Form C-104
Rev. 09/2008

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VALUE ENGINEERING CHANGE PROPOSAL
MISSOURI DEPARTMENT OF TRANSPORTATION

Date 3-3-2009

Contract ID 080919-607 **Job No.** J6S2065

County St. Louis County **Original Bid Cost** $1,081,328.89

Contractor Gerstner Electric, Inc. **By** Thomas A. Dieckmann

Designed By Davar Divanbeigi, MODOT **Phone** 636-349-5999

VECP# 09-12 **(to be completed by C.O.)** **VECP** ☐ **or** **VECP/PDU** ☐

1. **Description of existing requirements and proposed change(s). Advantages/Disadvantages**
   Job provides for installation of new conduit, pull boxes, and fiber optic cable along the length of Rte 115 from Nelson Ave to Goodfellow Avenue. Proposed change is to use in place the existing conduit and fiber optic cable on Rte 115 from Nelson to Francis, and conduit only from east of Francis to Kienlen Avenue, a distance of approximately 4000 linear feet. The existing conduit, pull boxes, and 18sm/6mm hybrid fiber optic cable were installed on the north side of Rte 115 on Job J6I1220F. The conduit, boxes, and cable have been checked are in good and usable condition.

2. **Estimate of reduction in construction costs.** $46,366.20

3. **Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.**
   The maintenance costs will remain constant as opposed to doubling with the installation of another paralleling conduit/cable system.

4. **Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.**

   3-3-2009
   (date)

5. **Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.**

   5-1-2009 (date) n/a (effect)

6. **Dates of any previous or concurrent submission of the same proposal.**

   n/a
   (date and/or dates)

Additional Comments:

** Portion Below This Line To Be Filled Out by MoDOT **

Comments:
After consulting with MoDOT's Project Manager, Davar Divanbeigi, we both agree that we can utilize the existing conduit and 18-6 fiber optic cable currently in place. However, the contractor must verify and provide testing results for the fiber optic cable to confirm that it is in good working condition. I recommend approval of this value engineering proposal on the basis of a 75 (MoDOT)/25 (Contractor) split in lieu of a 50/50 VE due to utilization of existing features and an underrun of quantities.

Christine Redhage — 3/6/09
Submitted By Resident Engineer — Date

Comments: THE DISTRICT RECOMMENDS APPROVAL OF THIS V.E., AND AGREES WITH THE 75/25 SPLIT.

☑ **Approval Recommended**
☐ **Rejection Recommended**

Ed Harris — 3-11-09
District Engineer — Date

Comments:

☐ **Approval Recommended**
☐ **Rejection Recommended**

Federal Highway Administration — Date
Required for FHWA Full Oversight Projects

Comments: Concur with the District as a 75/25 PDVE pending satisfactory results in the field TK

☑ **Approval**
☐ **Rejection**

David D. Allen — 3/23/09
State Construction and Materials Engineer — Date

Distribution: Resident Engineer, Project Manager, District Construction & Materials Engineer, State Construction & Materials Engineer, Value Engineering Administrator – MoDOT, P. O. Box 270, Jefferson City, MO 65102

Job J6S2065 VE Proposal

Line Item Reductions:

0080 – Conduit, 2" Trench – 15 lf @ $7.89	= $ 118.35	(PB 150 to Nelson)
0090 – Conduit, 2" Pushed – 4069 lf @ $8.73	= $ 35522.37	(PB 150 to Ex PB 5)
0110 – Pull Box, Class 2 – 3 each @ $1166.37	= $ 3499.11	(PB 151, 152, 153)
0120 – Pull Box, Class 5 – 1 each @ $1443.25	= $ 1443.25	(PB 150)
0270 – Sig Cab Base Wrap/Shift – 1 ea @ $3001.96	= $ 3001.96	(at Nelson)
0300 – Fiber Optic Cable, 24 SM – 4180 lf @ $1.27	= $ 5308.60	(Nelson to Kienlen)
TOTAL	= $ 48893.64	

Line Item Quantity Additions/Pay Item Additions:

0180 – F & I SM Fiber Fusion Splice – 18 ea @ $40.06	= $ 721.08
5003 – F & I MM Fiber Fusion Splice – 6 ea @ $40.06	= $ 240.36
5004 – F & I Waterproof Fiber Splice Enc – 1 ea @ $423.00	= $ 423.00
5005 – Fiber Optic Cable, 18/6 Hybrid – 900 lf @ $1.27	= $ 1143.00
TOTAL	= $ 2527.44

Net Savings from VE Proposal:

Reductions = $ 48893.64
Additions = $ 2527.44
SAVINGS = $ 46366.20

MODOT Savings = $ 23183.10
GEI Portion = $ 23183.10

ROUTE	STATE	DISTRICT	SHEET NO.
VAR	MO	6	30

JOB NO. J6S2065

CONTRACT ID.

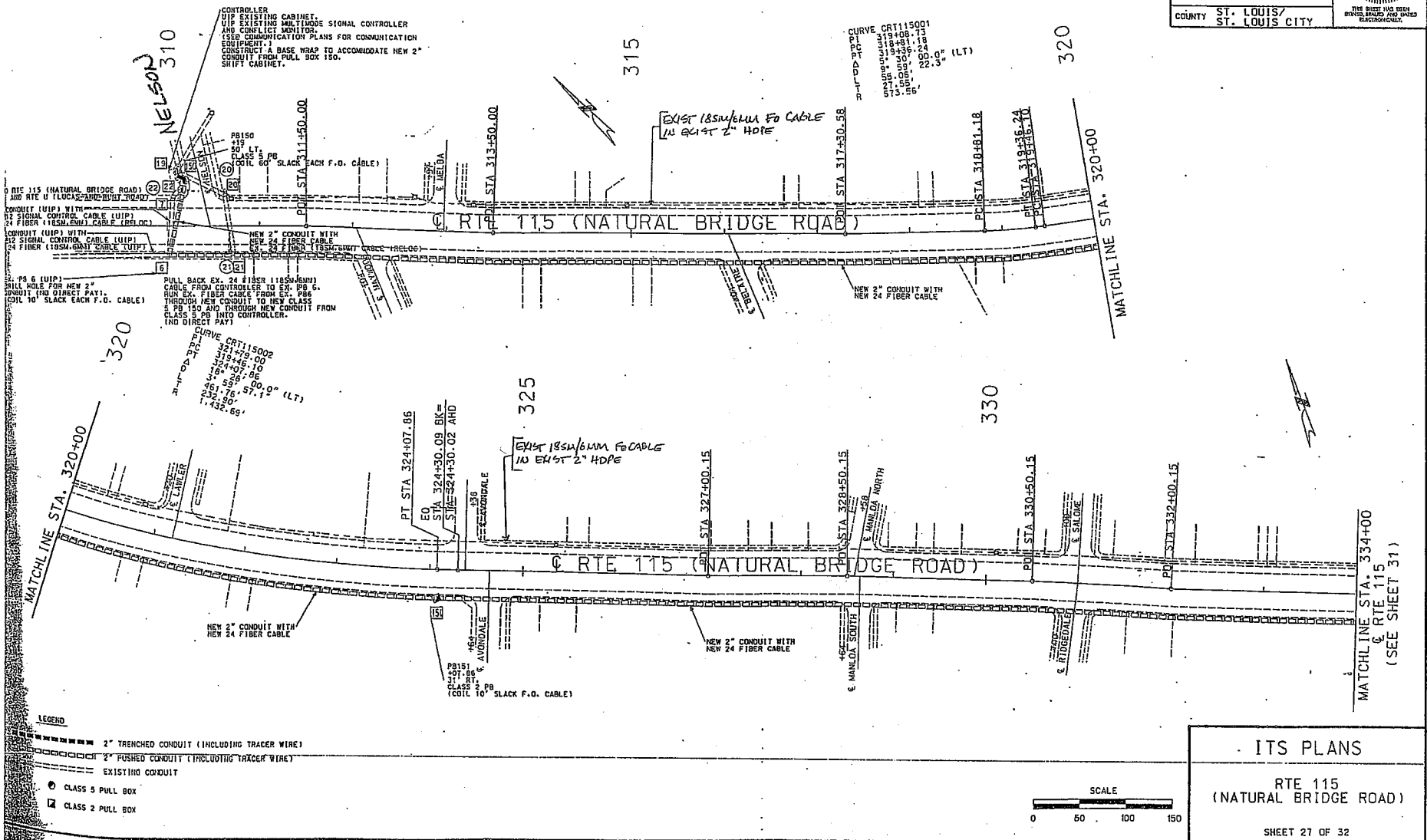
PROJECT NO.

COUNTY ST. LOUIS/ ST. LOUIS CITY

STATE OF MISSOURI
DAVAR DAVANGEIGH
NUMBER PE-24235
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

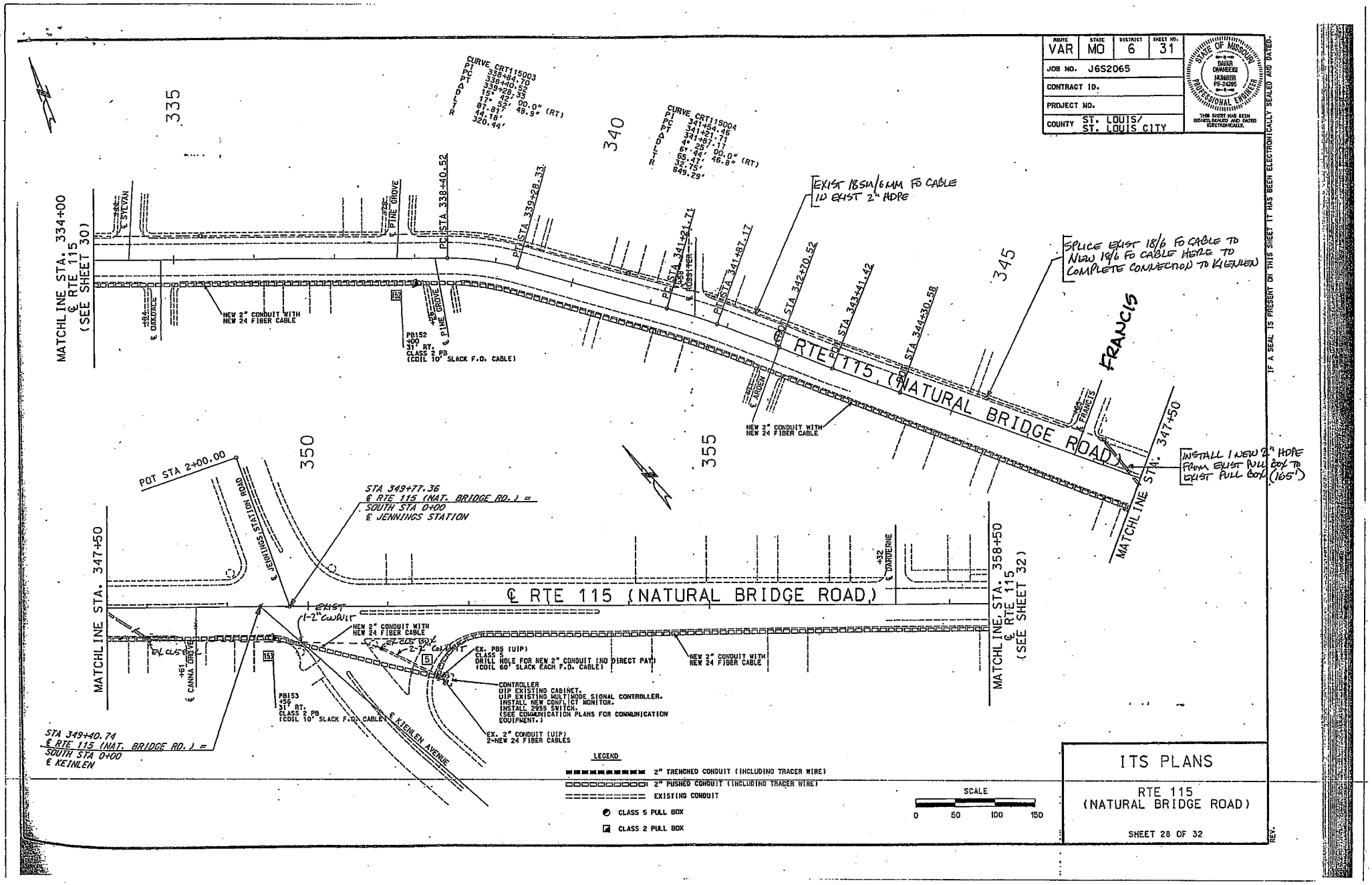


ITS PLANS

RTE 115
(NATURAL BRIDGE ROAD)

SHEET 27 OF 32

REV.



ROUTE VAR
STATE MO
DISTRICT 6
SHEET NO. 31
JOB NO. J6S2065
CONTRACT ID.
PROJECT NO.
COUNTY ST. LOUIS/ ST. LOUIS CITY
STATE OF MISSOURI
DAVAR OWANEESI
NUMBER PE-24295
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.
CURVE CRT115003
PI 338+84.70
PC 338+40.52
PT 339+28.33
Δ 15° 42' 00.0" (RT)
D 17° 52' 48.9"
L 87.81'
T 44.18'
R 320.44'
CURVE CRT115004
PI 341+54.46
PC 341+21.71
PT 341+87.17
Δ 4° 25' 00.0" (RT)
D 6° 44' 46.8"
L 65.47'
T 32.75'
R 849.29'
335
340
345
350
355
MATCHLINE STA. 334+00
℄ RTE 115
(SEE SHEET 30)
℄ SYLVAN
℄ PINE GROVE
PC STA 338+40.52
PT STA 339+28.33
PC STA 341+21.71
℄ ROSSITER
PT STA 341+87.17
PC STA 342+70.52
PT STA 343+41.42
PC STA 344+30.58
℄ OAKDALE
NEW 2" CONDUIT WITH NEW 24 FIBER CABLE
PB152
+00
31' RT.
CLASS 2 PB
(COIL 10' SLACK F.O. CABLE)
EXIST 18SM/6MM FO CABLE IN EXIST 2" HDPE
SPLICE EXIST 18/6 FO CABLE TO NEW 18/6 FO CABLE HERE TO COMPLETE CONNECTION TO KIENLEN
FRANCIS
RTE 115 (NATURAL BRIDGE ROAD)
℄ ARDEN
℄ FRANCIS
NEW 2" CONDUIT WITH NEW 24 FIBER CABLE
INSTALL 1 NEW 2" HDPE FROM EXIST PULL BOX TO EXIST PULL BOX (165')
MATCHLINE STA. 347+50
POT STA 2+00.00
℄ JENNINGS STATION ROAD
STA 349+77.36
℄ RTE 115 (NAT. BRIDGE RD.) =
SOUTH STA 0+00
℄ JENNINGS STATION
℄ RTE 115 (NATURAL BRIDGE ROAD)
+32
℄ DARDENNE
MATCHLINE STA. 358+50
℄ RTE 115
(SEE SHEET 32)
EXIST 1-2" CONDUIT
NEW 2" CONDUIT WITH NEW 24 FIBER CABLE
EX. CLS BOX
2-2" CONDUIT
EX. PB5 (UIP)
CLASS 5
DRILL HOLE FOR NEW 2" CONDUIT (NO DIRECT PAY)
(COIL 60' SLACK EACH F.O. CABLE)
NEW 2" CONDUIT WITH NEW 24 FIBER CABLE
EX. CLS BOX
+61
℄ CANNA DRIVE
PB153
+56
31' RT.
CLASS 2 PB
(COIL 10' SLACK F.O. CABLE)
CONTROLLER
UIP EXISTING CABINET.
UIP EXISTING MULTIMODE SIGNAL CONTROLLER.
INSTALL NEW CONFLICT MONITOR.
INSTALL 2955 SWITCH.
(SEE COMMUNICATION PLANS FOR COMMUNICATION EQUIPMENT.)
EX. 2" CONDUIT (UIP)
2-NEW 24 FIBER CABLES
℄ KIENLEN AVENUE
STA 349+40.74
℄ RTE 115 (NAT. BRIDGE RD.) =
SOUTH STA 0+00
℄ KEINLEN
LEGEND
2" TRENCHED CONDUIT (INCLUDING TRACER WIRE)
2" PUSHED CONDUIT (INCLUDING TRACER WIRE)
EXISTING CONDUIT
CLASS 5 PULL BOX
CLASS 2 PULL BOX
SCALE
0 50 100 150
ITS PLANS
RTE 115
(NATURAL BRIDGE ROAD)
SHEET 28 OF 32
REV.

ROUTE	STATE	DISTRICT	SHEET NO.
VAR	MO	6	32

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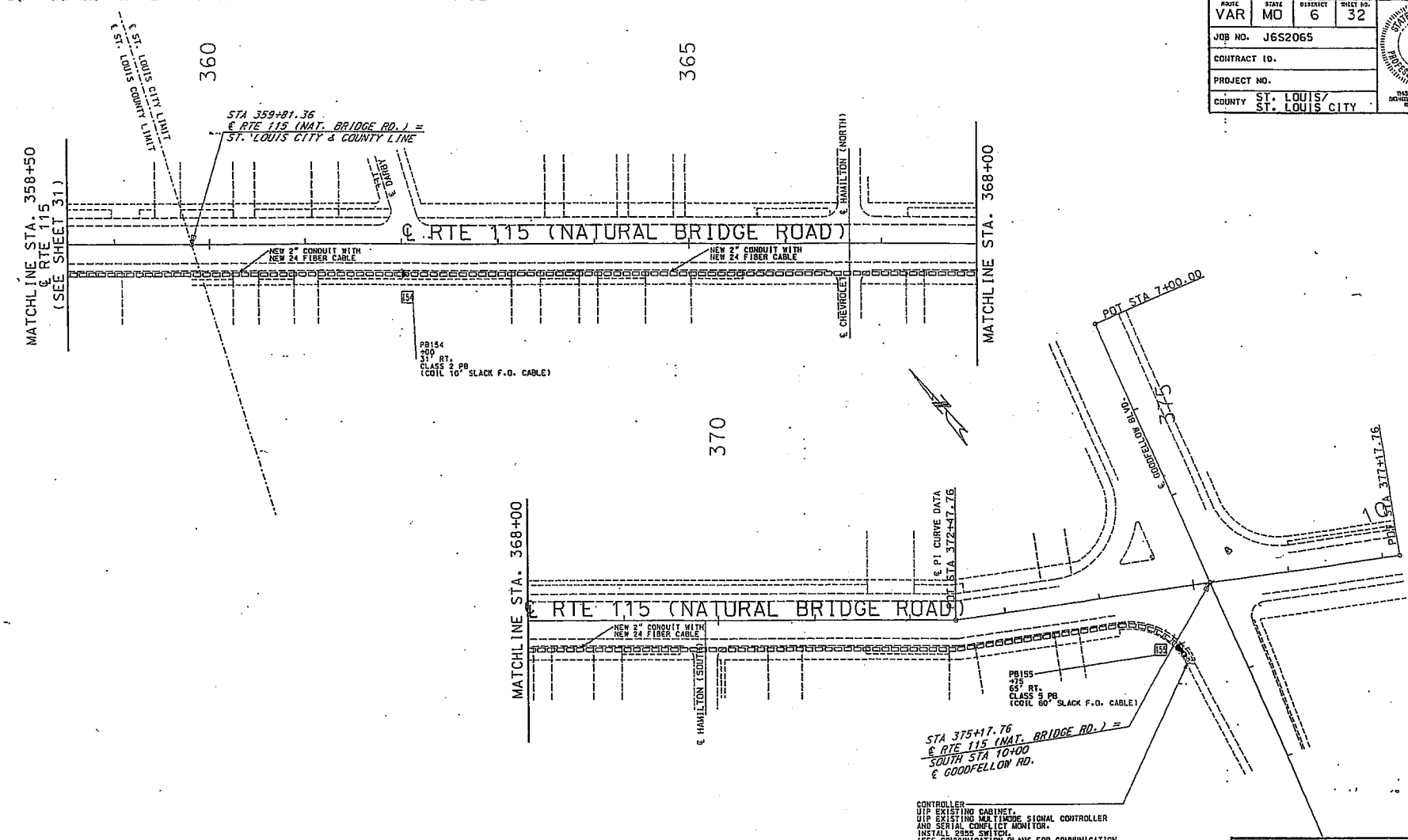

CONTROLLER
UIP EXISTING CABINET.
UIP EXISTING MULTIMODE SIGNAL CONTROLLER AND SERIAL CONFLICT MONITOR.
INSTALL 2955 SWITCH.
(SEE COMMUNICATION PLANS FOR COMMUNICATION EQUIPMENT.)
CONSTRUCT A BASE WRAP TO ACCOMMODATE NEW 2" CONDUIT FROM PULL BOX 155.
SHIFT CABINET.

LEGEND

- 2" TRENCHED CONDUIT (INCLUDING TRACER WIRE)
- 2" POSRED CONDUIT (INCLUDING TRACER WIRE)
- EXISTING CONDUIT
- CLASS 5 PULL BOX
- CLASS 2 PULL BOX

SCALE
0 50 100 150

ITS PLANS

RTE 115
(NATURAL BRIDGE ROAD)

SHEET 29 OF 32

REV.

VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- ☐ Bridge/Structure/Footings
- ☐ Drainage Structures (RCP, RCB, CMP's, ect.)
- ☐ TCP/MOT
- ☐ Paving (PCCP, ect.)
- ☐ Grading/MSE Walls
- ✓ Signal/Lighting/ITS
- ☐ Misc. _____

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

Contractor determined that existing conduit and pull boxes were in suitable condition and adequate to be used in place instead of creating a second, parallel system.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.