

**VAN-MARKET STREET**  
**PAVEMENT**  
**QUANTITY**  
**CALCULATIONS**

PID NO. 106341

February 2020



Calculations For VAN - Market Street PID No. 106341

Pavement Quantity Calculations

Computed By DJK Date 2-25-20 Sheet 1 of 4

Checked By MAD Date 3-2-20

01/BRF/BR

02/NFP/OT

Item 204E1000 Subgrade Compaction

Compact areas under pavement bounded by 18" beyond edge of pavement (face of curb) including 6" beyond edges, and areas under

sawcuts, approach slabs and extending. Compact areas under approach slabs, driveways.

CADD measured area:

- SW corner of Market & Crawford = 63.21 ft<sup>2</sup> ✓
- SE corner of Market & Crawford = 77.60 ft<sup>2</sup> ✓
- Along N. side of Crawford, W. of Market = 268.77 ft<sup>2</sup> ✓
- Market south of bridge = 2883.73 ft<sup>2</sup> ✓
- Rear approach slab = 703.34 ft<sup>2</sup> ✓
- Fwd. approach slab = 592.23 ft<sup>2</sup> ✓
- Market north of bridge = 5132.59 ft<sup>2</sup> ✓
- Total = 9721.47 ft<sup>2</sup> ✓

CADD measured areas:

- West side of Market = 487.62 ft<sup>2</sup> ✓
- East side of Market = 958.24 ft<sup>2</sup> ✓
- Total = 1445.86 ft<sup>2</sup> ✓

Total, 02/NFP/OT = 1445.86 ft<sup>2</sup> ÷ 9 ft<sup>2</sup>/yd<sup>2</sup> = 160.65 yd<sup>2</sup> ✓

Total, 01/BRF/BR = 9721.47 ft<sup>2</sup> ÷ 9 ft<sup>2</sup>/yd<sup>2</sup> = 1080.16 yd<sup>2</sup> ✓

1080 SY | 161 SY

Grand Total = 1241 SY ✓

Item 254E01000 Pavement Planing, Asphalt Concrete (Variable Thickness)

Intersection of Market & Crawford

CADD measured area = 1571.06 ft<sup>2</sup> ✓  
 = 1571.06 ft<sup>2</sup> ÷ 9 ft<sup>2</sup>/yd<sup>2</sup> = 174.56 yd<sup>2</sup> ✓

175 SY ✓

Item 254E01000 Pavement Planing, Asphalt Concrete (1 1/2")

From Sta. 11+00 to Sta 13+34.28

CADD measured area = 16,389.41 ft<sup>2</sup> ✓  
 = 16,389.41 ft<sup>2</sup> ÷ 9 ft<sup>2</sup>/yd<sup>2</sup> = 1821.05 yd<sup>2</sup> ✓

1821 SY ✓

Item 301E46000 Asphalt Concrete Base, PGG4-22

Areas bounded by sawcuts, face of curb and approach slab limits

CADD measured areas:

- SW corner of Market & Crawford = 33.39 ft<sup>2</sup> ✓
- SE corner of Market & Crawford = 40.56 ft<sup>2</sup> ✓
- Market South of Bridge = 2755.57 ft<sup>2</sup> ✓
- Market North of Bridge = 4370.51 ft<sup>2</sup> ✓
- Total = 7200.03 ft<sup>2</sup> ✓

Volume = (7200.03 ft<sup>2</sup>) (4 1/2" / 12") ÷ (27 ft<sup>3</sup>/yd<sup>3</sup>) = 88.89 yd<sup>3</sup> ✓

CADD measured areas:

- West side of Market = 200.06 ft<sup>2</sup> ✓
- East side of Market = 355.98 ft<sup>2</sup> ✓
- Total = 556.04 ft<sup>2</sup> ✓

Volume = (556.04 ft<sup>2</sup>) (4 1/2" / 12") ÷ (27 ft<sup>3</sup>/yd<sup>3</sup>) = 6.86 yd<sup>3</sup> ✓



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01/BRF/BR

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Item 301E46000 Asphalt Concrete Base, PG64-22 (continued...)

Volume = 89 CY ✓

Volume = 7 CY ✓

Grand Total = 96 CY

Item 304E20000 Aggregate Base

Areas under roadway bounded by sawcuts and extending 18" beyond face of curb.  
 Areas under approach slabs extending 6" beyond edges.

CADD measured areas:

SW corner of Market & Crawford = 63.21 ft<sup>2</sup> ✓

SE corner of Market & Crawford = 77.60 ft<sup>2</sup> ✓

North side of Crawford, W. of Market = 220.32 ft<sup>2</sup> ✓

Subtotal (7.6"th.) = 361.13 ft<sup>2</sup> ✓

Market South of Bridge = 2883.73 ft<sup>2</sup> ✓

Market North of Bridge = 4293.89 ft<sup>2</sup> ✓

Subtotal (12"th.) = 7177.62 ft<sup>2</sup> ✓

Rear Approach Slab = 703.34 ft<sup>2</sup> ✓

Fwd. Approach Slab = 592.23 ft<sup>2</sup> ✓

Subtotal (6"th.) = 1295.57 ft<sup>2</sup> ✓

West side of Market N. of Bridge = 462.88 ft<sup>2</sup> ✓

(pipe installation) Subtotal (13"th.) = 462.88 ft<sup>2</sup> ✓

$$\text{Volume} = \left[ \frac{(361.13 \text{ ft}^2)(7.6''/12)}{(27 \text{ ft}^3/\text{yd}^3)} + \frac{(7177.62 \text{ ft}^2)(12''/12)}{(27 \text{ ft}^3/\text{yd}^3)} + \frac{(1295.57 \text{ ft}^2)(6''/12)}{(27 \text{ ft}^3/\text{yd}^3)} + \frac{(462.88 \text{ ft}^2)(13''/12)}{(27 \text{ ft}^3/\text{yd}^3)} \right] = \frac{321.80 \text{ yd}^3}{316.87}$$

317  
322 CY

CADD measured areas:

West Side of Market = 399.39 ft<sup>2</sup> ✓

East Side of Market = 711.88 ft<sup>2</sup> ✓

Total = 1111.27 ft<sup>2</sup> ✓

$$\text{Volume} = \frac{(1111.27 \text{ ft}^2)(13''/12)}{(27 \text{ ft}^3/\text{yd}^3)} = 44.59 \text{ yd}^3 \checkmark$$

45 CY ✓

Grand Total = 367 CY

362



Calculations For VAN-Market Street

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01/BRF/BR	02/NFP/OT
<u>Item 407E20000 Non-Tracking Tack Coat</u>	
Apply 2 layers to areas as calculated for Asphalt Concrete Base at 0.055 gal/yd <sup>2</sup>	
$[(7200.03 \text{ ft}^2) \div (9 \text{ ft}^2/\text{yd}^2)](0.055 \text{ gal}/\text{yd}^2)(2)$ = 88.00 gal ✓	$[(556.04 \text{ ft}^2) \div (9 \text{ ft}^2/\text{yd}^2)](0.055 \text{ gal}/\text{yd}^2)(2)$ = 6.80 gal ✓
Apply 1 layer to areas as calculated for Pavement Planing, Asphalt Concrete at 0.085 gal/yd <sup>2</sup>	
$[(1571.06 \text{ ft}^2) \div (9 \text{ ft}^2/\text{yd}^2)](0.085 \text{ gal}/\text{yd}^2)$ = 14.84 gal ✓	$[(16,389.41 \text{ ft}^2) \div (9 \text{ ft}^2/\text{yd}^2)](0.085 \text{ gal}/\text{yd}^2)$ = 154.79 gal ✓
Total = 88.00 gal + 14.84 gal = 102.84 gal ✓	Total = 6.80 gal + 154.79 gal = 161.59 gal ✓
<b>103 GAL</b>	<b>162 GAL</b>
Grand Total = <b>265 GAL</b> ✓	

Item 441E50000 Asphalt Concrete Surface Course, Type 1, (448) PG64-22

Apply 3" to areas as calculated for Asphalt Concrete Base

$$(7200.03 \text{ ft}^2)(3"/12) \div 27 \text{ ft}^3/\text{yd}^3 = 66.67 \text{ yd}^3 \checkmark$$

$$(556.04 \text{ ft}^2)(3"/12) \div (27 \text{ ft}^3/\text{yd}^3) = 5.15 \text{ yd}^3 \checkmark$$

Apply 1 1/2" to areas as calculated for Pavement Planing, Asphalt Concrete

$$(1571.06 \text{ ft}^2)(1.5"/12) \div (27 \text{ ft}^3/\text{yd}^3) = 7.27 \text{ yd}^3 \checkmark$$

$$(16,389.41 \text{ ft}^2)(1.5"/12) \div (27 \text{ ft}^3/\text{yd}^3) = 75.88 \text{ yd}^3 \checkmark$$

$$\text{Total} = 66.67 \text{ yd}^3 + 7.27 \text{ yd}^3 = 73.94 \text{ yd}^3 \checkmark$$

$$\text{Total} = 5.15 \text{ yd}^3 + 75.88 \text{ yd}^3 = 81.03 \text{ yd}^3 \checkmark$$

**74 CY**

**81 CY**

Grand Total = **155 CY** ✓

Item 452E12010 8" Non-Reinforced Concrete Pavement, Class QC IP

Drive along Crawford, W. of Market = 62.49 ft<sup>2</sup> ✓

Drive at NE corner of bridge = 240.03 ft<sup>2</sup> ✓

Drive along Market @ 10+87.13 = 178.42 ft<sup>2</sup> ✓

Total = 480.94 ft<sup>2</sup> ✓

$$=(480.94 \text{ ft}^2) \div (9 \text{ ft}^2/\text{yd}^2) = 53.44 \text{ yd}^2 \checkmark$$

**53 SY**

Drive along Market: 11+20.02 = 130.45 ft<sup>2</sup> ✓

11+49.40 = 113.93 ft<sup>2</sup> ✓

12+18.80 = 57.23 ft<sup>2</sup> ✓

12+57.19 = 119.28 ft<sup>2</sup> ✓

Total = 420.89 ft<sup>2</sup> ✓

$$=(420.89 \text{ ft}^2) \div (9 \text{ ft}^2/\text{yd}^2) = 46.77 \text{ yd}^2 \checkmark$$

**47 SY**

Grand Total = **100 SY**



Calculations For YAN- Market Street

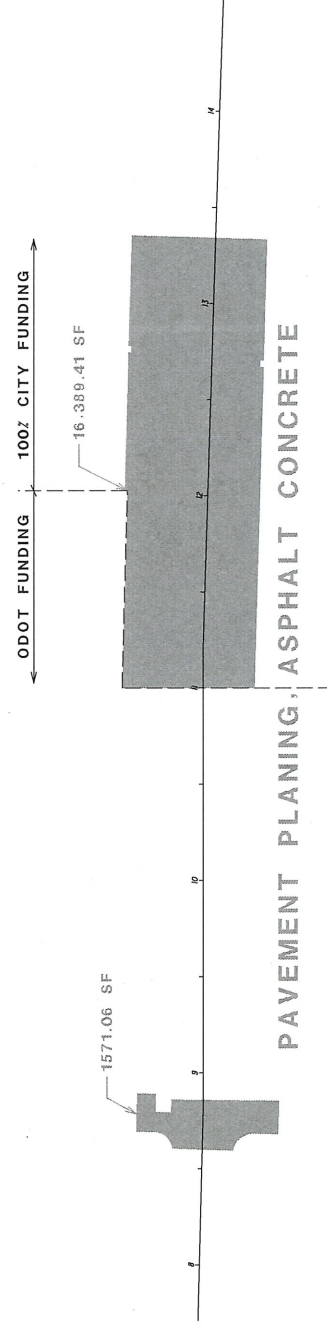
PID No. 106341

Pavement Quantity Calculations

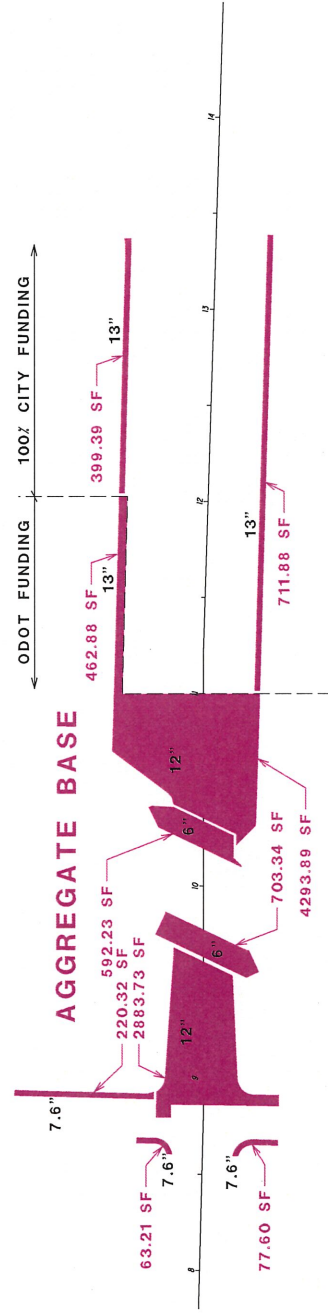
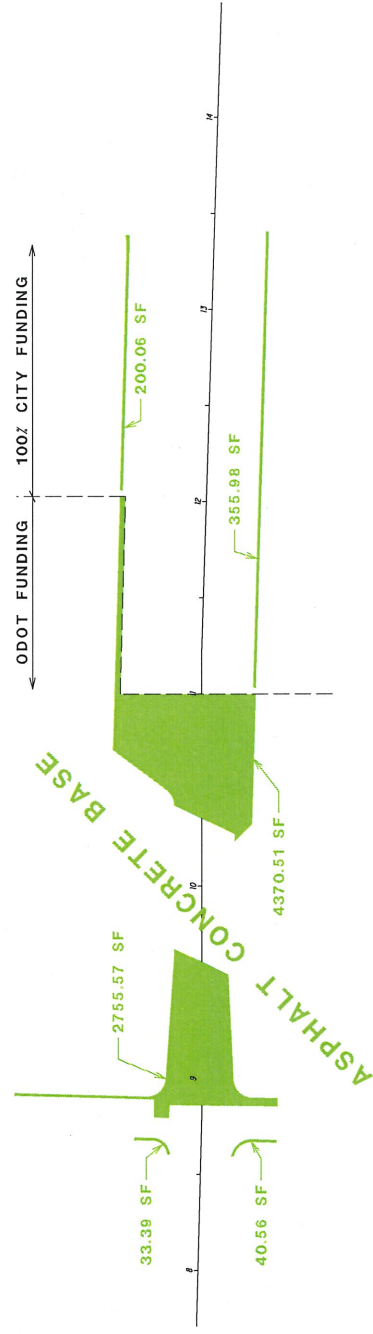
Computed By DJK Date 2-25-20  
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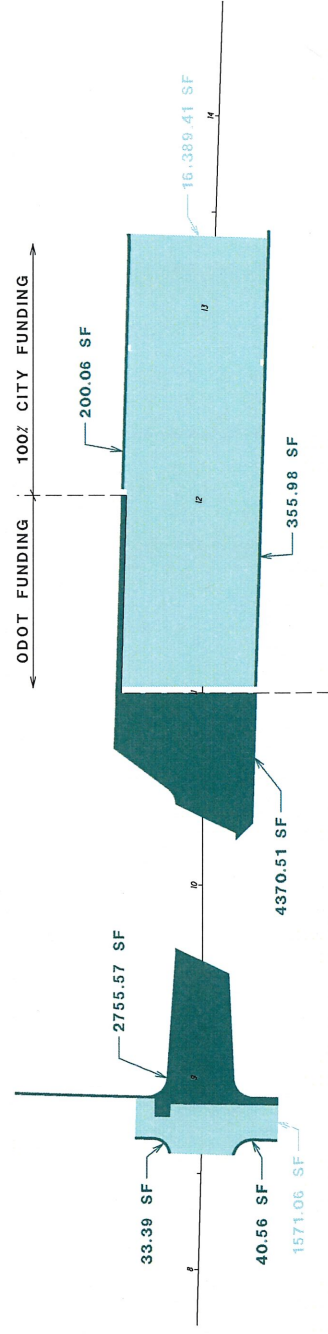
01/BRF/BR	02/NFP/OT
Item 609E24510 Curb, Type 4-C	
East Side of market, North of Bridge	
= 77.01 ft ✓	= 240.53 ft ✓
77 FT ✓	241 FT ✓
Grand Total = 318 FT ✓	
Item 609E26000 Curb, Type 6	
Curb Non-Adjacent Sidewalk /Driveways	
South of Bridge = 61.23 ft + 48.26 ft + 5.49 ft = 114.98 ft ✓	Along W. side of Market = 42.83 ft + 61.31 ft = 104.14 ft ✓
North of Bridge = 97.08 ft ✓	
Total = 114.98 ft + 97.08 ft = 212.06 ft ✓	
212 FT ✓	104 FT ✓
Grand Total = 316 FT ✓	
Item 609E26000 Curb, Type 6, As Per Plan	
Curb Adjacent Sidewalk /Driveways	
South of Bridge = 21.07 ft ✓ 90.47 ft ✓ 29.23 ft ✓ 25.87 ft ✓ <hr/> 166.64 ft ✓	Along W. side of Market = 32.00 ft ✓
North of Bridge = 75.75 ft ✓	
Total = 166.64 ft + 75.75 ft = 242.39 ft ✓	
242 FT ✓	32 FT ✓
Grand Total = 274 FT ✓	



PAVEMENT PLANING, ASPHALT CONCRETE

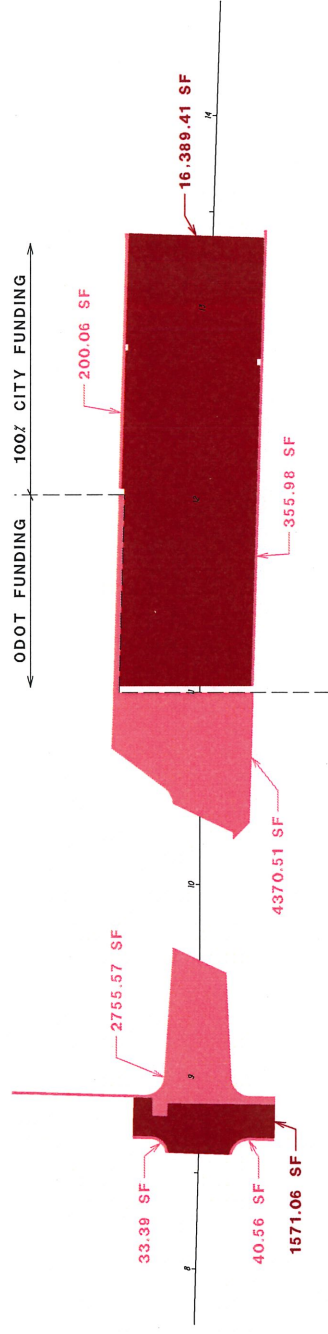


NON-TRACKING TACK COAT x2

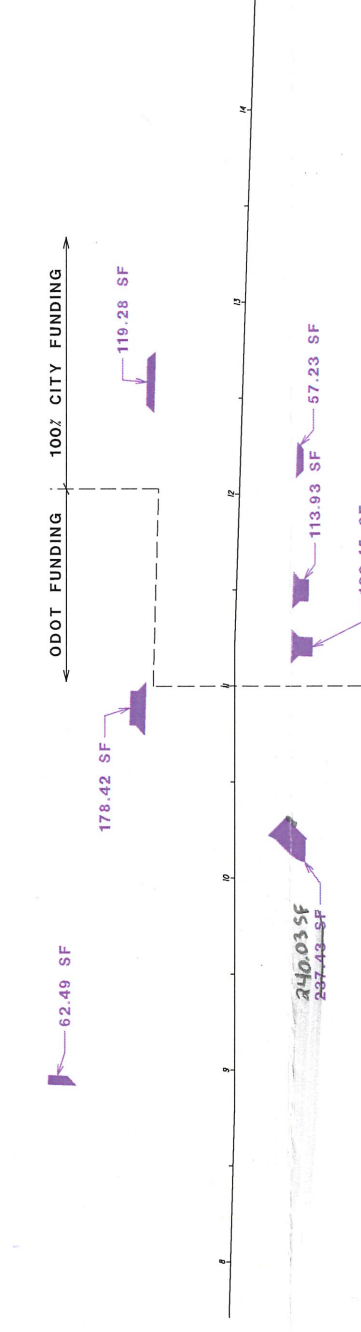


NON-TRACKING TACK COAT x1

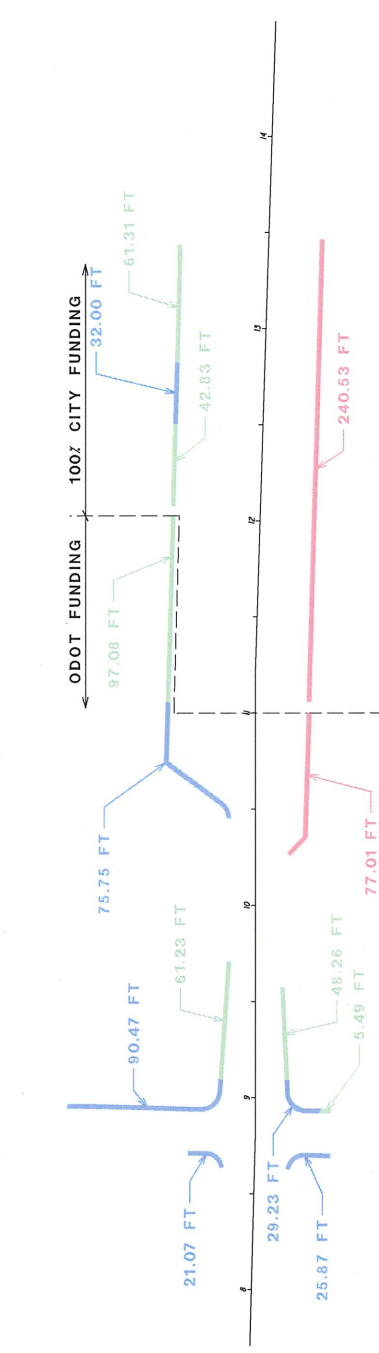
3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22



1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22



8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P



CURB, TYPE 6  
 CURB, TYPE 6, AS PER PLAN  
 CURB, TYPE 4-C

SCALE  
 1" = 100'

