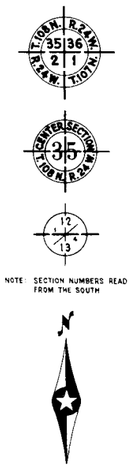
FORM 129A REV. '54

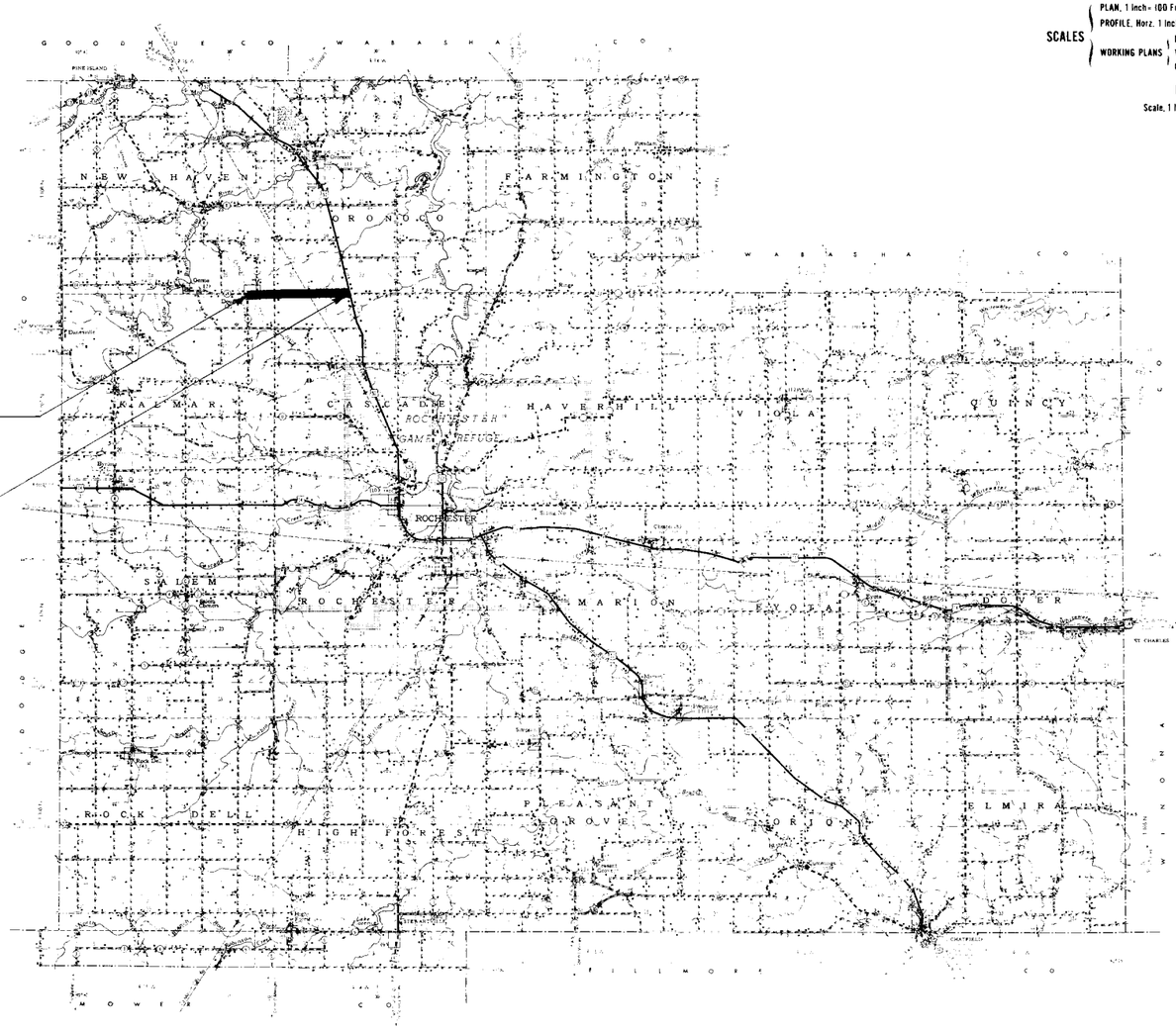
CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT ROAD R/W LINE
LIMITED ACCESS
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
STEAM RAILROAD
ELECTRIC RAILROAD
RAILROAD RIGHT-OF-WAY LINE
CREEK
RAPIDS OR WATERFALL
DRY RUN
DRAINAGE DITCH
HIGH TENSION LINE
POWER POLE LINE
TELEPHONE OR TELEGRAPH LINE
TELEPHONE CONDUIT
GUARD RAIL
WIRE FENCE
RAILROAD SNOW FENCE
BARB OR HIGH-WAY SNOW FENCE
STONE WALL OR FENCE
GAS MAIN
WATER PIPE
SEWER PIPE
DRAIN TILE
GRAVEL PIT
SAND PIT
CLAY PIT
ROCK QUARRY
SPRINGS
MARSH

TIMBER
BRUSH
ORCHARD
ROCK LEDGE
SAND
EDGE OF CUT
TOE OF EMBANKMENT
CATCH BASIN
MANHOLE
DROP INLET
FIRE HYDRANT
ARC LAMP
OTHER LAMPS (State Kind)
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
CATTLE GUARD
OVERHEAD (Highway Over)
UNDERPASS (Highway Under)
ABUTMENT, WALL & PIER
BRIDGE
CULVERT
BUILDING (One Story Frame)
(C-CONCRETE S-STONE T-TILE B-BRICK ST-STUCCO
HEDGE
IRON PIPE
STONE MONUMENT
WOOD STAKE OR HUB
MEANDER CORNER



NOTE: SECTION NUMBERS READ FROM THE SOUTH



Begin S.A.P. 55-614-02
Sta. 280+53.3

End S.A.P. 55-614-02
Sta. 431+08.7

—SPECIFICATIONS—

THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED MAY 1, 1959 AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE BUREAU OF PUBLIC ROADS ON MARCH 26, 1959 SHALL GOVERN.

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING-BOX CULVERT EXT.-CR. ROCK BASE

County **State Aid Road No. 14**

BETWEEN DOUGLAS **AND** TH #52

From SW Cor E½ SW¼ Sec 36 T108N-R15W **To** 692.7' East of SE Cor Sec 33 T108N-R14W
Give proper reference to Section, Township and Range

GROSS LENGTH 15055.4 FEET 2.8514 MILES
BRIDGES LENGTH 0 FEET 0 MILES
EXCEPTIONS LENGTH 0 FEET 0 MILES
NET LENGTH 15055.4 FEET 2.8514 MILES

SCALES
PLAN, 1 Inch = 100 Feet
PROFILE, Horz. 1 Inch = 100 Feet. Vert. 1 Inch = 10 Feet
WORKING PLANS: Horz. 1 Inch = 100 Feet; Vert. 1 Inch = 10 Feet; Cross-Section 1 Inch = 10 Feet
LAYOUT
Scale, 1 Inch = 10560 Feet

INDEX OF SHEETS

Sheet No. 1. Title Sheet & Layout Map
" No. 2. Est. Quantities & Typical Sec.
" No. 3. To 7. Plan & Profile
" No. 8. To 25. Cross Sections

Design Speed 55 M.P.H.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS WILL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

OLMSTED COUNTY HIGHWAY ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

COUNTY ENGINEER — DATE

COUNTY — REG. NO.

RECOMMENDED FOR APPROVAL _____ DIVISION ENGINEER 19__

RECOMMENDED FOR APPROVAL J. S. McMillan 7/2 DIVISION ENGINEER 1959

APPROVED _____ 19__ STATE AID ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DISTRICT ENGINEER — DATE

State Aid Project 55-614-02

Olmsted County, Minnesota — County Proj. No. _____ Plan No. _____ Sheet No. 1 of 25 Sheets

H. A. ROGERS CO. Minneapolis

FORM 129 C - # 1 Rev. '46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.		FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5N	MINN.					

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
2101.502	Clearing	Tree	80
2101.507	Grubbing	Tree	97
2104.501	Remove Portable Culverts	Linear Foot	1124
2105.501	Class A Excavation	Cubic Yard	66326
2105.502	Class B Excavation	Cubic Yard	300
2501.511 - 18"	F & I CMP Culverts - 18"	Linear Foot	800
2501.516 - 24"	F & I CMP Culverts - 24"	Linear Foot	244
2501.521 -24"	F & I SCP Culverts - 24" (Class 3)	Linear Foot	192
2501.521 -36"	F & I SCP Culverts - 36" (Class 3)	Linear Foot	158
2501.521 - 42"	F & I SCP Culverts - 42" (Class 3)	Linear Foot	114
2515.531 -18"	F & I Metal Aprons for CMP - 18"	Apron	52
2515.531 -24"	F & I Metal Aprons for CMP - 24"	Apron	2
2515.541 -24"	F & I Conc. Aprons for SCP - 24"	Apron	6
2515.541 -36"	F & I Conc. Aprons for SCP - 36"	Apron	6
2515.541 -42"	F & I Conc. Aprons for SCP - 42"	Apron	4
2414.511	F & I 60" P-C Conc. Cattle Pass	Linear Foot	36
2414.512	F & I 60" P-C Conc. Cattle Pass End Sections	End Section	2
2401.501	Concrete	Cubic Yard	55.3
2401.541	Reinforcement Bars	Pound	5147
2401.525	Class U Excavation	Cubic Yard	20
2252.527	Crushed Rock Wearing Course in Place	Cubic Yard	7225

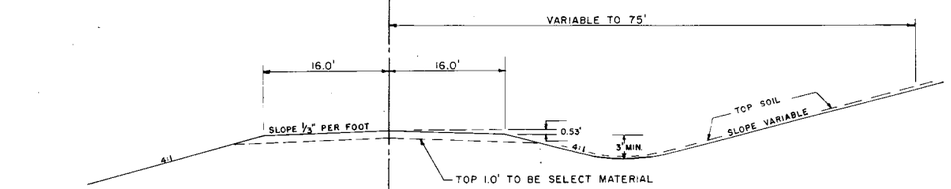
Note: Item 2252.527 Includes 490 Cu. Yds for Approaches and 90 Cu. Yds for TWP Roads.

STANDARD DETAIL PLATES

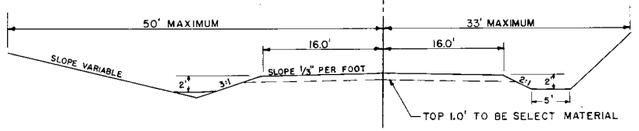
THE FOLLOWING STANDARD DETAIL PLATES, APPROVED BY THE BUREAU OF PUBLIC ROADS, SHALL APPLY ON THIS PROJECT.

PLATE NO.	DESCRIPTION
3100 B	Concrete Apron for Reinforced Concrete Pipe
3123 A	Metal Apron for C. M. Pipes

TYPICAL GRADING SECTIONS



STA. 296+00 TO 424+00

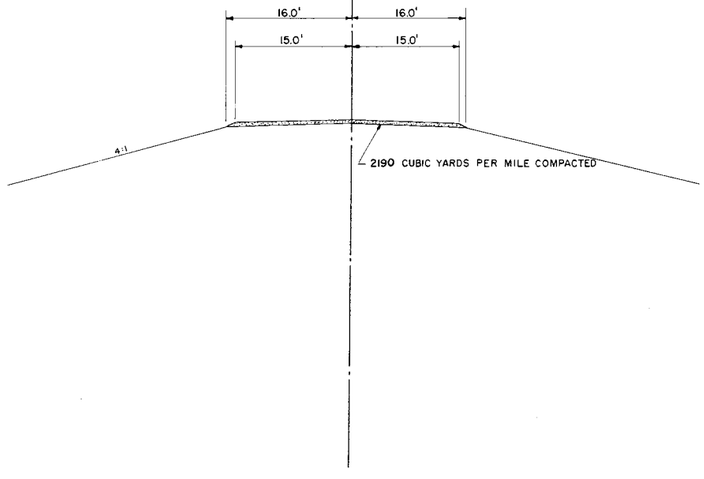


STA. 424+00 TO 430+60



STA. 280+50 TO 296+00

TYPICAL BASE & SURFACE SECTIONS



SPECIAL DETAILS

Note: Material from the top 1.0' of the Natural topsoil shall not be used in the upper 1.0' of the Roadway. Part of this material shall be spread uniformly on the slope and ditch-bottoms to a depth of 3". No payment in addition to the Contract Price for Class 'A' Excavation will be made for spreading the topsoil as provided above, nor will any undercutting made in excavation prior to placing the topsoil be measured for payment.

Note: Corrugated Metal and Sectional Concrete Pipe Culvert excavation shall be considered incidental and will be paid under unit Price for Furnish and Install Culvert Pipe.

Note: Subgrade Treatment
Excavation 1.0' below Profile Grade for compaction as shown on Plan and Profile Sheets. Excavation has been computed and is included in Balance Quantities. Backfill with Select Material from R.O.W. Taper shall be 50:1 in all cases.

Note: Place Sectional Concrete Pipe on Class C Bedding.

S.A.P. 55-614-02

Olmsted County, Minn. Proj. No. Plan No. Sheet No. 2 of 25 Sheets.

DAHMS PHOTO PRINT CO.
HYDE E. MINN.

Street 280+85 Lt.
Inpl. 12"X 30' C.M.P.
Remove
No Culv. Req'd

F.E. 282+23 Lt.
No Culv. Inpl.

284+924 C. R.R. Tracks
285+52.1 C. R.R. Tracks

286+42 ℄
Inpl 36"X40' C.M.P.
Remove
F&I 36"x 60' SCP
F&I 2-36" Conc. Aprons

F.E. 287+99 Lt.
No Culv. Inpl.

F.E. 289+48 Lt.
Inpl 15"X 10' C.M.P.
Remove
No Culv. Req'd

C.S.A.H. No. 3 293+63 Lt.
No Culv. Inpl

F.E. 300+25 Lt.
Inpl 18"X 16' C.M.P.
Remove
F&I 18"x 28' CMP
F&I 2-18" Metal Aprons

F.E. 283+78 Lt.
No Culv Inpl

F.E. 284+35 Lt.
No Culv. Inpl

F.E. 287+39 Lt.
No Culv. Inpl.

288+52 ℄
Inpl. 2-24"X 34' CMP
Remove
F&I 2-24"x64' CMP

F.E. 290+51 Lt.
No Culv. Inpl.

F.E. 295+25 Lt.
Inpl 15"X 20' C.M.P.
Remove
No Culv. Req'd

BEG. S.A.P. 53-614-02
Sta. 280+533

C.S.A.H. No. 3 280+81 Rt.
Inpl. 24"X40' C.M.P.
Remove
No Culv. Req'd

F.E. 283+43 Rt.
Inpl 18"X20' C.M.P.
Remove
No Culv. Req'd

284+23 ℄
Inpl 3-24"X36' C.M.P.
F&I 3-24"x12' Ext. Lt. CMP
F&I 3-24"x16' Ext. Rt. CMP

F.E. 286+10 Rt.
No Culv. Inpl.

F.E. 289+66 Rt.
No Culv. Inpl.

F.E. 293+60 Rt.
No Culv Inpl

F.E. 294+46 Rt
No Culv. Inpl.

F.E. 297+84 Rt.
No Culv. Inpl.
F&I 18" x 32' CMP
F&I 2-18" Metal Aprons

F.E. 281+75 Rt.
Inpl 15"X 10' C.M.P.
Remove
No Culv. Req'd

F.E. 283+99 Rt.
Inpl 15"X20' C.M.P.
Remove
No Culv. Req'd

F.E. 284+71 Rt.
No Culv. Inpl.

F.E. 287+94 Rt.
No Culv. Inpl.

F.E. 292+00 Rt.
No Culv. Inpl.

F.E. 293+77 Rt.
Inpl 8"X 14" C.M.P.
Remove
No Culv. Req'd

F.E. 296+14 Rt.
Inpl 15"X 20' C.M.P.
Remove
No Culv. Req'd

299+10 ℄
Inpl 30"X34' C.M.P.
Remove
F&I 42"x 48' SCP
F&I 2-42" Conc. Aprons

Cl 1 Gr 4 — Cl 1 Gr 4 — Cl 9 Gr 9

B.M. Elev. 1082.23
Spike in 30" Maple
31' Rt. 281+25

B.M. Elev. 1090.69
SE Cor 1st Step Ch
45' Lt. 293+07

B.M. Elev. 1106.77
Spike in P.P.
32' Rt. 303+37

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
BY
DATE
ALIGNMENT CHECKED
R.T. OF WAY CHECKED

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
NOTE BOOK
NO.
BY
DATE
STRUCTURE NOTATNS CHKD

BRUNING

SINGLE PLAN & PROFILE - DOTTED
CHARLES BRUNING COMPANY, INC.

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F.E. 315+75 Lt.
Inpl. 15"X 24' C.M.P
Remove
F&I 18"x20' CMP
F&I 2-18" Metal Aprons

F.E. 317+31 Lt.
No Culv Inpl
Move to Sta. 318+00
F&I 18"x28' CMP
F&I 2-18" Metal Aprons

T.W.P. Road 320+06 Lt.
Inpl. 15"X 30' C.M.P
Remove
F&I 18"x 36' CMP
F&I 2-18" Metal Aprons

Sta. 330+00 Lt.
Construct New
F&I 18"x 28' CMP
F&I 2-18" Metal Aprons

F.E. 317+61 Rt.
No Culv Inpl
Move to TWP Road
F&I 18"x 32' CMP
F&I 2-18" Metal Aprons

T.W.P. Road 320+06 Rt.
Inpl. 15"X 30' C.M.P
Remove
F&I 18"x 36' CMP
F&I 2-18" Metal Aprons

328+36 ℄
Inpl 36" X 40' C.M.P.
Remove
F&I 36"x 44' SCP
F&I 2-36" Conc. Aprons

F.E. 328+33 Rt.
No Culv Inpl.
F&I 18"x 28' CMP
F&I 2-18" Metal Aprons

333+54 ℄
Inpl 36"X 40' C.M.P.
Remove
F&I 36"x 54' SCP
F&I 2-36" Conc. Aprons

T108 N R 19 W
36 31 1 6
R 18 W R 20 W

P.I. 320+06.99
Δ L 0°-00'-30"

T.W.P. ROAD +06
T.W.P. ROAD +62

F.E. +75
F.E. +81
F.E. +31
F.E. +33

PLAN
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
ALIGNMENT CHECKED
NOTE BOOK
NO.
BY
DATE
STRUCTURE NO
TAB NO
STRUCTURE NO
TAB NO
TABS CHKD

Cl 8 Gr II

B.M. Elev. 1149.25
Spike in Pine
100' Rt. 319+78

B.M. Elev 1124.82
Spike in PP
32' Rt. 330+45

P.I. +00
Elev. 23.0
500' V.C.
M=3.3

P.I. +18.75
Elev. 27.875
600' V.C.
M=1.2

P.I. +13.75
Elev. 59.25
800' V.C.
M=3.0

Profile 75' Lt.
Profile 75' Rt.

Subgrade Treatment
Sta. 305+50 to 320+25

Subgrade Treatment
Sta. 336+50 to 340+50

Class B Exc. 65
Class A Exc. 10,417
Emb 6,236

Class B Exc. 237
Class A Exc. 9,237
Emb 8,570

SINGLE PLAN & PROFILE - DOTTED
CHARLES BRUNING COMPANY, INC.

SAP 55-614-02

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PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
NO.
GRADES CHECKED
X-SECTIONS
STRUCTURE NOTATIONS CHKD
BY
DATE

N

F.E. 351+92 Lt.
Inpl 15"X24" C.M.P.
Remove
F & I 10' - 32' CMP
F & I 2-18" Metal Aprons

F.E. 355+46 Lt.
Inpl 15"X20" C.M.P.
Remove
F & I 18"X 28' CMP
F & I 2-18" Metal Aprons

F.E. 360+21 Lt.
Inpl 15"X26" C.M.P.
Remove
F & I 16" x 28' CMP
F & I 2-15" Metal Aprons

T.W.P. Road 371+37 Lt.
No Culv Inpl

343+68 ℄
Inpl 24"X36" C.M.P.
Remove
F & I 24"x 44' SCP
F & I 2- 24" Conc. Aprons

349+35 ℄
Inpl 24"X36" C.M.P.
Remove
F & I 24"x 84' SCP
F & I 2-24" Conc. Aprons

F.E. 351+90 Rt.
No Culv Inpl

360+60 ℄
Inpl 40"X44" C.M.P.
Remove
F & I 42"x 66' SCP.
F & I 2-42" Conc. Aprons

Cl 2 Gr 3

Cl 5 Gr 5

B.M. Elev. 1111.59
Spike in P.P.
32' Rt. 352+10

B.M. Elev. 1106.56
Spike in P.P.
33' Rt. 368+70

Profile 73' Lt.
Profile 73' Rt.

Rt. 330
Elev. 00.2
360' V.C.
V = 1.2

Subject to Terms
File 1513-20 or 12423

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CHARLES BRUNING COMPANY, INC.

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S 12-35-614-02

PLAN — SURVEYED — PLOTTED — DRAWN — CHECKED — NOTE BOOK — NO. — BY — DATE — ALIGNMENT CHECKED — RT. OF WAY CHECKED

F.E. 369+21 Lt.
Inpl 15"X 26' C.M.P.

Sta. 373+70
F&I 60" P-C Cattle Pass 36' Long
F&I 2-60" Cattle Pass End Sections

F.E. 381+93 Lt.
No Culv Inpl
F&I 21"X 32' CMP
F&I 2-24" Metal Aprons

F.E. 384+69 Lt.
No Culv Inpl
F&I 13"X 28' CMP
F&I 2-13" Metal Aprons

F.E. 394+12 Lt.
No Culv Inpl

F.E. 396+21 Lt.
Inpl 15"X 26' C.M.P.
Remove
F&I 18" X 32' CMP
F&I 2-18" Metal Aprons

F.E. 398+01 Lt.
Inpl 15"X 28' C.M.P.
Remove
F&I 15"X 32' CMP
F&I 2-15" Metal Aprons

T.W.P. Road 371+37 Lt.
No Culv. Inpl.
F&I 15"X 36' CMP
F&I 2-15" Metal Aprons

F.E. 378+74 Rt.
Inpl 15"X 20' C.M.P.
Remove
F&I 18"X 28' CMP
F&I 2-18" Metal Aprons

F.E. 381+97 Rt.
No Culv Inpl
F&I 18"X 32' CMP
F&I 2-13" Metal Aprons

382+05 S.
Inpl 2-24" X 60' S.C.P.
Remove
No. Culv. Req'd.

390+55 S.
Inpl W86 X 35'
Extend 9' Lt.-9' Rt.
Conc. 35.7 Cu. Yds
Reinf. Steel 3502 Lbs
Class U Exc. 12 Cu.Yds

F.E. 391+3 Rt.
No Culv Inpl

400+84 S.
Inpl W64 X 35'
Extend 7' Lt.-8' Rt.
Conc. 19.85 Cu. Yds
Reinf. Steel 1645 Lbs
Class U Exc. 8 Cu.Yds

F.E. 397+70 Rt.
Inpl 15"X 20' C.M.P.
Remove
F&I 15"X 28' CMP
F&I 2-15" Metal Aprons

PROFILE — SURVEYED — PLOTTED — DRAWN — CHECKED — NOTE BOOK — NO. — BY — DATE — B.M.'s NOTED — STRUCTURE NOTATNS CHKD

Cl 32 Gr 37 — Cl 13 Gr 15

B.M. Elev.1064.63
Spike in 30" Maple
31' Lt. 381+35

B.M. Elev.1056.60
X in SE Cor HDWL
16' Rt. 390+55

Pl +00.0
Elev. 99.0
700' V.C.
M=42.875

Pl +25.0
Elev. 59.005
500' V.C.
M=5.0

Profile 75' Lt.
Profile 75' Rt.

Subgrade Treatment
Sta. 369+75 to 375+50

Subgrade Treatment
Sta. 391+00 to 397+50

Exc 10,003
Emb 7,060

Exc 9,735
Emb 3,220

Exc 516

Exc 677
Emb 901

Exc 1,910
Emb 1,000

Exc 2,192
Emb 1,000

SINGLE PLAN & PROFILE – DOTTED
CHARLES BRUNING COMPANY, INC.

S.A.P. 56-614-02

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PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, PLAN RAN CHECKED, NOTE BOOK NO., BY, DATE

F.E. 410+96 Lt.
Inpl 15"x 20' C.M.P.
Remove
F&I 18"x 32' CMP
F&I 2-18" Metal Aprons

F.E. 426+30 Lt
Inpl 15"X 48' C.M.P.
Remove
F&I 18"x 36' CMP
F&I 2-18" Metal Aprons

F.E. 428+96 Lt.
Inpl 15"X 42' C.M.P.
Remove
F&I 18"x 36' CMP
F&I 2-18" Metal Aprons

T.108 N. R.14 W. R.13 W. T.107 N. 32 33 5 4

P.I. 424+16.0
Δ 11°00'

P.O.T. 429+00

150' Concrete Pavement

End S.P. 55-616-02
Sta. 430+08.28

410+84 ℄
Inpl Cc4X35'

F.E. 411+53 Rt.
Inpl 15"X 28' C.M.P.
Remove
F&I 18"x 32' CMP
F&I 2-18" Metal Aprons

F.E. 416+39 Rt.
Inpl 15"X 20' C.M.P.
Remove
F&I 18"x 26' CMP
F&I 2-18" Metal Aprons

420+76 ℄
Inpl 18"X 62' C.M.P.
Remove
F&I 24"x 94' ECP
F&I 2-24" Conc. Aprons

F.E. 424+47 Rt.
No Culv Inpl
F&I 18"x 28' CMP
F&I 2-18" Metal Aprons

F.E. 429+85 Rt.
Inpl 15"X 20' C.M.P.
Remove
F&I 18"x 28' CMP
F&I 2-18" Metal Aprons

430+68 ℄
Inpl 24"X 126' C.M.P.
No Change

Cl 3 Gr 3 — Cl 6 Gr 6

B.M. Elev. 1055.98
X in SE Cor. HDWL
17' Rt. 400+84

B.M. Elev. 1084.51
Spike in T.P.
75' Rt. 412+24

B.M. Elev. 1093.78
Spike in 13" Elm
34' Rt. 430+73

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, NOTE BOOK NO., BY, DATE, STRUCTURE NOTATNS CHKD

Profile 75' Rt.

P.V.I. 425+62.5
P.V.C. 424+90.0
P.V.T. 426+35.0

Cl. 62.8
Elev. 09.0
Excl. V.c.
K= 8.0

Subgrade Elevation
Sta. 423+80 to 425+30

Elev. 1100

Elev. 1090

Elev. 1080

Elev. 1070

Elev. 1060

Elev. 1050

Elev. 1040

Elev. 1030

BRUNING

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CHARLES BRUNING COMPANY, INC.

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