

## Practical Design 2008 Awards for Excellence

December 10, 2007

Mr. Jay Bestgen  
MoDOT Design Division  
1320 Creek Trail Drive  
Jefferson City, Missouri 65109

RE: Practical Design 2008 Awards For Excellence

The City of Glendale appreciates the opportunity to submit this application for the MoDOT/ACEC Practical Design 2008 Awards for Excellence. The application is attached for your review.

The project we are submitting is Federal Project Number STP-5600 (674) Sappington Road Reconstruction. This recently completed project has been the product of many years of planning and design culminating in the construction of the Sappington Road Reconstruction Project this year. This project took what was essentially an old country road and turned it into a modern urban street. Given the limitations on right-of-way and funding, and condition of the existing street this was a tremendous accomplishment.

This project has been well received by residents and nonresidents alike for its improvements to driving, traffic safety and aesthetics. The design of the Sappington Road Reconstruction Project was done with a proper balance of those improvements in mind.

It is with great pride that the City of Glendale submits this application for the Practical Design 2008 Awards for Excellence for the Sappington Road Reconstruction Project.

Sincerely,

Mike Pounds  
City Administrator

PC: Mayor Magee  
Tom Weis, Weis Design Group

### **Historical Background:**

Sappington Road formerly known as Collins Road in the early 1900's, has seen very few upgrades between Manchester Road (Route 100) and Lockwood Avenue. This 1.5 mile long, 40 feet wide corridor was originally a dirt road, and received a 7 inch thick concrete pavement section, and several asphalt overlays since 1912 creating a pavement section that varied from 12 inches to 14 inches thick.

During this time frame, Sappington Road also has become a well-traveled collector for the City of Glendale and the surrounding communities, increasing the average daily traffic to over 7,000 vehicles per day.

### **Purpose and Need:**

The purpose of the project was to rehabilitate the existing corridor to current standards and into compliance with ADA requirements. The need was to provide safe continuity between the pedestrian and vehicular traffic.

### **Scope Comparison:**

The original plan was to divide the project into three stages, with complete closure of each stage. The plan for each stage was a complete removal and rebuilding of the corridor, along with utility relocations.

The revised plan was to utilize the existing road surface in place, and re-establish a 2 percent cross slope by proper roto-milling of the existing pavement surface. The application of pavement fabric to retard reflective cracking was utilized prior to a 4-inch asphalt overlay for a smooth surface.

The traffic control plan was also modified from the complete closure of each stage, to just one lane closure in each stage, starting at Lockwood Avenue and continuously moving towards Manchester Road, then reversing for the southbound lane. This allowed continuous traffic flow in the opposite direction.

### **Practical Design Solutions:**

Since The City was not able to obtain the additional right-of-way required to increase the corridor width to 50-feet, several design variations were implemented. Sappington Road required a 26-foot wide pavement section; this only left 7-feet available between the back of curb and the right-of-way line, instead of the standard 12-feet on each side. By utilizing a combination of 6-inch vertical curb & gutter, and a 2-foot green space, we created a safety barrier between pedestrians and vehicular traffic, which the existing corridor did not provide.

The design also called for a sidewalk variance from 5-feet to 4-feet wide. This allowed the roadway to be shifted 8-inches to the west to minimize the total number of relocated telephone poles from 32 poles to 16 poles. This decreased the construction schedule by 3 months, due to the amount of service line that needed relocation.

## Practical Design 2008 Awards for Excellence

### Cost Savings:

In the initial planning for the project, the City would have acquired additional right-of-way from 122 property owners, paid for Class-A excavation for the existing roadway materials, and would of had additional tonnage of asphalt for a new 10-inch thick pavement section.

By using practical design methods and design variances in the redesign, the City saved approximately 1 million dollars and decreased the time of construction by 6 months.

### Roadway User Expectations:

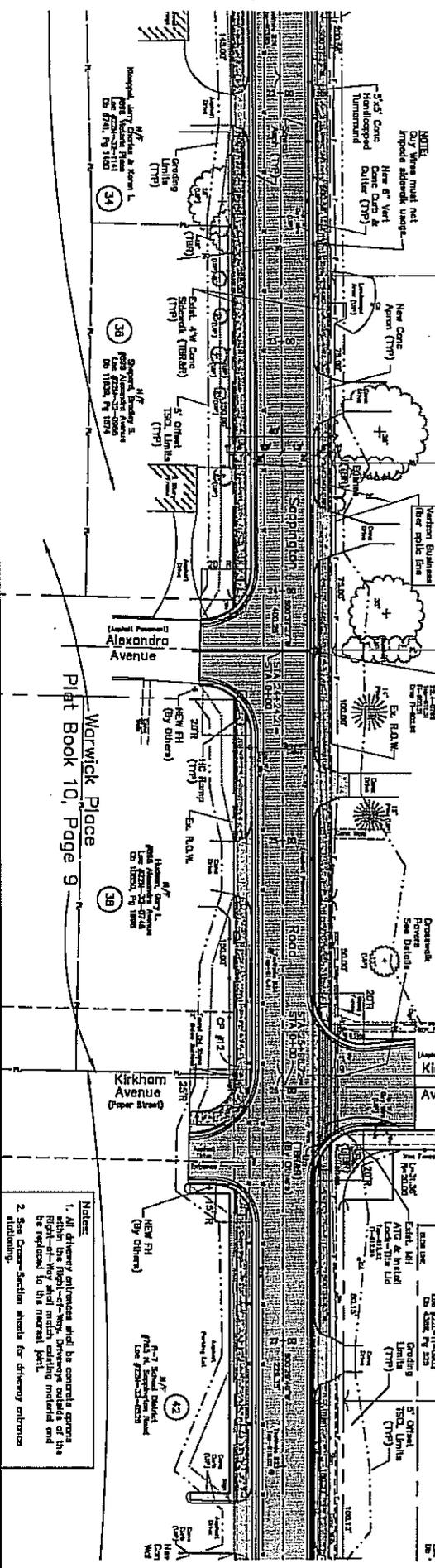
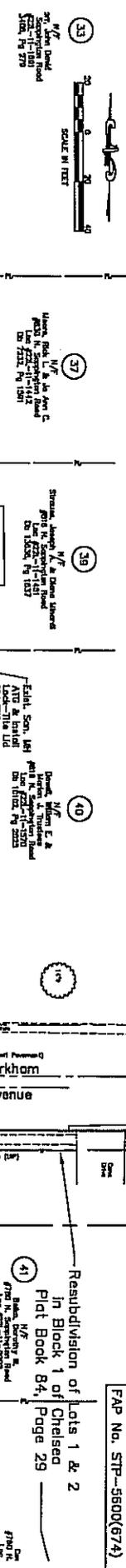
Roadway users expected a much smoother roadway with minimal construction delays. Additionally the pedestrians expected a safer and well-lighted walkway. This project provided both and has significantly improved the roadway quality and safety for both pedestrians and vehicular traffic. This project exceeded expectations by providing a consistent roadway appearance from one end to the other. Also, the new ADA compliant sidewalks and decorative street lighting have restored the feel of a “walkable community” to the historic area.

### Purpose and Need



Roadway User Expectations





|     |       |       |       |       |       |       |       |       |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| 640 | 22+00 | 23+00 | 24+00 | 25+00 | 26+00 | 27+00 | 28+00 | 29+00 |
| 630 |       |       |       |       |       |       |       |       |
| 620 |       |       |       |       |       |       |       |       |
| 610 |       |       |       |       |       |       |       |       |
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| 590 |       |       |       |       |       |       |       |       |
| 580 |       |       |       |       |       |       |       |       |
| 570 |       |       |       |       |       |       |       |       |
| 560 |       |       |       |       |       |       |       |       |
| 550 |       |       |       |       |       |       |       |       |

- Notes:**
- All driveway entrances shall be concrete aprons within the right-of-way. Driveway outlets of the right-of-way shall match existing material and be replaced in the nearest joint.
  - See Cross-Section sheets for driveway entrance detailing.
  - Provide standard curb and gutter at each block end and along the construction zone at each stage of construction (typical at street).
  - All other notes on sheets set within the project drawings shall be followed in general.

SCALE: 1" = 30' HORIZ.  
1" = 10' VERT.

PLAN AND PROFILE

FAP No. STP-5600(674)  
Resubdivision of Lots 1 & 2  
in Block 1 of Chelsea  
Plat Book 84, Page 29

CITY OF GLENDALE, MISSOURI  
SAPPINGTON ROAD  
RECONSTRUCTION

**Wels Design Group**  
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Edinville, Mo. 63201  
welsdesign.com  
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(636) 207-0834  
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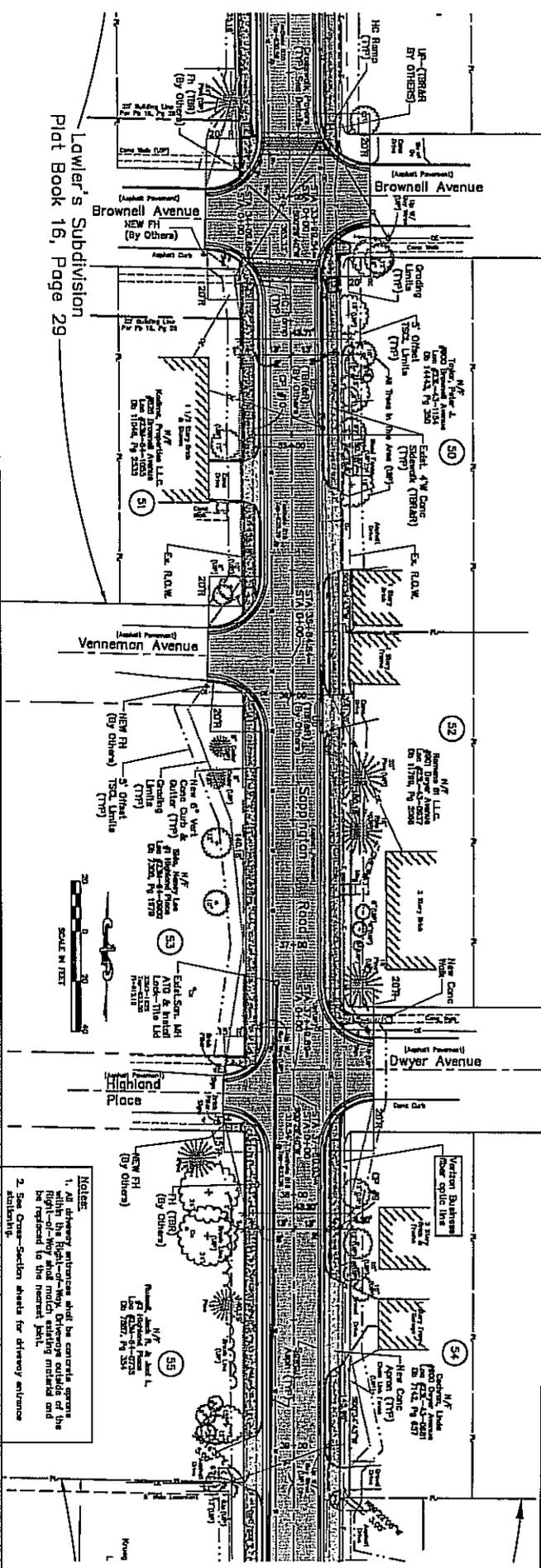


E/A Project No. 6003-00-2  
Reviewed: 09/07/07  
Date: 4/25/08  
Drawn By: PMS  
Checked By: PMS

Sheet No. **6**  
of 81  
Issue Date: 9/29/08

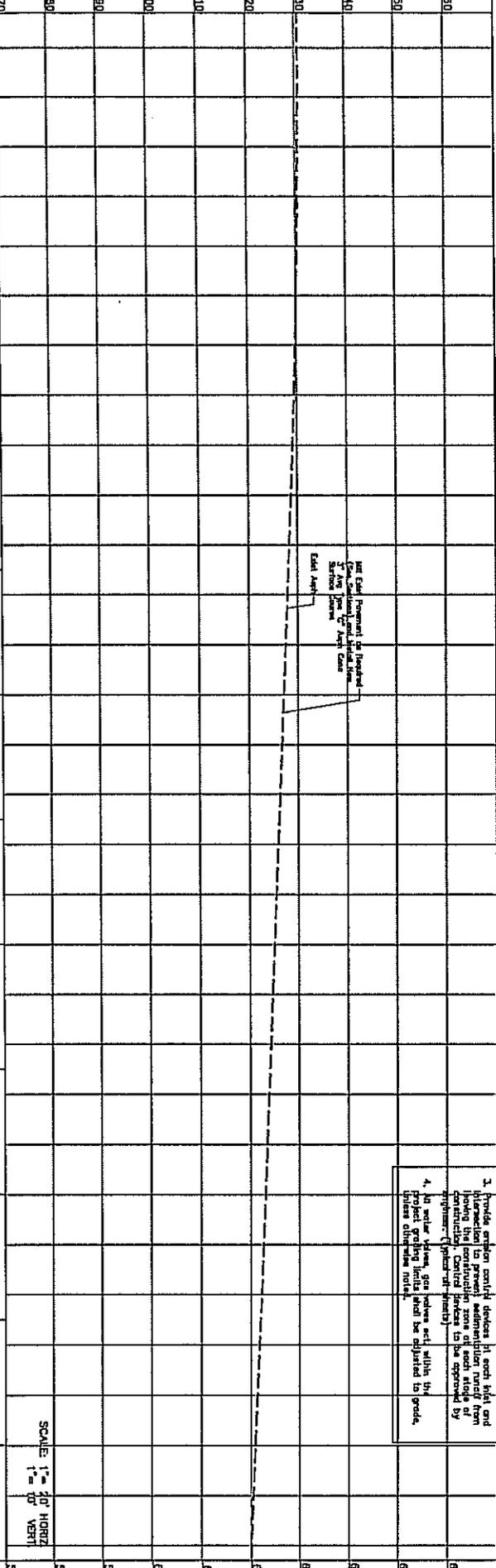


FAP No. STP-5800(674)



Lawler's Subdivision  
Plat Book 16, Page 29

- Notes:**
1. All driveway entrances shall be concrete aprons within the Right-of-Way. Driveways outside of the Right-of-Way shall match existing material and be replaced to the nearest joint.
  2. See Cross-Section sheets for driveway entrance detailing.
  3. Provide erosion control devices in each inlet and diversion to prevent sedimentation runoff from leaving the construction zone of each study or project (prior to final) to be approved by the City.
  4. No water features, gas valves, etc. shall be placed within the project driveway right-of-way.



SCALE: 1" = 20' HORIZ  
1" = 10' VERT

|     |       |       |       |       |       |       |       |       |       |       |     |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| 660 | 34+00 | 630.8 | 35+00 | 623.9 | 36+00 | 627.1 | 37+00 | 625.1 | 38+00 | 622.0 | 570 |
| 650 |       | 630.4 |       | 623.2 |       | 627.1 |       | 625.1 |       | 622.0 | 580 |
| 640 |       |       |       |       |       |       |       |       |       |       | 590 |
| 630 |       |       |       |       |       |       |       |       |       |       | 600 |
| 620 |       |       |       |       |       |       |       |       |       |       | 610 |
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| 590 |       |       |       |       |       |       |       |       |       |       | 640 |
| 580 |       |       |       |       |       |       |       |       |       |       | 650 |
| 570 |       |       |       |       |       |       |       |       |       |       | 660 |

PLAN AND PROFILE

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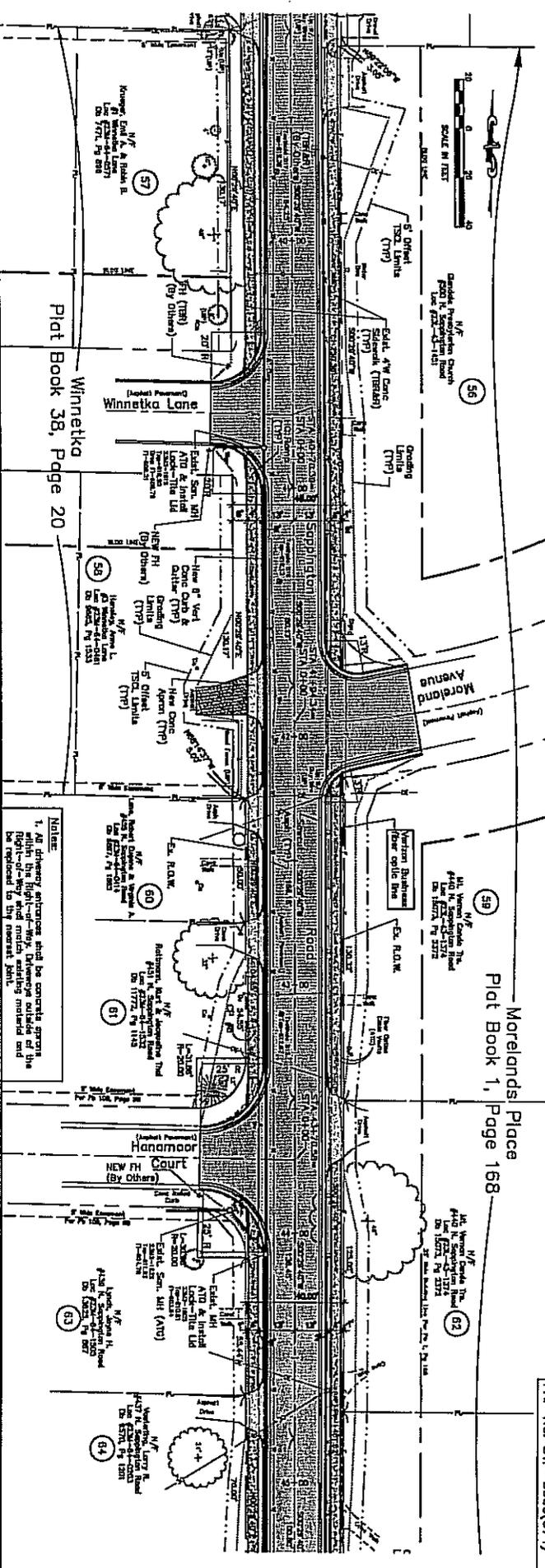


E/A, Project No.  
8003-00-2  
Revised: 02/07/07  
Date: 4/25/06  
Designed By: PMS  
Drawn By: PMS  
Checked By: PMS

**CITY OF GLENDALE, MISSOURI  
SAPPINGTON ROAD  
RECONSTRUCTION**

Sheet No.  
**8**  
OF 87  
Date: 9/29/06

As shown on this plan, the proposed reconstruction of Sappington Road is subject to the approval of the City of Glendale, Missouri. The City of Glendale, Missouri, is not responsible for the accuracy of the information shown on this plan. The City of Glendale, Missouri, is not responsible for the accuracy of the information shown on this plan. The City of Glendale, Missouri, is not responsible for the accuracy of the information shown on this plan.



CITY OF GLENDALE, MISSOURI  
SAPPINGTON ROAD  
RECONSTRUCTION

- Notes:**
- All driveway openings shall be complete prior to the right-of-way and motor vehicle material and be replaced to the nearest joint.
  - See Cross-section sheets for driveway entrances.
  - Provide suitable curbed drainage in each half and installation for storm water management from parking lot construction zone of each stage of construction. Control structures to be approved by engineer. (Point of Sale)
  - At no time shall any material be placed within the project grading limits shall be adjusted to grade, grass or otherwise noted.

Use East Elevation as Reference  
for all elevations on this plan  
2' High Top of Asphalt Curbs  
3' High Concrete  
Curb Height

|     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 860 | 819.0 | 40+00 | 819.0 | 40+00 | 819.0 | 41+00 | 819.0 | 41+00 | 819.0 | 42+00 | 819.0 | 42+00 | 819.0 | 43+00 | 819.0 | 43+00 | 819.0 | 44+00 | 819.0 | 44+00 | 819.0 | 45+00 | 819.0 | 45+00 |  |
| 850 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 840 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 830 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 820 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 810 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 800 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 790 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 780 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
| 770 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

PLAN AND PROFILE

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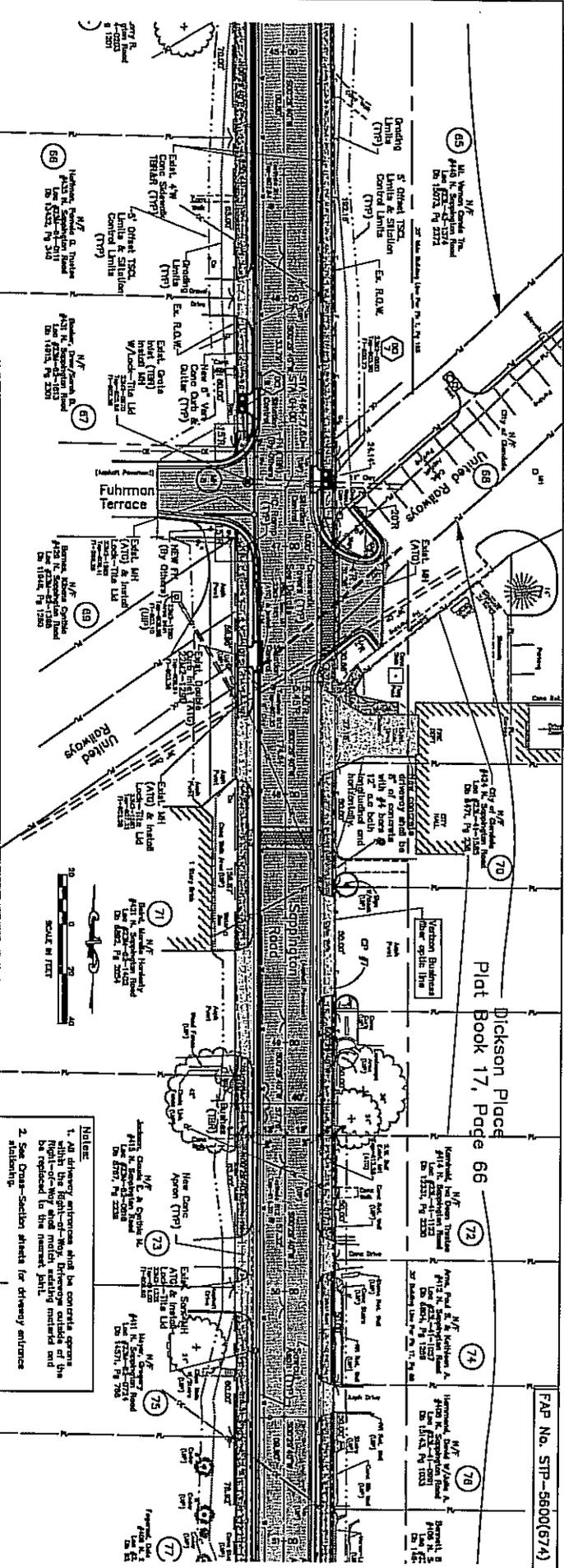


E/A: Patrick No.  
0000-00-2  
Date: 09/07/07  
Date: 1/23/08  
Designed By: PWS  
Checked By: PWS

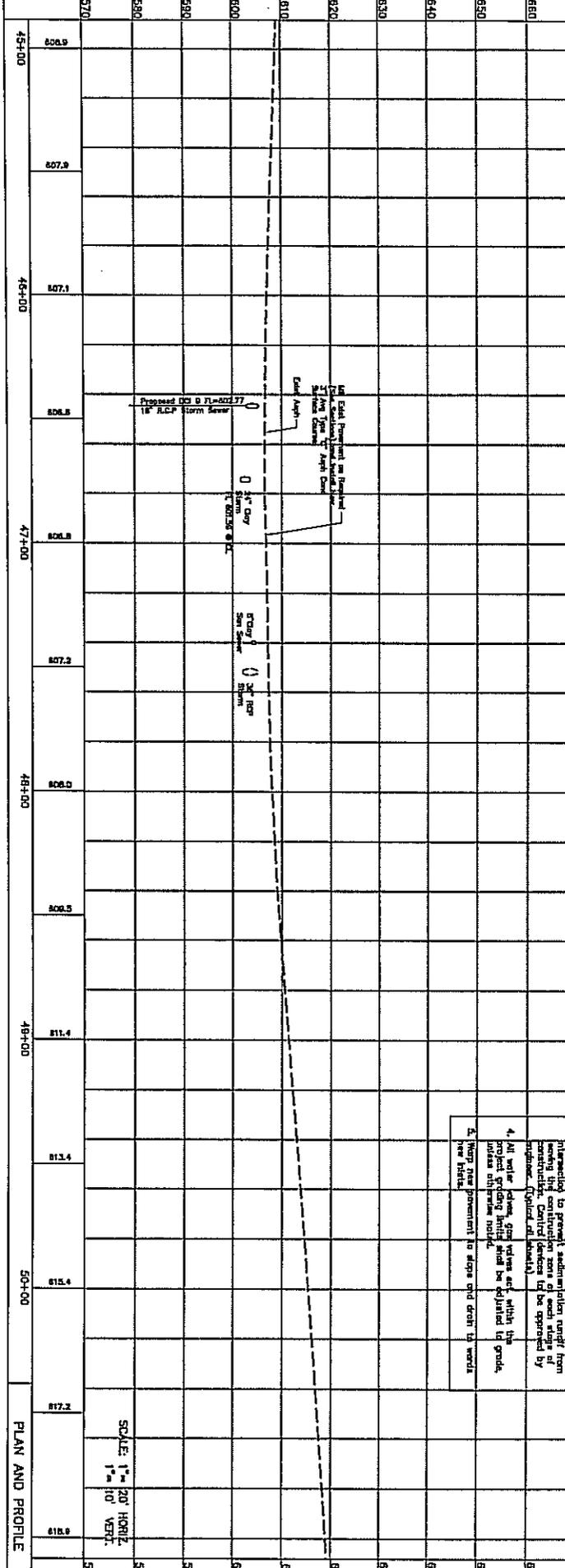
Sheet No.  
**9**  
of 11  
Issue Date: 9/29/08

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FAP No. STP-5600(674)



- Note:**
- All driveway entrances and the concrete aprons within the right-of-way. Driveways outside of the right-of-way may remain existing materials and be replaced in the necessary joints.
  - See Cross-Section sheets for driveway entrance standards.
  - Provide erosion control devices at each inlet and interlocking to prevent sediment transport from existing and proposed storm sewers to be approved by the City Engineer (Refer all details).
  - All water, gas, and sewer lines within the right-of-way shall be adjusted to grade, unless otherwise noted.
  - Keep new pavement to slope and drain to words per 100ft.



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

**CITY OF GLENDALE, MISSOURI  
SAPPINGTON ROAD  
RECONSTRUCTION**

E/A Project No. 6800-00-2  
 Date: 4/22/08  
 Designed By: PFS  
 Drawn By: PFS  
 Checked By: PFW

Sheel No. **10**  
 of 61  
 Issue Date: 4/23/08

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