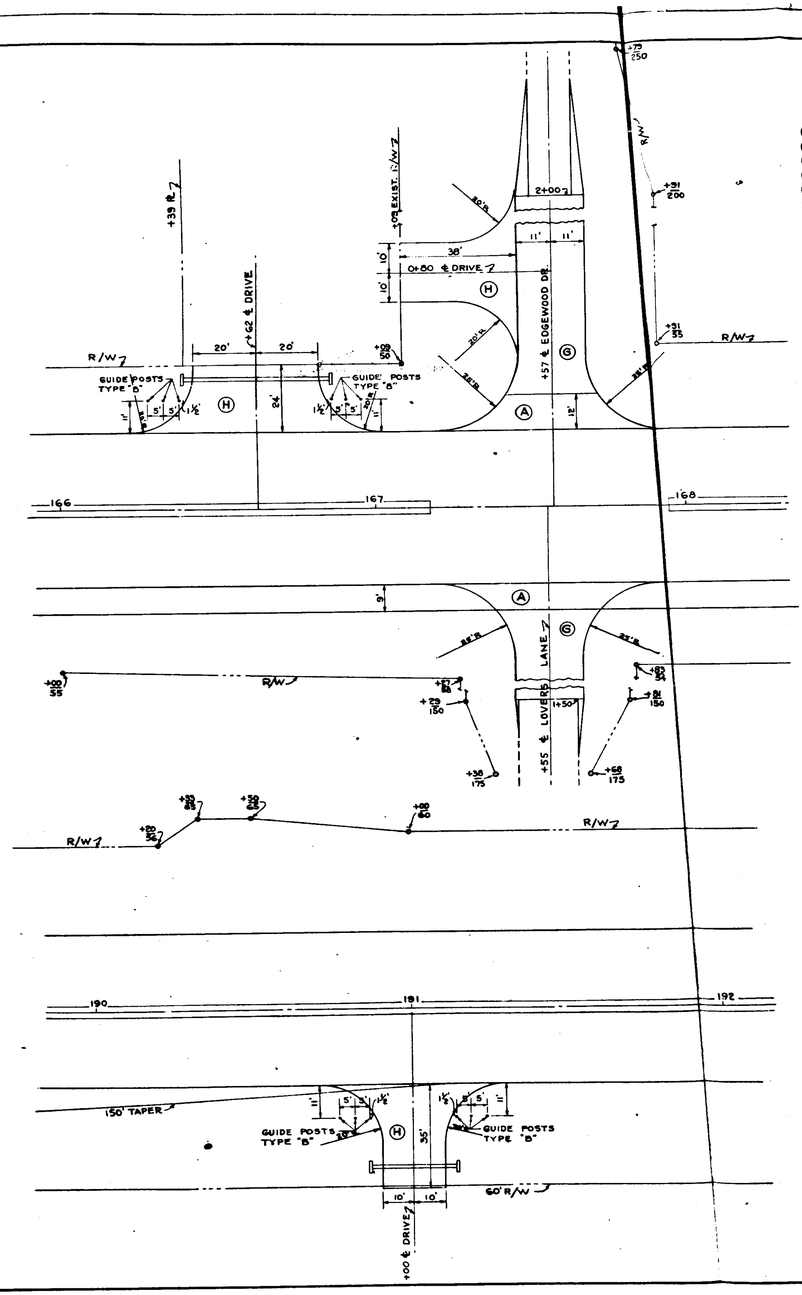
COMMERCIAL DRIVE DETAILS STA. 156+00 TO STA. 166+00

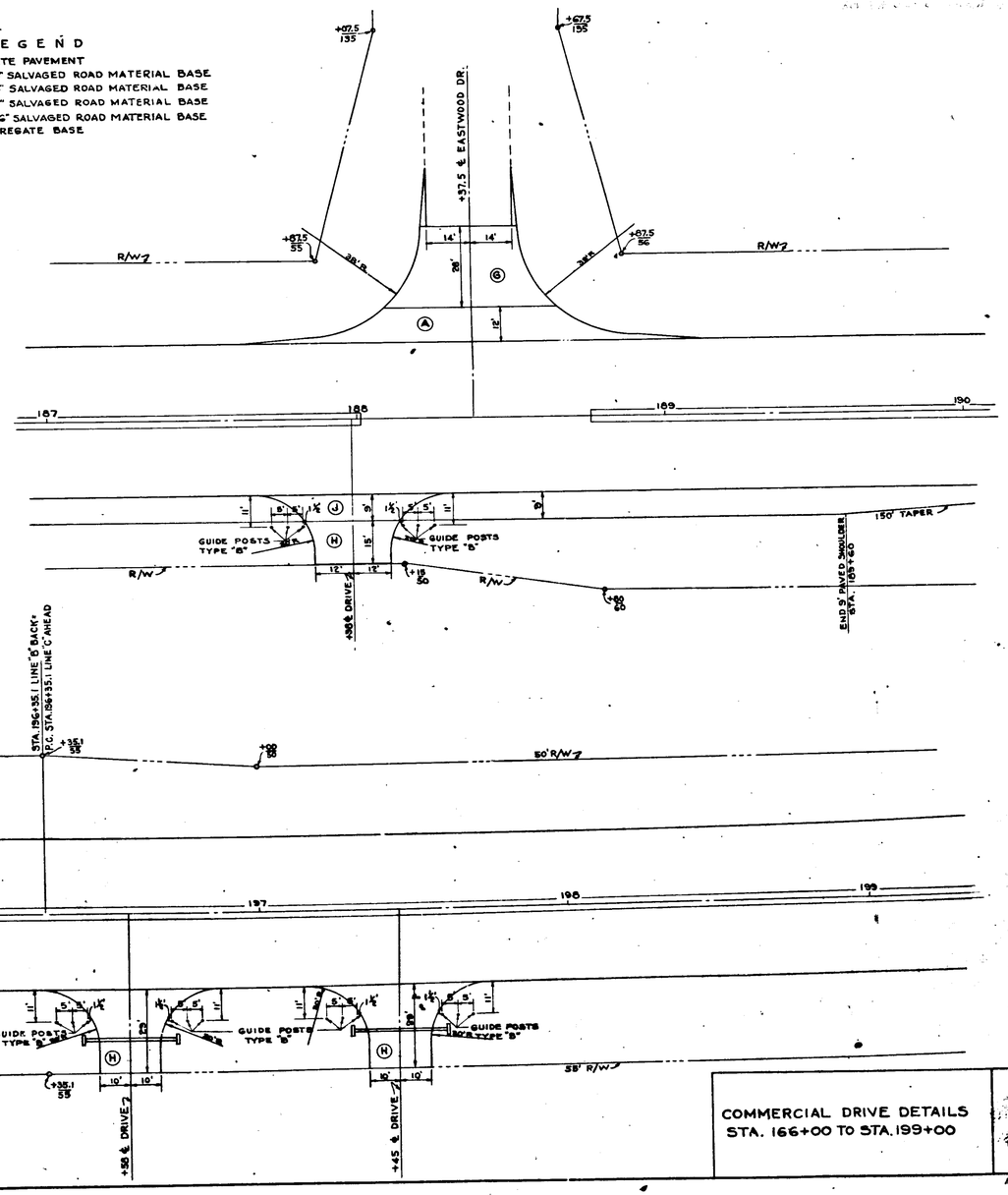
M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	F-PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391 (4)	1956	29	37

LEGEND

- (A) REINFORCED CONCRETE PAVEMENT
- (G) 3" A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE
- (H) 3" A.C. BINDER ON 5" SALVAGED ROAD MATERIAL BASE
- (J) 3" A.C. BINDER ON 3" SALVAGED ROAD MATERIAL BASE
- (K) 2½" A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE
- (L) 6" COMPACTED AGGREGATE BASE

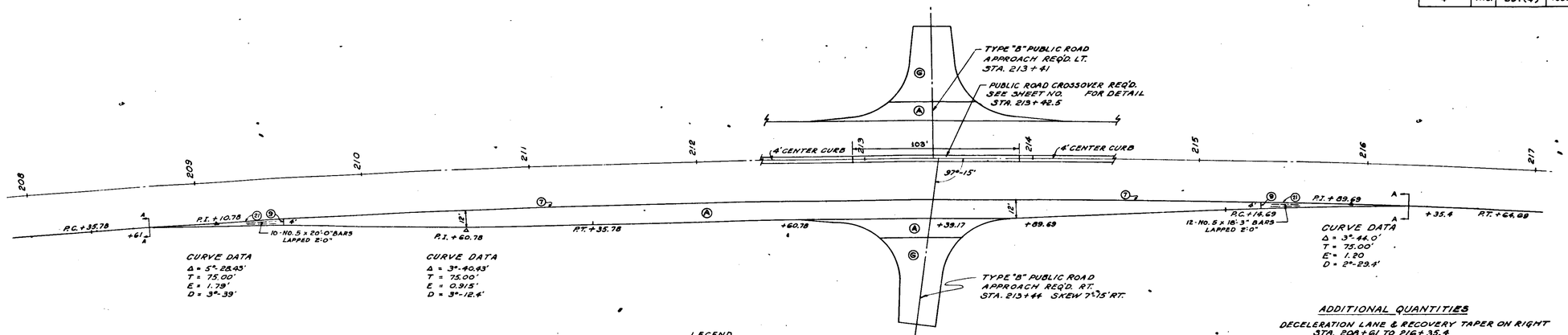




COMMERCIAL DRIVE DETAILS STA. 166+00 TO STA. 199+00

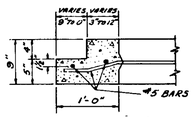
M.P.L. 6-28-56

FEDERAL ROAD DIVISION NO.	STATE	F. PROJ. NO.	FISCAL YEAR	SHEET NO.	NO. SHTS
4	IND.	391(4)	1956	30	7



LEGEND
- ⑦ KEYWAY JOINT
- ⑨ 1" CORK, CORK RUBBER OR FIBER EXPANSION JOINT
- Ⓐ 9" REINFORCED CONCRETE
- ⑥ 3" A.C. BINDER ON 6" SALVAGED ROAD MATERIAL BASE
- ⑪ KEYWAY CONSTRUCTION JOINT

DETAIL - DECELERATION LANE & RECOVERY TAPER-RIGHT - STA. 208+61 TO 216+35.4

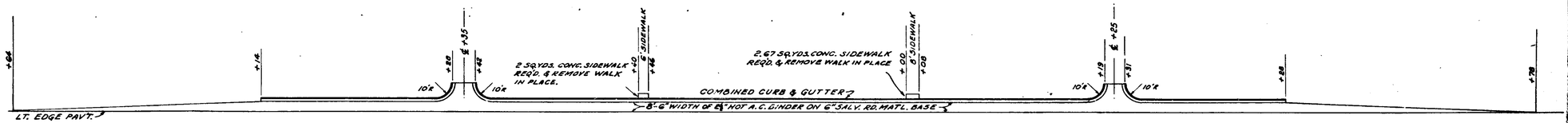


SECTION A-A

ADDITIONAL QUANTITIES

DECELERATION LANE & RECOVERY TAPER ON RIGHT STA. 208+61 TO 216+35.4

9" REINFORCED CONCRETE	=	693 SQ. YDS.
REINFORCING STEEL	=	437 LBS.
7" SUB BASE	=	135 CU. YDS.
1" CORK, CORK RUBBER OR FIBER EXP. JOINT	=	8 LIN. FT.



ESTIMATED QUANTITIES

6" SALVAGE ROAD MATERIAL	187.95	CU. YDS.
2" HOT A.C. BINDER	95.98	TONS
COMBINED CURB & GUTTER	611	LIN. FT.
CONCRETE WALK	4.67	SQ. YDS.
COMBINED CURB & GUTTER REMOVAL	611	LIN. FT.

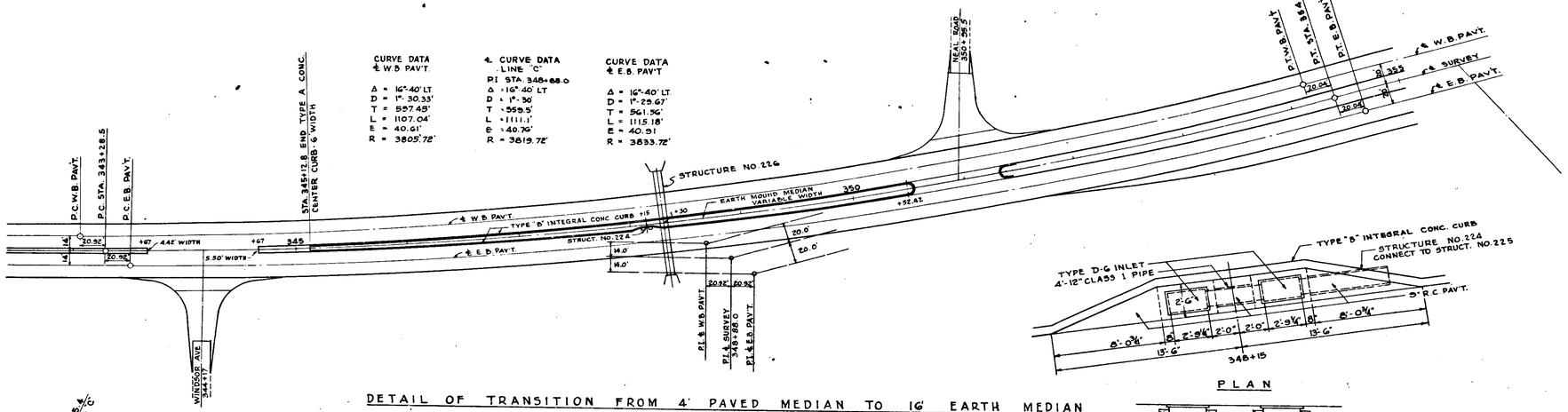
DETAIL PARKING STRIP ON LEFT
STA. 296+49 TO STA. 303+93

PAVEMENT WIDENING
STA. 208+61 TO STA. 216+34.4

PARKING STRIP
STA. 296+49 TO STA. 303+93

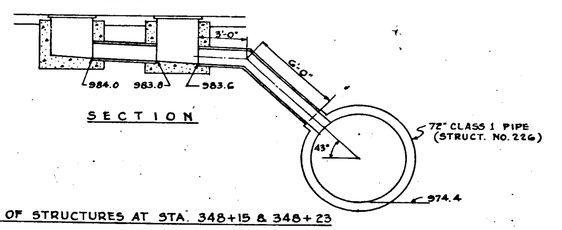
M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	F. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	31	197



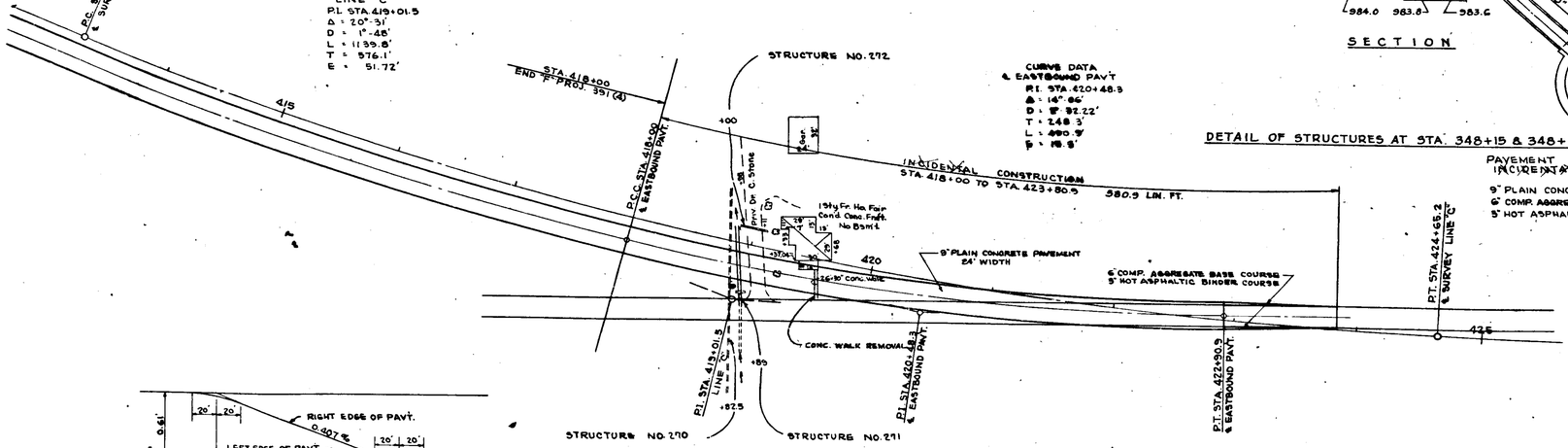
DETAIL OF TRANSITION FROM 4' PAVED MEDIAN TO 16' EARTH MEDIAN
STA. 343+07.58 TO STA. 354+59.64

PLAN



SECTION

DETAIL OF STRUCTURES AT STA. 348+15 & 348+23



PAVEMENT QUANTITIES FOR INCIDENTAL CONSTRUCTION

9" PLAIN CONCRETE PAVEMENT	SQ.YDS.	1809.07
6" COMP. AGGREGATE BASE COURSE	TONS	10.00
5" HOT ASPHALTIC BINDER COURSE	TONS	4.50

OUTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 421+00 TO STA. 422+90

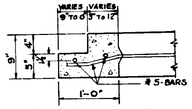
DETAIL OF INCIDENTAL CONSTRUCTION
STA. 418+00 TO STA. 423+80.9

DETAIL OF MEDIAN TRANSITION
STA. 343+07.58 TO STA. 354+59.64
DETAIL OF STRUCTURES AT { STA. 348+75 / STA. 348+83
DETAIL OF INCIDENTAL CONSTRUCTION
STA. 418+00 TO STA. 423+80.9

M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391-(4)	1956	32	197

FOR CURVE DATA EASTBOUND & WESTBOUND PAVEMENTS SEE SHEET NO. 31



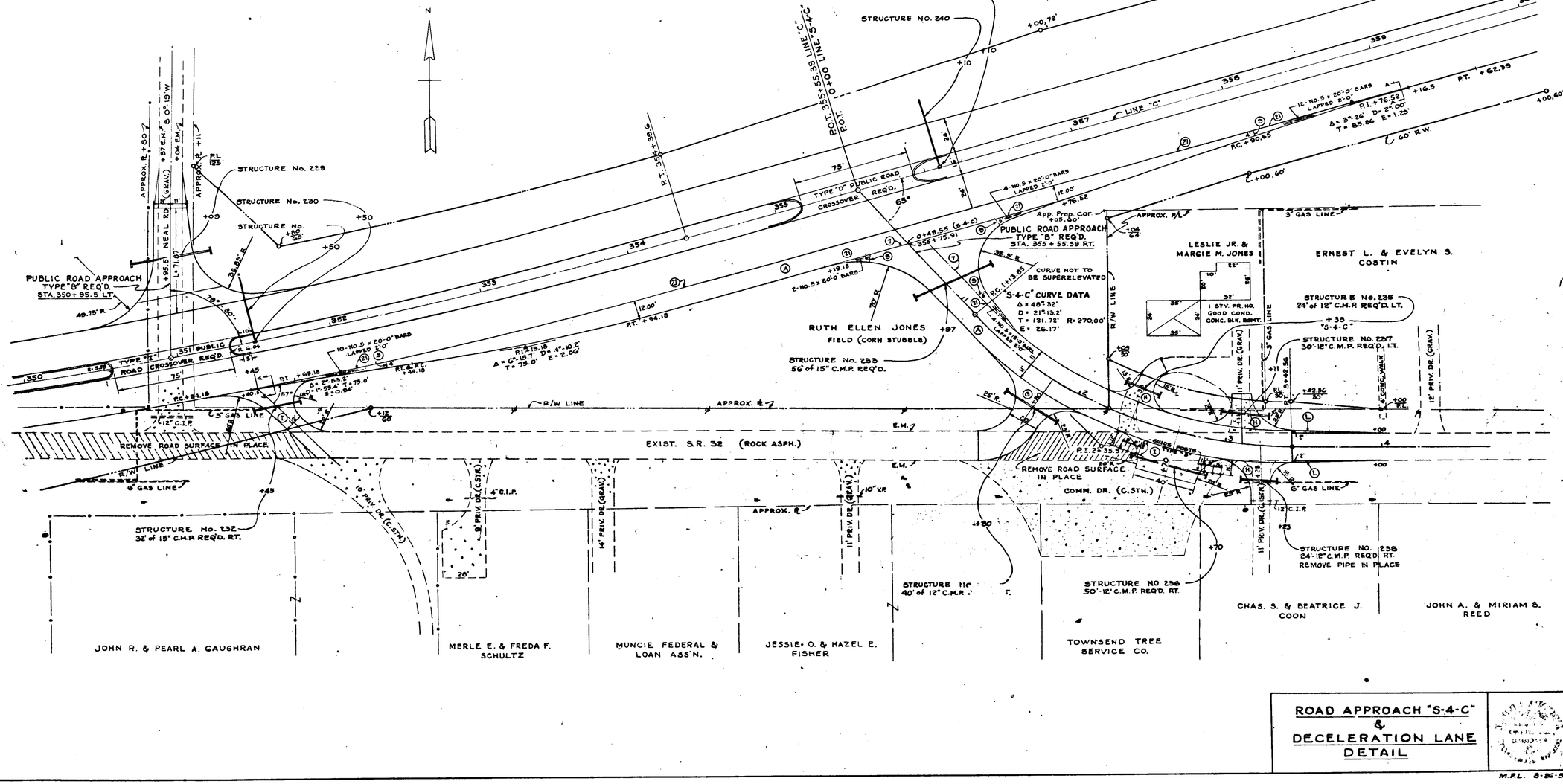
SECTION A-A

STANDARD EAR CONSTRUCTION, TYPE "A"

LEGEND
- (S) STD. LONGITUDINAL JOINT
- (C) 1" CORK, CORK RUBBER OR FIBER EXPANSION JOINT
- (A) REINFORCED CONCRETE PAVEMENT
- (H) 3" HOT A.C. BINDER ON 3" SALV. ROAD MAT'L BASE
- (I) 3" HOT A.C. BINDER ON 5" SALV. ROAD MAT'L BASE
- (L) 3" HOT A.C. BINDER ON 6" COMP. AGGREGATE BASE
- (G) 3" HOT A.C. BINDER ON 6" SALV. ROAD MAT'L BASE
- (T) KEYWAY JOINT
- (21) KEYWAY CONSTRUCTION JOINT

ADDITIONAL QUANTITIES
DECELERATION LANE & RECOVERY TAPER ON RIGHT
STA. 351+40.5 TO 359+16.5

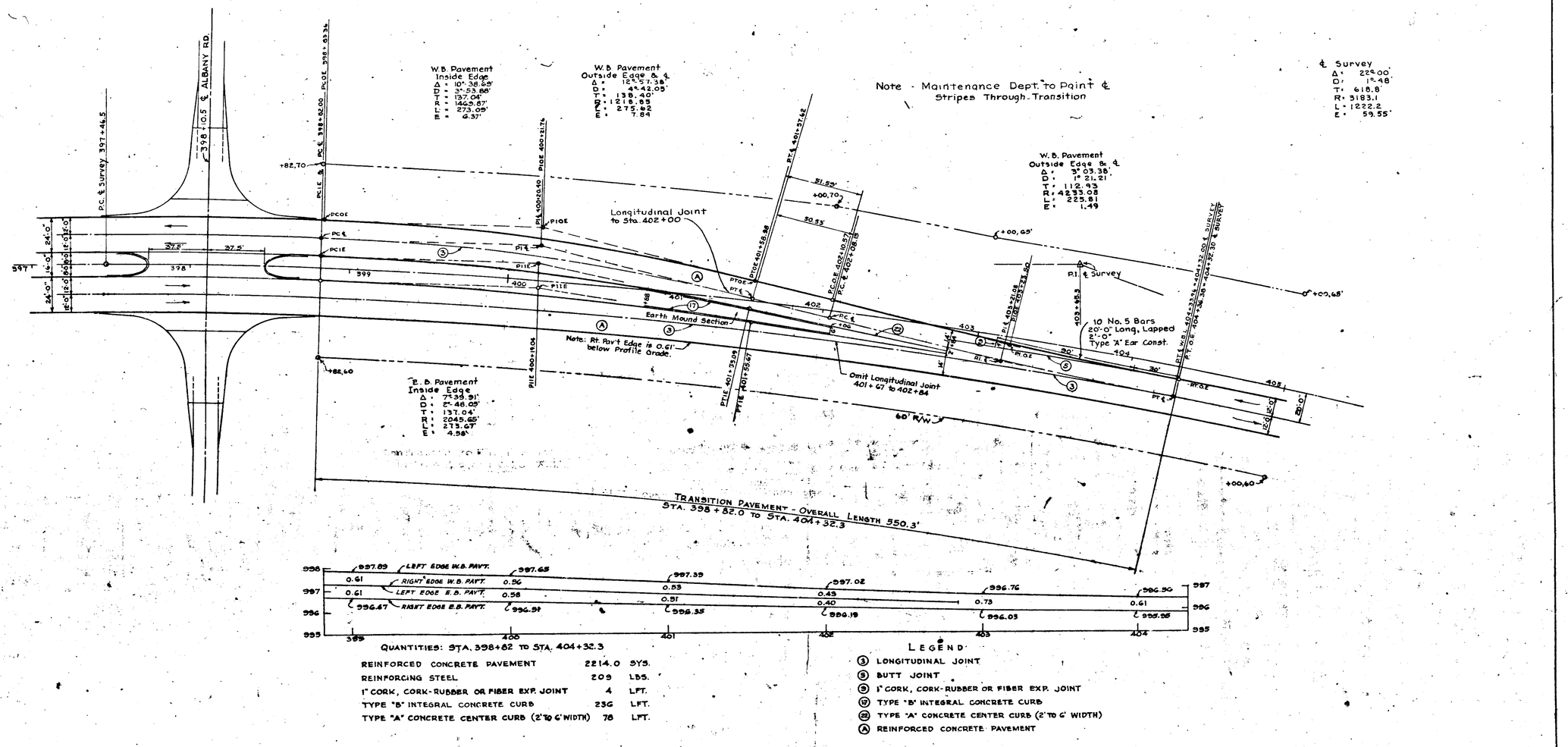
9" REINFORCED CONCRETE PAV'T.	=	711.5 SQ.YDS
REINFORCING STEEL	=	459 LBS.
5" & 7" SUB BASE	=	117 CU.YDS.
1" CORK, CORK RUBBER OR FIBER EXP. JOINT	=	8 LIN. FT.



ROAD APPROACH "S-4-C" & DECELERATION LANE DETAIL

M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	"B" PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391-(4)	1956	33	197



QUANTITIES: STA. 398+82 TO STA. 404+32.3

REINFORCED CONCRETE PAVEMENT	2214.0	SYS.
REINFORCING STEEL	209	LBS.
1" CORK, CORK-RUBBER OR FIBER EXP. JOINT	4	LFT.
TYPE "B" INTEGRAL CONCRETE CURB	236	LFT.
TYPE "A" CONCRETE CENTER CURB (2' TO 6' WIDTH)	78	LFT.

LEGEND

- ③ LONGITUDINAL JOINT
- ⑤ BUTT JOINT
- ⑨ 1" CORK, CORK-RUBBER OR FIBER EXP. JOINT
- ⑰ TYPE "B" INTEGRAL CONCRETE CURB
- ㉒ TYPE "A" CONCRETE CENTER CURB (2' TO 6' WIDTH)
- Ⓐ REINFORCED CONCRETE PAVEMENT

DETAIL OF TRANSITION FROM DIVIDED LANE TO TWO LANE PAVEMENT

STA. 398+82.00 TO STA. 404+32.3

SCALE - 1" = 30'

M.R.L. 8-26-55

STATE HIGHWAY
COMMISSION OF INDIANA

FED. ROAD DIST. NO.	STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	391(4)	1956	34	197

EQUATION
P.O.T. 0+00.0 (I.P.R.)
= P.O.T. 412+08.4 LINE "C"
Δ = 70°00' RT. TO LINE "C"

CURVE DATA
PI 413+01.5
Δ = 20° 54'12" Elem. S 89° 46'E
D = 1° 48'
R = 51.72'
T = 976.1'
L = 1139.8'

Brg. = S 69° 15' E

LINE "C"

P.C. 1+66.3 (I.P.R.)(N.B.R.R.)

PUBLIC ROAD APPROACH
TYPE "B" REQ'D
STA. 412+08.4 ON RT.

JAMES D. MURRAY
(Oats)

STRUCTURE NO. 269
42'-18"x11" DEP. CORR. M.
PIPE REQ'D.

LINE "S-3-C"
CURVE DATA
Δ = 41° 29' RT.
D = 12° 00'
R = 144.18'
T = 210.0'
L = 395.7'
CURVE NOT TO BE SUPERELEVATED

END OF "F" PROJECT 391 (4)
STA. 418+00

(Boy Beam)

(Woods)

THOMAS L. & HATTIE NEW

1½ Sty Fr. No.

Barn

Chicken Ho.

Store Lot

Garage

1 Stg Pr. Ho

SR 32 CA

Brg. = S 89° 14' W

PAV'T. TO REMAIN IN PLACE

S.R. 32 BIT. MAC.

Remove Road Surface in Place

Remove Road Surface in Place

STRUCTURE No. 60'-0" 12'0" CMP& RE 6"D.

PROPOSED LOCATION OF FIELD ENTRANCE

TO BE ADJUSTED

(Substation)

(Substation)

Rosa E. Clark

P.T. 5+56.0 (I.P.R.)

P.I. 3+70.3 (I.P.R.)
Δ = 41°29' RT. Brg. = S 89°46'W
D = 12°00', R = 144.18', T = 210.0', L = 395.7'

FOR DETAILS OF INCIDENTAL CONSTRUCTION, STA. 418+00 TO STA. 423+80.9, SEE SH. NO. 51

LEGEND
(CA) REINFORCED CONCRETE PAVEMENT
(L) 3" HOT A.C. BINDER ON 6" SALV. ROAD MAT'L. BASE
3" HOT A.C. BINDER ON 6" COMP. AGGREGATE BASE

1000
990

M.R.L. 8-26-58

PROJ. 391 (4) | SHEET IX | FILE S-3-C

PLATE I PLAN-PROFILE & R.R. STANDARD

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391 (4)	1956	35	197

SUBSURFACE DRAINAGE

EASTBOUND PAVEMENT

STATIONS	LENGTH	OUTLET LENGTH	CONNECTIONS	CONNECT TO STR.NO.	SOD
147+00 To 147+50 SPECIAL GRADE ⊛	50	19			2
147+50 To 152+50	500				
152+50 To 153+50 SPECIAL GRADE ⊛	100				
153+50 To 157+50	400				
157+50 To 157+90 SPECIAL GRADE ⊛	40	28			2
158+00 To 165+00	700	28			2
165+00 To 166+50 SPECIAL GRADE ⊛	150				
166+50 To 167+28 SPECIAL GRADE ⊛	78		1-6"on 15"TEE	52	
167+28 To 169+90	262				
169+90 To 170+00 SPECIAL GRADE ⊛	10		1-6"on 15"CROSS	56	
170+00 To 171+50 SPECIAL GRADE ⊛	150			56	
171+50 To 173+18	168				2
173+20 To 179+29	609	19			2
179+40 To 190+33	1093	16			2
190+45 To 196+15	570	19			2
195+95 To 203+60	757	32	CONNECT TO S.S.DRAIN UNDER RT. E.R.@ STA. 185+79	94, 98	
203+60 To 208+10	450		1-6"on 15"TEE	103	
207+90 To 215+50	760	27	3-6"on 12"TEES	107, 109, 113	2
215+50 To 217+20 SPECIAL GRADE ⊛	170				
217+20 To 222+75	551	35	1-6"on 12"TEE	115	2
225+50 To 228+75	325	34			2
230+75 To 231+75	100	32			
234+00 To 237+84	384	31			2
237+84 To 243+00	516		1-6"on 15"TEE	127	
245+75 To 253+00	725	28			2
261+25 To 275+00	1375	27			2
275+00 To 280+00	500	28			2
282+00 To 288+50	650	28			2
288+50 To 290+00 SPECIAL GRADE ⊛	150				
290+00 To 296+00	600				
296+00 To 296+30 SPECIAL GRADE ⊛	30		1-6"on 18"CROSS	189	
296+30 To 297+00 SPECIAL GRADE ⊛	70				
297+00 To 301+00	400				
301+00 To 303+12 SPECIAL GRADE ⊛	212				
303+12 To 321+25	1813	30			2
333+75 To 339+65	590	24			2
339+65 To 342+80	315		1-6"on 24"TEE	215	
342+60 To 344+25 SPECIAL GRADE ⊛	165				
344+25 To 348+00	375				
348+00 To 348+60 SPECIAL GRADE ⊛	60	47			2
348+60 To 355+55	695				
355+35 To 362+40	705	20			2
362+40 To 368+50	610		1-6"on 15"TEE	241	
370+80 To 373+00	220	25	1-6"on 15"TEE	249	2
373+00 To 375+50 SPECIAL GRADE ⊛	250	25			2
386+00 To 388+00	200	25			2
388+00 To 390+00 SPECIAL GRADE ⊛	200				
390+00 To 394+50 SPECIAL GRADE ⊛	450				2
394+50 To 404+00	950	25			2
408+00 To 412+53	453	25			
412+35 To 418+00	566	33	CONNECT TO S.S. DRAIN UNDER RT. E.R.@ STA. 412+17		
TOTALS	22,223	710			46

⊛ FOR SPECIAL GRADE S.S. DRAINS SEE SHEET NO'S. 36 & 37

TOTAL S.S. DRAIN PIPE E-B. PVT. 22,933 LIN. FT.
TOTAL S.S. DRAIN PIPE W.B. PVT. 22,682 LIN. FT.
TOTAL S.S. DRAIN PIPE 45,615 LIN. FT.

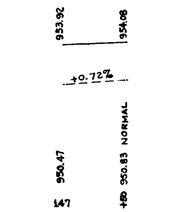
SUBSURFACE DRAINAGE

WESTBOUND PAVEMENT

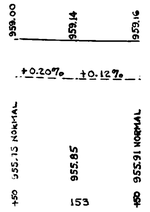
STATIONS	LENGTH	OUTLET LENGTH	CONNECTIONS	CONNECT TO STR.NO.	SOD
147+00 To 152+50	550	42	CONNECT TO OUTLET FOR RT. S.S. DRAIN		
152+50 To 153+50 SPECIAL GRADE ⊛	100				
153+50 To 157+50	400				
157+50 To 157+92 SPECIAL GRADE ⊛	42			35	
158+02 To 158+10 SPECIAL GRADE ⊛	8			35	
158+10 To 165+00	690				
165+00 To 166+50 SPECIAL GRADE ⊛	150				
166+50 To 167+28 SPECIAL GRADE ⊛	78		1-6"on 15"TEE	52	
167+28 To 169+90	262				
169+90 To 170+00 SPECIAL GRADE ⊛	10		1-6"on 15"CROSS	56	
170+00 To 171+50 SPECIAL GRADE ⊛	150			56	
171+50 To 173+18	168				2
173+20 To 179+29	609	18			2
179+40 To 190+33	1093	18			2
190+42 To 201+00	1058		2-6"on 12" TEES	86, 94, 98	
205+50 To 208+10	260	34			2
207+90 To 214+00	598	32	CONNECT TO S.S.DRAIN UNDER RT. E.R.@ STA. 207+74	106, 108, 112	
214+00 To 215+50 SPECIAL GRADE ⊛	150				
215+50 To 217+00 SPECIAL GRADE ⊛	150				
217+00 To 219+45	237	68		114	2
219+25 To 224+00	475				
224+00 To 224+48 SPECIAL GRADE ⊛	48		1-6"on 24"CROSS	118	
224+48 To 224+58 SPECIAL GRADE ⊛	10			118	
224+58 To 229+00	442				
231+00 To 233+70	270	31			2
233+70 To 238+16	446		1-6"on 24"TEE	126	
238+16 To 242+60	444		1-6"on 15"TEE	127	
242+60 To 243+50 SPECIAL GRADE ⊛	90				
245+50 To 255+19	969	26	1-6"on 18"TEE	143	2
255+19 To 257+00	181				
261+40 To 275+00	1360	26			2
275+00 To 280+89	589	26			2
280+91 To 282+00 SPECIAL GRADE ⊛	109	26			2
282+00 To 288+50	650				
288+50 To 290+00 SPECIAL GRADE ⊛	150				
290+00 To 296+00	600				
296+00 To 296+30 SPECIAL GRADE ⊛	30		1-6"on 18"CROSS	189	
296+30 To 297+00 SPECIAL GRADE ⊛	70			189	
297+00 To 301+00	400				
301+00 To 303+12 SPECIAL GRADE ⊛	212				
303+12 To 322+50	1938	29			2
333+50 To 339+65	615	25			2
339+65 To 342+00	235		1-6"on 24"TEE	215	
342+00 To 343+25 SPECIAL GRADE ⊛	125				
343+25 To 347+00	375	28			2
350+25 To 356+10	585	27			2
356+10 To 362+18	608		1-6"on 12" TEE		
361+98 To 362+40 SPECIAL GRADE ⊛	42		1-6"on 15"CROSS	241	
362+40 To 372+20	980			241	
372+20 To 373+00	80		1-6"on 15"TEE	249	
373+00 To 376+30 SPECIAL GRADE ⊛	330				
376+30 To 379+20	290	65			2
386+50 To 388+00	150	22			2
388+00 To 390+00 SPECIAL GRADE ⊛	200				
390+00 To 394+50 SPECIAL GRADE ⊛	450				
394+50 To 396+00	150				
396+00 To 396+75 SPECIAL GRADE ⊛	75	27			2
396+55 To 397+50	95		1-6" on 12" TEE	260	
397+50 To 400+80	330		1-6" on 12" TEE	266	
400+80 To 402+06	126	25	CONNECT TO S.S.DRAIN UNDER E.B. PAVT. @ 402+18		
TOTALS	22,087	535			32

SUBSURFACE DRAINAGE TABLES

M.P.L. 8-26-55



SPECIAL GRADE S.S. DRAIN RT.



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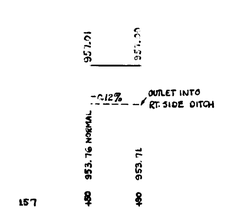

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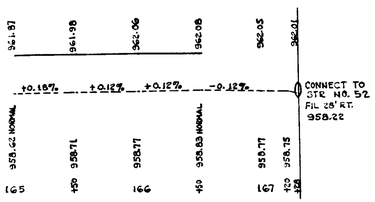

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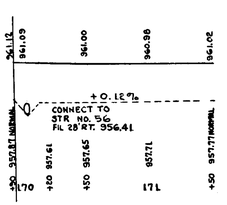

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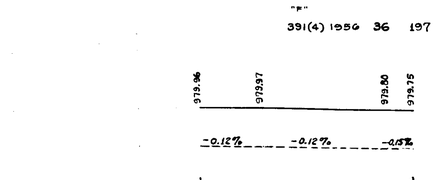

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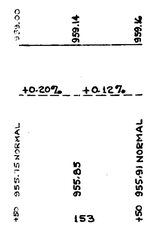

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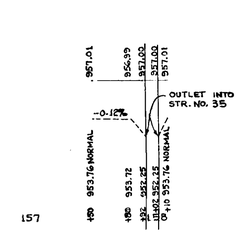

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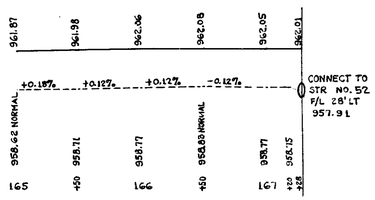

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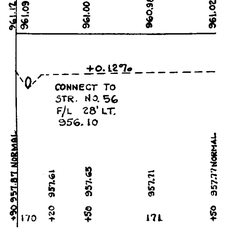

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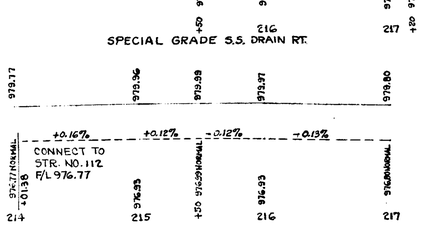

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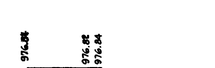

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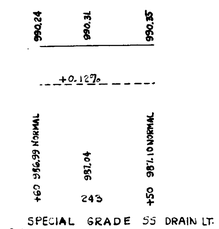

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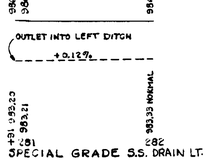

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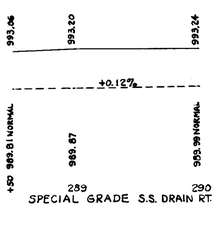
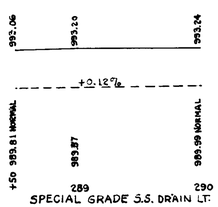


SPECIAL GRADE S.S. DRAIN RT.



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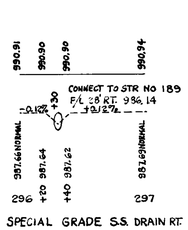

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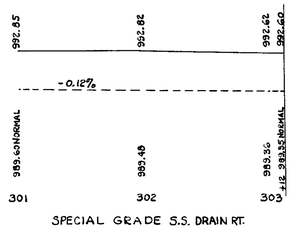

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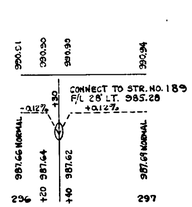

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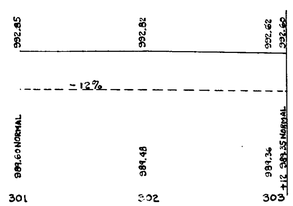

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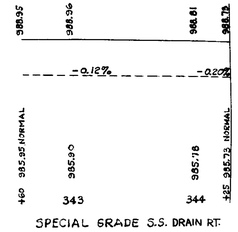

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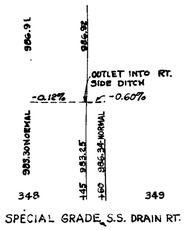

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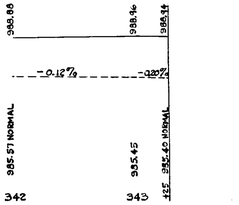

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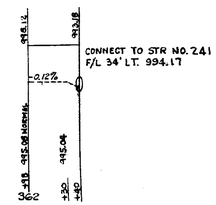
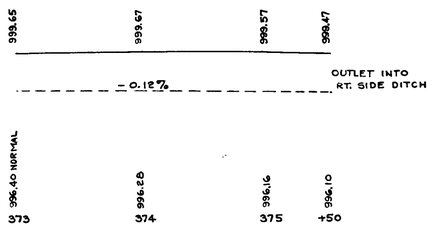


SPECIAL GRADE S.S. DRAIN LT.

SPECIAL GRADE SUBSURFACE DRAINS

M.P.L. 8-26-55



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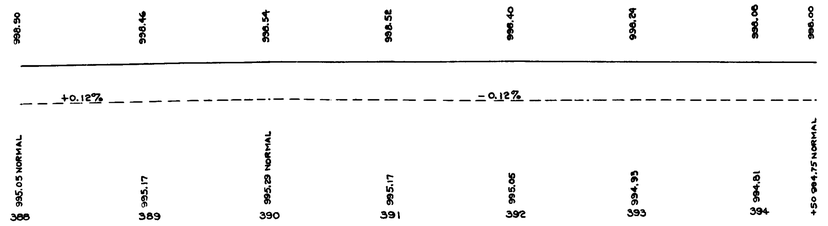

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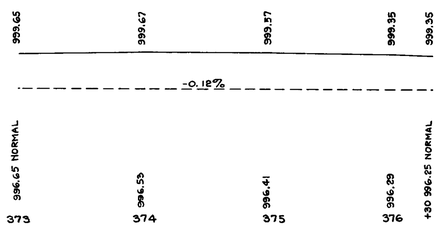

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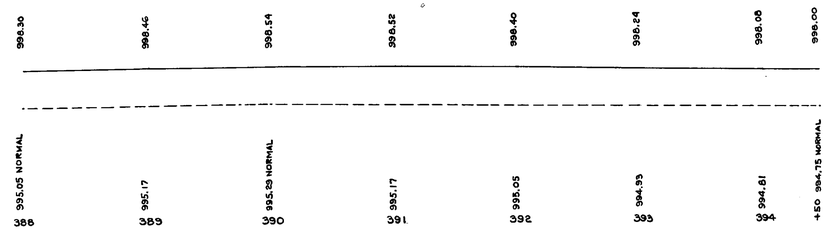

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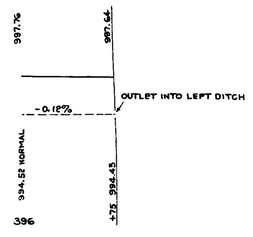
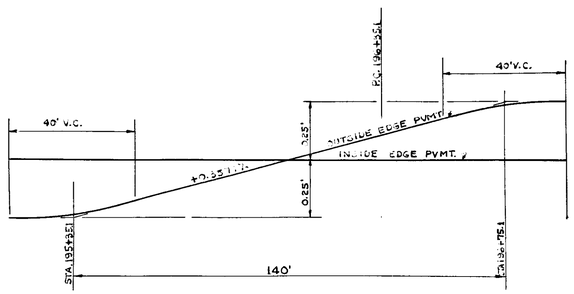


SPECIAL GRADE S.S. DRAIN LT.

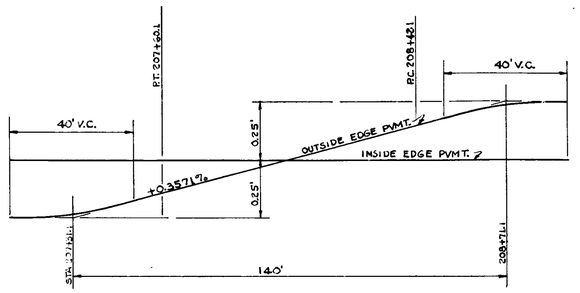
SPECIAL GRADE SUBSURFACE DRAINS

M.P.L. 8-26-55

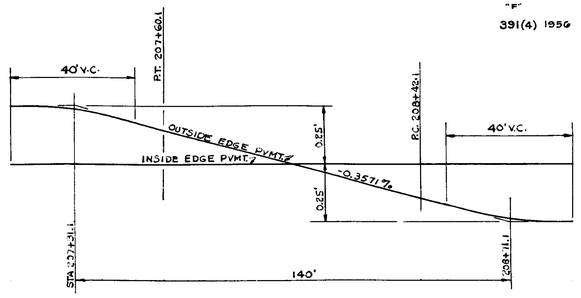
"F"
391(4) 1956 38 197



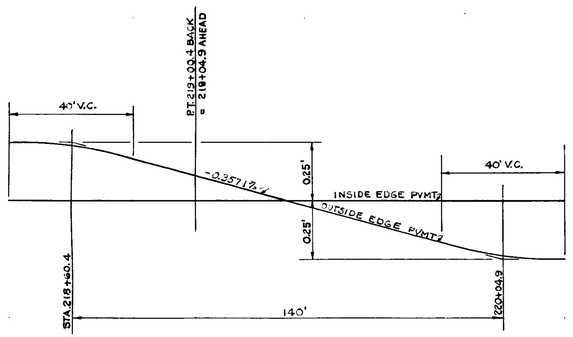
OUTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 195+15.1 To STA. 196+95.1



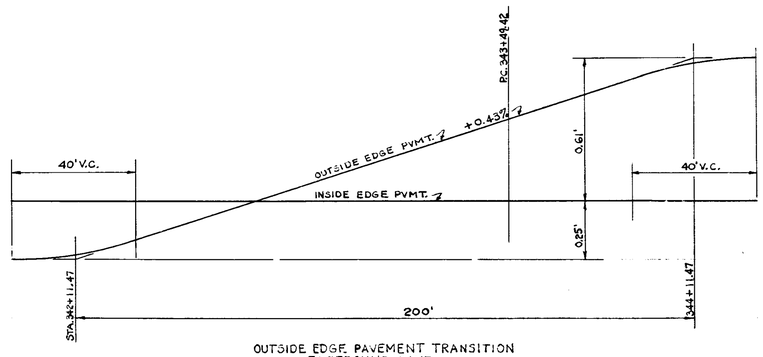
OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 207+11.1 To STA 208+91.1



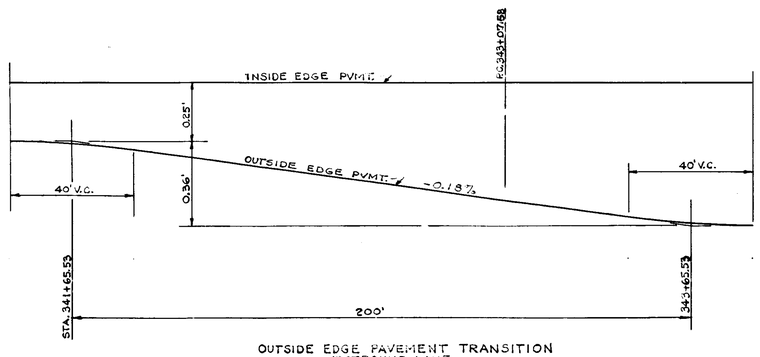
OUTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 207+11.1 To STA. 208+91.1



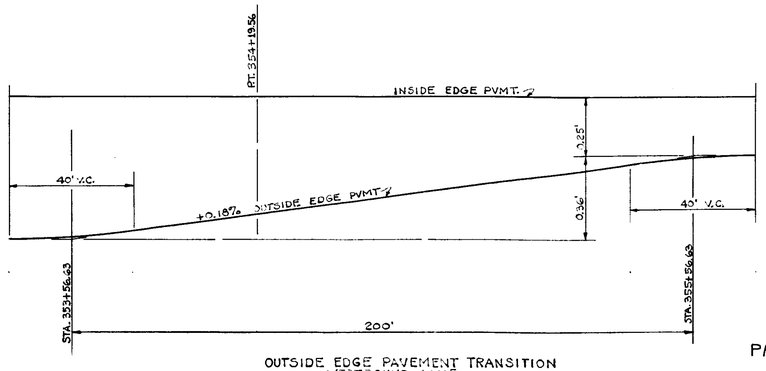
OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 218+40.4 To STA. 220+24.9



OUTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 341+91.47 To STA. 344+31.47



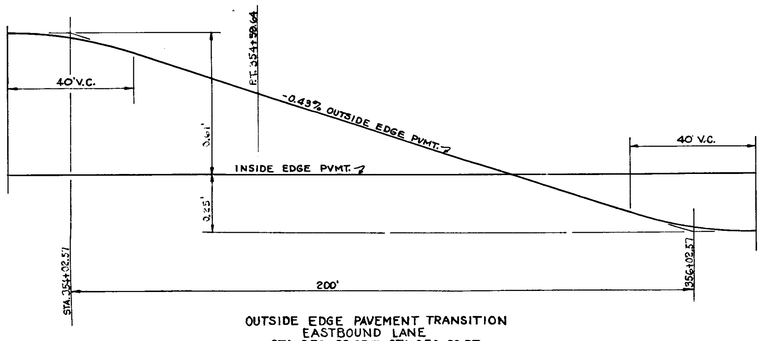
OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 341+45.53 To STA. 343+85.53



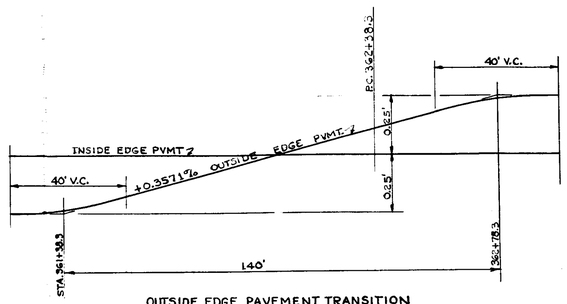
OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 353+36.63 To STA 355+76.63

PAVEMENT TRANSITIONS

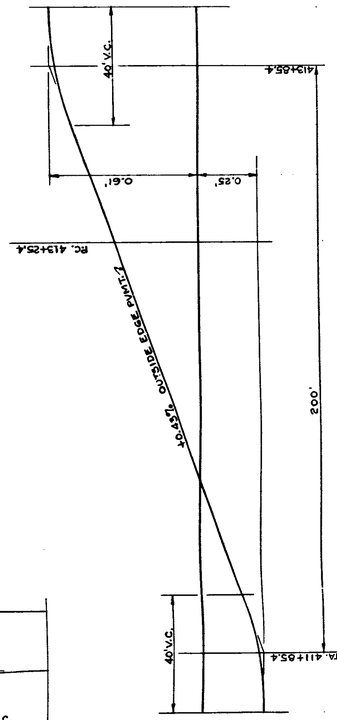
M.P.L. 8-26-55



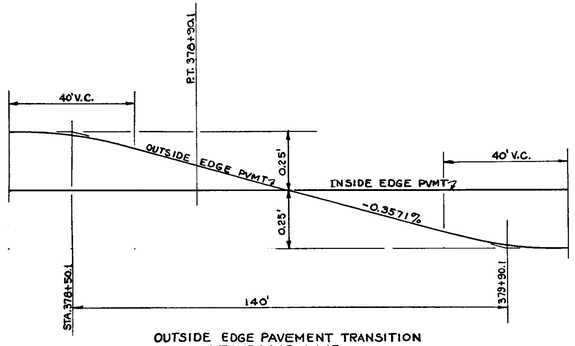
OUTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 353+82.57 To STA. 356+22.57



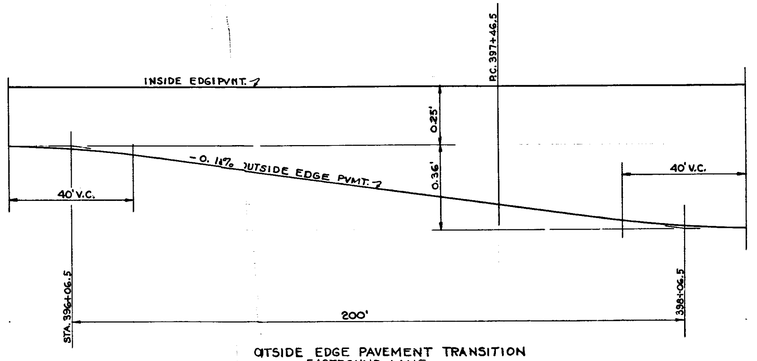
OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 361+18.3 To STA. 362+98.3



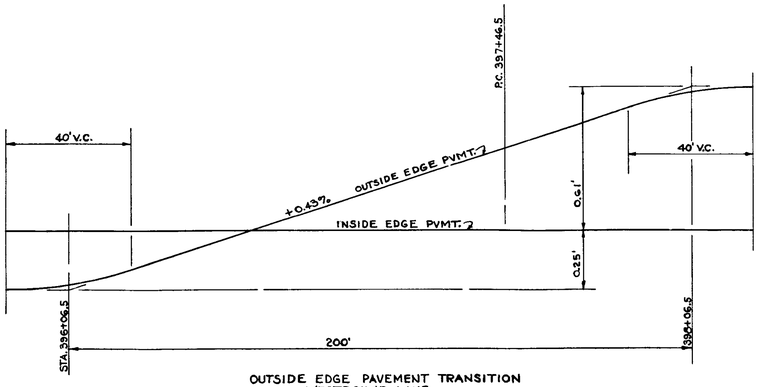
OUTSIDE EDGE PAVEMENT TRANSITION
STA. 411+65.4 To STA. 414+05.4



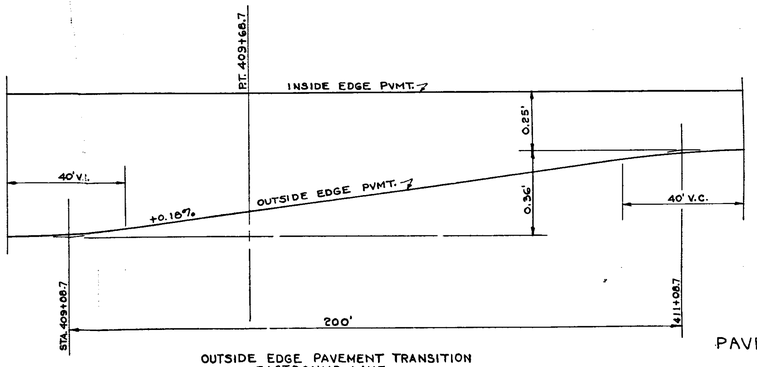
OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 378+30.1 To STA. 380+10.1



OTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 395+86.5 To STA. 398+26.5



OUTSIDE EDGE PAVEMENT TRANSITION
WESTBOUND LANE
STA. 395+86.5 To STA. 398+26.5



OUTSIDE EDGE PAVEMENT TRANSITION
EASTBOUND LANE
STA. 408+88.7 To STA. 411+28.7

PAVEMENT TRANSITIONS

M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391 (4)	1956	40	197

APPROACHES

LOCATION	DESCRIPTION	EXCAVATION CU YDS CUT	EXCAVATION CU YDS FILL	LENGTH "L"	WIDTH "W"	RADII "R"	AREA SALV ROAD MAT'L SQ YDS	SALV BASE COURSE ROAD MAT'L CU YDS 3"	5"	6"	HOT ASPH BINDER COURSE TONS	6" COMP AGGREGATE BASE COURSE SQ FT.	6" COMP AGGREGATE BASE COURSE TONS	9" REINF CONC SQ YDS.	REINF STEEL LBS.	GUIDE POSTS TYPE "B"	SKEW	SEE DETAIL ON SHEET NO.
166+93 TO 191+10 RT.	9' PAVED SHOULDER		(2½" A.C.)	4417	9'		4289.09			718.45	556.14							
OVER WILSON RD. OVER WILSON RD.	CLASS IV	0	0	35 AVG.	30'	5'-10"	29.68		4.12		4.49							
	CLASS IV	0	0	37'	40'	10'	169.21		23.50		25.36							
167+09 RT.	CLASS II	0	0	21'@	12'	10'-15'	28.87	2.36			4.24							
147+16 LT.	TYPE "D"	0	0	25'	22'	20'-25'	51.83			8.66	7.77			51.99	48			
147+80 LT.	CLASS IV	2	0	34'	35'	10'-10'	129.33		17.41		18.80					7		
148+38 LT.	CLASS IV	2	0	29'	35'	10'-10'	117.55			16.35	17.63					5		
149+40 RT.	CLASS II	3	0	19'@	15'	25'-15'	35.15	2.93			5.28							
149+85 LT.	CLASS IV	0	1	24'	40'	20'-20'	125.74		17.46		18.86					6		
150+05 RT.	CLASS II	2	0	17'@	12'	25'-15'	26.19	2.18			3.93							
150+65 LT.	TYPE "D"	0	0	25'	22'	20'-25'	32.19			5.86	5.28	62.50	2.31	56.74	49	6		
152+00 RT.	CLASS IV	4	0	19'@	40'	20'-20'	87.04		12.09		13.06					6		
152+50 LT.	CLASS IV	1	0	24'	40'	20'-20'	125.74		17.46		18.86					6		
152+70 RT.	CLASS IV	1	0	18'@	40'	20'-20'	87.04		12.09		13.06					5		
153+27 LT.	CLASS IV	1	0	24'	40'	20'-20'	125.74		17.46		18.86					6		
153+62 RT.	CLASS II	7	0	21'@	12'	25'-15'	31.25	2.60			4.69							
153+94 RT.	CLASS II	4	0	21'@	12'	25'-15'	28.27	2.36			4.24							
154+98 LT.	TYPE "D"	0	0	25'	22'	20'-25'	35.18			5.28	5.28	2.50	0.09	55.74	49			
155+01 LT.	CLASS II	0	0	25'	16'	25'-15'	53.60	4.47			8.04							
155+60 RT.	CLASS II	0	0	16'@	12'	25'-15'	24.86	2.07			3.73							
155+57 RT.	CLASS II	0	0	16'@	12'	25'-15'	24.86	2.07			3.73							
156+20 LT.	CLASS II	3	0	28'	12'	25'-15'	57.60	4.80			8.64							
156+59 LT.	CLASS IV	0	0	24'	40'	20'-20'	125.74		17.46		18.86					6		
157+74 RT.	CLASS II	0	0	16'@	12'	25'-15'	24.86	2.07			3.73							
157+85 RT.	CLASS IV	0	0	30'@	20'	20'-20'	56.36		7.83		8.45							
157+23 LT.	TYPE "D"	0	0	25'	22'	20'-25'	35.18			5.28	5.28	207.50	7.50	55.74	49			
157+59 RT.	CLASS IV	1	0	18'@	30'	20'-20'	62.59		8.69		9.39					6		
158+82 RT.	CLASS II	0	0	28'@	12'	25'-15'	30.19	2.52			4.53							
159+70 LT.	CLASS IV	0	0	29'	40'	20'-20'	147.96		20.55		22.19					6		
160+59.5 LT.	TYPE "D"	0	0	29'	22'	25-25	35.18			5.28	5.28	22.50	0.83	55.74	49			
160+87 RT.	CLASS IV	0	0	31'@	30'	20'-15'	116.30		16.15		17.45							
160+87 RT.	CLASS IV	2	0	20'@	15'	25'-15'	30.19	2.52			4.53							
161+38 LT.	CLASS IV	0	0	29'	40'	20'-20'	147.96		20.55		22.19					6		
162+18 LT.	CLASS IV	0	7	29'	40'	20-20	147.96		20.55		22.19					6		
163+02 RT.	CLASS IV	16	0	32'@	15'	25'-15'	61.86	5.15			9.28							
163+85 RT.	CLASS II	2	0	21'@	12'	25'-15'	31.53	2.63			4.73							
164+15 LT.	TYPE "B"	0	0	25'	22'	25'-25'	35.18			5.28	5.28	272.50	9.24	55.74	49			
164+15 RT.	CLASS IV	0	0	12'@	20'	15'-10'	34.48		4.78		5.16							
164+35 RT.	CLASS II	3	0	21'@	12'	25'-15'	31.53	2.63			4.73							
165+05 RT.	CLASS II	1	0	18'@	12'	25'-15'	27.53	2.29			4.13							
165+14 LT.	CLASS IV	0	2	24'	20'	20'-20'	72.41		10.02		10.86					6		
165+77 LT.	CLASS II	0	2	28'	12'	25'-15'	33.60	4.47			8.04							
166+62 LT.	CLASS IV	0	8	24'	40'	20'-20'	125.74		17.46		18.86					6		
166+92 RT.	CLASS II	1	0	22'@	12'	25'-15'	32.86	2.74			4.93							
167+55 RT.	CLASS IV	0	25	37'	20'	20'-20'	101.30		14.07		15.20							
167+55 RT.	TYPE "B"	881	0	124'	28'	25-25	277.18			44.98	44.98	22.50	0.83	55.74	49			
167+57 LT.	TYPE "D"	81	870	174	28'	25'-25'	388.49			58.27	58.91	160.00	5.93	55.74	49			
168+60 RT.	CLASS II	0	5	29'	12'	20'-20'	49.74	4.14			7.46							
168+60 RT.	CLASS II	0	0	19'@	12'	25'-15'	28.86	2.40			4.33							
170+40 LT.	TYPE "D"	0	206	29'	22'	25'-25'	191.62			31.94	28.74			55.74	49			
170+92 RT.	CLASS II	0	0	18'@	12'	25'-15'	28.86	2.40			4.33							
171+79 LT.	CLASS II	0	2	29'	12'	25'-15'	58.93	4.91			8.84							
172+93 RT.	CLASS II	0	0	19'@	12'	25'-15'	28.86	2.40			4.33							
173+75 RT.	CLASS II	0	0	15'@	20'	25'-15'	46.75	3.81			6.86							
174+13 LT.	CLASS II	0	3	50'	18'	25'-15'	120.27	10.02			18.04							
174+40 RT.	CLASS II																	
177+67 LT.	CLASS II	0	1	28'	12'	25'-15'	53.60	4.47			8.04							
178+52 RT.	CLASS II	0	0	19'@	12'	25'-15'	28.86	2.40			4.33							
179+90 RT.	CLASS II	0	0	20'@	12'	25'-15'	30.19	2.52			4.53							
180+17 RT.	CLASS II	0	0	20'@	18'	25'-15'	36.86	3.07			5.53							
181+78 RT.	CLASS II	0	0	18'@	12'	25'-15'	27.53	2.29			4.13							
182+62 RT.	CLASS II	0	0	16'@	12'	25'-15'	24.86	2.07			3.73							
182+90 LT.	TYPE "D"	0	0	25'	28'	25'-25'	35.18			5.28	5.28	122.50	4.53	55.74	49			
184+50 RT.	CLASS II	0	0	16'@	12'	25'-15'	24.86	2.07			3.73							
184+55 LT.	CLASS II	0	3	29'	12'	25'-15'	58.93	4.91			8.84							
184+60 RT.	CLASS II	0	0	16'@	12'	25'-15'	24.86	2.07			3.73							
186+56 LT.	CLASS II	11	0	37'	12'	25-15'	69.60	5.80			10.44							
186+95.5 RT.	CLASS II	0	0	16'@	24'	25'-15'	44.13	3.65			6.39							
187+98 RT.	CLASS IV	0	3	15'@	24'	20'-20'	42.58		5.92		6.39					6		
188+37.5 LT.	TYPE "B"	30	0	60'	28'	25-25	199.33			31.96	28.40	0	0	100.33	149			
188+38 RT.	CLASS II	0	3	18'	12'	25'-15'	27.53	2.29			4.13							

*-DRIVE LENGTHS FIGURED FROM OUTSIDE EDGE OF PAVED SHOULDER

APPROACHES

LOCATION	DESCRIPTION	EXCAVATION CU YDS CUT	EXCAVATION CU YDS FILL	LENGTH "L"	WIDTH "W"	RADII "R"	AREA SALV ROAD MAT'L SQ YDS	SALV BASE COURSE ROAD MAT'L CU YDS 3"	5"	6"	HOT ASPH BINDER COURSE TONS	6" COMP AGGREGATE BASE COURSE SQ FT.	6" COMP AGGREGATE BASE COURSE TONS	9" REINF CONC SQ YDS.	REINF STEEL LBS.	GUIDE POSTS TYPE "B"	SKEW	SEE DETAIL ON SHEET NO.
189+58 LT.	CLASS II	0	0	30'	12'	25'-15'	60.27	5.02			9.04							
191+00 RT.	CLASS IV	0	12	34'	20'	20'-20'	90.74		12.60		13.61					6		
191+98 LT.	CLASS V	0	9															
192+55 RT.	CLASS II	0	3	34'	12'	25'-15'	65.60	5.47			9.84							
196+58 RT.	CLASS IV	0	1	29'	20'	20'-20'	83.52		11.60		12.53							
197+45 RT.	CLASS IV	0	0	29'	20'	20'-20'	83.52		11.60		12.53							
197+85 RT.	CLASS II	0	0	29'	12'	25'-15'	58.93	4.91			8.84							
199+80 RT.	CLASS II	0	0	29'	12'	25'-15'	58.93	4.91			8.84							
200+30 LT.	CLASS II	0	0	26'	12'	25'-15'	54.94	4.58			8.24							
200+31 RT.	CLASS II	0	0	29'	12'	25'-15'	58.93	4.91			8.84							
202+35 RT.	CLASS II	0	0	39'	12'	25'-15'	72.27	6.02			10.84							
213+41 LT.	TYPE "B"	16	0	60'	22'	38'-36'	162.33			27.05	24.35	0	0	101.35	149			
213+44 RT.	TYPE "D"	48	0	60'	22'	37.28-43.5	162.08			27.01	24.31	0	0	105.15	142		7°15' RT.	
215+26 RT.	CLASS II	0	2	34'	12'	25'-15'	65.60	5.47			9.84							
220+85 RT.	CLASS II	0	0	31'	12'	25'-15'	61.60	5.13			9.24							
222+10 LT.	CLASS V	0	0															
226+10 RT.	CLASS II	0	0	27'	12'	25'-15'	56.27	4.69			8.44							
231+56 RT.	CLASS V	0	1															
231+56 LT.	CLASS II	0	0	29'	12'	25'-15'	58.93	4.91			8.84							
47TH STH 24'W 35LT.	9' PAVED SHOULDER		(2½" A.C.)	1075'	9'		925.00			154.17	115.65							
238+34 RT.	CLASS II	0	2	31'	12'	25'-15'	61.60	5.13			9.24							
239+00 RT.	CLASS II	0	0	28'	12'	25'-15'	57.60	4.80			8.64							
239+32 LT.	CLASS II	4	0	30'#	12'	25'-15'	43.53	3.63			6.53							
241+02 LT.	CLASS II	6	0	30'#	12'	25'-15'	43.53	3.63			6.53							
242+20 LT.	CLASS II	0	0	30'#	12'	25'-15'	43.53	3.63			6.53							
242+32 RT.	CLASS V	0	3															
243+04 LT.	CLASS II	0	1	30'#	12'	25'-15'	43.53	3.63			6.53							
243+23 RT.	CLASS II	0	4	25	12'	25'-15'	53.60	4.47			8.04							
243+34 LT.	CLASS II	0	2	30'#	12'	25'-15'	43.53	3.63			6.53							
244+04 LT.	CLASS II	0	2	30'#	12'	25'-15'	43.53	3.63			6.53							
244+77 LT.	CLASS II	0	18	30'#	12'	25'-15'	43.53	3.63			6.53							
245+90 LT.	CLASS II	0	2	30'#	12'	25'-15'	43.53	3.63			6.53							
246+05 RT.	CLASS V	0	3															
246+12 LT.	CLASS II	1	0	30'#	12'	25'-15'	43.53	3.63			6.53							
253+40 RT.	CLASS V	0	11															
256+26 LT.	CLASS II	1	0	28'	12'	25'-15'	57.60	4.80			8.64							
257+48 LT.	CLASS II	0	1	28'	12'	25'-15'	57.60	4.80			8.64							
260+00 RT.	CLASS V	0	21															
261+02 LT.	CLASS IV	0	9	37'	30'	20'-20'	101.30		14.07		11.26							
263+44 RT.	CLASS II	0	0	36'	12'	25'-15'	68.27	5.69			10.24							
265+24.5 RT.	TYPE "B"	10	6	60'	22'	38-38	170.94			28.49	25.64			101.33	149			
266+83 TO 289+28	9' PAVED SHOULDER		(2½" A.C.)	2281.5			2544.96			424.16	318.12							
266+02 LT.	CLASS II	0	0	28'	12'	25'-15'	57.60	4.80			8.64							
267+95 RT.	CLASS II	18	0	19'#	12'	25'-15'	28.86	2.41			4.33							
268+01.5 LT.	TYPE "D"	0	10	36'	22'	25'-15'	69.01			11.50	10.35			55.74	49			
269+45 RT.	CLASS II	0	0	18'#	12'	25'-15'	27.53	2.29			4.13							
270+78 LT.	CLASS V	0	0	34'	12'	25'-15'	66.60	5.47			9.84							
272+10 LT.	CLASS V	0	0	32'	12'	25'-15'	62.93	5.24			9.44							
273+19 RT.	TYPE "D"	11	12	107'	22'	25-25	185.40			27.87	20.91	80.0	3.33	55.74	49			
274+01 LT.	TYPE "D"	0	0	25'	22'	25-25	40.75			6.79	6.11	0	0	55.74	49			
274+05 RT.	CLASS V	0	5	35'#	12'	25'-15'	76.36	6.41			11.53							
275+08 LT.	CLASS V	2	0	32'	12'	25'-15'	62.93	5.24			9.44							
275+96 LT.	CLASS II	0	0	32'	12'	25'-15'	62.93	5.24			9.44							
276+20 RT.	CLASS II	0	0	22'#	12'	25'-15'	32.86	2.74			4.93							
276+60 LT.	CLASS II	1	0	31'	12'	25'-15'	61.60	5.13			9.24							
277+20 LT.	CLASS II	0	0	31'	12'	25'-15'	61.60	5.13			9.24							
277+28 RT.	CLASS V	0	4	22'#	12'	25'-15'	32.86	2.74			4.93							
277+98 LT.	CLASS V	0	0	31'	12'	25'-15'	61.60	5.13			9.24							
278+44 RT.	CLASS V	0	8	23'#	12'	25-15	34.19	2.85			5.13							
279+55 LT.	TYPE "D"	5	10	87.46'	22'	36-64	258.33			43.04	38.74			118.22	126		21° LT.	
281+18 RT.	CLASS II	0	7	21'#	12'	25-15	33.92	2.83			5.09							
281+35 RT.	CLASS II	0	6	21'#	12'	25-15	30.72	2.56			4.61							
282+15 RT.	CLASS II	0	4	21'#	12'	25-15	31.53	2.63			4.73							
282+47 RT.	CLASS II	0	3	21'#	12'	25-15	31.53	2.63			4.73							
282+94 LT.	TYPE "D"	0	0	25	22'	25-25	35.18			5.86	5.28	40.0	1.48	55.74	49			
283+33 RT.	CLASS II	0	1	21'#	12'	25-15	31.53	2.63			4.73							
283+66 LT.	CLASS II	0	0	32	12'	25-15	62.93	5.24			9.44							
284+48 LT.	CLASS II	0	0	33	12'	25-15	64.27	5.36			9.64							
285+26 LT.	CLASS II	0	0	33	12'	25-15	64.27	5.36			9.64							
286+02 LT.	CLASS II	0	0	33	12'	25-15	64.27	5.36			9.64							
286+25 RT.	TYPE "D"	0	0	38	22'	25-25	66.96			11.16	10.04	160.0	5.93	55.74	49			
287+35 RT.	CLASS V	0	0	19'#	12'	25-15	28.86	2.41			4.33							

*-DRIVE LENGTHS FIGURED FROM OUTSIDE EDGE OF PAVED SHOULDER

M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	41	197

APPROACHES

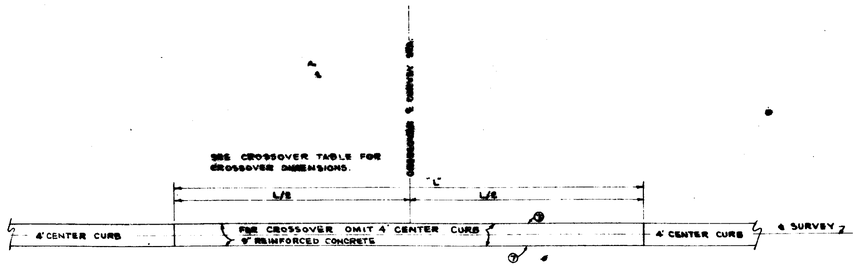
LOCATION	DESCRIPTION	EXCAVATION CU. YDS. CUT	EXCAVATION CU. YDS. FILL	LENGTH "L"	WIDTH "W"	RADII "R"	AREA SALV. ROAD MATL. SQ. YDS.	SALV. BASE COURSE MATL. CU YDS. 3"	5"	6"	HOT ASPH. BINDER COURSE TONS	6" COMP. AGGREGATE BASE COURSE SQ. FT.	TONS	8" REINF. CONC. SQ. YDS.	REINF. STEEL LBS.	GUIDE POSTS TYPE B	SKEW	SEE DETAIL ON SHEET NO.
288+21 RT.	CLASS II	0	0	19*	12	25-15	28.86	2.41			4.33							
289+14 RT.	CLASS II	0	1	19*	12	25-15	28.86	2.41			4.33							
290+10 RT.	CLASS II	0	3	19*	12	25-15	28.86	2.41			4.33							
291+03 RT.	CLASS II	0	1	19*	12	25-15	28.86	2.41			4.33							
294+53 RT.	CLASS II	1	0	30	12	25-15	60.27	5.02			9.04							
296+60 to 304+78 LT.	PARKING STRIP	(2½" AV. C.)		914	8'-11½" AVG.		767.39			127.95	95.96							
298+35 LT.	SPECIAL	0	0	10'	14'	10-10												
302+25 LT	SPECIAL	0	0	10'	12'	10-10												
295+11.5 RT.	TYPE "D"	0	0	34'	22'	25-25	57.18			9.53	8.58	202.50	7.50	55.74	49			
298+39 RT.	CLASS II	0	0	26'	12'	25-15	52.71	4.39			7.91							
298+65 RT.	CLASS II	0	0	26'	12'	25-15	52.60	4.38			7.89							
300+53 RT.	CLASS II	0	0	26'	12'	25-15	52.71	4.39			7.91							
300+79 RT.	CLASS II	0	0	24'	12'	25-15	52.60	4.38			7.89							
303+41 RT.	CLASS II	2	0	26'	12'	25-15'	54.93	4.58			8.24							
304+56 RT.	TYPE "B"	10	18	60'	22'	38-38	157.33			26.22	23.60	90.0	3.33	101.33	149			
304+65 LT.	CLASS V	0	0															
311+29 LT. WALTHEW RD.	CLASS IV	0	0	37 AVG.	20'	15-15	92.89	7.74			13.63							
305+39 RT.	CLASS IV	0	0	24'	35'	20-20	112.40		15.61		16.86					5		
305+99 RT.	CLASS IV	0	0	24'	35'	20-20	112.40		15.61		16.86					5		
310+00 RT.	CLASS II	0	0	31'	12'	25-15	61.60	5.13			9.24							
311+53 RT.	CLASS II	0	0	31'	12'	25-15	61.60	5.13			9.84							
312+98 RT.	CLASS II	0	0	32'	12'	25-15	62.93	5.24			9.44							
314+60 RT.	CLASS II	0	0	32'	12'	25-15	62.93	5.24			9.44							
316+65 RT.	CLASS II	0	0	32'	12'	25-15'	62.93	5.24			9.44							
317+66 RT.	TYPE "D"	0	0	29'	22'	25-25	44.96			7.49	6.74	160.0	5.93	55.74	49			
317+71 LT.	TYPE "B"	16	3	60'	22'	38-38	157.33			26.22	23.60	202.5	7.50	101.33	149			
319+30 RT.	CLASS II	0	0	37	12'	25-15	59.60	4.97			8.94							
321+15 LT.	CLASS II	0	0	27	12'	25-15	56.27	4.69			8.44							
324+00 LT.	CLASS V	0	189															
333+80 LT.	CLASS II	0	1	27'	12'	25-15	56.27	4.69			8.44							
336+73 RT.	CLASS II	0	0	29'	12'	25-15	56.93	4.91			8.84							
340+60 RT.	CLASS II	0	2	27'	12	25-15	56.27	4.69			8.44							
342+52 LT.	CLASS V	2	0															
342+75 LT.	CLASS II	*	0	32	12'	25'-15'	62.93	5.24			9.44							
345+33 LT.	CLASS II	4	0	30	12	25-15	60.27	5.02			9.04							
344+17 RT.	TYPE "B"	188	7	103.65	22'	38-38	274.03			45.67	41.10	90.0	3.33	101.33	149			
345+25 LT.	CLASS II	0	0	30	16	25'-15'	73.60	6.13			11.04							
345+28 RT.	CLASS II	0	0	33	12	25-15	64.27	5.36			9.64							
347+70 RT.	CLASS II	0	13	42'	12'	25'-15'	76.27	6.36			11.44							
349+32 RT.	CLASS II	0	13	45'	12	25-15	80.27	6.69			12.04						5° 30 RT.	
350+35.5 LT.	TYPE "B"	19	5	71.07'	22'	38-38	193.83			32.31	29.07	62.5	2.32	108.35	139		11° 30 RT.	
351+45 RT.	SPECIAL	0	0	42'	12	40-15	68.10		9.46		10.22						35° 00 LT.	
355+55.39 RT.	TYPE "B"	1012	0	294.01'	22	38.5-70					0.67	115.0	4.26	881.19	200		25° 00 LT.	
1+80 RT. 5-4 C"	TYPE C	0	0	58	20'	25-25	158.70		22.04	26.45	23.81							
2+30 LT. 5-4 C"	CLASS II	3	0	28	12	15-15	48.00	4.00			7.20							
2+70 RT. 4 C"	CLASS IV	0	0	20	40'	20-20	108.40		15.06		16.26					6		
3+11 LT. 5-4 C"	CLASS II	4	0	24	12'	25-15	52.20	4.35			7.83							
3+23 RT. 5-4 C"	CLASS II	0	0	27	12'	25-15	56.20	4.68			8.43							
371+60 RT.	TYPE "B"	60	315	122	22'	37.3-43.18	330.93			55.15	49.64			104.81	142		7° RT.	
371+6 LT.	TYPE "B"	77	99	67.06	22'	37.3 43.18	196.65			32.77	29.50			104.81	142		7° RT.	
4+15 LT. 5-2 C"	CLASS V	0	2															
398+10 RT.	TYPE "B"	54	30	60'	22'	38-38	167.33			27.89	25.10			101.33	149			
398+10 LT.	TYPE "B"	32	75	60'	22'	38-38	167.33			27.89	25.10			101.33	149			
398+30 RT.	CLASS V	0	0															
398+30 LT.	CLASS V	0	0															
4.2+05.4 RT.	TYPE "B"	424	261	521.95	22	625-36					1.56	99.8	3.48	1421.48	123		20° RT.	
2+60 LT. 5-3 C"	SPECIAL	0	0	159.09	18	25-25	347.99			58.00	52.20							
4+6+80 RT.	SPECIAL	0	0	155.17	18	25-40	336.51			56.08	50.48							
4+9+00 LT.	CLASS II				12	25-15												
(32) - M.B. APPROACHES							1333.33	111.04			200.00							

* DRIVE LENGTHS FIGURED FROM OUTSIDE EDGE OF PAVED SHOULDER

CROSSOVERS

LOCATION	DESCRIPTION	LENGTH "L"	WIDTH "W"	RADII "r"	8" REINF CONC SQ YDS	INTEGRAL CONC CURB TYPE B LIN FT.	REINF. STEEL LBS.	½" CORK, CORK RUBBER OR FIBER EXP JT LIN.FT.	1" PREF. EXP. JT. LOAD TRANSFER LIN.FT.	SEE DETAIL ON SHEET NO.
153+88	SPECIAL	78'	4'		33.33					
157+23	SPECIAL	75'	4'		33.33					
160+58.5	SPECIAL	75'	4'		33.33					
164+15	SPECIAL	75'	4'		33.33					
167+56	SPECIAL	77'	4'		34.22					
170+40	SPECIAL	75'	4'		33.33					
182+90	SPECIAL	75'	4'		33.33					
188+37.5	SPECIAL	100	4'		44.44					
213+42.5	SPECIAL	103	4'		45.77					
265+24.5	SPECIAL	100	4'		44.44					
268+01.5	SPECIAL	75'	4'		33.33					
273+16.5	SPECIAL	70'	4'		31.11					
274+03.5	SPECIAL	70'	4'		31.11					
279+55	SPECIAL	100	4'		44.44					
282+94	SPECIAL	75'	4'		33.33					
286+25	SPECIAL	75'	4'		33.33					
295+77.5	SPECIAL	75'	4'		33.33					
304+56	SPECIAL	100'	4'		44.44					
317+71	SPECIAL	100'	4'		44.44					
344+17	SPECIAL	100'	4.45 TO 5.96		55.11					
350+55.5	TYPE "T"	75'	11.87 to 12.66	5.98-6.06	105.56	64.5'	107	11.5'		
355+55.39	TYPE "D"	78	16'	STD.	147.85	102.8'	188	20'	75'	
371+60	TYPE "D"	75'	16'	STD.	147.85	102.8'	188	20'	75'	
398+10	TYPE "D"	75'	16'	STD.	147.85	102.8'	188	20'	75'	

SEE CROSSOVER TABLE FOR CROSSOVER DIMENSIONS.



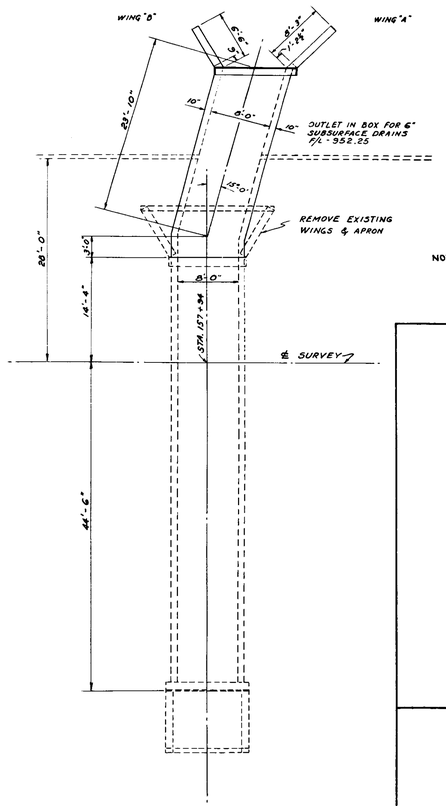
LEGEND

① KEYWAY JOINT

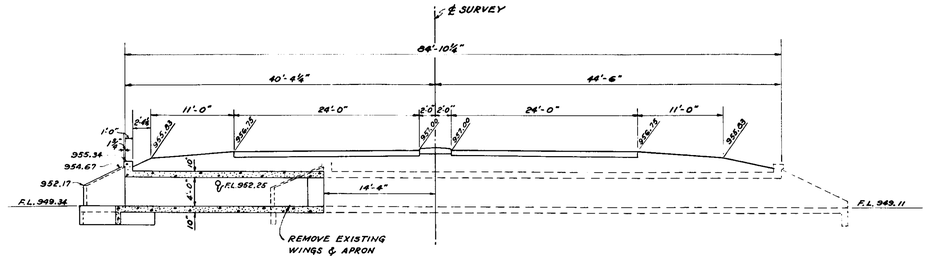
DETAIL SPECIAL CROSSOVER THRU 4' CENTER CURB

M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	42	137



PLAN



NOTE: BENCH MARK TABLET TO BE PLACED ON HEADWALL LEFT STRUCTURE NO. 35

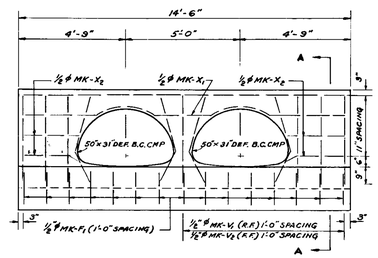
ELEVATION

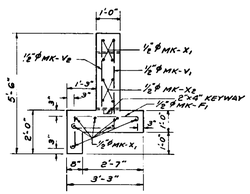
CONCRETE QUANTITIES CLASS "D"			
BOX	25.538 X 0.844	= 21.55	CU. YDS.
W, - BOX END & TWO WINGS		= 6.3	" "
TOTAL		= 27.85	CU. YDS.

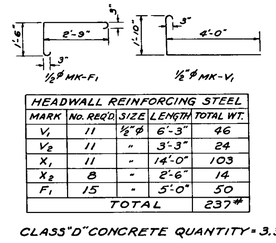
REINFORCING STEEL			
BOX	25.538 X 209.46	= 5349	LBS.
ONE LAP		= 87	"
W, - BOX END & TWO WINGS		= 848	"
TOTAL		= 6284	LBS.

CLASS "B" SPECIAL BORROW 65 CU. YDS.

STRUCTURE NO. 35 STA. 157+94



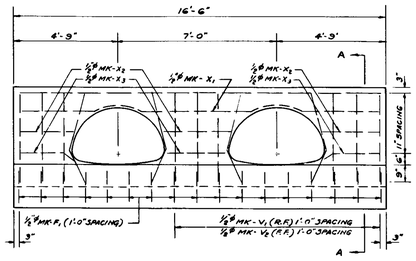




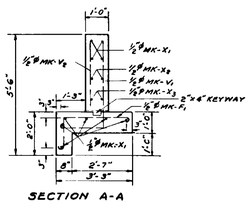
HEADWALL REINFORCING STEEL				
MARK	No. REQ'D	SIZE	LENGTH	TOTAL WT.
V_1	11	½" ℄	6'-3"	46
V_2	11	"	3'-3"	24
X_1	11	"	14'-0"	103
X_2	8	"	2'-6"	14
F_1	15	"	5'-0"	50
TOTAL				237 #

CLASS "D" CONCRETE QUANTITY = 3.34 C.Y.

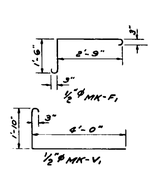
DETAIL OF HEADWALL FOR STRUCTURE NO. 64
2-30"x 50"x 31" DEF. B.C. C.M.P. STA. 174+13 LT.



ELEVATION



SECTION A-A



HEADWALL REINFORCING STEEL				
MARK	No. REQ'D	SIZE	LENGTH	TOTAL WT.
V_1	13	½" ℄	6'-3"	54
V_2	13	"	3'-3"	28
X_1	11	"	16'-0"	118
X_2	6	"	3'-0"	12
X_3	6	"	2'-6"	10
F_1	17	"	5'-0"	57
TOTAL				279 #

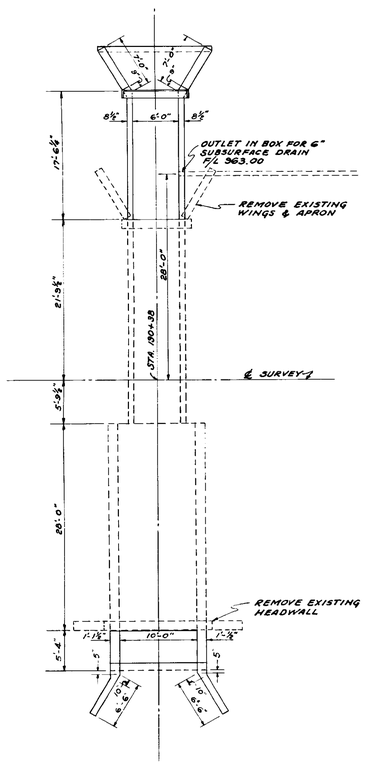
CLASS "D" CONCRETE QUANTITY = 3.89 C.Y.

DETAIL OF HEADWALL FOR STRUCTURE NO. 68
2-84"x 50"x 31" DEF. B.C.M.P. STA. 179+34

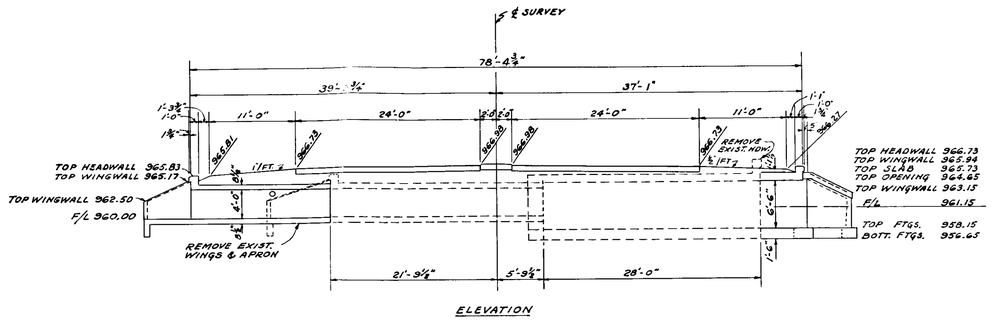
DETAILS FOR
STRUCTURE NO. 35 STA. 157+94
STRUCTURE NO. 64 STA. 174+13
AND
STRUCTURE NO. 68 STA. 179+34

M.P.L. 8-26-55

FEDERAL ROAD DIVISION No.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	43	197



PLAN



ELEVATION

6'x4' R.C. BOX CULVERT

CONCRETE QUANTITIES CLASS "D"			
BOX 17.521 x 0.393	=	10.50	CU. YDS.
ONE CURB & TWO WINGS - W,	=	4.90	" "
TOTAL	=	15.40	CU. YDS.

REINFORCING STEEL			
BOX 17.521 x 166.15	=	2912	LBS.
ONE CURB & TWO WINGS - W,	=	406	"
TOTAL	=	3318	LBS.

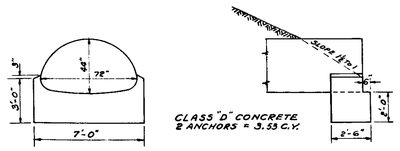
GRADE "B" SPECIAL BORROW = 23 CU. YDS.

10' SPAN R.C. SLAB TOP CULVERT UNDER FILL

CONCRETE QUANTITIES CLASS "D"			
ABUTMENTS	2x5.083 x (.255 + .366)	=	6.32 CU.YDS.
SLAB	5.083 x .521	=	2.65 " "
WINGS	35.7 - [46(.255+.366)]	=	7.13 " "
HEADWALL	12.5 x 1.12 + 27	=	0.52 " "
TOTAL		=	16.62 CU.YDS.

REINFORCING STEEL			
ABUTMENTS	5.083 x 20.32 #/LIN. FT.	=	103 LBS.
WINGS	1319 #- (46x20.32 #/LIN. FT.)	=	385 "
SUPERSTRUCTURE	5.083 x 68.67	=	349 "
TOTAL			837 LBS.

GRADE "B" SPECIAL BORROW = 8 CU. YDS



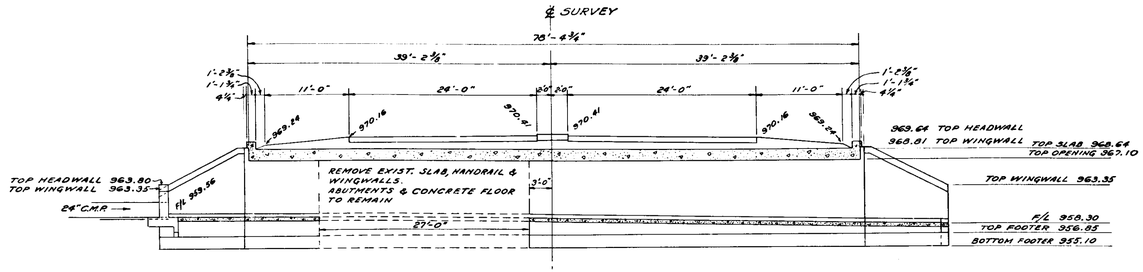
CLASS "D" CONCRETE & ANCHORS = 3.53 C.Y.

DETAIL OF PIPE CULVERT ANCHOR
STRUCTURE NO. 58, STA. 170+40 LT.

DETAILS FOR
STRUCTURE NO. 58, STA. 170+40 LT.
AND
STRUCTURE NO. 86, STA. 190+38

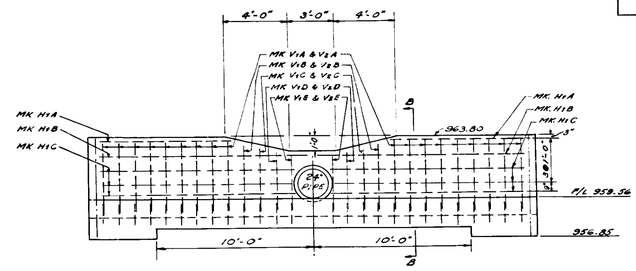
M.P.L. 8-26-55

FEDERAL ROAD DIVISION NO.	STATE	F.A. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391-(4)	1956	44	107

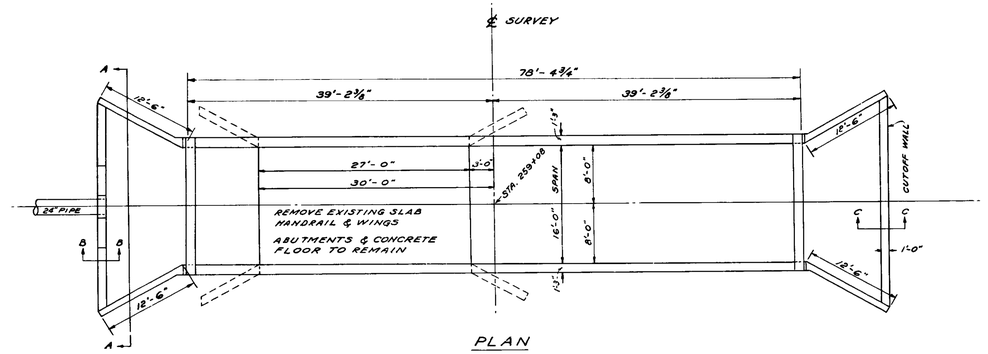


ELEVATION

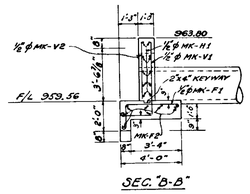
NOTE: BENCH MARK TABLET TO BE PLACED ON HEADWALL RIGHT.



HEADWALL BETWEEN WINGS LEFT SIDE CULVERT



PLAN



SEC. "B-B"

HEADWALL REINFORCING STEEL					
MARK	No. REQ.	SIZE	LENGTH	TOTAL WT.	
V1A	18	½" ϕ	6'-10⅛"	83	SEE DETAIL
V1B	2	"	6'-7⅛"	9	" "
V1C	2	"	6'-4⅛"	9	" "
V1D	2	"	6'-1⅛"	8	" "
V1E	2	"	5'-10⅛"	8	" "
V2A	18	"	3'-8⅞"	45	
V2B	2	"	3'-5⅞"	5	
V2C	2	"	3'-2⅞"	4	
V2D	2	"	2'-11⅞"	4	
V2E	2	"	2'-8⅞"	4	
F1	7	"	5'-6"	126	SEE DETAIL
F2	7	"	27'-0"	26	
H1A	4	"	8'-6"	23	
H1B	2	"	27'-0"	36	
H1C	6	"	12'-6"	50	
TOTAL				440#	

CLASS "D" CONCRETE QUANTITY 10 CU.YDS.

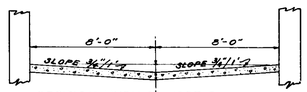
CONCRETE QUANTITIES CLASS "D"		
ABUTMENTS	(2) X 51'-4¾" X [(.454 + .637)]	= 112.21
SLAB	78'-4¾" X 1'-6½" X 18'-6" ÷ 27	= 82.73
WINGS	(2) X [71.4 - (1.09 X 46)]	= 42.43
HEADWALL	(2) X 18.5 X 1.12 ÷ 27	= 1.53
6" FLOOR		22.54
CUT-OFF WALL RT. SIDE		3.34
TOTAL		264.78 CU.YDS.

REINFORCING STEEL		
ABUTMENTS	51'-4¾" X 39.99#/LIN. FT.	2056#
4-WINGS	(4) X 559#	2232#
SUPERSTRUCTURE	78'-4¾" X 127.02#/LIN. FT.	9958#
LAP MK H, F, BARS		127#
CUT-OFF WALL RT. SIDE		188#
TOTAL		14,561#

SPECIAL GRADE "B" BORROW 286 CU.YDS.

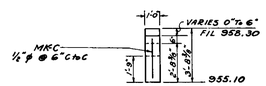
NOTE:
FOR DETAILS OTHER THAN SHOWN ON THIS SHEET, REFER TO: MISCELLANEOUS STANDARDS SHEET "N" & STD. REINFORCED CONCRETE CULVERT SLAB TOP TYPE UNDER FILL.

DRAINAGE AREA = 1320 ACRES C = 0.35
W.A. = 0.35 $\sqrt[3]{1320^2}$ = 0.35 X 219.26 = 76.74 SQ. FT.
USE 16 X 8 = 128 SQ. FT.



SECTION THRU CULVERT SHOWING 6" POURED CONCRETE FLOOR

NOTE: EXTEND EXISTING 6" PIPES THRU NEW ABUTMENTS.



SEC. C-C (CUTOFF WALL RIGHT SIDE)

STRUCTURE Nº. 146
STA. 259+08
16' SPAN R.C. SLAB TOP
CULVERT UNDER FILL
8' HGT., 78'-4¾" LGTH.

M.P.L. 8-26-55

ESTIMATE OF QUANTITIES

GRADING

ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS.	69,130
SOLID ROCK EXCAVATION	CYS.	
SPECIAL BORROW	CYS.	27,895
OVER-HAUL	CYS.	12,502
ADDED HAUL	UNITS	11,905
PEAT EXCAVATION	CYS.	15,338
SURCHARGE - 4'	LFT.	140
SURCHARGE - 4'-8'	LFT.	76
SURCHARGE - 8'-12'	LFT.	211
SURCHARGE - 12'	LFT.	836
MACHINE OPERATION	HRS.	786
MACHINE AVAILABILITY	HRS.	472
DYNAMITE	LBS.	1,200
TEST HOLES	LFT.	16,300
CASED DYNAMITE HOLES	LFT.	16,300
GRADE "B" SPECIAL BORROW	CYS.	90,010
TOP SOIL	CYS.	
PAVEMENT REMOVAL	SYS.	321
SALVAGED PAVEMENT	SYS.	
PAVEMENT SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	240
CENTER CURB REMOVAL	LFT.	
COMB. CURB & GUTTER REMOVAL	LFT.	611
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
RETAINING WALL REMOVAL	LFT.	344
PAVED SIDE DITCH REMOVAL	LFT.	
STOCKPILED SELECTED MATERIAL	CYS.	
SALVAGING STOCKPILED SELECTED MATERIAL	CYS.	
SALVAGED ROAD MATERIAL	CYS.	3,260

PAVEMENT

ITEM	UNIT	QUANTITY
SUBBASE, TYPE "I" OR "II"	CYS.	29,974
REINFORCED CONCRETE	SYS.	145,986
PLAIN CONCRETE	SYS.	1,309
H.E.S. REINFORCED CONCRETE	SYS.	
H.E.S. PLAIN CONCRETE	SYS.	
PLAIN CONCRETE FOR PRIVATE DRIVE CROSSOVERS	SYS.	
PRIVATE DRIVE	SYS.	
REINFORCING STEEL	LBS.	4,814
CONTRACTION JOINTS, TYPE D-1, D-4 OR D-5	LFT.	31,884
EXPANSION JT. 1" PREF. BITUM.	LFT.	
EXPANSION JT. 1" CORK OR CORK RUBBER		
OR FIBER	LFT.	111
EXPANSION JT. 1" PREF.	LFT.	
EXPANSION JT. 1" PREFORMED WITH LOAD TRANSFER	LFT.	225
3" PREFORMED BITUM. EXP. JT.	LFT.	
CONCRETE BASE H.E.S. CONCRETE BASE		
CONCRETE PATCHES	SYS.	
CLASS I CONCRETE PATCHES	SYS.	
CLASS II CONCRETE PATCHES	SYS.	
CLASS III CONCRETE PATCHES	SYS.	
CLASS IV CONCRETE PATCHES	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	GAL.	
AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	89.7
AGGREGATE FOR COMPACTED AGGREGATE SURFACE	TONS	
WATER FOR COMPACTED AGGREGATE BASE	M.GALS.	0.27
WATER FOR COMPACTED AGGREGATE SURFACE	M.GALS.	
AGGREGATE FOR SHOULDER DRAINS	TONS	

ITEM	UNIT	QUANTITY
BITUMINOUS MATERIAL FOR PRIME	TONS	34.67
BITUMINOUS MATERIAL FOR SEAL	TONS	19.81
COVERING AGGREGATE	TONS	117.9
HOT ASPHALTIC CONCRETE BINDER (1)	TONS	3329.0
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED AGGREGATE BINDER (1)	TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	
ROCK ASPHALT SURFACE	TONS	
BITUM. MIXTURE FOR APPROACHES	TONS	
CONCRETE SIDEWALK	SYS.	47.23
1" PREF. BITUM. EXP. JT. FOR SIDEWALK	LFT.	
CROSSWALK	SYS.	
CONCRETE HEADER	LFT.	
(1) INCLUDES FOR WEDGE & LEVELING COURSES	TONS	

MISCELLANEOUS

ITEM	UNIT	QUANTITY
SODDING	SYS.	42,766
FURNISHING & PLACING SEED MIXTURE	LBS.	1,876
FURNISHING & PLACING FERTILIZER	TONS	8.04
FURNISHING & PLACING AG. LIMESTONE	TONS	53.6
FURNISHING & PLACING MULCHING MATL	TONS	103
GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	135
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE OR STEEL BEAM GUARD RAIL	LFT.	
RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
RESET STEEL BEAM GUARD RAIL	LFT.	
RESET WIRE ROPE GUARD RAIL	LFT.	
GUARD RAIL SALVAGE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	39
GUIDE POSTS, TYPE "B"	EA.	117
RESET GUIDE POSTS	EA.	
BARRICADES, TYPE "A"	EA.	2
BARRICADES, TYPE "B"	EA.	16
TYPICAL SIGN STANDARDS	EA.	27
RAILROAD CROSSING SIGN, TYPE "A"	EA.	
RAILROAD CROSSING SIGN, TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
PAVED SIDE DITCH, TYPE "A"	LFT.	1,898
PAVED SIDE DITCH, TYPE "B"	LFT.	270
PAVED SIDE DITCH, TYPE "C"	LFT.	260
LIP GUTTER	LFT.	
COMBINED CURB AND GUTTER	LFT.	611
CONCRETE CURB	LFT.	13
CONCRETE CURB, TYPE "B"	LFT.	
INTEGRAL CONCRETE CURB	LFT.	20
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	1,689
CONCRETE CENTER CURB TYPE "A"	LFT.	17,539
HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING 6" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	12
PRECAST CONCRETE RIP RAP	SYS.	
RIGHT OF WAY FENCE	LFT.	12,897
RIGHT OF WAY MARKERS	EA.	309
PLACING RIGHT OF WAY MARKERS	EA.	
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE "D"	EA.	4
MONUMENTS, TYPE " "	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
CASTINGS ADJUSTED TO GRADE. MONUMENTS	EA.	
BENCH MARK POSTS	EA.	1
RESETTING BENCH MARK POSTS	EA.	

STRUCTURES

PIPE - LINEAL FEET

ITEM	4"	6"	8"	10"	12"	15"	18"	24"	72"	18"x11"	22"x13"	25"x16"	29"x18"	36"x22"	43"x27"	50"x31"	72"x44"
REINFORCED CONCRETE																	
VITRIFIED CLAY CONCRETE																	
CORRUGATED METAL					2958	950	204	60									
CLASS 1					749	878	619	450	102								
VC, CI, OR CONC. PIPE					42												
CLASS 5					238	134	22										
EXTRA STRENGTH REINFORCED CONCRETE																	
VIT. CLAY OR CONC. SEWER		52	631	6													
SEWER																	
VIT. CLAY SEWER																	
REINF. CONC. SEWER																	
DEFORMED BITUM. COATED CORR. METAL									186						68	172	
DEFORMED CORR. METAL								42		48	24	120				60	66
DRAINTILE		1204	800	600													

VOID SEE SHEET 48A

VOID SEE SHEET 40A

SUBSURFACE DRAINAGE

PIPE - LINEAL FEET	AGG.-CU.YDS.
6" PERF. C.M. VC. SEWER, CEM. CONC SEWER OR PERF. VC. SEWER	3,062
6" B.T. COATED PERF. C.M. VC. SEWER, CEM. CONC SEWER OR PERF. VC. SEWER	45.615

CASTINGS ADJUSTED TO GRADE

EACH

FOR STRUCTURES

ITEM	UNIT	QUANTITY
CONCRETE CLASS "D"	CYS.	512.59
REINFORCING STEEL	LBS.	27,763

GATE VALVES

SIZE	HEAD	EA.

CATCH BASINS

TYPE	EACH
C-5	1

PIPE CATCH BASIN

SIZE	EACH
12"	
15"	
18"	1
24"	

INLETS

TYPE	EACH
A-1	1
D-6	10
E-7	10

MANHOLES

TYPE	EACH
A-4	
B-4	

RECONSTRUCTED

TYPE	LIN FT
MANHOLE	
CATCH BASIN	
INLET	

STRUCTURE DATA

FEDERAL ROAD DIVISION NO.	STATE	"F"-PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391(4)	1956	45	197

STRUCTURE NUMBER	LOCATION	DESCRIPTION SIZE	DESCRIPTION	SKEW	LENGTH "L"	HEIGHT "H"	WINGS "W"	FLOW LINE UP STREAM ELEV.	FLOW LINE DOWN STREAM ELEV.	CONCRETE CLASS "D" CU.YDS.	SPECIAL BORROW GRADE "B" CU.YDS.	REINFORCING STEEL LBS.	REMARKS	PLANS ON SHEET NO.
/	330+53 to 330+93		See Proj. F 391(5)										To be Included in this Contract	
11	147+03 LT.	12"	STD. TYPE A-1 INLET											
			CLASS 1 PIPE		6'								CONNECT TO 3'x 2' CONC. BOX CULV. IN PLACE	
12	147+09 RT.	15"	C.M.P.		24'					0.69				
13	147+39 RT.	12"	C.M.P.		48'					0.58				
14	147+39 LT.	24"	C.M.P.		8'					0.62			CONNECT TO STRUCTURE IN PLACE	
15	147+80 LT.	12"	C.M.P.		44'					0.58			REMOVE STRUCTURE IN PLACE	
16	148+36 LT.	12"	C.M.P.		44'					0.58				
17	149+40 RT.	12"	C.M.P.		28'					0.58				
18	149+69 RT.	12"	PIPE Class 5		6'									
19	149+88 LT.	12"	C.M.P.		48'					0.58				
20	150+05 RT.	12"	C.M.P.		24'					0.58				
21	150+65 LT.	15"	C.M.P.		48'					0.69			REMOVE STRUCTURE IN PLACE	
22	152+00 RT.	12"	C.M.P.		48'					0.58				
23	152+50 LT.	12"	C.M.P.		48'					0.58				
24	152+70 RT.	12"	C.M.P.		48'					0.58				
25	153+27 LT.	12"	C.M.P.		48'					0.58				
26	153+52 RT.	12"	PIPE		6'									
27	155+01 LT.	12"	C.M.P.		24'					0.58			REMOVE STRUCTURE IN PLACE	
28	155+48.5 RT.	12"	C.M.P.		36					0.58				
29	156+18 LT.	12"	C.M.P.		24'					0.58			REMOVE STRUCTURE IN PLACE	
30	156+59 LT.	12"	C.M.P.		48'					0.58			REMOVE PIPE IN PLACE	
31	156+74 RT.	12"	C.M.P.		24'					0.58				
32	0+63.5' WILLIAMS AV.	12"	C.M.P.		28'					0.58			REMOVE PIPE IN PLACE	
33	157+23 LT.	15"	CLASS 5 PIPE		48'					0.69			REMOVE PIPE IN PLACE	
34	157+58 RT.	12"	C.M.P.		36'					0.58				
													† SEE DETAIL SHEET NO. 42	
35	157+94	8'	R.C. BOX CULVERT	15°RT.	26.83'	4'	A&B	949.34	949.11	27.85	65	6284	REMOVE WINGS & APRON ON LT. & EXTEND 8'x4' R.C. BOX CULVERT IN PLACE.	
36	158+82 RT.	12"	C.M.P.		24'					0.58				
37	159+75 LT.	12"	CLASS 5 PIPE		48'					0.58				
38	0+71 RT. CLAYPOOL AV.	12"	C.M.P.		28'					0.58				
39	160+87 RT.	12"	C.M.P.		24'					0.58				
40	161+39 LT.	12"	C.M.P.		48'					0.58				
41	162+19 LT.	12"	C.M.P.		48'					0.58				
42	162+77.5 RT.	12"	PIPE Class 5		6'									
43	163+02 RT.	12"	C.M.P.		28'					0.58				
44	163+95 RT.	12"	C.M.P.		24'					0.58				
45	164+15 LT.	15"	C.M.P.		54'					0.69			REMOVE PIPE IN PLACE	
46	164+35 RT.	12"	C.M.P.		24'					0.58				
47	165+00 LT.												REMOVE PIPE IN PLACE	
48	165+05 RT.	12"	C.M.P.		24'					0.58				
49	165+77 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
50	166+62 LT.	12"	C.M.P.		48'					0.58			REMOVE PIPE IN PLACE	
51	166+92 RT.	12"	CLASS 5 PIPE		24'					0.58				
52	167+28	15"	CLASS 1 PIPE ("L" HDW'LS)		90°			958.24	957.78	0.80	32		REMOVE STRUCTURE IN PLACE 1-6"ON 15" TEE 28' RT., 1-6" ON 15" TEE 28' LT.	
53	0+74 LT. RICHWOOD DR.	15"	C.M.P.		28'					0.69				
54	1+88 RT. EDGEWOOD DR.	12"	C.M.P.		24'					0.58				
55	168+60 RT.	12"	C.M.P.		24'					0.58				
56	170+00	18"	CLASS 1 PIPE		94'			956.50	956.06	0.80	57		REMOVE STRUCTURE IN PLACE 1-6"ON 18"CROSS 28' RT. 1-6" ON 18" CROSS 28' LT.	
57	170+05	6"	SEWER PIPE		126'						22		REMOVE 6" & 8" F.T. IN PLACE FROM R/W RT. TO R/W LT.	
58	170+40 LT.	78"x44"	DEF. C.M.P.		66'				(RAINCHORS)	3.33			REMOVE PIPE IN PLACE SEE DETAIL SHEET NO. 43	
59	170+92 RT.	12"	C.M.P.		24'					0.58				
60	172+63 RT.	12"	C.M.P.		24'					0.58				
61	173+18	22"x13"	Bitum. Coated C.M. Pipe Arch		90'			957.60	956.91	0.64	18		REMOVE STRUCTURE IN PLACE, CONSTRUCT OUTLET DITCH	
62	173+25 RT.	6"	SEWER PIPE	35.40° RT.	10'								REMOVE F.T. IN PLACE FROM DITCH RT. TO R/W RT.	
63	173+75 RT.	12"	C.M.P.		32'					0.58				
64	174+13 LT.	50"x31"	2- DEF. C.M.P.		30'					6.66		574	REMOVE STRUCTURE IN PLACE SEE DETAIL SHEET NO. 42	
65	174+40 RT.	12"	C.M.P.		20'					0.58				
66	177+62 LT.												REMOVE STRUCTURE IN PLACE	
67	178+39	18"	CLASS 1 PIPE	45° LT.	135'						40		REMOVE 18" F.T. IN PLACE, CONNECT TO F.T. IN PLACE R/W LT. & R/W RT.	
68	179+34	50"x31"	2-B.T. COATED C.M. Pipe Arch		86'			957.60	957.30	7.78	50	558	REMOVE STRUCTURE IN PLACE SEE DETAIL SHEET NO. 42	
69	180+03.5 RT.	12"	C.M.P.		52'					0.58				
70	181+78 RT.	12"	C.M.P.		24'					0.58				
71	182+62 RT.	12"	C.M.P.		24'					0.58				
72	182+90 LT.	24"	C.M.P.		48'					0.58			REMOVE PIPE IN PLACE	
73	183+60 LT.	6"	SEWER PIPE		14'								REMOVE F.T. IN PLACE, CONNECT TO F.T. IN PLACE R/W LT.	
74	183+89 LT.												REMOVE STRUCTURE IN PLACE	
75	184+50 RT.	12"	C.M.P.		24'					0.58				
76	184+55 LT.	12"	C.M.P.		24'					0.58			REMOVE STRUCTURE IN PLACE	
77	185+55 RT.	12"	C.M.P.		24'					0.58				
78	186+56 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
79	186+59.5 RT.	12"	PIPE Class 5		6'									
80	186+95.5 RT.	12"	C.M.P.		36'					0.58				
81	187+48.5 RT.	12"	PIPE Class 5		6'									
82	188+37.5 LT.	15"	C.M.P.		58'					0.69				
83	188+38 RT.	12"	C.M.P.		24'					0.58			REMOVE STRUCTURE IN PLACE	
84	190+18 LT.		STD. TYPE C-5 C.B.										REMOVE INLET IN PLACE, CONNECT TO STRUCTURE NOS. 85 & 87	
85	190+24	8"	SEWER PIPE	10° LT.	106'						130		REMOVE F.T. IN PLACE, CONNECT TO STR. Nº 84 LT. & F.T. IN PLACE R/W RT.	
86	190+38	6'	R.C. BOX CULVERT		17'-6"	4'	A&B		960.00	15.40	23	3318	EXTEND R.C. BOX CULVERT IN PLACE ON LT. SEE DETAIL SHEET NO. 43	
		10'	R.C. SLAB TOP CULVERT		5'-4"	4'	A&B	961.15		16.62	8	837	EXTEND R.C. SLAB TOP CULV. IN PLACE ON RT.	
87	190+45 LT.	6"	V.C. OR CONC. SEWER PIPE	60° LT.	10'								REMOVE PIPE IN PLACE, CONNECT TO STR. Nº 84 & F.T. IN PLACE R/W LT.	
88	191+00 RT.	12"	C.M.P.		28'					0.58				

SEPTEMBER 1955

"F"-PROJ.	LINE	SHEET	P.E.
391 (4)			

ESTIMATE OF QUANTITIES

GRADING

ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS.	
SOL'D. ROCK EXCAVATION	CYS.	
SPECIAL BORROW	CYS.	
OVER-HAUL	CYS.	
ADDED HAUL	UNITS	
BEAT EXCAVATION	CYS.	
SURCHARGE - 4'	LFT.	
SURCHARGE - 4' 8"	LFT.	
SURCHARGE - 8'-1/2	LFT.	
MACHINE OPERATION	HRS.	
MACHINE AVAILABILITY	HRS.	
DYNAMITE	LBS.	
TEST HOLES	LFT.	
CASED DYNAMITE HOLES	LFT.	
GRADE "B" SPECIAL BORROW	CYS.	
TOP SOIL	CYS.	
PAVEMENT REMOVAL	SYS.	
SALVAGED PAVEMENT	SYS.	
PAVEMENT SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	
CENTER CURB REMOVAL	LFT.	
COMB CURB & GUTTER REMOVAL	LFT.	
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
RETAINING WALL REMOVAL	LFT.	
PAVED SIDE DITCH REMOVAL	LFT.	
STOCKPILED SELECTED MATERIAL SALVAGING STOCKPILED	CYS.	
SELECTED MATERIAL SALVAGED ROAD MATERIAL	CYS.	

PAVEMENT

ITEM	UNIT	QUANTITY
SUBBASE, TYPE " "	CYS.	
REINFORCED CONCRETE	SYS.	
PLAIN CONCRETE	SYS.	
H.E.S. REINFORCED CONCRETE	SYS.	
H.E.S. PLAIN CONCRETE	SYS.	
PLAIN CONCRETE FOR PRIVATE DRIVE CROSSOVERS	SYS.	
PRIVATE DRIVE	SYS.	
REINFORCING STEEL	LBS.	
CONTRACTION JOINTS, TYPE	LFT.	
EXPANSION JT., 1" PREF. BITUM.	LFT.	
EXPANSION JT. 1" CORK OR CORK RUBBER	LFT.	
EXPANSION JT., 1" PREF FIBER	LFT.	
EXPANSION JT. " PREF.	LFT.	
EXPANSION JT. 1" PREFORMED WITH LOAD TRANSFER	LFT.	
9" PREFORMED BITUM. EXP. JT.	LFT.	
CONCRETE BASE H.E.S. CONCRETE BASE		
CONCRETE PATCHES	SYS.	
CLASS I CONCRETE PATCHES	SYS.	
CLASS II CONCRETE PATCHES	SYS.	
CLASS III CONCRETE PATCHES	SYS.	
CLASS IV CONCRETE PATCHES	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	GALS.	
AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	
AGGREGATE FOR COMPACTED AGGREGATE SURFACE	TONS	
WATER FOR COMPACTED AGGREGATE BASE	M.GALS	
WATER FOR COMPACTED AGGREGATE SURFACE	M.GALS	
AGGREGATE FOR SHOULDER DRAINS	TONS	

ITEM	UNIT	QUANTITY
BITUMINOUS MATERIAL FOR PRIME	GALS.	
BITUMINOUS MATERIAL FOR SEAL	GALS.	
COVERING AGGREGATE	TONS	
HOT ASPHALTIC CONCRETE BINDER (1)	TONS	
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED AGGREGATE BINDER (1)	TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	
ROCK ASPHALT SURFACE	TONS	
BITUM. MIXTURE FOR APPROACHES	TONS	
CONCRETE SIDEWALK	SYS.	
1" PREF. BITUM. EXP. JT. FOR SIDEWALK	LFT.	
CROSSWALK	SYS.	
CONCRETE HEADER	LFT.	
(1) INCLUDES FOR WEDGE & LEVELING COURSES	TONS	

MISCELLANEOUS

ITEM	UNIT	QUANTITY
SODDING	SYS.	
FURNISHING MATERIAL FOR PLAIN SEEDING	ACRES	
PLAIN SEEDING	ACRES	
MULCHED SEEDING	SYS.	
GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE OR STEEL BEAM GUARD RAIL	LFT.	
RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
RESET STEEL BEAM GUARD RAIL	LFT.	
RESET WIRE ROPE GUARD RAIL	LFT.	
GUARD RAIL SALVAGE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	
GUIDE POSTS, TYPE "B"	EA.	
RESET GUIDE POSTS	EA.	
BARRICADES, TYPE "A"	EA.	
BARRICADES, TYPE "B"	EA.	
TYPICAL SIGN STANDARDS	EA.	
RAILROAD CROSSING SIGN, TYPE "A"	EA.	
RAILROAD CROSSING SIGN, TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
PAVED SIDE DITCH, TYPE " "	LFT.	
PAVED SIDE DITCH, TYPE " "	LFT.	
PAVED SIDE DITCH, TYPE " "	LFT.	
LIP GUTTER	LFT.	
COMBINED CURB AND GUTTER	LFT.	
CONCRETE CURB	LFT.	
CONCRETE CURB, TYPE "B"	LFT.	
INTEGRAL CONCRETE CURB	LFT.	
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	
CONCRETE CENTER CURB		
6" HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING 6" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
RIGHT OF WAY MARKERS	EA.	
PLACING RIGHT OF WAY MARKERS	EA.	
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE " "	EA.	
MONUMENTS, TYPE " "	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
CASTINGS ADJUSTED TO GRADE, MONUMENTS	EA.	
BENCH MARK POSTS	EA.	
RESETTING BENCH MARK POSTS	EA.	

STRUCTURES

PIPE - LINEAL FEET

ITEM	4"	6"	8"	10"	12"	15"	18"	24"
REINFORCED CONCRETE								
VITRIFIED CLAY CONCRETE								
CORRUGATED METAL R.C. VIT. CL. OR CONC. V.C. CL. OR CONC.								
PIPE TO BE RELAID								
EXTRA STRENGTH REINFORCED CONCRETE								
VIT. CLAY OR CONC. SEWER								
SEWER T. CLAY SEWER								
REINF. CONC. SEWER								
BITUM. COATED CORR. METAL								
DEFORMED CORR. METAL								
DRAINTILE								

SUBSURFACE DRAINAGE

PIPE - LINEAL FEET	AGG.-CU.YDS.
6" PERF. C.M., V.C. SEWER, CEM. CONC. SEWER OR PERF. V.C. SEWER	
6" BIT. COATED PERF. C.M., V.C. SEWER, CEM. CONC. SEWER OR PERF. V.C. SEWER	

CASTINGS ADJUSTED TO GRADE

EACH

FOR STRUCTURES

ITEM	UNIT	QUANTITY
CONCRETE CLASS "D"	CYS	
REINFORCING STEEL	LBS	

GATE VALVES

SIZE	HEAD	EA

CATCH BASINS

TYPE	EACH

PIPE CATCH BASIN

SIZE	EACH
12"	
15"	
18"	
24"	

INLETS

TYPE	EACH

MANHOLES

TYPE	EACH
A - 4	
B - 4	

RECONSTRUCTED

TYPE	LIN. FT.
MANHOLE	
CATCH BASIN	
INLET	

STRUCTURE DATA

FEDERAL ROAD DIVISION NO.	STATE	"F" PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	331(4)	1956	46	197

STRUCTURE NUMBER	LOCATION	DESCRIPTION SIZE	DESCRIPTION	SKEW	LENGTH "L"	HEIGHT "H"	WINGS "W"	FLOW LINE UP STREAM ELEV.	FLOW LINE DOWN STREAM ELEV.	CONCRETE CLASS "D" CU.YDS.	SPECIAL BORROW CLASS "B" CU.YDS.	REINFORCING STEEL LBS.	REMARKS	PLANS ON SHEET NO.
89	191+96 LT.	12"	C.M.P.		20'					0.58			REMOVE STRUCTURE IN PLACE	
90	192+55 RT.	12"	C.M.P.		24'					0.58				
91	193+45 LT.												REMOVE STRUCTURE IN PLACE	
92	196+28 RT.	12"	C.M.P.		32'					0.58				
93	196+75		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 94	
94	196+75	12"	CLASS 1 PIPE		44'			967.85	967.48	0.29	6		CONNECT TO STRUCTURE Nº 93 1-6" ON 12" TEE, 28' LT.	
95	197+45 RT.	12"	C.M.P.		32'					0.58				
96	197+85 RT.	12"	C.M.P.		24'					0.58				
97	199+50		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 98	
98	199+50	12"	CLASS 1 PIPE		44'			969.64	969.22	0.29	5		CONNECT TO STRUCTURE Nº 97 1-6" ON 12" TEE 28' LT.	
99	199+80 RT.	12"	C.M.P.		24'					0.58				
100	202+25		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 101	
101	202+25	12"	CLASS 1 PIPE		46'			971.44	970.18	0.29	5		CONNECT TO STRUCTURE Nº 100	
102	202+28 RT.	12"	CLASS 5 PIPE		24'					0.58				
103	203+60	15"	CLASS 1 PIPE		96'			970.24	969.82	0.69	21		REMOVE STRUCTURE IN PLACE, OUTLET DITCH TO BE CONSTRUCTED	
104	205+00		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 105	
105	205+00	12"	CLASS 1 PIPE		50'			972.54	970.40	0.29	13		CONNECT TO STRUCTURE Nº 104	
106	208+50		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 107	
107	208+50	12"	CLASS 1 PIPE		50'			973.72	971.93	0.29	8		CONNECT TO STRUCTURE Nº 106 1-6" ON 12" TEE 28' RT.	
108	210+75		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 109	
109	210+75	12"	CLASS 1 PIPE		54'			974.88	974.15	0.29	8		CONNECT TO STRUCTURE Nº 108 1-6" ON 12" TEE 39.8' RT.	
110	213+34 RT.	15"	C.M.P.		52'					0.69			REMOVE STRUCTURE, E.D.T. & SIPHON IN PLACE	
111	213+96 RT.												REMOVE STRUCTURE IN PLACE	
112	214+00		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 113	
113	214+00	12"	CLASS 1 PIPE		52'			977.40	976.02	0.29	8		CONNECT TO STRUCTURE Nº 112 1-6" ON 12" TEE, 39.3 RT.	
114	218+75		STD. TYPE D-6 INLET										CONNECT TO STRUCTURE Nº 115	
115	218+75	12"	CLASS 1 PIPE		46'			975.76	975.10	0.29	5		CONNECT TO STRUCTURE Nº 114 1-6" ON 12" TEE, 28' RT.	
116	220+86.5 RT.	12"	CLASS 5 PIPE		28'					0.58				
117	222+10 LT.	12"	CLASS 5 PIPE		20'					0.58				
118	224+48	24"	CLASS 1 PIPE		90'			978.10	971.08	1.24	20		REMOVE STRUCTURE IN PLACE 6" ON 24" CROSS 28' LT.	
119	224+50 RT.	6"	F. T.		4'								REMOVE F.T. WITHIN R/W & CONNECT TO F.T. IN PLACE	
120	226+10 RT.	12"	C.M.P.		24'					0.58				
121	229+82	24"	CLASS 1 PIPE		98'			978.73	972.19	1.24	19		REMOVE STRUCTURE IN PLACE	
122	229+92		STD. 18" PIPE C.B.										REMOVE 18" F.T. INLET. CONNECT TO STR. NO. 123	
123	229+98	8"	SEWER PIPE		4'								CONNECT TO STRUCTURE Nº S122 & 124	
124	230+00	8"	SEWER PIPE		135'						36		8" ON 8" TEE, 56' RT. CONNECT TO STR. Nº 123 REMOVE F.T. IN PLACE AT R/W TO BE R/W CONNECT TO F.T. IN PLACE @ ST. & LT. R/W.	
125	233+08										10		REMOVE STRUCTURE IN PLACE	
126	233+70	24"	CLASS 1 PIPE		90'			977.01	974.26	1.24	27		1-6" ON 24" TEE, 26' LT.	
127	236+00	15"	CLASS 1 PIPE	30° RT.	110'			982.06	979.35	1.20	63		1-6" ON 15" TEE, 28' RT. 1-6" ON 15" TEE 28' LT. REMOVE STR. IN PLACE	
128	238+34 RT.	12"	C.M.P.		24'					0.58				
129	239+00 RT.	12"	C.M.P.		24'					0.58				
130	239+32 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
131	241+02 LT.	12"	C.M.P.		24'					0.58				
132	242+20 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
133	242+32 RT.	12"	C.M.P.		20'					0.58				
134	243+04 LT.												REMOVE PIPE IN PLACE	
135	243+23 RT.	12"	C.M.P.		24'					0.58				
136	243+34 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
137	244+04 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
138	244+77 LT.	12"	CLASS 5 PIPE		24'					0.58			REMOVE PIPE IN PLACE	
139	245+26	15"	CLASS 1 PIPE		102'			984.34	980.91	1.20	20		REMOVE STRUCTURE IN PLACE	
140	245+38 LT.	6"	SEWER PIPE		8'								REMOVE F.T. IN PLACE, TO LT. R/W. CONNECT TO F.T. IN PLACE @ LT. R/W.	
141	245+38 LT.												REMOVE PIPE IN PLACE	
142	253+40 RT.	12"	C.M.P.		20'					0.58				
143	255+35	18"	CLASS 1 PIPE	30° LT.	96'			971.28	969.82	1.60	32		1-6" ON 18" TEE 28' LT; L-HDWL. LT; REMOVE STRUCTURE IN PLACE	
144	256+26 LT.	12"	C.M.P.		24'					0.58				
145	257+48 LT.	12"	CLASS 5 PIPE		24'					0.58				
146	259+08	16'	R.C. SLAB TOP CULVERT		78'-4"	8'		959.56	956.30	264.78	286	14,561	FOR DETAILS OF R.C. SLAB TOP EXTENSION SEE SHEET Nº 44	
147	259+08 LT.	24"	C.M.P.		4'				959.56	10.00	3		REMOVE HDWL. & 16' OF C.M.P. IN PLACE, SEE DETAIL SHEET Nº 44	
148	260+00	18"	CLASS 5 PIPE		22'					0.80				
149	261+02 LT.	15"	CLASS 5 PIPE		32'					0.69				
150	263+44 RT.	18"	C.M.P.		24'					0.80			REMOVE PIPE IN PLACE	
151	265+24.5 RT.	15"	C.M.P.		52'					0.69				
152	266+02 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
153	267+35 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
154	268+01.5 LT.	15"	C.M.P.		48'					0.69				
155	269+65 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
156	270+73 LT.	12"	C.M.P.		24'					0.58				
157	272+10 LT.	12"	C.M.P.		24'					0.58				
158	274+01 LT.	15"	C.M.P.		48'					0.69				
159	274+05 RT.	12"	C.M.P.		24'					0.58				
160	275+98 LT.	12"	C.M.P.		24'					0.58				
161	276+20 RT.	12"	C.M.P.		24'					0.29			CONNECT TO STR. Nº 163 ; REMOVE STR. IN PLACE	
162	276+60 LT.	12"	C.M.P.		24'					0.58				
163	276+61 RT.	12"	SEWER PIPE		58'					0.29			CONNECT TO STR. Nº 161 ; REMOVE PIPE IN PLACE	
164	277+20 LT.	12"	C.M.P.		24'					0.58				
165	277+28 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
166	277+98 LT.	12"	C.M.P.		24'					0.58				
167	279+27 LT.	15"	C.M.P.		54'					0.69				

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"F" PROJ.	LINE	SHEET	FILE
331-(4)			

ESTIMATE OF QUANTITIES

GRADING

ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS.	
SOLID ROCK EXCAVATION	CYS.	
SPECIAL BORROW	CYS.	
OVERHAUL	CYS.	
ADDED HAUL	UNITS	
PEAT EXCAVATION	CYS.	
SURCHARGE - 4'	LFT.	
SURCHARGE - 4'-8'	LFT.	
SURCHARGE - 8'-12'	LFT.	
MACHINE OPERATION	HRS.	
MACHINE AVAILABILITY	HRS.	
DYNAMITE	LBS.	
TEST HOLES	LFT.	
CASED DYNAMITE HOLES	LFT.	
GRADE 'B' SPECIAL BORROW	CYS.	
TOP SOIL	CYS.	
PAVEMENT REMOVAL	SYS.	
SALVAGED PAVEMENT	SYS.	
PAVEMENT SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	
CENTER CURB REMOVAL	LFT.	
COMB. CURB & GUTTER REMOVAL	LFT.	
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
RETAINING WALL REMOVAL	LFT.	
PAVED SIDE DITCH REMOVAL	LFT.	
STOCKPILED SELECTED MATERIAL	CYS.	
SALVAGING STOCKPILED SELECTED MATERIAL	CYS.	
SALVAGED ROAD MATERIAL	CYS.	

PAVEMENT

ITEM	UNIT	QUANTITY
SUBBASE, TYPE " "	CYS.	
REINFORCED CONCRETE	SYS.	
PLAIN CONCRETE	SYS.	
H.E.S. REINFORCED CONCRETE	SYS.	
H.E.S. PLAIN CONCRETE	SYS.	
PLAIN CONCRETE FOR PRIVATE DRIVE CROSSOVERS	SYS.	
PRIVATE DRIVE	SYS.	
REINFORCING STEEL	LBS.	
CONTRACTION JOINTS, TYPE	LFT.	
EXPANSION JT., 1" PREF. BITUM.	LFT.	
EXPANSION JT., 1" CORK OR CORK RUBBER	LFT.	
EXPANSION JT., 1" PREF. FIBER	LFT.	
EXPANSION JT., " PREF.	LFT.	
EXPANSION JT., 1" PREFORMED WITH LOAD TRANSFER	LFT.	
3" PREFORMED BITUM. EXP. JT.	LFT.	
CONCRETE BASE		
H.E.S. CONCRETE BASE		
CONCRETE PATCHES	SYS.	
CLASS I CONCRETE PATCHES	SYS.	
CLASS II CONCRETE PATCHES	SYS.	
CLASS III CONCRETE PATCHES	SYS.	
CLASS IV CONCRETE PATCHES	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	GALS.	
AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	
AGGREGATE FOR COMPACTED AGGREGATE SURFACE	TONS	
WATER FOR COMPACTED AGGREGATE BASE	M.GALS.	
WATER FOR COMPACTED AGGREGATE SURFACE	M.GALS.	
AGGREGATE FOR SHOULDER DRAINS	TONS	

ITEM	UNIT	QUANTITY
BITUMINOUS MATERIAL FOR PRIME	GALS.	
BITUMINOUS MATERIAL FOR SEAL	GALS.	
COVERING AGGREGATE	TONS.	
HOT ASPHALTIC CONCRETE BINDER (1)	TONS	
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED AGGREGATE BINDER (1)	TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	
ROCK ASPHALT SURFACE	TONS	
BITUM. MIXTURE FOR APPROACHES	TONS	
CONCRETE SIDEWALK	SYS.	
1" PREF. BITUM. EXP. JT. FOR SIDEWALK	LFT.	
CROSSWALK	SYS.	
CONCRETE HEADER	LFT.	
(1) INCLUDES FOR WEDGE & LEVELING COURSES	TONS	

MISCELLANEOUS

ITEM	UNIT	QUANTITY
SODDING	SYS.	
FURNISHING MATERIAL FOR PLAIN SEEDING	ACRES	
PLAIN SEEDING	ACRES	
MULCHED SEEDING	SYS.	
GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE OR STEEL BEAM GUARD RAIL	LFT.	
RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
RESET STEEL BEAM GUARD RAIL	LFT.	
RESET WIRE ROPE GUARD RAIL	LFT.	
GUARD RAIL SALVAGE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	
GUIDE POSTS, TYPE "B"	EA.	
RESET GUIDE POSTS	EA.	
BARRICADES, TYPE "A"	EA.	
BARRICADES, TYPE "B"	EA.	
TYPICAL SIGN STANDARDS	EA.	
PAVED SIDE DITCH, TYPE " "	LFT.	
PAVED SIDE DITCH, TYPE " "	LFT.	
PAVED SIDE DITCH, TYPE " "	LFT.	
LIP GUTTER	LFT.	
COMBINED CURB AND GUTTER	LFT.	
CONCRETE CURB	LFT.	
CONCRETE CURB TYPE "B"	LFT.	
INTEGRAL CONCRETE CURB	LFT.	
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	
CONCRETE CENTER CURB		
6' HAND LAID RIP RAP	SYS.	
12' HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING 6' HAND LAID RIP RAP	SYS.	
PLACING 12' HAND LAID RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
RIGHT OF WAY MARKERS	EA.	
PLACING RIGHT OF WAY MARKERS	EA.	
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE " "	EA.	
MONUMENTS, TYPE " "	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
CASTINGS ADJUSTED TO GRADE, MONUMENTS	EA.	
BENCH MARK POSTS	EA.	
RESETTING BENCH MARK POSTS	EA.	

STRUCTURES

PIPE - LINEAL FEET

ITEM	4"	6"	8"	10"	12"	15"	18"	24"
REINFORCED CONCRETE								
V.T.RIFIED CLAY CONCRETE								
CORRUGATED METAL								
R.C., V.C., C.I. OR CONC.								
V.C., C.I. OR CONC. PIPE								
PIPE TO BE RELAID								
EXTRA STRENGTH REINFORCED CONCRETE								
VIT. CLAY OR CONC. SEWER								
V.T. CLAY SEWER								
REINF. CONC. SEWER								
BITUM. COATED CORR. METAL								
DEFORMED CORR. METAL								
DRAINTILE								

SUBSURFACE DRAINAGE

PIPE - LINEAL FEET	AGG. CU. YDS.
6" PERF. C.M., V.C. SEWER, CEM. CONC. SEWER OR PERF. V.C. SEWER	
6" BIT. COATED PERF. C.M., V.C. SEWER, CEM. CONC. SEWER OR PERF. V.C. SEWER	

CASTINGS ADJUSTED TO GRADE

EACH

FOR STRUCTURES

ITEM	UNIT	QUANTITY
CONCRETE CLASS 'D'	CYS	
REINFORCING STEEL	LBS.	

GATE VALVES

SIZE	HEAD	EA.

CATCH BASINS

TYPE	EACH

PIPE CATCH BASIN

SIZE	EACH
12"	
15"	
18"	
24"	

INLETS

TYPE	EACH

MANHOLES

TYPE	EACH
A - 4	
B - 4	

RECONSTRUCTED

TYPE	LIN. FT.
MANHOLE	
CATCH BASIN	
INLET	

STRUCTURE DATA

FEDERAL ROAD DIVISION NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND	391(4)	1956	47	197

STRUCTURE NUMBER	LOCATION	DESCRIPTION SIZE	DESCRIPTION	SKEW	LENGTH "L"	HEIGHT "H"	WINGS "W"	FLOW LINE UP STREAM ELEV.	FLOW LINE DOWN STREAM ELEV.	CONCRETE CLASS 'D' CU YDS	SPECIAL BORROW GRADE 'B' CU YDS	REINFORCING STEEL LBS.	REMARKS	PLANS ON SHEET NO.
168	279+44 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
169	280+90	18"	CLASS I PIPE		84'			982.92	982.47	0.80	20		REMOVE STRUCTURE IN PLACE	
170	281+25.5 RT.	15"	C.M.P.		40'					0.69			REMOVE PIPE IN PLACE	
171	282+15 RT.	15"	C.M.P.		24'					0.69			REMOVE PIPE IN PLACE	
172	282+47 RT.	15"	C.M.P.		24'					0.69			REMOVE PIPE IN PLACE	
173	282+96 LT.	15"	C.M.P.		48'					0.69				
174	283+33 RT.	15"	C.M.P.		24'					0.69			REMOVE PIPE IN PLACE	
175	283+66 LT.	12"	C.M.P.		24'					0.58				
176	284+48 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
177	285+26 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
178	286+02 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
179	286+85 RT.	15"	C.M.P.		24'					0.69			REMOVE PIPE IN PLACE	
180	287+35 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
181	288+21 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
182	289+14 RT.												REMOVE PIPE IN PLACE	
183	290+10 RT.	12"	C.M.P.		24'					0.58				
184	291+03 RT.	12"	C.M.P.		24'					0.58				
185	293+93 RT.	12"	PIPE Class 5		6'									
186	294+53 RT.	12"	C.M.P.		24'					0.58				
187	295+72.5 RT.	15"	C.M.P.		48'					0.69			REMOVE PIPE IN PLACE	
188	296+14 LT.	10"	SEWER PIPE		6'								REMOVE F.T. IN PLACE TO LT. R/W. CONNECT TO F.T. IN PLACE @ LT. R/W.	
189	296+30	18"	CLASS I PIPE		96'			986.46	984.94	0.80	51		1-6" ON 18" CROSS 28' RT; 1-6" ON 18" CROSS 28 FT. LT; REMOVE STR. IN PLACE	
190	298+39 RT.	12"	C.M.P.		24'					0.58				
191	298+65 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
192	300+53 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
193	300+79 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
194	303+41 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
195	303+77 RT.	6"	SEWER PIPE		10'								REMOVE PIPE IN PLACE TO RT. R/W. CONNECT TO PIPE @ RT. R/W.	
196	304+56 RT.	15"	C.M.P.		52'					0.69			REMOVE STRUCTURE IN PLACE.	
197	304+65 LT.	12"	C.M.P.		20'					0.58				
198	WHITEWAY RD. 1+93 LT.	12"	C.M.P.		28'					0.58			REMOVE STRUCTURE IN PLACE.	
199	305+39 RT.	15"	C.M.P.		44'					0.58			REMOVE STRUCTURE IN PLACE	
200	305+39 RT.	15"	C.M.P.		44'					0.58			REMOVE STRUCTURE IN PLACE	
201	310+00 RT.	18"	C.M.P.		24'					0.80			REMOVE STRUCTURE IN PLACE	
202	311+53 RT.	25"x16"	C.M. PIPE ARCH		24'					0.77			REMOVE PIPE IN PLACE	
203	312+98 RT.	25"x16"	C.M. PIPE ARCH		24'					0.77			REMOVE PIPE IN PLACE	
204	314+60 RT.	36"x22"	C.M. PIPE ARCH		24'					1.71			REMOVE PIPE IN PLACE	
205	316+65 RT.	36"x22"	C.M. PIPE ARCH		24'					1.71				
206	317+66 RT.	36"x22"	C.M. PIPE ARCH		48'					1.71				
207	317+71 LT.	18"	C.M.P.		52'					0.80			REMOVE PIPE IN PLACE	
208	319+30 RT.	36"x22"	C.M. PIPE ARCH		24'					1.71			REMOVE PIPES IN PLACE	
209	321+15 LT.	12"	C.M.P.		24'					0.29			REMOVE PIPE IN PLACE	
210	321+85 LT.	12"	SEWER PIPE		116'					0.29			REMOVE PIPE IN PLACE	
211	324+00 LT.	12"	CLASS 5 PIPE		22'					0.58			REMOVE PIPE IN PLACE	
212	335+50 LT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
213	337+53 RT.	6"	F.T.		200'								REMOVE F.T. WITHIN R/W. CONNECT TO F.T. IN PLACE.	
214	337+98 RT.												REMOVE PIPE IN PLACE	
215	339+65	24"	CLASS I PIPE		96'			982.37	978.40	2.50	31		REMOVE STRUCTURE IN PLACE 6" ON 24" TEE 28 LT. 6" ON 24" TEE 28 RT.	
216	340+60 RT.	29"x18"			24'					0.90			REMOVE PIPE IN PLACE	
217	342+75 LT.	12"	C.M.P.		24'					0.58				
218	343+38 LT.	12"	C.M.P.		24'					0.58				
219	343+75 LT.	12"	PIPE Class 5		6'									
220	344+27 RT.												REMOVE 130± OF 4" F.T. IN PLACE	
221	345+05 LT.	12"	C.M.P.		28'					0.58			REMOVE PIPE IN PLACE	
222	345+28 RT.	12"	C.M.P.		24'					0.58			REMOVE PIPE IN PLACE	
223	347+70 RT.	12"	CLASS 5 PIPE		24'					0.58			REMOVE STRUCTURE IN PLACE	
224	348+15		2-STD. TYPE D-6 INLETS										SEE DETAIL SHEET NO. 31	
		12"	CLASS I PIPE		4'			984.6	983.8				CONNECT TO STR. NO. 225	
225	348+23	12"	CLASS I PIPE		9'			983.6			2		CONNECT TO STR. NOS. 224 & 226 INCLUDES 1-45° ELBOW	31
226	348+30	78"	CLASS I PIPE		100'		W.	974.81	974.00	25.92	403	1510	12" ON 78" TEE REQD. ON ℄. CONNECT TO STR. NO. 225 REM. STR. IN PLACE	
227	349+38 RT.	15"	C.M.P.		24'					0.69			REMOVE PIPE IN PLACE	
228	350+95 RT.												REMOVE STRUCTURE IN PLACE	
229	351+09 LT.	18"	C.M.P.		52'					0.80				
230	351+50		STD. TYPE E-7 INLET					989.08	987.50				CONNECT TO STR. NO. 231	
231	351+50 LT.	12"	CLASS I PIPE		48'			987.50	986.60	0.29	4		CONNECT TO STR. NO. 230	
232	351+55 RT.	15"	C.M.P.		32'					0.69				
233	355+97 RT.	15"	C.M.P.		56'					0.69				
234	1+84 RT. 5+13 LT.	12"	C.M.P.		40'					0.58				32
235	5+29 LT. 5+47 RT.	12"	C.M.P.		24'					0.58				32
236	5+70 LT. 5+88 RT.	12"	C.M.P.		50'					0.58				32
237	3+11 LT. 3+29 RT.	12"	C.M.P.		30'					0.58				32
238	5+84 RT. 5+66 LT.	12"	C.M.P.		24'					0.58				32
239	356+10		STD. TYPE E-7 INLET					995.00	992.50				CONNECT TO STR. NO. 240	
240	356+10 LT.	12"	CLASS I PIPE		48'			992.50	992.00	0.29	6		CONNECT TO STR. NO. 239 6" ON 12" TEE 34' LT.	
241	362+40	15"	CLASS I PIPE		100'			994.51	994.10	0.69	12		CONNECT TO STR. NO. 242 12" ON 15" TEE ON ℄ 6" ON 15" TEE 34' RT. & 8" ON 15" CROSS 34' LT.	
242	362+45	12"	CLASS I PIPE		8'			995.00			1		CONNECT TO STR. NOS. 241, 243	
243	362+50		STD. TYPE E-7 INLET					997.52	995.00				CONNECT TO STR. NO. 242	
244	369+90		STD. TYPE E-7 INLET					998.56	995.56				CONNECT TO STR. NO. 245	
245	369+95	12"	CLASS I PIPE		8'			995.56			1		CONNECT TO STR. NOS. 244 & 246	
246	370+00	18"	CLASS I PIPE		102'			992.86	992.86	2.29	18		CONNECT TO STR. NO. 245, 12" ON 18" TEE ON ℄	

SEPTEMBER 1953

F.-PROJ.	LINE	SHEET	F.
391 (4)			

ESTIMATE OF QUANTITIES

GRADING

ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS.	
SOLID ROCK EXCAVATION	CYS.	
SPECIAL BORROW	CYS.	
OVERHAUL	CYS.	
ADDED HAUL	UNITS	
PEAT EXCAVATION	CYS.	
SURCHARGE - 4'	LFT.	
SURCHARGE - 4'-8'	LFT.	
SURCHARGE - 8'-12'	LFT.	
MACHINE OPERATION	HRS.	
MACHINE AVAILABILITY	HRS.	
DYNAMITE	LBS.	
TEST HOLES	LFT.	
CASED DYNAMITE HOLES	LFT.	
GRADE "B" SPECIAL BORROW	CYS.	
TOP SOIL	CYS.	
PAVEMENT REMOVAL	SYS.	
SALVAGED PAVEMENT	SYS.	
PAVEMENT SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	
CENTER CURB REMOVAL	LFT.	
COMB CURB & GUTTER REMOVAL	LFT.	
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
RETAINING WALL REMOVAL	LFT.	
PAVED SIDE DITCH REMOVAL	LFT.	
STOCKPILED SELECTED MATERIAL	CYS.	
SALVAGING STOCKPILED SELECTED MATERIAL	CYS.	
SALVAGED ROAD MATERIAL	CYS.	

PAVEMENT

ITEM	UNIT	QUANTITY
SUBBASE, TYPE " "	CYS.	
REINFORCED CONCRETE	SYS.	
PLAIN CONCRETE	SYS.	
H.E.S. REINFORCED CONCRETE	SYS.	
H.E.S. PLAIN CONCRETE	SYS.	
PLAIN CONCRETE FOR PRIVATE DRIVE CROSSOVERS	SYS.	
PRIVATE DRIVE	SYS.	
REINFORCING STEEL	LBS.	
CONTRACTION JOINTS, TYPE	LFT.	
EXPANSION JT., 1" PREF. BITUM.	LFT.	
EXPANSION JT., 1" CORK OR CORK RUBBER	LFT.	
EXPANSION JT., 1" PREF. FIBER	LFT.	
EXPANSION JT., " PREF.	LFT.	
EXPANSION JT., 1" PREFORMED WITH LOAD TRANSFER	LFT.	
3" PREFORMED BITUM. EXP. JT.	LFT.	
CONCRETE BASE H.E.S. CONCRETE BASE		
CONCRETE PATCHES	SYS.	
CLASS I CONCRETE PATCHES	SYS.	
CLASS II CONCRETE PATCHES	SYS.	
CLASS III CONCRETE PATCHES	SYS.	
CLASS IV CONCRETE PATCHES	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	GALS.	
AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	
AGGREGATE FOR COMPACTED AGGREGATE SURFACE	TONS	
WATER FOR COMPACTED AGGREGATE BASE	M.GALS	
WATER FOR COMPACTED AGGREGATE SURFACE	M.GALS	
AGGREGATE FOR SHOULDER DRAINS	TONS	

ITEM	UNIT	QUANTITY
BITUMINOUS MATERIAL FOR PRIME	GALS.	
BITUMINOUS MATERIAL FOR SEAL	GALS.	
COVERING AGGREGATE	TONS.	
HOT ASPHALTIC CONCRETE BINDER (1)	TONS	
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED AGGREGATE BINDER (1)	TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	
ROCK ASPHALT SURFACE	TONS	
BITUM. MIXTURE FOR APPROACHES	TONS	
CONCRETE SIDEWALK	SYS.	
1" PREF. BITUM. EXP. JT. FOR SIDEWALK	LFT.	
CROSSWALK	SYS.	
CONCRETE HEADER	LFT.	
(1) INCLUDES FOR WEDGE & LEVELING COURSES	TONS	

MISCELLANEOUS

ITEM	UNIT	QUANTITY
SODDING	SYS.	
FURNISHING MATERIAL FOR PLAIN SEEDING	ACRES	
PLAIN SEEDING	ACRES	
MULCHED SEEDING	SYS.	
GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	
SHOP CURVED STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
FLEXIBLE STEEL PLATE OR STEEL BEAM GUARD RAIL	LFT.	
RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
RESET STEEL BEAM GUARD RAIL	LFT.	
RESET WIRE ROPE GUARD RAIL	LFT.	
GUARD RAIL SALVAGE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	
GUIDE POSTS, TYPE "B"	EA.	
RESET GUIDE POSTS	EA.	
BARRICADES, TYPE "A"	EA.	
BARRICADES, TYPE "B"	EA.	
TYPICAL SIGN STANDARDS	EA.	
RAILROAD CROSSING SIGN, TYPE "A"	EA.	
RAILROAD CROSSING SIGN, TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
PAVED SIDE DITCH, TYPE " "	LFT.	
PAVED SIDE DITCH, TYPE " "	LFT.	
PAVED SIDE DITCH, TYPE " "	LFT.	
LIP GUTTER	LFT.	
COMBINED CURB AND GUTTER	LFT.	
CONCRETE CURB	LFT.	
CONCRETE CURB, TYPE "B"	LFT.	
INTEGRAL CONCRETE CURB	LFT.	
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	
CONCRETE CENTER CURB		
6" HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING 6" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
RIGHT OF WAY MARKERS	EA.	
PLACING RIGHT OF WAY MARKERS	EA.	
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS TYPE " "	EA.	
MONUMENTS TYPE " "	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
CASTINGS ADJUSTED TO GRADE, MONUMENTS	EA.	
BENCH MARK POSTS	EA.	
RESETTING BENCH MARK POSTS	EA.	

STRUCTURES

PIPE - LINEAL FEET

ITEM	4"	6"	8"	10"	12"	15"	18"	24"
REINFORCED CONCRETE								
VITRIFIED CLAY CONCRETE								
CORRUGATED METAL R.C.,V.C.,C.I. OR CONC.								
V.C.,C.I. OR CONC. PIPE								
PIPE TO BE RELAID								
EXTRA STRENGTH REINFORCED CONCRETE								
VIT CLAY OR CONC SEWER								
VIT CLAY SEWER								
REINF CONC SEWER								
BITUM COATED CORR. METAL								
DEFORMED CORR. METAL								
DRAINTILE								

SUBSURFACE DRAINAGE

PIPE - LINEAL FEET	AGG. CU.YDS.
6" PERF C.M.,V.C. SEWER, CEM. CONC SEWER OR PERF V.C. SEWER	
6" BIT. COATED PERF C.M.,V.C. SEWER, CEM. CONC SEWER OR PERF V.C. SEWER	

CASTINGS ADJUSTED TO GRADE

EACH

FOR STRUCTURES

ITEM	UNIT	QUANTITY
CONCRETE CLASS "D"	CYS.	
REINFORCING STEEL	LBS.	

GATE VALVES

SIZE	HEAD	EA.

CATCH BASINS

TYPE	EACH

PIPE CATCH BASIN

SIZE	EACH
12"	
15"	
18"	
24"	

INLETS

TYPE	EACH

MANHOLES

TYPE	EACH
A-4	
B-4	

RECONSTRUCTED

TYPE	LIN.FT.
MANHOLE	
CATCH BASIN	
INLET	

STRUCTURE DATA

FEDERAL ROAD DIVISION NO.	STATE	"F" PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	331 (4)	1956	48	197

STRUCTURE NUMBER	LOCATION	DESCRIPTION SIZE	DESCRIPTION	SKEW	LENGTH "L"	HEIGHT "H"	WINGS "W"	FLOW LINE UP STREAM ELEV.	FLOW LINE DOWN STREAM ELEV.	CONCRETE CLASS "D" CUYDS.	SPECIAL EXCAVATION GRADE "B" CUYDS.	REINFORCING STEEL LBS.	REMARKS	PLANS ON SHEET NO.
246A	4+15 5-2-C	12"	C.M.P.		20'					0.58				
247	372+10		STD. TYPE E-7 INLET					996.86	996.86				CONNECT TO STR. NO. 248	
248	372+15	12"	CLASS I PIPE		8'			996.86			1		CONNECT TO STR. NOS. 247, 249	
249	372+20	15"	CLASS I PIPE		94'			995.94	995.44	1.71	12		CONNECT TO STR. NO. 248 12"ON 15" TEE ON ℄ 8"ON 15" TEE 34' RT. 6"ON 15" TEE 34' LT.	
250	376+90		STD. TYPE E-7 INLET					998.39	996.39				CONNECT TO STR. NO. 251	
251	376+95	12"	CLASS I PIPE		8'			996.39			1		CONNECT TO STR. NOS. 250, 252	
252	377+00	15"	CLASS I PIPE		104'			994.70	994.38	0.69	14		CONNECT TO STR. NO. 251 12" ON 15" TEE ON ℄	
253	379+20 5	15"	CLASS I PIPE		160'						67		REMOVE F.T. IN PLACE R/W TO R/W. CONNECT TO F.T. IN PLACE	
254	383+00		STD. TYPE E-7 INLET					996.73	994.61				CONNECT TO STR. NO. 255	
255	383+00 LT.	12"	CLASS I PIPE		48'			994.61	994.12	0.29	6		CONNECT TO STR. NO. 254	
256	384+00	22"x 13"	BIT. COATED C.M. PIPE ARCH.		96'			994.19	994.11	0.64	11			
257	386+00		STD. TYPE E-7 INLET					997.21	994.79				CONNECT TO STR. NO. 258	
258	386+00 LT.	12"	CLASS I PIPE		48'			994.79	994.42	0.29	6		CONNECT TO STR. NO. 257	
259	397+50		STD. TYPE E-7 INLET					996.83	994.29				CONNECT TO STR. NO. 260	
260	397+50 LT.	12"	CLASS I PIPE		52'			994.29	994.13	0.29	5		CONNECT TO STR. NO. 259 6" ON 12" TEE 6' LT.	
261	398+10 RT.	10"	C.M.P.		52'					0.80				
262	398+10 LT.	15"	CLASS 5 PIPE		54'					0.69			REMOVE PIPE IN PLACE	
263	398+30 RT.	12"	C.M.P.		20'					0.58				
264	398+30 LT.	12"	C.M.P.		20'					0.58				
265	400+80		STD. TYPE E-7 INLET					996.38	993.66				CONNECT TO STR. NO. 266	
266	400+80 LT.	12"	CLASS I PIPE		48'			993.66	993.46	0.29	5		CONNECT TO STR. NO. 265 6" ON 12" TEE 1' RT. PLACING GROUTED RIP-RAP 8 SQ.YDS. LT.	
267	407+00	8"	SEWER PIPE		125'						31		LOCATION IS APPROX. EXIST. TILE NOT FOUND. CONNECT TO EXISTING TILE AT R/W LINES	
268	407+45	43"x 27"	BIT. COATED C.M. PIPE ARCH		60'			992.70	992.60	1.18	10		PLACING GROUTED RIP-RAP 4 S.Y.S. LT.	
269	2+25 5-3-C	18"x 11"	C.M. PIPE ARCH		42'					0.45				34
270	418+82.5	8"	SEWER PIPE		135'						6		REMOVE EXIST. F.T. R/W TO R/W. CONNECT TO EXIST. F.T. @ R/W LINES	
271	418+89	24"	CLASS I PIPE		68'						10		NO HEADWALLS REQD. PLACING GROUTED RIP-RAP 6 SQ. YDS.	
272	419+00 LT.	12"	C.M.P.		24'								NO HEADWALLS REQD.	

SEPTEMBER 1955

"F" PROJ.	LINE	SHEET	TITLE
331 (4)			

ESTIMATE OF QUANTITIES

FEDERAL ROAD DIVISION NO.	STATE	"F" PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	391 (4)	1958	48A	197

GRADING

ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CYS.	69,130
SOLID ROCK EXCAVATION	CYS.	
UNCLASSIFIED EXCAVATION	CYS.	
SPECIAL BORROW	CYS.	27,895
OVERHAUL	CYS.	12,502
ADDED HAUL	UNITS	11,905
PEAT EXCAVATION	CYS.	15,338
SURCHARGE - 4'	LFT.	140
SURCHARGE - 4'-8'	LFT.	76
SURCHARGE - 8'-12'	LFT.	211
SURCHARGE - 12'-16'	LFT.	836
SURCHARGE - 16'-20'	LFT.	
SURCHARGE - 20'-24'	LFT.	
MACHINE OPERATION	HRS.	786
MACHINE AVAILABILITY	HRS.	472
DYNAMITE	LBS.	1,200
2" CASED TEST HOLES	LFT.	4,400
4" CASED TEST HOLES	LFT.	5,950
6" CASED TEST HOLES	LFT.	5,950
2" CASED DYNAMITE HOLES	LFT.	4,400
4" CASED DYNAMITE HOLES	LFT.	5,900
6 CASED DYNAMITE HOLES	LFT.	5,900
GRADE "B" SPECIAL BORROW	CYS.	90,010
PAVEMENT REMOVAL	SYS.	321
SALVAGED PAVEMENT	SYS.	
SURFACE REMOVAL	SYS.	
BREAKING PAVEMENT	SYS.	
CURB REMOVAL	LFT.	240
CENTER CURB REMOVAL	LFT.	
COMB CURB & GUTTER REMOVAL	LFT.	611
LIP GUTTER REMOVAL	LFT.	
GUTTER REMOVAL	LFT.	
WALK REMOVAL	SYS.	
STEPS REMOVAL	SYS.	
GUARD RAIL SALVAGE	LFT.	
RETAINING WALL REMOVAL	LFT.	
RETAINING WALL REMOVAL	LFT.	344
PAVED SIDE DITCH REMOVAL	LFT.	
SALVAGED ROAD MATERIAL	CYS.	

PAVEMENT

ITEM	UNIT	QUANTITY
SUBBASE TYPE "I" OR "II"	CYS.	29,974
SALVAGED ROAD MATERIAL FOR APPROACHES.	CYS.	3,260
REINFORCED CONCRETE	SYS.	145,986
PLAIN CONCRETE	SYS.	1,309
H.E.S. REINFORCED CONCFETE	SYS.	
PLAIN CEMENT CONCRETE FOR CROSSOVERS	SYS.	
BITUMINOUS MIXTURE FOR CROSSOVERS	TONS	
COVERING AGGREGATE	TONS	
SUBGRADE FINE AGGREGATE	TONS	
COMPACTED AGGREGATE	TONS	
PRIVATE DRIVE PAVEMENT	SYS.	
COMMERCIAL DRIVE PAVEMENT	SYS.	
REINFORCING STEEL	LBS.	4,814
CONTRACTION JOINTS, TYPE "D-1"	LFT.	31,884
	LFT.	
1" PREFORMED JOINT FILLER	LFT.	111
1" PREFORMED EXPANSION JOINT WITH LOAD TRANSFER	LFT.	225
3" EXPANSION JOINT	LFT.	
CONCRETE BASE	SYS.	
H.E.S. CONCRETE BASE	SYS.	
CONCRETE PATCHES	SYS.	
CONCRETE PATCHES CLASS I	SYS.	
CONCRETE PATCHES CLASS II	SYS.	
CONCRETE PATCHES CLASS III	SYS.	
CONCRETE PATCHES CLASS IV	SYS.	
CONCRETE WIDENING	SYS.	
FILLING CRACKS AND JOINTS	TONS	
BITUMINOUS MATERIAL FOR UNDERSEAL	TONS	
DRILLING HOLES	EACH	
COMPACTED AGGREGATE SHOULDER	TONS	7254
CALCIUM CHLORIDE	TONS	17
AGGREGATE FOR COMPACTED AGGREGATE BASE	TONS	90
WATER FOR COMPACTED AGGREGATE BASE	M GALS	0.27
AGGREGATE FOR SHOULDER DRAINS	TONS	
BITUMINOUS MATERIAL FOR PRIME	TONS	34.67
BITUMINOUS MATERIAL FOR SEAL	TONS	19.81
COVERING AGGREGATE	TONS	11.8
HOT ASPHALTIC CONCRETE BINDER (1)	TONS	3323.0
HOT ASPHALTIC CONCRETE SURFACE TYPE "B"	TONS	
BITUMINOUS COATED BLENDED AGGREGATE BINDER (1)	TONS	
BITUMINOUS COATED BLENDED AGGREGATE SURFACE	TONS	
BITUMINOUS COATED AGGREGATE BINDER (1)	TONS	
BITUMINOUS COATED AGGREGATE SURFACE	TONS	

ITEM	UNIT	QUANTITY
BITUM. MIXTURE FOR APPROACHES	TONS	
SALVAGED ROAD MATERIAL FOR APPROACHES	CYS.	
BITUMINOUS SHOULDER	TONS	
BITUMINOUS MATERIAL FOR SEAL	TONS	
COVERING AGGREGATE	TONS	

MISCELLANEOUS

ITEM	UNIT	QUANTITY
6" HAND LAID RIP RAP	SYS.	
12" HAND LAID RIP RAP	SYS.	
GROUTED RIP RAP	SYS.	
PLACING GROUTED RIP RAP	SYS.	12
PLACING 6" HAND LAID RIP RAP	SYS.	
PLACING 12" HAND LAID RIP RAP	SYS.	
PRECAST CONCRETE RIP RAP	SYS.	
STANDARD LIP GUTTER	LFT.	
PAVED SIDE DITCH, TYPE "A"	LFT.	1,898
PAVED SIDE DITCH, TYPE "B"	LFT.	270
PAVED SIDE DITCH, TYPE "C"	LFT.	260
INTEGRAL CONCRETE CURB	LFT.	20
INTEGRAL CONCRETE CURB TYPE "B"	LFT.	1,689
BITUMINOUS CURB	LFT.	
CONCRETE CURB	LFT.	13
CONCRETE CURB TYPE "B"	LFT.	
CONCRETE GUTTER	LFT.	
COMB. CONC. CURB AND GUTTER	LFT.	611
RECONSTRUCTED CONC. CURB	LFT.	
RECONSTRUCTED CONC. GUTTER	LFT.	
RECONSTRUCTED COMB. CONC. CURB AND GUTTER	LFT.	
RESET CURB	LFT.	
RESET COMB. CONC. CURB & GUTTER	LFT.	
CONCRETE CENTER CURB TYPE "A"	LFT.	17,539
CONCRETE CENTER CURB	SYS.	
FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
STEEL BEAM GUARD RAIL	LFT.	135
SHOP CURVED STEEL BEAM GUARDRAIL	LFT.	
DOUBLE FACE STEEL BEAM GUARD RAIL	LFT.	
WIRE ROPE GUARD RAIL	LFT.	
WOVEN WIRE FABRIC GUARD RAIL	LFT.	
GUARD RAIL	LFT.	
RESETTING FLEXIBLE STEEL PLATE GUARD RAIL	LFT.	
GUARD RAIL	LFT.	
GUARD RAIL POSTS	EA.	
RESETTING STEEL BEAM GUARD RAIL	LFT.	
RESETTING WIRE ROPE GUARD RAIL	LFT.	
RESET WOVEN WIRE FABRIC G. RAIL	LFT.	
GUARD FENCE	LFT.	
GUIDE POSTS, TYPE "A"	EA.	39
GUIDE POSTS, TYPE "B"	EA.	117
BARRICADES, TYPE "A"	EA.	2
BARRICADES, TYPE "B"	EA.	16
TYPICAL SIGN STANDARDS	EA.	27
RAILROAD CROSSING SIGN, TYPE "A"	EA.	
RAILROAD CROSSING SIGN, TYPE "B"	EA.	
ADVANCE RAILROAD WARNING SIGN	EA.	
CONCRETE HEADER	LFT.	
RECONSTRUCTED CONCRETE HEADER	LFT.	
CEMENT CONCRETE SIDEWALK	SYS.	47.2
RECONSTRUCTED CONCRETE SIDEWALK	SYS.	
CROSSWALK	SYS.	
RIGHT OF WAY MARKERS	EA.	309
RESET RIGHT OF WAY MARKERS	EA.	
MONUMENTS, TYPE " "	EA.	
MONUMENTS, TYPE "D"	EA.	4
CASTINGS ADJUSTED TO GRADE, MONUMENTS	EA.	
MONUMENTS, RE-ESTABLISHED	EA.	
BENCH MARK POSTS	EA.	1
RESETTING BENCH MARK POSTS	EA.	
SODDING	SYS.	42,766
FURNISHING AND PLACING:		
AGRICULTURAL LIMESTONE	TONS	53.6
FERTILIZER	TONS	8.04
SEED	LBS.	1,876
FURNISHING AND APPLYING MULCHING MATERIAL	TONS	10.3
PLAIN SEEDING	SYS.	
MULCHED SEEDING	SYS.	
TOP SOIL	CYS.	
FENCE (CHAIN LINK TYPE)	LFT.	12897

MISCELLANEOUS

ITEM	UNIT	QUANTITY

STRUCTURES

PIPE - LINEAL FEET

ITEM	4"	6"	8"	10"	12"	15"	18"	24"	72"	18"X11"	22"X13"	25"X16"	29"X18"	36"X22"	43"X27"	50"X31"
CLASS I					749	878	619	450	102							
CLASS II																
CLASS III																
CLASS IV																
CLASS V					280	134	22									
CLASS VI																
REINFORCED CONCRETE VITRIFIED CLAY SEWER CONCRETE																
CORRUGATED METAL					2,958	950	204	60								
BITUM. COATED C.M. PIPE ARCHES											186				68	172
SEWER		52	631	6												
R.C. or V.C. SEWER																
CORRUGATED METAL PIPE ARCHES										42		48	24	120		60
DRAIN TILE		1,204	800	600												

SUBSURFACE DRAINAGE

PIPE - LINEAL FEET		AGG-CU.YDS
6" CLASS VII	45,615	3,062

CASTINGS ADJUSTED TO GRADE

EACH

FOR STRUCTURES

ITEM	UNIT	QUANTITY
CONCRETE CLASS "D"	CYS	509.26
REINFORCING STEEL	LBS.	27763

AUTO DRAINAGE GATES

SIZE	HEAD	EACH

CATCH BASINS

TYPE	EACH
C-5	1

PIPE CATCH BASIN

SIZE	EACH
12"	
15"	
18"	1
24"	

INLETS

TYPE	EACH
A-1	1
D-6	10
E-7	10

MANHOLES

TYPE	EACH
A-4	
B-4	

RECONSTRUCTED

TYPE	LIN. FT.
MANHOLE	
CATCH BASIN	
INLET	
R.C. SPRING BOX	

MAY 1957

D.M.-56