| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R1 |

# Commonwealth of Kentucky
# DEPARTMENT OF HIGHWAYS

## PLANS OF
## PROPOSED PROJECT
### STP BRO 0601(196)
### FD52 070 0060 012–013
### LIVINGSTON
# US60 OVER CUMBERLAND RIVER

## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| R1 | LAYOUT SHEET |
| R2 - R2K | TYPICAL SECTIONS-SUMMARY OF QUANTITIES |
| R3 - R28 | PLAN AND PROFILE SHEETS |
| R29 | RIGHT OF WAY SUMMARY SHEETS |
| R30 - R32 | RIGHT OF WAY STRIP MAP SHEETS |
| R33 - R35 | COORDINATE CONTROL SHEETS |
| R36 - R66 | DETAIL SHEETS |
| R67 - R86 | TRAFFIC CONTROL SHEETS |
| R87 - R89 | EROSION CONTROL SHEETS |
| R90 - R106 | SOIL PROFILE SHEETS |
| R107 - R116 | PIPE DRAINAGE SHEETS |
| S1-S121 | STRUCTURE PLANS |
| U1-U15 | UTILITY RELOCATION PLANS |
| X1 - X86 | CROSS SECTION SHEETS |

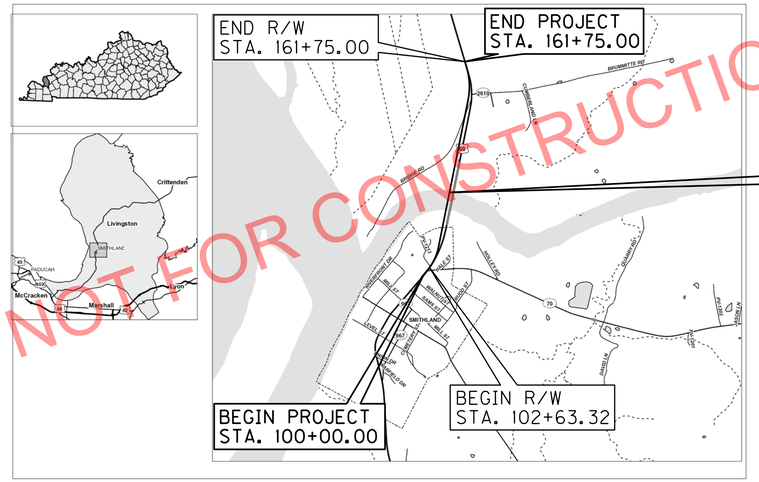
SHEETS NOT INCLUDED IN TOTAL SHEETS
R2A - R2I, R8A

## STANDARD DRAWINGS

NUMBER

| | | | |
|---|---|---|---|
| RBC-002-03 | RDI-021-01 | RDP-010-09 | RGX-005-06 |
| RBI-002-07 | RDI-025-05 | RDX-005-03 | RGX-010-04 |
| RBR-005-11 | RDI-026-01 | RDX-160-06 | RPM-110-07 |
| RBR-010-06 | RDI-035-02 | RDX-210-03 | |
| RDB-003-08 | RDI-041-01 | RDX-220-05 | |
| RDB-105-06 | RDM-005-06 | RDX-225-01 | |
| RDB-106-05 | RDM-055 | RDX-230-01 | |
| RDD-021-07 | RDM-100-03 | RFC-002-05 | |
| RDD-040-05 | RDM-105-03 | RFG-005-06 | |
| RDI-001-10 | RDP-001-06 | RGS-001-07 | |
| RDI-020-09 | RDP-005-05 | RGX-001-06 | |

TOTAL STANDARD DRAWINGS 36




STA. 124+46.75
10-SPAN HYBRID PCIB &
STEEL THROUGH TRUSS
@ 0° SKEW
120'-10"x121'-10"x123'-4"x
700'-4"x143'-4"x139'-10"x139'-10"
139'-10"x139'-10"x138'-10"

THIS PROJECT IS OFF THE NH SYSTEM

THESE PLANS ARE FOR GRADE, DRAIN AND SURFACING

THE CONTROL OF ACCESS ON THIS PROJECT SHALL BE BY PERMIT

PRELIMINARY NOT FOR CONSTRUCTION

## DESIGN CRITERIA

| | |
|---|---|
| CLASS OF HIGHWAY | RURAL PRINCIPAL ARTERIAL |
| TYPE OF TERRAIN | ROLLING |
| DESIGN SPEED | 55 |
| REQUIRED NPSD | 495 |
| REQUIRED PSD | 908 |
| LEVEL OF SERVICE | |
| ADT PRESENT ( 2012 ) | 4900 |
| ADT FUTURE ( 2038 ) | 6900 |
| DHV | 530/740 |
| D % | 50 |
| T % | 14.5 / 19 |

## GEOGRAPHIC COORDINATES

LATITUDE 37 DEGREES 08 MINUTES 55 SECONDS NORTH
LONGITUDE 88 DEGREES 23 MINUTES 58 SECONDS WEST

## DESIGNED

% RESTRICTED SD
LEVEL OF SERVICE
MAX. DISTANCE W/O PASSING

**BEFORE YOU DIG**

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.

0' 2000' 4000' 8000'

SCALE 1" = 2,000'

## LAYOUT MAP

| | | | |
|---|---|---|---|
| LENGTH 4262.16 LIN. FT. 0.807 MILES | LENGTH LIN. FT. MILES | LENGTH LIN. FT. MILES | LENGTH LIN. FT. MILES |
| ADDED / DEDUCTED FOR EQUALITIES LIN. FT. | ADDED / DEDUCTED FOR EQUALITIES LIN. FT. | ADDED / DEDUCTED FOR EQUALITIES LIN. FT. | ADDED / DEDUCTED FOR EQUALITIES LIN. FT. |
| NOT INCLUDED | NOT INCLUDED | NOT INCLUDED | NOT INCLUDED |
| RAILROAD CROSSINGS NO. LIN. FT. | RAILROAD CROSSINGS NO. LIN. FT. | RAILROAD CROSSINGS NO. LIN. FT. | RAILROAD CROSSINGS NO. LIN. FT. |
| BRIDGES 1912.84 LIN. FT. | BRIDGES LIN. FT. | BRIDGES LIN. FT. | BRIDGES LIN. FT. |

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY OF
**LIVINGSTON**

ITEM NO. 1-1142.00
PROJECT NUMBER: STP BRO 0601(196) FD52 070 0060 012-013
LETTING DATE:

RECOMMENDED BY: CHRIS KUNTZ, PE
PROJECT MANAGER DATE:

PLAN APPROVED BY:
STATE HIGHWAY ENGINEER DATE:

PLANS PREPARED AND SUBMITTED BY:
DESIGN CONSULTANT

Stantec

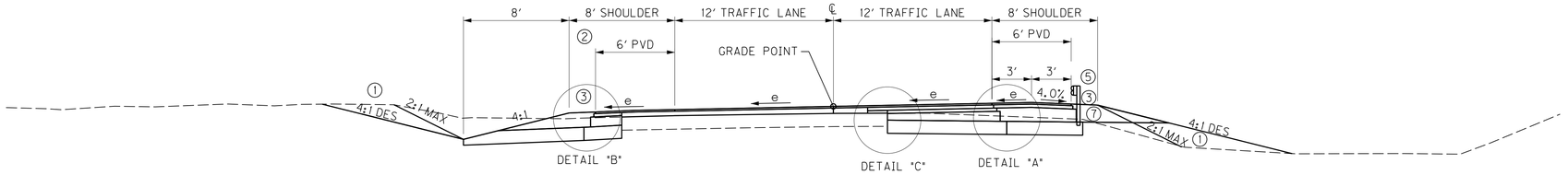
AEI
AMERICAN ENGINEERS, INC.
DESIGNING YOUR FUTURE
2500 Nelson Miller Pkwy Louisville KY
502.245.3813

STATE OF KENTUCKY
KEITH ROBIN DAMRON
16593
LICENSED
PROFESSIONAL ENGINEER

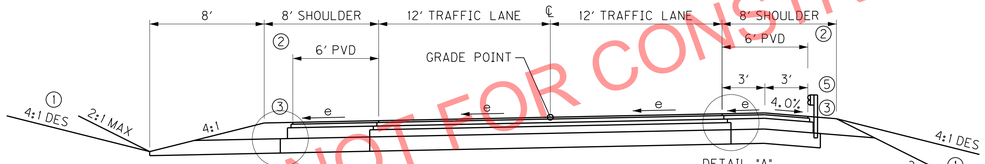
FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\RDDIOOLS.DGN
USER: mwmsatt
DATE PLOTTED: January 27, 2020
E-SHEET NAME: RDDIOOLS
MicroStation v8.11.7.443

# TYPICAL SECTION

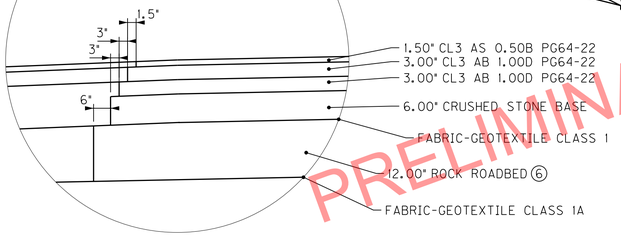
## US 60
## MAINLINE



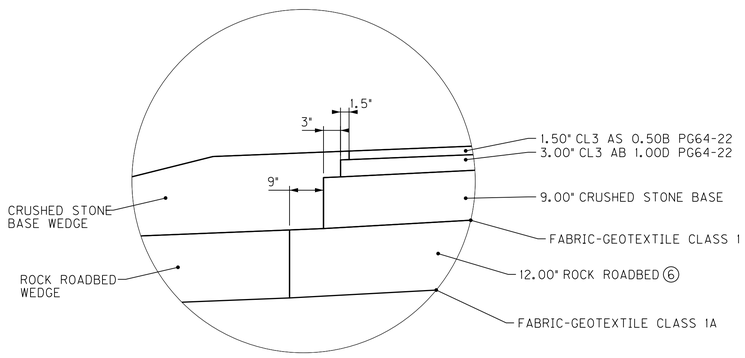

## SUPERELEVATED SECTION
## OVERLAY
## RURAL TWO–LANE
## STA. 100 + 00.00 TO STA. 107 + 70.06
## STA. 155 + 44.03 TO STA. 161 + 75.00



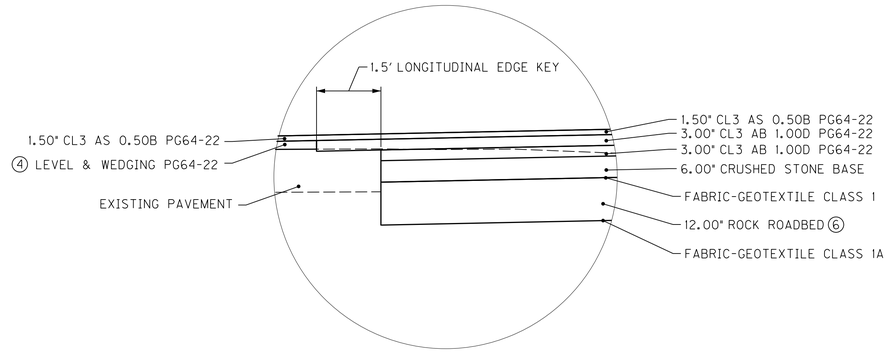

## SUPERELEVATED SECTION
## RURAL TWO–LANE
## STA. 107 + 70.06 TO STA. 108 + 50
## STA. 152 + 10 TO STA. 155 + 44.03



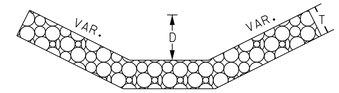

**DETAIL "A"**




**DETAIL "B"**




**DETAIL "C"**




TO BE CONSTRUCTED AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER. SEE PLAN NOTES FOR VALUES OF "D" & "T".

CHANNEL LINING DETAIL

PAVEMENT SCHEDULE

| | |
|---|---|
| TRAFFIC LANE | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>6.00" CRUSHED STONE BASE<br>FABRIC-GEOTEXTILE CLASS 1<br>12.00" ROCK ROADBED ⑥<br>FABRIC-GEOTEXTILE CLASS 1A |
| PAVED SHOULDER | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>9.00" CRUSHED STONE BASE<br>FABRIC-GEOTEXTILE CLASS 1<br>12.00" ROCK ROADBED ⑥<br>FABRIC-GEOTEXTILE CLASS 1A |

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2 |

NOTES:

① SEE X-SECTIONS FOR SLOPES OUTSIDE OF SHOULDER

② SUPERELEVATED SHOULDERS CONSTRUCT TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN NORMAL SHOULDER SLOPES

③ ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE. TWO APPLICATIONS OF THE FOLLOWING:

ASPHALT SEAL COAT @ 2.4 LBS PER SQ. YD. ASPHALT SEAL AGGREGATE @ 20 LBS PER SQ. YD. (NO. 8 OR 9)

ASPHALT MATERIAL FOR TACK AT APPLICATION RATE OF 0.84 LBS/SY

④ IN AREAS TO BE LEVELED IN EXCESS OF 2", UTILIZE ASPHALT BASE MIXTURE FOR LEVELING.

⑤ WHERE INSTALLATION IS NECESSARY, GUARDRAIL WILL REQUIRE 7' POSTS.

⑥ ROCK ROADBED TO BE CONSTRUCTED FROM CRUSHED AGGREGATE SIZE NO. 2S, 3S, OR 23S.

⑦ SLOPE CSB AWAY FROM EXISTING PAVEMENT EDGE AT 1.0% MIN. TO PROVIDE SUBGRADE DRAINAGE WHERE WATER MAY BECOME IMPOUNDED AGAINST THE EXISTING PAVEMENT.

PRELIMINARY NOT FOR CONSTRUCTION

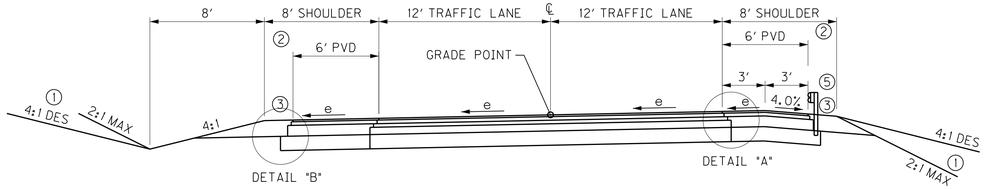
TYPICAL SECTION

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0020OTS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0020OTS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R2A |

# TYPICAL SECTION

## US 60
## MAINLINE

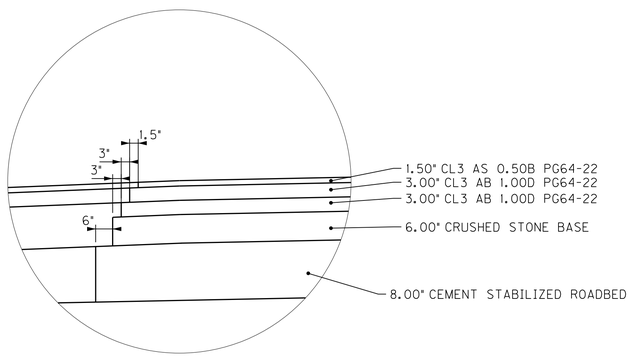



**SUPERELEVATED SECTION**
**RURAL TWO–LANE**
**STA. 108 + 50 TO STA. 110 + 20.41**
**STA. 149 + 48.50 TO STA. 152 + 10**

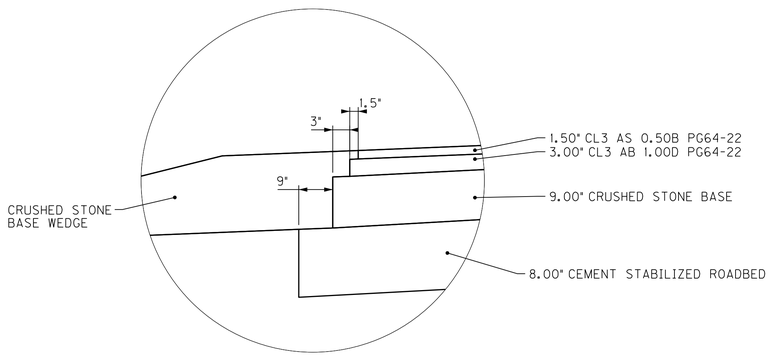



**NORMAL SECTION**
**RURAL TWO–LANE**
**STA. 110 + 20.41 TO STA. 114 + 90.33**
**STA. 134 + 03.17 TO STA. 149 + 48.50**

PRELIMINARY NOT FOR CONSTRUCTION




**DETAIL "A"**




**DETAIL "B"**

NOTES:

1. SEE X-SECTIONS FOR SLOPES OUTSIDE OF SHOULDER
2. SUPERELEVATED SHOULDERS CONSTRUCT TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN NORMAL SHOULDER SLOPES
3. ASPHALT SEAL REQUIRED FROM OUTSIDE EDGE OF PAVED SHOULDER TO A POINT 2' DOWN THE DITCH OR FILL SLOPE. TWO APPLICATIONS OF THE FOLLOWING:

   ASPHALT SEAL COAT @ 2.4 LBS PER SQ. YD. ASPHALT SEAL AGGREGATE @ 20 LBS PER SQ. YD. (NO. 8 OR 9)

   ASPHALT MATERIAL FOR TACK AT APPLICATION RATE OF 0.84 LBS/SY
4. 6% DRY MASS, USING AN AVERAGE DRY DENSITY OF 111.5 LBS/CU. FT.
5. WHERE INSTALLATION IS NECESSARY, GUARDRAIL WILL REQUIRE 7' POSTS.

PAVEMENT SCHEDULE

| | |
|---|---|
| TRAFFIC LANE | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>6.00" CRUSHED STONE BASE<br>8.00" CEMENT STABILIZED ROADBED (4) |
| PAVED SHOULDER | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>9.00" CRUSHED STONE BASE<br>8.00" CEMENT STABILIZED ROADBED (4) |

TYPICAL SECTION

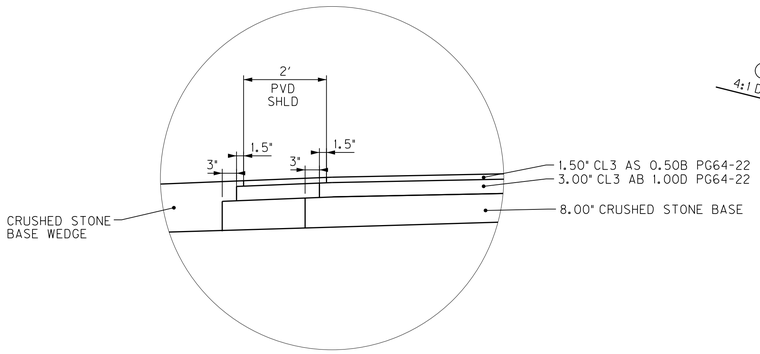
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R0020ATS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0020ATS
MicroStation v8.11.7.443

# TYPICAL SECTION

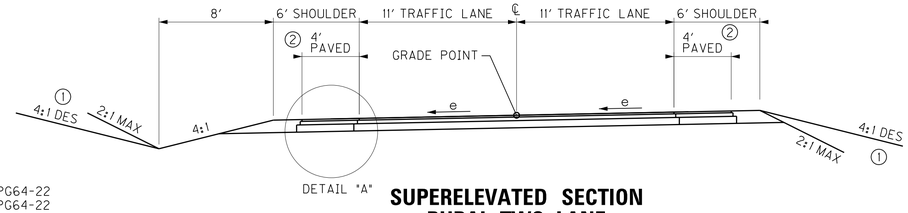
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2B |

NOTES:

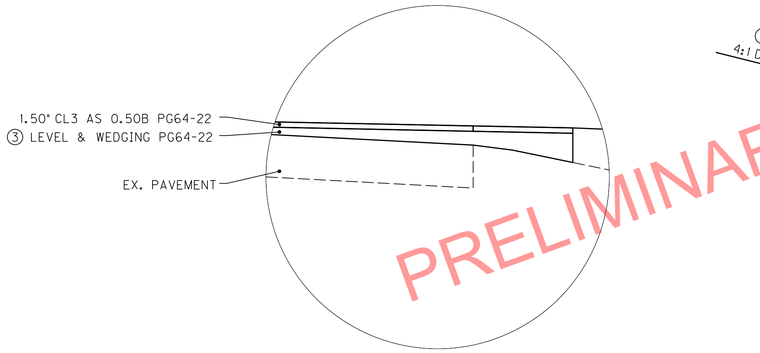
1. SEE X-SECTIONS FOR SLOPES OUTSIDE OF SHOULDER
2. SUPERELEVATED SHOULDERS CONSTRUCT TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN NORMAL SHOULDER SLOPES
3. IN AREAS TO BE LEVELED IN EXCESS OF 2", UTILIZE ASPHALT BASE MIXTURE FOR LEVELING.



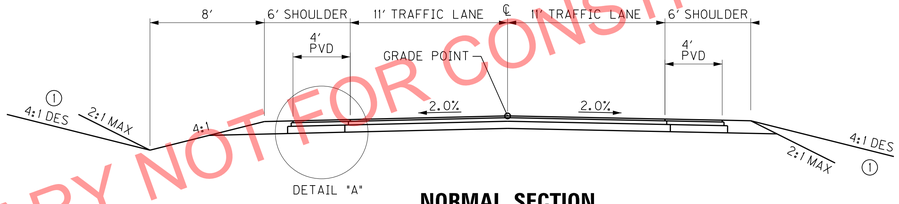

**DETAIL "A"**




**SUPERELEVATED SECTION**
**RURAL TWO-LANE**
**KY 70**
**STA. 50+12 TO STA. 51+12**




**DETAIL "B"**

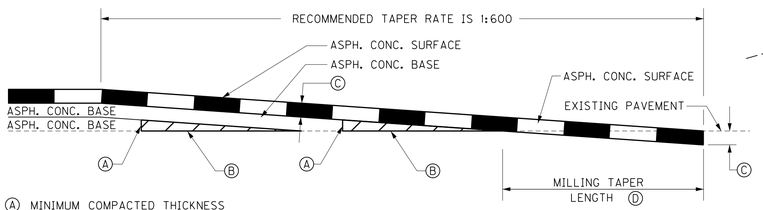



**NORMAL SECTION**
**RURAL TWO-LANE**
**KY 70**
**STA. 51+12 TO STA. 52+50**

PRELIMINARY NOT FOR CONSTRUCTION

APPROACH PAVEMENT SCHEDULE

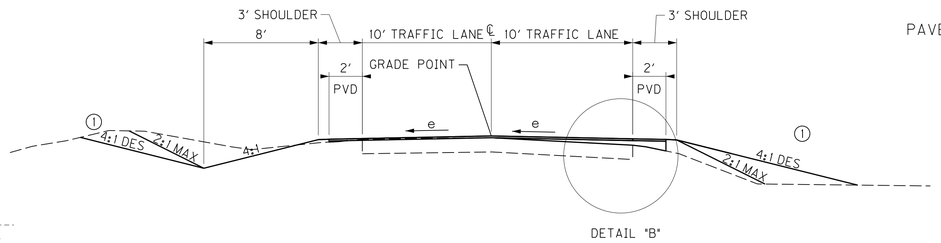
| | |
|---|---|
| TRAFFIC LANE | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>8.00" CRUSHED STONE BASE |
| PAVED SHOULDER | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>8.00" CRUSHED STONE BASE |




(A) MINIMUM COMPACTED THICKNESS
(B) ASPHALT MIXTURE FOR LEVELING AND WEDGING OR NEXT COURSE OF ASPHALT MIXTURE.
(C) ASPHALT SURFACE THICKNESS (FULL DEPTH)
(D) MILL EXISTING PAVEMENT TO RECEIVE ASPHALT SURFACE FULL DEPTH (EDGE KEY).
TAPER LENGTH (ft) = $\frac{\text{t (in)} \times \text{TAPER RATE}}{12}$

FOR A TAPER RATE OF 1:600 (1":50')
TAPER LENGTH = 75 FEET WHEN t = 1.50 inches

**TAPERING OF OVERLAYS ON MEDIUM SPEED FACILITIES (45 TO 65 MPH)**




**OVERLAY SECTION**
**RURAL TWO-LANE**
**KY 70**
**STA. 52+50 TO STA. 54+00**

TYPICAL SECTION

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0020BTS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0020BTS
MicroStation v8.11.7.443

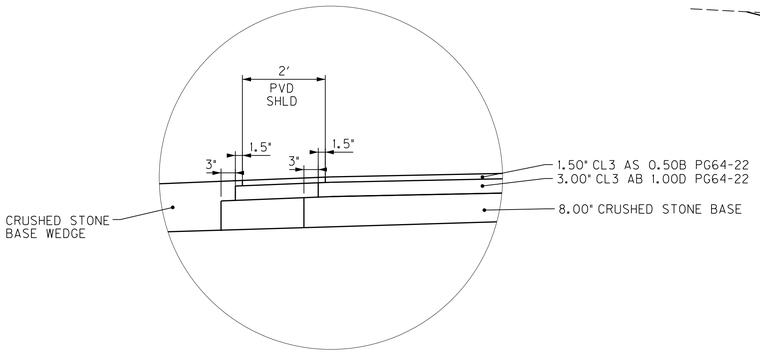
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2C |

# TYPICAL SECTION

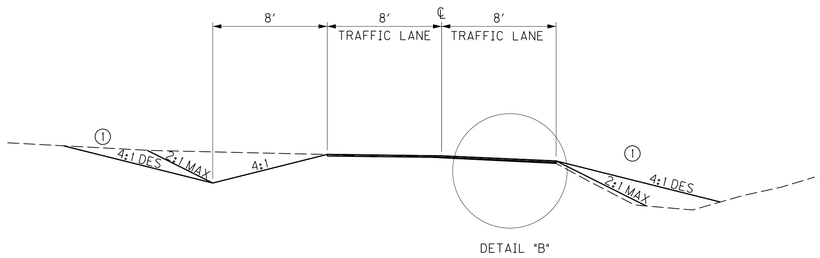
## APPROACH ROADS

NOTES:

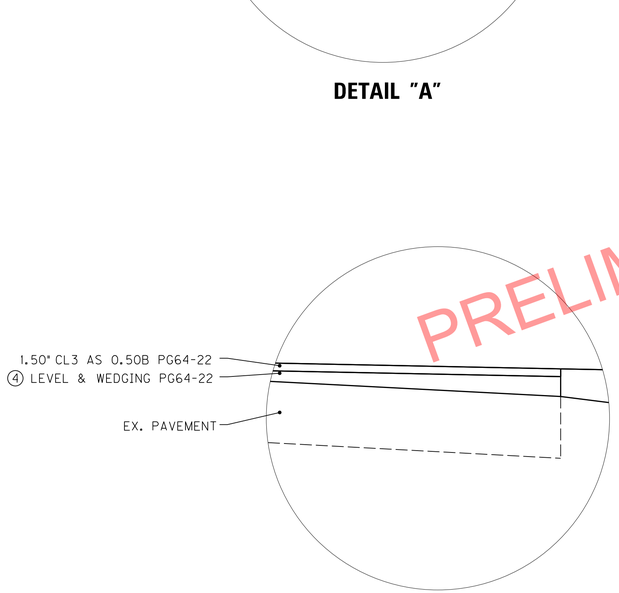
1. SEE X-SECTIONS FOR SLOPES OUTSIDE OF SHOULDER
2. SUPERELEVATED SHOULDERS CONSTRUCT TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN NORMAL SHOULDER SLOPES
3. WHERE INSTALLATION IS NECESSARY, GUARDRAIL WILL REQUIRE 7' POSTS.
4. IN AREAS TO BE LEVELED IN EXCESS OF 2", UTILIZE ASPHALT BASE MIXTURE FOR LEVELING.



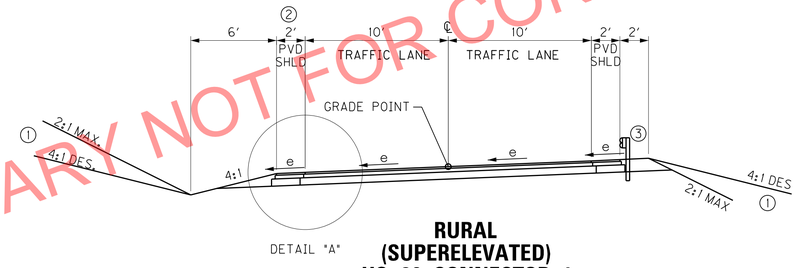

**DETAIL "A"**



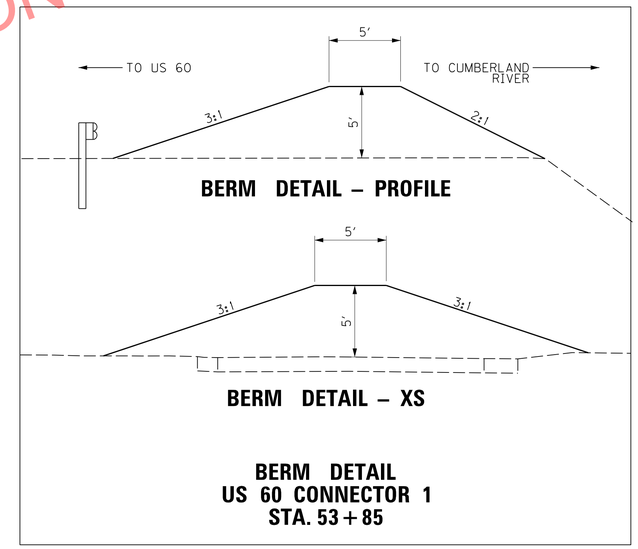

**OVERLAY SECTION**
**CONANT LANE**
**STA. 49+10 TO STA. 49+87.40**




**DETAIL "B"**



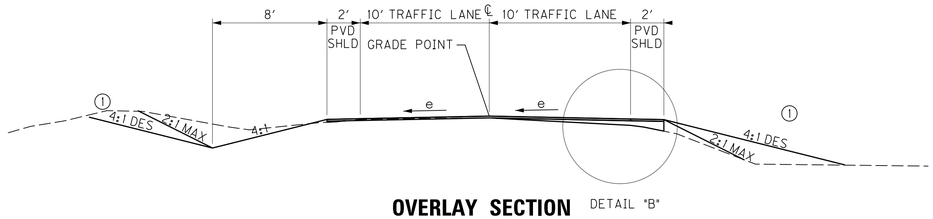

**RURAL**
**(SUPERELEVATED)**
**US 60 CONNECTOR 1**
**STA. 50+12 TO STA. 52+00**




**BERM DETAIL – PROFILE**

**BERM DETAIL – XS**

**BERM DETAIL**
**US 60 CONNECTOR 1**
**STA. 53+85**




**OVERLAY SECTION**
**US 60 CONNECTOR 1**
**STA. 52+00 TO STA. 53+00**

APPROACH PAVEMENT SCHEDULE

| | |
|---|---|
| TRAFFIC LANE | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>8.00" CRUSHED STONE BASE |
| PAVED SHOULDER | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>8.00" CRUSHED STONE BASE |

PRELIMINARY NOT FOR CONSTRUCTION

TYPICAL SECTION

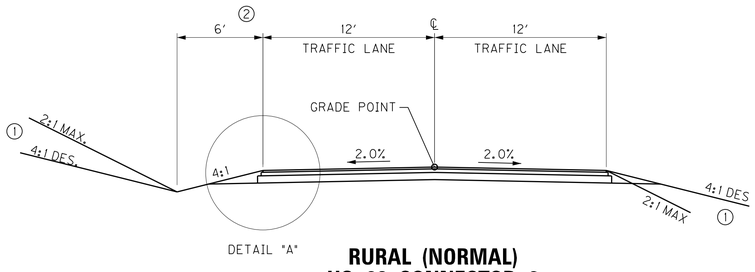
FILE NAME: G:\USERS\MWIMSATT\DESKTOP\ESHEET\R0020CTS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0020CTS
MicroStation v8.11.7.443

# TYPICAL SECTION

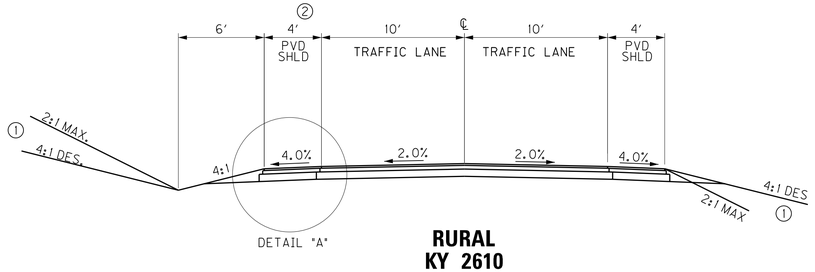
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2D |

NOTES:

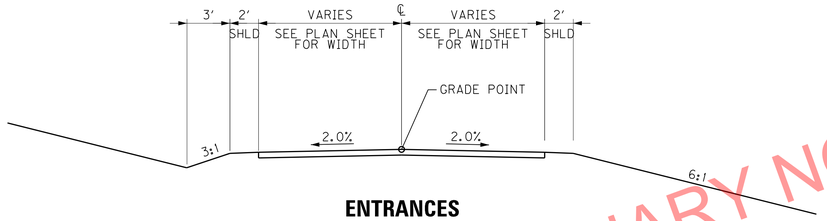
1. SEE X-SECTIONS FOR SLOPES OUTSIDE OF SHOULDER
2. SUPERELEVATED SHOULDERS CONSTRUCT TO STANDARD SUPERELEVATION EXCEPT NOT FLATTER THAN NORMAL SHOULDER SLOPES
3. IN AREAS TO BE LEVELED IN EXCESS OF 2", UTILIZE ASPHALT BASE MIXTURE FOR LEVELING.



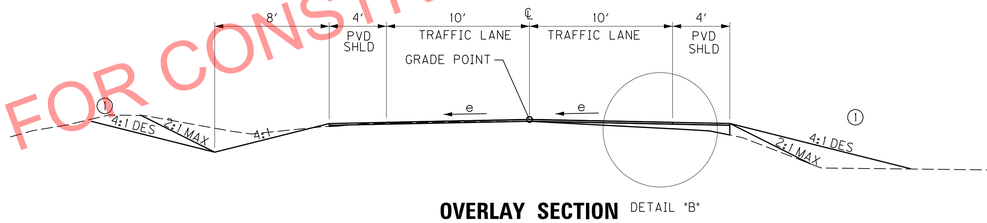

**RURAL (NORMAL)**
**US 60 CONNECTOR 2**
**STA. 50+12 TO STA. 51+40**




**RURAL**
**KY 2610**
**STA. 50+30.76 TO STA. 50+72**




**ENTRANCES**




**OVERLAY SECTION**
**KY 2610**
**STA. 50+72 TO STA. 53+75**

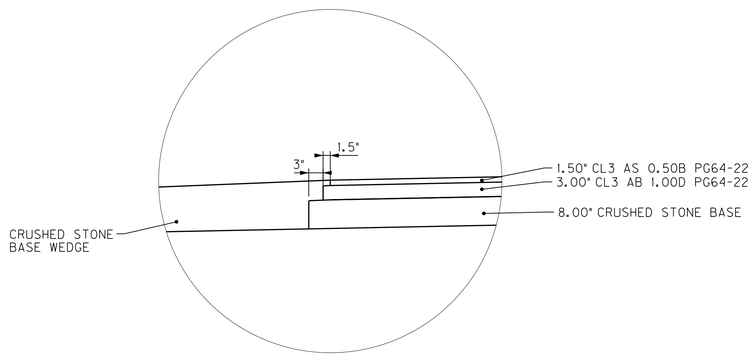
PRELIMINARY NOT FOR CONSTRUCTION

ENTRANCE PAVEMENT SCHEDULE

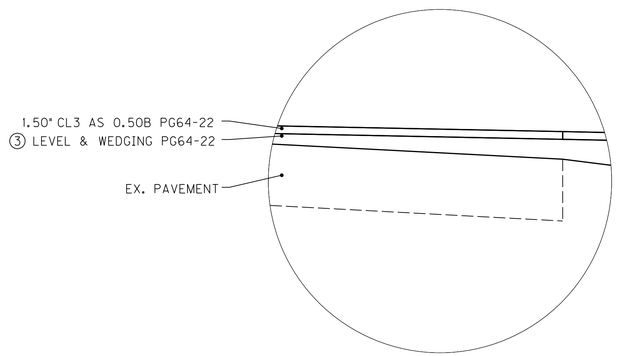
| | |
|---|---|
| ENTRANCES | ASPHALT - COM. ENTRANCE<br>1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>6.00" CRUSHED STONE BASE<br><br>ASPHALT - RES. ENTRANCE<br>1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>4.00" CRUSHED STONE BASE |

APPROACH PAVEMENT SCHEDULE

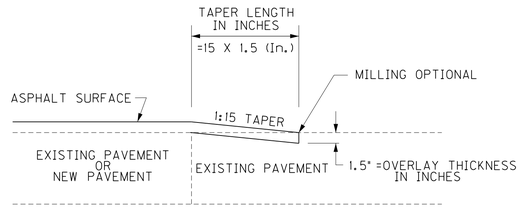
| | |
|---|---|
| TRAFFIC LANE | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>8.00" CRUSHED STONE BASE |
| PAVED SHOULDER | 1.50" CL3 ASPHALT SURFACE 0.50B PG64-22<br>3.00" CL3 ASPHALT BASE 1.00D PG64-22<br>8.00" CRUSHED STONE BASE |




**DETAIL "A"**




**DETAIL "B"**




**TAPER ENTRANCES**

TYPICAL SECTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R0020DTS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0020DTS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2E |

# GENERAL SUMMARY

| ITEM | DESCRIPTION | UNIT | US 60 | KY 70 | CONANT LN | US 60 CONN. 1 | US 60 CONN. 2 | KY 2610 | | | | | | | | | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1310 | REMOVE PIPE | LF | 73 | 260 | 35 | | | | | | | | | | | | 368 |
| 1987 | DELINEATOR FOR GUARDRAIL B/W | EACH | 22 | | | | | | | | | | | | | | 22 |
| 2014 | BARRICADE-TYPE III | EACH | 4 | | | | | | | | | | | | | | 4 |
| 2091 | REMOVE PAVEMENT | SQYD | 2195 | 152 | | | | | | | | | | | | | 2347 |
| 2159 | TEMP DITCH | LF | 3774 | | | | | | | | | | | | | | 3774 |
| 2160 | CLEAN TEMP DITCH | LF | 1887 | | | | | | | | | | | | | | 1887 |
| 2200 | ROADWAY EXCAVATION | CUYD | 10852 | 442 | | 58 | | | | | | | | | | | 11352 |
| 2230 | EMBANKMENT IN PLACE | CUYD | 56736 | | | | 160 | 374 | | | | | | | | | 57270 |
| 2242 | WATER (1) | MGAL | 250 | | | | | | | | | | | | | | 250 |
| 2275 | FENCE- 8FT CHAIN LINK | LF | 30 | | | | | | | | | | | | | | 30 |
| 2287 | DOUBLE VEHICULAR CHAIN LINK GATE | EACH | | | | | | 1 | | | | | | | | | 1 |
| 2351 | GUARDRAIL-STEEL W BEAM-S FACE | LF | 2162.5 | | | 25 | | | | | | | | | | | 2187.5 |
| 2360 | GUARDRAIL TERMINAL SECTION NO 1 | EACH | | | | 2 | | | | | | | | | | | 2 |
| 2371 | GUARDRAIL END TREATMENT TYPE 7 | EACH | 2 | | | | | | | | | | | | | | 2 |
| 2391 | GUARDRAIL END TREATMENT TYPE 4A | EACH | 2 | | | | | | | | | | | | | | 2 |
| 2429 | RIGHT-OF-WAY MONUMENT TYPE 1 | EACH | 29 | | | | | | | | | | | | | | 29 |
| 2432 | WITNESS POST | EACH | 3 | | | | | | | | | | | | | | 3 |
| 2483 | CHANNEL LINING CLASS II (6) | TON | | | | | | | | | | | | | | | 81 |
| 2484 | CHANNEL LINING CLASS III (7) | TON | | | | | | | | | | | | | | | 9 |
| 2545 | CLEARING AND GRUBBING (3) | LS | 1 | | | | | | | | | | | | | | 1 |
| 2555 | CONCRETE CLASS B | CUYD | | | | | | 1 | | | | | | | | | 1 |
| 2562 | TEMPORARY SIGNS (4) | SQFT | 362 | | | | | | | | | | | | | | 362 |
| 2568 | MOBILIZATION | LS | 1 | | | | | | | | | | | | | | 1 |
| 2569 | DEMOBILIZATION | LS | 1 | | | | | | | | | | | | | | 1 |
| 2585 | EDGE KEY | LF | 140 | 22 | 16 | 26 | 19 | 18 | | | | | | | | | 241 |
| 2650 | MAINTAIN & CONTROL TRAFFIC | LS | 1 | | | | | | | | | | | | | | 1 |
| 2671 | PORTABLE CHANGEABLE MESSAGE SIGN | EACH | 2 | | | | | | | | | | | | | | 2 |
| 2676 | MOBILIZATION FOR MILL & TEXT (2) | LS | 1 | | | | | | | | | | | | | | 1 |
| 2690 | SAFELOADING | CUYD | 17 | | | | | | | | | | | | | | 17 |
| 2696 | SHOULDER RUMBLE STRIPS | LF | 5434 | | | | | | | | | | | | | | 5434 |
| 2701 | TEMP SILT FENCE | LF | 3774 | | | | | | | | | | | | | | 3774 |
| 2703 | SILT TRAP TYPE A | EACH | 25 | | | | | | | | | | | | | | 25 |
| 2704 | SILT TRAP TYPE B | EACH | 25 | | | | | | | | | | | | | | 25 |
| 2705 | SILT TRAP TYPE C | EACH | 25 | | | | | | | | | | | | | | 25 |
| 2706 | CLEAN SILT TRAP TYPE A | EACH | 25 | | | | | | | | | | | | | | 25 |
| 2707 | CLEAN SILT TRAP TYPE B | EACH | 25 | | | | | | | | | | | | | | 25 |
| 2708 | CLEAN SILT TRAP TYPE C | EACH | 25 | | | | | | | | | | | | | | 25 |
| 2726 | STAKING | LS | 1 | | | | | | | | | | | | | | 1 |
| 2731 | REMOVE STRUCTURE (5) | LS | 1 | | | | | | | | | | | | | | 1 |
| 2775 | ARROW PANEL | EACH | 2 | | | | | | | | | | | | | | 2 |
| 5950 | EROSION CONTROL BLANKET | SQYD | 6289 | 350 | | | | 172 | | | | | | | | | 6811 |
| 5952 | TEMP MULCH | SQYD | 79404 | | | | | | | | | | | | | | 79404 |
| 5953 | TEMP SEEDING AND PROTECTION | SQYD | 59553 | | | | | | | | | | | | | | 59553 |
| 5963 | INITIAL FERTILIZER | TON | 17 | | | | | | | | | | | | | | 17 |
| 5964 | MAINTENANCE FERTILIZER | TON | 9 | | | | | | | | | | | | | | 9 |
| 5985 | SEEDING AND PROTECTION | SQYD | 83727 | | | | | | | | | | | | | | 83727 |
| 5992 | AGRICULTURAL LIMESTONE | TON | 74 | | | | | | | | | | | | | | 74 |
| 6510 | PAVE STRIPING-TEMP PAINT-4 IN | LF | 5000 | | | | | | | | | | | | | | 5000 |
| 6542 | PAVE STRIPING-THERMO-6 IN W | LF | 12777 | 682 | | | | | | | | | | | | | 13459 |
| 6543 | PAVE STRIPING-THERMO-6 IN Y | LF | 14346 | 748 | | | | 250 | | | | | | | | | 15344 |
| 6568 | PAVE MARKING-THERMO STOP BAR-24IN | LF | | 25 | | | | 27 | | | | | | | | | 52 |
| 6574 | PAVE MARKING-THERMO CURV ARROW | EACH | 4 | | | | | | | | | | | | | | 4 |
| 10020NS | FUEL ADJUSTMENT | DOLL | 51125 | | | | | | | | | | | | | | 51125 |
| 10030NS | ASPHALT ADJUSTMENT | DOLL | 27786 | | | | | | | | | | | | | | 27786 |
| 20166ES810 | TEMPORARY PIPE | LF | 129 | | | | | | | | | | | | | | 129 |

PRELIMINARY NOT FOR CONSTRUCTION

**NOTES:**

EROSION CONTROL QUANTITIES ARE BASED ON THE PROBABLE AMOUNT OF EROSION CONTROL FEATURES AS ESTIMATED BY THE DESIGNER.

(1) FOR CONTROLLING DUST CAUSED BY MAINTAINING TRAFFIC ONLY

(2) MILLINGS SHALL BECOME THE PROPERTY OF KYTC AND DELIVERED TO THE LIVINGSTON COUNTY MAINTENANCE LOT

(3) APPROXIMATELY 25 ACRES

(4) SEE SHEETS R84-R86 FOR CONSTRUCTION SIGN TABLES

(5) REMOVAL OF EXISTING US 60 TWIN GIRDER AND THROUGH TRUSS BRIDGE OVER THE CUMBERLAND RIVER

(6) 81 TONS CARRIED OVER FROM PIPE SUMMARY

(7) 9 TONS CARRIED OVER FROM PIPE SUMMARY

(8) REMOVAL & RELOCATION OF EXISTING FLAGPOLE

EARTHWORK CALCULATIONS SOUTH OF BRIDGE:

EMBANKMENT:

1905 CU. YD EMB.
82 CU. YD EMB. BENCH
152 CU. YD TRANS. BENCH

2139 CU. YD EMB. TOTAL

EXCAVATION:

10216 CU. YD COM. EXC.
122 CU. YD DT. LT.
274 CU. YD DT. RT.
82 CU. YD EMB. BENCH
152 CU. YD TRANS. BENCH
6 CU. YD INLET/OUTLET DT.

10852 CU. YD TOTAL EXCAVATION

EARTHWORK CALCULATIONS NORTH OF BRIDGE:

EMBANKMENT:

56439 CU. YD EMB.
297 CU. YD EMB. BENCH

56736 CU. YD EMB. TOTAL

EXCAVATION:

3147 CU. YD COM. EXC.
421 CU. YD DT. LT.
1246 CU. YD DT. RT.
297 CU. YD EMB. BENCH
7 CU. YD INLET/OUTLET DT.

5118 CU. YD TOTAL EXCAVATION

GENERAL SUMMARY

MicroStation v8.11.7.443
E-SHEET NAME: R0020ESU
USER: Jlitteton
DATE PLOTTED: February 5, 2020
FILE NAME: G:\ESHEET\R0020

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2F |

# GENERAL SUMMARY

| ITEM | DESCRIPTION | UNIT | US 60 | KY 70 | CONANT LN | US 60 CONN. 1 | US 60 CONN. 2 | KY 2610 | | | | | | | | | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20191ED | OBJECT MARKER TY 3 | EACH | 2 | | | | | | | | | | | | | | 2 |
| 21289ED | LONGITUDINAL EDGE KEY | LF | 2431 | 340 | | | | 99 | | | | | | | | | 2870 |
| 23189EC | REMOVE GATE | EACH | 1 | | | | | | | | | | | | | | 1 |
| 24605ED | RELOCATE ⑧ | EACH | 1 | | | | | | | | | | | | | | 1 |
| 25078ED | THRIE BEAM GUARDRAIL TRANSITION TL-3 | EACH | 4 | | | | | | | | | | | | | | 4 |
| 25086EC | AUTOMATED SLIDE GATE | EACH | 1 | | | | | | | | | | | | | | 1 |
| 25087EC | V BARBED WIRE ARMS | LF | 30 | | | | | | | | | | | | | | 30 |
| 25088EC | AUTOMATED SLIDING GATE OPERATOR | EACH | 1 | | | | | | | | | | | | | | 1 |

PRELIMINARY NOT FOR CONSTRUCTION

**NOTES:**

EROSION CONTROL QUANTITIES ARE BASED ON THE PROBABLE AMOUNT OF EROSION CONTROL FEATURES AS ESTIMATED BY THE DESIGNER.

① FOR CONTROLLING DUST CAUSED BY MAINTAINING TRAFFIC ONLY

② MILLINGS SHALL BECOME THE PROPERTY OF

③ APPROXIMATELY 25 ACRES

④ SEE SHEETS R84-R86 FOR CONSTRUCTION SIGN TABLES

⑤ REMOVAL OF EXISTING US 60 TWIN GIRDER AND THROUGH TRUSS BRIDGE OVER THE CUMBERLAND RIVER

⑥ 81 TONS CARRIED OVER FROM PIPE SUMMARY

⑦ 9 TONS CARRIED OVER FROM PIPE SUMMARY

EARTHWORK CALCULATIONS SOUTH OF BRIDGE:

EMBANKMENT:

1905 EMB. TOTAL

EXCAVATION:

10216 CU. YD COM. EXC.

122 CU. YD DT. LT.

274 CU. YD DT. RT.

10612 CU. YD TOTAL EXCAVATION

EARTHWORK CALCULATIONS NORTH OF BRIDGE:

EMBANKMENT:

56439 EMB. TOTAL

EXCAVATION:

3147 CU. YD COM. EXC.

421 CU. YD DT. LT.

1246 CU. YD DT. RT.

4814 CU. YD TOTAL EXCAVATION

GENERAL SUMMARY

FILE NAME: C:\PWWORK\GARY.WALTERS\D0596899\R0020FSU.DGN
USER: gary.walters
DATE PLOTTED: February 6, 2020
SHEET NAME: R0020FSU
OpenRoads Designer v10.12.0.56

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R2G |

PRELIMINARY NOT FOR CONSTRUCTION

## PAVING AREAS

| ITEM | US 60 S | CONANT LN Q | KY 70 U | KY 70 A | US 60 CONNECTOR 1 R | US 60 CONNECTOR 2 E | KY 2610 Y | ENTRANCES A | KY 2610 R | TOTAL PROJECT D | TOTAL PROJECT S |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.50" CL3 ASPH SURF 0.50B PG64-22 | 17928 | 176 | 1168 | 817 | 384 | 937 | 3850 | | | | 25260 |
| 3.00" CL3 ASPH BASE 1.00 PG64-22 | 26486 | | 827 | 546 | 387 | 269 | 3850 | | | | 32365 |
| 4.00" CRUSHED STONE BASE | | | | | | | 1224 | | | | 1224 |
| 6.00" CRUSHED STONE BASE | 7587 | | | | | | 2626 | | | | 10213 |
| 8.00" CRUSHED STONE BASE | | | 841 | 555 | 393 | 268 | | | | | 2057 |
| 9.00" CRUSHED STONE BASE | 3003 | | | | | | | | | | 3003 |
| VARIABLE CRUSHED STONE BASE (CY) | 2750 | | | | | | | | | | 2750 |
| 8" CEMENT STABILIZED ROADBED | 11123 | | | | | | | | | | 11123 |
| VARIABLE CRUSHED AGGREGATE SIZE NO 2 (CY) | 2719 | | | | | | | | | | 2719 |
| ASPHALT SEAL | 3754 | | 320 | | | 130 | | | | | 4204 |
| ASPHALT PAVE MILLING & TEXTURING (CY) | 17 | 2 | 14 | 6 | | 11 | | | | | 50 |
| LEVELING & WEDGING PG64-22 (CY) | 475 | 2 | 14 | 27 | | 2 | | | | | 520 |

## PAVING SUMMARY

| ITEM CODE | ITEM | UNIT | US 60 | CONANT LN | KY 70 | US 60 CONNECTOR 1 | US 60 CONNECTOR 2 | KY 2610 | ENTRANCES | TOTAL PROJECT |
|---|---|---|---|---|---|---|---|---|---|---|
| 00003 | CRUSHED STONE BASE ①③ | TON | 9864 | | 387 | 255 | 181 | 123 | 1187 | 12047 |
| 00008 | CEMENT STABILIZED ROADBED | SQYD | 11123 | | | | | | | 11123 |
| 00078 | CRUSHED AGGREGATE SIZE NO 2 ⑥⑨ | TON | 4622 | | | | | | | 4626 |
| 00100 | ASPHALT SEAL AGGREGATE ②⑨ | TON | 75 | | 6 | | | 3 | | 84 |
| 00103 | ASPHALT SEAL COAT ② | TON | 9.0 | | 0.8 | | | 0.3 | | 10.1 |
| 00190 | LEVEL & WEDGING PG64-22 | TON | 941 | 4 | 28 | 53 | | 4 | | 1030 |
| 00214 | CL3 ASPH BASE 1.00D PG64-22 | TON | 4370 | | 136 | 90 | 64 | 44 | 635 | 5339 |
| 00324 | CL3 ASPH SURF 0.50B PG64-22 | TON | 1479 | 15 | 96 | 67 | 32 | 77 | 318 | 2084 |
| 00356 | ASPHALT MATERIAL FOR TACK ④ | TON | 12.1 | 0.1 | 0.8 | 0.5 | 0.3 | 0.5 | | 14.3 |
| 00358 | ASPHALT CURING SEAL ⑦ | TON | 11 | | | | | | | 11 |
| 02223 | GRANULAR EMBANKMENT ⑪ | CUYD | 1481 | | | | | | | 1481 |
| 02542 | CEMENT ⑤ | TON | 223 | | | | | | | 223 |
| 02602 | FABRIC-GEOTEXTILE CLASS I ⑩ | SQYD | 10407 | | | | | | | 10407 |
| 02604 | FABRIC-GEOTEXTILE CLASS 1A | SQYD | 8157 | | | | | | | 8157 |
| 02677 | ASPHALT PAVE MILLING & TEXTURING | TON | 34 | 4 | 28 | 12 | | 22 | | 100 |
| 02702 | SAND FOR BLOTTER ⑧ | TON | 28 | | | | | | | 28 |
| 20071EC | JOINT ADHESIVE | LF | 14680 | 78 | 388 | 288 | 128 | 351 | | 15913 |

### NOTES

ALL ASPHALT MIXTURES SHALL BE ESTIMATED AT 110 LBS. PER SQ. YD. PER INCH OF DEPTH, UNLESS NOTED OTHERWISE.

① ESTIMATED AT 115 LBS. PER SQ. YD. PER INCH OF DEPTH.

② ASPHALT SEAL COAT @ 2.4 LBS./S.Y. ASPHALT SEAL AGGREGATE @ 20 LBS./S.Y. (TOTAL INCLUDES 2 APPLICATIONS)

③ 50 TONS ADDED FOR MAINTAINING ENTRANCES DURING CONSTRUCTION

④ ASPHALT MATERIAL FOR TACK AT APPLICATION RATE OF 0.84 LBS/SY

⑤ ESTIMATED AT 6%, BY DRY MASS, USING AND AVERAGE DRY DENSITY OF 111.5 LB/CF

⑥ ESTIMATED AT 1.7 TONS PER CU YD

⑦ ASPHALT CURING SEAL AT 2.0 LBS/SY

⑧ SAND FOR BLOTTER AT 5.0 LBS/SY

⑨ INCLUDES 4 TONS FROM PERFORATED PIPE SUMMARY

⑩ 2250 SY ADDED FOR GEOTECHNICAL NOTE #11

⑪ 1481 CY ADDED FOR GEOTECHNICAL NOTE #11

PAVEMENT SUMMARY

MicroStation v8.11.7.443 | E-SHEET NAME: R0020GSU | USER: mwmsatt | DATE PLOTTED: January 22, 2020 | FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0020GSU.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2H |

| SHEET NO. | STATION | SKEW | COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE 18" | STORM SEWER 15" | STORM SEWER 18" | STORM SEWER 24" | S&F BOX INLET-OUTLET 18" | S&F BOX INLET-OUTLET 24" | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | FABRIC GEOTEXTILE TY IV FOR PIPE ② | CHANNEL LINING CLASS II ① | CHANNEL LINING CLASS III ① | ENTRANCE PIPE 15" | PIPELINE INSPECTION | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ITEM CODE | | | | 462 | 521 | 522 | 524 | 1450 | 1451 | 1496 | 1761 | 23952EC | 24575ES610 | 24575ES610 | 1691 | 2600 | 2483 | 2484 | 440 | 24814EC | | | | | | |
| | UNIT TO BID | | FT | | LF | | | | EACH | | | | | | | | SY | TONS | TONS | LF | LF | | | | | | |
| | CROSS DRAINS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | US 60 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R107 | 101+31 | | | M | | 38 | | 110 | | 1 | | 1 | | | | | 282 | | 9 | | 43 | | | | | | (H=9.03') W/ FRAME & LID TYPE 2 |
| R107 | 101+65 | | | M | | | | 31 | | | 1 | | | | | | 64 | | | | 16 | | | | | | (H=3.00') |
| R108 | 103+35 | | | M | | | | 165 | | | 1 | | | | | | 339 | | | | 165 | | | | | | (H=3.00') |
| R108 | 104+65 | | | M | | | | 125 | | | 1 | | | | | | 257 | | | | 63 | | | | | | (H=6.06') |
| R109 | 105+75 | 10° RT | 5.62' | M | | | | 157 | | | 1 | 1 | | | | | 323 | | | | 107 | | | | | | MH#5 (H=9.79'), DBI#6 (H=5.61') |
| R109 | 106+30 | | | M | | | 58 | | | | 1 | | | | | | 97 | | | | 29 | | | | | | (H=2.50') |
| R110 | 108+50 | | 1.30' | M | 61 | | | | 2 | | | | | | | | 102 | | | | 61 | | | | | | ADD. 26LF FOR MOT |
| R110 | 134+43 | | | | | | | | | | | | | | | 2 | | 26 | | | | | | | | | |
| R111 | 140+81 | | | | | | | | | | | | | | | | | 24 | | | | | | | | | |
| R111 | 145+11 | | 3.28' | M | 71 | | | | 2 | | | | | | | | 120 | 18 | | | 76 | | | | | | |
| R111 | 153+30 | | 3.58' | M | 91 | | | | 2 | | | | | | | | 152 | | | | 101 | | | | | | |
| | KY 70 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R112 | 51+65 | | | M | | 110 | | | | | 1 | | | | | | 162 | | | | 55 | | | | | | (H=2.50') |
| R112 | 53+08 | | | M | | 128 | | | | | 1 | | | | | | 188 | | | | 64 | | | | | | (H=2.50') |
| R113 | 53+75 | | | M | | 59 | | | | | 1 | | | | | | 87 | | | | 30 | | | | | | (H=2.50') |
| | CONANT LANE | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R114 | 49+65 | 10° RT | 1.03' | M | 38 | | | | | | | | 1 | | 1 | | 63 | | | | 38 | | | | | | |
| | US 60 CONN 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R116 | 50+38 | | 1.02' | M | 37 | | | | 2 | | | | | | | | 62 | | | | 37 | | | | | | |
| | KY 2610 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R115 | 51+00 | | 1.42' | M | 42 | | | | 2 | | | | | | | | 70 | 13 | | | 42 | | | | | | |
| | ENTRANCES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | LT 104+48 | | | | | | | | | | | | | 2 | | | | | | 38 | 19 | | | | | | |
| | LT 106+80 | | | | | | | | | | | | | 2 | | | | | | 41 | 21 | | | | | | |
| | LT 110+20 | | | | | | | | | | | | | 2 | | | | | | 52 | 26 | | | | | | |
| | LT 152+56 | | | | | | | | | | | | | 2 | | | | | | 68 | 34 | | | | | | |
| | **SHEET TOTAL** | | | | 340 | 335 | 58 | 588 | 10 | 1 | 8 | 2 | 1 | 8 | 1 | 2 | 2368 | 81 | 9 | 199 | 1027 | 0 | 0 | 0 | 0 | 0 | |

PRELIMINARY NOT FOR CONSTRUCTION

① QUANTITIES ARE ADDED TO GENERAL SUMMARY

② FOR WRAPPING PIPE TRENCH BACKFILL

PIPE SUMMARY

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0020HSU.DGN
USER: mwimsatt
DATE PLOTTED: January 27, 2020
E-SHEET NAME: R0020HSU
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2I |

# PERFORATED PIPE DRAINAGE SUMMARY

| MILEPOST OR STATIONS | PERFORATED PIPE – 4 IN | NON-PERFORATED PIPE – 4 IN | PERF PIPE HEADWALL TY 1 – 4 IN | PERF PIPE HEADWALL TY 2 – 4 IN | PERF PIPE HEADWALL TY 3 – 4 IN | CORED HOLE DRAINAGE BOX CON – 4 IN | CRUSHED AGGREGATE NO. 2 ① | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ITEM CODE | 1000 | 1010 | 1020 | 1024 | 1028 | 1740 | 78 | | | |
| UNIT TO BID ON | LF | | EACH | EACH | EACH | EACH | TONS | | | |
| US 60 | | | | | | | | | | |
| 100+00 | 35 | 10 | 1 | | | | 1 | | | |
| 114+30 | 43 | 10 | | | 1 | | 1 | | | |
| 145+50 | 45 | 10 | | 1 | | | 1 | | | |
| 161+75 | 21 | 10 | | 1 | | | 1 | | | |
| | | | | | | | | | | |
| CONANT LANE | | | | | | | | | | |
| 49+76 | 33 | 12 | | | | 1 | | | | |
| | | | | | | | | | | |
| KY 70 | | | | | | | | | | |
| 50+20 | 90 | 12 | | | | 1 | | | | |

| MILEPOST OR STATIONS | PERFORATED PIPE – 4 IN | NON-PERFORATED PIPE – 4 IN | PERF PIPE HEADWALL TY 1 – 4 IN | PERF PIPE HEADWALL TY 2 – 4 IN | PERF PIPE HEADWALL TY 3 – 4 IN | CORED HOLE DRAINAGE BOX CON – 4 IN | CRUSHED AGGREGATE NO. 2 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ITEM CODE | 1000 | 1010 | 1020 | 1024 | 1028 | 1740 | 78 | | | |
| UNIT TO BID ON | LF | | EACH | EACH | EACH | EACH | TONS | | | |

PRELIMINARY NOT FOR CONSTRUCTION

| | | | |
|---|---|---|---|
| PERFORATED PIPE – 4 IN | 267 – LF | PERF PIPE HEADWALL TY 1 – 4 IN | 1 – EACH |
| NON-PERFORATED PIPE – 4 IN | 64 – LF | PERF PIPE HEADWALL TY 2 – 4 IN | 2 – EACH |
| | | PERF PIPE HEADWALL TY 3 – 4 IN | 1 – EACH |
| CORED HOLE DRAINAGE BOX CON – 4 IN | 2 – EACH | | |
| CRUSHED AGGREGATE NO. 2 | 4 – TONS ① | | |

① QUANTITY IS ADDED TO PAVING SUMMARY

PERFORATED PIPE SUMMARY

MicroStation v8.11.7.443
E-SHEET NAME: R0020ISU
USER: Jlitteton
DATE PLOTTED: February 5, 2020
FILE NAME: G:\ESHEET\R0020ISU.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2J |

# QUALITY LEVEL "A" DATA SUMMARY

| TEST HOLE # | UTILITY (TYPE & SIZE) | NORTHING (Y) | EASTING (X) | GROUND ELEVATION (ft) | TOP UTILITY ELEVATION (ft) | DEPTH (ft) | STATION | OFFSET (ft) | SURFACE TYPE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 7001 | WATER - 6" PVC ELBOW | 3586519.36 | 4148318.32 | 364.09 | 361.09 | 3.00 | US 60 99+43.56 | 18.74' LT | ASPHALT | |
| 7002 | WATER - 6" PVC ELBOW | 3586500.59 | 4148349.68 | 362.42 | 361.09 | 1.33 | US 60 99+48.86 | 17.42' RT | GRASS | |
| 7003 | | | | | | | | | | NOT EXCAVATED |
| 7004 | | | | | | 1.75 | | | | |
| 7005 | | | | | | | | | | NOT FOUND |
| 7006 | WATER - 6" PVC | 3586655.06 | 4148692.46 | 381.13 | 378.13 | 3.00 | KY 70 51+69.35 | 55.61' RT | GRASS | |
| 7007 | WATER - 6" PVC | 3586669.72 | 4148944.08 | 399.95 | 397.28 | 2.67 | KY 70 54+07.29 | 42.69' RT | GRASS | |
| 7008 | | | | | | | | | | UNDER ROAD |
| 7009 | WINDSTREAM | 3586786.36 | 4148499.02 | 374.99 | 371.99 | 3.00 | US 60 102+67.09 | 45.76' LT | GRASS | |
| 7010 | WATER - 6" PVC | 3586865.43 | 4148578.95 | 376.87 | 373.70 | 3.17 | US 60 103+80.13 | 23.52' LT | GRASS | |
| 7011 | WATER - 6" C.I. TEE | 3586946.58 | 4148625.28 | 379.48 | 376.90 | 2.58 | US 60 104+75.19 | 23.41' LT | GRASS | |
| 7012 | WATER - 6" PVC | 3587272.23 | 4148725.27 | 389.86 | 387.19 | 2.67 | US 60 108+24.54 | 44.31' LT | GRASS | |
| 7013 | WATER - 6" PVC TEE | 3587242.73 | 4148780.61 | 388.14 | 386.81 | 1.33 | US 60 108+08.86 | 16.45' RT | GRASS | |
| 7014 | WATER - 6" PVC | 3587397.25 | 4148842.76 | 389.22 | 387.64 | 1.58 | US 60 109+71.87 | 45.34' RT | GRASS | |
| 7015 | WATER - 6" PVC TEE | 3587017.96 | 4148667.98 | 382.69 | 379.19 | 3.50 | US 60 105+59.27 | 16.30' LT | GRASS | |
| 7016 | | | | | | | | | | NOT EXCAVATED |
| 7017 | STORM JUNCTION | 3586994.85 | 4148711.16 | 383.85 | 380.18 | 3.67 | US 60 105+56.02 | 32.56' RT | GRAVEL | TOP OF JUNCTION |
| 7018 | WATER - 6" PVC | 3591594.86 | 4149762 | 346.57 | 343.82 | 2.75 | US 60 152+57.09 | 126.24' RT | GRASS | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

QUALITY LEVEL "A" UTILITY OWNER(S):

PRELIMINARY NOT FOR CONSTRUCTION

QUALITY LEVEL "A" DATA SUMMARY

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR0020JSU.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0020JSU
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R2K |

# GENERAL NOTES AND SPECIAL PROVISIONS

## DIVISION 100 – GENERAL PROVISIONS

160 - BENCH MARKS

DO NOT DISTURB N.G.S. (U.S.G.S.) BENCH MARKS IN ANY MANNER UNLESS DIRECTED BY THE ENGINEER.

165 - BEFORE YOU DIG

THE CONTRACTOR IS INSTRUCTED TO CALL 1-800-752-6007 TO REACH KY 811, THE ONE-CALL SYSTEM FOR INFORMATION ON THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE CALL IS TO BE PLACED A MINIMUM OF TWO (2) AND NO MORE THAN TEN (10) BUSINESS DAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHOULD BE AWARE THAT OWNERS OF UNDERGROUND FACILITIES ARE NOT REQUIRED TO BE MEMBERS OF THE KY 811 ONE-CALL BEFORE-U-DIG (BUD) SERVICE. THE CONTRACTOR MUST COORDINATE EXCAVATION WITH THE UTILITY OWNERS, INCLUDING THOSE WHOM DO NOT SUBSCRIBE TO KY 811. IT MAY BE NECESSARY FOR THE CONTRACTOR TO CONTACT THE COUNTY COURT CLERK TO DETERMINE WHAT UTILITY COMPANIES HAVE FACILITIES IN THE AREA.

190 - DEPARTMENT OF THE ARMY PERMIT AND WATER QUALITY CERTIFICATION APPROVALS

A DEPARTMENT OF THE ARMY (DA) PERMIT, WHICH MAY REQUIRE APPROVAL OF A STATE WATER QUALITY CERTIFICATION FROM THE KENTUCKY DIVISION OF WATER, REGULATES THIS PROJECT AT ONE OR MORE LOCATIONS. PERFORM ALL APPLICABLE WORK IN COMPLIANCE WITH THE CONDITIONS STATED IN THE DA PERMIT AND THE APPROVED WATER QUALITY CERTIFICATION. POST A COPY OF THE DA PERMIT AND THE WATER QUALITY CERTIFICATION IN A CONSPICUOUS PLACE AT THE PROJECT SITE. IF A DA PERMIT OR WATER QUALITY CERTIFICATION APPROVAL IS PENDING, DO NOT WORK IN OR DISTURB THE DESIGNATED AREA(S) UNTIL OBTAINING THE APPROPRIATE APPROVAL(S). REFER TO NOTICE(S) CONTAINED IN THE CONTRACT BID PROPOSAL FOR DESIGNATED AREA(S) WHERE WORK IS PROHIBITED BY THE ABSENCE OF APPROVAL.

## DIVISION 200 – EARTHWORK

248 - ROADBED NOTE, EMBANKMENT-IN-PLACE

USE EMBANKMENT-IN-PLACE WITH A MINIMUM CBR VALUE OF 4 OR GREATER IN THE TOP 12 INCHES OF ROADBED IN CUT AND FILL SECTIONS.

275 - CEMENT STABILIZED ROADBED

STABILIZE THE TOP 12 INCHES OF THE FINISHED ROADBED WITH PORTLAND CEMENT IN ACCORDANCE WITH SECTION 208 OF THE STANDARD SPECIFICATIONS. USE SELECTED SOILS, WITH A MINIMUM CBR VALUE OF 4 , FOR THIS PURPOSE.

THE PORTLAND CEMENT CONTENT IS 6 PERCENT BY WEIGHT, AND THE ESTIMATED PLAN QUANTITY USES AN AVERAGE DRY DENSITY OF 106 LBS/CUBIC FEET. HOWEVER, ADJUST THE QUANTITY AFTER CONSTRUCTING THE ROADBED AND SUBMITTING THE SAMPLES FOR TESTING. THIS TAKES APPROXIMATELY TWO WEEKS.

## DIVISION 400 – ASPHALT PAVEMENTS

444 - ASPHALT PAVEMENT RIDE QUALITY

PAVEMENT RIDEABILITY REQUIREMENTS, IN ACCORDANCE WITH SECTION 410 OF THE STANDARD SPECIFICATIONS, SHALL APPLY ON THIS PROJECT. CATEGORY A SHALL APPLY.

447 - COMPACTION OF ASPHALT MIXTURES

WILL ACCEPT THE COMPACTION OF ASPHALT MIXTURES FURNISHED FOR DRIVING LANES AND RAMPS AT ONE INCH OR GREATER ON THIS PROJECT BY OPTION A ACCORDING TO SUBSECTIONS 402 AND 403 OF THE CURRENT STANDARD SPECIFICATIONS. USE JOINT CORES AS DESCRIBED IN SUBSECTION 402.03.02 FOR SURFACE MIXTURES ONLY. WILL ACCEPT THE COMPACTION OF ALL OTHER ASPHALT MIXTURES BY OPTION B.

455 - EDGE KEY

THIS WORK INCLUDES CUTTING OUT THE EXISTING ASPHALT SURFACE TO A MINIMUM DEPTH AND WIDTH AS DETAILED ELSEWHERE IN THE PLANS SO THAT THE NEW SURFACE MAY HEEL INTO THE EXISTING SURFACE. THE CONTRACT UNIT PRICE BID LINEAR FOOT (PER METER) FOR "EDGE KEY" INCLUDES ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND DISPOSE OF THE REMOVED ASPHALT MATERIAL.

## DIVISION 600 – STRUCTURES AND CONCRETE

650 - STANDARD DRAWINGS

STANDARD DRAWINGS ARE NOT ATTACHED TO THESE PLANS. A STANDARD DRAWING BOOK AND THE HEADWALL SUPPLEMENTAL BOOK MAY BE OBTAINED FROM THE POLICY SUPPORT BRANCH OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES IN FRANKFORT, KY. AT (502)564-3670

## SPECIAL NOTES & SPECIAL PROVISIONS

SPECIAL NOTE 11 - SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

SPECIAL NOTE 11N - LONGITUDINAL PAVEMENT JOINT ADHESIVE 2019

SPECIAL NOTE FOR BARCODES ON PERMANENT SIGNS 2019

SPECIAL PROVISION 69 - EMBANKMENT AT BRIDGE END BENT STRUCTURES CURRENT EDITION

SPECIAL NOTE - CLASS 1A GEOTEXTILE FABRICS USED IN STRUCTURAL PAVEMENT DESIGNS

SPECIAL NOTE FOR AN AUTOMATED GATE

## PROJECT SPECIFIC SPECIAL NOTES

MATERIAL TRANSFER VEHICLE

USE A MATERIAL TRANSFER VEHICLE (MTV) ACCORDING TO SECTION 403.03.05A OF THE STANDARD SPECIFICATIONS.

HAULING OF EXCAVATED OR BORROW MATERIAL

IN ADDITION TO SPECIAL NOTE 10Z FOR EXCAVATION AND EMBANKMENT, HAULING OF EXCAVATED OR BORROW MATERIALS SHALL NOT BE PERMITTED ACROSS THE EXISTING US 60 BRIDGE OVER THE CUMBERLAND RIVER.

PRELIMINARY NOT FOR CONSTRUCTION

GENERAL & SPECIAL NOTES

FILE NAME: C:\PWWORK\KYTC_JACK.BOLTON\D0596899\R0020KGN.DGN
USER: Jack.bolton
DATE PLOTTED: February 6, 2020
SHEET NAME: R0020KGN
OpenRoads Designer v10.12.0.56

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R3 |

## CONVENTIONAL SIGNS

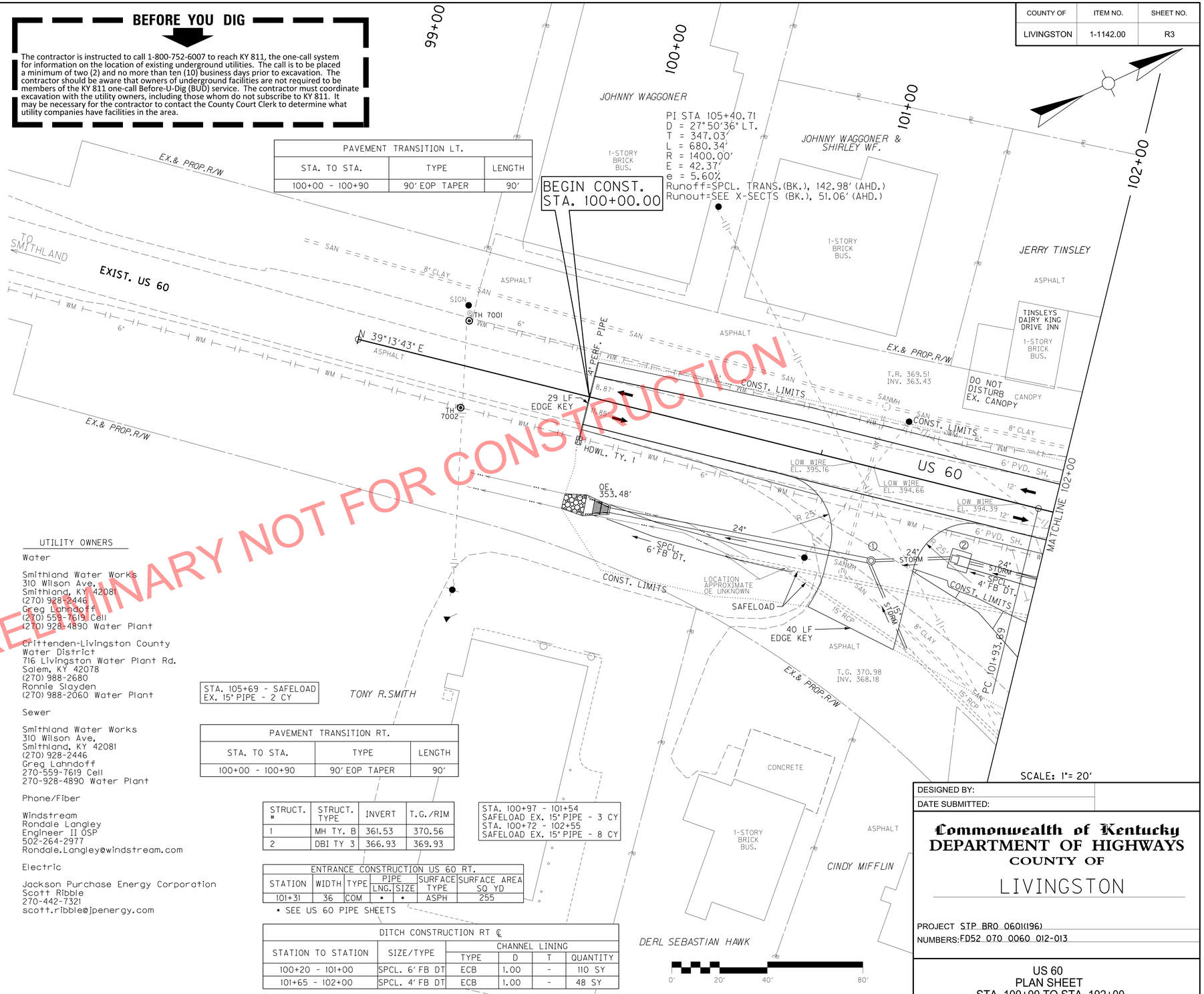
SURVEY LINE
GRADE LINE
GROUND LINE
COUNTY LINE
CORPORATE LIMITS
EXIST. PROPERTY LINE
EXIST. RIGHT OF WAY & PROPERTY LINE
PROPOSED RIGHT OF WAY
RIGHT OF WAY MONUMENT
BENCH MARK
EXISTING R/W MARKER
RIGHT OF WAY MONUMENT EXISTING/PROPOSED
UTILITY TEST HOLE
EXISTING ROAD
RAILROAD
FENCE (CONTROLLED ACCESS)
FENCE (EXCEPT STONE AND HEDGE)
TREE LINE
TREES
PIPE CULVERT
CULVERT
BRIDGE
BUILDINGS
GUARDRAIL

| | EXISTING | PROPOSED |
|---|---|---|
| LIGHTING POLE | | |
| POWER POLE | | |
| JOINT POWER & TELEPHONE POLE | | |
| TELEPHONE & TELEGRAPH POLE | | |
| ANCHOR, POWER OR TELEPHONE | | |
| STUB POWER | | |
| STUB TELEPHONE | | |
| WATER MAIN | WM | 6" WM |
| GAS MAIN | GM | 6" GM |
| TELEPHONE DUCT | T | T |
| ELECTRIC DUCT | E | E |
| DIRECT BURIAL TV CABLE | TV | TV |
| SANITARY SEWER (WITH MANHOLE) | SAN | SAN |
| STORM SEWER (WITH MANHOLE) | STORM | STORM |
| DIRECT BURIAL ELECTRIC CABLE | E | E |
| DIRECT BURIAL TELEPHONE CABLE | T | T |
| OVERHEAD WIRE | | |
| TRAFFIC LIGHTS | | |
| ELECTRIC MANHOLE | EMH | EMH |
| TELEPHONE MANHOLE | TMH | TMH |

STONE FENCE
HEDGE FENCE
SWAMP OR MARSH
SPRINGS
SINKHOLE
QUARRY SITE
BLUE LINE STREAM
INTERMITTENT STREAM OR DITCH
LAKES OR PONDS
REGULATED FLOODWAY
NORTH POINT

## BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.




| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 100+00 - 100+90 | 90' EOP TAPER | 90' |

STA. 105+69 - SAFELOAD
EX. 15" PIPE - 2 CY

| PAVEMENT TRANSITION RT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 100+00 - 100+90 | 90' EOP TAPER | 90' |

| STRUCT. # | STRUCT. TYPE | INVERT | T.G./RIM |
|---|---|---|---|
| 1 | MH TY. B | 361.53 | 370.56 |
| 2 | DBI TY 3 | 366.93 | 369.93 |

STA. 100+97 - 101+54
SAFELOAD EX. 15" PIPE - 3 CY
STA. 100+72 - 102+55
SAFELOAD EX. 15" PIPE - 8 CY

| ENTRANCE CONSTRUCTION US 60 RT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE LNG. | PIPE SIZE | SURFACE TYPE | SURFACE AREA SQ YD |
| 101+31 | 36 | COM | • | • | ASPH | 255 |

• SEE US 60 PIPE SHEETS

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING TYPE | D | T | QUANTITY |
| 100+20 - 101+00 | SPCL. 6' FB DT | ECB | 1.00 | - | 110 SY |
| 101+65 - 102+00 | SPCL. 4' FB DT | ECB | 1.00 | - | 48 SY |

### UTILITY OWNERS

Water

Smithland Water Works
310 Wilson Ave,
Smithland, KY 42081
(270) 928-2446
Greg Lahndoff
(270) 559-7619 Cell
(270) 928-4890 Water Plant

Crittenden-Livingston County Water District
716 Livingston Water Plant Rd.
Salem, KY 42078
(270) 988-2680
Ronnie Slayden
(270) 988-2060 Water Plant

Sewer

Smithland Water Works
310 Wilson Ave,
Smithland, KY 42081
(270) 928-2446
Greg Lahndoff
270-559-7619 Cell
270-928-4890 Water Plant

Phone/Fiber

Windstream
Rondale Langley
Engineer II OSP
502-264-2977
Rondale.Langley@windstream.com

Electric

Jackson Purchase Energy Corporation
Scott Ribble
270-442-7321
scott.ribble@jpenergy.com

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"= 20'

DESIGNED BY:
DATE SUBMITTED:

**Commonwealth of Kentucky**
**DEPARTMENT OF HIGHWAYS**
**COUNTY OF**
LIVINGSTON

PROJECT NUMBERS: STP BRO 0601(196)
FD52 070 0060 012-013

US 60
PLAN SHEET
STA. 100+00 TO STA. 102+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR00300PL.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R00300PL
MicroStation v8.11.7.443

## BASIS OF ELEVATIONS

Elevations were derived from GPS methods and are adjusted to the NAVD88 Vertical Datum. Geoid model used was Geoid12.

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R4 |




PRELIMINARY NOT FOR CONSTRUCTION

| FLOOD DATA DRAINAGE AREA = 0.42 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 1.41 | 370.06 | 1.89 |
| CHECK | 100 | 1.82 | 370.09 | 10.27 |
| ALLOWABLE HEAD WATER = 371.79 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

# US 60
# PROFILE SHEET
# STA. 100+00 TO STA. 102+00

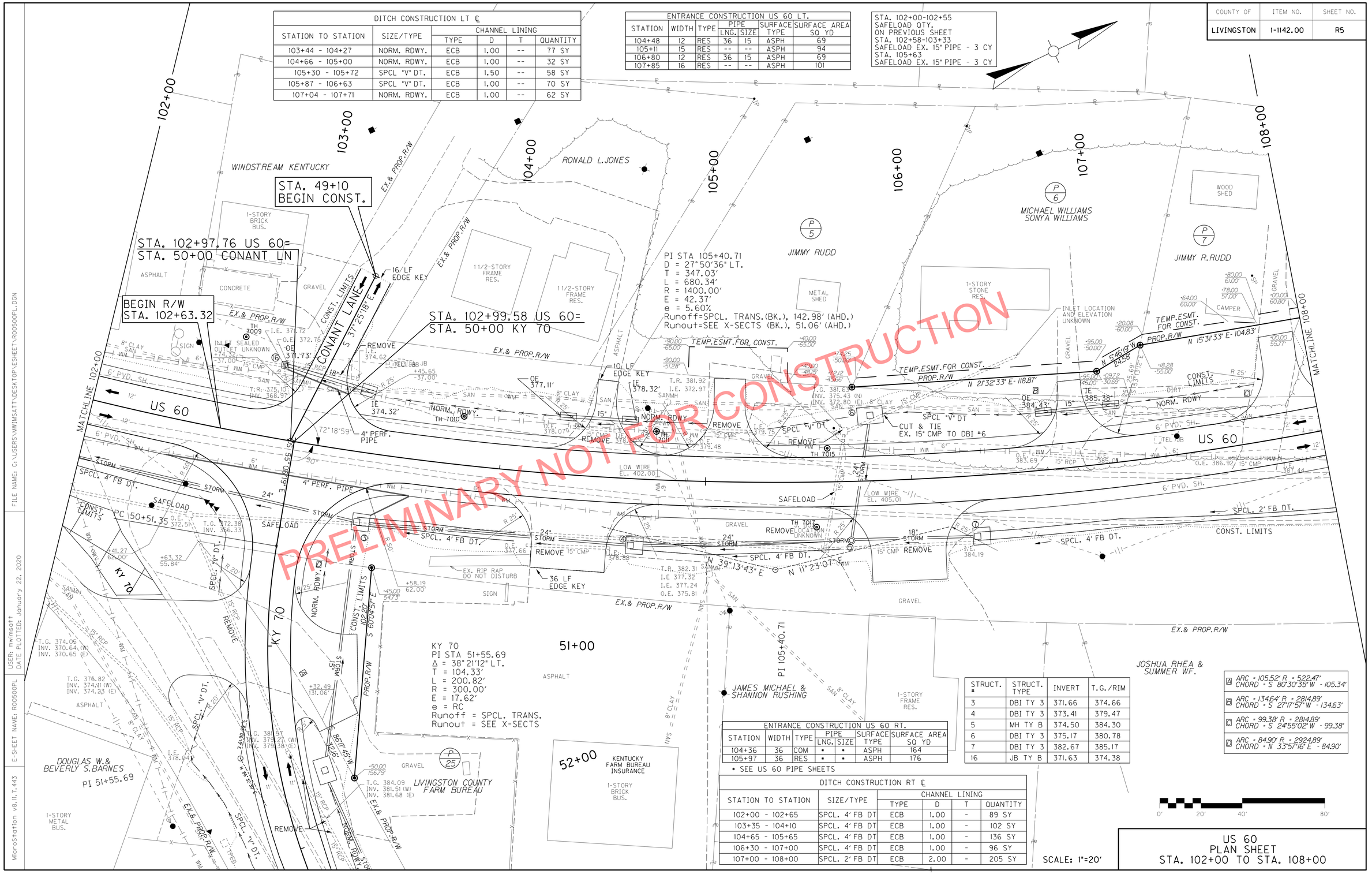
FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R00400PF.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R00400PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R5 |

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 103+44 - 104+27 | NORM. RDWY. | ECB | 1.00 | -- | 77 SY |
| 104+66 - 105+00 | NORM. RDWY. | ECB | 1.00 | -- | 32 SY |
| 105+30 - 105+72 | SPCL "V" DT. | ECB | 1.50 | -- | 58 SY |
| 105+87 - 106+63 | SPCL "V" DT. | ECB | 1.00 | -- | 70 SY |
| 107+04 - 107+71 | NORM. RDWY. | ECB | 1.00 | -- | 62 SY |

| ENTRANCE CONSTRUCTION US 60 LT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 104+48 | 12 | RES | 36 | 15 | ASPH | 69 |
| 105+11 | 15 | RES | -- | -- | ASPH | 94 |
| 106+80 | 12 | RES | 36 | 15 | ASPH | 69 |
| 107+85 | 16 | RES | -- | -- | ASPH | 101 |

STA. 102+00-102+55
SAFELOAD QTY.
ON PREVIOUS SHEET
STA. 102+58-103+33
SAFELOAD EX. 15" PIPE - 3 CY
STA. 105+63
SAFELOAD EX. 15" PIPE - 3 CY


102+00
103+00
104+00
105+00
106+00
107+00
108+00
STA. 49+10
BEGIN CONST.
STA. 102+97.76 US 60=
STA. 50+00 CONANT LN
BEGIN R/W
STA. 102+63.32
STA. 102+99.58 US 60=
STA. 50+00 KY 70
CONANT LANE
S 37°25'18" E
16 LF EDGE KEY
10 LF EDGE KEY
36 LF EDGE KEY
REMOVE
4" PERF. PIPE
72°18'59"
90°
PC 50+51.35
KY 70
PI STA 105+40.71
D = 27°50'36" LT.
T = 347.03'
L = 680.34'
R = 1400.00'
E = 42.37'
e = 5.60%
Runoff=SPCL. TRANS.(BK.), 142.98'(AHD.)
Runout=SEE X-SECTS (BK.), 51.06'(AHD.)
KY 70
PI STA 51+55.69
Δ = 38°21'12" LT.
T = 104.33'
L = 200.82'
R = 300.00'
E = 17.62'
e = RC
Runoff = SPCL. TRANS.
Runout = SEE X-SECTS
PI 51+55.69
PI 105+40.71
51+00
52+00
MATCHLINE 102+00
MATCHLINE 108+00
US 60
KY 70
WINDSTREAM KENTUCKY
RONALD L.JONES
JIMMY RUDD
MICHAEL WILLIAMS
SONYA WILLIAMS
JIMMY R.RUDD
DOUGLAS W.& BEVERLY S.BARNES
JAMES MICHAEL & SHANNON RUSHING
JOSHUA RHEA & SUMMER WF.
LIVINGSTON COUNTY FARM BUREAU
KENTUCKY FARM BUREAU INSURANCE
1-STORY BRICK BUS.
1-STORY METAL BUS.
1-STORY FRAME RES.
1-STORY STONE RES.
1 1/2-STORY FRAME RES.
METAL SHED
WOOD SHED
CAMPER
ASPHALT
CONCRETE
GRAVEL
DIRT
TEMP.ESMT. FOR CONST.
PROP.R/W
EX.& PROP.R/W
CONST. LIMITS
NORM. RDWY.
SPCL. 4' FB DT.
SPCL. 2' FB DT.
SPCL "V" DT.
CUT & TIE EX. 15" CMP TO DBI #6
SAFELOAD
STORM
SAN
WM
LOW WIRE EL. 402.00
LOW WIRE EL. 405.01
INLET LOCATION AND ELEVATION UNKNOWN
SIGN
EX. RIP RAP DO NOT DISTURB
TH 7009
TH 7010
TH 7011
TH 7012
TH 7013
TH 7014
TH 7015
TH 7016
JB #6
JB #8
SANMH #40
SANMH #41
SANMH #42
SANMH #43
SANMH #44
SANMH #45
SANMH #46
SANMH #47
SANMH #48
SANMH #49
SANMH #50
SANMH #51
SANMH #52
SANMH #53
SANMH #54
SANMH #55
SANMH #56
SANMH #57
SANMH #58
SANMH #59
SANMH

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R6 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

PRELIMINARY NOT FOR CONSTRUCTION

VPI 49+70.00
Elev 375.69
L 20 FT
SD 7.4 FT

VPI 49+10.00
Elev 378.20

STA. 49+65.00
18" PIPE @10° SKEW

PVC 49+60.00
Elev 376.11

LO 49+76.13
Elev 375.77

PVT 49+80.00
Elev 375.79

-4.2%

+4.0%

STA. 49+10
BEGIN CONST.

18" PIPE

| FLOOD DATA DRAINAGE AREA = 1.20 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 25 | 3.4 | 375.12 | 10.01 |
| CHECK | 100 | 4.0 | 375.22 | 10.43 |
| ALLOWABLE HEAD WATER = 374.57 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

CONANT LN

STA. 102+99.58 US 60=
STA. 50+00 KY 70

STA. 102+97.76 US 60=
STA. 50+00 CONANT LN

DBI #3
33.62' RT. STA. 103+35.00
DBI TY. 3 (H=3.00')
T.G. 374.66'
INV. 372.47' (IN) - 15" PIPE
INV. 371.76' (IN) - 24" PIPE
INV. 371.66' (OUT)

PVC 103+50.00
Elev 377.71

VPI 104+00.00
Elev 379.36
L 100 FT
SD 44.41 FT

PVT 104+50.00
Elev 380.89

DBI #4
31.00' RT. STA. 104+65.00
DBI TY. 3 (HF6.06')
T.G. 379.40'
INV. 373.50' (IN)
INV. 373.40' (OUT)

OVERHEAD UTILITY
STA. 104+86.26
ELEV. = 402.00
(PLOTTED 10' BELOW DATUM)

STA. 105+75.00
24" PIPE @10° SK. RT.

DBI #6
32.23' LT. STA. 105+75.00
DBI TY. 3 (HF5.61')
T.G. 380.78'
INV. 375.26' (IN - EX. 15" PIPE)
INV. 376.17' (OUT)

MH #5
27.33' RT. STA. 105+75.00
MH TY. B (H=9.79')
RIM. 384.30'
INV. 379.77' (IN)
INV. 374.59' (IN)
INV. 374.50' (OUT)

OVERHEAD UTILITY
STA. 105+80.09
ELEV. = 405.01
(PLOTTED 10' BELOW DATUM)

DBI #7
29.41' RT. STA. 106+30.00
DBI TY. 3 (HF2.50')
T.G. 385.17'
INV. 382.67' (OUT)

MATCHLINE STA. 108+00

| FLOOD DATA DRAINAGE AREA = 1.77 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 5.95 | 381.07 | 1.89 |
| CHECK | 100 | 7.67 | 381.13 | 2.44 |
| ALLOWABLE HEAD WATER = 382.80 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

3.1%
SPCL. 2' FB DT. RT.
0.4%
15" ENT. PIPE So=2.3%
+00 RT. 387.34
+04 LT. IE 385.38
+63 LT. OE 384.43
+50 LT. 383.91
+30 RT. 385.17
SPCL. 1' DT. LT.
5.4%
+72 LT. 380.65
+81 LT. 380.79
+00 LT. 381.23
EX. WATER LINE ASSUMED ELEV.
18" PIPE So=5.0%

| FLOOD DATA DRAINAGE AREA = 5.41 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 9.90 | 385.66 | 6.46 |
| CHECK | 100 | 12.72 | 385.75 | 7.63 |
| ALLOWABLE HEAD WATER = 386.11 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

NOTE: RT. STORM SEWER PLOTTED 5' BELOW DATUM

MATCHLINE STA. 102+00

2.2%
SPCL. 4' FB DT. RT.
+65 RT. 372.13
+90 LT. OE 371.73
24" PIPE So=2.8%

3.5%
SPCL. 4' FB DT. RT.
+65 RT. 379.47
+10 RT. 377.76
+27 LT. OE 377.11
15" ENT. PIPE So=3.1%
+65 RT. 376.19
+35 RT. 374.66
+44 LT. IE 374.32
18" PIPE So=5.9%
24" PIPE So=1.3%

+66 LT. IE 378.32
EX. WATER LINE ASSUMED ELEV.
8" SAN SWR
24" PIPE So=1.0%

| FLOOD DATA DRAINAGE AREA = 1.52 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 5.04 | 374.97 | 8.22 |
| CHECK | 100 | 6.50 | 375.03 | 9.95 |
| ALLOWABLE HEAD WATER = 376.60 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| FLOOD DATA DRAINAGE AREA = 1.21 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 2.99 | 379.69 | 5.51 |
| CHECK | 100 | 3.86 | 379.73 | 6.83 |
| ALLOWABLE HEAD WATER = 380.99 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| STA. | 102+00 | 102+50 | 103+00 | 103+50 | 104+00 | 104+50 | 105+00 | 105+50 | 106+00 | 106+50 | 107+00 | 107+50 | 108+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATUM | 372.3 | 373.9 | 375.5 | 377.1 | 378.6 | 380.2 | 381.7 | 383.3 | 384.7 | 386.2 | 386.8 | 386.9 | 389.0 |
| | 372.76 | 374.41 | 376.06 | 377.71 | 379.33 | 380.89 | 382.42 | 383.94 | 385.47 | 387.00 | 388.52 | 390.05 | 391.58 |

US 60
PROFILE SHEET
STA. 102+00 TO STA. 108+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0606OPF.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0606OPF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R7 |

| ENTRANCE CONSTRUCTION US 60 LT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE LNG. | PIPE SIZE | SURFACE TYPE | SURFACE AREA SQ YD |
| 110+20 | 14 | RES | 51 | 15 | ASPH | 137 |

| CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 111+90.75 | -- | TYPE 4A | 114+00 | -- | -- | 165.5 |

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING TYPE | D | T | QUANTITY |
| 108+00 - 108+50 | SPCL.2' FB DT. | ECB | 1.00 | -- | 57 SY |
| 108+50 - 109+50 | SPCL.2' FB DT. | ECB | 1.00 | -- | 114 SY |
| 109+50 - 109+89 | SPCL "V" DT. | ECB | 1.00 | -- | 45 SY |
| 110+41 - 110+50 | SPCL "V" DT. | ECB | 1.00 | -- | 10 SY |
| 110+50 - 113+00 | NORM. RDWY. | ECB | 1.00 | -- | 230 SY |
| 113+00 - 114+00 | SPCL. "V" DT. | ECB | 1.00 | -- | 92 SY |

NANCY G.SMITH

JAMES & NATASHA D.LANE

PHILLIP R.CHAMPION

JIMMY R.RUDD

LINDA L.BUSHEY

WM HOWARD GAUTIER

108+00 109+00 110+00 111+00 112+00 113+00 114+00

PROP.R/W

N 62°36'12" W 135.20'

N 32°16'07" E 143.84'

N 32°16'07" E 66.44'

N 8°12'55" E 299.46'

N 23°54'51" E 138.29'

STA. 112+20.00 US 60=
STA. 50+00 US 60 CONNECTOR 1=

TH 7012

TH 7013

TH 7014

CONST. LIMITS

SPCL. 2' FB DT.

SPCL. "V" DT.

NORM. RDWY.

IE 388.34'

OE 394.24'

IE 396.24'

IE 398.03'

6' PVD. SH.

12'

US 60

N 11°23'07" E

90°00'00"

S 78°36'53" E

DIRT

ASPHALT

8" CLAY

I.E. 388.28
O.E. 388.16
15" RCP

O.E. 388.02
I.E. 388.18
15" CMP

OE 387.99

OE 397.17'

SANMH (E) T.R. 404.32 INV. 397.51

T.R. 390.60 INV. 384.95

SANMH SAN

TEL UB

SAN

WM

PT 108+74.03

LOW WIRE EL. UNKNOWN

LOW WIRE EL. 412.48

EX. US 60

51+00

52+00

N 14°39'48" E

US 60 CONNECTOR 1

EX.& PROP.R/W

CONST. LIMITS

1-STORY BRICK RES. W/ BSMT.

GRAVEL

LOVENIA TERRY

JOSHUA RHEA & SUMMER WF.

MATCHLINE 108+00

MATCHLINE 114+00

PRELIMINARY NOT FOR CONSTRUCTION

PI STA 105+40.71
Δ = 27°50'36" LT.
T = 347.03'
L = 680.34'
R = 1400.00'
E = 42.37'
e = 5.60%
Runoff=SPCL. TRANS.(BK.), 142.98' (AHD.)
Runout=SEE X-SECTS (BK.), 51.06' (AHD.)

US 60 CONNECTOR 1
PI STA 50+93.00
Δ = 86°43'19" LT.
T = 47.22'
L = 75.68'
R = 50.00'
E = 18.77'
e = SEE X-SECTS
Runoff=SPCL. TRANS.
Runout= SEE X-SECTS

US 60 CONNECTOR 1
PI STA 51+98.52
D = 3°16'52" LT.
T = 74.47'
L = 148.89'
R = 2600.00'
E = 1.07'
e = SEE X-SECTS
Runoff = SPCL. TRANS.
Runout = SEE X-SECTS

| US 60 CONN. 1 PAVEMENT TRANSITION RT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 51+00 - 52+00 | 100' EOP TAPER | 100' |

| US 60 CONN. 1 PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 51+00 - 52+00 | 100' EOP TAPER | 100' |

[A] ARC = 80.76' R = 2814.89'
CHORD = S 23°05'02" W - 80.75'

[B] ARC = 534.53' R = 2814.89'
CHORD = S 16°49'19" W - 533.73'

| REMOVE PAVEMENT | | | |
|---|---|---|---|
| LT./RT. | FROM STATION | TO STATION | REMOVE SQ YD |
| RT. | 108+22 | 111+98 | 690 |

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING TYPE | D | T | QUANTITY |
| 108+00 - 108+50 | SPCL.2' FB DT. | ECB | 1.00 | - | 103 SY |
| 108+50 - 110+50 | SPCL. "V" DT. | ECB | 1.50 | - | 274 SY |
| 110+50 - 111+91 | SPCL. "V" DT. | ECB | 1.00 | - | 130 SY |
| 112+45 - 114+00 | SPCL. "V" DT. | ECB | 1.00 | - | 143 SY |

| CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 113+18.82 | -- | TY. 7 | 114+00 | -- | -- | 240.5 |

0' 20' 40' 80'

SCALE: 1"=20'

# US 60
# PLAN SHEET
# STA.108+00 TO STA. 114+00

MicroStation v8.11.7.443 | E-SHEET NAME: R007OOPL | USER: mwimsatt DATE PLOTTED: January 27, 2020 | FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R007OOPL.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R8 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 412 410 408 406 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374

VPI 112+30.38
Elev 404.72
L 450 FT
SD 542 FT

STA. 108+50.00
18" PIPE @0° SK.

STA. 112+20.00 US 60=
STA. 50+00 US 60 CONNECTOR 1=

MATCHLINE STA. 114+00

MATCHLINE STA. 108+00

PVC 110+05.38
Elev 397.85

3.1%
-0.3%
0.2%
1.6%
3.9%
4.3%
0.4%
-0.4%
0.0%
0.5%
5.7%
2.3%

SPCL. "V" DT. LT.
SPCL. 2' FB DT. LT.
SPCL. 2' FB DT. RT.
SPCL. "V" DT. RT.
15" ENT. PIPE So=3.9%
18" PIPE So=2.3%
18" PIPE
8" SAN SWR

+00 LT. 401.01
+41 LT. IE 396.24
+50 LT. 396.58
+89 LT. OE 394.24
+50 LT. 392.72
+50 RT. 388.94
+92 RT. OE 396.98
+00 RT. OE 397.17
+37 RT. IE 398.03
+45 RT. IE 398.22
+00 LT. 388.53
+40 LT. 388.39
+50 LT. 388.39
+50 RT. 387.94

EX. WATER LINE ASSUMED ELEV.

| FLOOD DATA DRAINAGE AREA = 2.18 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 25 | 3.4 | 389.52 | 3.42 |
| CHECK | 100 | 4.1 | 389.67 | 3.49 |
| ALLOWABLE HEAD WATER = 391.23 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

PRELIMINARY NOT FOR CONSTRUCTION

| 108+00 | 108+50 | 109+00 | 109+50 | 110+00 | 110+50 | 111+00 | 111+50 | 112+00 | 112+50 | 113+00 | 113+50 | 114+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 389.0 391.58 | 390.6 393.11 | 392.9 394.63 | 395.3 396.16 | 400.6 397.69 | 402.7 399.14 | 409.4 400.40 | 406.6 401.48 | 407.5 402.36 | 408.0 403.06 | 407.9 403.57 | 406.7 403.89 | 405.5 404.02 |

# US 60
# PROFILE SHEET
# STA.108+00 TO STA. 114+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R00800PF.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R00800PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R8A |

SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL

DATUM

OVERHEAD UTILITY
STA. 52+78
ELEV. = 415.61

OVERHEAD UTILITY
STA. 50+68
ELEV. UNKOWN

OVERHEAD UTILITY
STA. 51+96
ELEV. = 412.48

VPI 50+12.00
Elev 402.43

STA. 50+38
18" PIPE @ 2% SK. LT.

| FLOOD DATA DRAINAGE AREA = 0.23 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 25 | 0.8 | 398.56 | 2.81 |
| CHECK | 100 | 0.9 | 398.59 | 2.88 |
| ALLOWABLE HEAD WATER = 400.28 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

VPI 50+80.00
Elev 399.54
L 50 FT
SD 647 FT

PVC 50+55.00
Elev 400.60

4.2%

TRANS. BENCH

TRANS. BENCH

PVT 51+05.00
Elev 398.05

6.0%

PVC 51+20.00
Elev 397.15

VPI 52+00.00
Elev 392.37
L 160 FT
SD 151 FT

LO 52+66.86
Elev 392.77

PVT 52+80.00
Elev 392.80

0.5%

VPI 53+00.00
Elev 392.91

5' BERM
(SEE BERM
DETAIL-R2C)

33.33%

7.00%

STA. 53+98
END CONST.

401.2
400.81

392.0
398.34

392.4
395.54

392.6
393.68

392.7
392.82

392.9
392.91

393.1

391.3

50+00 50+50 51+00 51+50 52+00 52+50 53+00 53+50 54+00

PRELIMINARY NOT FOR CONSTRUCTION

US 60 CONNECTOR 1
PROFILE SHEET
STA. 50+00 TO STA. 53+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0080APF.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0080APF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R9 |

| CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 114+00 | -- | -- | 114+72 | -- | • | 72 |

•TIE TO THRIE-BEAM GUARDRAIL TRANSITION (TL-3)

CONST. THRIE-BEAM TRANSITION (TL-3) FROM LT. 114+72.18 TO LT. 114+90.33 - 1 EACH

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 114+00 - 114+80 | SPCL "V" DT. | ECB | 1.00 | -- | 74 SY |

| CONST. STD. HEADER CURB & GUTTER (MOD.)• | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | C&G LF |
| LT. | 114+78.43 | 114+90.33 | 11.9 |

•INCIDENTAL TO THRIE-BEAM TRANS.

114+00 115+00 116+00 117+00 118+00 119+00 120+00

BEGIN BRIDGE
CONST. STA. 114+90.33

P 21
WM HOWARD GAUTIER

PROP.R/W
N 23°54'51" E
138.23'

+00.00
-50.00'

N 11°23'07" E- 393.40'

PROP.R/W

+93.40
-50.00'

S 81°47'47" E- 45.51'

SPCL. "V" DT.
CONST. LIMITS
1-STORY BRICK RES. W/ BSMT.
6' PVD. SH.
12'
N 11°23'07" E
4" PERF. PIPE
12'
6' PVD. SH.
HDWL. TY. 3
SPCL. "V" DT.
CONST. LIMITS

US 60

CONST. LIMITS

+95.93
-4.56'

12'
12'

MATCHLINE 114+00

MATCHLINE 120+00

EX. R/W
S 11°22'55" W - 479.33'
EX. R/W

+20.72
50.09'

GRAVEL

STA. 53+98
END CONST.

53+00

54+00

TEL JB

N 11°22'56" E

US 60 CONNECTOR 1

26 LF
EDGE KEY

LOW WIRE
EL. 415.61

S 82°55'46" E- 54.78'

+00.05
50.06'

CUMBERLAND RIVER

EX. US 60 BRIDGE (REMOVE)

CONST. 5' BERM
SEE DETAIL - R2C

DO NOT DISTURB
EXISTING STREAM
GAGE STATION

US 60 CONNECTOR 1
PI STA 51+98.52
D = 3°16'52" LT.
T = 74.47'
L = 148.89'
R = 2600.00'
E = 1.07'
e = SEE X-SECTS
Runoff = SPCL. TRANS.
Runout = SEE X-SECTS

EX.& PROP.R/W

EX.& PROP.R/W

GRAVEL

P 30
LOVENIA TERRY

CONST. THRIE-BEAM TRANSITION (TL-3) FROM RT. 114+72.18 TO RT. 114+90.33 - 1 EACH

| US 60 CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 114+00 | -- | -- | 114+72 | -- | • | 72 |

•TIE TO THRIE-BEAM GUARDRAIL TRANSITION (TL-3)

| CONST. STD. HEADER CURB & GUTTER (MOD.)• | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | C&G LF |
| RT. | 114+78.43 | 114+90.33 | 11.9 |

•INCIDENTAL TO THRIE-BEAM TRANS.

| US 60 CONNECTOR 1 CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 53+67 | 1 | -- | 53+67 | 1 | -- | 25 |

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 114+00 - 114+40 | SPCL "V" DT. | ECB | 1.00 | - | 37 SY |

PRELIMINARY NOT FOR CONSTRUCTION

0' 20' 40' 80'

SCALE: 1"= 20'

US 60
PLAN SHEET
STA. 114+00 TO STA. 120+00

FILE NAME: C:\USERS\MWMSAT\DESKTOP\ESHEET\R00900PL.DGN
USER: mwmsatt
DATE PLOTTED: January 27, 2020
E-SHEET NAME: R00900PL
MicroStation v8.11.7.443

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R10 |

PRELIMINARY NOT FOR CONSTRUCTION

DATUM 410 408 406 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372

MATCHLINE STA. 114+00

HI 114+09.32
Elev 404.02

PVT 114+55.38
Elev 403.94

BEGIN BRIDGE
STA. 114+90.33

1.6%

0.2% SPCL. "V" DT. LT.

SPCL. "V" DT. RT.

+40 RT.
401.42

+80 LT.
401.29

MATCHLINE A
ELEV. 374.00

MATCHLINE B
ELEV. 344.00

MATCHLINE C
ELEV. 326.00

MATCHLINE D
ELEV. 296.00

-0.3%

MATCHLINE STA. 120+00

ELEV. 281.73

| 114+00 | 114+50 | 115+00 | 115+50 | 116+00 | 116+50 | 117+00 | 117+50 | 118+00 | 118+50 | 119+00 | 119+50 | 120+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 405.5 404.02 | 402.3 403.96 | 399.8 403.78 | 373.6 403.61 | 349.8 403.44 | 339.0 403.26 | 336.8 403.09 | 335.2 402.91 | 334.0 402.74 | 333.8 402.57 | 322.0 402.39 | 298.2 402.22 | 281.7 402.04 |

MATCHLINE A
ELEV. 374.00

MATCHLINE B
ELEV. 344.00

MATCHLINE C
ELEV. 326.00

MATCHLINE D
ELEV. 296.00

US 60
PROFILE SHEET
STA. 114+00 TO STA. 120+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R01000PF.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R01000PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R11 |

120+00 121+00 122+00 123+00 124+00 125+00 126+00

P/31 DAVID W.REED

EXISTING KYTC PERMANENT EASEMENT (DB 108 PG 629)

STA. 124+46.75
10-SPAN HYBRID PCIB &
STEEL THROUGH TRUSS
@ 0° SKEW
120'-10"x121'-10"x123'-4"x
700'-4"x143'-4"x139'-10"x139'-10"
139'-10"x139'-10"x138'-10"

+80.16
-50.00'

P/31

CONST. LIMITS

MATCHLINE 120+00

12'

12'

N 11°23'07" E

US 60

CONST. LIMITS

CONST. LIMITS

MATCHLINE 126+00

N 79°52'18" W 100.04'

+82.35
50.02'

CUMBERLAND RIVER

EX. US 60 BRIDGE (REMOVE)

EXISTING KYTC PERMANENT EASEMENT (DB 108 PG 629)

0' 20' 40' 80'

SCALE: 1"=20'

US 60
PLAN SHEET
STA. 120+00 TO STA. 126+00

PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R0110OPL.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0110OPL
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R12 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 406 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372 370 368

MATCHLINE STA. 120+00

-0.3%

ELEV. 281.73

STA. 124+46.75
10-SPAN HYBRID PCIB &
STEEL THROUGH TRUSS
@ 0° SKEW
120'-10"x121'-10"x123'-4"x
700'-4"x143'-4"x139'-10"x139'-10"
139'-10"x139'-10"x138'-10"

MATCHLINE E
ELEV. 291.00

PVC 125+60.00
Elev 400.09

MATCHLINE STA. 126+00

ELEV. 318.30

LOW ELEV. 255.83

MATCHLINE E
ELEV. 291.00

281.7 402.04
273.2 401.87
272.0 401.70
266.1 401.52
263.4 401.35
261.4 401.17
256.6 401.00
260.9 400.82
265.5 400.65
279.9 400.48
292.7 400.30
306.1 400.13
318.3 399.90

120+00 120+50 121+00 121+50 122+00 122+50 123+00 123+50 124+00 124+50 125+00 125+50 126+00

PRELIMINARY NOT FOR CONSTRUCTION

US 60
PROFILE SHEET
STA. 120+00 TO STA. 126+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R01200PF.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R01200PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R13 |

126+00 127+00 128+00 129+00 130+00 131+00 132+00

EXISTING KYTC PERMANENT EASEMENT
(DB 108 PG 629)

P/31

DAVID W.REED

PROP.R/W

N 11°23'07" E
689.84'

PROP.R/W

CONST. LIMITS

CONST. LIMITS

MATCHLINE 126+00

12'

N 11°23'07" E

12'

US 60

12'

12'

MATCHLINE 132+00

CONST. LIMITS

CONST. LIMITS

EX. R/W

S 11°22'55" W- 797.26'

EX. R/W

PRELIMINARY NOT FOR CONSTRUCTION

EX. US 60 BRIDGE (REMOVE)

EX.& PROP.R/W

EX.& PROP.R/W

EXISTING KYTC PERMANENT EASEMENT
(DB 108 PG 629)

DAVID W.REED

0' 20' 40' 80'

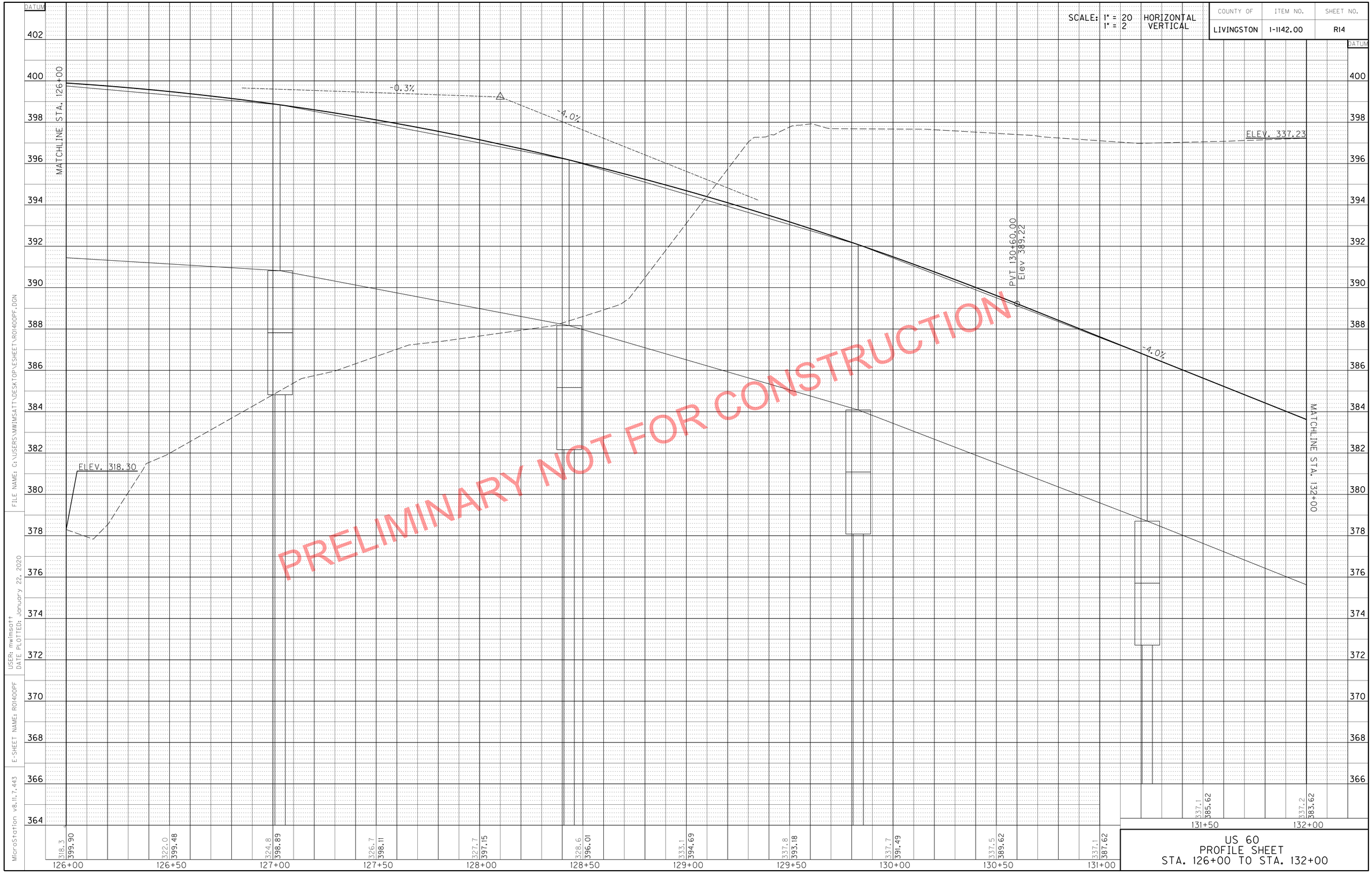
SCALE: 1"=20'

US 60
PLAN SHEET
STA. 126+00 TO STA. 132+00

MicroStation v8.11.7.443
E-SHEET NAME: R01300PL
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R01300PL.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | RI4 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL




PRELIMINARY NOT FOR CONSTRUCTION

US 60
PROFILE SHEET
STA. 126+00 TO STA. 132+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0I400PF.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0I400PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R15 |

| CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 134+21.32 | -- | • | 138+00 | -- | -- | 379 |

•TIE TO THRIE-BEAM GUARDRAIL TRANSITION (TL-3)

CONST. THRIE-BEAM TRANSITION (TL-3) FROM LT. 134+03.17 TO LT. 134+21.32 - 1 EACH

| CONST. STD. HEADER CURB & GUTTER (MOD.) | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | C&G LF |
| LT. | 134+03.17 | 134+25.17 | 22 |

•INCIDENTAL TO THRIE-BEAM TRANS.

132+00 133+00 134+00 135+00 136+00 137+00 138+00

•85.00
-130.00'

N 23°26'21" W- 140.08'

•70.00
-50.00'

PROP.R/W
N 11°23'07" E- 689.84'

END BRIDGE
CONST. STA. 134+03.17

P
31

DAVID W.REED

PROP.R/W
N 15°56'34" E- 692.19'

CONST. LIMITS

MATCHLINE 132+00

CONST. LIMITS

6' PVD. SH.

12'

12'

N 11°23'07" E

US 60

6' PVD. SH.

6' PVD. SH.

12'

12'

6' PVD. SH.

MATCHLINE 138+00

CONST. LIMITS

+79.61
49.97'

N 78°37'05" W
10.00'

+79.61
59.97'

EX. R/W
S 11°22'55" W- 797.26'

RGVRD

S 11°22'55" W- 1514.05'

SURF. 2' FB DT.

EX. R/W

CONST. LIMITS

ASPHALT

EX. US 60

FIBER OPTIC GOES UNDERGROUND

R 25'

EX.& PROP.R/W

EX.& PROP.R/W

LIVINGSTON COUNTY COOPERATIVE

DAVID W.REED

PRELIMINARY NOT FOR CONSTRUCTION

| CONST. STD. HEADER CURB & GUTTER (MOD.)• | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | C&G LF |
| RT. | 134+03.17 | 134+25.17 | 22 |

•INCIDENTAL TO THRIE-BEAM TRANS.

| REMOVE PAVEMENT | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | REMOVE SQ YD |
| RT. | 133+60 | 134+00 | 97 |

CONST. THRIE-BEAM TRANSITION (TL-3) FROM RT. 134+03.17 TO RT. 134+21.32 - 1 EACH

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 136+40 - 138+00 | SURF.2' FB DT. | ECB | 1.00 | - | 131 SY |

| ENTRANCE CONSTRUCTION US 60 RT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 136+50 | 16 | RES | -- | -- | ASPH | 123 |

| CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 134+21.32 | -- | • | 138+00 | -- | -- | 379 |

•TIE TO THRIE-BEAM GUARDRAIL TRANSITION (TL-3)

SCALE: 1"=20'

0' 20' 40' 80'

US 60
PLAN SHEET
STA. 132+00 TO STA. 138+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R01500PL.DGN
USER: mwimsatt
DATE PLOTTED: January 27, 2020
E-SHEET NAME: R01500PL
MicroStation v8.11.7.443

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R16 |

DATUM 390 388 386 384 382 380 378 376 374 372 370 368 366 364 362 360 358 356 354 352

MATCHLINE STA. 132+00

END BRIDGE
STA. 134+03.17

-4.0%

-0.5%

SURF. 2' FB DT, RT

ELEV. 337.23

ELEV. 344.05

1+40 RT.
344.40

PVC 137+47.80
Elev 360.75

MATCHLINE STA. 138+00

| 132+00 | 132+50 | 133+00 | 133+50 | 134+00 | 134+50 | 135+00 | 135+50 | 136+00 | 136+50 | 137+00 | 137+50 | 138+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 337.2 383.62 | 337.6 381.62 | 337.9 379.62 | 338.6 377.62 | 339.3 375.62 | 340.0 373.62 | 340.7 371.62 | 341.1 369.62 | 341.8 367.62 | 342.1 365.62 | 342.7 363.62 | 343.5 361.62 | 344.0 359.55 |

PRELIMINARY NOT FOR CONSTRUCTION

US 60
PROFILE SHEET
STA. 132+00 TO STA. 138+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R01600PF.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R01600PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R17 |

138+00 | 139+00 | 140+00 | 141+00 | 142+00 | 143+00 | 144+00

P 31 DAVID W.REED

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 143+30 - 144+00 | SURF.2' FB DT | ECB | 1.00 | -- | 80 SY |

| ENTRANCE CONSTRUCTION US 60 LT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 142+97 | 16 | RES. | -- | -- | ASPH | 224 |

| CONSTRUCT STEEL W-BEAM GUARDRAIL LT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 138+00 | -- | -- | 141+52.25 | -- | TYPE 4A | 308.5 |

PROP.R/W

N 15°56'34" E - 692.19'

P 31 DAVID W.REED

·75.00 ·75.00'

N 15°47'02" E - 195.58'

·32.00 ·123.00'

TEMP.ESMT. FOR CONST.

·02.00 ·90.00'

GRAVEL

·20.00 ·63.85'

·70.00 ·60.00'

·25.00 ·63.85'

N 7°20'51" E - 170.42'

CONST. LIMITS

SURF. 2' FB DT.

STA. 142+97.00 US 60=
STA. 50+00 US 60 CONNECTOR 2

R 25'

R 25'

GRAVEL

MATCHLINE 138+00

6' PVD. SH.

12'

N 11°23'07" E

US 60

12'

6' PVD. SH.

90°

12'

6' PVD. SH.

MATCHLINE 144+00

US 60 CONNECTOR 2

R 35'

SURF. 2' FB DT.

SURF. 2' FB DT.

+50.00 47.00'

+44.00 47.00'

CONST. LIMITS

EX. R/W

CONST. LIMITS

EX. HIST. MON. DO NOT DISTURB

S 11°22'55" W - 1514.05'

R 20'

R 20'

I.E. 340.75

18" RCP

EX. US 60

ASPHALT

O.E. 339.65

R 20'

R 20'

EX.& PROP.R/W

19 LF EDGE KEY

EX.& PROP.R/W

LIVINGSTON COUNTY COOPERATIVE

| ENTRANCE CONSTRUCTION US 60 CONN 2 RT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 51+00 | 21 | COM. | -- | -- | ASPH | 119 |

| ENTRANCE CONSTRUCTION US 60 CONN 2 LT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 51+00 | 21 | COM. | -- | -- | ASPH | 119 |

STA. 51+40.00
END CONST.

ASPHALT

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 138+00 - 140+81 | SURF.2' FB DT. | ECB | 1.00 | - | 230 SY |
| 140+81 - 142+75 | SURF.2' FB DT | ECB | 1.00 | - | 179 SY |
| 143+20 - 144+00 | SURF.2' FB DT | ECB | 1.00 | - | 83 SY |

| CONSTRUCT STEEL W-BEAM GUARDRAIL RT. (SINGLE FACE) | | | | | | |
|---|---|---|---|---|---|---|
| BEGIN STATION | TERM. SEC. | END TREAT. | END STATION | TERM. SEC. | END TREAT. | LF |
| 138+00 | -- | -- | 142+19 | -- | 7 | 546 |

0' 20' 40' 80'

SCALE: 1"=20'

US 60
PLAN SHEET
STA. 138+00 TO STA. 144+00

PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R0170OPL.DGN
USER: mwlmsatt
DATE PLOTTED: January 1, 0001
E-SHEET NAME: R0170OPL
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R18 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332 330 328 326

MATCHLINE STA. 138+00

L 450 FT
SD 538 FT
VPI 139+96.80
Elev 351.75

-4.0%

-0.4%

PVT 142+21.80
Elev 350.95

-0.4%

MATCHLINE STA. 144+00

STA. 142+97.00 US 60=
STA. 50+00 US 60 CONNECTOR 2

-0.5%

SURF. 2' FB DT. RT.

0.5%

+81 RT.
342.20

+50 RT.
342.55

1.3%

+75 RT.
344.15

SURF. 2' FB DT. RT.

-0.9%

-0.4%

SURF. 2' FB DT. LT.

+20 RT.
344.72
+30 LT.
344.45

PRELIMINARY NOT FOR CONSTRUCTION

VPI 51+20.00
Elev 345.59
L 40 FT
SD 127 FT

STA. 51+40.00
END CONST.

-4.5%

PVC 51+00.00
Elev 346.49

PVT 51+40.00
Elev 345.48

345.8
50+00

345.7
348.33
50+50

345.9
345.98
51+00

345.5
51+50

US 60 CONNECTOR 2

344.0 359.65 | 344.6 357.87 | 344.8 356.29 | 344.6 354.91 | 344.2 353.73 | 344.1 352.76 | 344.0 351.99 | 344.4 351.42 | 344.9 351.05 | 345.4 350.86 | 345.9 350.68

138+00 138+50 139+00 139+50 140+00 140+50 141+00 141+50 142+00 142+50 143+00

345.9 350.50 | 345.3 350.32

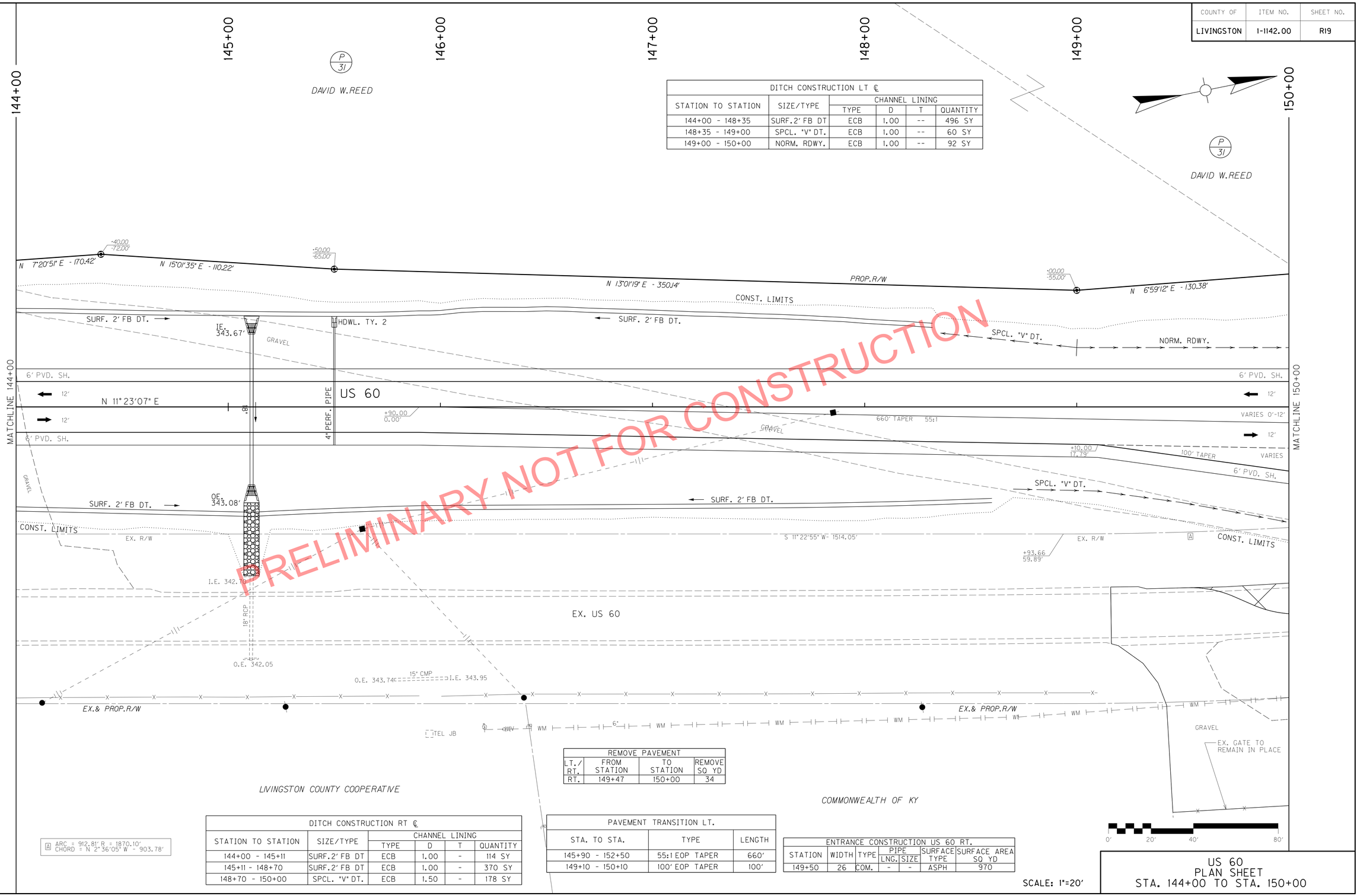
143+50 144+00

US 60
PROFILE SHEET
STA. 138+00 TO STA. 144+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R01800PF.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R01800PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R19 |

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 144+00 - 148+35 | SURF.2' FB DT | ECB | 1.00 | -- | 496 SY |
| 148+35 - 149+00 | SPCL. "V" DT. | ECB | 1.00 | -- | 60 SY |
| 149+00 - 150+00 | NORM. RDWY. | ECB | 1.00 | -- | 92 SY |




PRELIMINARY NOT FOR CONSTRUCTION

| REMOVE PAVEMENT | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | REMOVE SQ YD |
| RT. | 149+47 | 150+00 | 34 |

LIVINGSTON COUNTY COOPERATIVE

COMMONWEALTH OF KY

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 144+00 - 145+11 | SURF.2' FB DT | ECB | 1.00 | - | 114 SY |
| 145+11 - 148+70 | SURF.2' FB DT | ECB | 1.00 | - | 370 SY |
| 148+70 - 150+00 | SPCL. "V" DT. | ECB | 1.50 | - | 178 SY |

[A] ARC = 912.81' R = 1870.10'
CHORD = N 2°36'05" W - 903.78'

| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 145+90 - 152+50 | 55:1 EOP TAPER | 660' |
| 149+10 - 150+10 | 100' EOP TAPER | 100' |

| ENTRANCE CONSTRUCTION US 60 RT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 149+50 | 26 | COM. | - | - | ASPH | 970 |

SCALE: 1"=20'

US 60
PLAN SHEET
STA. 144+00 TO STA. 150+00

MicroStation v8.11.7.443
E-SHEET NAME: R01900PL
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R01900PL.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R20 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 370 368 366 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332

MATCHLINE STA. 144+00

MATCHLINE STA. 150+00

-0.4%

-0.5%

-0.3%

PVC 145+00.00
Elev 349.97

PVT 146+00.00
Elev 350.04

PVC 147+50.00
Elev 350.79

PVT 148+50.00
Elev 350.90

VPI 145+50.00
Elev 349.79
L 100 FT
SD 503 FT

VPI 148+00.00
Elev 351.04
L 100 FT
SD 1409 FT

STA. 145+41.42
Elev 349.90

STA. 145+41.00
18" PIPE Ø80° SK.

PRELIMINARY NOT FOR CONSTRUCTION

HI 148+12.99
Elev 350.95

-0.9% SURF. 2' FB DT. LT.
SURF. 2' FB DT. RT.

-0.4%

0.0%

0.3%

1.4%

SURF. 2' FB DT. RT. 1.1%

2.4% SPCL. 'V' DT. LT.

0.5% SPCL. 'V' DT. RT.

18" PIPE

+06 LT. 343.74
+11 RT. 342.97

+16 LT. 343.74

+50 LT. 344.14

+35 LT. 346.65

+70 RT. 346.76

+00 LT. 348.19

| FLOOD DATA DRAINAGE AREA = 0.92 ac. | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 25 | 2.1 | 344.54 | 3.63 |
| CHECK | 100 | 2.5 | 344.62 | 3.82 |
| ALLOWABLE HEAD WATER = 348.46 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| | | | |

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R21 |

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 150+00 - 151+30 | NORM. RDWY. | ECB | 1.00 | -- | 120 SY |
| 151+30 - 152+26 | SPCL. "V" DT. | ECB | 1.00 | -- | 88 SY |
| 152+95 - 153+30 | SPCL. "V" DT. | ECB | 1.00 | -- | 32 SY |
| 154+50 - 156+00 | NORM. RDWY. | ECB | 1.50 | -- | 206 SY |

| ENTRANCE CONSTRUCTION US 60 LT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 152+56 | 16 | RES. | 68 | 15" | ASPH | 152 |

PI STA 155+46.51
D = 27°27'40" LT.
T = 461.80'
L = 905.85'
R = 1890.00'
E = 55.60'
e = 5.00%
Runoff = 127.90' (BK.), SPCL. TRANS.(AHD.)
Runout = 50.82' (BK.), SEE X-SECTS (AHD.)

150+00 151+00 152+00 153+00 154+00 155+00 156+00

P/31 DAVID W.REED

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

N 6°59'12" E 130.38'
PROP.R/W
N 13°01'05" E - 186.03'
CONST. LIMITS
NORM. RDWY.
SPCL. "V" DT.
6' PVD. SH.
12'
VARIES 0'-12'
100' TAPER
200' STORAGE
MATCHLINE 150+00
+10.00 31.59'
+10.00 11.08'
EX. R/W
GRAVEL
SPCL. "V" DT.
150+84.71 P.O.C.
CONST. LIMITS
LOW WIRE EL. 368.72
99°56'22"
N 86°22'24" E
-36.00 -95.00'
TEMP. ESMT. FOR CONST.
-75.00 -95.00'
-20.00 -55.00'
-90.00 -64.41'
-45.00 -70.00'
-35.00 -45.00'
N 1°40'58" W - 121.17'
N 18°06'51" E - 90.76'
N 5°05'03" W - 394.82'
IE. 344.76'
15"
R 25'
SPCL. "V" DT.
OE. 343.27'
OE. 342.33'
6' PVD. SH.
12'
US 60
18"
O.E. 341.51
REMOVE 18" RCP
R 50'
IE. 342.79'
SPCL. "V" DT.
+26.70 73.99'
+11.72 85.08'
OE. 344.59'
I.E. 342.87
18"
IE. 344.94'
15" CMP (CRUSHED)
I.E. 348.43
O.E. 347.65
CONST. LIMITS
TH 7018
KY 2610
ASPHALT
10'
10'
6' WM
EX.& PROP.R/W
LOCATION OF NEW FLAGPOLE
(2) NEW PARKING SPOTS (10'x20')
EX. FLAGPOLE TO BE RELOCATED
COMMONWEALTH OF KY
EX. GATE TO BE REMOVED
EX. GRAVEL PARKING AREA
EX. SECTION OFFICE
MATCHLINE 155+00
660' TAPER
VARIES 55:1
EX. R/W
+15.00 12.00'
200' STORAGE
N 16°04'33" W
N 11°23'07" E
EX.& PROP.R/W
51+00
PI 155+46.51
52+00
P/31 DAVID W.REED
THOMAS D.CHAMPION

Ⓐ ARC = 912.81' R = 1870.10'
CHORD = N 2°36'05" W - 903.78'

| REMOVE PAVEMENT | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | REMOVE SQ YD |
| RT. | 150+00 | 152+42 | 1083 |
| RT. | 153+80 | 156+00 | 286 |

STA. 151+37 TO STA. 151+64
CONST. 30' - 8' CHAIN LINK FENCE

REMOVE & RELOCATE EX. FLAGPOLE FROM APPROX. STA. 150+05 - LT. 170 TO APPROX. STA. 150+35 - LT. 130

| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 145+90 - 152+50 | 55:1 EOP TAPER | 660' |
| 149+10 - 150+10 | 100' EOP TAPER | 100' |
| 155+15 - 161+75 | 55:1 EOP TAPER | 660' |

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 150+00 - 152+30 | SPCL. "V" DT. | ECB | 1.50 | - | 315 SY |
| 153+30 - 154+50 | SPCL. "V" DT. | ECB | 1.00 | - | 111 SY |
| 154+50 - 156+00 | NORM. RDWY. | ECB | 1.00 | - | 138 SY |

0' 20' 40' 80'

SCALE: 1"=20'

# US 60
# PLAN SHEET
# STA. 150+00 TO STA. 156+00

PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R02100PL.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02100PL
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R22 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 368 366 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332 330

OVERHEAD UTILITY
STA. 152+33.61
ELEV. = 368.72

STA. 153+30.00
18" PIPE @ 90° SK.

MATCHLINE STA. 150+00

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

-0.3%

MATCHLINE STA. 156+00

0.5%
SPCL. "V" DT. RT.

18" PIPE
So=-0.84%

+52 RT.
1E 344.94

+91 RT.
0E 344.59

4.6%
SPCL. "V" DT. RT.

+50 RT.
348.28

18" PIPE

+30 RT.
345.23

+30 LT.
347.16

-2.4%
SPCL. "V" DT. LT.

15" ENT. PIPE
So=2.2%

+28 LT.
1E 344.76

-2.4%

+90 LT.
0E 343.27

+30 RT.
342.83

+30 LT.
342.29

PRELIMINARY NOT FOR CONSTRUCTION

FLOOD DATA
DRAINAGE AREA = 1.91 ac.

| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 25 | 4.2 | 344.18 | 4.49 |
| CHECK | 100 | 5.1 | 344.41 | 4.84 |

ALLOWABLE HEAD WATER = 347.65 ft

BASIS FOR AHW: 1' BELOW LOW SHOULDER ELEVATION

NOTE: LT. DT. PLOTTED 5' BELOW DATUM

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 352.2 | 351.2 | 351.3 | 349.9 | 347.3 | 344.9 | 343.6 | 342.3 | 344.7 | 347.1 | 347.4 | 347.6 | 347.5 |
| 350.46 | 350.31 | 350.16 | 350.02 | 349.87 | 349.72 | 349.58 | 349.43 | 349.28 | 349.13 | 348.99 | 348.84 | 348.69 |
| 150+00 | 150+50 | 151+00 | 151+50 | 152+00 | 152+50 | 153+00 | 153+50 | 154+00 | 154+50 | 155+00 | 155+50 | 156+00 |

US 60
PROFILE SHEET
STA. 150+00 TO STA. 156+00

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R02200PF.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02200PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R23 |

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 156+00 - 158+50 | NORM. RDWY. | ECB | 1.50 | -- | 343 SY |

| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 160+00 - 161+75 | 175' EOP TAPER | 175' |

156+00 157+00 158+00 159+00 160+00 161+00 161+75

PI STA 155+46.51
Δ = 27°27'40" LT.
T = 461.80'
L = 905.85'
R = 1890.00'
E = 55.60'
e = 5.00%
Runoff = 127.90' (BK.), SPCL. TRANS.(AHD.)
Runout = 50.82' (BK.), SEE X-SECTS (AHD.)

P/31 DAVID W.REED

END CONST.
STA. 161+75.00

PROP.R/W
CONST. LIMITS
NORM. RDWY.
6' PVD. SH.
12'
VARIES
660' TAPER 55:1
12'
6' PVD. SH.
MATCHLINE 156+00
N 16°04'33" W
CONST. LIMITS
EX.& PROP.R/W
N 5°05'03" W - 394.82'
N 14°39'25" W - 331.52'
S 16°35'04" E - 374.26'
EX. R/W
+97.61 -27.63'
+90.00 -18.00'
+90.00 20.40'
N 16°04'33" W
US 60
10.36'
10.66'
25 LF 4" PERF. PIPE EDGE KEY
TO BURNA
HDWL. TY. 2
CONST. LIMITS
EX.& PROP.R/W
N 16°35'04" W - 373.55'
EX. R/W
WM
6"
+75.00 39.36'
SPCL. "V" DT.
+06.23 51.90'
S 7°04'37" E - 150.22'
PROP.R/W
S 14°37'30" E - 245.49'
PT 159+90.56
S 33°57'15" E - 99.82'
PROP.R/W
+80.00 70.00'
EX.& PROP.R/W
+95.00 64.13'
+40.00 70.00'
+40.00 -43.00'
+75.00 -40.65'

END R/W
STA. 161+75.00

PRELIMINARY NOT FOR CONSTRUCTION

| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 155+15 - 161+75 | 55:1 EOP TAPER | 660' |

P/31 DAVID W.REED

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 156+00 - 161+75 | SPCL. "V" DT. | ECB | 1.00 | - | 529 SY |

| REMOVE PAVEMENT | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | REMOVE SQ YD |
| RT. | 156+00 | 156+17 | 5 |

[A] ARC = 912.81' R = 1870.10'
CHORD = N 2°36'05" W - 903.78'

[B] ARC = 115.29' R = 1950.10'
CHORD = N 14°53'27" W - 115.28'

0' 20' 40' 80'

SCALE: 1"=20'

US 60
PLAN SHEET
STA. 156+00 TO STA. 161+75

FILE NAME: d:\USERS\MWMSATT\DESKTOP\ESHEET\R02300PL.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02300PL
MicroStation v8.11.7.443

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R24 |

DATUM 370 368 366 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332

MATCHLINE STA. 156+00

+00 RT. 347.76

-0.3%

-2.8%

SPCL. "V" DT. RT.

-0.3%

+00 RT. 344.92

+75 RT. 343.50

VPI 161+75.00
Elev 347.00

STA. 161+75
END PROJECT

347.5 348.69 | 347.3 348.55 | 346.6 348.40 | 346.7 348.25 | 347.3 348.11 | 347.4 347.96 | 347.4 347.81 | 347.3 347.67 | 347.3 347.52 | 347.3 347.37 | 347.2 347.23 | 347.1 347.08

156+00 156+50 157+00 157+50 158+00 158+50 159+00 159+50 160+00 160+50 161+00 161+50 162+00

US 60
PROFILE SHEET
STA. 156+00 TO STA. 161+75

PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R02400PF.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02400PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R25 |

STA. 49+10
BEGIN CONST.

STA. 102+97.76 US 60=
STA. 50+00 CONANT LN

STA. 50+00 KY 70=
STA. 102+99.58 US 60

STA. 54+00
END CONST.

PRELIMINARY NOT FOR CONSTRUCTION

RONALD L.JONES

JAMES MICHAEL & SHANNON RUSHING

WINDSTREAM KENTUCKY

JERRY TINSLEY

LIVINGSTON COUNTY FARM BUREAU

JOSHUA RHEA & SUMMER WF.

DOUGLAS W.& BEVERLY S.BARNES

DERL SEBASTIAN HAWK

| REMOVE PIPE | | | | |
|---|---|---|---|---|
| LT./ RT. | SIZE/ TYPE | FROM STATION | TO STATION | LF |
| LT. | 15" | 51+55 | 51+88 | 34 |
| LT. | 15" | 51+91 | 52+23 | 30 |
| LT. | 15" | 52+27 | 53+03 | 74 |

| DITCH CONSTRUCTION LT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 50+47 - 50+70 | NORM. RDWY. | ECB | 1.00 | - | 21 SY |
| 51+72 - 52+45 | NORM. RDWY. | ECB | 1.00 | - | 44 SY |
| 53+15 - 53+31 | SPCL. "V" DT. | ECB | 1.00 | - | 11 SY |
| 53+81 - 54+00 | SPCL. "V" DT. | ECB | 1.00 | - | 13 SY |

| ENTRANCE CONSTRUCTION KY 70 LT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 51+10 | 20 | COM | • | • | ASPH | 168 |
| 52+81 | 40 | COM | • | • | ASPH | 111 |
| 53+55 | 20 | RES | • | • | ASPH | 80 |

• SEE KY 70 PIPE SHEETS

| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 52+00 - 52+50 | 50' EOP TAPER | 50' |

KY 70
PI STA 51+59.50
Δ = 38°33'10" LT.
T = 104.92'
L = 201.86'
R = 300.00'
E = 17.82'
e = RC
Runoff=SPCL. TRANS.
Runout=SEE X-SECTS

| REMOVE PAVEMENT | | | |
|---|---|---|---|
| LT./ RT. | FROM STATION | TO STATION | REMOVE SQ YD |
| RT. | 50+30 | 50+81 | 152 |

| STRUCT. # | STRUCT. TYPE | INVERT | T.G./RIM |
|---|---|---|---|
| 13 | DBI TY 3 | 379.27 | 381.77 |
| 14 | DBI TY 3 | 389.63 | 392.13 |
| 15 | DBI TY 3 | 394.78 | 397.28 |

| ENTRANCE CONSTRUCTION KY 70 RT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 50+97 | 36 | COM | - | - | ASPH | 262 |
| 52+46 | 20 | COM | EX. | PIPE | ASPH | 62 |

| PAVEMENT TRANSITION RT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 52+00 - 52+50 | 50' EOP TAPER | 50' |

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 50+35 - 50+77 | NORM. RDWY. | ECB | 1.00 | - | 39 SY |
| 51+25 - 51+48 | SPCL. "V" DT. | ECB | 1.00 | - | 21 SY |
| 51+48 - 52+23 | SPCL. "V" DT. | ECB | 1.00 | - | 61 SY |
| 53+20 - 54+00 | SPCL. "V" DT. | ECB | 1.00 | - | 40 SY |

| REMOVE PIPE | | | | |
|---|---|---|---|---|
| LT./ RT. | SIZE/ TYPE | FROM STATION | TO STATION | LF |
| RT. | 15" | 50+45 | 51+22 | 122 |

| | |
|---|---|
| A | ARC = 84.90' R = 2924.89' CHORD = N 33°57'16" E - 84.90' |
| B | ARC = 105.52' R = 522.47' CHORD = S 80°30'35" W - 105.34' |

KY 70
N 86°32'30" E

22 LF EDGE KEY

TO TILINE

SCALE: 1"=20'

0' 20' 40' 80'

KY 70
PLAN SHEET
STA. 50+00 TO STA. 54+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R02500PL.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02500PL
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R26 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM

408 406 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372 370

DBI #13
22.11' L ; STA. 51+65.00
DBI TY. 3 (H=2.50')
T.G. 381.77'
INV. 379.35' (IN)
INV. 379.27' (OUT)

DBI #14
22.75' L ; STA. 53+08.00
DBI TY. 3 (H=2.50')
T.G. 392.13'
INV. 389.71' (IN)
INV. 389.63' (OUT)

DBI #15
18.30' L ; STA. 53+75.00
DBI TY. 3 (H=2.50')
T.G. 397.28'
INV. 394.18' (OUT)

| FLOOD DATA DRAINAGE AREA = 0.17 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 0.49 | 381.83 | 3.61 |
| CHECK | 100 | 0.63 | 381.84 | 4.66 |
| ALLOWABLE HEAD WATER = 382.92 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| FLOOD DATA DRAINAGE AREA = 0.21 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 0.92 | 392.21 | 3.21 |
| CHECK | 100 | 1.19 | 392.23 | 4.14 |
| ALLOWABLE HEAD WATER = 393.80 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

STA. 54+00
END CONST.

PVT 54+00.00
Elev 401.10

VPI 53+50.00
Elev 397.95
L 100 FT
SD 1596 FT

PVCC 53+00.00
Elev 394.45

VPI 52+50.00
Elev 390.95
L 100 FT
SD 1109 FT

PVC 52+00.00
Elev 386.94

VPI 50+12.00
Elev 376.29

VPI 50+75.00
Elev 376.92
L 100 FT
SD 105 FT

PVT 51+25.00
Elev 384.93

PVC 50+25.00
Elev 376.42

STA. 50+00 KY 70=
STA. 102+99.58 US 60

SPCL. "V" DT. LT.

+00 LT.
399.03

+81 LT. 397.70

7.0%

SPCL. "V" DT. LT.

+15 LT. 393.08

+31 LT.
394.20

7.0%

15" PIPE So=8.6%

9.4%

SPCL. "V" DT. RT.

+00 RT.
398.41

+20 RT.
390.92

8.9%

15" PIPE So=8.0%

15.4%

SPCL. "V" DT. RT.

+23 RT.
386.40

8.2%

+00 RT.
382.86

4.5%

+80 RT.
381.23

8.1%

+60 RT.
380.33

-1.2%

SPCL. "V" DT. RT.

+25 RT.
378.31

+48 RT.
378.04

1.0%

15" PIPE So=6.2%

24" PIPE

| FLOOD DATA DRAINAGE AREA = 0.81 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 3.02 | 397.47 | 2.57 |
| CHECK | 100 | 3.89 | 397.50 | 3.17 |
| ALLOWABLE HEAD WATER = 398.25 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

NOTE: RT. DT. PLOTTED 5' BELOW DATUM

PRELIMINARY NOT FOR CONSTRUCTION

| | |
|---|---|
| 375.5 | |
| 375.6 | 376.89 |
| 379.1 | 379.14 |
| 382.8 | 382.93 |
| 386.9 | 386.94 |
| 390.7 | 390.82 |
| 394.3 | 394.45 |
| 397.8 | 397.86 |
| 401.1 | 401.10 |
| 403.6 | |

50+00 50+50 51+00 51+50 52+00 52+50 53+00 53+50 54+00 54+50 55+00

KY 70
PROFILE SHEET
STA. 50+00 TO STA. 54+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R02600PF.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02600PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R27 |

PI STA 155+46.51
Δ = 27°27'40" LT.
T = 461.80'
L = 905.85'
R = 1890.00'
E = 55.60'
e = 5.00%

154+00
153+00
152+00
151+00
51+00
52+00
53+00
54+00

N 18°06'54" E - 90.76'
N 14°58' W - 121.77'
N 13°07'05" E - 186.03'
N 11°23'07" E
N 6°59'12" E - 130.38'
N 86°22'24" E

US 60
EXIST. US 60
CONST. LIMITS
EX.& PROP.R/W
PROP.R/W
EX. R/W
200' STORAGE
SPCL. "V" DT.
TEMP.ESMT. FOR CONST.
ASPHALT
KY 2610
CONST. 30' SLIDE GATE
EX. GRAVEL PARKING AREA
COMMONWEALTH OF KY
EX. GATE TO BE REMOVED
GRAVEL
15' CMP (CRUSHED)
18" RCP REMOVE
DAVID W.REED
THOMAS D.CHAMPION

STA. 50+00 KY 2610=
STA. 152+55.99 US 60=

STA. 53+75
END CONST.

OE 342.33'
IE 342.79'
O.E. 341.51
I.E. 342.87
OE 343.27'
OE 344.59'
IE 344.76'
IE 344.94'
O.E. 347.65
I.E. 348.43

18"
15"
12"
8"
6"

9.03'
8.45'

99°36'22"
R 50'
R 25'
+26.70
73.99'
+11.72
85.08'
150+84.71 PC
ARC = 913.81'
R = 1870.10'
CHORD = S 2°36'05" E - 903.78'

| PAVEMENT TRANSITION LT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 51+00 - 51+70 | 70' EOP TAPER | 70' |

| ENTRANCE CONSTRUCTION KY 2610 RT. | | | | | | |
|---|---|---|---|---|---|---|
| STATION | WIDTH | TYPE | PIPE | | SURFACE TYPE | SURFACE AREA SQ YD |
| | | | LNG. | SIZE | | |
| 52+38 | 30 | COM. | -- | -- | ASPH | 414 |

| DITCH CONSTRUCTION RT ℄ | | | | | |
|---|---|---|---|---|---|
| STATION TO STATION | SIZE/TYPE | CHANNEL LINING | | | |
| | | TYPE | D | T | QUANTITY |
| 50+63 - 51+00 | SPCL. "V" DT. | ECB | 1.00 | - | 51 SY |
| 51+00 - 52+00 | SPCL. "V" DT. | ECB | 1.00 | - | 121 SY |

| PAVEMENT TRANSITION RT. | | |
|---|---|---|
| STA. TO STA. | TYPE | LENGTH |
| 51+00 - 51+70 | 70' EOP TAPER | 70' |

0' 20' 40' 80'

SCALE: 1"=20'

# KY 2610
# PLAN SHEET
# STA. 50+00 TO STA. 52+40

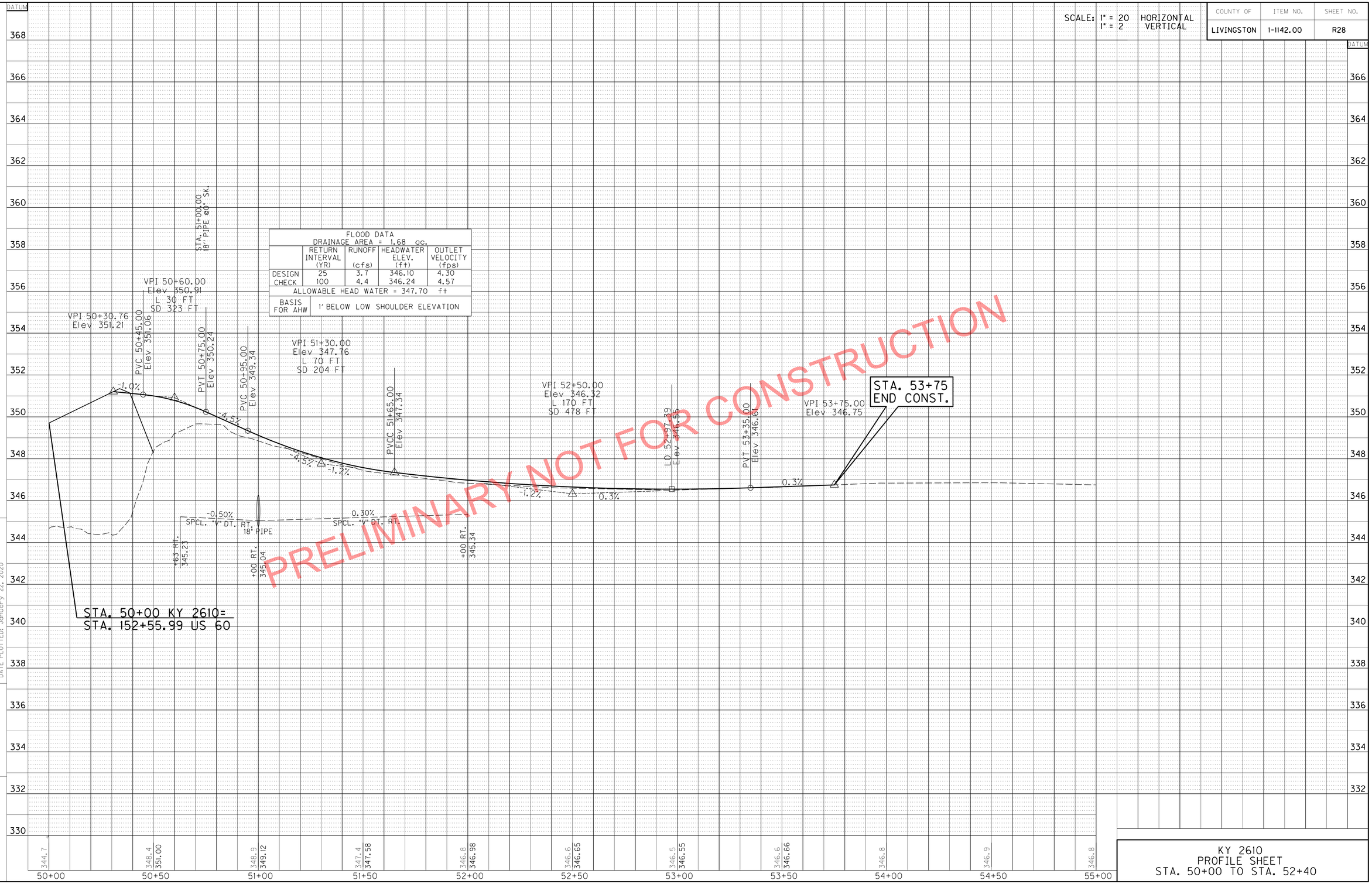
PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R02700PL.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02700PL
MicroStation v8.11.7.443

| SCALE: | | |
|---|---|---|
| 1" = 20 | 1" = 2 | HORIZONTAL<br>VERTICAL |

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R28 |

| FLOOD DATA<br>DRAINAGE AREA = 1.68 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 25 | 3.7 | 346.10 | 4.30 |
| CHECK | 100 | 4.4 | 346.24 | 4.57 |
| ALLOWABLE HEAD WATER = 347.70 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |




PRELIMINARY NOT FOR CONSTRUCTION

KY 2610
PROFILE SHEET
STA. 50+00 TO STA. 52+40

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R02800PF.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02800PF
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R29 |

# RIGHT OF WAY SUMMARY

| PARCEL NO. | OWNER(S) | TOTAL AREA OF TRACT | | PERMANENT R/W ACQUIRED | | EASEMENTS | | AREA SEVERED | | | | EXCESS PURCHASED | | PORTION REMAINING | | SEWER SYSTEM TYPE | SEWER SYSTEM AFFECTED BY PROJECT | | BUILDINGS ACQUIRED NUMBER | | | | SOURCE OF TITLE | REMARKS* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | PERMANENT | TEMPORARY | LEFT | | RIGHT | | | | | | | YES | NO | C | R | F | S | | |
| | | ACRES | SQ. FT. | ACRES | SQ. FT. | SQ. FT. | SQ. FT. | ACRES | SQ. FT. | ACRES | SQ. FT. | ACRES | SQ. FT. | ACRES | SQ. FT. | | | | | | | | | |
| 1-4 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | JIMMY RUDD | | 14,740 | | | | 736 | | | | | | | | 14740 | 1 | X | | | | | | DB 249 PG 581 | AREA BASED ON DEED |
| 6 | MICHAEL WILLIAMS AND SONYA WILLIAMS | | 22,651 | | 1,107 | | 652 | | | | | | | | 21544 | 1 | X | | | | | | DB 252 PG 595 | AREA BASED ON PVA PROPERTY CARD |
| 7 | JIMMY R. RUDD | | 14,300 | | 3,383 | | 328 | | | | | | | | 10917 | 1 | X | | | | | | DB 207 PG 230 | AREA BASED ON DEED |
| 8 | LINDA L. BUSHEY | | 14,064 | | 14,064 | | | | | | | | | | 0 | 5 | | X | | | | | DB 170 PG 42 | AREA BASED ON DEED, TOTAL TAKE |
| 9-20 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | WM HOWARD GAUTIER | 11,250 | | 2.324 | | | | | | | | | | 11247.68 | | 1 | X | | | 1 | | | DB 206 PG 353 | AREA BASED ON PVA PROPERTY CARD |
| 22-24 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 25 | LIVINGSTON COUNTY FARM BUREAU | | 39,099 | | 3,952 | | | | | | | | | | 35147 | 1 | X | | | | | | DB 171 PG 561 | AREA BASED ON DEED |
| 26 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 27-30 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 31 | DAVID W. REED | 1,180 | | 8.736 | | | 5698 | | | | | | | 1,171.26 | | 5 | | X | | | | | DB 94 PG 337 | AREA BASED ON PVA PROPERTY CARD |
| | NOTE: KYTC OWNS A PERMENT EASEMENT WITHIN PARCEL 31 (THE EASEMENT HAS A TOTAL AREA = 36,638 SF, THE AREA OF EASEMENT WITHIN THE PROPSED RIGHT OF WAY = 13,005 SF) | | | | | | | | | | | | | | | | | | | | | | DB 108 PG 629 | |
| 32-34 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |
| 35 | NOT USED | | | | | | | | | | | | | | | | | | | | | | | |

PRELIMINARY NOT FOR CONSTRUCTION

NOTE: PERMANENT R/W ACQUIRED + AREA SEVERED = TOTAL AREA OF TRACT.

THE CONTROL OF ACCESS ON THIS PROJECT SHALL BE BY PERMIT

TYPE SEWER SYSTEM
1. PRIVATE - INDIVIDUAL
2. PRIVATE - MULTI PARTY
3. PUBLIC
4. NONE
5. NOT APPLICABLE

BUILDINGS ACQUIRED CODE
C - COMMERICAL
R - RESIDENTIAL
F - FARM
S - STORAGE

*INCLUDES HAZARDOUS WASTE (UST - UNDERGROUND STORAGE TANKS)

**RIGHT OF WAY SUMMARY SHEET**

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R02900RW.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R02900RW
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R30 |

PRELIMINARY NOT FOR CONSTRUCTION

P 5 JIMMY RUDD

P 6 MICHAEL WILLIAMS
SONYA WILLIAMS

P 7 JIMMY R.RUDD

P 8 LINDA L.BUSHEY

100+00

105+00

110+00

115+00

BEGIN CONST.
STA. 100+00.00

BEGIN CONST.
STA. 49+10.00

PI STA 105+40.71
Δ = 27°50'36" LT.
T = 347.03'
L = 680.34'
R = 1400.00'
E = 42.37'
e = 5.80%

STA. 102+97.76 US 60=
STA. 50+00 CONANT LN.

CONANT LANE

S 37°25'18" E

STA. 102+99.58 US 60=
STA. 50+00 KY 70

P 21

P 5

P 6

P 7

P 8

STA. 112+20.00 US 60=
STA. 50+00 US 60 CONNECTOR 1=

WM HOWARD GAUTIER

US 60

PC 50+51.35

TONY R.SMITH

TEMP.EASMT.

TEMP.EASMT.

PROP R/W

PROP R/W

DERL SEBASTIAN HAWK

PI 51+55.69

DOUGLAS W.&
BEVERLY S.BARNES

PROP R/W

P 25

BEGIN R/W
STA. 102+63.32

PT 52+52.17

END CONST.
STA. 54+00.00

KY 70

KY 70
PI STA 51+55.69
Δ = 38°21'12" LT.
T = 104.33'
L = 200.82'
R = 300.00'
E = 17.62'

JOSHUA RHEA &
SUMMER WF.

PT 108+74.03

LOVENIA TERRY

US 60

MATCHLINE STA. 115+00

P 25 LIVINGSTON COUNTY
FARM BUREAU

P 26 JAMES MICHAEL &
SHANNON RUSHING

0' 100' 200' 400'

SCALE: 1"= 100

US 60
STRIP MAP
STA. 100+00 TO STA. 115+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R03000RW.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R03000RW
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R31 |

PRELIMINARY NOT FOR CONSTRUCTION

115+00
120+00
125+00
130+00
135+00
140+00
145+00

P 21
WM HOWARD GAUTIER

P 31
DAVID W.REED

EXISTING KYTC PERMANENT EASEMENT (DB 108 PG 629)

STA. 142+97.00 US 60=
STA. 50+00 US 60 CONNECTOR 2

PROP R/W
TEMP. EASMT.
PROP R/W
PROP R/W

US 60
N 11°23'07" E
US 60

MATCHLINE STA. 115+00
MATCHLINE STA. 145+00

CUMBERLAND RIVER

END CONST.
STA. 53+98.00

END CONST.
STA. 51+40.00

LOVENIA TERRY

EXISTING KYTC PERMANENT EASEMENT (DB 108 PG 629)

DAVID W.REED

LIVINGSTON COUNTY COOPERATIVE

0' 100' 200' 400'

SCALE: 1"= 100

US 60
STRIP MAP
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR03100RW.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R03100RW
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R32 |

PRELIMINARY NOT FOR CONSTRUCTION

MATCHLINE STA. 145+00

145+00

150+00

155+00

160+00

161+75

END CONST.
STA. 161+75.00

END R/W
STA. 161+75.00

PROP R/W

US 60

P 31

DAVID W.REED

TEMP.EASMT.

N 16°04'53" W

N 11°23'07" E

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

PT 159+90.56

PI STA 155+46.51
Δ = 27°27'40" LT.
T = 461.80'
L = 905.85'
R = 1890.00'
E = 55.60'
e = 5.00%

N 86°22'24" E

PC 150+84.71

END CONST.
STA. 53+75.00

55+00

COMMONWEALTH OF KY

LIVINGSTON COUNTY
COOPERATIVE

THOMAS D.CHAMPION

KY 2610

0' 100' 200' 400'

SCALE: 1"= 100

US 60
STRIP MAP
STA. 145+00 TO STA. 161+75

MicroStation v8.11.7.443
E-SHEET NAME: R03200RW
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR03200RW.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R33 |

## BASIS OF ELEVATIONS

**Elevations were derived from GPS methods and are adjusted to the NAVD88 Vertical Datum. Geoid model used was Geoid12.**

## COORDINATE CONTROL POINTS

| POINT | DESCRIPTION | Project Coordinates | | | STATION and OFFSET |
|---|---|---|---|---|---|
| | | NORTH (Y) | EAST (X) | ELEV. (Z) | |
| CP 2 | MONUMENT | 3586815.43 | 4148630.06 | 378.48 | 103+64.83, 46.3 RT. |
| CP 3 | MONUMENT | 3587719.18 | 4148997.85 | 396.90 | 113+18.08, 133.83 RT. |
| POB | MAINLINE | 3586551.23 | 4148368.53 | | 100+00.00 |
| PC | MAINLINE | 3586701.26 | 4148491.02 | | 101+93.69 |
| PI | PI 105+40.71 | 3586970.08 | 4148710.49 | | 105+33.86, 42.37 RT. |
| PT | MAINLINE | 3587310.28 | 4148778.99 | | 108+74.03 |
| POB | CONANT LANE | 3586855.73 | 4148499.09 | | 49+10.00 |
| POE | CONANT LANE | 3586784.25 | 4148553.78 | | 50+00.00 |
| POB | KY 70 | 3586785.74 | 4148554.83 | | 50+00.00 |
| PC | KY 70 | 3586756.37 | 4148596.95 | | 50+51.35 |
| PI | PI 51+55.69 | 3586696.68 | 4148682.52 | | 51+51.76, 17.62 RT. |
| PT | KY 70 | 3586702.97 | 4148786.67 | | 52+52.17 |
| POE | KY 70 | 3586711.89 | 4148934.23 | | 54+00.00 |
| POB | US 60 CONNECTOR 1 | 3587649.44 | 4148847.29 | | 50+00.00 |

## RIGHT OF WAY MONUMENT POINTS

| Alignment | Station | Offset | Type | Description | State Plane Coordinates | |
|---|---|---|---|---|---|---|
| | | | | | North (Y) | East (X) |
| US 60 | 103+45.00 | 54.73' RT | 1 | ROW MONUMENT | 3586793.58 | 4148626.08 |
| US 60 | 103+50.00 | 156.79' RT | 1 | ROW MONUMENT | 3586742.60 | 4148714.67 |
| US 60 | 105+72.12 | 45.66' LT | 1 | ROW MONUMENT | 3587041.38 | 4148646.28 |
| US 60 | 106+95.00 | 45.00' LT | 1 | ROW MONUMENT | 3587151.94 | 4148689.92 |
| US 60 | 107+18.28 | 55.00' LT | 1 | ROW MONUMENT | 3587176.40 | 4148687.45 |
| US 60 | 108+27.43 | 55.00' LT | 1 | ROW MONUMENT | 3587277.40 | 4148715.51 |
| US 60 | 108+69.04 | 138.39' LT | 1 | ROW MONUMENT | 3587333.20 | 4148642.43 |
| US 60 | 110+66.00 | 63.44' LT | 1 | ROW MONUMENT | 3587511.00 | 4148754.70 |
| US 60 | 113+65.00 | 80.00' LT | 1 | ROW MONUMENT | 3587807.38 | 4148797.49 |
| US 60 | 115+00.00 | 50.00' LT | 1 | ROW MONUMENT | 3587933.80 | 4148853.55 |

(P 5) JIMMY RUDD

(P 6) MICHAEL WILLIAMS
SONYA WILLIAMS

(P 7) JIMMY R.RUDD

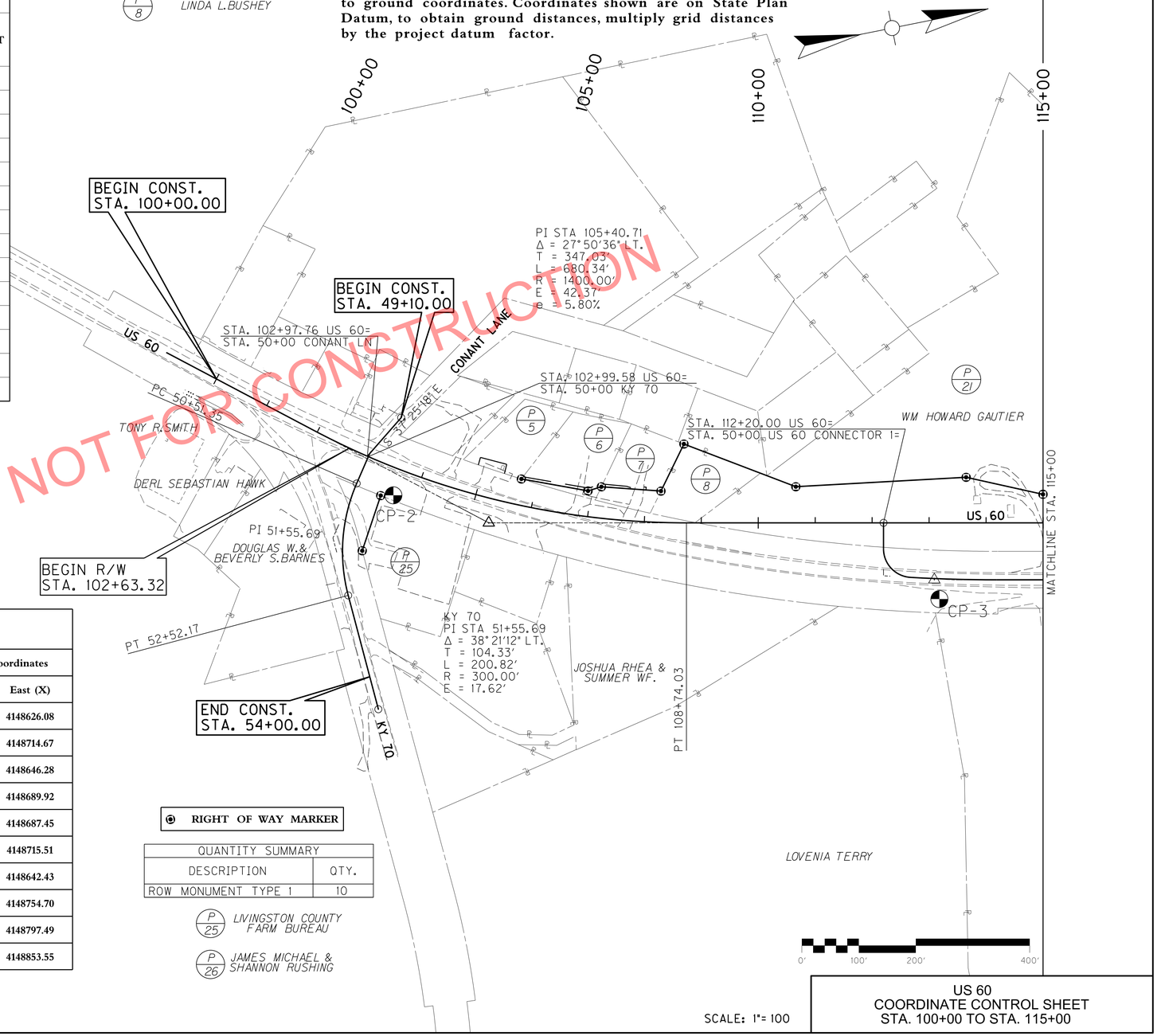
(P 8) LINDA L.BUSHEY

## PROJECT COORDINATES

**Coordinates for horizontal control were obtained from GPS methods and adjusted to the National NAD83/FBN System.**

**Coordinates shown are based on State Plane Coordinate System Single Zone (NAD83 2011) in U.S. Survey Feet.**

**A project datum factor of 0.99997283 was computed from Control Monument 1 to convert the State Plan Coordinates to ground coordinates. Coordinates shown are on State Plan Datum, to obtain ground distances, multiply grid distances by the project datum factor.**




**RIGHT OF WAY MARKER**

| QUANTITY SUMMARY | |
|---|---|
| DESCRIPTION | QTY. |
| ROW MONUMENT TYPE 1 | 10 |

(P 25) LIVINGSTON COUNTY FARM BUREAU

(P 26) JAMES MICHAEL & SHANNON RUSHING

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"= 100

**US 60**
**COORDINATE CONTROL SHEET**
**STA. 100+00 TO STA. 115+00**

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R03300CC.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R03300CC
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R34 |

# COORDINATE CONTROL POINTS

| POINT | DESCRIPTION | Project Coordinates | | | STATION and OFFSET |
|---|---|---|---|---|---|
| | | NORTH (Y) | EAST (X) | ELEV. (Z) | |
| CP 1 | MONUMENT | 3589677.84 | 4148706.37 | 336.38 | 131+80.66, 538.57 LT. |
| POE | US 60 CONNECTOR 1 | 3587946.91 | 4149009.30 | | 53+98.00 |
| POB | US 60 CONNECTOR 2 | 3590665.47 | 4149454.62 | | 50+00.00 |
| POE | US 60 CONNECTOR 2 | 3590638.27 | 4149591.88 | | 51+40.00 |

115+00 120+00 125+00 130+00 135+00 140+00 145+00 545+00

CP-1

P 21 — WM HOWARD GAUTIER

P 31 — DAVID W.REED

P 31

STA. 142+97.00 US 60=
STA. 50+00 US 60 CONNECTOR 2

US 60 — N 111°23'07" E — US 60

MATCHLINE STA. 115+00

MATCHLINE STA. 145+00

CUMBERLAND RIVER

END CONST.
STA. 53+98.00

END CONST.
STA. 51+40.00

LOVENIA TERRY

DAVID W.REED

LIVINGSTON COUNTY COOPERATIVE

PRELIMINARY NOT FOR CONSTRUCTION

# RIGHT OF WAY MONUMENT POINTS

| Alignment | Station | Offset | Type | Description | State Plane Coordinates | |
|---|---|---|---|---|---|---|
| | | | | | North (Y) | East (X) |
| US 60 | 118+93.40 | 50.00' LT | 1 | ROW MONUMENT | 3588319.46 | 4148931.21 |
| US 60 | 125+80.16 | 50.00' LT | 1 | ROW MONUMENT | 3588992.71 | 4149066.78 |
| US 60 | 132+70.00 | 50.00' LT | 1 | ROW MONUMENT | 3589668.97 | 4149202.96 |
| US 60 | 133+85.00 | 130.00' LT | 1 | ROW MONUMENT | 3589797.5 | 4149147.23 |
| US 60 | 140+75.00 | 75.00' LT | 1 | ROW MONUMENT | 3590463.07 | 4149337.36 |
| US 60 | 142+70.00 | 60.00' LT | 1 | ROW MONUMENT | 3590651.27 | 4149390.56 |
| US 60 | 144+40.00 | 72.00' LT | 1 | ROW MONUMENT | 3590820.29 | 4149412.35 |

RIGHT OF WAY MARKER

| QUANTITY SUMMARY | |
|---|---|
| DESCRIPTION | QTY. |
| ROW MONUMENT TYPE 1 | 7 |

0' 100' 200' 400'

SCALE: 1"= 100

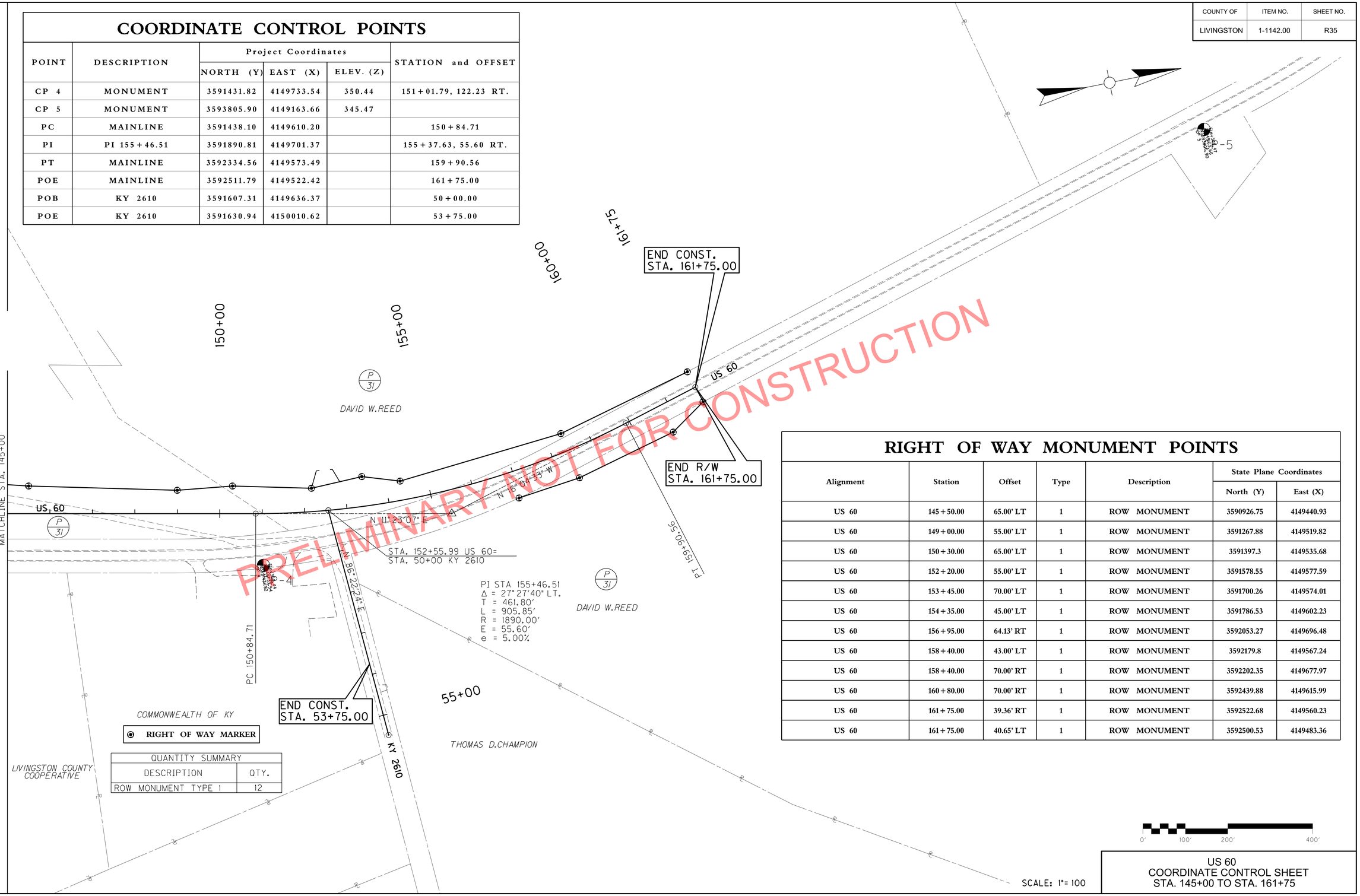
US 60
COORDINATE CONTROL SHEET
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR03400CC.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R03400CC
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R35 |

# COORDINATE CONTROL POINTS

| POINT | DESCRIPTION | Project Coordinates | | | STATION and OFFSET |
|---|---|---|---|---|---|
| | | NORTH (Y) | EAST (X) | ELEV. (Z) | |
| CP 4 | MONUMENT | 3591431.82 | 4149733.54 | 350.44 | 151+01.79, 122.23 RT. |
| CP 5 | MONUMENT | 3593805.90 | 4149163.66 | 345.47 | |
| PC | MAINLINE | 3591438.10 | 4149610.20 | | 150+84.71 |
| PI | PI 155+46.51 | 3591890.81 | 4149701.37 | | 155+37.63, 55.60 RT. |
| PT | MAINLINE | 3592334.56 | 4149573.49 | | 159+90.56 |
| POE | MAINLINE | 3592511.79 | 4149522.42 | | 161+75.00 |
| POB | KY 2610 | 3591607.31 | 4149636.37 | | 50+00.00 |
| POE | KY 2610 | 3591630.94 | 4150010.62 | | 53+75.00 |




| QUANTITY SUMMARY | |
|---|---|
| DESCRIPTION | QTY. |
| ROW MONUMENT TYPE 1 | 12 |

# RIGHT OF WAY MONUMENT POINTS

| Alignment | Station | Offset | Type | Description | State Plane Coordinates | |
|---|---|---|---|---|---|---|
| | | | | | North (Y) | East (X) |
| US 60 | 145+50.00 | 65.00' LT | 1 | ROW MONUMENT | 3590926.75 | 4149440.93 |
| US 60 | 149+00.00 | 55.00' LT | 1 | ROW MONUMENT | 3591267.88 | 4149519.82 |
| US 60 | 150+30.00 | 65.00' LT | 1 | ROW MONUMENT | 3591397.3 | 4149535.68 |
| US 60 | 152+20.00 | 55.00' LT | 1 | ROW MONUMENT | 3591578.55 | 4149577.59 |
| US 60 | 153+45.00 | 70.00' LT | 1 | ROW MONUMENT | 3591700.26 | 4149574.01 |
| US 60 | 154+35.00 | 45.00' LT | 1 | ROW MONUMENT | 3591786.53 | 4149602.23 |
| US 60 | 156+95.00 | 64.13' RT | 1 | ROW MONUMENT | 3592053.27 | 4149696.48 |
| US 60 | 158+40.00 | 43.00' LT | 1 | ROW MONUMENT | 3592179.8 | 4149567.24 |
| US 60 | 158+40.00 | 70.00' RT | 1 | ROW MONUMENT | 3592202.35 | 4149677.97 |
| US 60 | 160+80.00 | 70.00' RT | 1 | ROW MONUMENT | 3592439.88 | 4149615.99 |
| US 60 | 161+75.00 | 39.36' RT | 1 | ROW MONUMENT | 3592522.68 | 4149560.23 |
| US 60 | 161+75.00 | 40.65' LT | 1 | ROW MONUMENT | 3592500.53 | 4149483.36 |

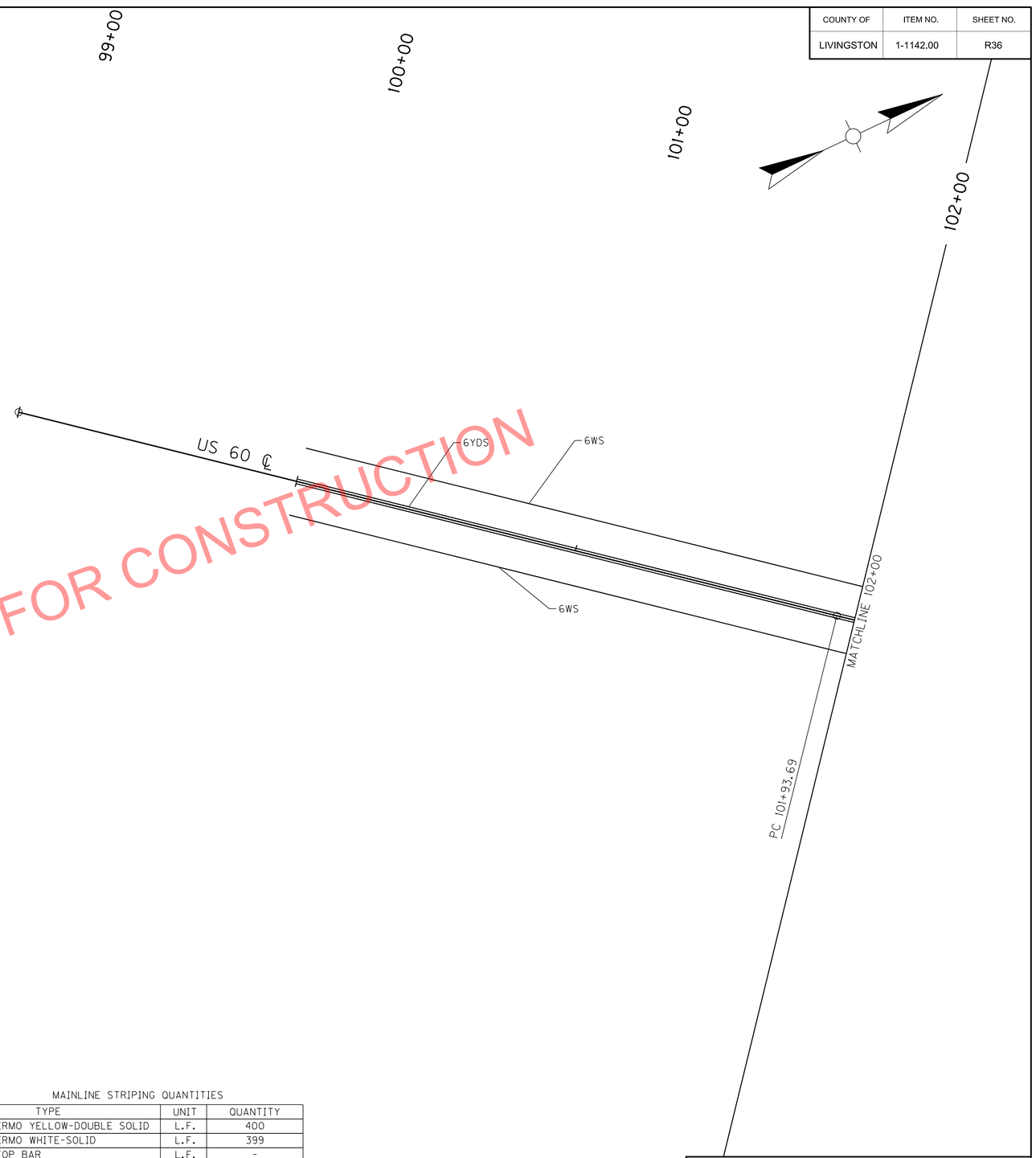
0' 100' 200' 400'

SCALE: 1"= 100

US 60
COORDINATE CONTROL SHEET
STA. 145+00 TO STA. 161+75

FILE NAME: C:\USERS\MWMSA\TTDESKTOP\ESHEETR03500CC.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R03500CC
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R36 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 400 |
| 6" THERMO WHITE-SOLID | L.F. | 399 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

0' 20' 40' 80'

SCALE: 1"=20'

US 60
STRIPING DETAIL
STA. 100+00 TO STA. 102+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR03600DS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R03600DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R37 |

102+00
103+00
104+00
105+00
106+00
107+00
108+00

STA. 102+97.76 US 60=
STA. 50+00 CONANT LN

CONANT LN. ℄

STA. 102+99.58 US 60=
STA. 50+00 KY 70

MATCHLINE 102+00

6WS
+74.32
-12.00'
+74.32
0.00'
6YDS

+45.65
-12.00'
+45.65
0.00'
6WS
6YDS

US 60 ℄

KY 70℄

24" STOP BAR

MATCHLINE 108+00

PC 50+51.35

6WS
6YDS
6WS

6WS

51+00

PI 105+40.71

52+00

PI 51+55.69

PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1058 |
| 6" THERMO WHITE-SOLID | L.F. | 1168 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

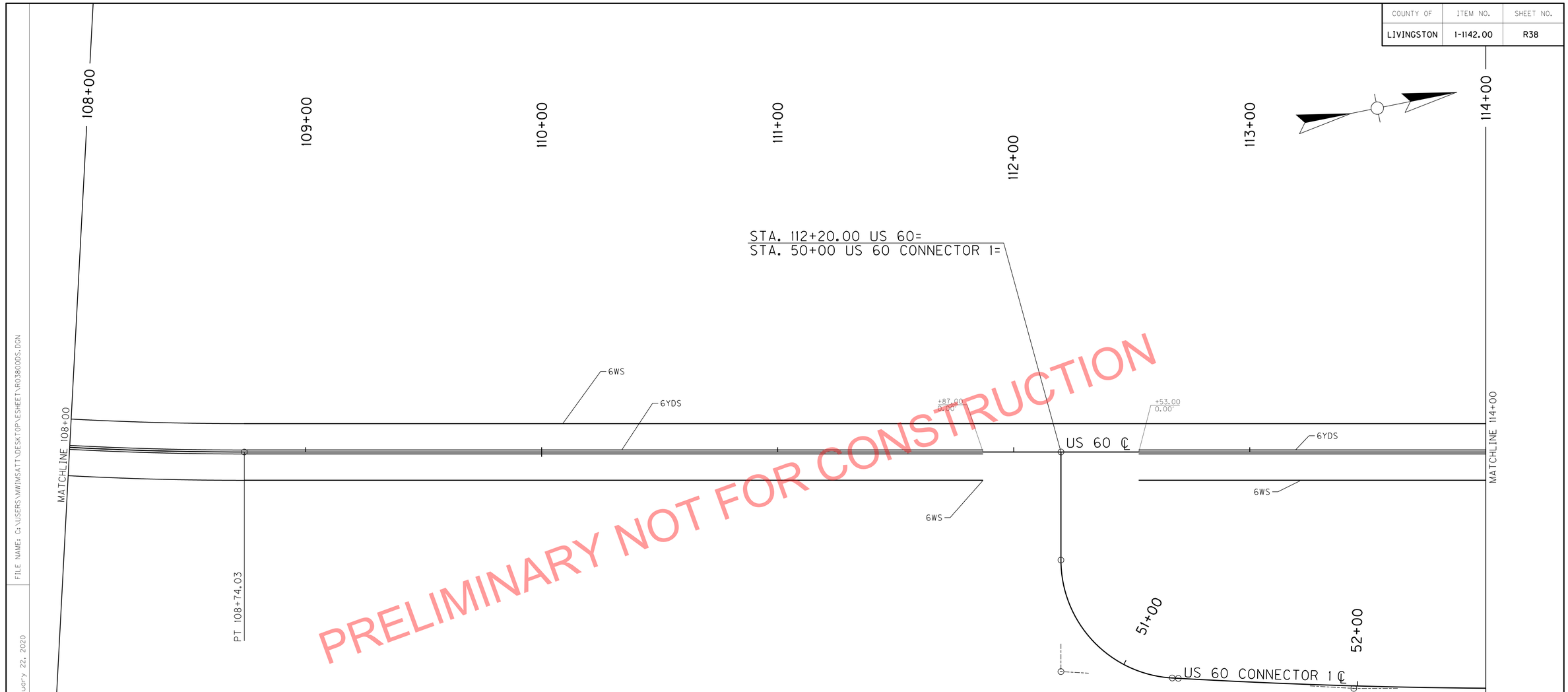
SCALE: 1"=20'

0' 20' 40' 80'

# US 60
# STRIPING DETAIL
# STA. 102+00 TO STA. 108+00

MicroStation v8.11.7.443
E-SHEET NAME: R037000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R037000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R38 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1068 |
| 6" THERMO WHITE-SOLID | L.F. | 1134 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

SCALE: 1"=20'

0' 20' 40' 80'

# US 60
# STRIPING DETAIL
# STA. 108+00 TO STA. 114+00

MicroStation v8.11.7.443
E-SHEET NAME: R038000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R038000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R39 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1200 |
| 6" THERMO WHITE-SOLID | L.F. | 1200 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

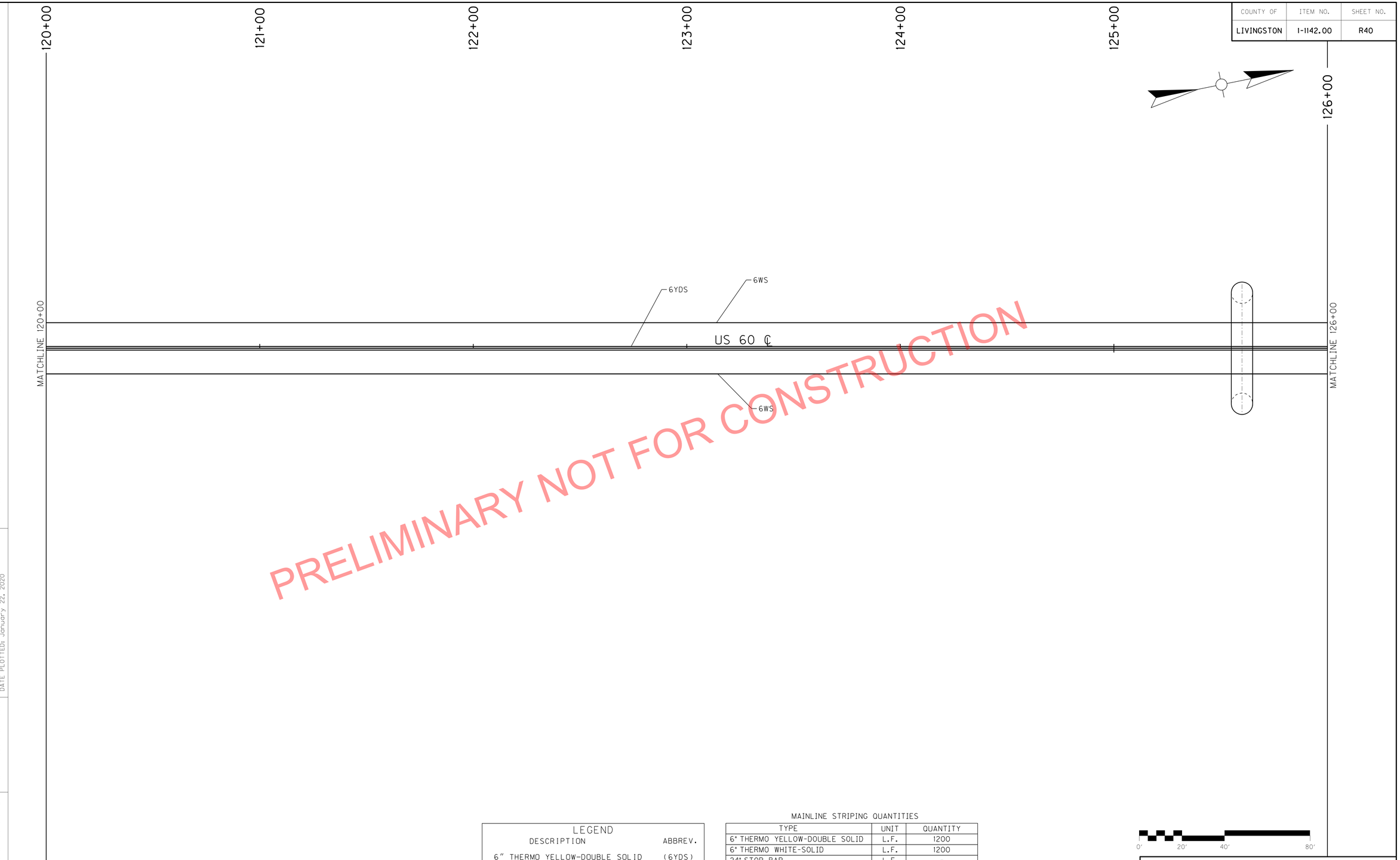
SCALE: 1"=20'

0' 20' 40' 80'

# US 60
# STRIPING DETAIL
# STA. 114+00 TO STA. 120+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R039000S.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R039000S
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R40 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1200 |
| 6" THERMO WHITE-SOLID | L.F. | 1200 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

SCALE: 1"=20'

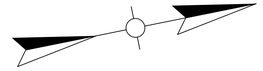
0' 20' 40' 80'

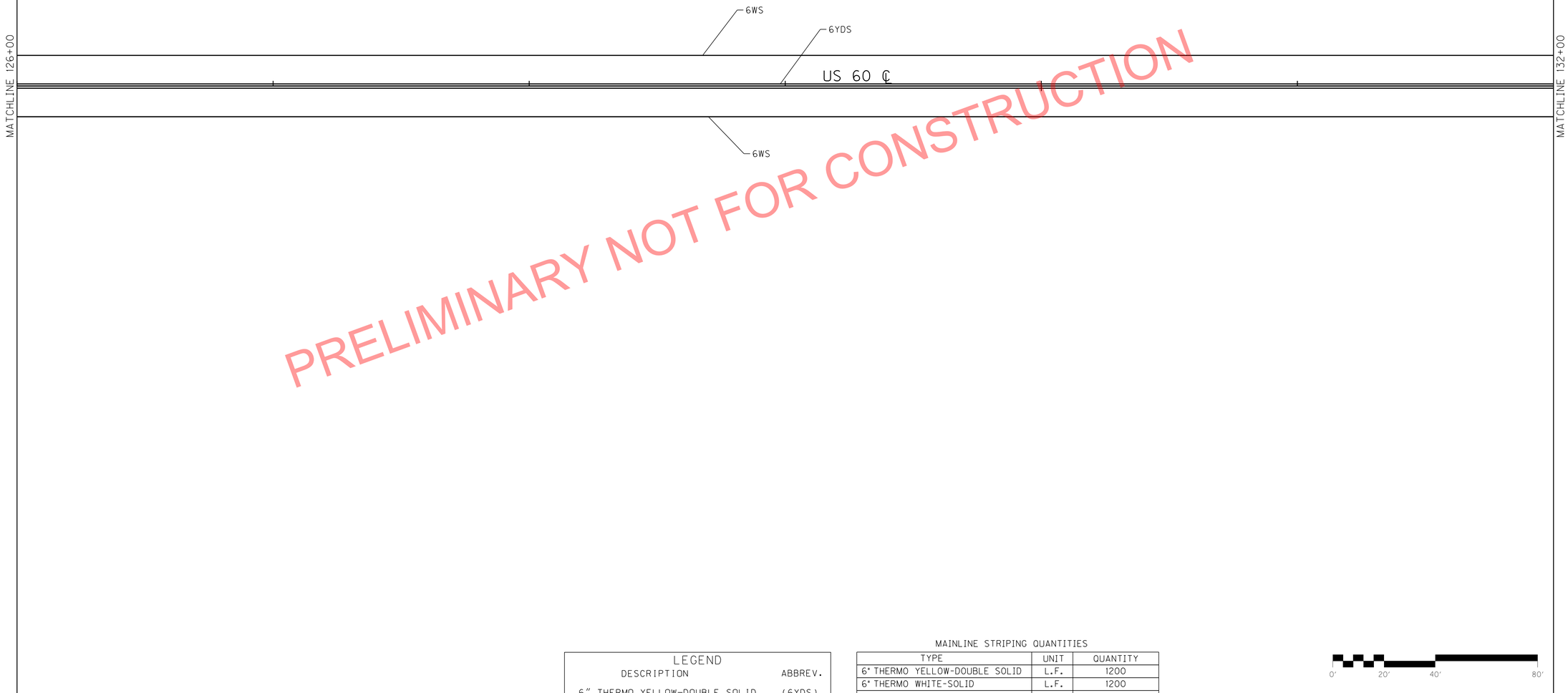
# US 60
# STRIPING DETAIL
# STA. 120+00 TO STA. 126+00

MicroStation v8.11.7.443
E-SHEET NAME: R040000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R040000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R41 |

126+00 127+00 128+00 129+00 130+00 131+00 132+00






PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1200 |
| 6" THERMO WHITE-SOLID | L.F. | 1200 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

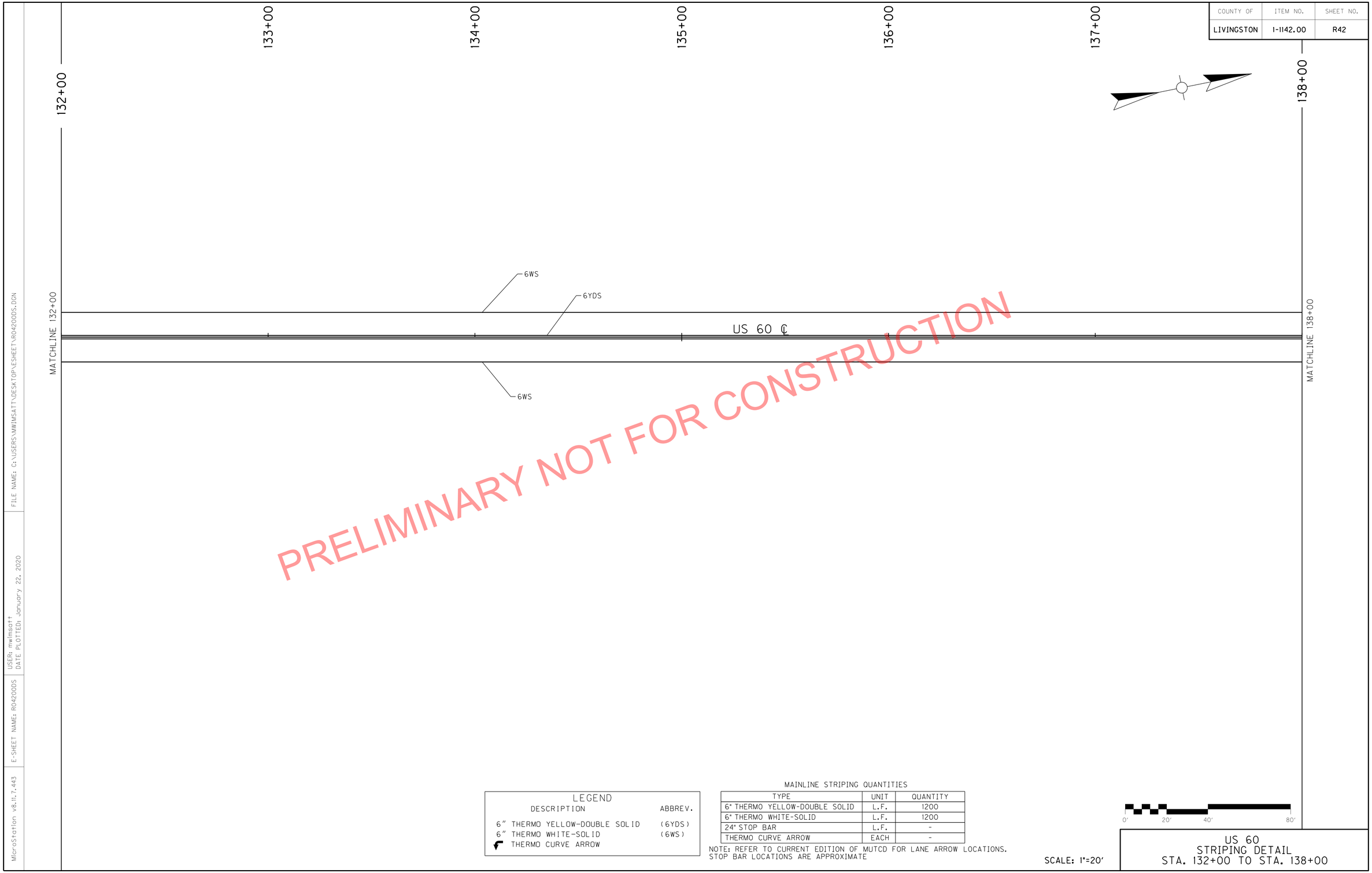
SCALE: 1"=20'

0' 20' 40' 80'

# US 60
# STRIPING DETAIL
# STA. 126+00 TO STA. 132+00

MicroStation v8.11.7.443
E-SHEET NAME: R041000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R041000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R42 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1200 |
| 6" THERMO WHITE-SOLID | L.F. | 1200 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

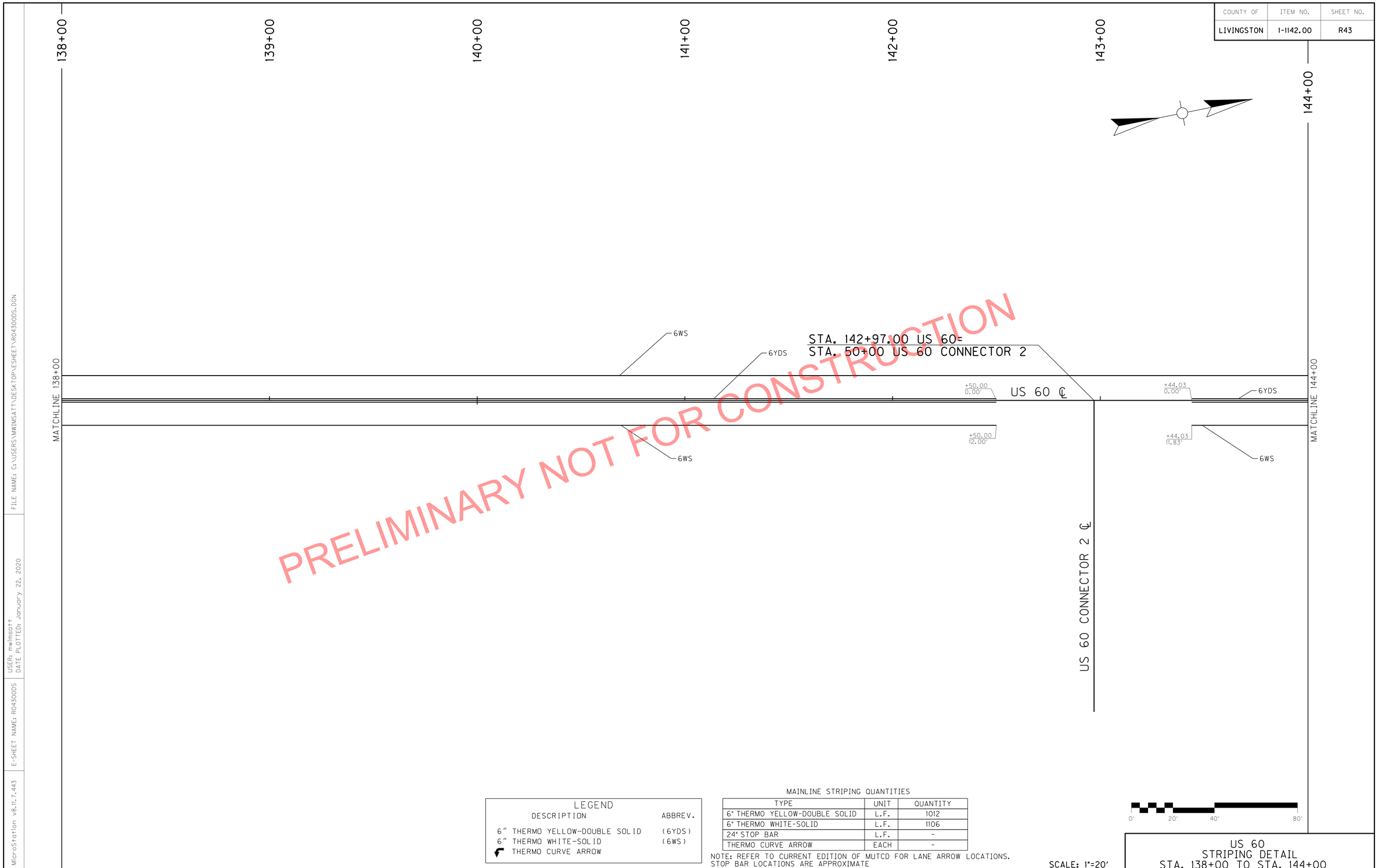
SCALE: 1"=20'

0' 20' 40' 80'

# US 60
# STRIPING DETAIL
# STA. 132+00 TO STA. 138+00

MicroStation v8.11.7.443
E-SHEET NAME: R042000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R042000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R43 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1012 |
| 6" THERMO WHITE-SOLID | L.F. | 1106 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

SCALE: 1"=20'

# US 60
# STRIPING DETAIL
# STA. 138+00 TO STA. 144+00

MicroStation v8.11.7.443
E-SHEET NAME: R04300DS
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R04300DS.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R44 |

144+00 145+00 146+00 147+00 148+00 149+00 150+00

MATCHLINE 144+00

MATCHLINE 150+00

6YDS

6WS

US 60 ℄

+90.00
0.00'

6YDS

6YDS

+10.00
17.79'

6WS

6WS

PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 2024 |
| 6" THERMO WHITE-SOLID | L.F. | 1287 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

0' 20' 40' 80'

SCALE: 1"=20'

# US 60
# STRIPING DETAIL
# STA. 144+00 TO STA. 150+00

MicroStation v8.11.7.443
E-SHEET NAME: R044000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R044000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R45 |

PRELIMINARY NOT FOR CONSTRUCTION

150+00
151+00
152+00
153+00
154+00
155+00
156+00

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

US 60 ℄

MATCHLINE 150+00

MATCHLINE 156+00

PC 150+84.71

PI 155+49.51

KY 2610 ℄

51+00

52+00

6WS
6YDS
4YDS
24" STOP BAR
R 5.54'
+10.00 0.00'
+10.00 11.08'
+10.00 19.59'
+10.00 23.08'
+10.00 31.59'
+10.00 35.04'
+00.00 0.00'
+00.00 12.00'
+26.70 23.99'
+46.83 -26.65'
+45.01 0.00'
+70.00 0.00'

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 1932 |
| 6" THERMO WHITE-SOLID | L.F. | 1732 |
| 24" STOP BAR | L.F. | 27 |
| THERMO CURVE ARROW | EACH | 4 |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

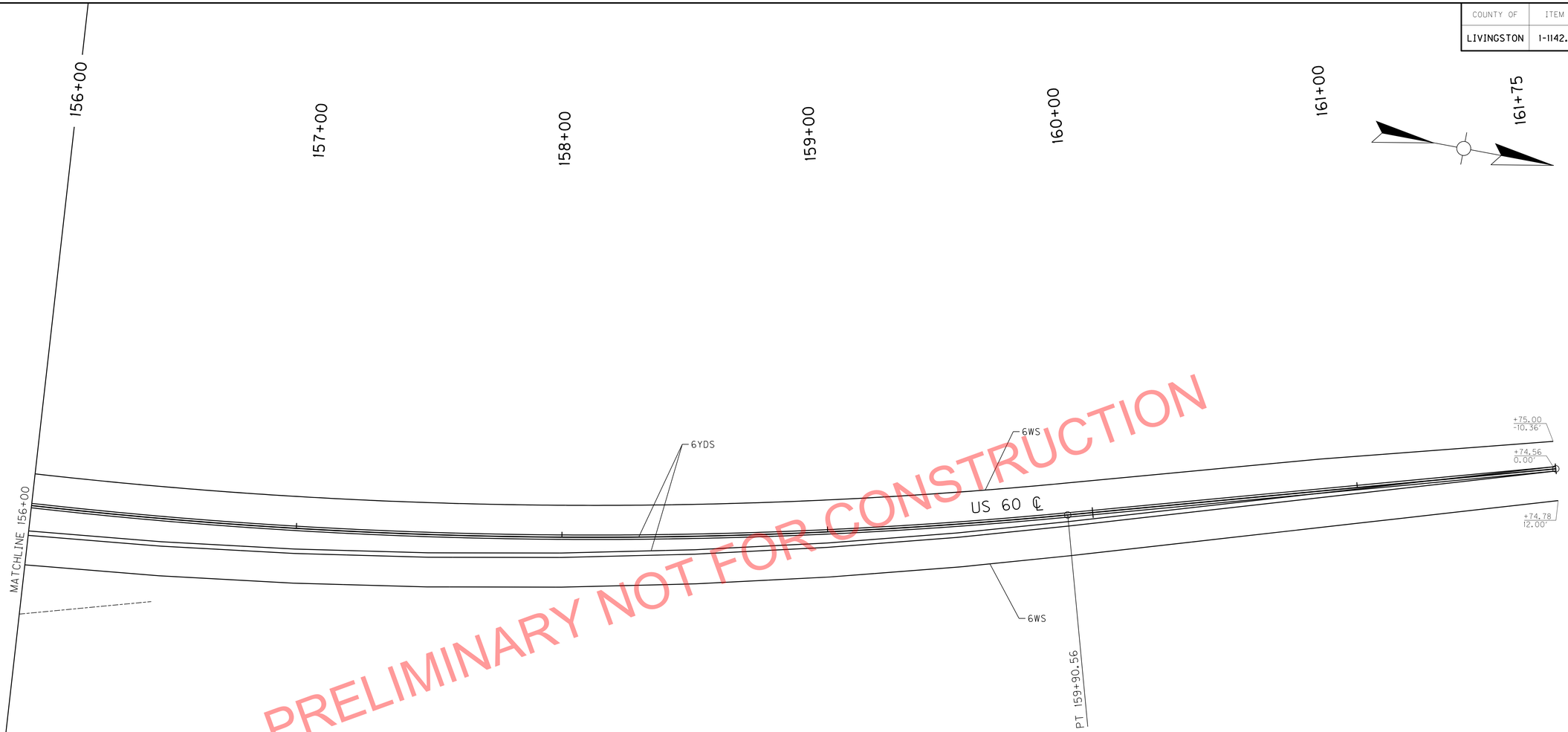
0' 20' 40' 80'

SCALE: 1"=20'

# US 60
# STRIPING DETAIL
# STA. 150+00 TO STA. 156+00

MicroStation v8.11.7.443
E-SHEET NAME: R045000DS
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R045000DS.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R46 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 2302 |
| 6" THERMO WHITE-SOLID | L.F. | 1151 |
| 24" STOP BAR | L.F. | - |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

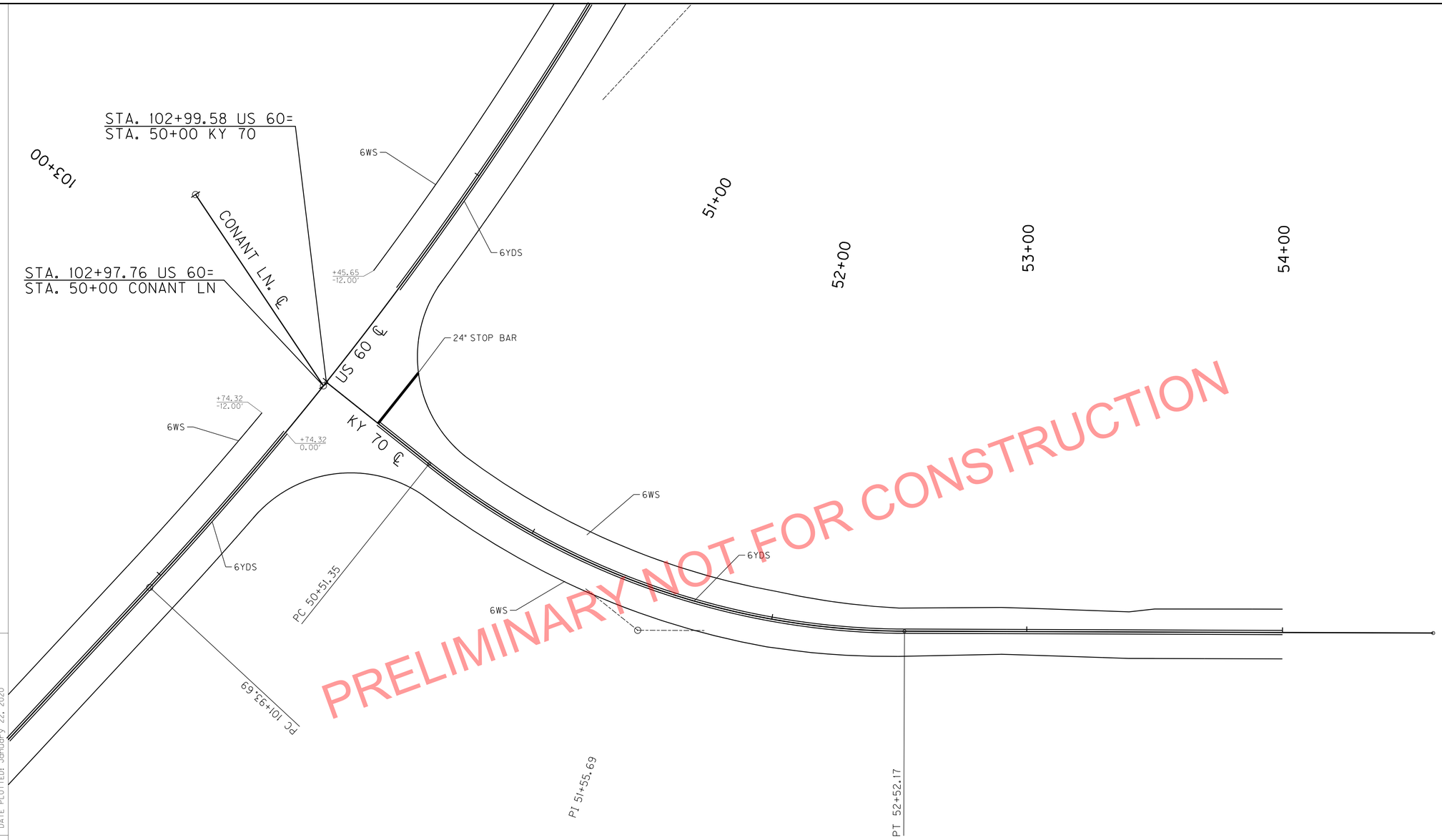
0' 20' 40' 80'

SCALE: 1"=20'

# US 60
# STRIPING DETAIL
# STA. 156+00 TO STA. 161+75

MicroStation v8.11.7.443
E-SHEET NAME: R046000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R046000S.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R47 |




PRELIMINARY NOT FOR CONSTRUCTION

LEGEND

| DESCRIPTION | ABBREV. |
|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | (6YDS) |
| 6" THERMO WHITE-SOLID | (6WS) |
| THERMO CURVE ARROW | |

MAINLINE STRIPING QUANTITIES

| TYPE | UNIT | QUANTITY |
|---|---|---|
| 6" THERMO YELLOW-DOUBLE SOLID | L.F. | 748 |
| 6" THERMO WHITE-SOLID | L.F. | 682 |
| 24" STOP BAR | L.F. | 25 |
| THERMO CURVE ARROW | EACH | - |

NOTE: REFER TO CURRENT EDITION OF MUTCD FOR LANE ARROW LOCATIONS.
STOP BAR LOCATIONS ARE APPROXIMATE

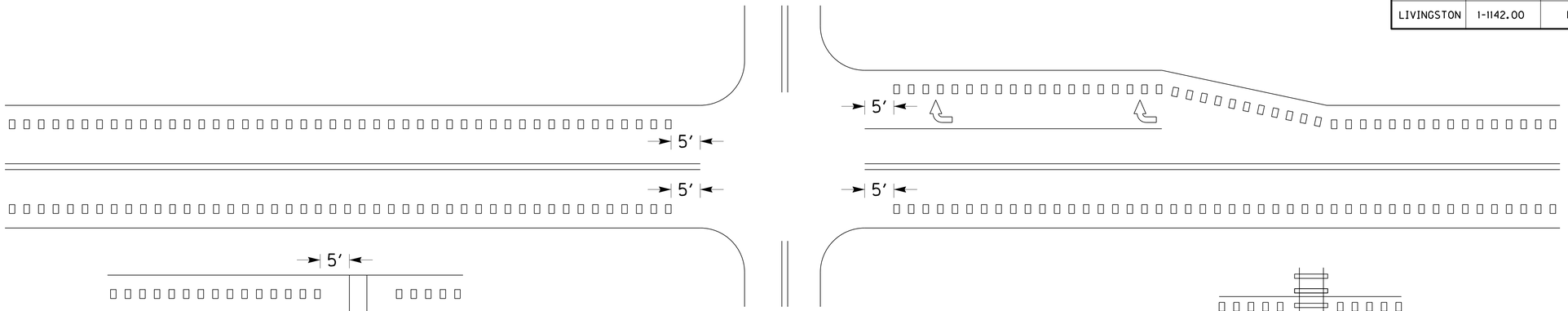
SCALE: 1"=20'

0' 20' 40' 80'

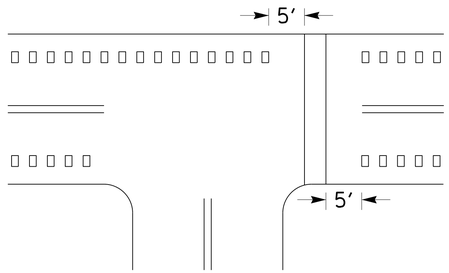
# KY 70
# STRIPING DETAIL
# STA. 50+00 TO STA. 54+00

MicroStation v8.11.7.443
E-SHEET NAME: R0470005
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R0470005.DGN

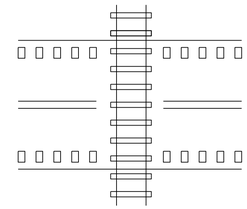
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R48 |



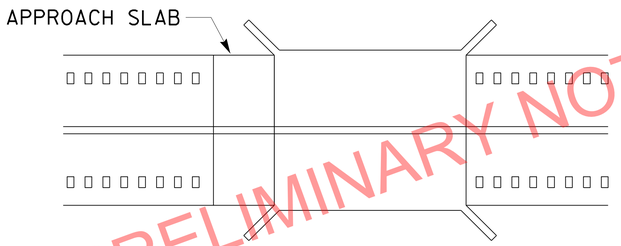

INTERSECTIONS WITH OR WITHOUT ① RIGHT TURN LANES



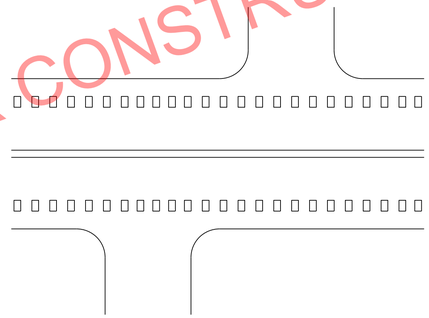

MARKED CROSSWALK ②



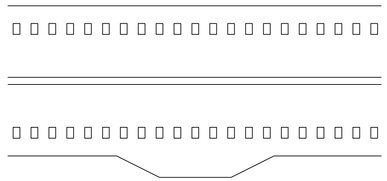
HIGHWAY-RAIL GRADE CROSSINGS ③




BRIDGE DECK/APPROACH SLAB ④



DRIVEWAYS/MINOR COMMERCIAL ENTRANCES ⑤



MAILBOX TURNOUTS ⑥

PRELIMINARY NOT FOR CONSTRUCTION

~ NOTES ~

① RUMBLE STRIPS SHALL BE OMITTED THROUGH MAJOR INTERSECTIONS WITH, OR WITHOUT, RIGHT-TURN LANES. OMIT RUMBLE STRIPS APPROXIMATELY 5′ IN ADVANCE OF THE AREA WHERE EDGELINE PAVEMENT MARKINGS HAVE BEEN OMITTED (NORMALLY WHERE SIDE STREET RADIUS INTERSECTS MAINLINE).

② RUMBLE STRIPS SHALL NOT BE INSTALLED THROUGH MARKED CROSSWALKS. OMIT RUMBLE STRIPS APPROXIMATELY 5′ IN ADVANCE OF MARKED CROSSWALKS.

③ RUMBLE STRIPS SHALL NOT BE INSTALLED ACROSS HIGHWAY-RAIL GRADE CROSSINGS.

④ RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS OR APPROACH SLABS.

⑤ RUMBLE STRIPS SHALL BE INSTALLED THROUGH DRIVEWAYS & MINOR COMMERCIAL ENTRANCES.

⑥ RUMBLE STRIPS SHALL BE INSTALLED THROUGH MAILBOX TURNOUTS.

7. RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEMS AND UNIT TO BID

| | |
|---|---|
| EDGELINE RUMBLE STRIPS | LF |
| SHOULDER RUMBLE STRIPS | LF |

DRAWING NOT TO SCALE

USE WITH SEPIA 006, 007, AND 008

KENTUCKY DEPARTMENT OF HIGHWAYS

SHOULDER & EDGELINE RUMBLE STRIP DETAILS

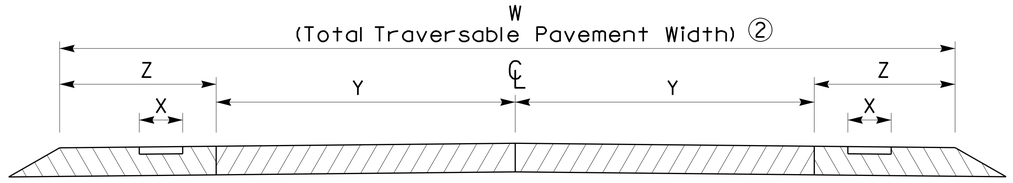
SUBMITTED R. Jeffrey Wolfe 11-23-16 DATE

005

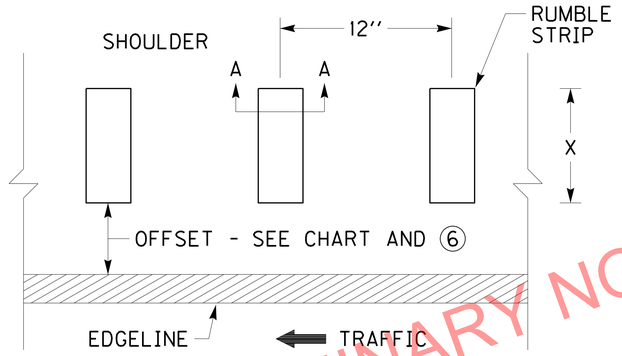
MicroStation v8.11.7.443 | E-SHEET NAME: R04800DS | USER: mwmsatt | DATE PLOTTED: January 22, 2020 | FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R04800DS.DGN

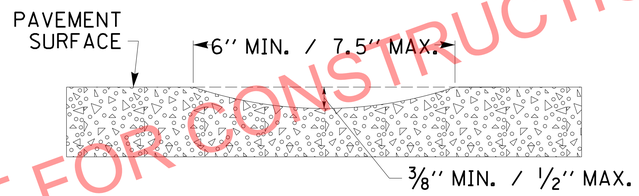
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R49 |

| PAVEMENT WIDTH (W) ② | RUMBLE LENGTH (X) ⑥ | OFFSET ⑥ | CLRS & SRS | |
|---|---|---|---|---|
| | | | LANE WIDTH (Y) ③ | SHOULDER WIDTH (Z) ④ |
| 34′ | 8′′ | 6′′ | 12′ | 5′ |
| 35′ | 8′′ | 6′′ | 12′ | 5.5′ |
| 36′ | 8′′ | 6′′ | 12′ | 6′ |
| 37′ | 12′′ | 12′′ | 12′ | 6.5′ |
| 38′ | 12′′ | 12′′ | 12′ | 7′ |
| 39′ | 12′′ | 12′′ | 12′ | 7.5′ |
| >=40′ | 16′′ | 12′′ | 12′ | >=8′ |

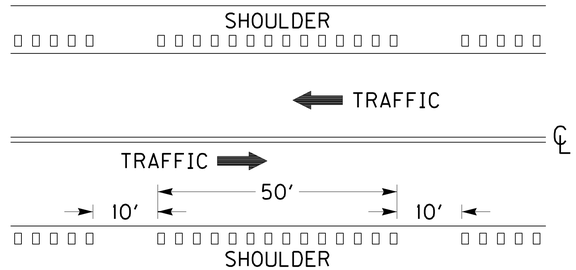



PAVEMENT CROSS-SECTION




SECTION A-A




BICYCLE GAPS ⑦

PRELIMINARY NOT FOR CONSTRUCTION

~ NOTES ~

1. SHOULDER RUMBLE STRIPS SHOULD BE INSTALLED ACCORDING TO THE DIMENSIONS PROPOSED ABOVE UNLESS THERE IS AN ENGINEERING BASIS THAT SUPPORTS A CHANGE IN DIMENSION. FOR EXAMPLE, IF THE EXISTING LANE WIDTH IS NARROWER THAN THE LANE WIDTH PROPOSED IN THIS DRAWING AND THE EXISTING SHOULDER PAVEMENT DEPTH IS NOT SUITABLE TO BE CONVERTED INTO A PORTION OF THE PROPOSED LANE WIDTH, THEN THE EXISTING LANE WIDTH SHOULD BE USED INSTEAD OF THE WIDTH PROPOSED IN THIS DRAWING.

② PAVEMENT WIDTH (W) IS THE TOTAL WIDTH OF TRAVERSABLE PAVEMENT. DO NOT INCLUDE THE WIDTH OF ANY NON-TRAVERSABLE PAVEMENT, SUCH AS PAVEMENT WEDGES, WHEN MEASURING THE PAVEMENT WIDTH (W).

③ LANE WIDTH (Y) TO BE MEASURED FROM CENTER OF ROAD TO CENTER OF EDGELINE STRIPE.

④ PAVED SHOULDER WIDTH (Z) TO BE MEASURED FROM CENTER OF EDGELINE STRIPE TO OUTSIDE EDGE OF TRAVERSABLE PAVEMENT.

5. DISTANCES SHOWN ARE APPROXIMATE. MAINTAIN RUMBLE STRIP DIMENSIONS AND SPACING AS MUCH AS POSSIBLE. IF THE TYPICAL SECTION SHOWS A LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) THAT DIFFERS FROM THE WIDTHS LISTED IN THIS DRAWING, THE ENGINEER SHALL DETERMINE THE LANE WIDTH (Y) AND/OR SHOULDER WIDTH (Z) AT THE TIME OF CONSTRUCTION.
NOTE: CENTERLINE RUMBLE STRIPS SHOULD BE OMITTED WHEN THE LANE WIDTH (Y) IS LESS THAN 11 FT.

⑥ RUMBLE LENGTH (X) AND/OR OFFSET DISTANCE MAY BE MODIFIED AS THE ENGINEER DIRECTS, IF THE SHOULDER WIDTH (Z) IS EQUAL TO OR LESS THAN THE COMBINED WIDTH OF THE PROPOSED RUMBLE LENGTH (X) AND OFFSET DISTANCE.

⑦ ALL SHOULDER RUMBLE STRIPS ALONG SHOULDERS THAT ARE 5′ OR WIDER SHOULD INCLUDE BICYCLE GAPS AS DETAILED.

8. SHOULDER RUMBLE STRIPS SHOULD BE OMITTED WHERE THE POSTED SPEED LIMIT IS 45 MPH OR LESS.

BID ITEM AND UNIT TO BID
SHOULDER RUMBLE STRIPS LF

DRAWING NOT TO SCALE

USE WITH SEPIA 005

KENTUCKY
DEPARTMENT OF HIGHWAYS

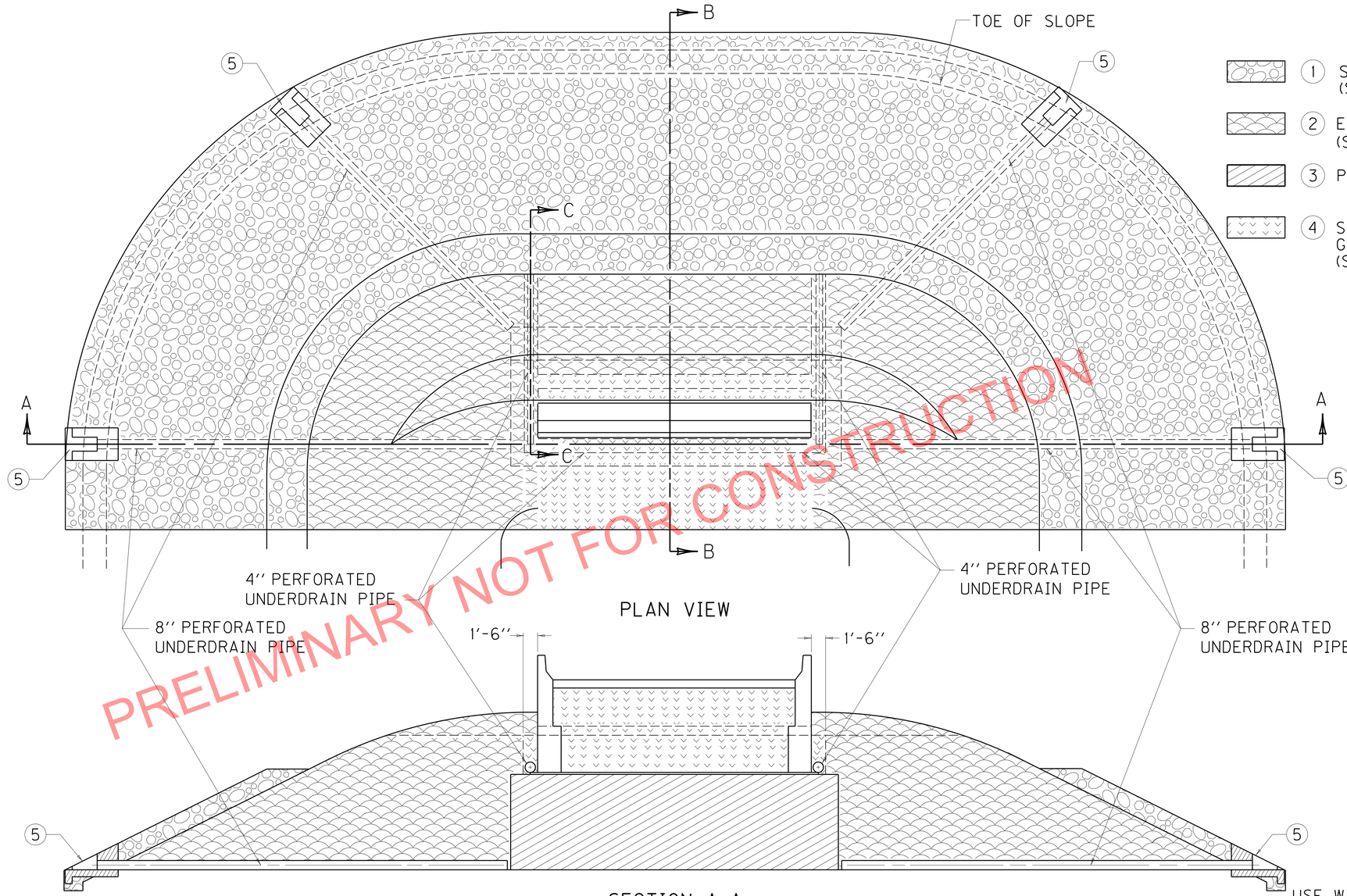
SHOULDER RUMBLE STRIP DETAILS
TWO LANE ROADWAYS

SUBMITTED R. Jeffrey Wolfe 11-23-16
DATE

007

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R049000S.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R049000S
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R50 |




LEGEND

1. SLOPE PROTECTION (SEE BRIDGE PLANS)
2. EMBANKMENT (SEE ROADWAY PLANS)
3. PILE CORE
4. STRUCTURE GRANULAR BACKFILL (SEE BRIDGE PLANS)

PRELIMINARY NOT FOR CONSTRUCTION

~ NOTES ~

THE PURPOSE OF THIS DRAWING AND CUR. SEPIA 010 IS TO DEFINE THE LIMITS OF THE FOUR MATERIALS SHOWN. FOR SIMPLICITY PURPOSES, AN END-BENT ON A ZERO DEGREE SKEW IS SHOWN. THE SAME PRINCIPLES WOULD APPLY FOR MORE VARIED STRUCTURES.

1. SLOPE PROTECTION REQUIRED WHEN AND AS NOTED ON THE PLANS.
2. GRANULAR OR ROCK EMBANKMENT REQUIRED WHEN AND AS NOTED ON THE PLANS.
3. PILE CORE IN ACCORDANCE WITH SPECIAL PROVISION NO. 69.
4. STRUCTURE GRANULAR BACKFILL REQUIRED AT ALL TIMES.
5. FOR HEADWALL CONSTRUCTION SEE CUR. STD. DWG RDP-010. (SEE ROADWAY PLANS)

USE WITH CUR. STD. DWG. RDP-010, SEPIA 010

KENTUCKY DEPARTMENT OF HIGHWAYS

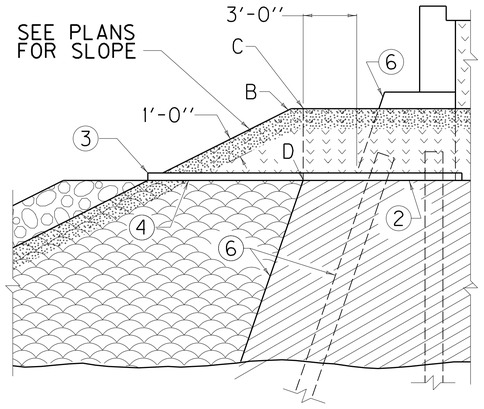
# TREATMENT OF EMBANKMENTS AT END-BENTS

SUBMITTED William S Gullett 1-30-17 DATE

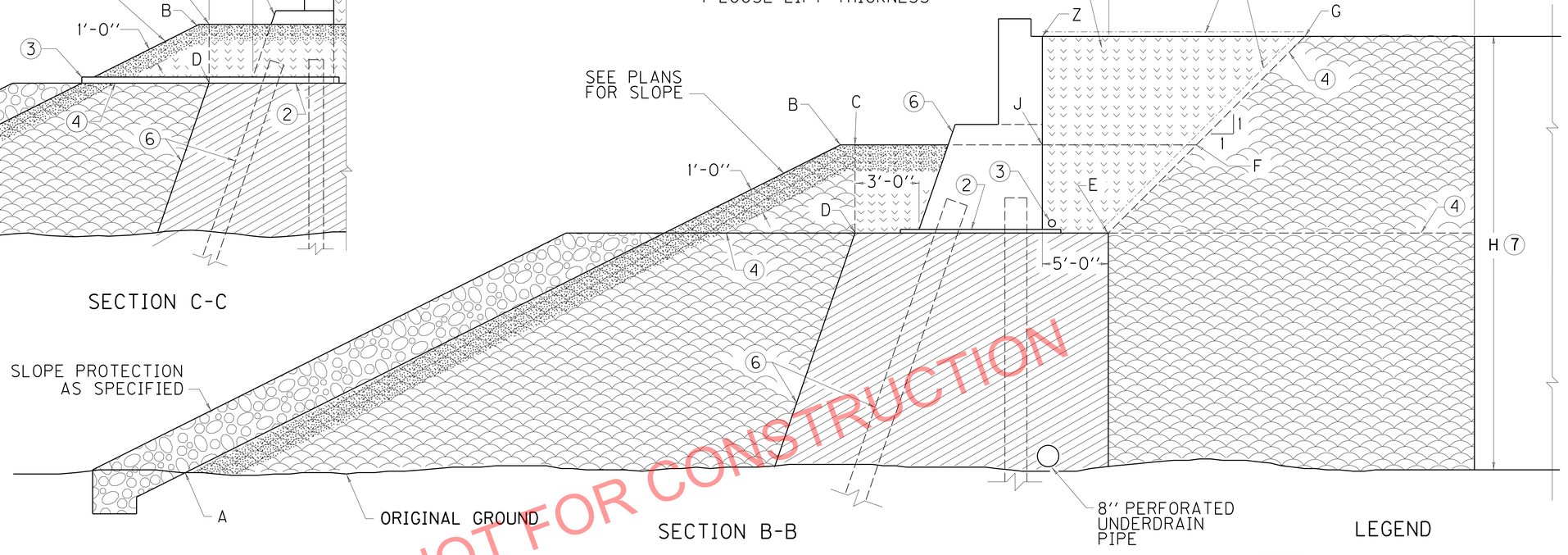
009

FILE NAME: G:\USERS\MWMSATT\DESKTOP\SHEET\R05000DS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R05000DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R51 |




SECTION C-C




SECTION B-B

PRELIMINARY NOT FOR CONSTRUCTION

BID ITEMS AND UNIT TO BID

| | |
|---|---|
| GRANULAR EMBANKMENT | CUYD |
| STRUCTURE GRANULAR BACKFILL | CUYD |

## CONSTRUCTION SEQUENCE "A"

1. CONSTRUCT EMBANKMENT TO SLOPES A, B, F, AND G SUCH THAT NO UNCOMPACTED OR LOOSE MATERIAL SHALL REMAIN.
2. EXCAVATE FOR END-BENT TO C, D, E, AND F.
3. INSTALL PILES (OR OTHER FOUNDATION).
4. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
5. CONSTRUCT CONCRETE END-BENT.
6. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.
7. BACKFILL TO C, D, E, F, G, Z, AND J WITH COMPACTED STRUCTURE GRANULAR BACKFILL.

## ① CONSTRUCTION SEQUENCE "B"

1. CONSTRUCT EMBANKMENT TO TEMPORARY SLOPE ④.
2. INSTALL PILES (OR OTHER FOUNDATION).
3. PLACE 2" MORTAR BED OR ANY CLASS CONCRETE.
4. CONSTRUCT CONCRETE END-BENT.
5. INSTALL 4" PERFORATED UNDERDRAIN PIPE AND BACKFILL.
6. BACKFILL TO FINISHED GRADE IN ACCORDANCE WITH SPECIAL PROVISION NO. 69.

## ~ NOTES ~

① CONSTRUCTION SEQUENCE "B" IS A PERMITTED ALTERNATE ONLY WHEN GRANULAR OR ROCK EMBANKMENT IS UTILIZED.

② 2" MORTAR BED OR ANY CLASS CONCRETE.

③ 4" PERFORATED UNDERDRAIN PIPE WRAPPED WITH GEOTEXTILE FABRIC FOR DRAINING THE EXCAVATED TRENCH AND STRUCTURE GRANULAR BACKFILL.

④ ACCEPTABLE ALTERNATES FOR TEMPORARY SLOPE (CONSTRUCTION SEQUENCE "B").

5. SHADED PORTIONS ▨ AND ▨ REPRESENT LIMITS OF NON-ERODIBLE GRANULAR EMBANKMENT IN ACCORDANCE WITH SPECIAL PROVISION NO. 69.

⑥ SLOPES ARE EQUAL.

⑦ "H" = EMBANKMENT HEIGHT MEASURED FROM SUBGRADE ELEVATION AT POINT Ⓩ TO THE LOWEST ELEVATION AT THE TOE OF THE SLOPE.

⑧ LIMITS OF EMBANKMENT CONSTRUCTION (H/2 OR 50' MIN.) REQUIRING 2' MAXIMUM LIFT THICKNESS FOR GRANULAR OR ROCK EMBANKMENTS.

9. SEE CURRENT SPECIAL PROVISION NO. 69 FOR CONSTRUCTION AND MATERIAL REQUIREMENTS, METHOD OF MEASUREMENT AND BASIS OF PAYMENT.

10. STRUCTURE GRANULAR BACKFILL PLACED AS A COMPLETE SEPARATE OPERATION AFTER CONSTRUCTION OF ALL OTHER EMBANKMENT.

11. *NO INDIVIDUAL FRAGMENTS LARGER THAN 4 INCHES IN ANY DIMENSION PERMITTED WITHIN 3'-0" OF THE STRUCTURE.*

⑫ PLACE GEOTEXTILE FABRIC, TYPE IV PRIOR TO PLACING STRUCTURE GRANULAR BACKFILL AND AGGREGATE BASE COURSE.

## LEGEND

- SLOPE PROTECTION (SEE BRIDGE PLANS)
- PILE CORE
- STRUCTURE GRANULAR BACKFILL
- EMBANKMENT

USE WITH SEPIA 009

KENTUCKY DEPARTMENT OF HIGHWAYS

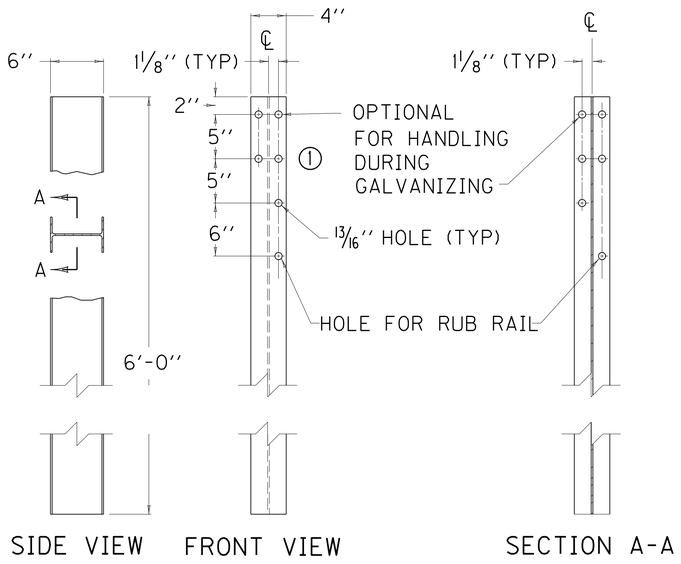
# TREATMENT OF EMBANKMENTS AT END-BENTS - DETAILS

SUBMITTED William S Gullett 1-30-17 DATE

010

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R05100DS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R05100DS
MicroStation v8.11.7.443

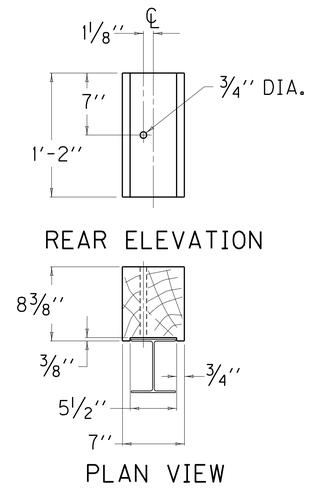
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R52 |




SIDE VIEW FRONT VIEW SECTION A-A

~ W6 X 9.0 STEEL GUARDRAIL POST ~

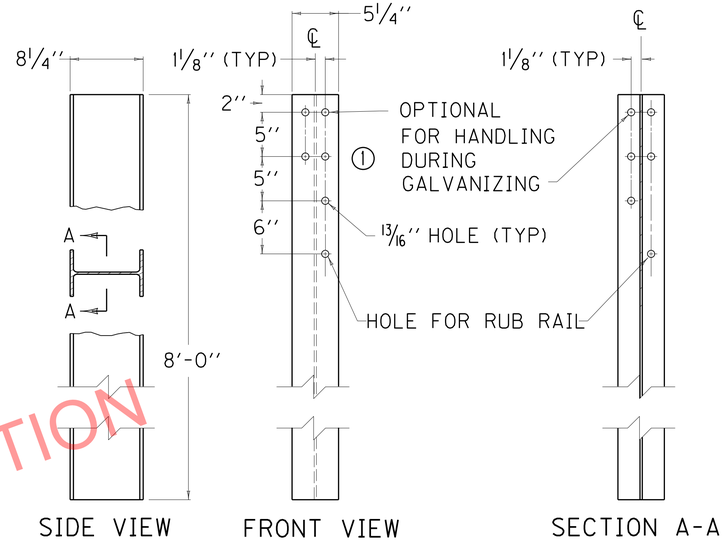
(USED WITH C6 X 8.2 RUB RAIL)




OFFSET BLOCK TYPE 6

(TIMBER OR APPROVED COMPOSITE)

(FOR USE WITH W8 X 21 STEEL POST ONLY)



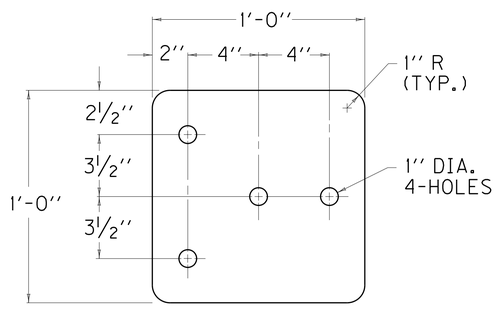

SIDE VIEW FRONT VIEW SECTION A-A

~ W8 X 21 STEEL GUARDRAIL POST ~

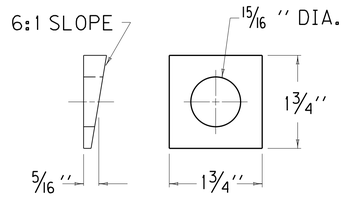
PRELIMINARY NOT FOR CONSTRUCTION

~ NOTES ~

1 THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.




5/8'' STEEL PLATE ''A''




BEVELED WASHER

USE WITH CUR. STD. DWGS.
RBC-002, RBC-005, RBC-006

KENTUCKY
DEPARTMENT OF HIGHWAYS

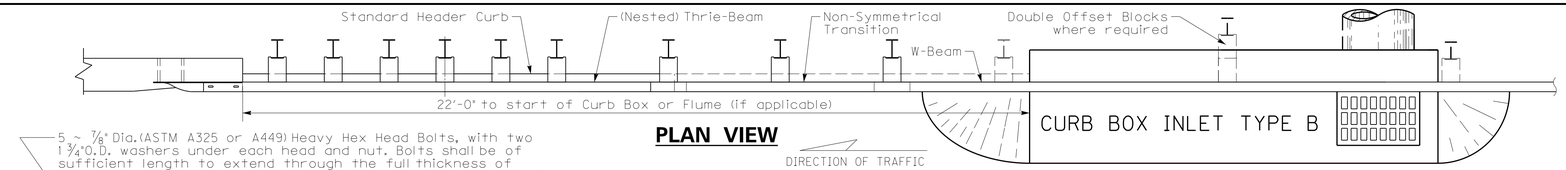
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A AND A-1 COMPONENTS

SUBMITTED William S. Hulick 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

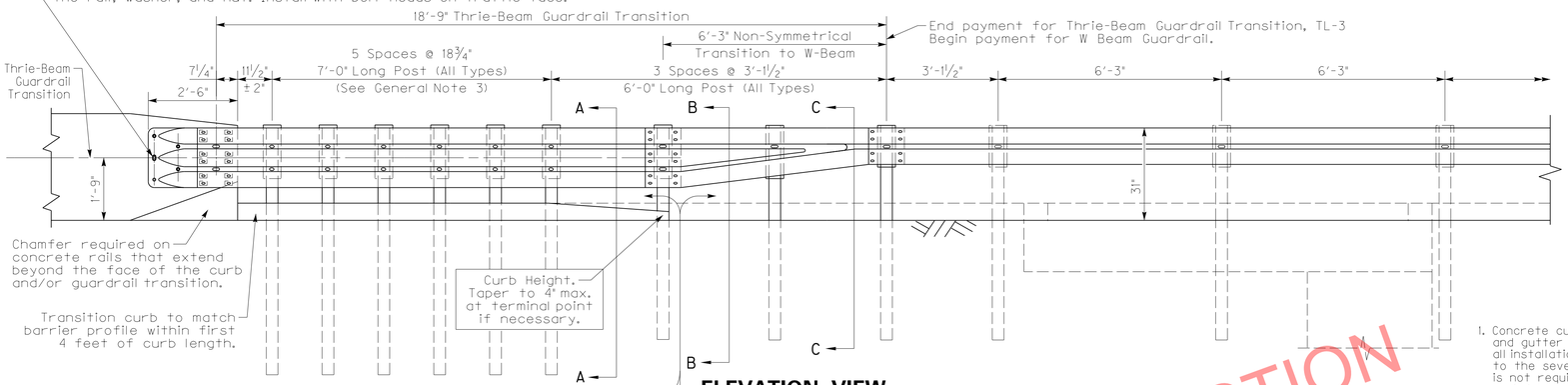
013

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R05200DS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R05200DS
MicroStation v8.11.7.443

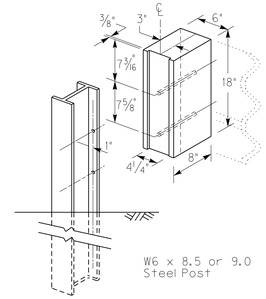
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R53 |



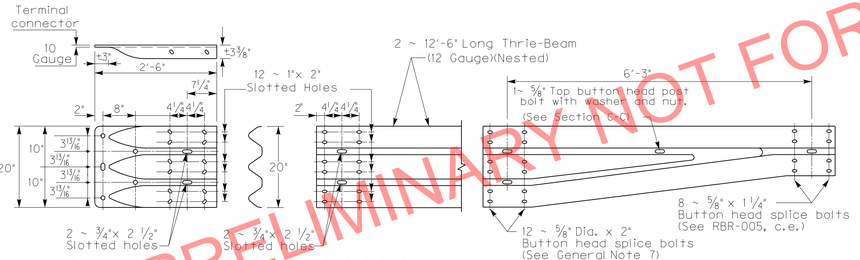

## PLAN VIEW




## ELEVATION VIEW

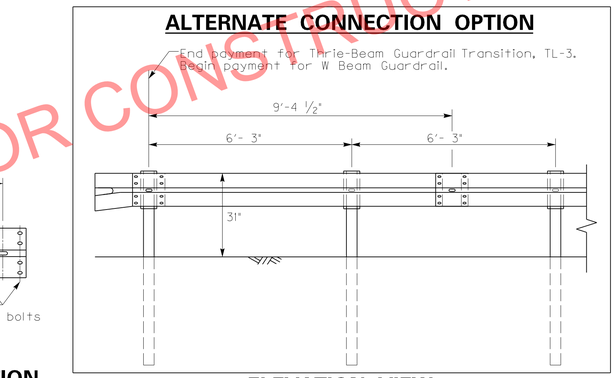



## STEEL POST & BLOCK
(Showing Thrie-Beam Block)

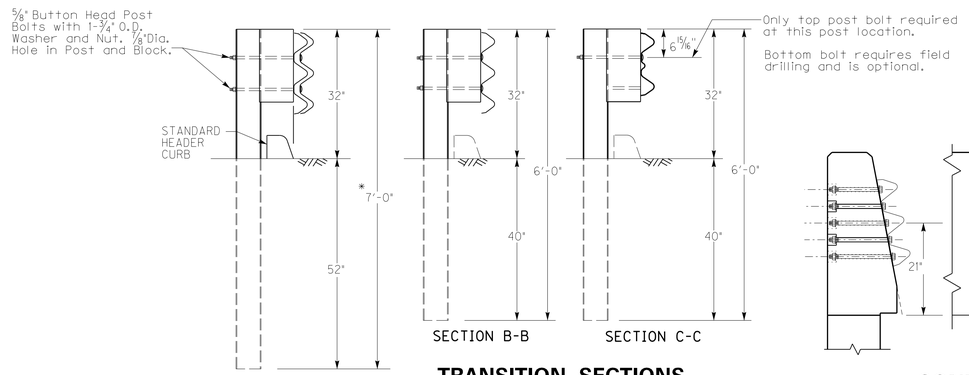



## THRIE-BEAM TERMINAL CONNECTION
(See General Notes 6 & 7 for required hardware)

## NON-SYMMETRICAL TRANSITION TO W-BEAM (10 Gauge)




## ELEVATION VIEW




## SECTION A-A

* Note: (All post types) (See General Note 3)

## TRANSITION SECTIONS

## CONNECTION TO CONCRETE BRIDGE RAIL AND TRAFFIC BARRIERS

(12) Galvanized rectangular washers (See Std. Dwg. RBR-005, c.e.) are required under the recessed nut at the terminal connector splice to nested thrie-beam. (See General Notes 6 & 7).

PRELIMINARY NOT FOR CONSTRUCTION

## GENERAL NOTES

1. Concrete curb shall be standard header curb or standard header curb and gutter as shown on Std. Dwg. RPM-100, c.e. and is required on all installations. At a minimum, concrete curb shall be continuous to the seventh post (first 6'-0" long post). Where a curb box or flume is not required, end curb at first 6'-0" long post as detailed. Where a curb box or flume is required extend the curb 22'-0" minimum to the curb box or flume. All costs are incidental to the lump sum price bid for Thrie-Beam Guardrail Transition, TL-3.

2. Use steel posts as shown unless indicated otherwise in the plans.

3. The post length shall be marked on all 7'- 0" long posts by the Manufacturer. The mark shall be located within the top 1 ft. region of the post, at least 5/8" in height, and visible after installation. Steel posts shall be marked with a stencil before galvanizing.

4. Rail element shall meet the requirements of AASHTO M180 except as modified on the plans. The thrie-beam terminal connector and the thrie-beam transition to w-beam shall be of the same material, but shall not be less than 10 gauge.

   Contractor shall verify that the locations of bolt holes match those in the thrie-beam terminal connector prior to ordering materials.

5. Unless otherwise shown in the plans, transitions shall be placed with the block face in front of or directly above the curb face.

6. Galvanized washers used with the 5/8" dia. post bolts shall be 1 3/4" O.D. washers. The (12) rectangular plate washers are required at the terminal connector splice.

7. Button head "post" bolts (ASTM A307) shall be of sufficient length to extend through the full thickness of the nut (ASTM A563) and washer and not more than 1" beyond it. Button head "splice" bolts (ASTM A307) 5/8" dia. x 2" (at triple rail splices) with 5/8" double recessed nuts.

8. Bolts, nuts, and washers shall be galvanized in accordance with AASHTO M232. Hardware shall be incidental to the bid item.

9. If solid rock is encountered, see the standard specifications for the proper installation guidance.

10. Posts shall not be set in concrete.

11. This railing has been successfully evaluated by full scale crash test to meet MASH TL-3 criteria. This railing transition is to be used when speeds are over 45 mph.

12. Method of measurement and basis of payment.

    A. Thrie-Beam Guardrail Transition, TL-3 shall be paid at the contract unit price Each and includes the Thrie-beam terminal connection, nested Thrie-Beam elements, non symmetrical transition, posts, concrete standard header curb or standard header curb and gutter, hardware and all other incidentals necessary to complete the installation. This transition must tie into W Beam Guardrail, which is not included in this transition bid item.

    B. Plastic pipe and cost of forming holes shall be included in the cost for the bridge railing.

KENTUCKY DEPARTMENT OF HIGHWAYS

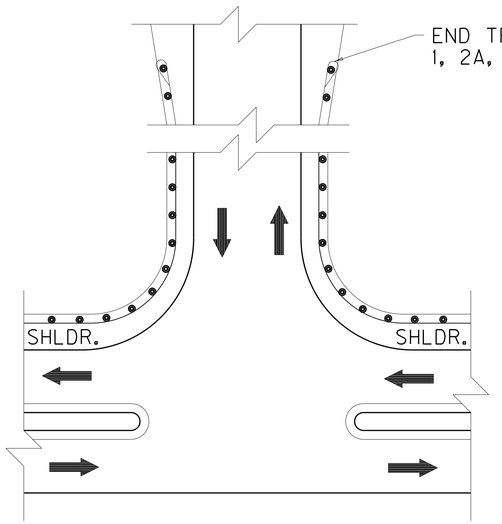
# THRIE-BEAM GUARDRAIL TRANSITION (TL-3)

SUBMITTED _____ 4-30-19
DIRECTOR DIVISION OF STRUCTURAL DESIGN — DATE

057

FILE NAME: C:\USERS\MWMSATT\DESKTOP\SHEETR05300DS.DGN
USER: mwmsatt
DATE PLOTTED: January 1, 0001
E-SHEET NAME: R05300DS
MicroStation v8.11.7.443

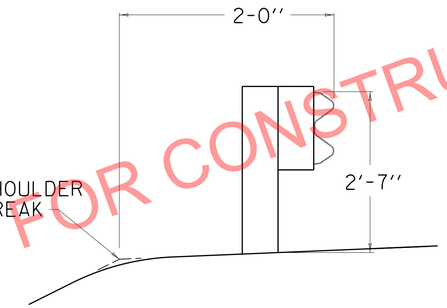
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R54 |



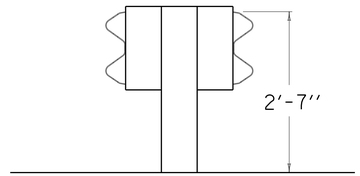

APPROACH ROADS

## ~ NOTES ~

1. FOR END TREATMENT TYPE 4A USE CUR. STD. DWG. RBR-035 FOR OFFSETS.
2. THE MINIMUM LENGTH OF GUARDRAIL, INCLUDING THE END TREATMENT, PRECEDING A FIXED OBJECT IS 200 FEET: ( LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT).

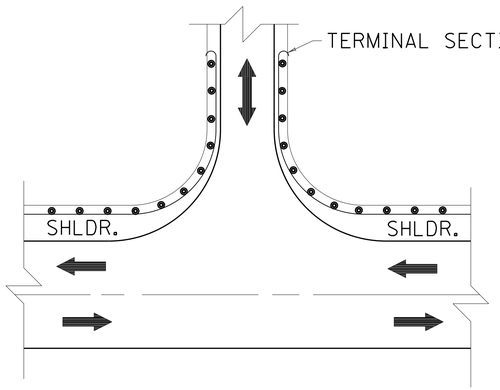



NORMAL GUARDRAIL INSTALLATION

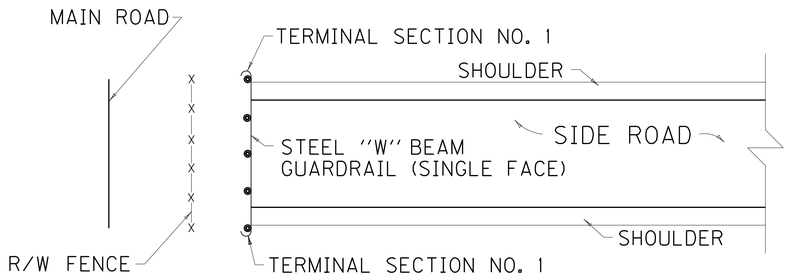



TYPICAL DOUBLE FACE
GUARDRAIL INSTALLATION

PRELIMINARY NOT FOR CONSTRUCTION




ENTRANCES




GUARDRAIL USED AS A BARRICADE

USE WITH CUR. STD. DWG.
RBI-002, RBR-035

KENTUCKY
DEPARTMENT OF HIGHWAYS

TYPICAL GUARDRAIL

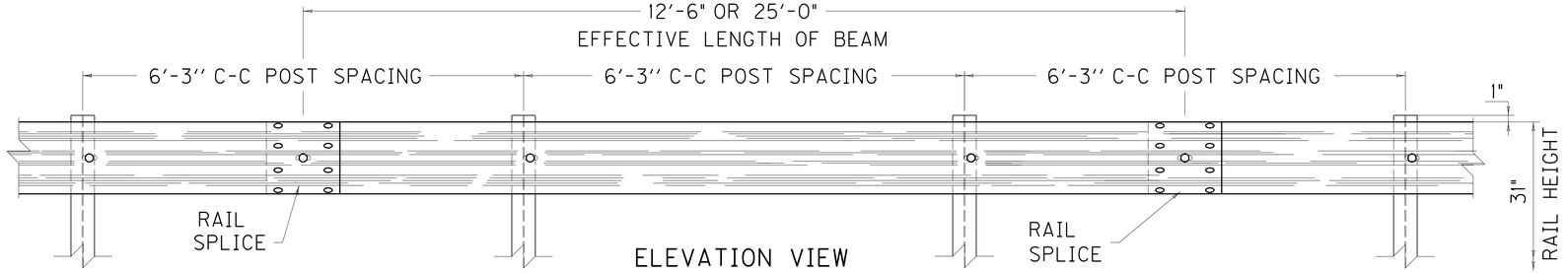
INSTALLATIONS

SUBMITTED William S Stallard 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

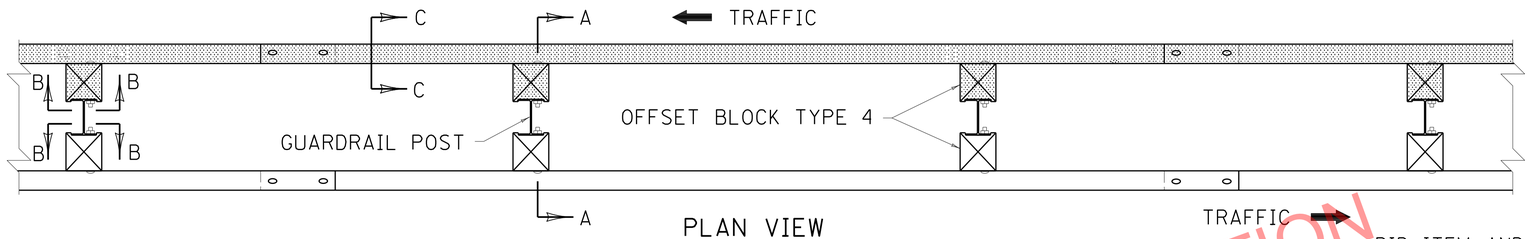
024

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R05400DS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R05400DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R55 |



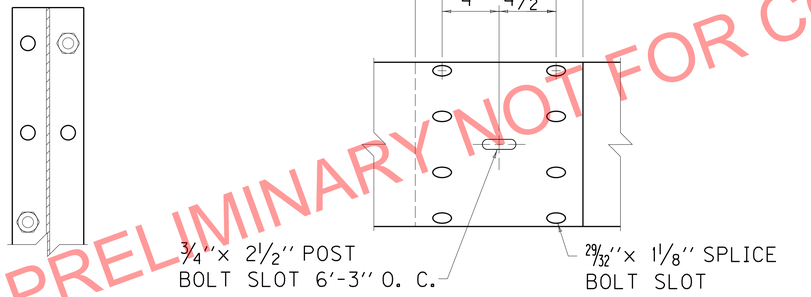

ELEVATION VIEW




PLAN VIEW

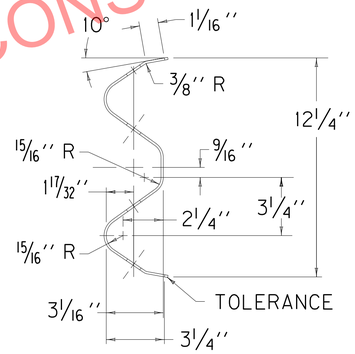
(DOUBLE FACE RAIL OR SINGLE FACE RAIL)

TRAFFIC



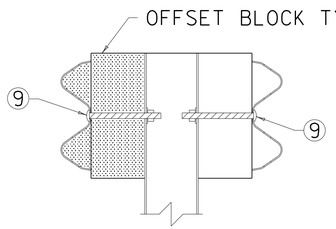

SECTION B-B

RAIL SPLICE ⑤



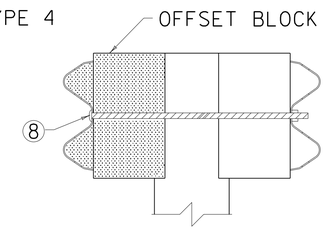

SECTION C-C

(RAIL CORRUGATED SHEET STEEL BEAM)



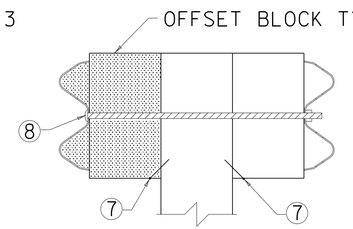

SECTION A-A

DOUBLE FACE RAIL WITH STEEL POST ( W6x9 ) ( TIMBER OR APPROVED COMPOSITE OFFSET BLOCK )




SECTION A-A

DOUBLE FACE RAIL WITH ROUND TIMBER POST




SECTION A-A

DOUBLE FACE RAIL WITH TIMBER POST

PRELIMINARY NOT FOR CONSTRUCTION

## ~ NOTES ~

BID ITEM AND UNIT TO BID
GUARDRAIL-STEEL W BEAM-S FACE LF
OR
GUARDRAIL-STEEL W BEAM-D FACE LF

1. DIMENSIONAL TOLERANCES NOT SHOWN OR IMPLIED ARE INTENDED TO BE THOSE CONSISTENT WITH THE PROPER FUNCTIONING OF THE PART, INCLUDING ITS APPEARANCE AND ACCEPTED MANUFACTURING PRACTICES.
2. THE RAIL ELEMENT SHALL COMPLY WITH AASHTO M-180 -CLASS A, TYPE II.
3. ALL LAPS SHALL BE PLACED IN THE DIRECTION OF TRAFFIC FLOW.

④ TOLERANCE + 1¼", -¼"

⑤ 8-⅝" x 1¼" LONG BUTTON HEAD BOLTS AND HEX HEAD RECESS NUTS REQUIRED FOR EACH RAIL SPLICE.

⑥ LENGTH EQUALS POST AND BLOCK WIDTH PLUS 2" FOR BOLT OR 2¼" FOR THREADED ROD.

⑦ GALVANIZED STEEL 10d COMMON COATED NAIL (DRIVE NAIL AT THE TOP OR BOTTOM CENTER OF BLOCK AND POST AFTER BOLT IS INSTALLED).

⑧ ⅝" x ⑥ STEEL THREADED ROD AND TWO (2) HEX HEAD NUTS OR ⅝" x ⑥ BUTTON OR HEX HEAD BOLT AND HEX HEAD NUT.

⑨ ⅝" x 8" BUTTON HEAD BOLT, HEX HEAD RECESS NUT AND ONE ⅝" ROUND WASHER (TYP.). BOLT SHALL HAVE A MINIMUM THREAD LENGTH OF 2".

▨ REQUIRED FOR DOUBLE RAIL

10. BOTH 12'-6" AND 25' LENGTHS OF "W" BEAM GUARDRAIL SECTIONS WILL BE PERMITTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

KENTUCKY DEPARTMENT OF HIGHWAYS

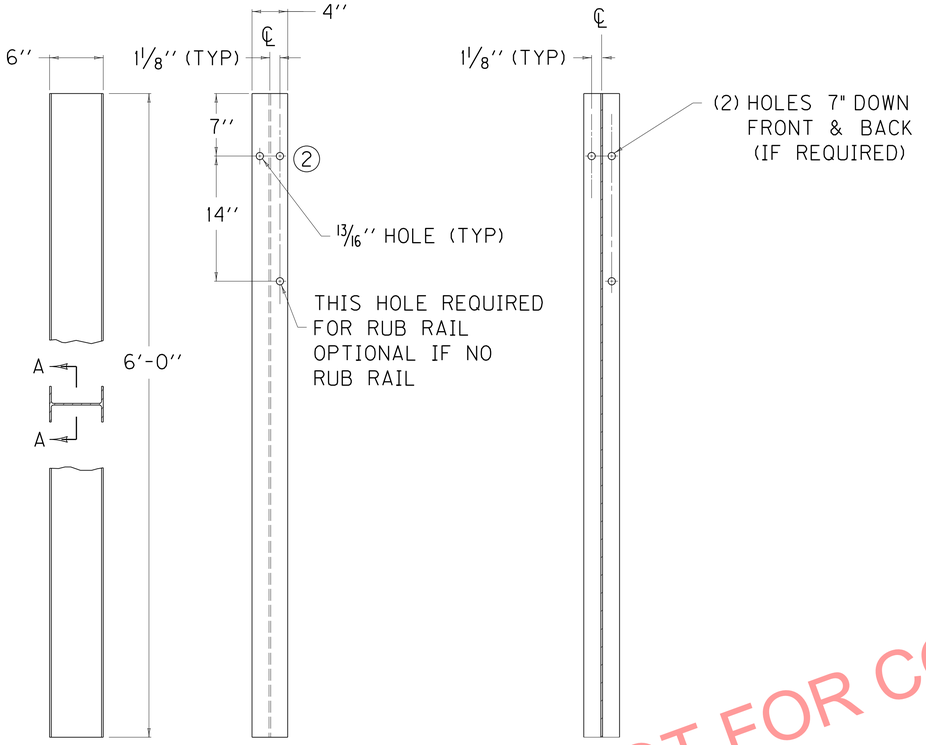
# STEEL BEAM GUARDRAIL ("W" BEAM)

SUBMITTED William S. Haskins 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

027

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R055000S.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R055000S
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R56 |




~ W6 X 9.0 STEEL POST ① ~

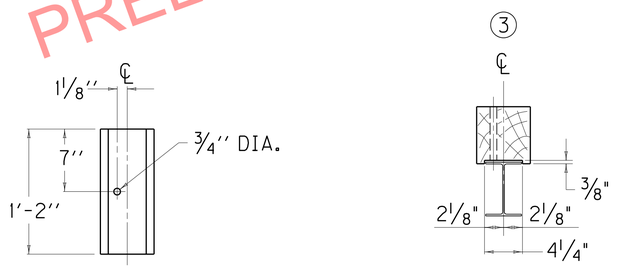
~ NOTES ~

① W6 X 8.5 IS AN ACCEPTABLE ALTERNATE.

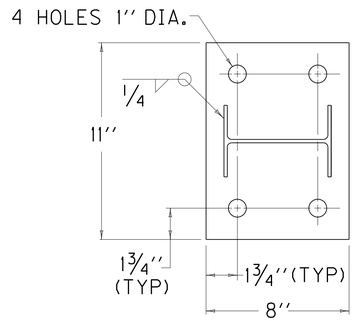
② THESE HOLES ARE REQUIRED FOR ATTACHING RAIL.

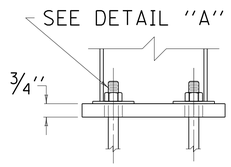
③ TIMBER OR COMPOSITE BLOCKOUTS MAY BE USED WITH STEEL POST.

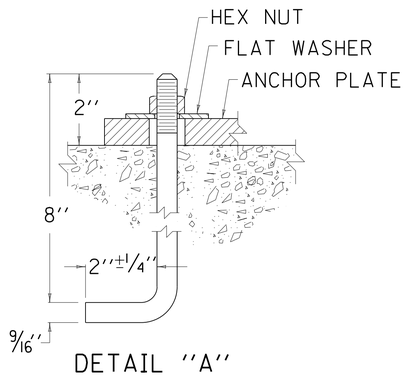
PRELIMINARY NOT FOR CONSTRUCTION




OFFSET BLOCK TYPE 4
6" X 8" (Nominal Size)
(TIMBER OR APPROVED COMPOSITE)
(FOR USE WITH STEEL POST ONLY)




KENTUCKY DEPARTMENT OF HIGHWAYS

STEEL

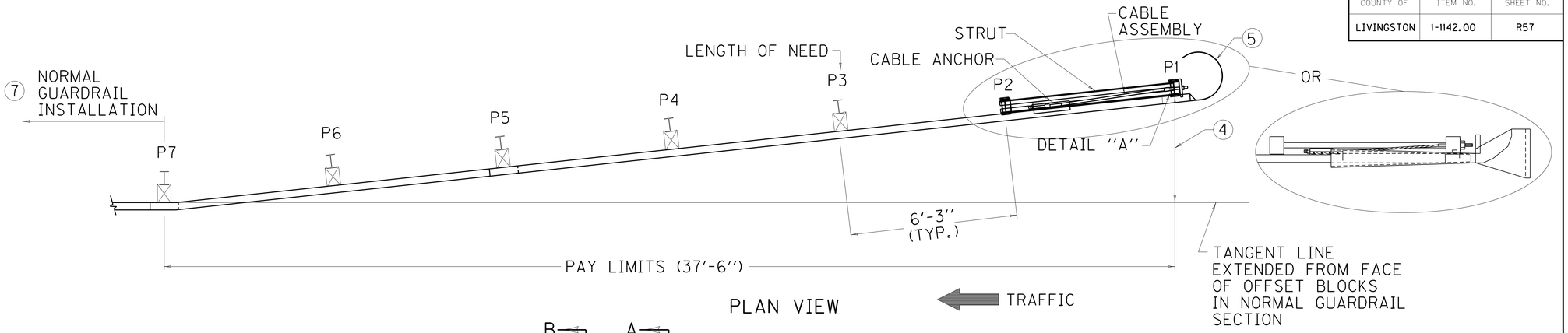
GUARDRAIL POSTS

SUBMITTED William S Stallard — DIRECTOR DIVISION OF DESIGN — 3-06-18 DATE

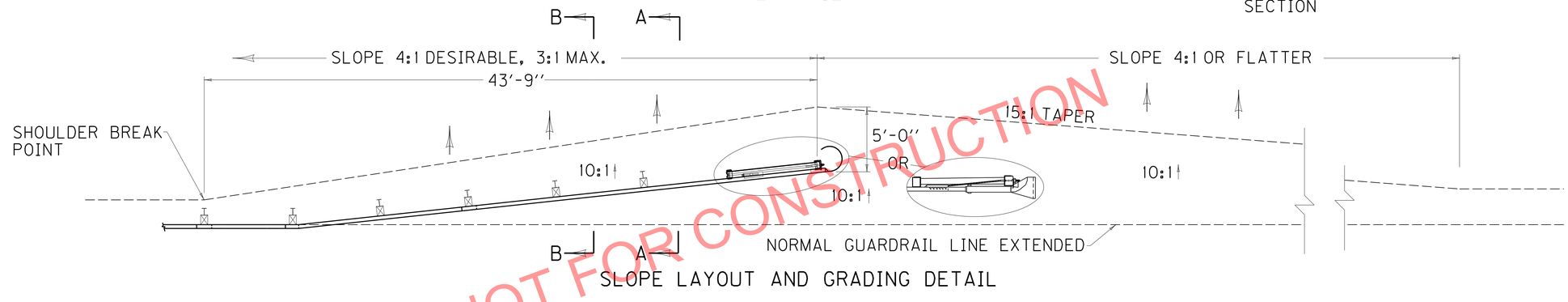
028

MicroStation v8.11.7.443
E-SHEET NAME: R056000S
USER: mwmsatt
DATE PLOTTED: January 22, 2020
FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R056000S.DGN

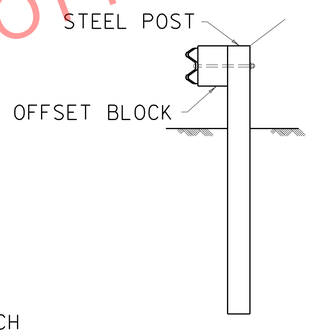
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R57 |



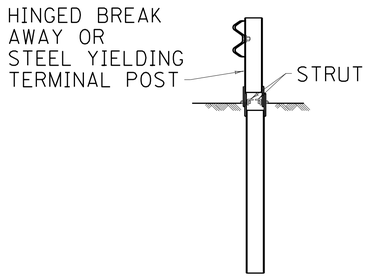

PLAN VIEW



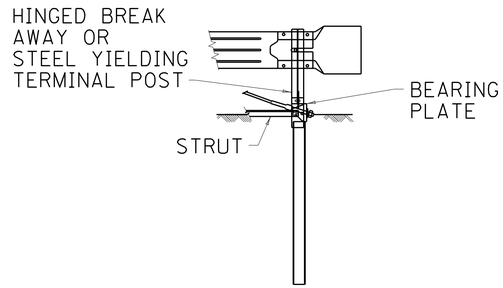

SLOPE LAYOUT AND GRADING DETAIL




SECTION B-B
( POSTS P3 THRU P7)




SECTION A-A
( POST P2)




DETAIL ''A''
( ENLARGED VIEW P1)

PRELIMINARY NOT FOR CONSTRUCTION

~ NOTES ~

| BID ITEMS AND UNIT TO BID: | |
|---|---|
| GUARDRAIL END TREATMENT TYPE 4A | EACH |
| ROADWAY OR BORROW EXCAVATION OR EMBANKMENT-IN-PLACE | CUYD |
| OBJECT MARKER TY 3 | EACH |

1. INTENDED USE: AREAS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL.
2. PERMISSIBLE ALTERNATES FOR GUARDRAIL END TREATMENT TYPE 4A ARE PATENTED ITEMS: SRTM10 MANUFACTURED BY TRINITY INDUSTRIES OF DALLAS, TEXAS OR MFLEAT MANUFACTURED BY ROAD SYSTEMS INC. OF BIG SPRINGS, TEXAS.
3. THE MANUFACTURER SHALL FURNISH TWO (2) SETS OF SHOP PLANS TO THE CONTRACTOR WITH EACH INSTALLATION.
4. SYSTEM OFFSET OF 4'-0'' SHALL BE MEASURED FROM FACE OF OFFSET BLOCK AT NORMAL GUARDRAIL SECTION TO FACE OF POST AT P1.
5. OBJECT MARKER TYPE 3 (SEE CURRENT MUTCD MANUAL FOR DETAILS).
6. THE COMPLETED INSTALLATION SHALL MEET ALL APPLICABLE REQUIREMENTS OF THE MANUFACTURER. (SEE SHOP DRAWINGS)
7. FOR MAINTENANCE AND REPAIR PROJECTS, USE "GUARDRAIL SYSTEM TRANSITION "SEPIA 33", TO TRANSITION BACK TO 27" OR 29" GUARDRAIL HEIGHT, IF ONLY THE TERMINAL IS PROPOSED TO BE REPLACED.

KENTUCKY
DEPARTMENT OF HIGHWAYS

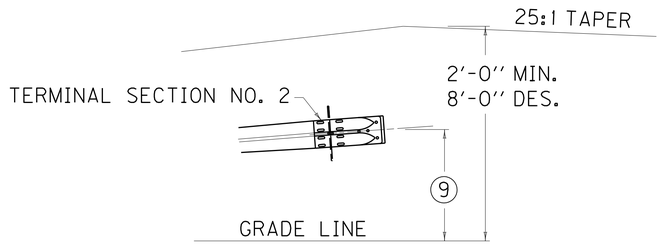
GUARDRAIL
END TREATMENT
TYPE 4A

SUBMITTED William S. Hulick 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

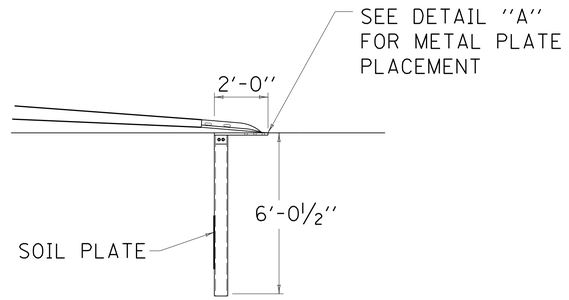
030

MicroStation v8.11.7.443
E-SHEET NAME: R057000S
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R057000S.DGN

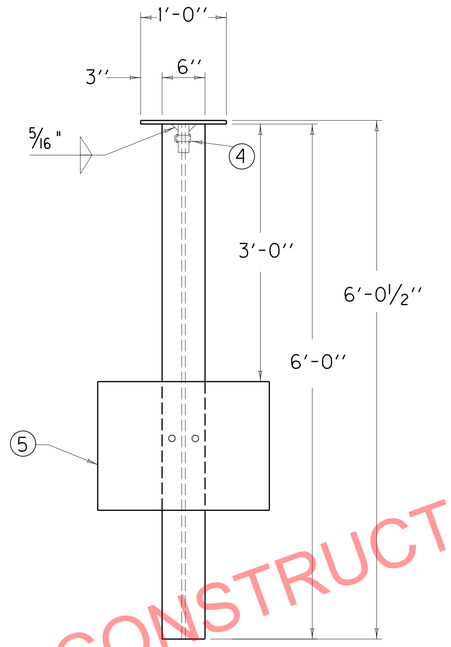
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R58 |



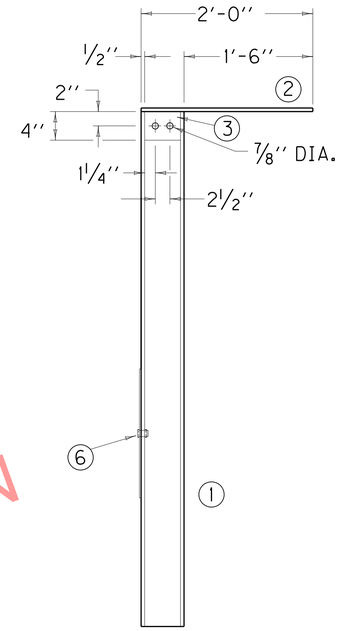

PLAN VIEW




ELEVATION VIEW




SIDE VIEW



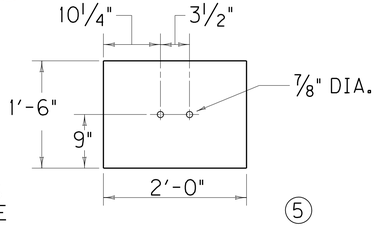

FRONT VIEW

PRELIMINARY NOT FOR CONSTRUCTION

## ~ NOTES ~

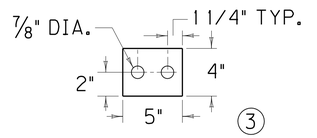
BID ITEM AND UNIT TO BID
GUARDRAIL END TREATMENT TYPE 7 EACH

7. GUARDRAIL END TREATMENT TYPE 7 SHALL BE TO THE PAY LIMITS AS DETAILED AND THE CONTRACT UNIT PRICE EACH SHALL INCLUDE TERMINAL SECTION NO. 2, STEEL ''W'' BEAM GUARDRAIL (SINGLE FACE), GUARDRAIL POSTS M1, STEEL ANCHOR PLATE AND POST, SOIL PLATE, TAB PLATES, EXCAVATION, LABOR, HARDWARE AND ALL INCIDENTALS NECESSARY FOR THE INSTALLATION.
8. SPLICE BOLTS AT TERMINAL SECTION NO. 2 SHALL BE LOOSELY TIGHTENED AND CENTERED TO ALLOW MAXIMUM MOVEMENT DUE TO EXPANSION. ONE (1) 11/16 '' ROUND WASHER AND (1) RECTANGULAR PLATE WASHER REQUIRED FOR EACH SPLICE BOLT, AT TERMINAL SECTION NO. 2.
9. THE DESIREABLE OFFSET DISTANCE FROM THE NORMAL GUARDRAIL LINE SHALL BE 4'-0". THE MINIMUM OFFSET DISTANCE FROM THE NORMAL GUARDRAIL LINE IS ZERO FEET.
10. SEE CUR. STD. DWG. RBR-001, RBR-005, RBR-010 AND RBR-015 FOR APPLICABLE DETAILS AND SPECIFICATIONS.
11. LEAVE CLEARANCE IN BETWEEN TAB PLATES FOR GALVANIZED W6 x 15 W-BEAM POST.

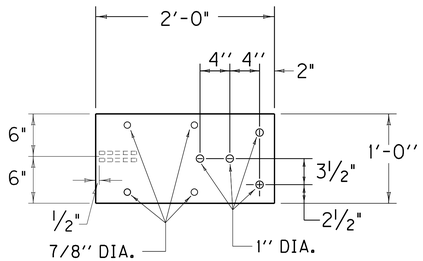



SOIL PLATE

DETAIL ''A''




TAB PLATE




ANCHOR PLATE
ASSMEBLY ②

| BILL OF MATERIAL | | |
|---|---|---|
| NO. | QTY. | DESCRIPTION |
| ① | 1 | W6x15 W-BEAM |
| ② | 1 | 2' x 1' x ½" ANCHOR PLATE ASSEMBLY |
| ③ | 2 | 4" x 5" x ½" TAB PLATE |
| ④ | 2 | ¾" DIA. x 2½" HEAVY HEX HD BOLT w/NUT & (2) FLAT WASHERS |
| ⑤ | 1 | 2' x 18" x ¼" SOIL PLATE |
| ⑥ | 2 | ¾" DIA. x 2" HEAVY HEX HD BOLT w/NUT & (2) FLAT WASHERS |

USE WITH CUR. STD. DWG.
RBR-001, RBR-005, RBR-010
RBR-015, RBR-050

KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL END
TREATMENT TYPE 7
ALTERNATE ANCHOR

SUBMITTED William S. Stallick 11-17-17
DIRECTOR DIVISION OF DESIGN DATE

031

MicroStation v8.11.7.443
E-SHEET NAME: R058000S
USER: mwmsatt
DATE PLOTTED: January 22, 2020
FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R058000S.DGN

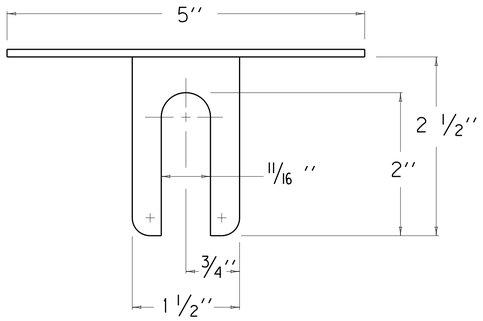
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R59 |

# ~ NOTES ~

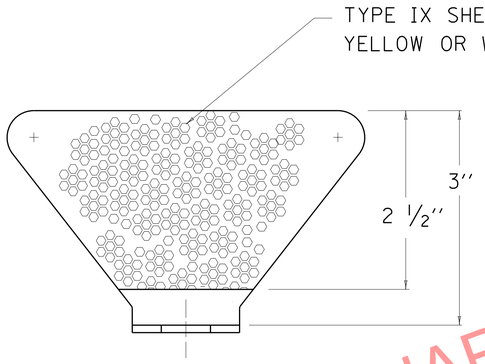
BID ITEMS AND UNIT TO BID

| | |
|---|---|
| DELINEATOR FOR GUARDRAIL B/W | EACH |
| DELINEATOR FOR GUARDRAIL M/W | EACH |
| DELINEATOR FOR GUARDRAIL M/Y | EACH |

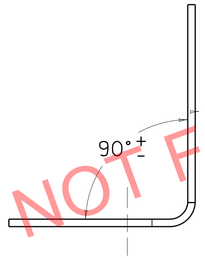
1. DELINEATORS SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR ONE COMPLETE INSTALLATION.
2. DELINEATOR SHAPE AND DIMENSIONS ARE SHOWN FOR ILLUSTRATION PURPOSES ONLY. TYPES OF DELINEATORS PERMITTED SHALL BE FROM THE LIST OF APPROVED MATERIALS.
3. GUARDRAIL DELINEATORS SHALL BE REQUIRED ON ALL GUARDRAIL.
4. DELINEATORS SHALL NOT BE INSTALLED WITHIN THE PAY LIMITS OF THE END TREATMENT.
5. DELINEATORS SHALL BE MANUFACTURED FROM 12 GA. GALVANIZED STEEL.
6. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO MANUFACTURER'S TOLERANCES.
7. WHEN CONCRETE BARRIERS EXTEND ACROSS BRIDGE STRUCTURES IN LIEU OF STEEL BEAM GUARDRAIL, DELINEATORS SHALL BE INSTALLED AT SAME VERTICAL ALIGNMENT AS ON THE GUARDRAIL, AND DELINEATORS SHALL COMPLY WITH CURRENT STANDARD DRAWING RBM-020.
8. DELINEATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.




PLAN VIEW

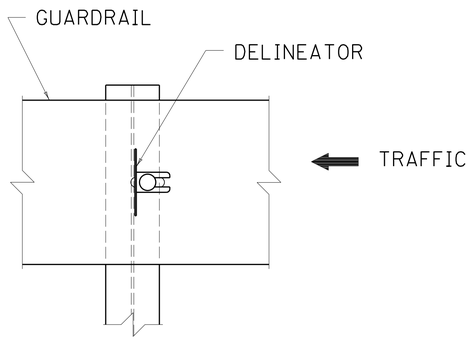



FRONT VIEW

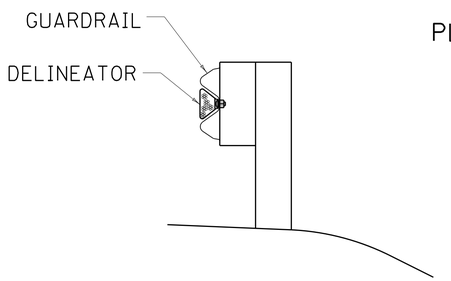



SIDE VIEW

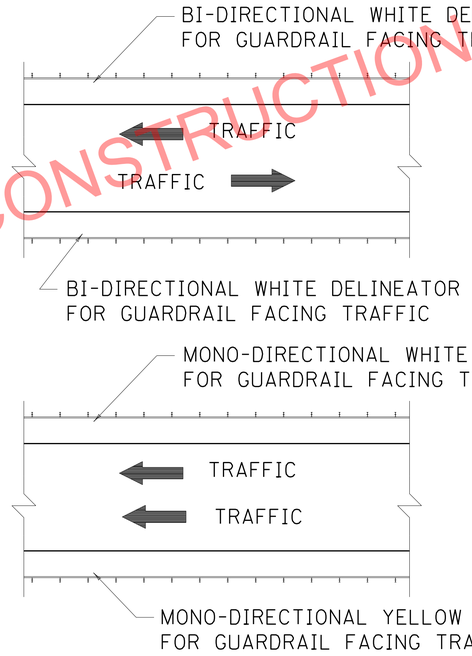
DIMENSIONS SHOWN ARE FOR ONE VERSION OF A WEB-MOUNTED GUARDRAIL DELINEATOR. DELINEATORS WITH ALTERNATE DIMENSIONS MAY BE CONSIDERED FOR INCLUSION ON THE APPROVED PRODUCTS LIST.



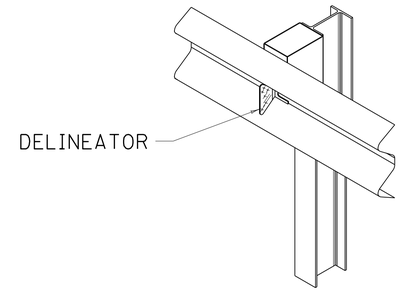

FRONT VIEW




SIDE VIEW




PLACEMENT OF DELINEATORS FOR GUARDRAIL




ISOMETRIC VIEW

USE WITH CUR. STD. DWGS. RBM-020, RBR-060

| APPROXIMATE DELINEATOR SPACING | |
|---|---|
| TANGENT | 100' |
| CURVE | 50' |

SPACING SHOULD BE ADJUSTED IN CURVES SO THAT SEVERAL DELINEATORS ARE ALWAYS SIMULTANEOUSLY VISIBLE TO THE ROAD USER.

KENTUCKY DEPARTMENT OF HIGHWAYS

DELINEATORS FOR GUARDRAIL

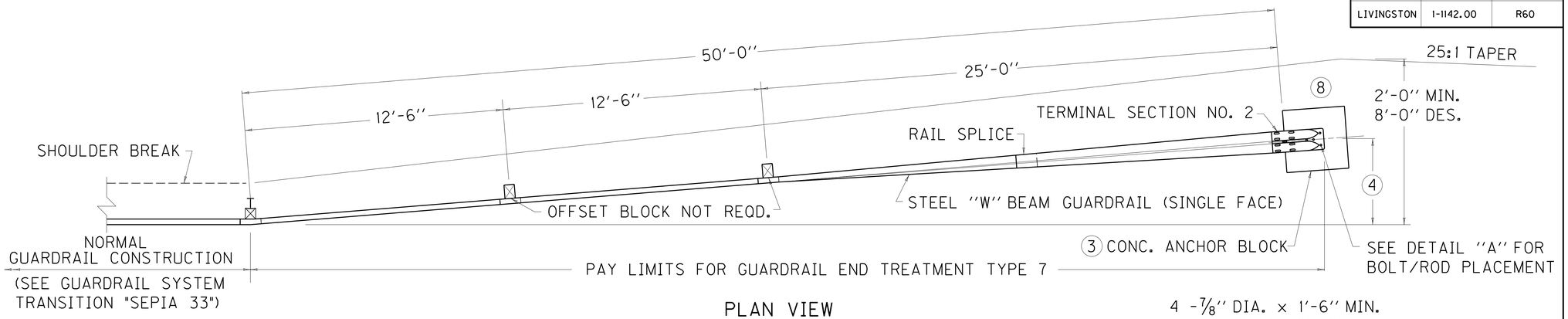
SUBMITTED William S. Hallick 11-17-17
DIRECTOR DIVISION OF DESIGN — DATE

032

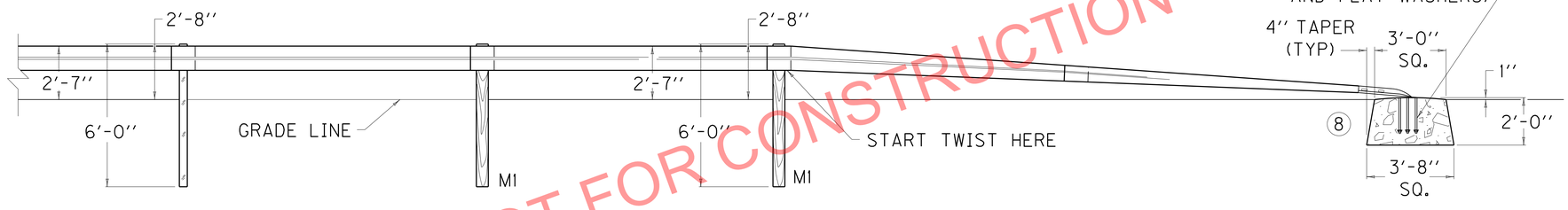
PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R059000S.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R059000S
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R60 |




PLAN VIEW




ELEVATION VIEW

PRELIMINARY NOT FOR CONSTRUCTION

## ~ NOTES ~

BID ITEM AND UNIT TO BID
GUARDRAIL END TREATMENT TYPE 7 — EACH

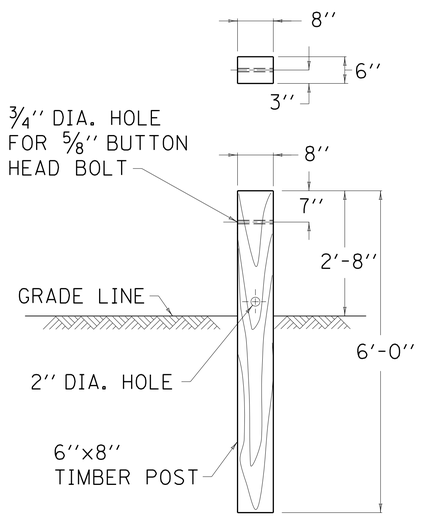
1. GUARDRAIL END TREATMENT TYPE 7 SHALL BE TO THE PAY LIMITS AS DETAILED AND THE CONTRACT UNIT PRICE EACH SHALL INCLUDE TERMINAL SECTION NO. 2, STEEL ''W'' BEAM GUARDRAIL (SINGLE FACE), GUARDRAIL POSTS M1, CONCRETE ANCHOR BLOCK, EXCAVATION, LABOR, HARDWARE AND INCIDENTALS NECESSARY FOR THE INSTALLATION.
2. SPLICE BOLTS AT TERMINAL SECTION NO. 2 SHALL BE LOOSELY TIGHTENED AND CENTERED TO ALLOW MAXIMUM MOVEMENT DUE TO EXPANSION. ONE (1) 11/16'' ROUND WASHER AND ONE (1) RECTANGULAR PLATE WASHER REQUIRED FOR EACH SPLICE BOLT, AT TERMINAL SECTION NO. 2.

(3) THE CONCRETE ANCHOR BLOCK MAY BE PRECAST OR CAST-IN-PLACE. WHEN THE CONCRETE ANCHOR BLOCK IS CAST-IN-PLACE FORMING OF THE SIDES SHALL BE REQUIRED.

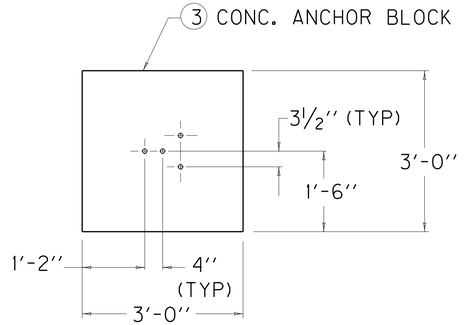
(4) THE DESIREABLE OFFSET DISTANCE FROM THE NORMAL GUARDRAIL LINE SHALL BE 4'-0". THE MINIMUM OFFSET DISTANCE FROM THE NORMAL GUARDRAIL LINE IS ZERO FEET.

5. SEE CUR. STD. DWG. RBR-001, RBR-005, RBR-010, AND RBR-015 FOR APPLICABLE DETAILS AND SPECIFICATIONS.
6. APPROX. QUANTITY FOR ANCHOR BLOCK: 0.83 CU. YD. CLASS ''A'' CONCRETE FOR TYPE 7 INSTALLATON.
7. THIS GUARDRAIL END TREATMENT IS NOT FOR USE ON APPROACH END ON HIGH SPEED NHS ROUTES ABOVE 35 MPH.

(8) SEE CUR. STD. DWG. RBR-051 FOR ALTERNATE END ANCHOR.




M1 POST DETAIL




DETAIL ''A''

USE WITH CUR. STD. DWG.
RBR-001, RBR-005, RBR-010
RBR-015, RBR-051

KENTUCKY
DEPARTMENT OF HIGHWAYS

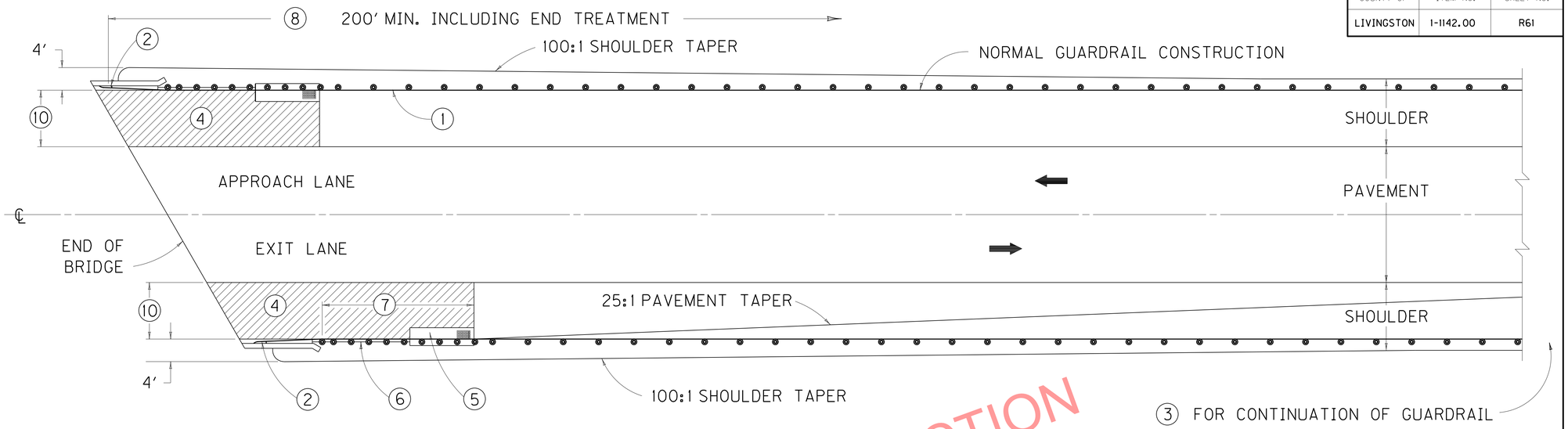
GUARDRAIL
END TREATMENT
TYPE 7

SUBMITTED William S. Hallick — DIRECTOR DIVISION OF DESIGN — 11-17-17 DATE

034

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R06000DS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R06000DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R61 |




## ~ NOTES ~

⑦ VARIABLE LENGTH, SEE APPLICABLE ''BRIDGE END CONNECTOR'' DRAWINGS.

⑧ SHOWN FOR FILL CONDITION. LENGTH MAY BE REDUCED SHOULD FIELD CONDITIONS WARRANT.

9. TO TERMINATE GUARDRAIL INSTALLATION:
   A. ALL FILLS; ALSO SOLID ROCK CUTS WITH ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL, USE END TREATMENT TYPE 1 OR 4A.
   B. SOLID ROCK CUTS WITHOUT ADEQUATE VEHICLE RECOVERY ZONE BEHIND GUARDRAIL, USE END TREATMENT TYPE 2A.
   C. EARTH CUTS AND SOFT ROCK CUTS, USE END TREATMENT TYPE 3.

⑩ USE ISLAND CURB AND GUTTER AND SAME PAVEMENT AS SHOWN ON MAINLINE DESIGN, (SEE DETAIL A).

11. NO ANGLES PERMITTED IN NORMAL GUARDRAIL ALIGNMENT.

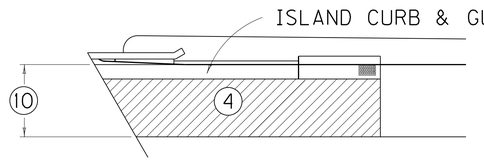
12. THIS ILLUSTRATION IS FOR TWO-WAY TRAFFIC FLOW. FOR ONE-WAY TRAFFIC FLOW, MAKE THE FOLLOWING ALTERATIONS:

APPROACH END OF STRUCTURE-
   A. NO PAVEMENT TAPER REQUIRED
   B. ALIGN FACE OF GUARDRAIL WITH STRUCTURE GUTTERLINE

EXIT END OF STRUCTURE-
   A. PAVEMENT TAPER REQUIRED FOR BOTH OUTSIDE LANES
   B. FOR GUARDRAIL ALIGNMENT SEE BRIDGE END CONNECTOR DRAWINGS

PRELIMINARY NOT FOR CONSTRUCTION

| ITEM | STD. DWG. NO. (CURRENT EDITION) |
|---|---|
| ① STEEL W BEAM GUARDRAIL - S FACE | RBR-001 |
| ② BRIDGE END CONNECTORS | RBC-SERIES |
| ③ END TREATMENT TYPE 1, 2A, 3 OR 4A (NOTE 9) | RBR-SERIES |
| DRAINAGE ITEMS (WHEN REQUIRED) | |
| ④ BRIDGE END DRAINAGE AREA (NOTE 10) | |
| ⑤ CURB BOX INLET TYPE B | RDB-SERIES |
| ⑥ ISL. HEADER CURB OR ISL. CURB AND GUTTER | RPM-SERIES |




DETAIL A

USE WITH CUR. STD. DWGS.
RBC-005, RBC-006, RBR-001

KENTUCKY
DEPARTMENT OF HIGHWAYS

GUARDRAIL AND
BRIDGE END DRAINAGE
FOR SINGLE STRUCTURES

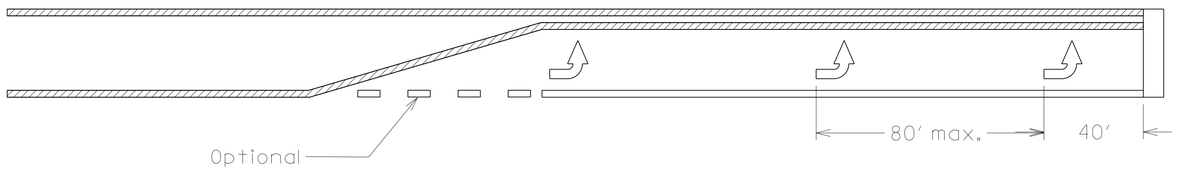
SUBMITTED William S. Haddock 02-5-18
DIRECTOR DIVISION OF DESIGN DATE

037

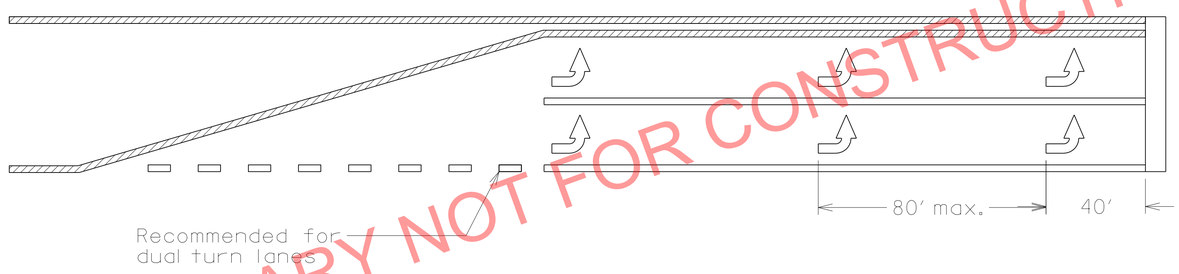
MicroStation v8.11.7.443
E-SHEET NAME: R061000S
USER: mwinsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWINSATT\DESKTOP\ESHEET\R061000DS.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R62 |

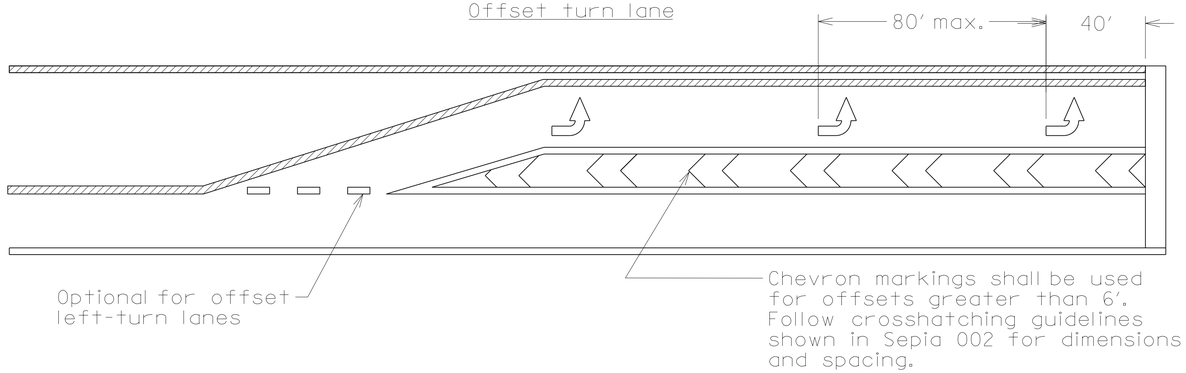
Single turn lane




Dual turn lane




Offset turn lane




PRELIMINARY NOT FOR CONSTRUCTION

STRIPING NOTES:

- ARROWS SHALL BE USED IN ANY EXCLUSIVE TURN LANES.
- IN A SINGLE TURN LANE, DOTTED WHITE LANE LINE EXTENSIONS MAY BE USED THROUGH THE TAPER OF THE TURN LANE.
- IF USED, DOTTED WHITE LANE LINE EXTENSIONS SHALL BE NORMAL WIDTH, AND SHOULD BE 2' LONG, WITH A GAP OF 2-6' BETWEEN EACH LINE.
- IN DUAL TURN LANES, DOTTED WHITE LANE LINE EXTENSIONS SHOULD BE USED THROUGH THE TAPER OF THE TURN LANE. BOTH SOLID LINES FORMING THE TURN LANES SHALL BEGIN AT THE DOWNSTREAM END OF THE TAPER.

ARROW SPACING NOTES:

IN SINGLE-DIRECTION TURN LANES, ARROWS SHOULD BE SPACED AS FOLLOWS:

- AT LEAST TWO ARROWS SHOULD BE USED IN EACH TURN LANE. HOWEVER, IF A TURN LANE IS LESS THAN 80' IN LENGTH, THE DOWNSTREAM ARROW MAY BE ELIMINATED.
- THE FIRST UPSTREAM ARROW SHALL BE PLACED AT THE BEGINNING OF THE SOLID LINE FOR THE TURN LANE.
- THE LAST DOWNSTREAM ARROW SHOULD BE PLACED 40' FROM THE STOP BAR.
- ANY ADDITIONAL ARROWS SHOULD BE EVENLY SPACED. SPACING SHOULD NOT EXCEED 80'.
- ARROW SPACING AND NUMBER OF ARROWS MAY VARY BASED ON SITE CONDITIONS.

DOTTED EXTENSION DIMENSIONS:




Dotted extensions shall be normal width.



DRAWING NOT TO SCALE

LEGEND

MARKINGS

WHITE

YELLOW

KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR TURN LANES

SUBMITTED R. Jeffrey Wolfe 8-23-18 DATE

042

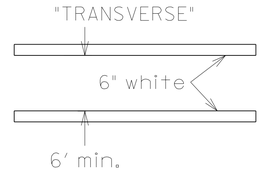
MicroStation v8.11.7.443
E-SHEET NAME: R06200DS
USER: mwmsatt
DATE PLOTTED: January 22, 2020
FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R06200DS.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R63 |

## STOP LINE NOTES

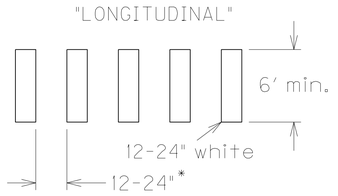
1. STOP LINES SHALL BE 24" WHITE AND SHALL EXTEND ACROSS ALL APPROACH LANES.
2. STOP LINES SHOULD BE PLACED A MINIMUM OF 4' IN ADVANCE OF THE NEAREST EDGE OF A MARKED CROSSWALK. IN THE ABSENCE OF A MARKED CROSSWALK, STOP LINES SHOULD BE PLACED NO MORE THAN 30' OR NO LESS THAN 4' FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.
3. STOP LINES IN LEFT TURN LANES MAY BE PULLED BACK SO AS NOT TO INTERFERE WITH THE WHEEL PATH OF TURNING VEHICLES.

## CROSSWALK DETAIL



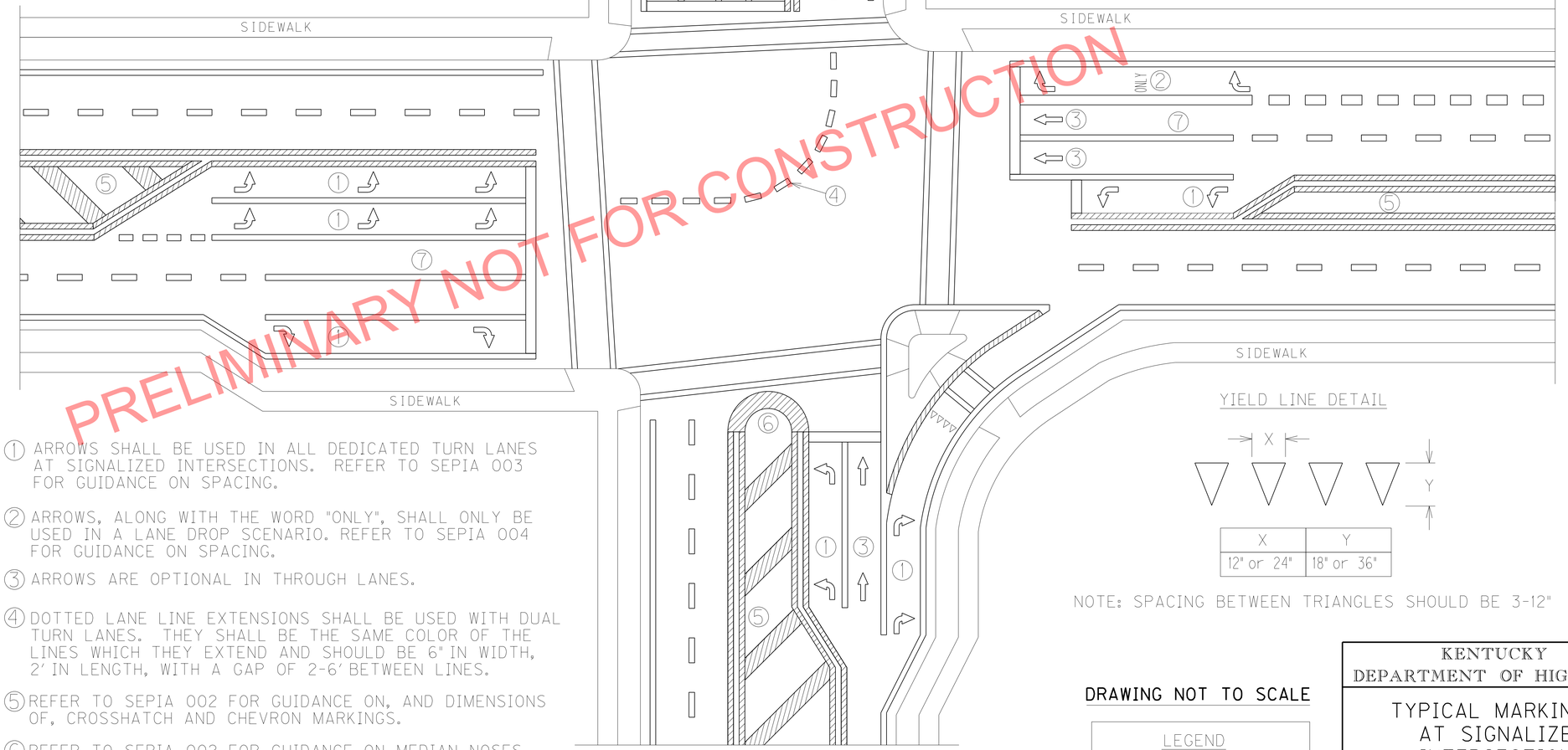

TRANSVERSE LINES SHOULD EXTEND ACROSS THE FULL WIDTH OF THE APPROACH PAVEMENT.

TRANSVERSE LINES MAY BE COMBINED WITH LONGITUDINAL LINES TO FORM A "LADDER-STYLE" CROSSWALK.




CROSSWALK BARS SHALL BE INSTALLED PARALLEL WITH ONCOMING TRAFFIC.

*SPACING OF BARS SHOULD BE MODIFIED SO AS TO AVOID TIRE PATHS OF APPROACHING VEHICLES.




① ARROWS SHALL BE USED IN ALL DEDICATED TURN LANES AT SIGNALIZED INTERSECTIONS. REFER TO SEPIA 003 FOR GUIDANCE ON SPACING.

② ARROWS, ALONG WITH THE WORD "ONLY", SHALL ONLY BE USED IN A LANE DROP SCENARIO. REFER TO SEPIA 004 FOR GUIDANCE ON SPACING.

③ ARROWS ARE OPTIONAL IN THROUGH LANES.

④ DOTTED LANE LINE EXTENSIONS SHALL BE USED WITH DUAL TURN LANES. THEY SHALL BE THE SAME COLOR OF THE LINES WHICH THEY EXTEND AND SHOULD BE 6" IN WIDTH, 2' IN LENGTH, WITH A GAP OF 2-6' BETWEEN LINES.

⑤ REFER TO SEPIA 002 FOR GUIDANCE ON, AND DIMENSIONS OF, CROSSHATCH AND CHEVRON MARKINGS.

⑥ REFER TO SEPIA 002 FOR GUIDANCE ON MEDIAN NOSES.

⑦ SOLID LINE SEPARATING THROUGH LANES SHOULD EXTEND BACK A MINIMUM OF 50' FROM THE STOP BAR.

*NOTE: OTHER THAN LONGITUDINAL STRIPING, ALL MARKINGS SHOWN ON THIS DRAWING SHOULD BE THERMOPLASTIC.

## YIELD LINE DETAIL




| X | Y |
|---|---|
| 12" or 24" | 18" or 36" |

NOTE: SPACING BETWEEN TRIANGLES SHOULD BE 3-12"

DRAWING NOT TO SCALE

LEGEND

MARKINGS

WHITE

YELLOW

KENTUCKY DEPARTMENT OF HIGHWAYS

# TYPICAL MARKINGS AT SIGNALIZED INTERSECTIONS

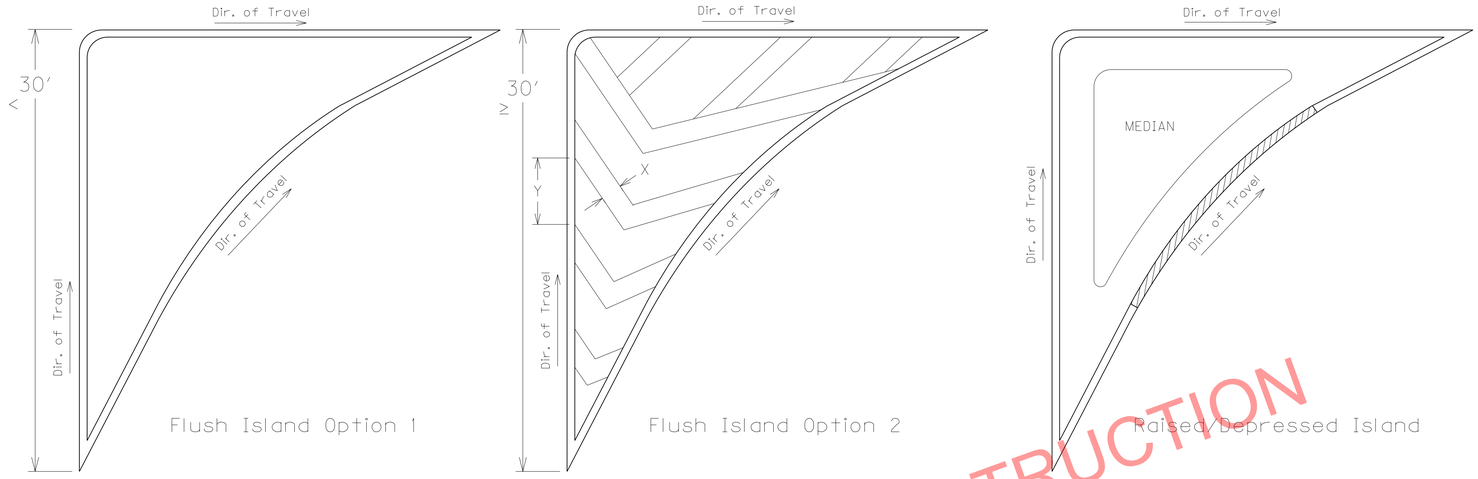
SUBMITTED R. Jeffrey Wolfe 8-23-18 DATE

044

FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R06300DS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R06300DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R64 |

# TYPICAL RIGHT-TURN CHANNELIZING ISLAND MARKINGS




## GENERAL NOTES

THE MINIMUM WIDTH (X) OF CROSSHATCH MARKINGS IS 12" FOR LOW SPEED ROADS (< 45 MPH) AND 24" FOR HIGH SPEED ROADS (≥ 45 MPH).

THE SPACE BETWEEN ADJACENT CROSSHATCH MARKINGS (Y) SHOULD BE SET AT 10 TIMES THE WIDTH (X) OF THE CROSSHATCH MARKINGS.

CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN A MEDIAN LESS THAN 6' IN WIDTH.

CROSSHATCH MARKINGS SHOULD NOT BE PLACED IN AND ISLAND IF ANY SIDE OF AN ISLAND IS LESS THAN 30' IN LENGTH.

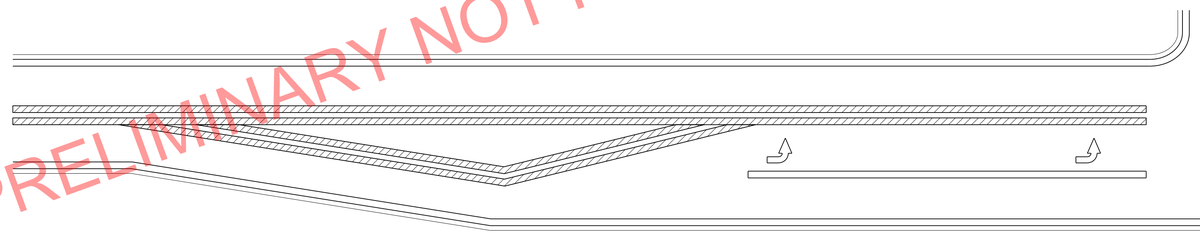
THE OUTLINE OF AN ISLAND SHOULD BE EITHER 8" OR 12".

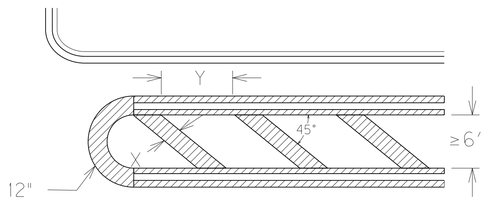
MEDIAN NOSES MAY BE EITHER A SINGLE 12" LINE OR A SOLID SEMI-CIRCLE.

CROSSHATCH AND CHEVRON MARKINGS SHOULD BE THERMOPLASTIC.

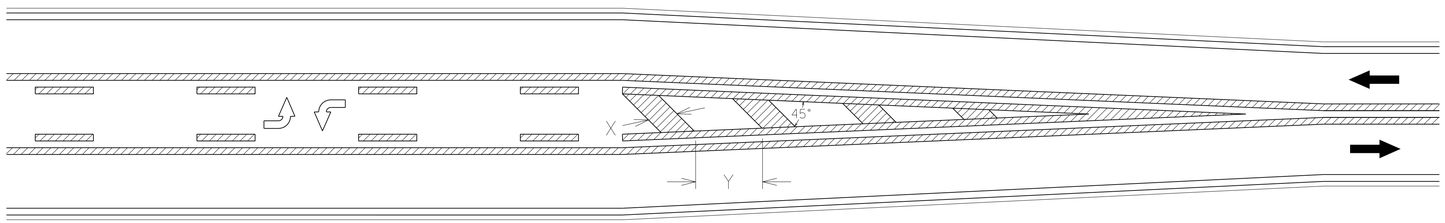
PRELIMINARY NOT FOR CONSTRUCTION

# TYPICAL LEFT-TURN LANE / FLUSH MEDIAN CROSSHATCH MARKINGS






# TYPICAL TWO-WAY LEFT-TURN LANE (TWLTL) TRANSITION MARKINGS




Note: Crosshatch markings shall be placed in the transition area of a TWLTL.

LEGEND

MARKINGS

WHITE

YELLOW

DRAWING NOT TO SCALE

KENTUCKY DEPARTMENT OF HIGHWAYS

TYPICAL MARKINGS FOR ISLANDS AND MEDIANS

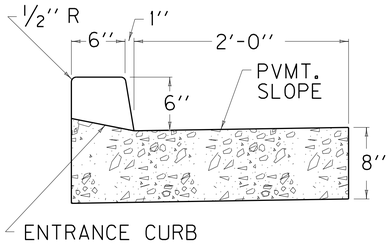
SUBMITTED R. Jeffrey Wolfe 8-23-18 DATE

046

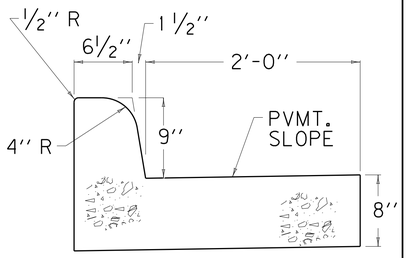
FILE NAME: G:\USERS\MWMSATT\DESKTOP\ESHEET\R06400DS.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R06400DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R65 |

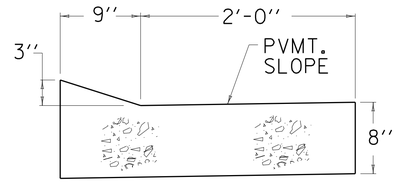
## STANDARD CURB & GUTTER



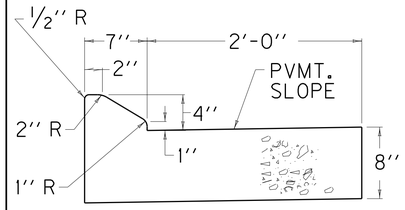

## BARRIER CURB & GUTTER



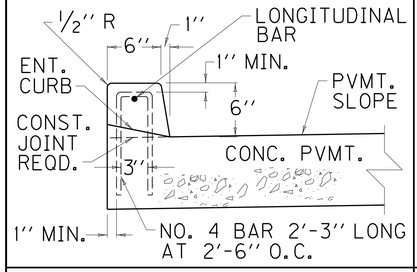

## LIP CURB & GUTTER



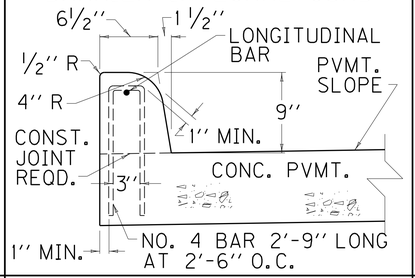

## ISLAND CURB & GUTTER



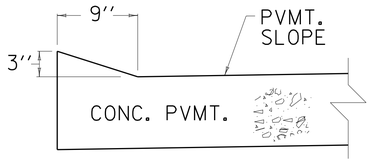

## ① STANDARD INTEGRAL CURB




## BARRIER INTEGRAL CURB

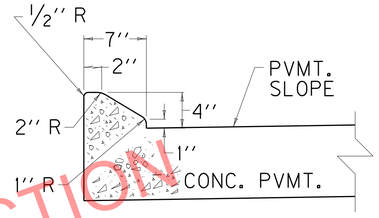



## LIP INTEGRAL CURB



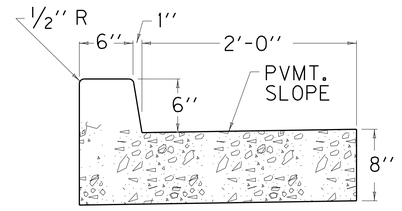

CONST. JOINT NOT PERMITTED

## ISLAND INTEGRAL CURB

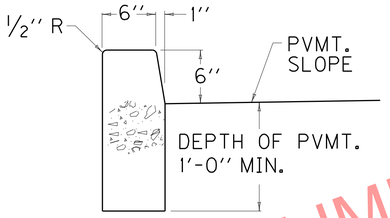



CONST. JOINT NOT PERMITTED

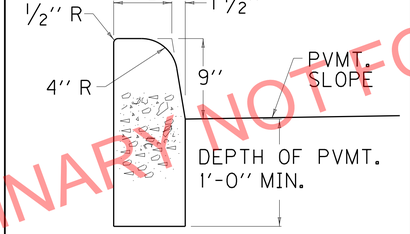
## STANDARD HEADER CURB & GUTTER



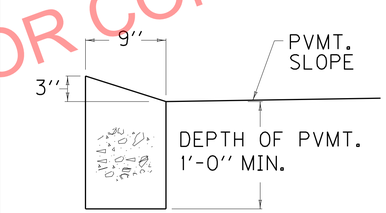

## STANDARD HEADER CURB TYPE 1
EXISTING PAVEMENT



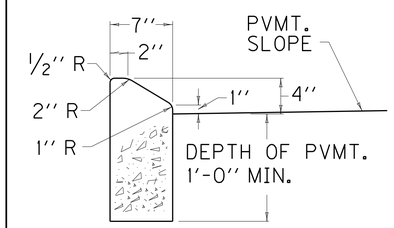

## BARRIER HEADER CURB



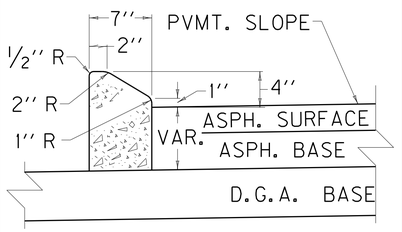

## LIP HEADER CURB



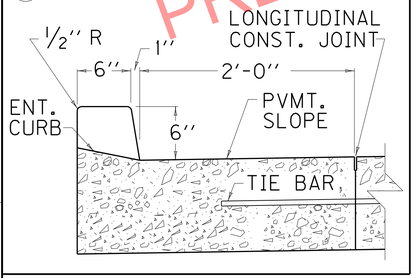

## ISLAND HEADER CURB TYPE 1
EXISTING PAVEMENT




## ISLAND HEADER CURB TYPE 2
NEW CONSTRUCTION

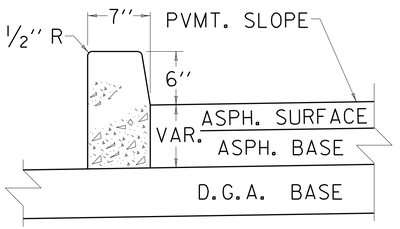



## ② STANDARD INTEGRAL CURB

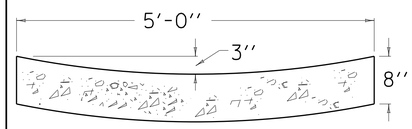



BID ITEM AND UNIT TO BID (CURB TYPE) LF

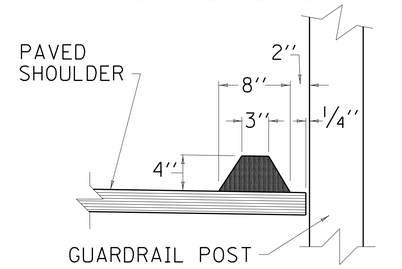
## STANDARD HEADER CURB TYPE 2
NEW CONSTRUCTION




## VALLEY GUTTER




## ASPHALT WEDGE CURB




~ NOTES ~

1. ALL INTEGRAL CURBS SHOWING REINFORCING STEEL SHALL BE CAST SEPARATELY FROM THE PAVEMENT AND THE REINFORCEMENT SHALL CONSIST SOLELY OF NO. 4 BARS AS DETAILED ON THIS DRAWING. ON CONSTRUCTION CARE SHOULD BE TAKEN SO THAT NO REINFORCEMENT BARS ARE CLOSER THAN 3'' TO THE CENTER OF THE SAWED TRANSVERSE JOINT.
2. THE CONTRACTOR HAS THE OPTION OF CONSTRUCTING THE STANDARD INTEGRAL CURB AS DETAILED IN EITHER ① OR ② . IF ② IS CHOSEN A LONGITUDINAL CONSTRUCTION JOINT SHALL BE REQUIRED AND THE REMAINING PAVEMENT AND CURB SHALL BE CONSTRUCTED MONOLITHIC WITHOUT A HORIZONTAL CONSTRUCTION JOINT AND ACCOMPANYING REINFORCING STEEL.

KENTUCKY DEPARTMENT OF HIGHWAYS

# CURB AND GUTTER, CURBS AND VALLEY GUTTER

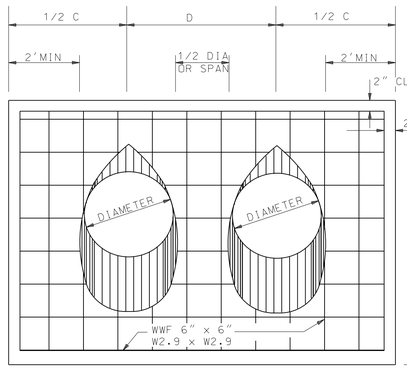
SUBMITTED _____ DIRECTOR DIVISION OF DESIGN — DATE 4-30-19

060

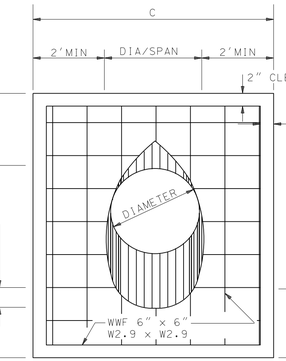
PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\SHEETR06500DS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R06500DS
MicroStation v8.11.7.443

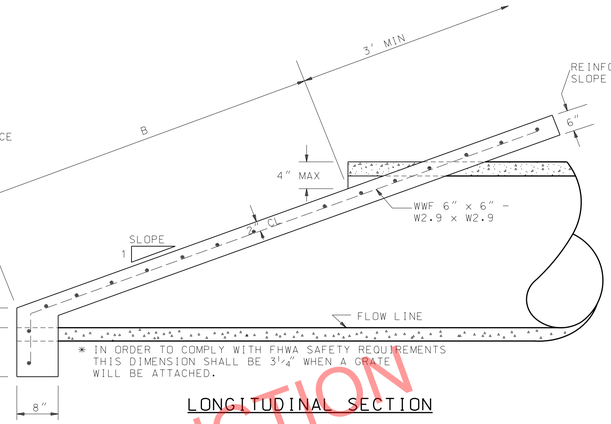
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R66 |



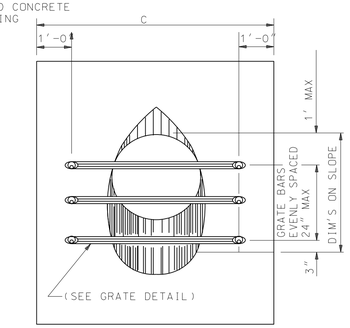

END ELEVATION DOUBLE BARREL



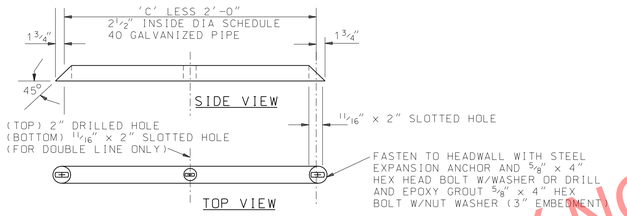

END ELEVATION SINGLE BARREL



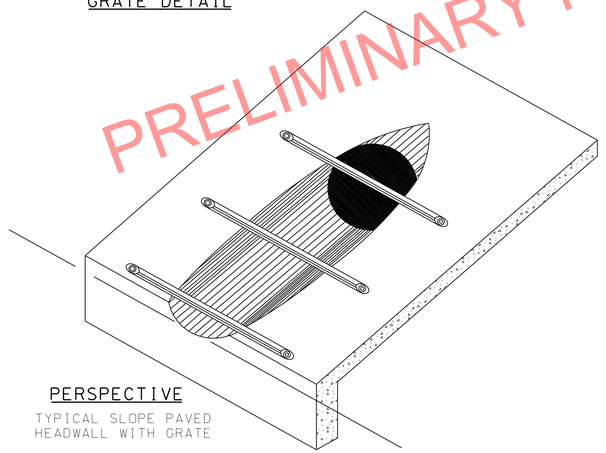

LONGITUDINAL SECTION




END ELEVATION WITH GRATE




GRATE DETAIL



PERSPECTIVE

TYPICAL SLOPE PAVED HEADWALL WITH GRATE

| DIMENSIONS AND QUANTITIES | | | | | | | |
|---|---|---|---|---|---|---|---|
| PIPE SIZE | AREA SQ FT | SLOPE | B | C | D | CU YDS ONE BARREL | CU YDS ADDITIONAL BARREL |
| 15" | 1.2 | 4:1 | 5'-1" | 5'-3" | 1'-11" | 1.44 | 0.43 |
| 18" | 1.8 | 4:1 | 4'-2" | 5'-6" | 2'-3" | 1.66 | 0.51 |
| 24" | 3.1 | 4:1 | 6'-4" | 6'-0" | 3'-0" | 2.07 | 0.74 |
| 30" | 4.9 | 4:1 | 8'-6" | 6'-6" | 3'-9" | 2.51 | 1.03 |
| 36" | 7.1 | 4:1 | 10'-8" | 7'-0" | 4'-6" | 2.92 | 1.34 |
| 42" | 9.6 | 4:1 | 12'-10" | 7'-6" | 5'-3" | 3.45 | 1.72 |
| 48" | 12.6 | 4:1 | 15'-0" | 8'-0" | 6'-0" | 3.77 | 2.09 |
| 54" | 15.9 | 4:1 | 17'-2" | 8'-6" | 6'-9" | 4.08 | 2.52 |
| 15" | 1.2 | 6:1 | 4'-8" | 5'-3" | 1'-11" | 2.01 | 0.56 |
| 18" | 1.8 | 6:1 | 6'-3" | 5'-6" | 2'-3" | 2.35 | 0.75 |
| 24" | 3.1 | 6:1 | 9'-6" | 6'-0" | 3'-0" | 3.05 | 1.12 |
| 30" | 4.9 | 6:1 | 12'-9" | 6'-6" | 3'-9" | 3.74 | 1.57 |
| 36" | 7.1 | 6:1 | 16'-0" | 7'-0" | 4'-6" | 4.44 | 2.09 |
| 42" | 9.6 | 6:1 | 19'-3" | 7'-6" | 5'-3" | 5.17 | 2.66 |
| 48" | 12.6 | 6:1 | 22'-6" | 8'-0" | 6'-0" | 5.87 | 3.33 |
| 54" | 15.9 | 6:1 | 25'-9" | 8'-6" | 6'-9" | 6.56 | 4.08 |
| 15" | 1.2 | 10:1 | 7'-9" | 5'-3" | 1'-11" | 2.94 | 0.78 |
| 18" | 1.8 | 10:1 | 10'-5" | 5'-6" | 2'-3" | 3.65 | 1.13 |
| 24" | 3.1 | 10:1 | 15'-10" | 6'-0" | 3'-0" | 4.93 | 1.76 |
| 30" | 4.9 | 10:1 | 21'-3" | 6'-6" | 3'-9" | 6.30 | 2.60 |
| 36" | 7.1 | 10:1 | 26'-8" | 7'-0" | 4'-6" | 7.58 | 3.58 |
| 42" | 9.6 | 10:1 | 32'-1" | 7'-6" | 5'-3" | 8.96 | 4.66 |
| 48" | 12.6 | 10:1 | 37'-6" | 8'-0" | 6'-0" | 10.97 | 5.93 |
| 54" | 15.9 | 10:1 | 42'-11" | 8'-6" | 6'-9" | 11.57 | 7.40 |
| 15" | 1.2 | 20:1 | 15'-5" | 5'-3" | 1'-11" | 5.35 | 1.34 |
| 18" | 1.8 | 20:1 | 20'-10" | 5'-6" | 2'-3" | 6.98 | 1.98 |
| 24" | 3.1 | 20:1 | 31'-8" | 6'-0" | 3'-0" | 9.84 | 3.39 |

## GENERAL NOTES

1. THE FILL IS TO BE PLACED AND ALL SHORING REMOVED BEFORE THE SLOPE PAVING IS PLACED.
2. QUANTITIES SHOWN INCLUDE TWO (2) SLOPE PAVED HEADWALLS WITH TOE WALLS.
3. DIMENSIONS AND QUANTITIES SHOWN APPLIES TO CONCRETE, CORRUGATED METAL PIPE, AND CORRUGATED HDPE PIPE. CONCRETE QUANTITIES ARE SUFFICIENT WHEN HEADWALLS FOR ARCH PIPE IS DESIRABLE.
4. CONCRETE PIPE SHALL BE BEVELED BY SAWING AFTER SLOPE PAVING HAS BEEN PLACED AND SUFFICIENTLY CURED (SOME HAND FINISHING MAY BE NECESSARY.) METAL PIPE SHALL BE SHOP CUT. CORRUGATED HDPE PIPE MAY BE FIELD BEVELED PRIOR TO PAVING OR SHOP CUT.
5. CONTRACTOR SHALL INSURE THROUGH MECHANICAL MEANS OR OTHER APPROVED DEVICES THAT CONNECTION BETWEEN BEVELED PIPE END AND CONCRETE WILL NOT BE DETACHED. CORRUGATED HDPE PIPE SHALL HAVE 1/2" x 6" GALVANIZED HOOK BOLTS WITH WASHERS LOCATED AT 30° OC FOR THE TOE AND 1/2" x 6" GALVANIZED THREADED HEX HEAD BOLTS WITH WASHERS LOCATED ON 2'-0" CENTERS FOR SIDES. ANCHOR BOLTS INTO CONCRETE.
6. SLOPE PAVED HEADWALL WITHOUT GRATE SHALL BE CLASS 1. SLOPE PAVED HEADWALL WITH GRATE SHALL BE CLASS 2.
7. A 24" PIPE WITH GREATER THAN A 30° SKEW AND 30" OR GREATER IN DIAMETER SHALL HAVE A CLASS 2 END TREATMENT WHEN TERMINATED WITHIN THE CLEAR ZONE.
8. PIPE FOR GRATE SHALL BE SCHEDULE 40. GALVANIZED (ASTM A53) HARDWARE SHALL BE GALVANIZED ACCORDING TO SPECIFICATIONS.
9. RAW METAL EXPOSED BY CUTTING AND DRILLING OF PIPE FOR GRATE ASSEMBLY WILL REQUIRE A GALVANIZING REPAIR PAINT WITH AN ENGINEER - APPROVED RUST PROHIBITIVE PAINT.
10. ENTRANCE PIPE LENGTHS LISTED IN THE PLANS ARE CALCULATED TO THE TOE OF THE HEADWALL AND END STATIONS LISTED ARE AT THE TOE OF THE HEADWALL.

PRELIMINARY NOT FOR CONSTRUCTION

NOT TO SCALE

ENTRANCE PIPE HEADWALL DETAIL

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R06600DS.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R06600DS
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R67 |

## GENERAL TRAFFIC CONTROL NOTES

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.

2. EXCEPT FOR THE ROADWAY AND TRAFFIC CONTROL BID ITEMS LISTED, ALL ITEMS OF WORK NECESSARY TO MAINTAIN AND CONTROL TRAFFIC WILL BE PAID AT THE LUMP SUM BID PRICE TO "MAINTAIN AND CONTROL TRAFFIC" AS SET FORTH IN THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE PROVIDED FOR IN THESE NOTES. THE LUMP SUM BID TO "MAINTAIN AND CONTROL TRAFFIC" SHALL ALSO INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS AND OPERATIONS:

   A. ALL GRADING AND NECESSARY DRAINAGE (UNLESS A BID ITEM FOR DETOUR CONSTRUCTION IS INCLUDED) FOR THE TEMPORARY ROADWAY AND REMOVAL THEREOF, WHEN IT IS NO LONGER NEEDED. IF A BID ITEM FOR DETOUR CONSTRUCTION IS INCLUDED, GRADING AND DRAINAGE WILL BE PAID FOR IN THE BID ITEM "DETOUR CONSTRUCTION".

   B. ALL LABOR AND MATERIALS NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES AND MARKINGS.

   C. ALL FLAGPERSONS AND TRAFFIC CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, FLASHERS, SIGNS BARRICADES AND VERTICAL PANELS, PLASTIC DRUMS (STEEL DRUMS WILL NOT BE PERMITTED) AND CONES NECESSARY FOR THE CONTROL AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC AS SPECIFIED IN THESE NOTES, THE PLANS, THE MUTCD OR THE ENGINEER.

   D. ANY STORM SEWER, CULVERT PIPE OR UTILITY INSTALLATIONS THAT REQUIRE THE ROADWAY BE "OPEN-CUT" TO INSTALL THE FACILITY MUST BE DONE DURING THE WORK HOURS APPROVED BY THE ENGINEER. BACKFILL OF ALL OPEN CUTS OF THE EXISTING ROADWAYS SHALL REQUIRE GRANULAR BACKFILL AND 9" OF APPROVED ASPHALT BASE (PLACED IN 2 - 4.5" LIFTS).

   E. ALL TEMPORARY DRAINAGE ITEMS, WHICH INCLUDE BUT ARE NOT LIMITED TO: TEMPORARY PIPES, TEMPORARY BOX INLETS, TEMPORARY HEADWALLS, AND TEMPORARY DITCHING.

   F. SAFELOADING TEMPORARY DRAINAGE FEATURES.

   G. REMOVAL OF ALL TEMPORARY PAVEMENT MARKINGS BEYOND THE LIMITS OF CONSTRUCTION. THESE MARKINGS MAY BE NECESSARY TO MAINTAIN TRAFFIC AND SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.

   H. FLASHING ARROWS

   I. TEMPORARY SIGNALS.

3. ANY TEMPORARY TRAFFIC CONTROL ITEMS, DEVICES, MATERIALS AND INCIDENTALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR WHEN NO LONGER NEEDED.

4. THE CONTRACTOR SHALL MAINTAIN A TWO-LANE TRAVEL WAY WITH A MINIMUM LANE WIDTH OF 10 FEET. HOWEVER, DURING WORKING HOURS, ONE-WAY TRAFFIC MAY BE ALLOWED AT THE DISCRETION OF THE ENGINEER, PROVIDED ADEQUATE SIGNING AND A FLAGPERSON ARE AT THE LOCATION.

5. LANE CLOSURES WILL NOT BE PERMITTED FOR THE PERIODS LISTED BELOW:

   A. SHORT TERM LANE CLOSURES WILL NOT BE PERMITTED BETWEEN THE HOURS OF 7:00 AM TO 9:00 AM AND BETWEEN 3:00 PM TO 6:00 PM.

   B. NO LANE CLOSURES SHALL BE ALLOWED DURING THE OBSERVANCE OF ALL HOLIDAYS IDENTIFIED IN SECTION 101 OF THE KYTC, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. UNDER SPECIAL CIRCUMSTANCES, KYTC RESERVES THE RIGHT TO RESTRICT THE USE OF LANE CLOSURES DUE TO UNFORESEEN SPECIAL EVENTS.

6. THE CONTRACTOR SHALL COMPLETELY COVER ANY SIGNS, EITHER EXISTING, PERMANENT OR TEMPORARY, WHICH DO NOT PROPERLY APPLY TO THE CURRENT TRAFFIC PHASING, AND SHALL MAINTAIN THE COVERING UNTIL THE SIGNS ARE APPLICABLE OR ARE REMOVED.

7. IN GENERAL, ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED STARTING AND PROCEEDING IN THE DIRECTION OF THE FLOW OF TRAFFIC AND REMOVED STARTING AND PROCEEDING IN THE DIRECTION OPPOSITE THE FLOW OF TRAFFIC.

8. THE ENGINEER AND THE CONTRACTOR, OR THEIR AUTHORIZED REPRESENTATIVES, SHALL REVIEW THE SIGNING BEFORE TRAFFIC IS ALLOWED TO USE ANY LANE CLOSURES, CROSSOVERS OR DETOURS. ALL SIGNING SHALL BE APPROVED BY THE ENGINEER BEFORE WORK CAN BE STARTED BY THE CONTRACTOR.

9. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL SCHEME AND CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS AND THIS PROPOSAL, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL OF THE DIVISIONS OF TRAFFIC, DESIGN AND CONSTRUCTION, AND THE FEDERAL HIGHWAY ADMINISTRATION, WHERE APPLICABLE.

10. IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY VEHICLE ON AN OFFICIAL EMERGENCY RUN ARRIVES AT THE SCENE, THE CONTRACTOR SHALL MAKE PROVISIONS FOR THE PASSAGE OF THAT VEHICLE AS QUICKLY AS POSSIBLE.

11. REASONABLE MEANS OF INGRESS AND EGRESS SHALL BE MAINTAINED TO ALL PROPERTIES WITHIN THE PROJECT LIMITS, AND MORE SPECIFICALLY TO BOTH SIDES OF PROPERTIES SEVERED DURING CONSTRUCTION. ACCESS TO FIRE HYDRANTS MUST ALSO BE MAINTAINED AT ALL TIMES.

## GENERAL TRAFFIC CONTROL NOTES

12. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUPPLYING ALL FLASHING ARROWS AND VARIABLE MESSAGE BOARDS NECESSARY TO MAINTAIN TRAFFIC FOR THIS PROJECT. UPON COMPLETION OF THE PROJECT, THE FLASHING ARROWS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

13. PAVING OF WIDENING AREAS AND OVERLAY OF EXISTING PAVEMENT SHOULD BE PERFORMED IN A MANNER AS TO NOT CAUSE PONDING OF WATER IN DRIVING LANES.

## PAVEMENT DROP-OFF

A PAVEMENT EDGE THAT TRAFFIC IS NOT EXPECTED TO CROSS, EXCEPT ACCIDENTALLY, SHOULD BE TREATED AS FOLLOWS:

LESS THAN TWO INCHES - NO PROTECTION REQUIRED, WARNING SIGNS SHOULD BE PLACED IN ADVANCE AND THROUGHOUT THE DROP-OFF AREA

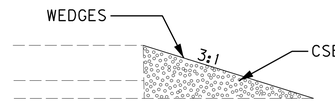
TWO TO FOUR INCHES - PLASTIC DRUMS, VERTICAL PANELS OR BARRICADES EVERY 100 FEET ON TANGENT SECTIONS FOR SPEEDS OF 50 MPH OR GREATER. CONES MAY BE USED IN PLACE OF PLASTIC DRUMS, PANELS AND BARRICADES DURING DAYLIGHT HOURS. FOR TANGENT SECTIONS WITH SPEEDS LESS THAN 50 MPH AND FOR CURVES, DEVICES SHOULD BE PLACED EVERY 50 FEET. SPACING OF DEVICES ON TAPERED SECTIONS SHOULD BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

GREATER THAN FOUR INCHES - POSITIVE SEPARATION OR WEDGE WITH 3:1 OR FLATTER SLOPE AS NEEDED. IF THERE IS FIVE FEET OR MORE DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE DROP-OFF, THEN DRUMS, PANELS OR BARRICADES MAY BE USED. IF THE DROP-OFF IS GREATER THAN 12 INCHES, POSITIVE SEPARATION IS STRONGLY ENCOURAGED. IF CONCRETE BARRIERS ARE USED, SPECIAL REFLECTIVE DEVICES OR STEADY BURN LIGHTS SHOULD BE USED FOR OVERNIGHT INSTALLATIONS.

FOR TEMPORARY CONDITIONS, DROP-OFFS GREATER THAN FOUR INCHES MAY BE PROTECTED WITH PLASTIC DRUMS, VERTICAL PANELS OR BARRICADES FOR SHORT DISTANCES DURING DAYLIGHT HOURS WHILE WORK IS BEING DONE IN THE DROP-OFF AREA.

LESSER TREATMENTS THAN THOSE DESCRIBED ABOVE MAY BE CONSIDERED FOR LOW-VOLUME LOCAL STREETS.

PAYMENT WILL BE ALLOWED FOR CSB MATERIAL USED FOR WEDGING.




**PAVEMENT DROP-OFF DETAIL**

## LANE CLOSURES

ALL LANE CLOSURES, LANE SHIFTS AND TAPERS SHALL BE IN ACCORDANCE WITH THE STANDARD DRAWINGS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ANY LANE CLOSURE OR LANE SHIFT MUST BE APPROVED BY THE ENGINEER PRIOR TO THE CLOSURE OR LANE SHIFT. THE CONTRACTOR MUST NOTIFY THE ENGINEER AT LEAST FIVE (5) DAYS PRIOR TO ANY PROPOSED CLOSURE OR TRAFFIC PATTERN SHIFT.

CONTRARY TO SECTION 112, LANE CLOSURES SHALL BE INCIDENTAL TO THE BID ITEM "MAINTAIN AND CONTROL TRAFFIC"

LANE CLOSURES SHIFTS ON US 60 AND INTERSECTING ROADS WILL BE PERMITTED ONLY AT THE DISCRETION AND APPROVAL OF THE ENGINEER . THE CLEAR LANE WIDTH FOR ONE-LANE AND TWO-LANE TRAFFIC SHOULD BE 10 FEET. THE CLEAR LANE IN EACH DIRECTION WILL BE A MINIMUM OF 10 FEET.

## SIGNS

ADDITIONAL TRAFFIC CONTROL SIGNS IN ADDITION TO NORMAL LANE CLOSURE AND LANE SHIFT SIGNING DETAILED ON THE STANDARD DRAWINGS MAY BE REQUIRED BY THE ENGINEER. ADDITIONAL SIGNS NEEDED FOR LANE CLOSURES AND SHIFTS MAY INCLUDE, BUT ARE NOT LIMITED TO, "SLOWED/STOPPED TRAFFIC AHEAD". SIGNAGE FOR REDUCED SPEED LIMITS AND DOUBLE FINE WORK ZONES WILL BE FURNISHED, RELOCATED AND MAINTAINED BY THE CONTRACTOR.

CONTRARY TO SECTION 112, INDIVIDUAL SIGNS WILL BE MEASURED ONLY ONCE FOR PAYMENT, REGARDLESS OF HOW MANY TIMES THEY ARE SET, RESET, REMOVED AND RELOCATED DURING THE DURATION OF THE PROJECT. REPLACEMENTS FOR DAMAGED SIGNS OR SIGNS DIRECTED TO BE REPLACED BY THE ENGINEER DUE TO POOR LEGIBILITY OR REFLECTIVITY WILL NOT BE MEASURED FOR PAYMENT.

## TRAFFIC COORDINATOR

DESIGNATE AN EMPLOYEE TO BE TRAFFIC COORDINATOR. THE DESIGNATED TRAFFIC COORDINATOR MUST BE CERTIFIED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). THE TRAFFIC COORDINATOR WILL INSPECT THE PROJECT MAINTENANCE OF TRAFFIC EVERY TWO HOURS DURING THE CONTRACTOR'S OPERATIONS AND AT ANY TIME A LANE CLOSURE IS IN PLACE. THE TRAFFIC COORDINATOR WILL REPORT ALL INCIDENTS THROUGHOUT THE WORKZONE TO THE ENGINEER ON THE PROJECT. THE CONTRACT WILL FURNISH THE NAME AND TELEPHONE NUMBER WHERE THE TRAFFIC COORDINATOR CAN BE CONTACTED AT ALL TIMES.

DURING ANY PERIOD WHEN A LANE CLOSURE IS IN PLACE, THE TRAFFIC COORDINATOR WILL ARRANGE FOR PERSONNEL TO BE PRESENT ON THE PROJECT AT ALL TIMES TO INSPECT THE TRAFFIC CONTROL, MAINTAIN THE SIGNING AND DEVICES AND RELOCATE PORTABLE CHANGEABLE MESSAGE SIGNS AS QUEUE LENGTHS CHANGE. THE PERSONNEL WILL HAVE ACCESS ON THE PROJECT TO A RADIO OR TELEPHONE TO BE USED IN CASE OF EMERGENCIES OR ACCIDENTS.

PRELIMINARY NOT FOR CONSTRUCTION

FOR MAINTENANCE OF TRAFFIC ONLY

N.T.S.

MAINTENANCE OF TRAFFIC
US 60
GENERAL NOTES

MicroStation v8.11.7.443
E-SHEET NAME: R0670OMT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R0670OMT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R68 |

PERMANENT STRIPING

AFTER ALL OTHER WORK IS COMPLETED, PLACE PERMANENT STRIPING. MOBILE OPERATIONS MAY BE UTILIZED.

INLAID PAVEMENT MARKERS

AFTER PLACING PERMANENT STRIPING, INSTALL INLAID PAVEMENT MARKERS AS SPECIFIED IN THE SPECIAL NOTE FOR INLAID PAVEMENT MARKERS.

SPECIAL TRAFFIC CONTROL NOTES

BLASTING OPERATIONS

THE CONTRACTOR SHALL HALT TRAFFIC AT A SAFE DISTANCE FROM THE LOCATION WHERE THE WORK IS TO BE PERFORMED. THE CONTRACTOR SHALL INSPECT THE PAVEMENT FOR ANY DEBRIS THAT MAY BE A HAZARD TO THE TRAFFIC BEFORE ALLOWING TRAFFIC TO PROCEED ON THE AFFECTED SECTION.

WHEN BLASTING, THE CONTRACTOR SHALL HALT TRAFFIC A MAXIMUM OF 20 MINUTES TO ALLOW THE EXECUTION OF "THE SHOT" AND TO ALLOW FOR REMOVAL OF ROCK FRAGMENTS AND DEBRIS, CLEAN THE EXISTING PAVEMENTS AND RETURN TRAFFIC TO NORMAL OPERATION. BLASTING WILL NOT BE PERMITTED BETWEEN THE HOURS OF 7:00 AM TO 9:00 AM AND 3:00 PM TO 6:00 PM.

THE CONTRACTOR SHALL HAVE SUITABLE EQUIPMENT AT THE SITE AND IN A RUNNING MODE FOR THE PURPOSE OF CLEANING THE EXISTING PAVEMENTS OF ALL DEBRIS.

PORTABLE CHANGEABLE MESSAGE SIGNS

PROVIDE PORTABLE CHANGEABLE MESSAGE SIGNS IN ADVANCE OF AND WITHIN THE PROJECT AT LOCATION TO BE DETERMINED BY THE ENGINEER. IF WORK IS IN PROGRESS CONCURRENTLY IN BOTH DIRECTIONS, PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS. PLACE PORTABLE CHANGEABLE MESSAGE SIGNS ONE MILE IN ADVANCE OF THE ANTICIPATED QUEUE AT EACH LANE CLOSURE ON US 60. AS THE ACTUAL QUEUE LENGTHENS AND/OR SHORTENS, RELOCATE OR PROVIDE ADDITIONAL PORTABLE CHANGEABLE MESSAGE SIGNS SO THAT TRAFFIC HAS WARNING OF SLOWED OR STOPPED TRAFFIC AT LEAST ONE MILE BUT NO MORE THAN TWO MILES BEFORE REACHING THE END OF THE ACTUAL QUEUE. THE LOCATIONS DESIGNATED MAY VARY AS THE WORK PROGRESSES. THE PORTABLE CHANGEABLE MESSAGE SIGNS WILL BE IN OPERATION AT ALL TIMES. IN THE EVENT OF DAMAGE OR MECHANICAL/ELECTRICAL FAILURE, THE CONTRACTOR WILL REPAIR OR REPLACE THE PORTABLE CHANGEABLE MESSAGE SIGN IMMEDIATELY. PORTABLE CHANGEABLE MESSAGE SIGNS WILL BE PAID FOR ONCE, NO MATTER HOW MANY TIMES THEY ARE MOVED OR RELOCATED.

PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE IN ACCORDANCE WITH THE SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS.

ALL PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UPON PROJECT COMPLETION.

PORTABLE FLASHING ARROW

THE CONTRACTOR SHALL PROVIDE PORTABLE FLASHING ARROWS AS INDICATED ON THE PLANS OR REQUIRED BY THE ENGINEER. THE PORTABLE FLASHING ARROWS SHALL BE MOUNTED ON TRAFFIC-WORTHY CARRIAGES THAT MEET ALL APPLICABLE SAFETY STANDARDS. THE ARROWS SHALL BE EITHER DIESEL POWERED OR ELECTRIC AND SHALL MEET THE REQUIREMENTS SPECIFIED IN THE CURRENT STANDARD DRAWINGS. PAYMENT FOR THE PORTABLE FLASHING ARROWS WILL BE INCIDENTAL TO THE BID ITEM "MAINTAIN AND CONTROL TRAFFIC". PAYMENT SHALL BE FULL COMPENSATION FOR PROVIDING, PLACING, OPERATING, RELOCATING AND MAINTAINING THE PORTABLE FLASHING ARROWS.

THE CONTRACTOR SHALL HAVE AVAILABLE ONE RESERVE FLASHING ARROW TO BE PLACED IN OPERATION IN THE EVENT OF DAMAGE OR MECHANICAL/ELECTRICAL FAILURE. NO DIRECT PAYMENT WILL BE ALLOWED FOR THE RESERVE UNIT. ALL FLASHING ARROWS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE PROJECT.

REMOVAL OF PAVEMENT MARKINGS

THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS AND PAVEMENT MARKERS THAT DO NOT CONFORM TO THE TRAFFIC OPERATION IN USE. IN AREAS WHERE THE MARKING WILL CONFORM TO THE FINAL MARKING SCHEME OR FOR OTHER REASONS WILL NOT BE REMOVED, MARKINGS SHALL BE OF A PERMANENT TYPE PAVEMENT MARKING MATERIAL. ALL TEMPORARY MARKING WHICH MUST BE SUBSEQUENTLY REMOVED FROM ULTIMATE PAVEMENT SHALL BE AN APPROVED REMOVABLE STRIPING TAPE. REMOVABLE STRIPING TAPE SHALL BE INCIDENTAL TO THE BID ITEM "MAINTAIN AND CONTROL TRAFFIC."

MARKINGS ON EXISTING OR TEMPORARY PAVEMENT MAY BE REMOVED BY EITHER AN ABRASION OR BURNING PROCESS TO THE SATISFACTION OF THE ENGINEER. PAINTING OF EXISTING MARKING WITH BITUMINOUS OR OTHER MATERIALS TO OBLITERATE THE MARKINGS SHALL NOT BE ALLOWED. ANY EXISTING PERMANENT MARKINGS BEYOND THE LIMITS OF THE PROJECT WHICH WERE REMOVED FOR TEMPORARY PURPOSES SHALL BE REPLACED IN KIND. PAYMENT FOR REPLACING SAID MARKINGS SHALL BE IN ACCORDANCE WITH THE APPROPRIATE BID ITEMS FOR THE TYPE OF STRIPING REMOVED.

CONTRACTOR'S VEHICLES

THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH AND NOT AGAINST THE FLOW OF TRAFFIC. VEHICLES SHALL ENTER AND LEAVE WORK AREAS IN A MANNER WHICH WILL NOT BE HAZARDOUS TO OR INTERFERE WITH NORMAL TRAFFIC. VEHICLES SHALL NOT PARK OR STOP EXCEPT WITHIN WORK AREAS DESIGNATED BY THE ENGINEER. DO NOT USE OR ALLOW EMPLOYEES TO USE MEDIAN CROSSOVERS AT ANY TIME.

PHASING NOTES

PHASE I

A. INSTALL CONSTRUCTION SIGNING.

B. CONSTRUCT ENTRANCES AND DRAINAGE ON EAST SIDE OF THE PROJECT FROM STA. 100+50 TO 106+50. THE SOUTH EDGE OF THE EXISTING KY 70 EDGE OF PAVEMENT WILL NEED TO BE REALIGNED TO CONSTRUCT THE MANHOLE AT STA. 101+35 AND THE DBI AT STA. 101+65. CONSTRUCTION WILL ALSO INCLUDE THE STORM SEWER CROSSING AT STA. 105+75.

C. CONSTRUCT NEW KY 70 ALIGNMENT FROM STA. 50+00 TO STA. 54+00 AND TIE INTO US 60. CONSTRUCT THROUGH TOP LIFT OF BASE, SWITCH TRAFFIC, AND REMOVE THE EXISTING KY 70 PAVEMENT.

PHASE II

A. CONSTRUCT THE BRIDGE.

B. CONSTRUCT THE CROSS-DRAINS AT STA. 108+50 AND STA. 153+30 WITH A TEMPORARY PIPE EXTENSION UNDER THE EXISTING ROAD TO THE EAST SIDE OF EXISTING US 60 USING A FLAG PERSON AND 1 LANE TRAFFIC. CONSTRUCT A TEMPORARY DITCH TO THE DBI AT STA. 106+31.

C. CONSTRUCT A TEMPORARY 15 IN PIPE UNDER EXISTING US 60 AT APPROXIMATELY STA. 110+50 WITH TEMPORARY DITCH TO STA. 108+50.

D. CONSTRUCT THE CROSS-DRAIN AT KY 2610 STA. 51+00.

E. CONSTRUCT A TEMPORARY 15 IN PIPE UNDER EXISTING US 60 AT APPROXIMATELY STA. 150+00 WITH A TEMPORARY DITCH TO THE KY 2610 CROSS DRAIN.

F. CONSTRUCT THE MAINLINE THROUGH THE CSB BETWEEN STA. 108+50 TO THE BRIDGE (114+90.33) AND FROM THE BRIDGE (134+03.17) TO STA. 154+00, WITH THE EXCEPTION OF THE TAPER AND RIGHT TURN LANE AT KY 2610. A TEMPORARY DITCH WILL BE REQUIRED FROM APPROXIMATELY RIGHT STA. 134+00 TO 136+00. CONSTRUCT 3:1 SLOPE RT. STA. 134+00 TO 135+50.

G. CONSTRUCT A TEMPORARY TIE TO THE WEST EDGE OF EXISTING US 60 AT KY 2610 WITH A TEMPORARY 15 IN PIPE. CONSTRUCT A TEMPORARY DITCH BACK TO THE TEMPORARY PIPE AT STA. 150+00.

H. CONSTRUCT THE TIE-IN TO US 60 AT STA. 142+97 AND AS MUCH AS FEASIBLE AT STA. 112+20.

I. CONSTRUCT TIE-IN TO BRIDGE ROAD.

J. COMPLETE ANY UTILITY RELOCATIONS.

K. CONSTRUCT THE ENTRANCES AT LT. STA. 110+20 AND 152+55.99 THROUGH THE CSB.

PHASE III

A. CONSTRUCT THE MAINLINE ASPHALT BASE FROM STA. 108+50 TO STA. 154+00.

B. BEGIN CONSTRUCTION OF THE TIE-INS FROM STA. 106+00 TO 108+50 AND STA. 154+00 TO 161+75 PART-WIDTH UNDER TRAFFIC USING FLAGPERSONS.

PHASE IV

A. SWITCH TRAFFIC TO THE NEW PAVEMENT AND COMPLETE THE TIE-INS TO US 60 THROUGH THE TOP LIFT OF BASE UTILIZING FLAGPERSONS.

B. COMPLETE THE TAPER AND RIGHT TURN LANE TO KY 2610. THROUGH THE TOP LIFT OF BASE.

C. COMPLETE US 60 CONNECTOR #1 THROUGH THE TOP LIFT OF BASE.

D. CONSTRUCT KY 2610 THROUGH THE TOP LIFT OF BASE USING FLAGPERSONS AND TEMPORARY WIDENING, AS APPROVED BY THE ENGINEER.

E. REMOVE OLD US 60 IN AREAS DEPICTED IN THE PLANS & CROSS SECTIONS. COMPLETE 4:1 SLOPE RT. STA. 134+00 TO 135+50. REMOVE TEMPORARY PIPES AT STA. 108+50 AND 153+30 AND INSTALL HEADWALLS.

F. CONSTRUCT ALL REMAINING ENTRANCES, PIPES AND DITCHES THROUGHOUT THE PROJECT

PHASE V

A. CONSTRUCT THE FINAL SURFACE COURSE, GUARDRAIL AND ASPHALT SEAL ON THE MAINLINE AND ALL APPROACH ROADS USING FLAGPERSONS AND STRIPE THE PAVEMENT.

PRELIMINARY NOT FOR CONSTRUCTION

FOR MAINTENANCE OF TRAFFIC ONLY

N.T.S.

MAINTENANCE OF TRAFFIC
US 60
GENERAL NOTES

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R0680OMT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R0680OMT
MicroStation v8.11.7.443

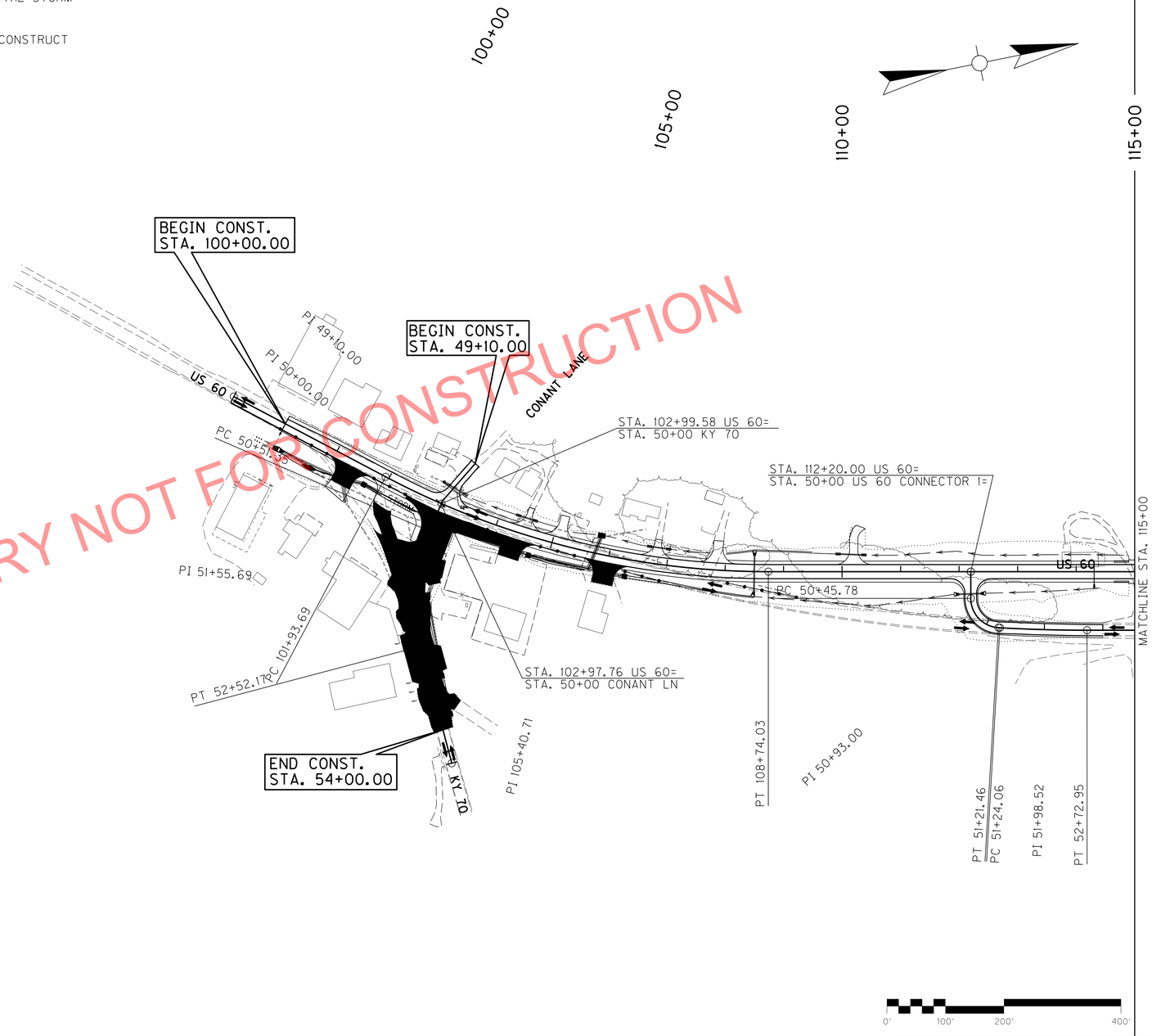
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R69 |

PHASE I

A. INSTALL CONSTRUCTION SIGNING.

B. CONSTRUCT ENTRANCES AND DRAINAGE ON EAST SIDE OF THE PROJECT FROM STA. 100+50 TO 106+50. THE SOUTH EDGE OF THE EXISTING KY 70 EDGE OF PAVEMENT WILL NEED TO BE REALIGNED TO CONSTRUCT THE MANHOLE AT STA. 101+35 AND THE DBI AT STA. 101+65. CONSTRUCTION WILL ALSO INCLUDE THE STORM SEWER CROSSING AT STA. 105+75.

C. CONSTRUCT NEW KY 70 ALIGNMENT FROM STA. 50+00 TO STA. 54+00 AND TIE INTO US 60. CONSTRUCT THROUGH TOP LIFT OF BASE, SWITCH TRAFFIC, AND REMOVE THE EXISTING KY 70 PAVEMENT.




PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

SCALE: 1"=100'

US 60
MOT PHASE I
STA. 100+00 TO STA. 115+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R06900MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R06900MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R70 |

PRELIMINARY NOT FOR CONSTRUCTION

115+00 120+00 125+00 130+00 135+00 140+00 145+00

MATCHLINE STA. 115+00

US 60

END CONST.
STA. 53+98.00

BRIDGE ROAD

PI 50+00.00

PI 51+50.00

STA. 142+96.56 US 60=
STA. 50+00 US 60 CONNECTOR 2

END CONST.
STA. 51+40.00

MATCHLINE STA. 145+00

US 60

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0' 100' 200' 400'

SCALE: 1"=100'

US 60
MOT PHASE I
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R07000MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07000MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R71 |

PRELIMINARY NOT FOR CONSTRUCTION

145+00

150+00

155+00

160+00

161+75

END CONST.
STA. 161+75.00

MATCHLINE STA. 145+00

PI 50+00.00

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

PT 159+90.56

PC 150+84.71

PI 155+46.51

END CONST.
STA. 53+75.00

PI 55+47.93

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0' 100' 200' 400'

SCALE: 1"=100'

US 60
MOT PHASE I
STA. 145+00 TO STA. 161+75

MicroStation v8.11.7.443
E-SHEET NAME: R07100MT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETS\R07100MT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R72 |

PHASE II

A. CONSTRUCT THE BRIDGE.

B. CONSTRUCT THE CROSS-DRAIN AT STA. 108+50 AND STA. 153+30 WITH A TEMPORARY PIPE EXTENSION UNDER THE EXISTING ROAD TO THE EAST SIDE OF EXISTING US 60 USING FLAG PERSON AND 1 LANE TRAFFIC. CONSTRUCT A TEMPORARY DITCH TO THE DBI AT STA. 106+31.

C. CONSTRUCT A TEMPORARY 15 IN PIPE UNDER EXISTING US 60 AT APPROXIMATELY STA. 110+50 WITH A TEMPORARY DITCH TO STA. 108+50.

D. CONSTRUCT THE CROSS-DRAIN AT KY 2610 STA. 51+00.

E. CONSTRUCT A TEMPORARY 15 IN PIPE UNDER EXISTING US 60 AT APPROXIMATELY STA. 150+00 WITH A TEMPORARY DITCH TO THE KY 2610 CROSS DRAIN.

F. CONSTRUCT THE MAINLINE THROUGH THE CSB BETWEEN STA. 108+50 TO THE BRIDGE (114+90.33) AND FROM THE BRIDGE (134+03.17) TO STA. 154+00, WITH THE EXCEPTION OF THE TAPER AND RIGHT TURN LANE AT KY 2610. A TEMPORARY DITCH WILL BE REQUIRED FROM APPROXIMATELY RIGHT STA. 134+00 TO 136+00. CONSTRUCT 3:1 SLOPE RT. STA. 134+00 TO 135+50.

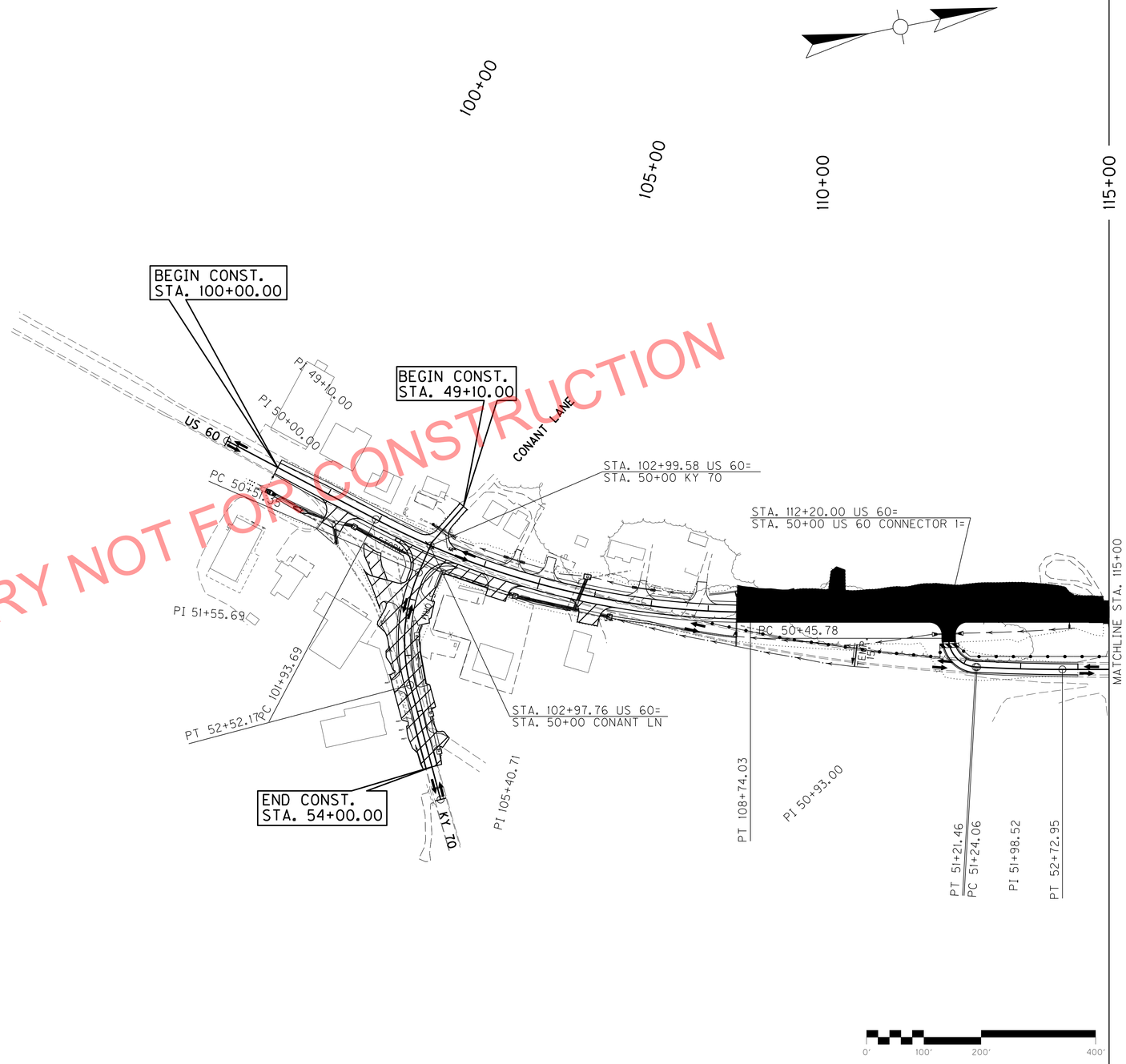
G. CONSTRUCT A TEMPORARY TIE TO THE WEST EDGE OF EXISTING US 60 AT KY 2610 WITH A TEMPORARY 15 IN PIPE. CONSTRUCT A TEMPORARY DITCH BACK TO THE TEMPORARY PIPE AT STA. 150+00.

H. CONSTRUCT THE TIE-IN TO US 60 AT STA. 142+97 AND AS MUCH AS FEASIBLE AT STA. 112+20.

I. CONSTRUCT TIE-IN TO BRIDGE ROAD.

J. COMPLETE ANY UTILITY RELOCATIONS.

K. CONSTRUCT THE ENTRANCES AT LT. STA. 110+20 AND 152+55.99 THROUGH THE CSB.




PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

SCALE: 1"=100'

US 60
MOT PHASE II
STA. 100+00 TO STA. 115+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R07200MT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07200MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R73 |

PRELIMINARY NOT FOR CONSTRUCTION

115+00 120+00 125+00 130+00 135+00 140+00 145+00

MATCHLINE STA. 115+00

MATCHLINE STA. 145+00

US 60

US 60

BRIDGE ROAD

PI 51+50.00

STA. 142+96.56 US 60=
STA. 50+00 US 60 CONNECTOR 2

END CONST.
STA. 53+98.00

END CONST.
STA. 51+40.00

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0′ 100′ 200′ 400′

SCALE: 1"=100′

US 60
MOT PHASE II
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR07300MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07300MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R74 |

PRELIMINARY NOT FOR CONSTRUCTION

145+00

150+00

155+00

160+00

161+75

MATCHLINE STA. 145+00

PI 50+00.00

TEMP. 15"

TEMP. 18"
STA. 152+55.99 US 60=
STA. 50+00 KY 2610

PT 159+90.56

PC 150+84.71

PI 155+46.51

END CONST.
STA. 161+75.00

END CONST.
STA. 53+75.00

PI 55+47.93

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0' 100' 200' 400'

SCALE: 1"=100'

US 60
MOT PHASE II
STA. 145+00 TO STA. 161+75

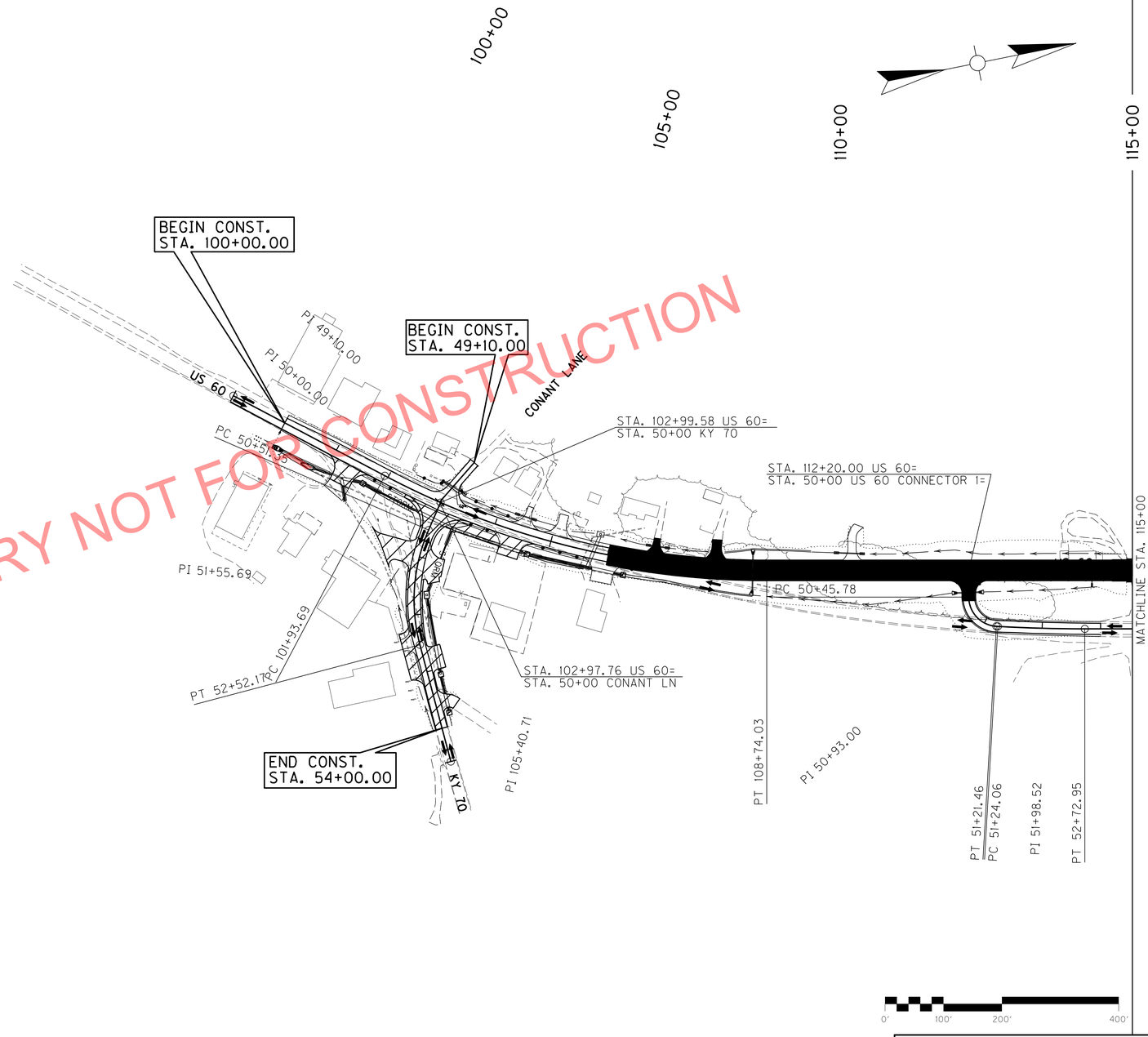
FILE NAME: C:\USERS\MWMSAT\DESKTOP\SHEETS\R07400MT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07400MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R75 |

PHASE III (ONCE NEW BRIDGE CONSTRUCTION IS COMPLETE)

A. CONSTRUCT THE MAINLINE ASPHALT BASE FROM STA. 108+50 TO STA. 154+00.

B. BEGIN CONSTRUCTION OF THE TIE-INS FROM STA. 106+00 TO 108+50 AND STA. 154+00 TO 161+75 PART-WIDTH UNDER TRAFFIC USING FLAG PERSONS.




PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

SCALE: 1"=100'

US 60
MOT PHASE III
STA. 100+00 TO STA. 115+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R07500MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07500MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R76 |

PRELIMINARY NOT FOR CONSTRUCTION

115+00 120+00 125+00 130+00 135+00 140+00 145+00

MATCHLINE STA. 115+00

US 60

END CONST.
STA. 53+98.00

BRIDGE ROAD

PI 51+50.00

STA. 142+96.56 US 60=
STA. 50+00 US 60 CONNECTOR 2

END CONST.
STA. 51+40.00

US 60

MATCHLINE STA. 145+00

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

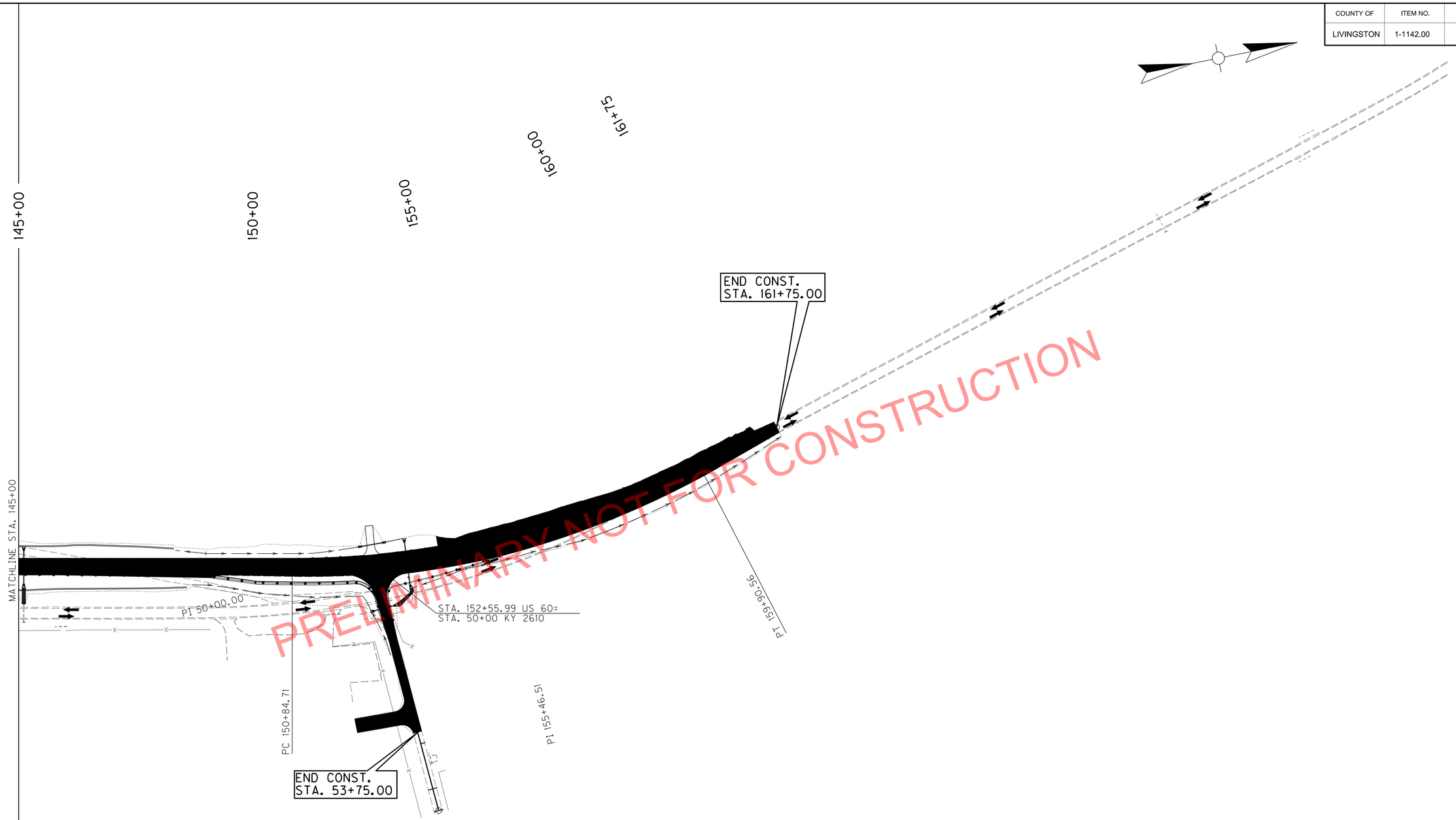
0′ 100′ 200′ 400′

SCALE: 1"=100′

US 60
MOT PHASE III
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR07600MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07600MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R77 |




PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0′ 100′ 200′ 400′

SCALE: 1"=100′

US 60
MOT PHASE III
STA. 145+00 TO STA. 161+75

MicroStation v8.11.7.443
E-SHEET NAME: R07700MT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR07700MT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R78 |

PHASE IV

A. SWITCH TRAFFIC TO THE NEW PAVEMENT AND COMPLETE THE TIE-INS TO US 60 THROUGH THE TOP LIFT OF BASE UTILIZING FLAGPERSONS.

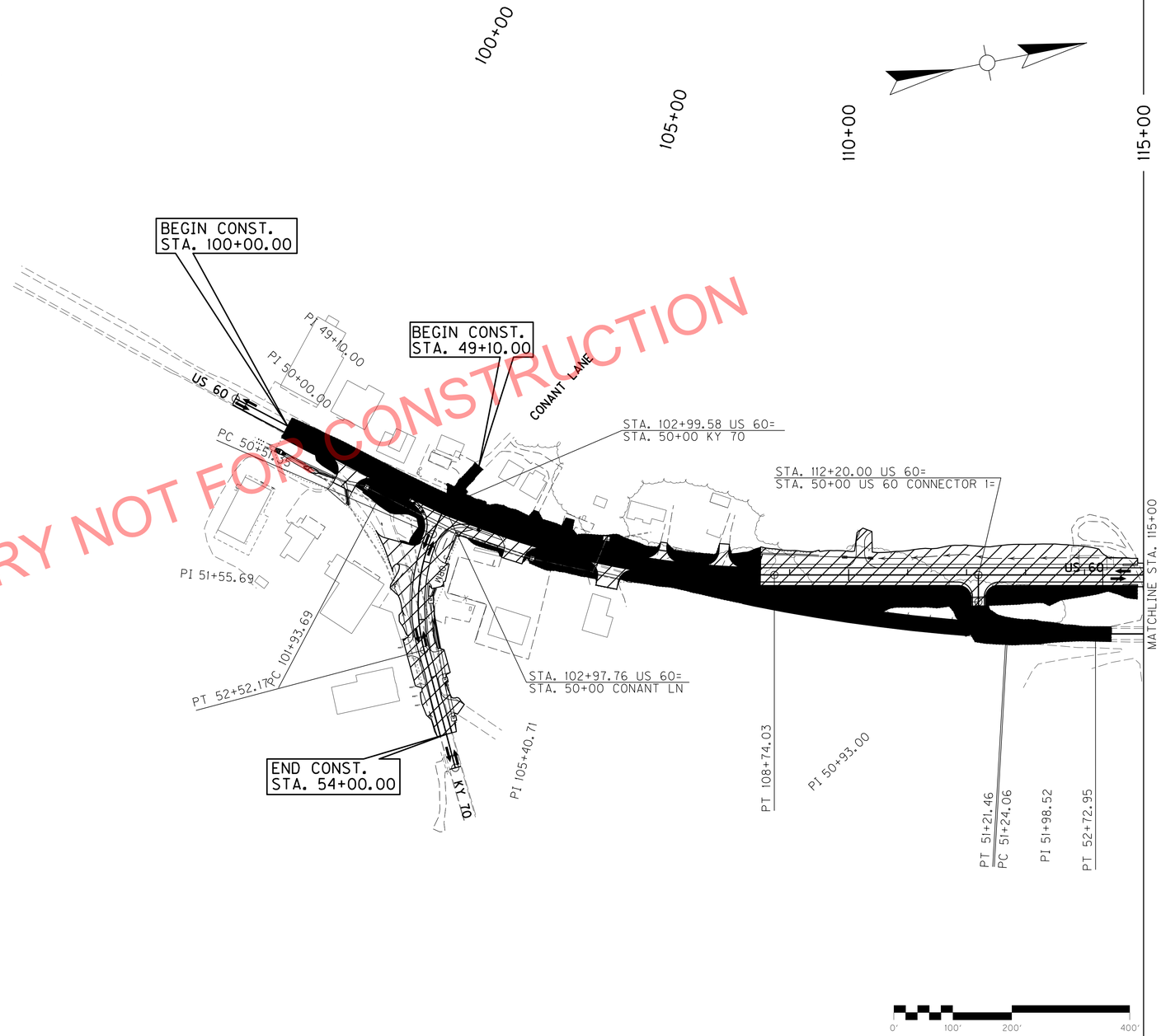
B. COMPLETE THE TAPER AND RIGHT TURN LANE TO KY 2610. THROUGH THE TOP LIFT OF BASE.

C. COMPLETE US 60 CONNECTOR #1 THROUGH THE TOP LIFT OF BASE.

D. CONSTRUCT KY 2610 THROUGH THE TOP LIFT OF BASE USING FLAGPERSONS AND TEMPORARY WIDENING, AS APPROVED BY THE ENGINEER.

E. REMOVE OLD US 60 IN AREAS DEPICTED IN THE PLANS & CROSS SECTIONS. COMPLETE 4:1 SLOPE RT. STA. 134+00 TO 135+50.

F. CONSTRUCT ALL REMAINING ENTRANCES, PIPES AND DITCHES THROUGHOUT THE PROJECT




PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

SCALE: 1"=100'

US 60
MOT PHASE IV
STA. 100+00 TO STA. 115+00

MicroStation v8.11.7.443
E-SHEET NAME: R07800MT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR07800MT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R79 |

PRELIMINARY NOT FOR CONSTRUCTION

115+00 120+00 125+00 130+00 135+00 140+00 145+00

MATCHLINE STA. 115+00

US 60

END CONST.
STA. 53+98.00

BRIDGE ROAD

PI 50+00.00

PI 51+50.00

STA. 142+96.56 US 60=
STA. 50+00 US 60 CONNECTOR 2

US 60

END CONST.
STA. 51+40.00

MATCHLINE STA. 145+00

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0' 100' 200' 400'

SCALE: 1"=100'

US 60
MOT PHASE IV
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\E-SHEETS\R07900MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R07900MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R80 |

PRELIMINARY NOT FOR CONSTRUCTION

145+00

150+00

155+00

160+00

161+75

MATCHLINE STA. 145+00

PI 50+00.00

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

PT 159+90.56

PC 150+84.71

PI 155+46.51

END CONST.
STA. 161+75.00

END CONST.
STA. 53+75.00

PI 55+47.93

## *MOT LEGEND*

| | |
|---|---|
| DIRECTION OF TRAVEL THIS PHASE | TRAFFIC DRUMS |
| CONSTRUCT THIS PHASE | TY. III BARRICADE |
| CONSTRUCTED IN PREVIOUS PHASE | REMOVE PAVEMENT |

0' 100' 200' 400'

SCALE: 1"=100'

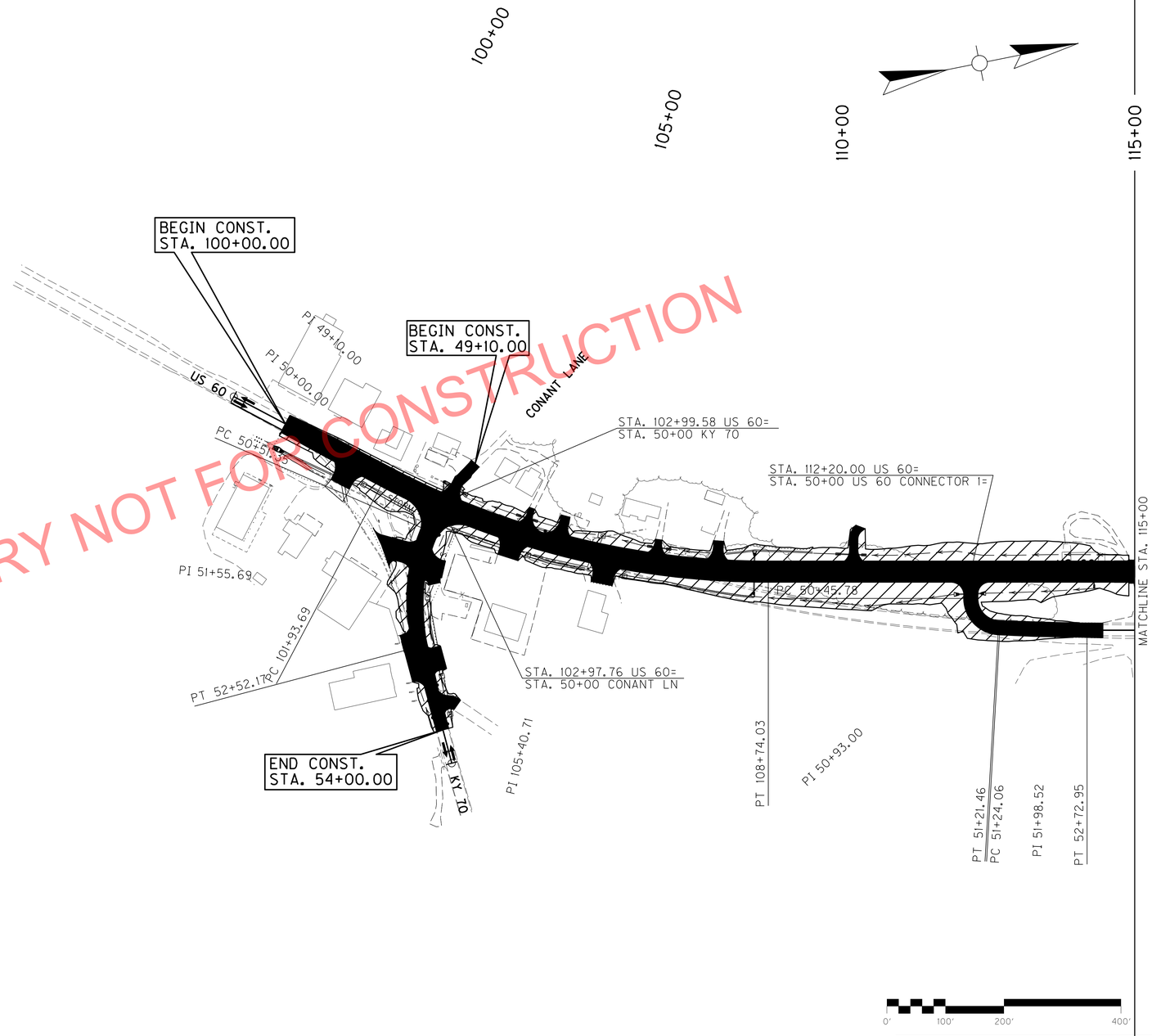
US 60
MOT PHASE IV
STA. 145+00 TO STA. 161+75

MicroStation v8.11.7.443
E-SHEET NAME: R08000MT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR08000MT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R81 |

PHASE V

A. CONSTRUCT THE FINAL SURFACE COURSE ON THE MAINLINE AND ALL APPROACH ROADS USING FLAGPERSONS AND STRIPE THE PAVEMENT.




PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

SCALE: 1"=100'

US 60
MOT PHASE V
STA. 100+00 TO STA. 115+00

MicroStation v8.11.7.443
E-SHEET NAME: R08100MT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R08100MT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R82 |

115+00 120+00 125+00 130+00 135+00 140+00 145+00

MATCHLINE STA. 115+00

US 60

END CONST.
STA. 53+98.00

BRIDGE ROAD

US 60

PI 51+50.00

STA. 142+96.56 US 60=
STA. 50+00 US 60 CONNECTOR 2

END CONST.
STA. 51+40.00

MATCHLINE STA. 145+00

PRELIMINARY NOT FOR CONSTRUCTION

## *MOT LEGEND*

| | |
|---|---|
| DIRECTION OF TRAVEL THIS PHASE | TRAFFIC DRUMS |
| CONSTRUCT THIS PHASE | TY. III BARRICADE |
| CONSTRUCTED IN PREVIOUS PHASE | REMOVE PAVEMENT |

0' 100' 200' 400'

SCALE: 1"=100'

US 60
MOT PHASE V
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ES\SHEETS\R08200MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R08200MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R83 |

145+00

150+00

155+00

160+00

161+75

END CONST.
STA. 161+75.00

PRELIMINARY NOT FOR CONSTRUCTION

MATCHLINE STA. 145+00

PI 50+00.00

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

PT 159+90.56

PC 150+84.71

PI 155+46.51

END CONST.
STA. 53+75.00

PI 55+47.93

## *MOT LEGEND*

- DIRECTION OF TRAVEL THIS PHASE
- CONSTRUCT THIS PHASE
- CONSTRUCTED IN PREVIOUS PHASE
- TRAFFIC DRUMS
- TY. III BARRICADE
- REMOVE PAVEMENT

0′ 100′ 200′ 400′

SCALE: 1"=100′

US 60
MOT PHASE V
STA. 145+00 TO STA. 161+75

MicroStation v8.11.7.443

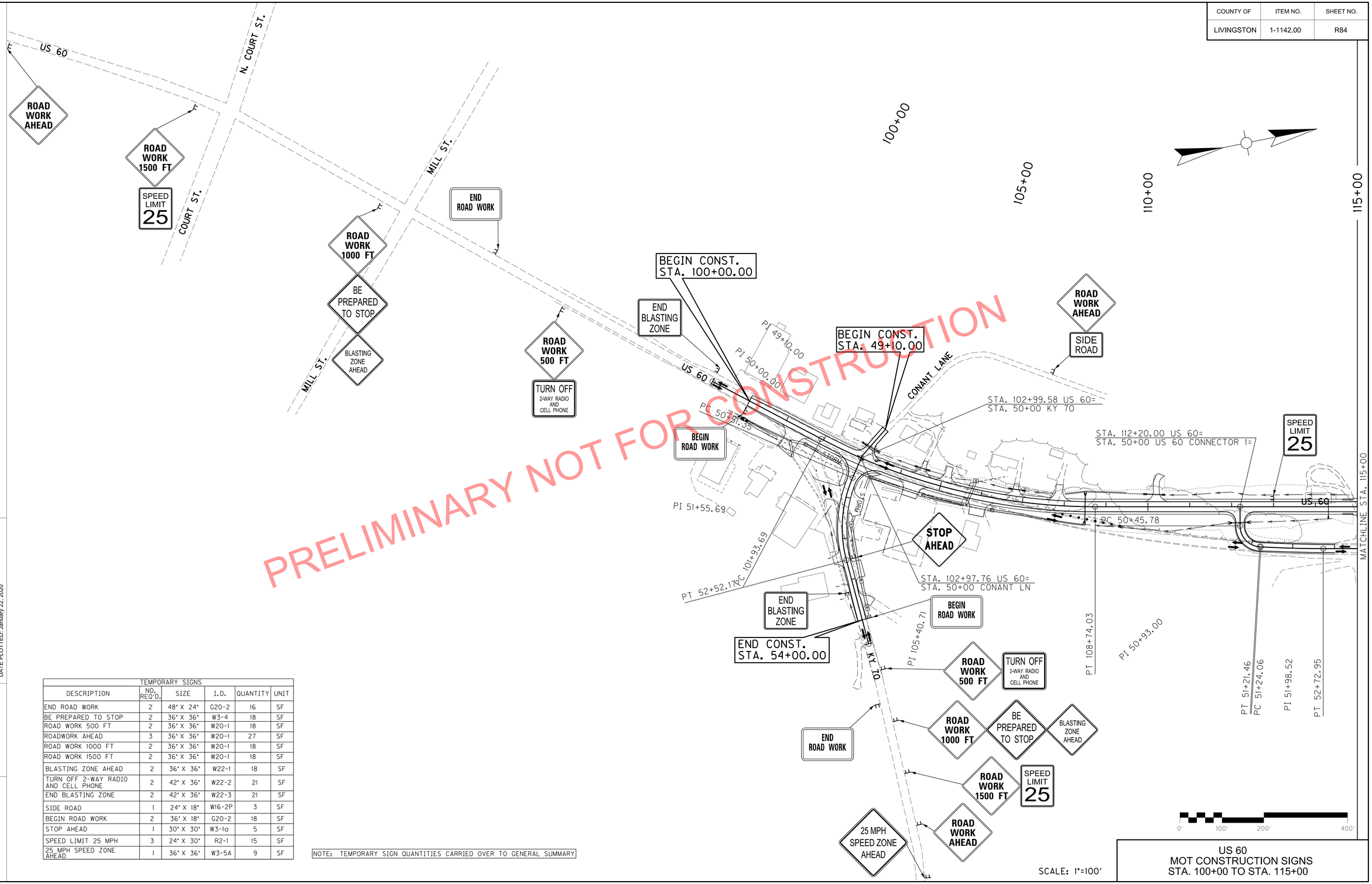
E-SHEET NAME: R08300MT

USER: mwimsatt
DATE PLOTTED: January 22, 2020

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR08300MT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R84 |

PRELIMINARY NOT FOR CONSTRUCTION




SCALE: 1"=100'

US 60
MOT CONSTRUCTION SIGNS
STA. 100+00 TO STA. 115+00

| TEMPORARY SIGNS | | | | | |
|---|---|---|---|---|---|
| DESCRIPTION | NO. REQ'D. | SIZE | I.D. | QUANTITY | UNIT |
| END ROAD WORK | 2 | 48" X 24" | G20-2 | 16 | SF |
| BE PREPARED TO STOP | 2 | 36" X 36" | W3-4 | 18 | SF |
| ROAD WORK 500 FT | 2 | 36" X 36" | W20-1 | 18 | SF |
| ROADWORK AHEAD | 3 | 36" X 36" | W20-1 | 27 | SF |
| ROAD WORK 1000 FT | 2 | 36" X 36" | W20-1 | 18 | SF |
| ROAD WORK 1500 FT | 2 | 36" X 36" | W20-1 | 18 | SF |
| BLASTING ZONE AHEAD | 2 | 36" X 36" | W22-1 | 18 | SF |
| TURN OFF 2-WAY RADIO AND CELL PHONE | 2 | 42" X 36" | W22-2 | 21 | SF |
| END BLASTING ZONE | 2 | 42" X 36" | W22-3 | 21 | SF |
| SIDE ROAD | 1 | 24" X 18" | W16-2P | 3 | SF |
| BEGIN ROAD WORK | 2 | 36" X 18" | G20-2 | 18 | SF |
| STOP AHEAD | 1 | 30" X 30" | W3-1a | 5 | SF |
| SPEED LIMIT 25 MPH | 3 | 24" X 30" | R2-1 | 15 | SF |
| 25 MPH SPEED ZONE AHEAD | 1 | 36" X 36" | W3-5A | 9 | SF |

NOTE: TEMPORARY SIGN QUANTITIES CARRIED OVER TO GENERAL SUMMARY

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\SHEETR08400MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R08400MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R85 |

PRELIMINARY NOT FOR CONSTRUCTION

115+00 120+00 125+00 130+00 135+00 140+00 145+00

MATCHLINE STA. 115+00

US 60

END CONST.
STA. 53+98.00

BRIDGE ROAD

PI 50+00.00

PI 51+50.00

STA. 142+96.56 US 60=
STA. 50+00 US 60 CONNECTOR 2

END CONST.
STA. 51+40.00

SPEED LIMIT 45

US 60

MATCHLINE STA. 145+00

| TEMPORARY SIGNS | | | | | |
|---|---|---|---|---|---|
| DESCRIPTION | NO. REQ'D. | SIZE | I.D. | QUANTITY | UNIT |
| SPEED LIMIT 45 MPH | 1 | 24" X 30" | R2-1 | 5 | SF |

NOTE: TEMPORARY SIGN QUANTITIES CARRIED OVER TO GENERAL SUMMARY

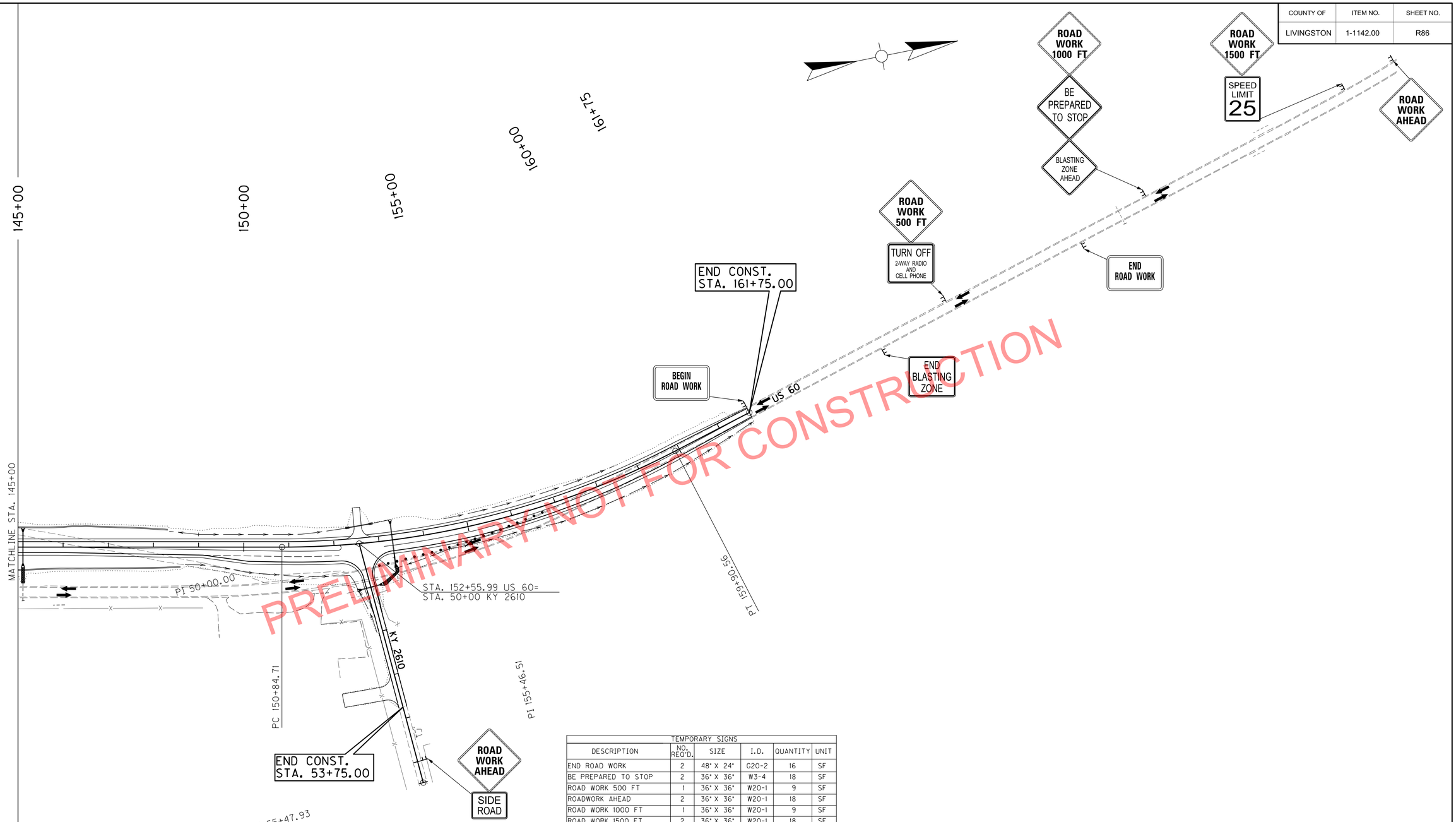
0' 100' 200' 400'

SCALE: 1"=100'

US 60
MOT CONSTRUCTION SIGNS
STA. 115+00 TO STA. 145+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR08500MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R08500MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R86 |




PRELIMINARY NOT FOR CONSTRUCTION

| TEMPORARY SIGNS | | | | | |
|---|---|---|---|---|---|
| DESCRIPTION | NO. REQ'D. | SIZE | I.D. | QUANTITY | UNIT |
| END ROAD WORK | 2 | 48" X 24" | G20-2 | 16 | SF |
| BE PREPARED TO STOP | 2 | 36" X 36" | W3-4 | 18 | SF |
| ROAD WORK 500 FT | 1 | 36" X 36" | W20-1 | 9 | SF |
| ROADWORK AHEAD | 2 | 36" X 36" | W20-1 | 18 | SF |
| ROAD WORK 1000 FT | 1 | 36" X 36" | W20-1 | 9 | SF |
| ROAD WORK 1500 FT | 2 | 36" X 36" | W20-1 | 18 | SF |
| BLASTING ZONE AHEAD | 2 | 36" X 36" | W22-1 | 18 | SF |
| TURN OFF 2-WAY RADIO AND CELL PHONE | 1 | 42" X 36" | W22-2 | 10.5 | SF |
| END BLASTING ZONE | 1 | 42" X 36" | W22-3 | 10.5 | SF |
| SIDE ROAD | 1 | 24" X 18" | W16-2P | 3 | SF |
| BEGIN ROAD WORK | 1 | 36" X 18" | G20-2 | 9 | SF |
| SPEED LIMIT 25 MPH | 1 | 24" X 30" | R2-1 | 5 | SF |

NOTE: TEMPORARY SIGN QUANTITIES CARRIED OVER TO GENERAL SUMMARY

0' 100' 200' 400'

SCALE: 1"=100'

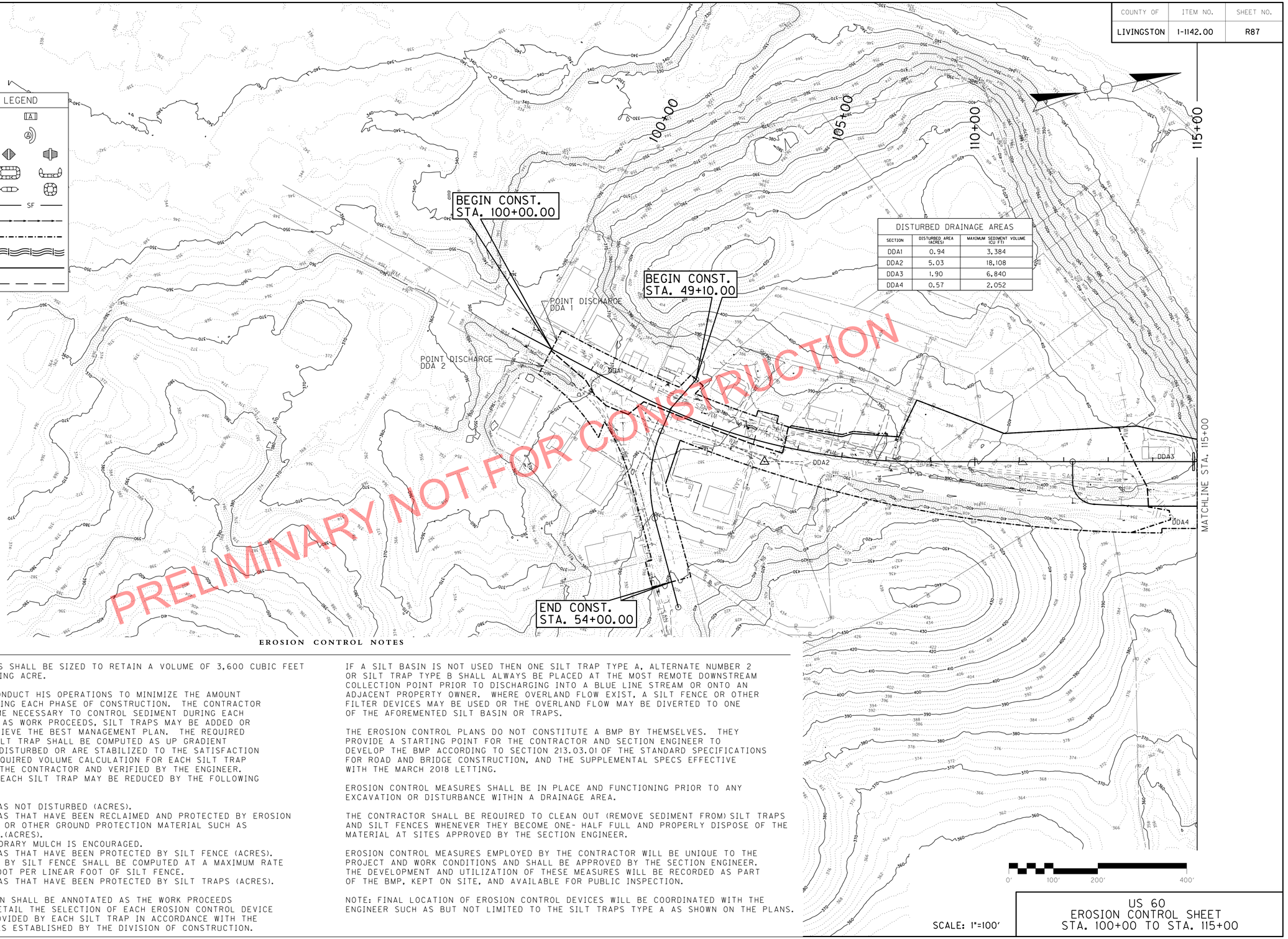
# US 60
# MOT CONSTRUCTION SIGNS
# STA. 145+00 TO STA. 161+75

FILE NAME: C:\USERS\MWIMSAT\DESKTOP\ESHEETR08600MT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R08600MT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R87 |

## EROSION CONTROL LEGEND

- SILT TRAP TYPE A ALTERNATE 1 — A
- SILT TRAP TYPE A ALTERNATE 2
- SILT TRAP TYPE B
- SILT TRAP TYPE C
- SILT FENCE — SF
- TEMPORARY SILT DITCH
- DISTURBED DRAINAGE AREA
- OVERLAND SHEET FLOW
- PROPOSED R/W
- PROPOSED EASEMENT




### DISTURBED DRAINAGE AREAS

| SECTION | DISTURBED AREA (ACRES) | MAXIMUM SEDIMENT VOLUME (CU FT) |
|---|---|---|
| DDA1 | 0.94 | 3,384 |
| DDA2 | 5.03 | 18,108 |
| DDA3 | 1.90 | 6,840 |
| DDA4 | 0.57 | 2,052 |

0′ 100′ 200′ 400′

SCALE: 1"=100′

US 60
EROSION CONTROL SHEET
STA. 100+00 TO STA. 115+00

## EROSION CONTROL NOTES

ALL SILT CONTROL DEVICES SHALL BE SIZED TO RETAIN A VOLUME OF 3,600 CUBIC FEET PER DISTURBED CONTRIBUTING ACRE.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED GROUND DURING EACH PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL COMPUTE THE VOLUME NECESSARY TO CONTROL SEDIMENT DURING EACH PHASE OF CONSTRUCTION. AS WORK PROCEEDS, SILT TRAPS MAY BE ADDED OR REMOVED IN ORDER TO ACHIEVE THE BEST MANAGEMENT PLAN. THE REQUIRED VOLUME AT EACH ADDED SILT TRAP SHALL BE COMPUTED AS UP GRADIENT CONTRIBUTING AREAS ARE DISTURBED OR ARE STABILIZED TO THE SATISFACTION OF THE ENGINEER. THE REQUIRED VOLUME CALCULATION FOR EACH SILT TRAP SHALL BE DETERMINED BY THE CONTRACTOR AND VERIFIED BY THE ENGINEER. THE REQUIRED VOLUME AT EACH SILT TRAP MAY BE REDUCED BY THE FOLLOWING AMOUNTS:

- UP GRADIENT AREAS NOT DISTURBED (ACRES).
- UP GRADIENT AREAS THAT HAVE BEEN RECLAIMED AND PROTECTED BY EROSION CONTROL BLANKET OR OTHER GROUND PROTECTION MATERIAL SUCH AS TEMPORARY MULCH.(ACRES).
- THE USE OF TEMPORARY MULCH IS ENCOURAGED.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT FENCE (ACRES). AREAS PROTECTED BY SILT FENCE SHALL BE COMPUTED AT A MAXIMUM RATE OF 100 SQUARE FOOT PER LINEAR FOOT OF SILT FENCE.
- UP GRADIENT AREAS THAT HAVE BEEN PROTECTED BY SILT TRAPS (ACRES).

THE EROSION CONTROL PLAN SHALL BE ANNOTATED AS THE WORK PROCEEDS BY THE CONTRACTOR TO DETAIL THE SELECTION OF EACH EROSION CONTROL DEVICE USED AND THE VOLUME PROVIDED BY EACH SILT TRAP IN ACCORDANCE WITH THE DOCUMENTATION PROCEDURES ESTABLISHED BY THE DIVISION OF CONSTRUCTION.

IF A SILT BASIN IS NOT USED THEN ONE SILT TRAP TYPE A, ALTERNATE NUMBER 2 OR SILT TRAP TYPE B SHALL ALWAYS BE PLACED AT THE MOST REMOTE DOWNSTREAM COLLECTION POINT PRIOR TO DISCHARGING INTO A BLUE LINE STREAM OR ONTO AN ADJACENT PROPERTY OWNER. WHERE OVERLAND FLOW EXIST, A SILT FENCE OR OTHER FILTER DEVICES MAY BE USED OR THE OVERLAND FLOW MAY BE DIVERTED TO ONE OF THE AFOREMENTED SILT BASIN OR TRAPS.

THE EROSION CONTROL PLANS DO NOT CONSTITUTE A BMP BY THEMSELVES. THEY PROVIDE A STARTING POINT FOR THE CONTRACTOR AND SECTION ENGINEER TO DEVELOP THE BMP ACCORDING TO SECTION 213.03.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SUPPLEMENTAL SPECS EFFECTIVE WITH THE MARCH 2018 LETTING.

EROSION CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONING PRIOR TO ANY EXCAVATION OR DISTURBANCE WITHIN A DRAINAGE AREA.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT (REMOVE SEDIMENT FROM) SILT TRAPS AND SILT FENCES WHENEVER THEY BECOME ONE- HALF FULL AND PROPERLY DISPOSE OF THE MATERIAL AT SITES APPROVED BY THE SECTION ENGINEER.

EROSION CONTROL MEASURES EMPLOYED BY THE CONTRACTOR WILL BE UNIQUE TO THE PROJECT AND WORK CONDITIONS AND SHALL BE APPROVED BY THE SECTION ENGINEER. THE DEVELOPMENT AND UTILIZATION OF THESE MEASURES WILL BE RECORDED AS PART OF THE BMP, KEPT ON SITE, AND AVAILABLE FOR PUBLIC INSPECTION.

NOTE: FINAL LOCATION OF EROSION CONTROL DEVICES WILL BE COORDINATED WITH THE ENGINEER SUCH AS BUT NOT LIMITED TO THE SILT TRAPS TYPE A AS SHOWN ON THE PLANS.


FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R08700EC.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R08700EC
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R88 |

DISTURBED DRAINAGE AREAS

| SECTION | DISTURBED AREA (ACRES) | MAXIMUM SEDIMENT VOLUME (CU FT) | |
|---|---|---|---|
| DDA3 | 1.90 | 6,840 | REPEATED |
| DDA4 | 0.57 | 2,052 | REPEATED |
| DDA5 | 5.42 | 19,512 | |
| DDA6 | 0.91 | 3,276 | |
| DDA7 | 2.83 | 10,188 | |
| DDA8 | 2.13 | 7,668 | |
| DDA9 | 0.65 | 2,340 | |

PRELIMINARY, NOT FOR CONSTRUCTION

115+00

120+00

125+00

130+00

135+00

140+00

145+00

MATCHLINE STA. 115+00

MATCHLINE STA. 145+00

DDA3

DDA4

DDA5

DDA6

DDA7

DDA8

DDA9

N 11°23'07" E

END CONST.
STA. 53+98.00

POINT DISCHARGE
DDA 7

END CONST.
STA. 51+40.00

0' 100' 200' 400'

SCALE: 1"=100'

US 60
EROSION CONTROL SHEET
STA. 115+00 TO STA. 145+00

MicroStation v8.11.7.443
E-SHEET NAME: R08800EC
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR08800EC.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R89 |

| DISTURBED DRAINAGE AREAS | | | |
|---|---|---|---|
| SECTION | DISTURBED AREA (ACRES) | MAXIMUM SEDIMENT VOLUME (CU FT) | |
| DDA8 | 2.13 | 7,668 | REPEATED |
| DDA9 | 0.65 | 2,340 | REPEATED |
| DDA10 | 0.06 | 216 | |
| DDA11 | 2.25 | 8,208 | |
| DDA12 | 1.16 | 4,176 | |
| DDA13 | 0.80 | 2,880 | |

145+00
150+00
155+00
160+00
161+75
55+00

END CONST.
STA. 161+75.00

END R/W
STA. 161+75.00

END CONST.
STA. 53+75.00

POINT DISCHARGE
DDA 12

POINT DISCHARGE
DDA 13

POINT DISCHARGE
DDA 11

POINT DISCHARGE
DDA 8

POINT DISCHARGE
DDA 10

DDA8
DDA9
DDA10
DDA11
DDA12
DDA13

PRELIMINARY NOT FOR CONSTRUCTION

0' 100' 200' 400'

SCALE: 1"=100'

US 60
EROSION CONTROL SHEET
STA. 145+00 TO STA. 161+75

FILE NAME: C:\USERS\MWMSATT\DESKTOP\SHEETR08900EC.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R08900EC
MicroStation v8.11.7.443

# GEOTECHNICAL SYMBOLS

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R90 |

## AASHTO Classification of Soils and Soil-Aggregate Mixtures

| General Classification | Granular Materials (35% or less passing 0.075 mm) | | | | | | | Silt-Clay Materials (More than 35% passing 0.075 mm) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Group Classification | A-1 | | A-3 | A-2 | | | | A-4 | A-5 | A-6 | A-7 |
| | A-1-a | A-1-b | | A-2-4 | A-2-5 | A-2-6 | A-2-7 | | | | A-7-5 A-7-6 |
| Sieve Analysis, Percent Passing | | | | | | | | | | | |
| 2.00 mm (No. 10) | 50 max | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 0.425 mm (No. 40) | 30 max | 50 max | 51 min | - - - | - - - | - - - | - - - | - - - | - - - | - - - | - - - |
| 0.075 mm (No. 200) | 15 max | 25 max | 10 max | 35 max | 35 max | 35 max | 35 max | 36 min | 36 min | 36 min | 36 min |
| Characteristics of Fraction Passing 0.425 mm (No. 40) | | | | | | | | | | | |
| Liquid Limit | - - - | | - - - | 40 max | 41 min | 40 max | 41 min | 40 max | 41 min | 40 max | 41 min |
| Plasticity Index | 6 max | | N.P. | 10 max | 10 max | 11 min | 11 min | 10 max | 10 max | 11 min | 11 min |

## Unified Soil Classifications

| MAJOR DIVISIONS | | SYMBOL | NAME |
|---|---|---|---|
| COARSE GRAINED SOILS | GRAVEL AND GRAVELLY SOILS | GW | Well-graded gravels or gravel-sand mixtures, little or no fines. |
| | | GP | Poorly graded gravels or gravel-sand mixtures, little or no fines. |
| | | GM | Silty gravels, gravel-sand-silt mixtures. |
| | | GC | Clayey gravels, gravel-sand-clay mixtures. |
| | SAND AND SANDY SOILS | SW | Well graded sands or gravelly sands, little or no fines. |
| | | SP | Poorly graded sands or gravelly sands, little or no fines. |
| | | SM | Silty sands, sand-silt mixtures. |
| | | SC | Clayey sands, sand-clay mixtures. |
| FINE GRAINED SOILS | SILTS AND CLAYS LL IS LESS THAN 50 | ML | Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity. |
| | | CL | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays silty clays, lean clays. |
| | SILTS AND CLAYS LL IS GREATER THAN 50 | MH | Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts. |
| | | CH | Inorganic clays of high plasticity, fat clays. |
| UNCLASSIFIED MATERIAL | | NONE | Non-classified material (i.e. overburden, pavement, slag, etc.) Include visual description. |

| | |
|---|---|
| AI | Activity Index |
| LI | Liquidity Index |
| S+C | Silt + Clay (% finer than No.200 Sieve) |
| ○ | Rockline Soundings |
| ◔ | Disturbed Sample Boring |
| ◎ | Undisturbed Sample Boring |
| ◉ | Undisturbed Sample Boring & Rock Core |
| ● | Rock Core |
| ⊹ | Slope Inclinometer Installation |
| | typical applications: ⊹ ◔ ◎ ◉ ● |
| OW | Observation Well |
| ➡ | Approximate Footing Elevation |
| ▼ (Date) | Water Elevation |
| VS (psf) | Field Vane Shear Strength |
| ▮ | Thin-walled Tube Sample |
| < | Standard Penetration Test Sample |
| N | Penetration Resistance |
| Qu (psf) | Unconfined Compressive Strength |
| UU (psf) | Unconsolidated Undrained Triaxial Strength |
| w% | Moisture Content |
| KY RQD | Rock Quality Designation (Kentucky Method) |
| STD RQD | Rock Quality Designation (Standard Method) |
| SDI(JS) | Slake Durability Index (Jar Slake Test) |
| REC | Core Recovery |
| ∅ | Angle of Internal Friction (Total Stress) |
| $\overline{\emptyset}$ | Angle of Internal Friction (Effective Stress) |
| c (psf) | Cohesion (Total Stress) |
| $\overline{c}$ (psf) | Cohesion (Effective Stress) |
| $\delta$ (pcf) | Total Unit Weight |
| RDZ | Rock Disintegration Zone |
| OB | Overburden Bench |
| IB | Intermediate Bench |
| R | Refusal |
| NR | Refusal Not Encountered |

LIMESTONE

SANDSTONE

DURABLE SHALE (SDI ≥ 95)

NONDURABLE SHALE (SDI < 95)

COAL

TALUS, MINE WASTE, FILL MATERIAL, BOULDERS, & ETC.

GRANULAR EMBANKMENT

STRUCTURE GRANULAR BACKFILL

SLOPE PROTECTION

PRELIMINARY NOT FOR CONSTRUCTION

GEOTECHNICAL SYMBOL SHEET

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\SHEET\R09000GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09000GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R91 |

# Geotechnical Notes

1. Clearing and grubbing of embankment areas shall be completed in accordance with Section 202 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

2. Removal of existing structures and other obstructions shall be completed in accordance with Section 203 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

3 All water wells and/or cisterns within the limits of construction, whether shown on the plans or not, shall be plugged in accordance with Section 708 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

4. All catch basins and manholes shall be filled and capped and all septic tanks shall be filled in accordance with Section 708 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

5. All channel changes and special ditches shall be constructed prior to placement of any embankment materials adjacent to them in accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Materials excavated from these areas may be utilized in construction of the embankments, but may require aeration to the proper moisture contents prior to compaction operations. No extra payment shall be permitted for re-handling, hauling, stockpiling and/or manipulating these materials.

6. In accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, the moisture content of embankment and subgrade materials shall not vary from the optimum moisture content, as determined by KM 64-511, by more than plus or minus two percent. This moisture content requirement shall have equal weight with the density requirement when determining the acceptability of embankment or subgrade construction. Refer to the family of curves for moisture-density relationships.

7. The Contractor shall conduct grading operations in such a manner that soil (free of rock larger than 4 inches and shale) from roadway excavation be stockpiled separately or otherwise manipulated so that ample quantities are available for a chemically stabilized roadbed meeting the requirements of Section 208 of the current Standard Specifications for Road and Bridge Construction. No direct payment will be allowed for such necessary manipulating as stockpiling, hauling and/or handling the material.

8. All soils, whether from roadway excavation or borrow, may require manipulation to obtain proper moisture contents prior to compaction. Direct payment shall not be permitted for re-handling, hauling, stockpiling and/or manipulating soils.

9. The Contractor is responsible for conducting any operations necessary to excavate the cut areas to the required typical sections. The cost of these operations shall be incidental to the earthwork.

10. As directed by the Engineer, existing bituminous concrete at the following approximate locations that is positioned less than three feet from proposed subgrade level shall be undercut a minimum of two feet beneath proposed subgrade level and backfilled with suitable subgrade material. This work shall be in accordance with Section 206 of the current Kentucky Department of Highways Standard Specifications for Road and Bridge Construction.

Approximate Station Limits

| Mainline | KY 70 |
|---|---|
| 100+00 to 107+60 | 51+50 to 54+00 |
| 155+50 to 161+75 | |
| US 60 CONNECTOR 1 | KY 2610 |
| 51+50 to 53+00 | 50+70 to 51+70 |

11. In order to provide a working platform for embankment construction, place non-erodible Granular Embankment over all soft and/or saturated areas that may be detected during construction, as directed by the Engineer. The required thickness is estimated to be 2 feet, but the actual locations and thickness may depend on seasonal fluctuations in the water table. The Granular Embankment shall be underlain with Fabric-Geotextile Class 1 (for Stabilization) in accordance with Sections 214 and 843 of the current Standard Specifications. Any outdated references to fabric "Type" in Section 214 shall be ignored.

12. Perforated pipes for subgrade drainage shall be installed at vertical sags and at the upgrade ends of structures, in accordance with Kentucky Department of Highways Standard Drawing RDP-005 and/or as directed by the Engineer. These drainage features shall be installed at the following approximate locations:

Approximate Station Limits

Mainline
100+00
114+30
145+50
161+75

US 60 CONNECTOR 1
52+67

Conant Lane
49+76

KY 70
50+20

13. Embankment foundation benches/slope serrations and perforated pipe underdrains shall be constructed at the following approximate locations in accordance with current Kentucky Department of Highways Standard Drawings RGX-010 and RDP-006, project cross-sections and as directed by the Engineer. If water is encountered during benching, construct a one (1) foot drainage blanket as directed by the Engineer, or contact the Geotechnical Branch for guidance. The drainage blanket shall consist of Coarse Aggregate for Rock Drainage Blanket in accordance with Section 805, wrapped with Fabric - Geotextile Class 1 in accordance with Section 214 and 843 of the current Standard Specifications. The benches shall be constructed one at a time beginning with the lowest bench. Each bench shall be backfilled prior to excavation of the next bench. This procedure should be followed to help maintain stability of the existing slopes in these areas.

Approximate Station Limits

Mainline
157+25 to 158+75, Right
159+75 to 160+25, Right

KY 70
51+75 to 52+25, Right

KY 2610
50+75 to 51+25, Left

14. Conventional transverse benches shall be constructed and perforated pipe underdrains installed at the following approximate locations in accordance with Kentucky Department of Highways Standard Drawings RDP-005 and RDP-006, project plans (as applicable), and as directed by the Engineer. Contrary to Standard Drawing RDP-006, transverse benches and perforated pipe underdrains shall be installed in both uphill and downhill transition areas between cuts and fills.

Approximate Station Limits

US 60 CONNECTOR 1
50+50

15. Construct a chemically stabilized soil subgrade with a CBR value of 4 for the underlying soil. The chemical stabilization shall consist of 8 inches of cement stabilization. Apply the cement in accordance with Section 208 of the Kentucky Standard Specifications for Road and Bridge Construction. Where soft and or wet subgrade is encountered during construction, the thickness of the chemically stabilized layer may be increased to a thickness of up to 16 inches to also serve as a working platform for subgrade stabilization. These adjustments shall be as directed by the Engineer and may depend on seasonal conditions or fluctuations in the ground water table.

16. In areas where the chemical stabilization is not feasible (such as cross-overs, tie-ins, entrances, etc.) the top twelve (12) inches of the subgrade shall be constructed with KY Coarse Aggregate No. 2, 3 or 23 in accordance with Section 805 of the Standard Specifications for Road and Bridge Construction, current edition. The aggregate shall be underlain with Fabric-Geotextile Class 1A meeting the requirements of AASHTO M 288 for Class 1A Fabric, and of the Special Note for Class 1A Geotextile Fabrics Used in Structural Pavement Designs. The aggregate shall be overlain with Fabric-Geotextile Class 1 in accordance with Sections 214 & 843 of the current Standard Specifications. Any outdated references to fabric "Type" in Section 214 shall be ignored. The lower layer of fabric may be omitted when the base of the rock roadbed is on bedrock. The aggregate shall daylight horizontally to the edge of embankment in fills and to the ditchline in cuts to ensure positive drainage. The actual locations will be determined by the Engineer during construction.

17. A pile cone shall be constructed at the north bridge approach embankments in accordance with Kentucky Standard Drawings RGX-100 and RGX-105, meeting the material requirements of the current edition of Special Provision 69.

18. Slope protection meeting the requirements of Section 703 and 805 of the Standard Specifications for Road and Bridge Construction, current edition, will be required at the north approach to the bridge over the Cumberland River from the ground surface to elevation 344.07 feet. Place Fabric- Geotextile Class 1, in accordance with Sections 214 and 843 of the Standard Specifications between the embankment and the protection. Any outdated references to fabric "Type" in Section 214 shall be ignored

19. Borrow material required to construct the project shall meet a minimum CBR value of 4.0. The Contractor shall conduct grading operations in such a manner that soil (free of rock larger than 4 inches and shale) from roadway excavation be stockpiled separately or otherwise manipulated so that ample quantities are available for a chemically stabilized roadbed meeting the requirements of Section 208 of the current Standard Specifications for Road and Bridge Construction. No direct payment will be allowed for such necessary manipulating as stockpiling, hauling and/or handling the material.

20. Upon identification of a borrow source for materials to construct the roadway embankment north of the river, the Contractor shall test the soils in terms of Unified Soil Classification System (USCS) classification testing and Standard Proctor Testing (Kentucky Method 64-511) to confirm suitability for use with cement stabilization. The testing shall be completed and submitted to the Department's Geotechnical Branch for approval prior to beginning construction of the top two (2) feet of the subgrade.

21. Some of the soil horizons and slopes on the project, as well as potential borrow soils, may be subject to erosion due to being non-plastic or having Plasticity Indices lower than 12. Necessary procedures, in accordance with Section 212 and 213 of the current Kentucky Standard Specifications for Road and Bridge Construction shall be followed during construction.

PRELIMINARY - NOT FOR CONSTRUCTION

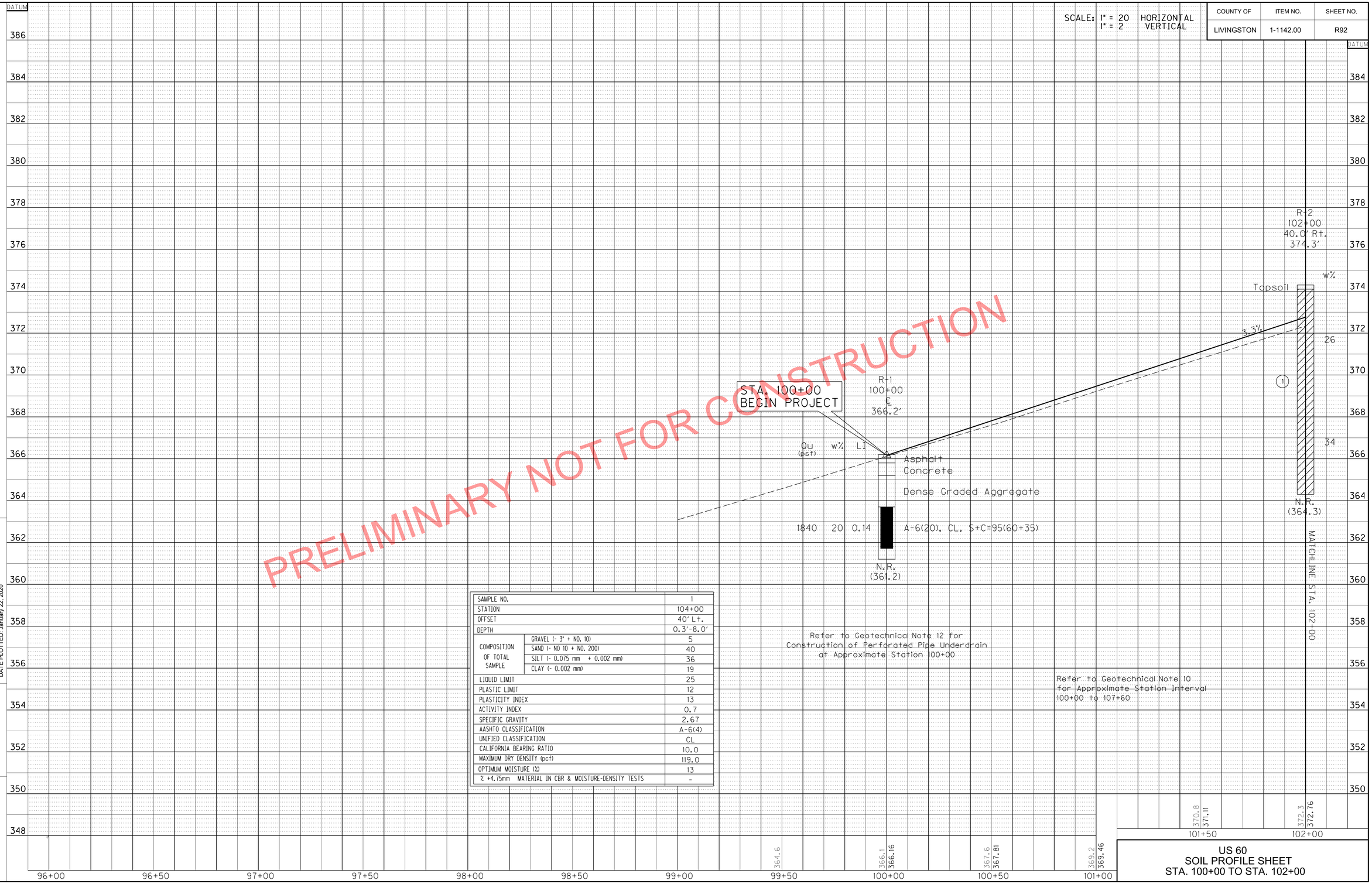
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R091OOGT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R091OOGT
MicroStation v8.11.7.443

US 60
GEOTECHNICAL NOTES

| SCALE: | | |
|---|---|---|
| 1" = 20 | HORIZONTAL | |
| 1" = 2 | VERTICAL | |

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R92 |

PRELIMINARY NOT FOR CONSTRUCTION




| | | |
|---|---|---|
| SAMPLE NO. | | 1 |
| STATION | | 104+00 |
| OFFSET | | 40' Lt. |
| DEPTH | | 0.3'-8.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 5 |
| | SAND (- NO 10 + NO. 200) | 40 |
| | SILT (- 0.075 mm + 0.002 mm) | 36 |
| | CLAY (- 0.002 mm) | 19 |
| LIQUID LIMIT | | 25 |
| PLASTIC LIMIT | | 12 |
| PLASTICITY INDEX | | 13 |
| ACTIVITY INDEX | | 0.7 |
| SPECIFIC GRAVITY | | 2.67 |
| AASHTO CLASSIFICATION | | A-6(4) |
| UNIFIED CLASSIFICATION | | CL |
| CALIFORNIA BEARING RATIO | | 10.0 |
| MAXIMUM DRY DENSITY (pcf) | | 119.0 |
| OPTIMUM MOISTURE (%) | | 13 |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - |

Refer to Geotechnical Note 12 for Construction of Perforated Pipe Underdrain at Approximate Station 100+00

Refer to Geotechnical Note 10 for Approximate Station Interval 100+00 to 107+60

# US 60
# SOIL PROFILE SHEET
# STA. 100+00 TO STA. 102+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR09200GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09200GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R93 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

PRELIMINARY NOT FOR CONSTRUCTION

VPI 49+70.00
Elev 375.69
L 20 FT
SD 74 FT

VPI 49+10.00
Elev 378.20

-4.2%

PVC 49+60.00
Elev 376.11

LO 49+76.13
Elev 375.77

PVT 49+80.00
Elev 375.79

4.0%

STA. 49+10
BEGIN CONST.

Refer to Geotechnical Note 12 for
Construction of Perforated Pipe Underdrain
at Approximate Station 49+76

376.5 376.53 375.5

49+00 49+50 50+00

CONANT LN

MATCHLINE STA. 102+00

STA. 102+99.58 US 60=
STA. 50+00 KY 70

STA. 102+97.76 US 60=
STA. 50+00 CONANT LN

R-2
102+00
40.0' Rt.
374.3'

w% Topsoil

26

34

N.R.
(364.3)

PVC 103+50.00
Elev 377.71

R-3
104+00
40.0' Lt.
380.0'

w% Topsoil

12

16

N.R.
(372.0)

PVT 104+50.00
Elev 380.89

VPI 104+00.00
Elev 379.36
L 100 FT
SD 4441 FT

Refer to Geotechnical Note 10
for Approximate Station Interval
100+00 to 107+60

R-4
106+00
40.0' Rt.
385.7'

w% Topsoil

19

N.R.
(376.7)

3.1%

R-6
108+00
35.0' Lt.
389.1'

w% Topsoil

21

19

N.R.
(381.1)

MATCHLINE STA. 108+00

| SAMPLE NO. | | 1 | 2 |
|---|---|---|---|
| STATION | | 104+00 | 108+00 |
| OFFSET | | 40' Lt. | 35' Lt. |
| DEPTH | | 0.3'-8.0' | 0.3'-8.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 5 | 10 |
| | SAND (- NO 10 + NO. 200) | 40 | 9 |
| | SILT (- 0.075 mm + 0.002 mm) | 36 | 51 |
| | CLAY (- 0.002 mm) | 19 | 30 |
| LIQUID LIMIT | | 25 | 43 |
| PLASTIC LIMIT | | 12 | 16 |
| PLASTICITY INDEX | | 13 | 27 |
| ACTIVITY INDEX | | 0.7 | 0.9 |
| SPECIFIC GRAVITY | | 2.67 | 2.62 |
| AASHTO CLASSIFICATION | | A-6(4) | A-7-6(21) |
| UNIFIED CLASSIFICATION | | CL | CL |
| CALIFORNIA BEARING RATIO | | 10.0 | 3.7 |
| MAXIMUM DRY DENSITY (pcf) | | 119.0 | 111.4 |
| OPTIMUM MOISTURE (%) | | 13 | 17 |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - | - |

372.3 372.76 | 373.9 374.41 | 375.5 376.06 | 377.1 377.71 | 378.6 379.33 | 380.2 380.89 | 381.7 382.42 | 383.3 383.94 | 384.7 385.47 | 386.2 387.00 | 386.8 388.52 | 386.9 390.05 | 389.0 391.58

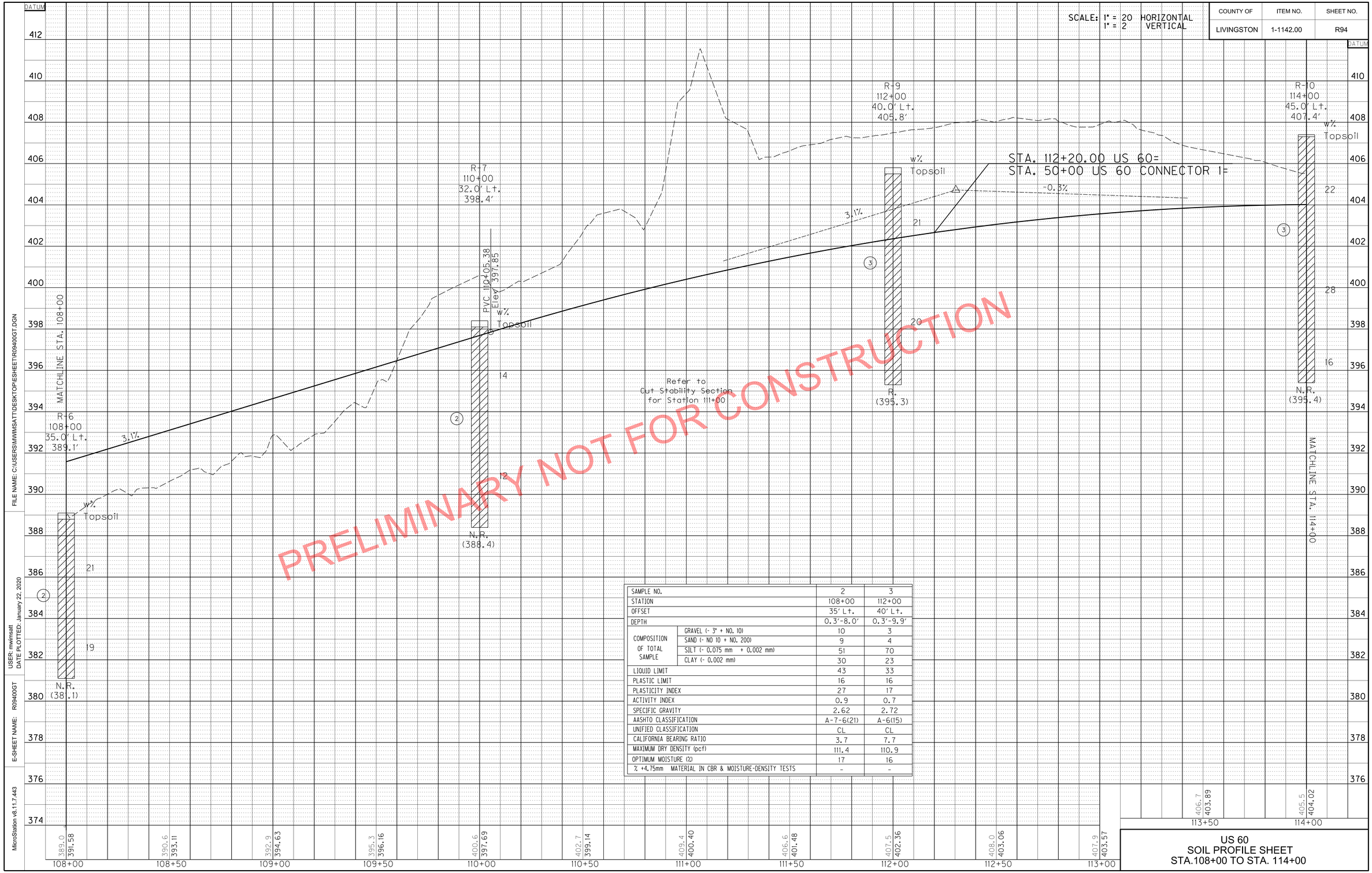
102+00 102+50 103+00 103+50 104+00 104+50 105+00 105+50 106+00 106+50 107+00 107+50 108+00

# US 60
# SOIL PROFILE SHEET
# STA. 102+00 TO STA. 108+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR09300GT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09300GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R94 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL




PRELIMINARY NOT FOR CONSTRUCTION

| SAMPLE NO. | | 2 | 3 |
|---|---|---|---|
| STATION | | 108+00 | 112+00 |
| OFFSET | | 35' Lt. | 40' Lt. |
| DEPTH | | 0.3'-8.0' | 0.3'-9.9' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 10 | 3 |
| | SAND (- NO 10 + NO. 200) | 9 | 4 |
| | SILT (- 0.075 mm + 0.002 mm) | 51 | 70 |
| | CLAY (- 0.002 mm) | 30 | 23 |
| LIQUID LIMIT | | 43 | 33 |
| PLASTIC LIMIT | | 16 | 16 |
| PLASTICITY INDEX | | 27 | 17 |
| ACTIVITY INDEX | | 0.9 | 0.7 |
| SPECIFIC GRAVITY | | 2.62 | 2.72 |
| AASHTO CLASSIFICATION | | A-7-6(21) | A-6(15) |
| UNIFIED CLASSIFICATION | | CL | CL |
| CALIFORNIA BEARING RATIO | | 3.7 | 7.7 |
| MAXIMUM DRY DENSITY (pcf) | | 111.4 | 110.9 |
| OPTIMUM MOISTURE (%) | | 17 | 16 |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - | - |

US 60
SOIL PROFILE SHEET
STA.108+00 TO STA. 114+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR09400GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09400GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R95 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 410 408 406 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372

R-10
114+00
45.0' Lt.
407.4'
w/
Topsoil

22
28
16

N.R.
(395.4)

PVT 114+55.38
Elev 403.94

BEGIN BRIDGE
STA. 114+92.83

MATCHLINE A
ELEV. 374.00

Groundline plotted 30 feet above page datum

MATCHLINE B
ELEV. 344.00

MATCHLINE C
ELEV. 326.00

Groundline plotted 80 feet above page datum

-0.3%

MATCHLINE STA. 120+00

MATCHLINE D
ELEV. 296.00

Groundline plotted 100 feet above page datum

ELEV. 281.73

Groundline plotted 50 feet above page datum

MATCHLINE STA. 114+00

HI 114+09.32
Elev 404.02

Refer to Geotechnical Note 12 for Construction of Perforated Pipe Underdrain at Approximate Station 114+30

| | | |
|---|---|---|
| SAMPLE NO. | | 3 |
| STATION | | 112+00 |
| OFFSET | | 40' Lt. |
| DEPTH | | 0.3'-9.9' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 3 |
| | SAND (- NO 10 + NO. 200) | 4 |
| | SILT (- 0.075 mm + 0.002 mm) | 70 |
| | CLAY (- 0.002 mm) | 23 |
| LIQUID LIMIT | | 33 |
| PLASTIC LIMIT | | 16 |
| PLASTICITY INDEX | | 17 |
| ACTIVITY INDEX | | 0.7 |
| SPECIFIC GRAVITY | | 2.72 |
| AASHTO CLASSIFICATION | | A-6(15) |
| UNIFIED CLASSIFICATION | | CL |
| CALIFORNIA BEARING RATIO | | 7.7 |
| MAXIMUM DRY DENSITY (pcf) | | 110.9 |
| OPTIMUM MOISTURE (%) | | 16 |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - |

PRELIMINARY NOT FOR CONSTRUCTION

MATCHLINE A ELEV. 374.00
MATCHLINE B ELEV. 344.00
MATCHLINE C ELEV. 326.00
MATCHLINE D ELEV. 296.00

405.5 404.02 | 402.3 403.96 | 399.8 403.78 | 373.6 403.61 | 349.8 403.44 | 339.0 403.26 | 336.8 403.09 | 335.2 402.91 | 334.0 402.74 | 333.8 402.57 | 322.0 402.39 | 298.2 402.22 | 281.7 402.04

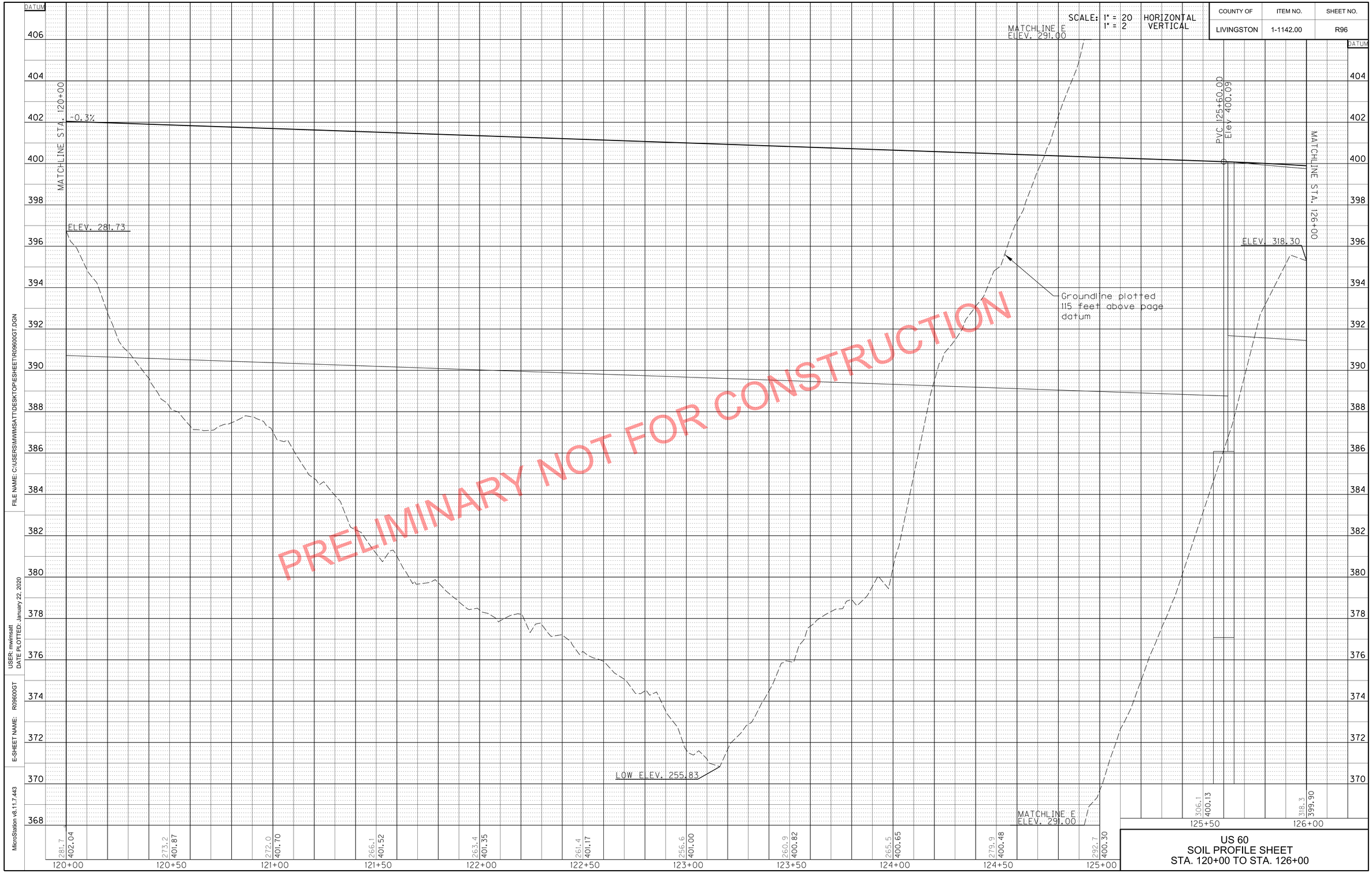
114+00 114+50 115+00 115+50 116+00 116+50 117+00 117+50 118+00 118+50 119+00 119+50 120+00

US 60
SOIL PROFILE SHEET
STA. 114+00 TO STA. 120+00

FILE NAME: C:\USERS\MWMSA~1\APPDATA\LOCAL\TEMP\ACPUBLISH_1000\R09500GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09500GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R96 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL




PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR09600GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09600GT
MicroStation v8.11.7.443

US 60
SOIL PROFILE SHEET
STA. 120+00 TO STA. 126+00

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R97 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372 370 368 366 364

MATCHLINE STA. 126+00

-0.3%

-4.0%

Groundline plotted 60 feet above page datum

ELEV. 337.23

BRIDGE
STA. 114+90 TO
STA. 134+00
BRIDGE TYPE
0° SKEW

PVT 130+60.00
Elev 389.22

-4.0%

ELEV. 318.30

MATCHLINE STA. 132+00

PRELIMINARY NOT FOR CONSTRUCTION

318.3 399.90 | 322.0 399.48 | 324.8 398.89 | 326.7 398.11 | 327.7 397.15 | 328.6 396.01 | 333.1 394.69 | 337.8 393.18 | 337.7 391.49 | 337.5 389.62 | 337.1 387.62

126+00 126+50 127+00 127+50 128+00 128+50 129+00 129+50 130+00 130+50 131+00

337.1 385.62 | 337.2 383.62

131+50 132+00

US 60
SOIL PROFILE SHEET
STA. 126+00 TO STA. 132+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR09700GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09700GT
MicroStation v8.11.7.443

| SAMPLE NO. | | 4 | 5 | 6 |
|---|---|---|---|---|
| STATION | | 136+00 | 140+00 | 150+00 |
| OFFSET | | 75' Rt. | 50' Rt. | 32' Lt. |
| DEPTH | | 5.0'-10.0' | 0.2'-10.0' | 0.5'-10.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 0 | 0 | 0 |
| | SAND (- NO 10 + NO. 200) | 46 | 14 | 89 |
| | SILT (- 0.075 mm + 0.002 mm) | 35 | 52 | 7 |
| | CLAY (- 0.002 mm) | 19 | 34 | 4 |
| LIQUID LIMIT | | 24 | 35 | NP |
| PLASTIC LIMIT | | 18 | 17 | NP |
| PLASTICITY INDEX | | 6 | 18 | NP |
| ACTIVITY INDEX | | 0.3 | 0.5 | N/A |
| SPECIFIC GRAVITY | | 2.61 | 2.73 | 2.73 |
| AASHTO CLASSIFICATION | | A-4(1) | A-6(15) | A-2-4(0) |
| UNIFIED CLASSIFICATION | | CL-ML | CL | SP-SM |
| CALIFORNIA BEARING RATIO | | N/A | N/A | N/A |
| MAXIMUM DRY DENSITY (pcf) | | N/A | N/A | 104.7 |
| OPTIMUM MOISTURE (%) | | N/A | N/A | 15 |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - | - | - |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R98 |

DATUM 390 388 386 384 382 380 378 376 374 372 370 368 366 364 362 360 358 356 354 352

MATCHLINE STA. 132+00

Refer to Embankment Stability Section for Station 134+00

END BRIDGE
STA. 134+00.66

-4.0%

R-12
136+00
75.0' Lt.
339.3'

w% Topsoil

4 20

5 20

6 24

23

23

N.R.
(315.3)

ELEV. 344.05

PVC 1377.80
Elev 360.75

MATCHLINE STA. 138+00

ELEV. 337.23

Groundline plotted 20 feet above page datum

340 338 336 334 332 330 328 326 324 322 320 318 316 314

| 337.2 383.62 | 337.6 381.62 | 337.9 379.62 | 338.6 377.62 | 339.3 375.62 | 340.0 373.62 | 340.7 371.62 | 341.1 369.62 | 341.8 367.62 | 342.1 365.62 | 342.7 363.62 | 343.5 361.62 | 344.0 359.65 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 132+00 | 132+50 | 133+00 | 133+50 | 134+00 | 134+50 | 135+00 | 135+50 | 136+00 | 136+50 | 137+00 | 137+50 | 138+00 |

PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR09800GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09800GT
MicroStation v8.11.7.443

US 60
SOIL PROFILE SHEET
STA. 132+00 TO STA. 138+00

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R99 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332 330 328 326

MATCHLINE STA. 138+00

L 450 FT
SD 538 FT
VPI 139+96.80
Elev 351.75

-4.0%

-0.4%

PVT 142+21.80
Elev 350.95

-0.4%

MATCHLINE STA. 144+00

R-13
140+00
50.0' Rt.
343.9'

w%
Topsoil
22
22
(5)
N.R.
(333.9)

R-14
144+00
50.0' Rt.
345.3'

w%
Topsoil
19
17
(5)
N.R.
(335.3)

| SAMPLE NO. | | 5 |
|---|---|---|
| STATION | | 140+00 |
| OFFSET | | 50' Rt. |
| DEPTH | | 0.2'-10.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 0 |
| | SAND (- NO 10 + NO. 200) | 14 |
| | SILT (- 0.075 mm + 0.002 mm) | 52 |
| | CLAY (- 0.002 mm) | 34 |
| LIQUID LIMIT | | 35 |
| PLASTIC LIMIT | | 17 |
| PLASTICITY INDEX | | 18 |
| ACTIVITY INDEX | | 0.5 |
| SPECIFIC GRAVITY | | 2.73 |
| AASHTO CLASSIFICATION | | A-6(15) |
| UNIFIED CLASSIFICATION | | CL |
| CALIFORNIA BEARING RATIO | | N/A |
| MAXIMUM DRY DENSITY (pcf) | | N/A |
| OPTIMUM MOISTURE (%) | | N/A |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - |

PVC 50+15.00
Elev 350.35

-2.0%

PVT 50+35.00
Elev 348.74

-6.0%

PVC 50+42.50
Elev 347.85

VPI 50+65.00
Elev 345.17
L 45 FT
SD 42 FT

LO 50+81.03
Elev 345.55

PVT 50+87.50
Elev 345.62

VPI 50+89.53
Elev 345.66

STA. 50+89.53
END CONST.

2.0%

345.8 347.04 345.9
50+00 50+50 51+00

US 60 CONNECTOR 2

344.0 359.65 | 344.6 357.87 | 344.8 356.29 | 344.6 354.91 | 344.2 353.73 | 344.1 352.76 | 344.0 351.99 | 344.4 351.42 | 344.9 351.05 | 345.4 350.86 | 345.9 350.68

138+00 138+50 139+00 139+50 140+00 140+50 141+00 141+50 142+00 142+50 143+00

345.9 350.50 | 345.3 350.32

143+50 144+00

US 60
SOIL PROFILE SHEET
STA. 138+00 TO STA. 144+00

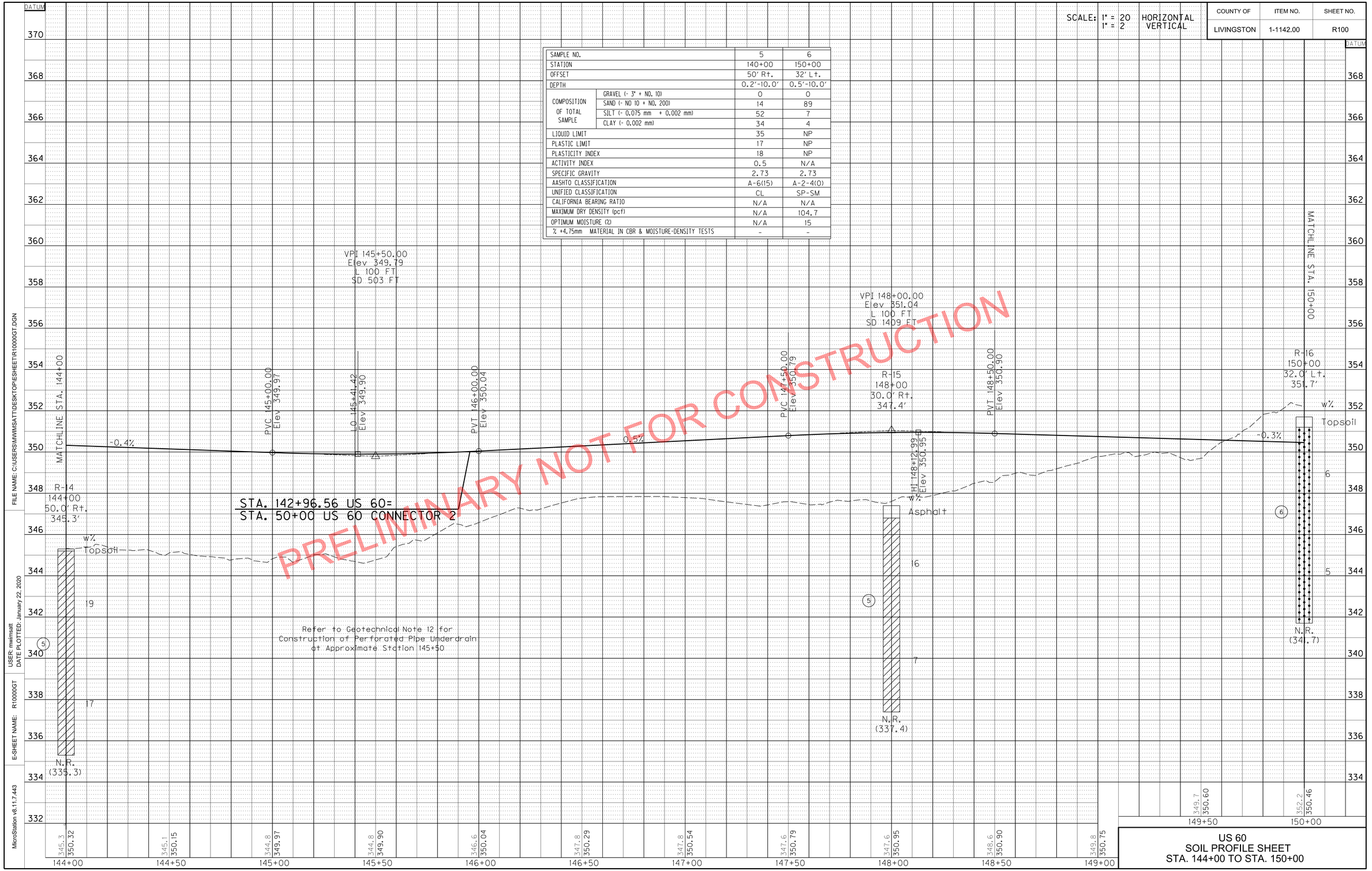
PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ES\SHEET\R09900GT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R09900GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R100 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| SAMPLE NO. | | 5 | 6 |
|---|---|---|---|
| STATION | | 140+00 | 150+00 |
| OFFSET | | 50' Rt. | 32' Lt. |
| DEPTH | | 0.2'-10.0' | 0.5'-10.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 0 | 0 |
| | SAND (- NO 10 + NO. 200) | 14 | 89 |
| | SILT (- 0.075 mm + 0.002 mm) | 52 | 7 |
| | CLAY (- 0.002 mm) | 34 | 4 |
| LIQUID LIMIT | | 35 | NP |
| PLASTIC LIMIT | | 17 | NP |
| PLASTICITY INDEX | | 18 | NP |
| ACTIVITY INDEX | | 0.5 | N/A |
| SPECIFIC GRAVITY | | 2.73 | 2.73 |
| AASHTO CLASSIFICATION | | A-6(15) | A-2-4(0) |
| UNIFIED CLASSIFICATION | | CL | SP-SM |
| CALIFORNIA BEARING RATIO | | N/A | N/A |
| MAXIMUM DRY DENSITY (pcf) | | N/A | 104.7 |
| OPTIMUM MOISTURE (%) | | N/A | 15 |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - | - |




PRELIMINARY NOT FOR CONSTRUCTION

US 60
SOIL PROFILE SHEET
STA. 144+00 TO STA. 150+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR10000GT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R10000GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R101 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| SAMPLE NO. | | 6 | 7 |
|---|---|---|---|
| STATION | | 150+00 | 156+00 |
| OFFSET | | 32' Lt. | 20' Rt. |
| DEPTH | | 0.5'-10.0' | 0.2'-10.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 0 | 0 |
| | SAND (- NO 10 + NO. 200) | 89 | 58 |
| | SILT (- 0.075 mm + 0.002 mm) | 7 | 26 |
| | CLAY (- 0.002 mm) | 4 | 16 |
| LIQUID LIMIT | | NP | NP |
| PLASTIC LIMIT | | NP | NP |
| PLASTICITY INDEX | | NP | NP |
| ACTIVITY INDEX | | N/A | N/A |
| SPECIFIC GRAVITY | | 2.73 | 2.67 |
| AASHTO CLASSIFICATION | | A-2-4(0) | A-4(0) |
| UNIFIED CLASSIFICATION | | SP-SM | SM |
| CALIFORNIA BEARING RATIO | | N/A | N/A |
| MAXIMUM DRY DENSITY (pcf) | | N/A | N/A |
| OPTIMUM MOISTURE (%) | | N/A | N/A |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - | - |

DATUM 368 366 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332 330

MATCHLINE STA. 150+00

R-16
150+00
32.0' Lt.
351.7'

w%
Topsoil
6
5
N.R.
(341.7)

R-17
152+00
32.0' Rt.
347.1'

w%
Topsoil
6
18
N.R.
(342.1)

STA. 152+55.99 US 60=
STA. 50+00 KY 2610

-0.3%

R-18
154+00
40.0' Lt.
343.4

w%
Topsoil
7
16
11
N.R.
(333.4)

MATCHLINE STA. 156+00

R-19
156+00
20.0' Rt.
347.7'

w%
Topsoil
7
23
19
N.R.
(337.7)

Refer to Geotechnical Note 10
for Approximate Station Interval
155+50 to 161+75

| 150+00 | 150+50 | 151+00 | 151+50 | 152+00 | 152+50 | 153+00 | 153+50 | 154+00 | 154+50 | 155+00 | 155+50 | 156+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 352.2 / 350.46 | 351.2 / 350.31 | 351.3 / 350.16 | 349.9 / 350.02 | 347.3 / 349.87 | 344.9 / 349.72 | 343.6 / 349.58 | 342.3 / 349.43 | 344.7 / 349.28 | 347.1 / 349.13 | 347.4 / 348.99 | 347.6 / 348.84 | 347.5 / 348.69 |

PRELIMINARY NOT FOR CONSTRUCTION

US 60
SOIL PROFILE SHEET
STA. 150+00 TO STA. 156+00

FILE NAME: C:\USERS\MWMSA\DESKTOP\ESHEETR10100GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R10100GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R102 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

| SAMPLE NO. | | 7 | 8 |
|---|---|---|---|
| STATION | | 156+00 | 160+00 |
| OFFSET | | 20' Rt. | 35' Rt. |
| DEPTH | | 0.2'-10.0' | 0.4'-5.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 0 | 1 |
| | SAND (- NO 10 + NO. 200) | 58 | 13 |
| | SILT (- 0.075 mm + 0.002 mm) | 26 | 54 |
| | CLAY (- 0.002 mm) | 16 | 32 |
| LIQUID LIMIT | | NP | 30 |
| PLASTIC LIMIT | | NP | 14 |
| PLASTICITY INDEX | | NP | 16 |
| ACTIVITY INDEX | | N/A | 0.5 |
| SPECIFIC GRAVITY | | 2.67 | 2.42 |
| AASHTO CLASSIFICATION | | A-4(0) | A-6(12) |
| UNIFIED CLASSIFICATION | | SM | CL |
| CALIFORNIA BEARING RATIO | | N/A | N/A |
| MAXIMUM DRY DENSITY (pcf) | | N/A | N/A |
| OPTIMUM MOISTURE (%) | | N/A | N/A |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - | - |

PRELIMINARY NOT FOR CONSTRUCTION

MATCHLINE STA. 156+00

R-19
156+00
20.0' Rt.
347.7'

w%
Topsoil
23
19
N.R.
(337.7)

-0.3%

R-20
158+00
20.0' Lt.
345.3'

w%
Topsoil
19
N.R.
(340.3)

R-21
160+00
35.0' Rt.
344.4'

w%
Topsoil
20
N.R.
(339.4)

R-22
161+75
℄
347.1'

Qu (psf) w% LI
940 24 1.01

Asphalt
Concrete
A-6(7), CL, S+C=86(66+20)
N.R.
(342.1)

STA. 161+75
END PROJECT

Refer to Geotechnical Note 10
for Approximate Station Interval
155+50 to 161+75

Refer to Geotechnical Note 12 for
Construction of Perforated Pipe Underdrain
at Approximate Station 161+75

Refer to Geotechnical Note 13 for
Construction of Embankment Foundation Benches
within the Approximate Station Interval
from 157+25 to 158+75, Right

Refer to Geotechnical Note 13 for
Construction of Embankment Foundation Benches
within the Approximate Station Interval
from 159+75 to 160+25, Right

| 156+00 | 156+50 | 157+00 | 157+50 | 158+00 | 158+50 | 159+00 | 159+50 | 160+00 | 160+50 | 161+00 | 161+50 | 162+00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 347.5 348.69 | 347.3 348.55 | 346.6 348.40 | 346.7 348.25 | 347.3 348.11 | 347.4 347.96 | 347.4 347.81 | 347.3 347.67 | 347.3 347.52 | 347.3 347.37 | 347.2 347.23 | 347.1 347.08 | |

DATUM 370 368 366 364 362 360 358 356 354 352 350 348 346 344 342 340 338 336 334 332

US 60
SOIL PROFILE SHEET
STA. 156+00 TO STA. 161+75

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR10200GT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R10200GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R103 |

SCALE: 1" = 20 HORIZONTAL
1" = 2 VERTICAL

DATUM

408
406
404
402
400
398
396
394
392
390
388
386
384
382
380
378
376
374
372
370

STA. 54+00
END CONST.

PVT 54+00.00
Elev 401.10

R-23
53+50
20.0' Lt.
397.6'

w/
Topsoil

9

PVCC 53+00.00
Elev 394.45

N.R.
(389.6)

6

PVC 52+00.00
Elev 386.94

Refer to Geotechnical Note 12 for
Construction of Perforated Pipe Underdrain
at Approximate Station 50+20

PVT 51+25.00
Elev 380.93

8.0'

Refer to Geotechnical Note 10
for Approximate Station Interval
51+50 to 54+00

STA. 50+00 KY 70=
STA. 102+99.58 US 60

PVC 50+25.00
Elev 376.42

1.0%

Refer to Geotechnical Note 13 for
Construction of Embankment Foundation Benches
within the Approximate Station Interval
from 51+75 to 52+25, Right

| | | |
|---|---|---|
| SAMPLE NO. | | 9 |
| STATION | | 53+50 |
| OFFSET | | 20' Lt. |
| DEPTH | | 0.2'-8.0' |
| COMPOSITION OF TOTAL SAMPLE | GRAVEL (- 3" + NO. 10) | 2 |
| | SAND (- NO 10 + NO. 200) | 4 |
| | SILT (- 0.075 mm + 0.002 mm) | 38 |
| | CLAY (- 0.002 mm) | 56 |
| LIQUID LIMIT | | 72 |
| PLASTIC LIMIT | | 18 |
| PLASTICITY INDEX | | 54 |
| ACTIVITY INDEX | | 1.0 |
| SPECIFIC GRAVITY | | 2.61 |
| AASHTO CLASSIFICATION | | A-7-6(56) |
| UNIFIED CLASSIFICATION | | CH |
| CALIFORNIA BEARING RATIO | | N/A |
| MAXIMUM DRY DENSITY (pcf) | | N/A |
| OPTIMUM MOISTURE (%) | | N/A |
| % +4.75mm MATERIAL IN CBR & MOISTURE-DENSITY TESTS | | - |

PRELIMINARY NOT FOR CONSTRUCTION

375.5
375.6 376.89
379.1 379.14
382.8 382.93
386.9 386.94
390.7 390.82
394.3 394.45
397.8 397.86
401.1 401.10
403.6

50+00 50+50 51+00 51+50 52+00 52+50 53+00 53+50 54+00 54+50 55+00

KY 70
SOIL PROFILE SHEET
STA. 50+00 TO STA. 54+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR10300GT.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R10300GT
MicroStation v8.11.7.443

| SCALE: | 1" = 20 | HORIZONTAL |
|---|---|---|
| | 1" = 2 | VERTICAL |

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R104 |

DATUM

410
418
416
414
412
410
408
406
404
402
400
398
396
394
392
390

Refer to Geotechnical Note 14 for
Construction of Transverse Benching
at the Approximate Station 50+50

STA. 50+00 US 60 CONNECTOR 1=
STA. 112+20.00 US 60

STA. 50+38
18" PIPE @2° SK. L.T.

PVC 50+55.00
Elev 400.50

4.0%

18" PIPE

PVT 51+05.00
Elev 398.05

6.0%

PVC 51+20.00
Elev 397.15

Refer to Geotechnical Note 12 for
Construction of Perforated Pipe Underdrain
at Approximate Station 52+67

Refer to Geotechnical Note 10
for Approximate Station Interval
51+50 to 53+00

LO 52+66.86
Elev 392.77

PVT 52+80.00
Elev 392.80

STA. 53+00
END CONST.

0.5%

407.7
50+00

401.2
400.81
50+50

392.0
398.34
51+00

392.4
395.54
51+50

392.6
393.68
52+00

392.7
392.82
52+50

392.9
392.91
53+00

PRELIMINARY NOT FOR CONSTRUCTION

US 60 CONNECTOR 1
SOIL PROFILE SHEET
STA. 50+00 TO STA. 53+00

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEETR10400GT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R10400GT
MicroStation v8.11.7.443

SCALE: 1" = HORIZONTAL
1" = VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R105 |

DATUM
368
366
364
362
360
358
356
354
352
350
348
346
344
342
340
338
336
334
332
330

PVC 50+45.00
Elev 351.06

PVT 50+75.00
Elev 350.24

PVC 50+95.00
Elev 349.34

PVT 51+65.00
Elev 347.25

STA. 51+70
END CONST.

A=1.0%

-4.5%

+4.5%

VPI 50+30.76
Elev 351.21

Refer to Geotechnical Note 10
for Approximate Station Interval
50+70 to 51+70

STA. 50+00 KY 2610=
STA. 152+55.99 US 60=
STA. 553+04.17 BRIDGE RD (CR 1265)

Refer to Geotechnical Note 13 for
Construction of Embankment Foundation Benches
within the Approximate Station Interval
from 50+75 to 51+25, Left

344.7
348.4 351.00
348.9 349.12
347.4 347.52
346.8
346.6
346.5
346.6
346.8
346.9
346.8

50+00 50+50 51+00 51+50 52+00 52+50 53+00 53+50 54+00 54+50 55+00

PRELIMINARY NOT FOR CONSTRUCTION

KY 2610
SOIL PROFILE SHEET
STA. 50+00 TO STA. 52+40

FILE NAME: C:\USERS\MWMSATT\DESKTOP\SHEETR10500GT.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R10500GT
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R106 |

| ROCK ROAD BED | REFILL | EMB. BENCH | GRAN. EMB. | COM | EMB | ROCK EXC | DT LT | DT RT |
|---|---|---|---|---|---|---|---|---|




PRELIMINARY NOT FOR CONSTRUCTION

NOTE:

1. This sheet presents geotechnical data and recommendations. Refer to project plans, profiles, and cross sections for final alignment and grade.
2. Auger Refusal indicates the beginning of rock-like resistance to the advancement of the augers. This may indicate the beginning of weathered bedrock, boulders or rock remnants. An exact determination cannot be made without performing rock coring.
3. Surface elevations are referenced to Mean Sea Level.

150 100 50 0 50 100 150

SCALE: 1" = 10' HORIZONTAL
1" = 10' VERTICAL

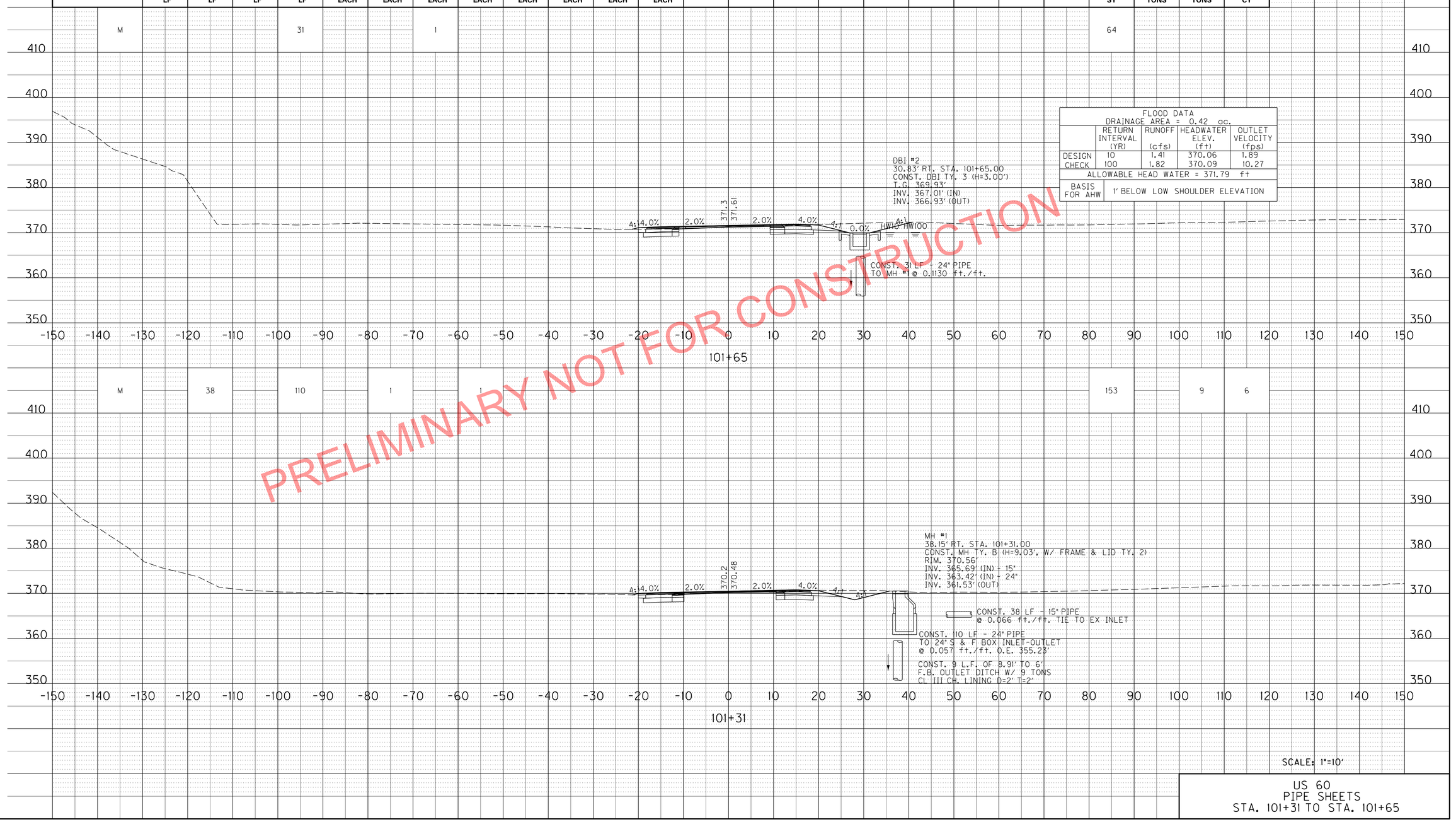
US 60
CUT STABILITY SECTION
STA. 111+00

MicroStation v8.11.7.443
E-SHEET NAME: R10600GT
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEETR10600GT.DGN

# PIPE DRAINAGE SHEET 1 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R107 |

| | COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | SY | TONS | TONS | CY |
| | | M | | | | 31 | | | 1 | | | | | | | | | | | | | 64 | | | |
| | | M | | 38 | | 110 | | 1 | | 1 | | | | | | | | | | | | 153 | | 9 | 6 |




| FLOOD DATA DRAINAGE AREA = 0.42 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 10 | 1.41 | 370.06 | 1.89 |
| CHECK | 100 | 1.82 | 370.09 | 10.27 |
| ALLOWABLE HEAD WATER = 371.79 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"=10'

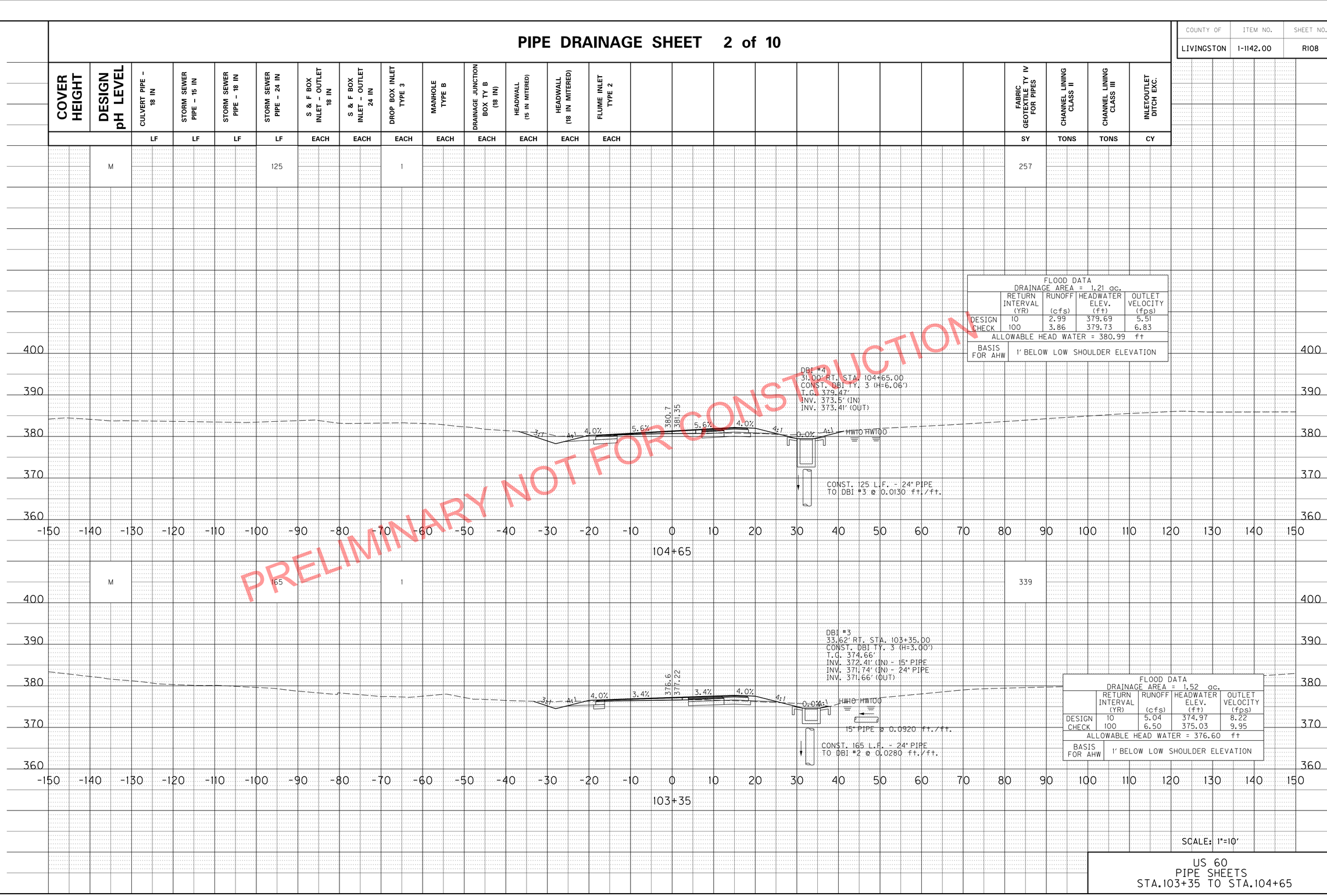
US 60
PIPE SHEETS
STA. 101+31 TO STA. 101+65

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\RI0700PD.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: RI0700PD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 2 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R108 |

| COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | SY | TONS | TONS | CY |
| | M | | | | 125 | | | 1 | | | | | | | | | | | | | | 257 | | | |




| FLOOD DATA DRAINAGE AREA = 1.21 ac. | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 10 | 2.99 | 379.69 | 5.51 |
| CHECK | 100 | 3.86 | 379.73 | 6.83 |
| ALLOWABLE HEAD WATER = 380.99 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| FLOOD DATA DRAINAGE AREA = 1.52 ac. | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 10 | 5.04 | 374.97 | 8.22 |
| CHECK | 100 | 6.50 | 375.03 | 9.95 |
| ALLOWABLE HEAD WATER = 376.60 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"=10'

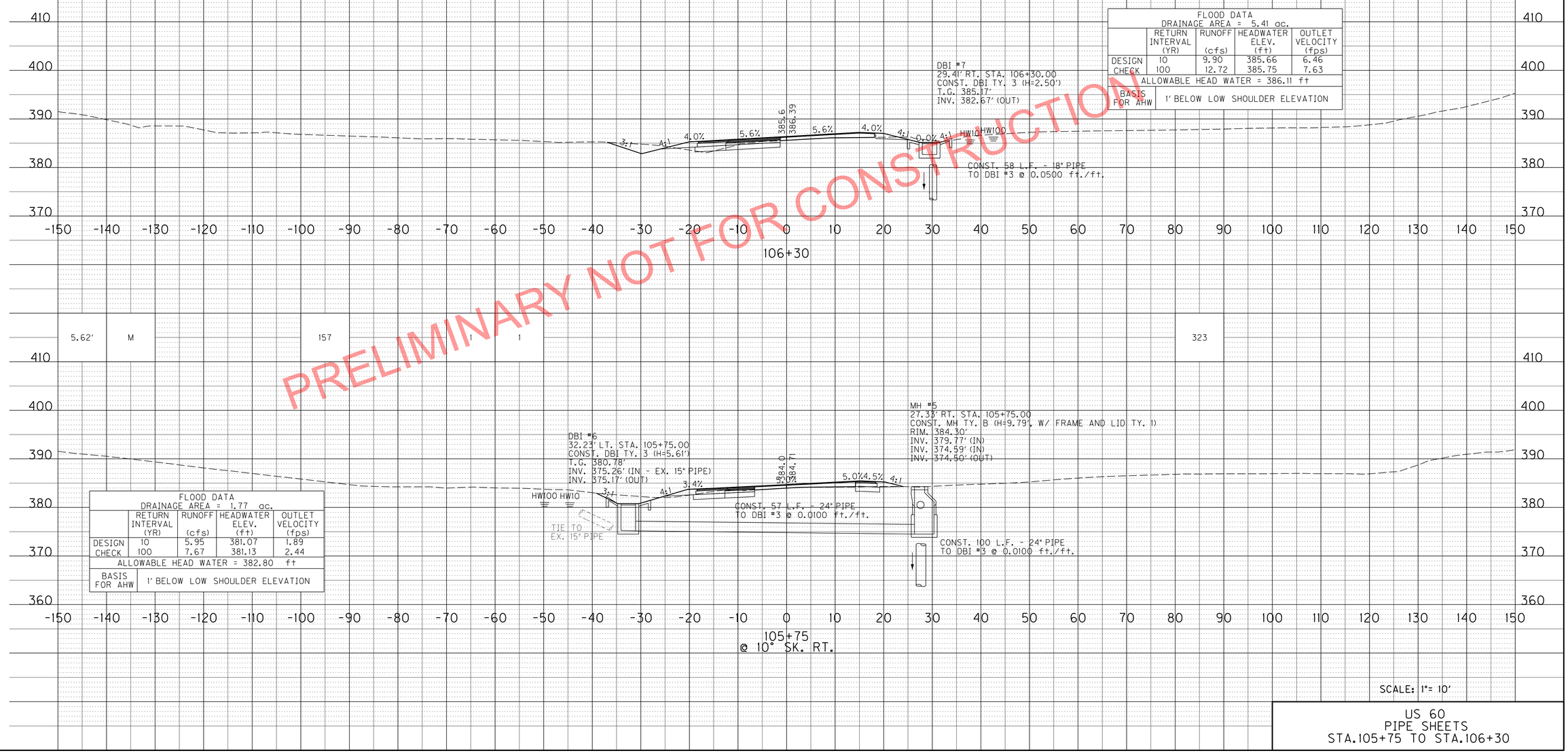
US 60
PIPE SHEETS
STA.103+35 TO STA.104+65

MicroStation v8.11.7.443
E-SHEET NAME: R10800PD
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R10800PD.DGN

# PIPE DRAINAGE SHEET 3 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R109 |

| COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | SY | TONS | TONS | CY |
| | M | | | 58 | | | | 1 | | | | | | | | | | | | | | 97 | | | |
| 5.62' | M | | | 157 | | | | 1 | 1 | | | | | | | | | | | | | 323 | | | |




| FLOOD DATA DRAINAGE AREA = 5.41 ac. | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 10 | 9.90 | 385.66 | 6.46 |
| CHECK | 100 | 12.72 | 385.75 | 7.63 |
| ALLOWABLE HEAD WATER = 386.11 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| FLOOD DATA DRAINAGE AREA = 1.77 ac. | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 10 | 5.95 | 381.07 | 1.89 |
| CHECK | 100 | 7.67 | 381.13 | 2.44 |
| ALLOWABLE HEAD WATER = 382.80 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"= 10'

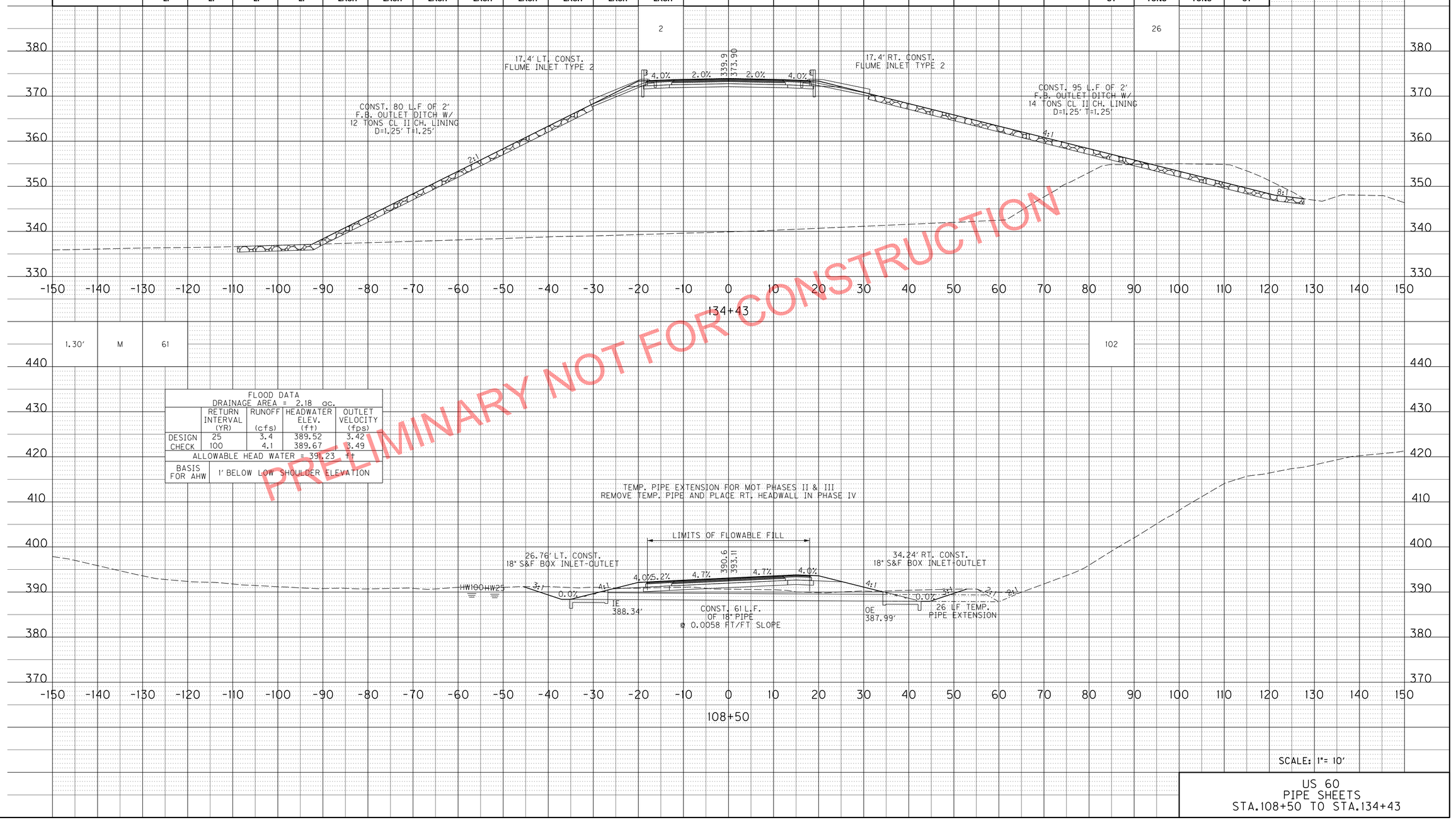
US 60
PIPE SHEETS
STA.105+75 TO STA.106+30

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R109OOPD.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R109OOPD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 4 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R110 |

| | COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | SY | TONS | TONS | CY |
| | | | | | | | | | | | | | | 2 | | | | | | | | | 26 | | |
| | 1.30' | M | 61 | | | | | | | | | | | | | | | | | | | 102 | | | |




FLOOD DATA
DRAINAGE AREA = 2.18 ac.

| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 25 | 3.4 | 389.52 | 3.42 |
| CHECK | 100 | 4.1 | 389.67 | 3.49 |
| ALLOWABLE HEAD WATER = 391.23 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"= 10'

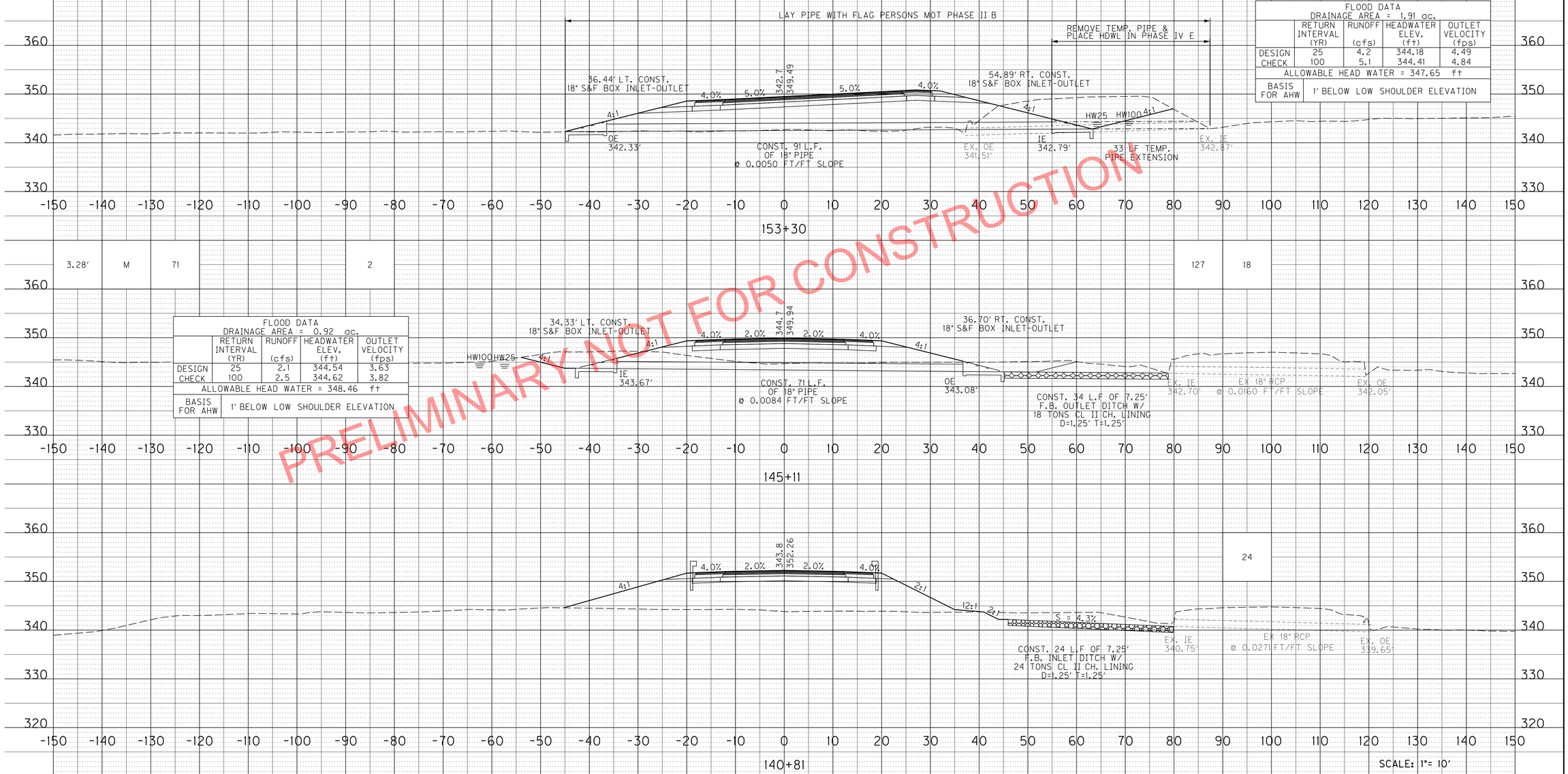
US 60
PIPE SHEETS
STA.108+50 TO STA.134+43

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R1100PD.DGN
USER: mwmsatt
DATE PLOTTED: January 27, 2020
E-SHEET NAME: R1100PD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 5 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | I-1142.00 | R111 |

| | COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | SY | TONS | TONS | CY |
| 153+30 | 3.58' | M | 91 | | | | 2 | | | | | | | | 101 | | | |
| 145+11 | 3.28' | M | 71 | | | | 2 | | | | | | | | 127 | 18 | | |
| 140+81 | | | | | | | | | | | | | | | | | | |




| FLOOD DATA DRAINAGE AREA = 1.91 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 25 | 4.2 | 344.18 | 4.49 |
| CHECK | 100 | 5.1 | 344.41 | 4.84 |
| ALLOWABLE HEAD WATER = 347.65 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

| FLOOD DATA DRAINAGE AREA = 0.92 ac. | | | | |
|---|---|---|---|---|
| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
| DESIGN | 25 | 2.1 | 344.54 | 3.63 |
| CHECK | 100 | 2.5 | 344.62 | 3.82 |
| ALLOWABLE HEAD WATER = 348.46 ft | | | | |
| BASIS FOR AHW | 1' BELOW LOW SHOULDER ELEVATION | | | |

PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"= 10'

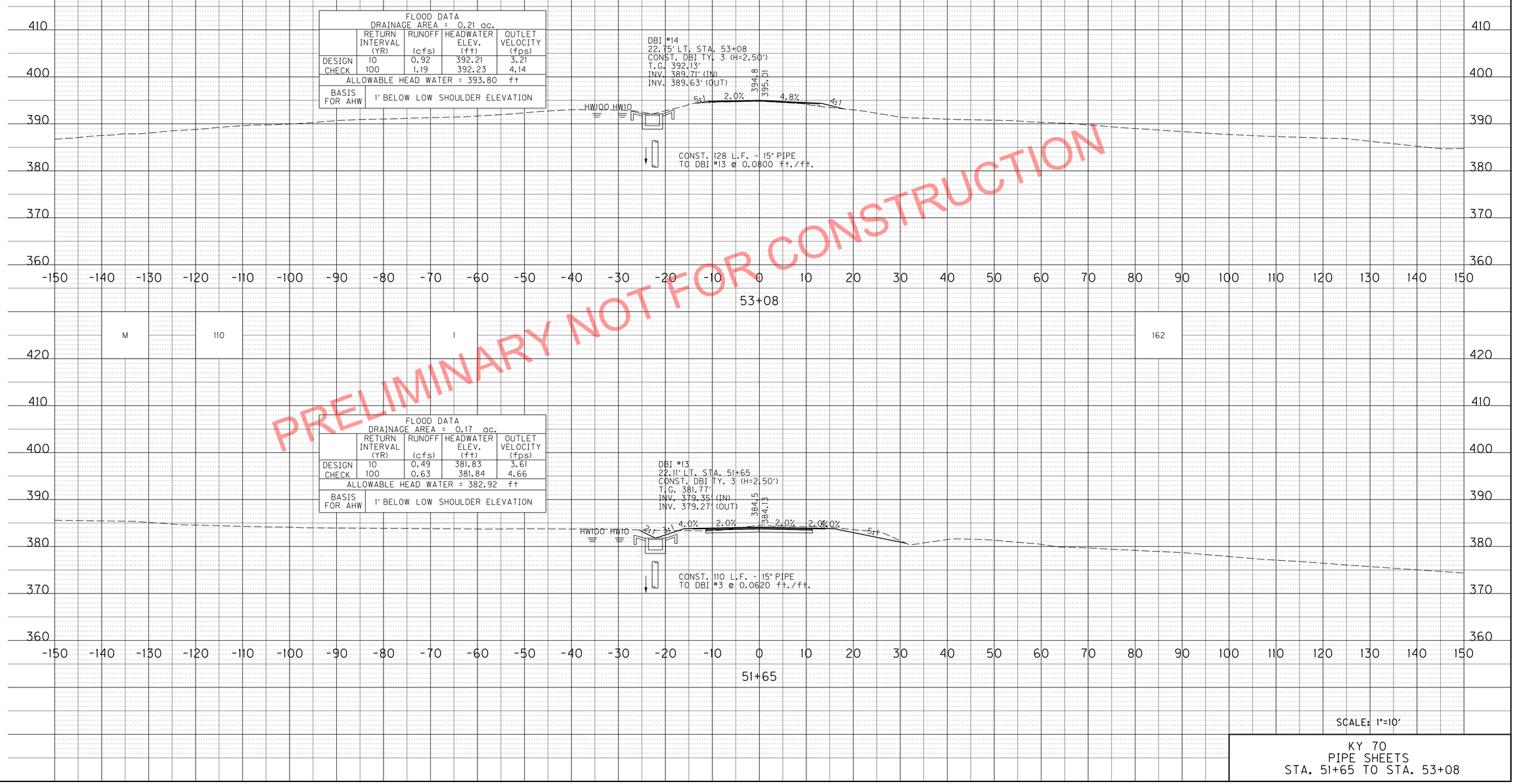
US 60
PIPE SHEETS
STA. 140+81 TO STA.153+30

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\R111OOPD.DGN
USER: mwlmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R111OOPD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 6 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R112 |

| | COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | SY | TONS | TONS | CY |
| | | M | | 128 | | | | | 1 | | | | | | | | | | | | | | 188 | | | |
| | | M | | 110 | | | | | 1 | | | | | | | | | | | | | | 162 | | | |




PRELIMINARY NOT FOR CONSTRUCTION

SCALE: 1"=10'

KY 70
PIPE SHEETS
STA. 51+65 TO STA. 53+08

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\RI120PD.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: RI120PD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 7 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R113 |

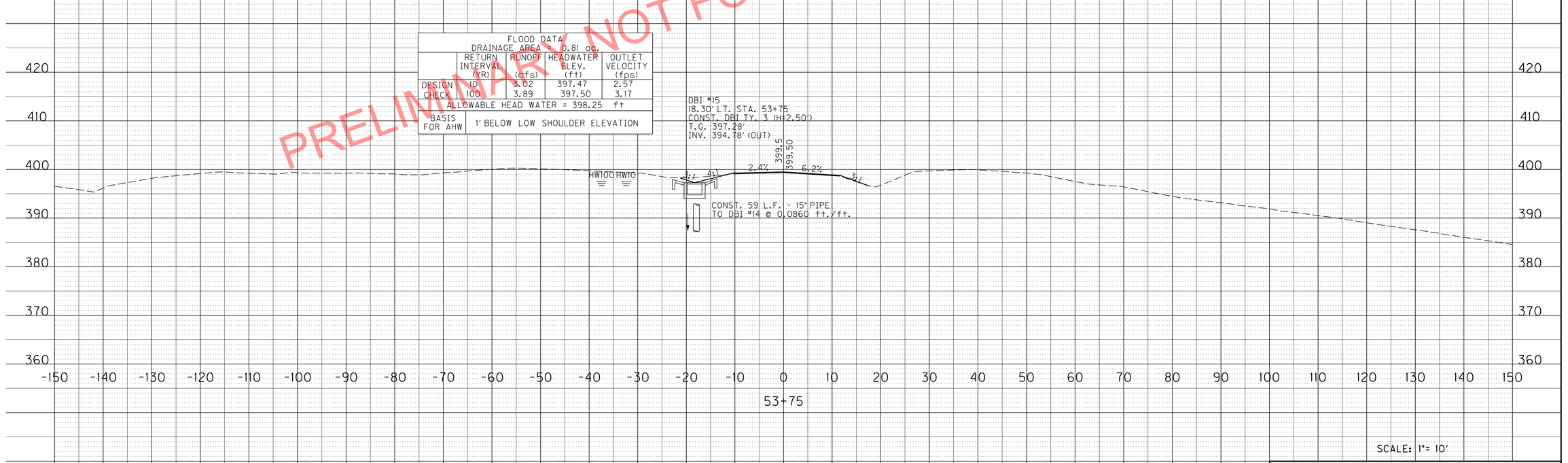
| COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | | SY | TONS | TONS | CY |
| | M | | 59 | | | | | 1 | | | | | | | | | | | | | | | 87 | | | |

FLOOD DATA
DRAINAGE AREA = 0.81 ac.

| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 10 | 3.02 | 397.47 | 2.57 |
| CHECK | 100 | 3.89 | 397.50 | 3.17 |

ALLOWABLE HEAD WATER = 398.25 ft

BASIS FOR AHW: 1' BELOW LOW SHOULDER ELEVATION




SCALE: 1"= 10'

KY 70
PIPE SHEETS
STA. 53+75

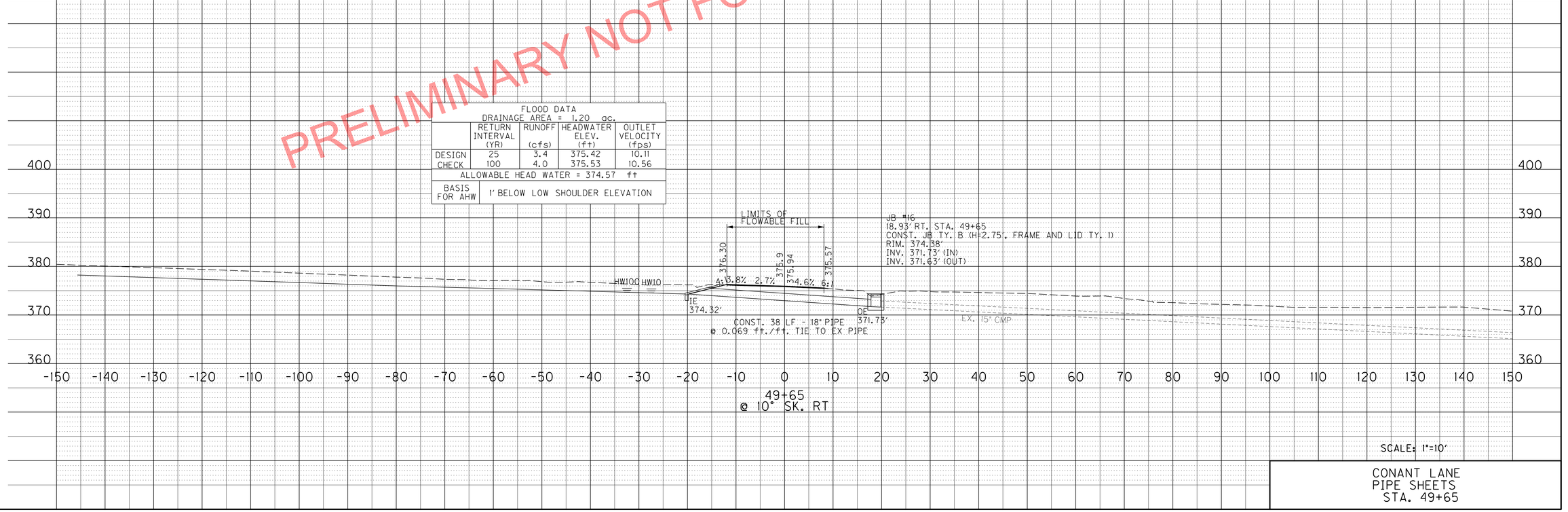
PRELIMINARY NOT FOR CONSTRUCTION

FILE NAME: C:\USERS\MWMSATT\DESKTOP\ESHEET\RI130OPD.DGN
USER: mwmsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: RI130OPD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 8 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R114 |

| COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE - 18 IN | STORM SEWER PIPE - 15 IN | STORM SEWER PIPE - 18 IN | STORM SEWER PIPE - 24 IN | S & F BOX INLET - OUTLET 18 IN | S & F BOX INLET - OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | SY | TONS | TONS | CY |
| 1.03' | M | 33 | | | | | | | | 1 | | 1 | | | | | | | | | | 55 | | | |




SCALE: 1"=10'

CONANT LANE
PIPE SHEETS
STA. 49+65

MicroStation v8.11.7.443
E-SHEET NAME: R1400PD
USER: mwimsatt
DATE PLOTTED: January 22, 2020
FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R1400PD.DGN

# PIPE DRAINAGE SHEET 9 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R115 |

| COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE – 18 IN | STORM SEWER PIPE – 15 IN | STORM SEWER PIPE – 18 IN | STORM SEWER PIPE – 24 IN | S & F BOX INLET – OUTLET 18 IN | S & F BOX INLET – OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | SY | TONS | TONS | CY |
| 1.02' | M | 37 | | | | 2 | | | | | | | | | | | | | | | | 62 | | | |

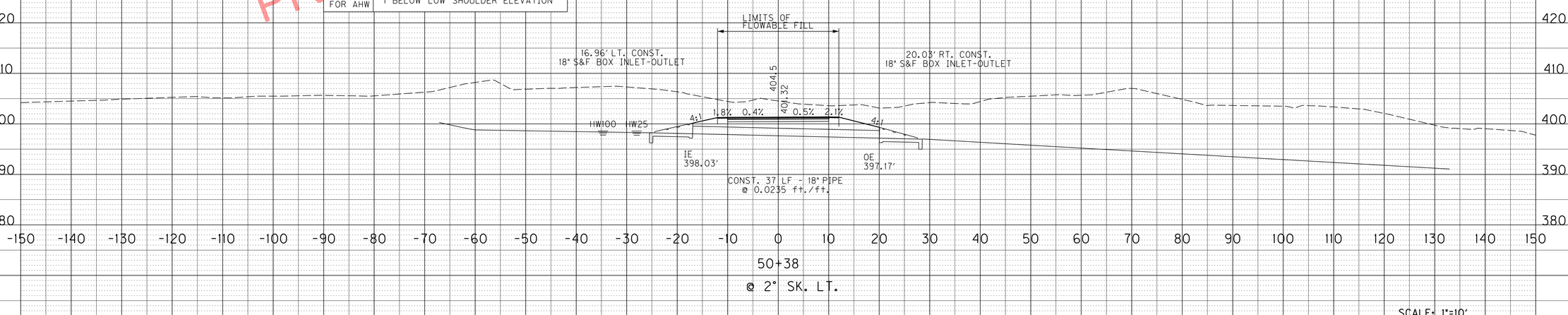
PRELIMINARY NOT FOR CONSTRUCTION

FLOOD DATA
DRAINAGE AREA = 0.23 sq. mi.

| | RETURN INTERVAL (YR) | RUNOFF (cfs) | HEADWATER ELEV. (ft) | OUTLET VELOCITY (fps) |
|---|---|---|---|---|
| DESIGN | 25 | 0.8 | 398.56 | 2.81 |
| CHECK | 100 | 0.9 | 398.59 | 2.88 |

ALLOWABLE HEAD WATER = 400.28 ft

BASIS FOR AHW: 1' BELOW LOW SHOULDER ELEVATION




SCALE: 1"=10'

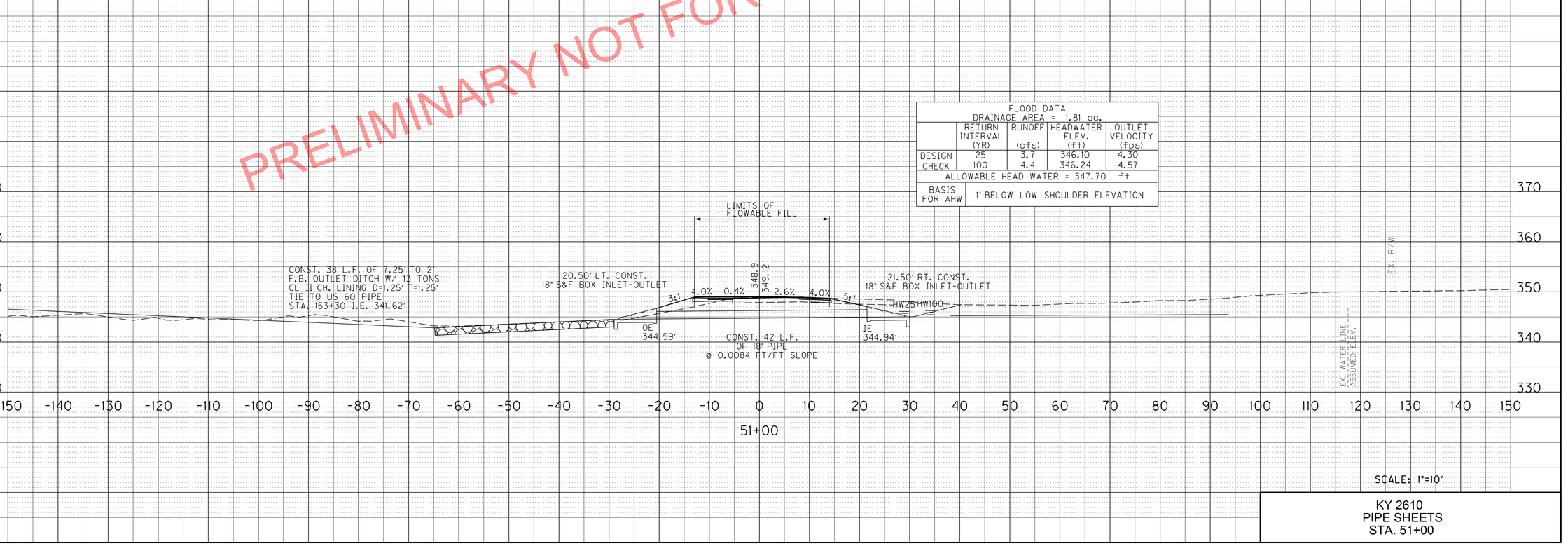
US 60 CONNECTOR 1
PIPE SHEETS
STA. 50+38

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R11500PD.DGN
USER: mwimsatt
DATE PLOTTED: January 22, 2020
E-SHEET NAME: R11500PD
MicroStation v8.11.7.443

# PIPE DRAINAGE SHEET 10 of 10

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | R116 |

| COVER HEIGHT | DESIGN pH LEVEL | CULVERT PIPE – 18 IN | STORM SEWER PIPE – 15 IN | STORM SEWER PIPE – 18 IN | STORM SEWER PIPE – 24 IN | S & F BOX INLET – OUTLET 18 IN | S & F BOX INLET – OUTLET 24 IN | DROP BOX INLET TYPE 3 | MANHOLE TYPE B | DRAINAGE JUNCTION BOX TY B (18 IN) | HEADWALL (15 IN MITERED) | HEADWALL (18 IN MITERED) | FLUME INLET TYPE 2 | | | | | | | | | FABRIC GEOTEXTILE TY IV FOR PIPES | CHANNEL LINING CLASS II | CHANNEL LINING CLASS III | INLET/OUTLET DITCH EXC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LF | LF | LF | LF | EACH | EACH | EACH | EACH | EACH | EACH | EACH | EACH | | | | | | | | | SY | TONS | TONS | CY |
| 1.42' | M | 42 | | | | 2 | | | | | | | | | | | | | | | | 70 | 13 | | 7 |



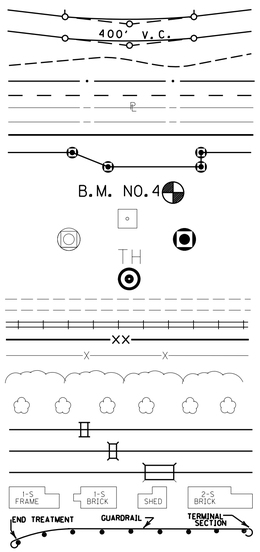

KY 2610
PIPE SHEETS
STA. 51+00

FILE NAME: C:\USERS\MWIMSATT\DESKTOP\ESHEET\R11600PD.DGN
USER: mwimsatt
DATE PLOTTED: January 1, 0001
E-SHEET NAME: R11600PD
MicroStation v8.11.7.443

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U1 |

# CONVENTIONAL SIGNS

SURVEY LINE
GRADE LINE
GROUND LINE
COUNTY LINE
CORPORATE LIMITS
EXIST. PROPERTY LINE
EXIST. RIGHT OF WAY & PROPERTY LINE
PROPOSED RIGHT OF WAY
RIGHT OF WAY MONUMENT
BENCH MARK
EXISTING R/W MARKER
RIGHT OF WAY MONUMENT EXISTING/PROPOSED
UTILITY TEST HOLE
EXISTING ROAD
RAILROAD
FENCE (CONTROLLED ACCESS)
FENCE (EXCEPT STONE AND HEDGE)
TREE LINE
TREES
PIPE CULVERT
CULVERT
BRIDGE
BUILDINGS
GUARDRAIL

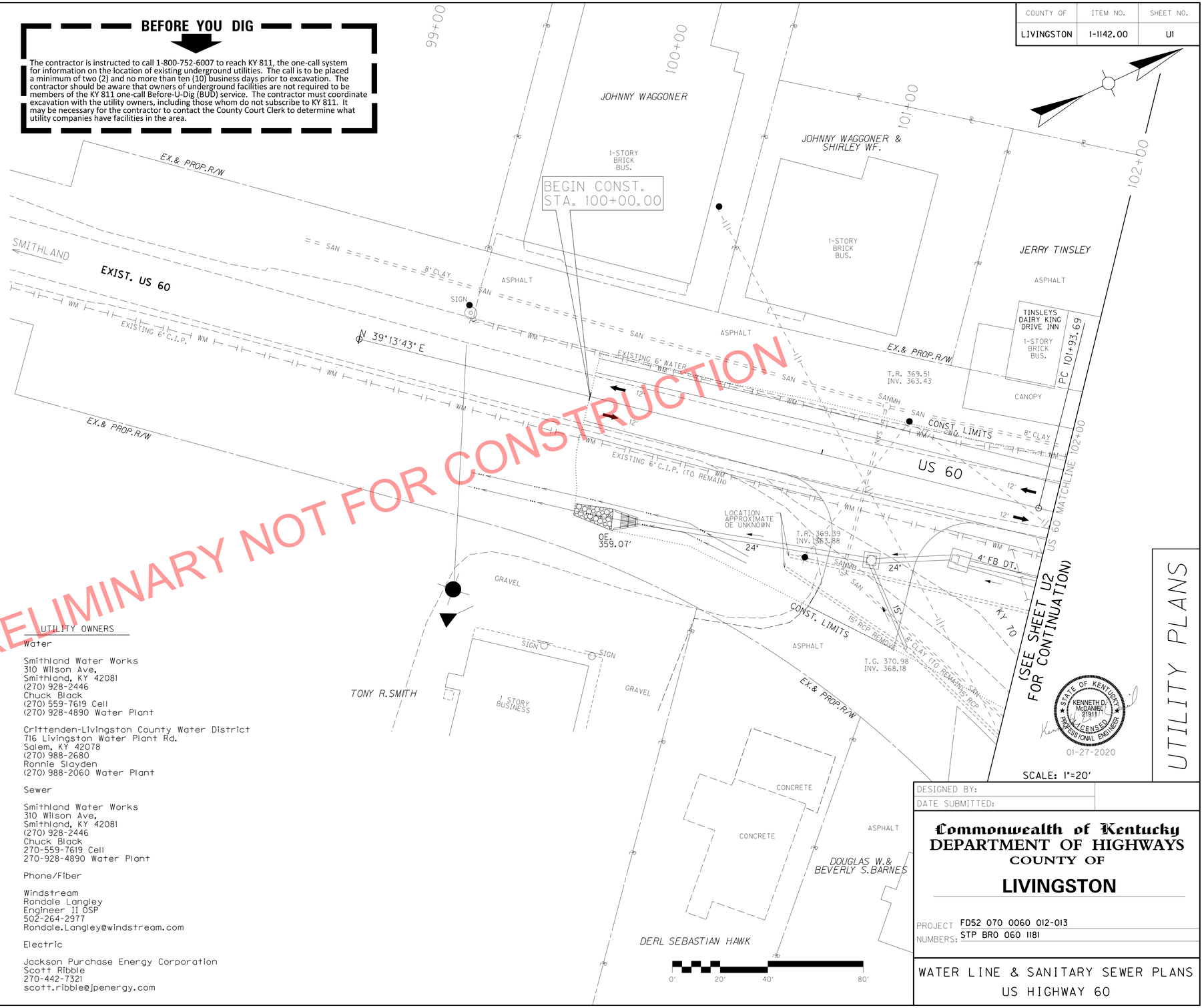



| | EXISTING | PROPOSED |
|---|---|---|
| LIGHTING POLE | | |
| POWER POLE | | |
| JOINT POWER & TELEPHONE POLE | | |
| TELEPHONE & TELEGRAPH POLE | | |
| ANCHOR, POWER OR TELEPHONE | | |
| WATER METER | WM | WM |
| WATER VALVE | WV | WV |
| FIRE HYDRANT | | |
| AIR RELEASE VALVE | ARV | ARV |
| SANITARY SEWER MANHOLE | SANMH | SANMH |
| SANITARY SEWER CLEANOUT | SANCO | SANCO |
| WATER MAIN | WM | 6" WM |
| GAS MAIN | GM | GM |
| TELEPHONE DUCT | T | T |
| ELECTRIC DUCT | E | E |
| DIRECT BURIAL TV CABLE | TV | TV |
| SANITARY SEWER (WITH MANHOLE) | SAN | SAN |
| STORM SEWER (WITH MANHOLE) | STORM | STORM |
| DIRECT BURIAL ELECTRIC CABLE | E | E |
| DIRECT BURIAL TELEPHONE CABLE | T | T |
| OVERHEAD WIRE | | |
| TRAFFIC LIGHTS | | |
| ELECTRIC MANHOLE | EMH | EMH |
| TELEPHONE MANHOLE | TMH | TMH |

STONE FENCE
HEDGE FENCE
BLUE LINE STREAM
INTERMITTENT STREAM OR DITCH
LAKES OR PONDS
REGULATED FLOODWAY
NORTH POINT

## BEFORE YOU DIG

The contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the contractor to contact the County Court Clerk to determine what utility companies have facilities in the area.




PRELIMINARY NOT FOR CONSTRUCTION

## UTILITY OWNERS

Water

Smithland Water Works
310 Wilson Ave,
Smithland, KY 42081
(270) 928-2446
Chuck Black
(270) 559-7619 Cell
(270) 928-4890 Water Plant

Crittenden-Livingston County Water District
716 Livingston Water Plant Rd.
Salem, KY 42078
(270) 988-2680
Ronnie Slayden
(270) 988-2060 Water Plant

Sewer

Smithland Water Works
310 Wilson Ave,
Smithland, KY 42081
(270) 928-2446
Chuck Black
270-559-7619 Cell
270-928-4890 Water Plant

Phone/Fiber

Windstream
Rondale Langley
Engineer II OSP
502-264-2977
Rondale.Langley@windstream.com

Electric

Jackson Purchase Energy Corporation
Scott Ribble
270-442-7321
scott.ribble@jpenergy.com

STATE OF KENTUCKY
KENNETH D. McDANIEL
21811
LICENSED PROFESSIONAL ENGINEER
01-27-2020

SCALE: 1"=20'

UTILITY PLANS

DESIGNED BY:
DATE SUBMITTED:

**Commonwealth of Kentucky**
**DEPARTMENT OF HIGHWAYS**
**COUNTY OF**
**LIVINGSTON**

PROJECT NUMBERS: FD52 070 0060 012-013
STP BRO 060 1181

WATER LINE & SANITARY SEWER PLANS
US HIGHWAY 60

FILE NAME: C:\DCWORK.DIR\DMS730744\U1.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
Power InRoads v8.11.9.3 E-SHEET NAME:

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U2 |

6.0' LT. WATER LINE "A" STA. 12+78
INSTALL 1-W TIE-IN 06 INCH &
1-W TAPPING SLEEVE & VALVE SIZE 1,
1-W PLUG EXISTING MAIN, &
1 PLUG PIPE

WATER LINE "A"
STA. 12+11 TO STA. 12+85
CONSTRUCT 74 L.F. OF W ENCASEMENT
STEEL BORED-RANGE 3

LT. WATER LINE "A" STA. 12+87
INSTALL 14 L.F. W PIPE PVC 06 INCH
& 1-W VALVE 06 INCH

WATER LINE "A" STA. 12+92
INSTALL 1-W VALVE 06 INCH

WATER LINE "A" STA. 10+00 TO STA. 17+36
INSTALL 736 L.F. W PIPE PVC 06 INCH

LT. WATER LINE "A" STA. 13+44
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

LT. WATER LINE "A" STA. 13+55
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

LT. WATER LINE "A" STA. 14+09
INSTALL 1-W FIRE HYDRANT ASSEMBLY

36' LT. US 60 C.L. STA. 104+00
1-W METER REMOVE

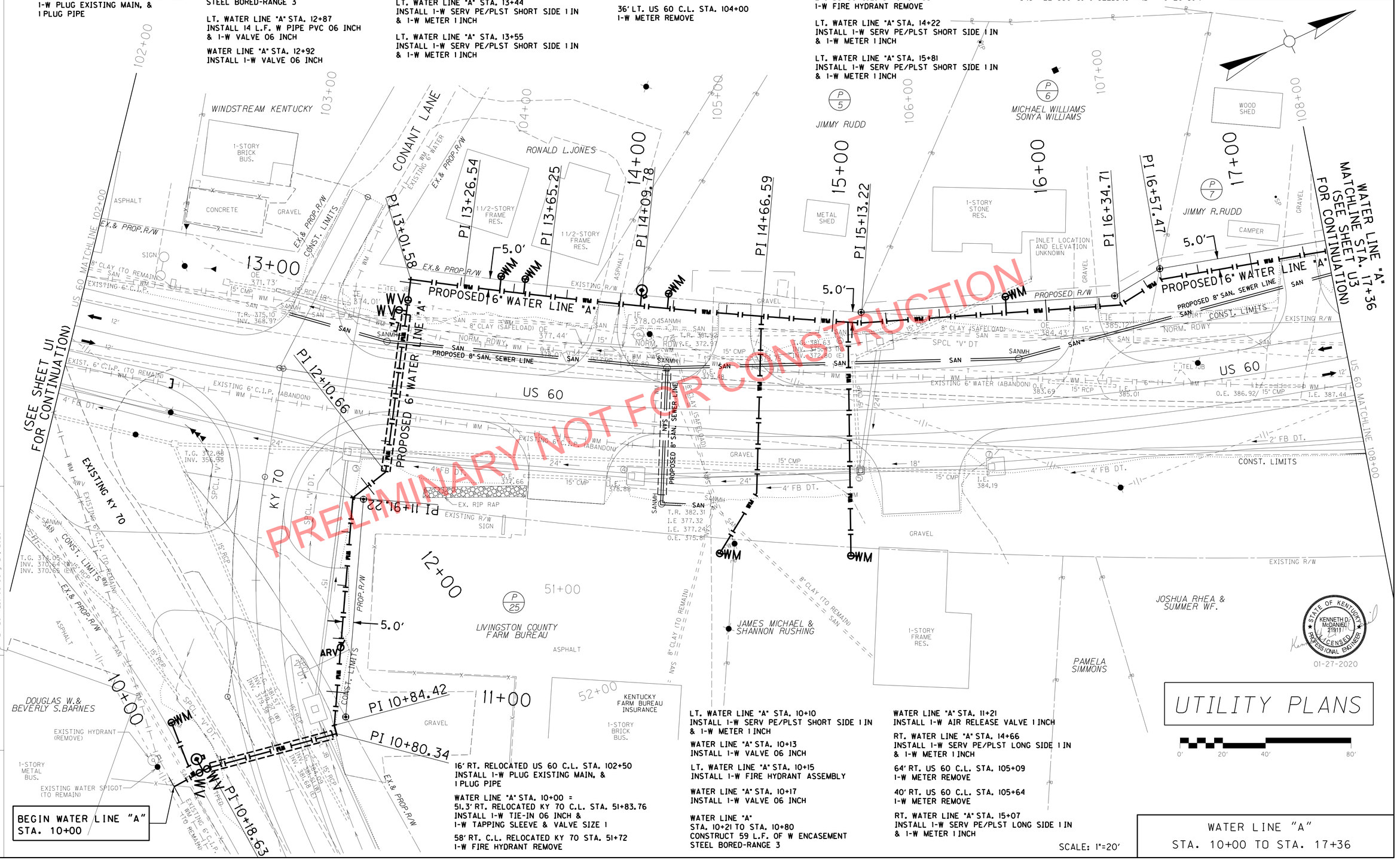
27' LT. US 60 C.L. STA. 104+77
1-W METER REMOVE

LT. US 60 C.L. STA. 104+65
1-W FIRE HYDRANT REMOVE

LT. WATER LINE "A" STA. 14+22
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

LT. WATER LINE "A" STA. 15+81
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

WATER LINE "A" STA. 10+00 TO STA. 17+36
INSTALL 550 S.Y. SEEDING AND PROTECTION




PRELIMINARY NOT FOR CONSTRUCTION

16' RT. RELOCATED US 60 C.L. STA. 102+50
INSTALL 1-W PLUG EXISTING MAIN, &
1 PLUG PIPE

WATER LINE "A" STA. 10+00 =
51.3' RT. RELOCATED KY 70 C.L. STA. 51+83.76
INSTALL 1-W TIE-IN 06 INCH &
1-W TAPPING SLEEVE & VALVE SIZE 1

58' RT. C.L. RELOCATED KY 70 STA. 51+72
1-W FIRE HYDRANT REMOVE

LT. WATER LINE "A" STA. 10+10
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

WATER LINE "A" STA. 10+13
INSTALL 1-W VALVE 06 INCH

LT. WATER LINE "A" STA. 10+15
INSTALL 1-W FIRE HYDRANT ASSEMBLY

WATER LINE "A" STA. 10+17
INSTALL 1-W VALVE 06 INCH

WATER LINE "A"
STA. 10+21 TO STA. 10+80
CONSTRUCT 59 L.F. OF W ENCASEMENT
STEEL BORED-RANGE 3

WATER LINE "A" STA. 11+21
INSTALL 1-W AIR RELEASE VALVE 1 INCH

RT. WATER LINE "A" STA. 14+66
INSTALL 1-W SERV PE/PLST LONG SIDE 1 IN
& 1-W METER 1 INCH

64' RT. US 60 C.L. STA. 105+09
1-W METER REMOVE

40' RT. US 60 C.L. STA. 105+64
1-W METER REMOVE

RT. WATER LINE "A" STA. 15+07
INSTALL 1-W SERV PE/PLST LONG SIDE 1 IN
& 1-W METER 1 INCH

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

# UTILITY PLANS

0' 20' 40' 80'

SCALE: 1"=20'

WATER LINE "A"
STA. 10+00 TO STA. 17+36

Power InRoads v8.11.9.397 | E-SHEET NAME: | USER: dcurtsinger | DATE PLOTTED: January 27, 2020 | FILE NAME: C:\DCWORK..DIR\DMS730T4\U2.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U3 |

LT. WATER LINE "A" STA. 17+75
INSTALL 1-W FIRE HYDRANT ASSEMBLY

LT. WATER LINE "A" STA. 17+77
INSTALL 1-W VALVE 06 INCH
(REDUCE MAIN FROM 6" TO 4"
IMMEDIATELY AFTER THIS VALVE)

WATER LINE "A" STA. 17+36 TO STA. 17+64
INSTALL 28 L.F. OF W PIPE PVC 06 INCH

LT. WATER LINE "A" STA. 17+54
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

LT. WATER LINE "A" STA. 17+61
INSTALL 1-W TIE-IN 06 INCH,
1-W VALVE 06 INCH,
1-W PLUG EXISTING MAIN, &
1 PLUG PIPE

61' LT. US 60 C.L. STA. 108+23
1-W METER REMOVE

WATER LINE "A" STA. 17+64 TO STA. 24+14.90
INSTALL 652 L.F. OF W PIPE PVC 04 INCH

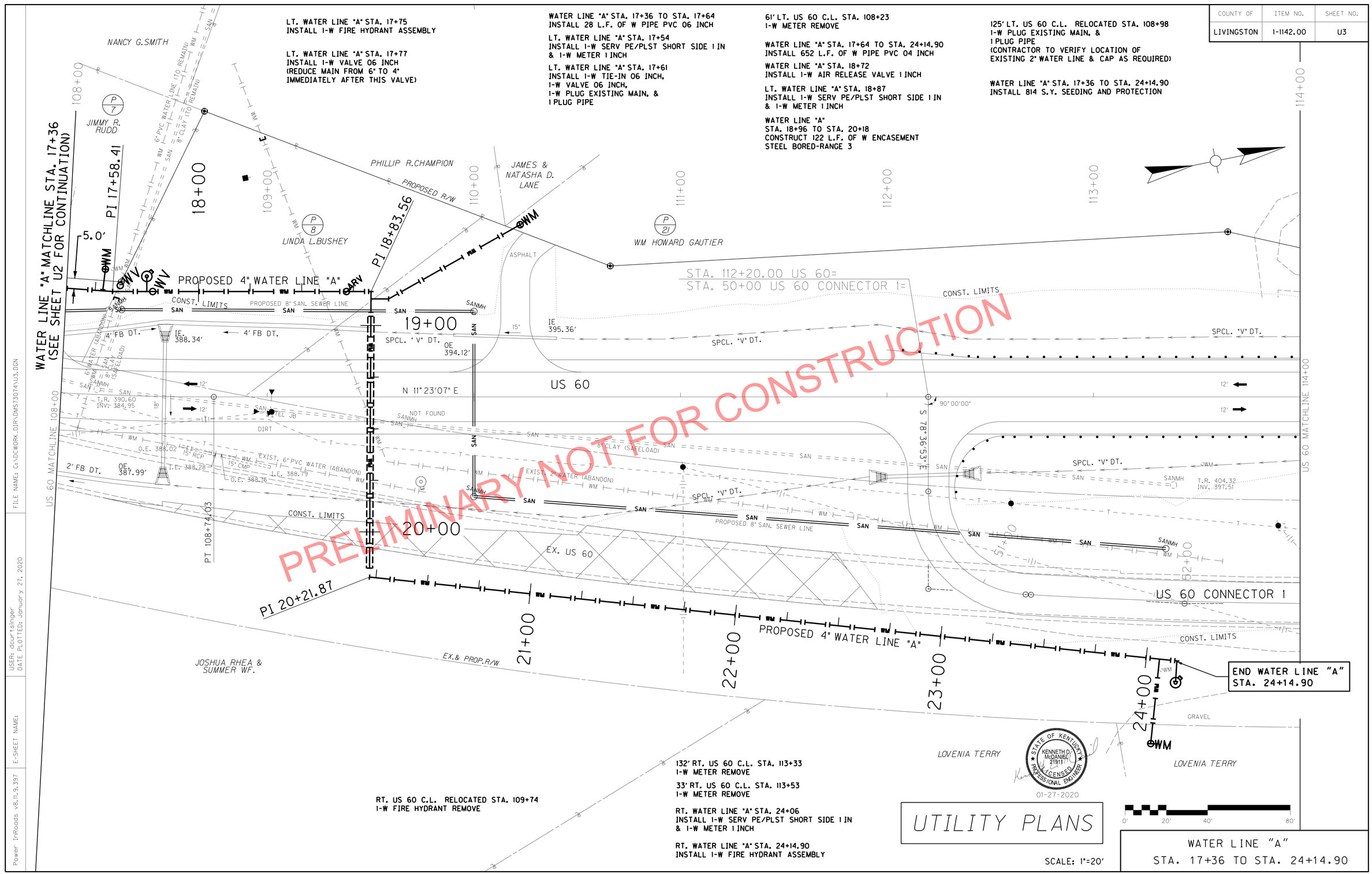
WATER LINE "A" STA. 18+72
INSTALL 1-W AIR RELEASE VALVE 1 INCH

LT. WATER LINE "A" STA. 18+87
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

WATER LINE "A"
STA. 18+96 TO STA. 20+18
CONSTRUCT 122 L.F. OF W ENCASEMENT
STEEL BORED-RANGE 3

125' LT. US 60 C.L. RELOCATED STA. 108+98
1-W PLUG EXISTING MAIN, &
1 PLUG PIPE
(CONTRACTOR TO VERIFY LOCATION OF
EXISTING 2" WATER LINE & CAP AS REQUIRED)

WATER LINE "A" STA. 17+36 TO STA. 24+14.90
INSTALL 814 S.Y. SEEDING AND PROTECTION




PRELIMINARY NOT FOR CONSTRUCTION

RT. US 60 C.L. RELOCATED STA. 109+74
1-W FIRE HYDRANT REMOVE

132' RT. US 60 C.L. STA. 113+33
1-W METER REMOVE

33' RT. US 60 C.L. STA. 113+53
1-W METER REMOVE

RT. WATER LINE "A" STA. 24+06
INSTALL 1-W SERV PE/PLST SHORT SIDE 1 IN
& 1-W METER 1 INCH

RT. WATER LINE "A" STA. 24+14.90
INSTALL 1-W FIRE HYDRANT ASSEMBLY

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED
PROFESSIONAL ENGINEER
01-27-2020

# UTILITY PLANS

SCALE: 1"=20'

0' 20' 40' 80'

WATER LINE "A"
STA. 17+36 TO STA. 24+14.90

Power InRoads v8.11.9.397
E-SHEET NAME:
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
FILE NAME: G:\DCWORK.DIR\DMS730744\U3.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U4 |

SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL

DATUM 398 396 394 392 390 388 386 384 382 380 378 376 374 372 370 368 366 364 362 360

STA. 10+00 BEGIN WATER LINE "A"
INSTALL 1-W TIE-IN 06 INCH,
1-W TAPPING SLEEVE AND VALVE SIZE 1

STA. 10+13
INSTALL 1-W VALVE 06 INCH

RT. STA. 10+15
INSTALL 1-W FIRE HYDRANT ASSEMBLY

STA. 10+17
INSTALL 1-W VALVE 06 INCH

C.L. EXISTING KY 70

C.L. RELOCATED KY 70

PROPOSED GRADE

EXISTING 15" STORM PIPE

PROPOSED 15" STORM PIPE

STA. 11+21
INSTALL 1-W AIR RELEASE VALVE

42" MIN.

EXISTING 6" WATER LINE (APPROX. LOCATION)

EXISTING 8" VCP SAN. SEWER LINE

STA. 10+21 TO STA. 10+80
CONSTRUCT 59 L.F. W ENCASEMENT
STEEL BORED RANGE 3

PROPOSED 6" SDR21 PVC WATER MAIN

PROPOSED 24" STORM PIPE

C.L. RELOCATED US 60

PROPOSED GRADE

STA. 12+11 TO STA. 12+85
CONSTRUCT 74 L.F. W ENCASEMENT
STEEL BORED RANGE 3

PROPOSED 8" SAN. SEWER

STA. 12+87 LT.
INSTALL 1-W VALVE 06 INCH
ON 6" CONNECTION TO
EXISTING WATER LINE

STA. 12+92
INSTALL 1-W VALVE 06 INCH

EXISTING COMMUNICATION LINES

EXISTING 6" WATER LINE

STA. 12+78 LEFT
INSTALL 1-W TIE-N 06 INCH &
1-W TAPPING SLEEVE & VALVE SIZE 1,
1-W PLUG EXISTING MAIN, &
1 PLUG PIPE

STA. 12+87
INSTALL 6"x6"x6" TEE.
TIE NEW 6" WATER LINE TO
EXISTING 6" WATER LINE

EXISTING 8" VCP SAN. SEWER LINE (SAFELOAD)

42" MIN.

LT. STA. 14+09
INSTALL 1-W FIRE HYDRANT ASSEMBLY

EXISTING GROUND

PROPOSED 6" SDR21 PVC WATER MAIN

42" MIN.

EXISTING 15" STORM PIPE

MATCHLINE STA. 16+00 (SEE SHEET U5)

10+00 10+50 11+00 11+50 12+00 12+50 13+00 13+50 14+00 14+50 15+00 15+50 16+00

PRELIMINARY NOT FOR CONSTRUCTION

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

UTILITY PLANS

WATER LINE "A" PROFILE
STA. 10+00 TO STA. 16+00

FILE NAME: C:\DCWORK.DIR\DMS730744\U4.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
Power InRoads v8.11.9.397

SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U5 |

DATUM 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372 370

MATCHLINE STA. 16+00 (SEE SHEET U4)

LT. STA. 17+62
CONNECT TO EXISTING 6" WATER LINE FROM WEST
CONSTRUCT 1-W TIE 06 INCH
& INSTALL 1-W VALVE 06 INCH

LT. STA. 17+75
INSTALL 1-W FIRE HYDRANT ASSEMBLY

STA. 17+77
INSTALL 1-W VALVE 06 INCH
END 6" WATER MAIN
BEGIN 4" WATER MAIN

STA. 18+72
INSTALL 1-W AIR RELEASE VALVE

C.L. RELOCATED US 60

C.L. EXISTING US 60

EXISTING GROUND

PROPOSED GRADE

EXISTING COMMUNICATION LINES

EXISTING 8" VCP SAN. SEWER LINE (SAFELOAD)

EXISTING 6" WATER LINE

EXISTING 8" WATER LINE (ABANDON)

EXISTING 8" VCP SAN. SEWER LINE

42" MIN.

18" MIN.

PROPOSED 6" SDR21 PVC WATER MAIN

PROPOSED 4" SDR21 PVC WATER MAIN

PROPOSED 6" × 4" REDUCER

STA. 18+96 TO RT. STA. 20+18
CONSTRUCT 122 L.F. W ENCASEMENT
STEEL BORED RANGE 3

MATCHLINE STA. 22+00 (THIS SHEET)

16+00 16+50 17+00 17+50 18+00 18+50 19+00 19+50

MATCHLINE STA. 22+00 (THIS SHEET)

EXISTING GROUND

42" MIN.

PROPOSED 4" SDR21 PVC WATER MAIN

RT. STA. 24+14.90
INSTALL 1-W FIRE HYDRANT ASSEMBLY
& END WATER LINE "A"

20+00 20+50 21+00 21+50 22+00 22+50 23+00 23+50 24+00

PRELIMINARY NOT FOR CONSTRUCTION

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

UTILITY PLANS

WATER LINE "A" PROFILE
STA. 16+00 TO STA. 24+14.90

FILE NAME: C:\DGNWORK.DIR\DMS730744\U5.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
Power InRoads v8.11.9.397

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U6 |

EXISTING SANITARY SEWER M.H. A1
STA. 10+00 SANITARY SEWER LINE "A" =
25.8' LT. US 60 C.L. STA. 102+97.94
CONSTRUCT 1-S MANHOLE TAP EXISTING,
1-S MANHOLE ADJUST TO GRADE &
1-S MANHOLE CASTING WATERTIGHT

STA. 10+00 TO STA. 14+95 SAN. SEWER LINE "A"
INSTALL 481 L.F. OF S PIPE PVC 08 INCH

STA. 10+03 TO STA. 10+33 SAN. SEWER LINE "A"
CONSTRUCT 30 L.F. OF S ENCASEMENT STEEL BORED
RANGE 4

M.H. A2
STA. 10+47.56 SANITARY SEWER LINE "A" =
19.9' LT. US 60 C.L. STA. 103+45.91
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

EXISTING M.H.
37.8' LT. US 60 CENTERLINE STA. 104+80.15
INSTALL 1-S BYPASS PUMPING &
1-S MANHOLE ABANDON/REMOVE

LT. STA. 10+60 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE

LT. STA. 11+07 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE

M.H. A3
STA. 11+79.12 SAN. SEWER LINE "A" =
STA. 30+00 SAN. SEWER LINE "B" =
19.1' LT. US 60 C.L. STA. 104+79.38
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

LT. & RT. US 60 C.L. STA. 102+97.94 TO STA. 108+00
8 C.Y. SAFELOAD (573 L.F. OF EXISTING 8" VCP SAN. SEWER PIPE)

LT. STA. 11+40 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE

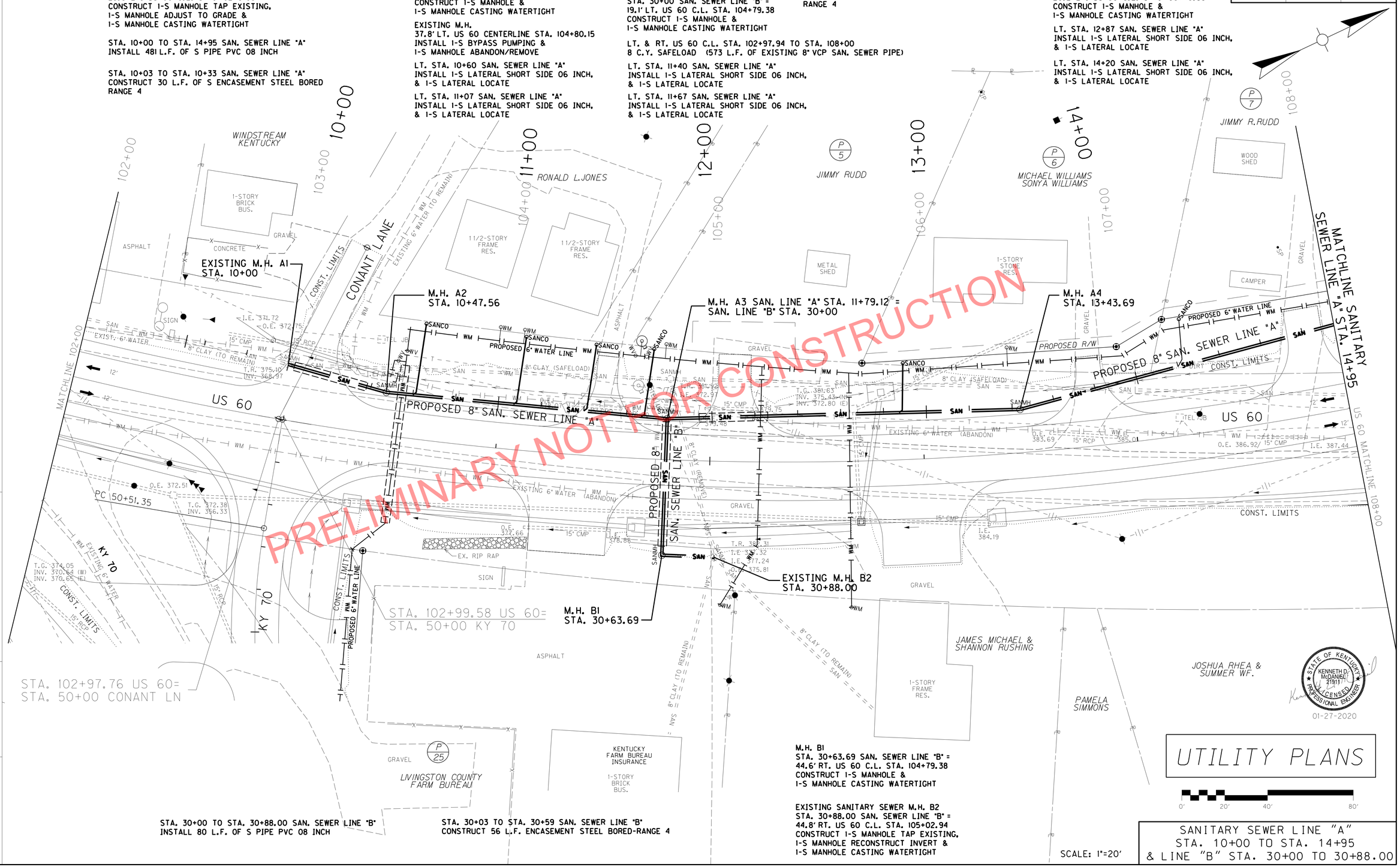
LT. STA. 11+67 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE

STA. 11+94 TO STA. 12+26 SAN. SEWER LINE "A"
CONSTRUCT 32 L.F. OF S ENCASEMENT STEEL OPEN CUT
RANGE 4

M.H. A4
STA. 13+43.69 SAN. SEWER LINE "A" =
20.2' LT. US 60 C.L. STA. 106+46.39
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

LT. STA. 12+87 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE

LT. STA. 14+20 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE




PRELIMINARY NOT FOR CONSTRUCTION

M.H. B1
STA. 30+63.69 SAN. SEWER LINE "B" =
44.6' RT. US 60 C.L. STA. 104+79.38
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

EXISTING SANITARY SEWER M.H. B2
STA. 30+88.00 SAN. SEWER LINE "B" =
44.8' RT. US 60 C.L. STA. 105+02.94
CONSTRUCT 1-S MANHOLE TAP EXISTING,
1-S MANHOLE RECONSTRUCT INVERT &
1-S MANHOLE CASTING WATERTIGHT

STA. 30+00 TO STA. 30+88.00 SAN. SEWER LINE "B"
INSTALL 80 L.F. OF S PIPE PVC 08 INCH

STA. 30+03 TO STA. 30+59 SAN. SEWER LINE "B"
CONSTRUCT 56 L.F. ENCASEMENT STEEL BORED-RANGE 4

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED
PROFESSIONAL ENGINEER
01-27-2020

# UTILITY PLANS

0' 20' 40' 80'

SCALE: 1"=20'

SANITARY SEWER LINE "A"
STA. 10+00 TO STA. 14+95
& LINE "B" STA. 30+00 TO 30+88.00

Power InRoads v8.11.9.397 | E-SHEET NAME: | USER: dcurtsinger DATE PLOTTED: January 27, 2020 | FILE NAME: C:\DCWORK.DIR\DMS730744\U6.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U7 |

M.H. A5
STA. 15+22.50 SAN. SEWER LINE "A" =
41.6' LT. US 60 C.L. STA. 108+28.05
CONSTRUCT 1-S MANHOLE WITH DROP &
1-S MANHOLE CASTING WATERTIGHT
(CONNECT EXISTING 8" VCP SAN. SEWER
FROM THE WEST TO PROPOSED MANHOLE)

LT. & RT. STA. 108+00 TO STA. 114+00
8 C.Y. SAFELOAD (576 L.F. OF EXISTING
8" VCP SAN. SEWER PIPE)

EXISTING M.H.
2.6' LT. US 60 C.L. STA. 108+17.49
1-S MANHOLE ABANDON/REMOVE

M.H. A6
STA. 16+93.08 SAN. SEWER LINE "A" =
41.4 LT. US 60 C.L. STA. 110+00
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

STA. 16+99 TO STA. 17+59 SAN. SEWER LINE "A"
CONSTRUCT 60 L.F. OF S ENCASEMENT STEEL OPEN CUT
RANGE 4

STA. 14+95 TO STA. 21+18.73 SAN. SEWER LINE "A"
INSTALL 608 L.F. OF S PIPE PVC 08 INCH

LT. STA. 16+80 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
& 1-S LATERAL LOCATE

NANCY G.SMITH
JIMMY R.RUDD
PHILLIP R.CHAMPION
LINDA L.BUSHEY
JAMES & NATASHA D. LANE
WM HOWARD GAUTIER
JOSHUA RHEA & SUMMER WF.
LOVENIA TERRY

MATCHLINE SANITARY SEWER LINE "A" STA. 14+95
US 60 MATCHLINE 108+00
US 60 MATCHLINE 114+00

M.H. A5
STA. 15+22.50

M.H. A6
STA. 16+93.08

M.H. A7
STA. 17+82.78

M.H. A7
STA. 21+18.73

PROPOSED 4" WATER LINE
PROPOSED 8" SAN. SEWER LINE "A"
PROPOSED 4" WATER LINE
PROPOSED 8" SAN. SEWER LINE "A"

STA. 112+20.00 US 60=
STA. 50+00 US 60 CONNECTOR 1=

US 60
US 60 CONNECTOR 1
EX. US 60

CONST. LIMITS
ASPHALT
GRAVEL
STONE BRICK RES. W/ BSMT.

N 11°23'07" E
90°00'00"

T.R. 390.60
INV. 384.95
T.R. 404.32
INV. 397.51
O.E. 388.02
T.E. 388.28
O.E. 388.16
I.E. 388.79
15" RCP
15" CMP
18"
8" CLAY (SAFELOAD)
EXIST. 6" WATER (ABANDON)
EXIST. 2" WATER (ABANDON)
SANMH NOT FOUND
SANCO
DIRT

PT 108+74.03

108+00
109+00
110+00
111+00
112+00
113+00
114+00
15+00
16+00
17+00
18+00
19+00
20+00
21+00

PRELIMINARY NOT FOR CONSTRUCTION

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

M.H. A7
STA. 17+82.78 SAN. SEWER LINE "A" =
48.3 RT. US 60 C.L. STA. 110+00
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

EXISTING M.H.
13.3' RT. US 60 C.L. STA. 109+66.64
1-S MANHOLE ABANDON/REMOVE

STA. 19+89 TO STA. 20+27 SAN. SEWER LINE "A"
CONSTRUCT 38 L.F. OF S ENCASEMENT STEEL OPEN CUT
RANGE 4

RT. STA. 21+05 SAN. SEWER LINE "A"
INSTALL 1-S LATERAL SHORT SIDE 06 INCH,
1-S LATERAL LOCATE

M.H. A8
STA. 21+18.73 SAN. SEWER LINE "A" =
73.5 RT. US 60 C.L. STA. 113+35
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT

EXISTING M.H.
42.7' RT. US 60 C.L. STA. 113+38.73
1-S MANHOLE ABANDON/REMOVE

# UTILITY PLANS

0' 20' 40' 80'

SCALE: 1"=20'

SANITARY SEWER LINE "A"
STA. 14+95 TO STA. 21+18.73

Power InRoads v8.11.9.397 | E-SHEET NAME: | USER: dcurtsinger DATE PLOTTED: January 27, 2020 | FILE NAME: C:\DCWORK.DIR\DMS730744\UT.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U8 |

SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL

DATUM

398 396 394 392 390 388 386 384 382 380 378 376 374 372 370 368 366 364 362

EXISTING SAN. M.H. A1 STA. 10+00.00 =
US 60 C.L. STA. 102+97.94 (25.8' LT.)
CONSTRUCT 1-S MANHOLE TAP EXISTING,
1-S MANHOLE ADJUST TO GRADE, &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 375.48
INV. EL. (OUT) 368.97
INV. EL. (IN) 369.27

C.L. PROPOSED CONANT LANE

PROPOSED SAN. M.H. A2 STA. 10+47.56 =
US 60 C.L. STA. 103+45.91 (19.9' LT.)
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 376.81
INV. EL. (OUT) 369.44
INV. EL. (IN) 369.54

EXISTING OVERHEAD UTILITY (APPROX. ELEVATION)

EXISTING OVERHEAD UTILITY (APPROX. ELEVATION)

PROPOSED SAN. M.H. A3 STA. 11+79.12 =
SANITARY SEWER LINE "B" STA. 30+00.00 =
US 60 C.L. STA. 104+82.04 (19.2' LT.)
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 380.72
INV. EL. (OUT) 373.06
INV. EL. (IN) 375.02 (LINE A)
INV. EL. (IN) 376.11 (LINE B)

PROPOSED SAN. M.H. A4 STA. 13+43.69 =
US 60 C.L. STA. 106+46.39 (20.2' LT.)
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 385.76
INV. EL. (OUT) 379.26
INV. EL. (IN) 380.76

PROPOSED GRADE

EXISTING GROUND

EXISTING COMMUNICATION LINES

EXISTING 6" WATER LINE (ABANDON)

EXISTING COMMUNICATION LINES

EXISTING 6" WATER LINE (ABANDON)

174.81' OF 8" PVC SAN. SEWER @ 0.97%

EXISTING 8" VCP SAN. SEWER LINE (SAFELOAD)

160.57' OF 8" PVC SAN. SEWER @ 2.64%

PROPOSED 24" STORM PIPE

EXISTING 15" STORM PIPE (TO BE REMOVED)

127.56' OF 8" PVC SAN. SEWER @ 2.76%

EXISTING 8" VCP SAN. SEWER LINE (SAFELOAD)

EXISTING 8" VCP SAN. SEWER LINE

43.56' OF 8" PVC SAN. SEWER @ 0.40%

STA. 10+03 TO 10+33
CONSTRUCT 30 L.F. S ENCASEMENT STEEL BORED
RANGE 4

STA. 11+94 TO STA. 12+26
CONSTRUCT 32 L.F. S ENCASEMENT STEEL OPEN CUT
RANGE 4

MATCHLINE STA. 15+00 (SEE SHEET U9)

PRELIMINARY NOT FOR CONSTRUCTION

9+00 9+50 10+00 10+50 11+00 11+50 12+00 12+50 13+00 13+50 14+00 14+50 15+00

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

UTILITY PLANS

SANITARY SEWER LINE "A" PROFILE
STA. 10+00 TO STA. 15+00

FILE NAME: C:\DCWORK.DIR\DMS730744\U8.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
Power InRoads v8.11.9.397

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U9 |

SCALE: 1" = 20' HORIZONTAL
1" = 2' VERTICAL

DATUM 410 408 406 404 402 400 398 396 394 392 390 388 386 384 382 380 378 376 374 372

MATCHLINE STA. 15+00 (SEE SHEET U8)

PROPOSED SAN. M.H. A5 STA. 15+22.50 = US 60 C.L. STA. 108+28.05 (41.6' LT.) CONSTRUCT 1-S MANHOLE WITH DROP & 1-S MANHOLE CASTING WATERTIGHT
T/R EL. 389.72
INV. EL. (OUT) 382.45
INV. EL. (IN) 384.26 (LINE "A")
INV. EL. (IN) 385.95• (EXIST. 8" VCP FROM WEST)

PROPOSED SAN. M.H. A6 STA. 16+93.08 = US 60 C.L. STA. 110+00.00 (41.4' LT.) CONSTRUCT 1-S MANHOLE & 1-S MANHOLE CASTING WATERTIGHT
T/R EL. 398.10
INV. EL. (OUT) 385.10
INV. EL. (IN) 385.20

PROPOSED SAN. M.H. A7 STA. 17+82.78 = US 60 C.L. STA. 110+00.00 (48.3' RT.) CONSTRUCT 1-S MANHOLE & 1-S MANHOLE CASTING WATERTIGHT
T/R EL. 390.74
INV. EL. (OUT) 385.54
INV. EL. (IN) 385.64

C.L. PROPOSED US 60

C.L. PROPOSED US 60 CONNECTOR 1

END SAN. SEWER LINE "A"
PROPOSED SAN. M.H. A8 STA. 21+18.73 = US 60 C.L. STA. 113+35.00 (73.5' RT.) CONSTRUCT 1-S MANHOLE & 1-S MANHOLE CASTING WATERTIGHT
T/R EL. 394.10
INV. EL. (OUT) 388.26

EXISTING GROUND
PROPOSED GRADE
PROPOSED 15" ENTRANCE PIPE
EXISTING COMMUNICATION LINES (TO BE RELOCATED)
PROPOSED 4" WATER MAIN
EXISTING 6" WATER LINE (ABANDON)
EXISTING 8" VCP SAN. SEWER LINE (SAFELOAD)
EXISTING OVERHEAD UTILITY (APPROX. ELEVATION)

EXISTING 8" VCP SAN. SEWER FROM WEST CONNECT TO PROPOSED M.H. A5 (ADD DROP)

174.81' OF 8" PVC SAN. SEWER @ 0.97%
166.58' OF 8" PVC SAN. SEWER @ 0.50%
85.70' OF 8" PVC SAN. SEWER @ 0.40%
331.95' OF 8" PVC SAN. SEWER @ 0.79%

STA. 16+99 TO 17+59
CONSTRUCT 60 L.F. S ENCASEMENT STEEL OPEN CUT
RANGE 4

STA. 19+89 TO 20+27
CONSTRUCT 38 L.F. S ENCASEMENT STEEL OPEN CUT
RANGE 4

PRELIMINARY NOT FOR CONSTRUCTION

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

UTILITY PLANS

15+00 15+50 16+00 16+50 17+00 17+50 18+00 18+50 19+00 19+50 20+00 20+50 21+00

SANITARY SEWER LINE "A" PROFILE
STA. 15+00 TO STA. 21+18.73

FILE NAME: C:\DCWORK.DIR\DMS73074\U9.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
Power InRoads v8.11.9.397

| SCALE: | 1" = 20' | HORIZONTAL |
|---|---|---|
| | 1" = 2' | VERTICAL |

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U10 |

PROPOSED SAN. M.H. A3 STA. 30+00 LINE "B" =
SANITARY SEWER LINE "A" STA. 11+79.12' =
US 60 C.L. STA. 104+82.04 (19.2' LT.)
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 380.72
INV. EL. (OUT) 374.31
INV. EL. (IN) 375.02 (LINE A)
INV. EL. (IN) 376.10 (LINE B)

C.L. PROPOSED US 60

PROPOSED SAN. M.H. B1 STA. 30+63.69 =
US 60 C.L. STA. 104+79.38 (44.6' RT.)
CONSTRUCT 1-S MANHOLE &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 382.04
INV. EL. (OUT) 376.70
INV. EL. (IN) 376.80

EXISTING SAN. M.H. B2 STA. 30+88.00 =
US 60 C.L. STA. 105+02.94 (44.8' RT.)
CONSTRUCT 1-S MANHOLE TAP EXISTING,
1-S MANHOLE RECONSTRUCT INVERT &
1-S MANHOLE CASTING WATERTIGHT
T/R EL. 382.31
INV. EL. (OUT) 377.00
EXISTING INV. EL. (IN) 377.32
EXISTING INV. EL. (IN) 377.24

PROPOSED GRADE

EXISTING GROUND

20.31' OF 8" PVC
SAN. SEWER @ 1.00%

59.69' OF 8" PVC
SAN. SEWER @ 1.00%

(2) EXISTING 4" PVC SAN. SEWER LINES (TO REMAIN)
INV. EL. (IN) 377.32
INV. EL. (IN) 377.24

FILL EXISTING MANHOLE WITH FLOWABLE FILL
TO ELEVATION OF PROPOSED PIPE OUTLET (377.00)

EXISTING 8" VCP SAN. SEWER LINE
(SAFELOAD)

PROPOSED 24" STORM PIPE

STA. 30+03 TO RT. STA. 30+59
CONSTRUCT 56 L.F. S ENCASEMENT STEEL BORED RANGE 4

PRELIMINARY NOT FOR CONSTRUCTION

DATUM 398 396 394 392 390 388 386 384 382 380 378 376 374 372 370 368 366 374

30+00 30+50 31+00 31+50 32+00 32+50

FILE NAME: C:\DCWORK.DIR\DMS730744\U10.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
Power InRoads v8.11.9.397

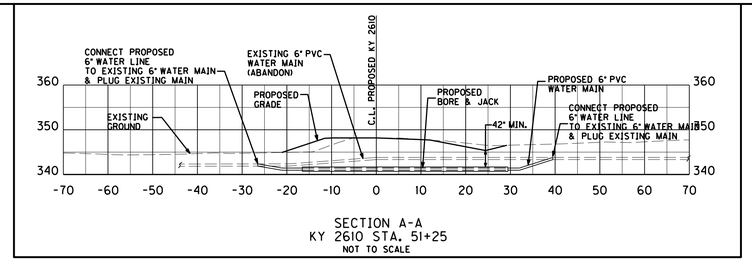
STATE OF KENTUCKY
KENNETH D. McDANIEL
21917
LICENSED PROFESSIONAL ENGINEER

01-27-2020

UTILITY PLANS

SANITARY SEWER LINE "B" PROFILE
STA. 30+00 TO STA. 30+88.00

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U11 |




SECTION A-A
KY 2610 STA. 51+25
NOT TO SCALE

PRELIMINARY NOT FOR CONSTRUCTION

150+00 151+00 152+00 153+00 154+00 155+00 156+00

PROP.R/W
N 12°46'23" E- 1422.30'
CONST. LIMITS
551+00
PROPOSED TRAFFIC BOUND BASE
552+00
END PROPOSED ASPHALT
PI 552+54.62
PROP.R/W
N 7°21'25" W- 421.53'

BRIDGE ROAD (CR 1265)
8'
8'

STA. 152+55.99 US 60=
STA. 553+04.17 BRIDGE RD (CR 1265)=
STA. 50+00 KY 2610

BRIDGE RD.
PI STA 552+54.62
Δ = 83°31'10" RT.
T = 44.64'
L = 72.88'
R = 50.00'
E = 17.03'

PI STA 155+46.51
Δ = 27°27'40" LT.
T = 461.80'
L = 905.85'
R = 1890.00'
E = 55.60'
e = 5.00%

R 20'
R 25'
PT 552+82.86
89°38'13"
99°56'22"
N 86°22'24" E
US 60
12'
12'
12'
200' STORAGE
+30.00
60.00'
CONST. LIMITS
660' TAPER
VARIES
55:1
12'
EX. R/W
+99.93
12.00'
MATCHLINE 156+00

P 31
DAVID W.REED
12'
VARIES
12'
12'
100' TAPER
200' STORAGE
+10.00
31.59'
+10.00
35.19'
MATCHLINE 150+00
EX. R/W
GRAVEL
PC 150+84.71
+10.00
11.08'
O.E. 341.51
R 50'
I.E. 342.87
CONST. LIMITS
EX.& PROP.R/W
WM
6"
51+00
PI 155+46.51
EXISTING 6" PVC WATER (TO REMAIN)
WM
WM
GRAVEL
15" CMP (CRUSHED)
O.E. 347.65
I.E. 348.43
EXISTING 6" PVC WATER (ABANDON)
PROPOSED 6" WATER LINE
CONST. LIMITS
A
A
KY 2610
P 31
52+00
DAVID W.REED
COMMONWEALTH OF KY
THOMAS D.CHAMPION

127.7' RT. US 60 C.L. STA. 152+39.09
INSTALL 1-W TIE-IN 06 INCH,
1-W TAPPING SLEEVE & VALVE SIZE 1
& 1-W PLUG EXISTING MAIN

RT. US 60 C.L. STA. 152+39.09 TO
RT. US 60 C.L. STA. 153+00
INSTALL 80 L.F. OF W PIPE PVC 06 INCH

133.1' RT. US 60 C.L. STA. 152+50 TO
125.6' RT. US 60 C.L. STA. 152+92
CONSTRUCT 46 L.F. OF W ENCASEMENT
STEEL BORED-RANGE 3

118.0' RT. US 60 C.L. STA. 153+00
INSTALL 1-W TIE-IN 06 INCH,
1-W TAPPING SLEEVE & VALVE SIZE 1
& 1-W PLUG EXISTING MAIN

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

# UTILITY PLANS

0' 20' 40' 80'

SCALE: 1"=20'

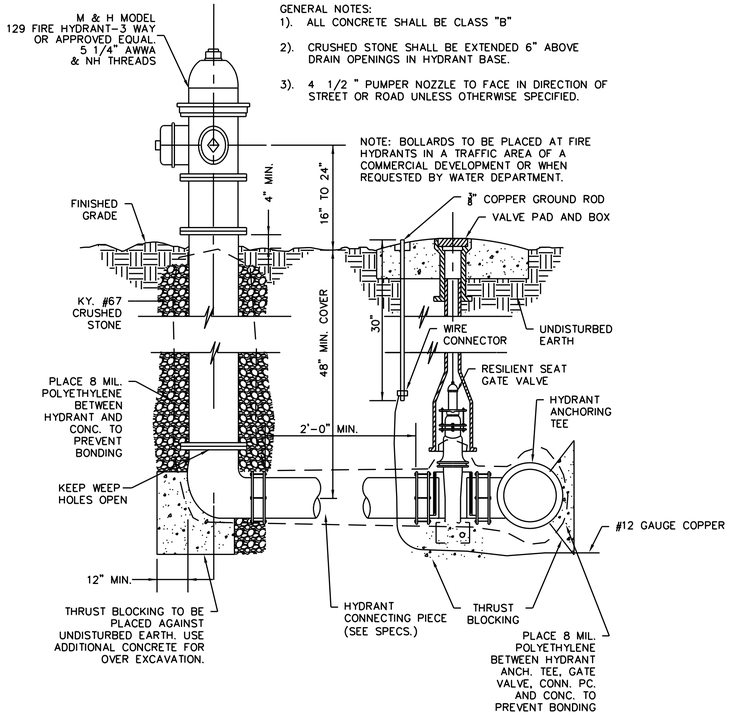
US 60 / KY 2610
WATER LINE PLAN
STA. 150+00 - STA. 156+00

Power InRoads v8.11.9.397 | E-SHEET NAME: | USER: dcurtsinger DATE PLOTTED: January 27, 2020 | FILE NAME: C:\DCWORK.DIR\DMS730744\U11.DGN

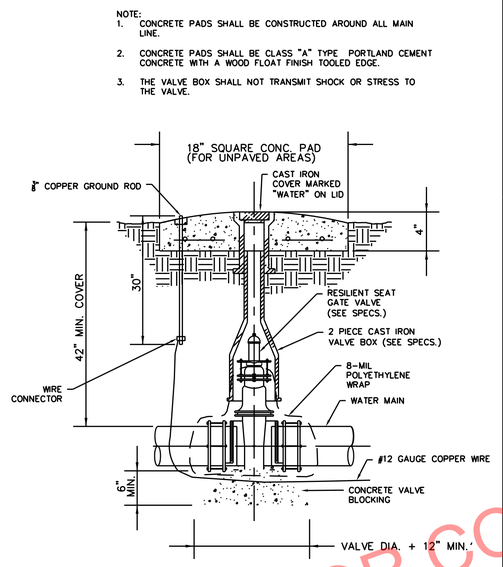
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U12 |



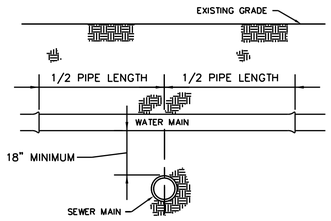

01-27-2020



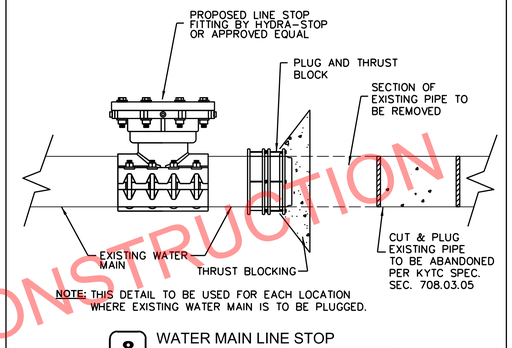

**1** WATER HYDRANT PLACEMENT DETAILS
SCALE: N.T.S.



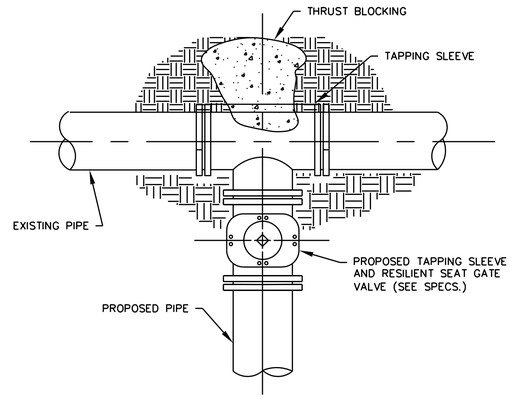

**2** TYPICAL GATE VALVE AND BOX COLLAR
SCALE: N.T.S.



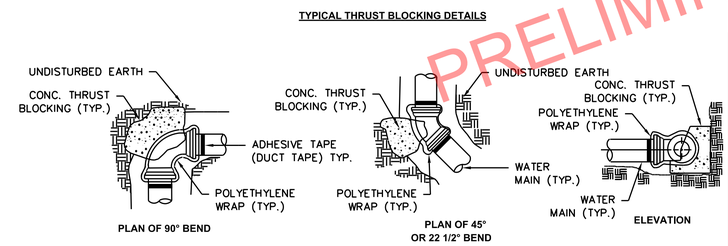

**3** WATER MAIN CROSSING SEWER
SCALE: N.T.S.




**8** WATER MAIN LINE STOP
SCALE: N.T.S.




**4** TYPICAL TAPPING VALVE INSTALLATION DETAIL
SCALE: N.T.S.




THRUST / LBS. OF PRESSURE

| PIPE SIZE | DEAD END OR TEE | 1/4" BEND | 1/8" BEND | 1/16" BEND |
|---|---|---|---|---|
| 4" | 20 | 40 | 27 | 20 |
| 6" | 39 | 60 | 54 | 29 |
| 8" | 68 | 100 | 56 | 31 |
| 10" | 110 | 160 | 89 | 48 |
| 12" | 155 | 220 | 120 | 62 |
| 16" | 260 | 340 | 180 | 90 |

**NOTES:**

ALL DUCTILE IRON PIPE, FITTINGS AND VALVES SHALL BE WRAPPED WITH A POLYETHYLENE MATERIAL, 8-MIL. INSTALLED TO THE CURRENT ADDITION OF THE AWWA C-105.

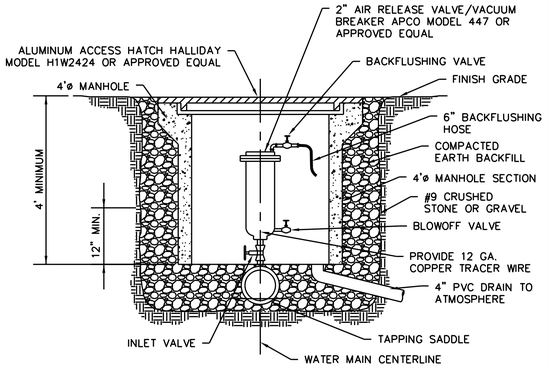
BLOCKING SHALL BE POURED AFTER THE POLYETHYLENE WRAP IS IN PLACE.

BLOCKING SHALL BE INSPECTED BY THE DESIGN ENGINEER'S INSPECTOR PRIOR TO BACKFILLING.

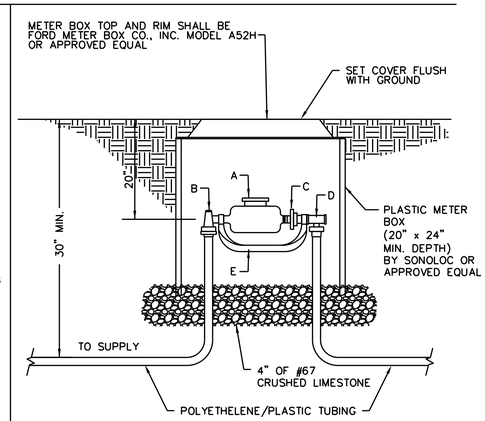
THRUST BLOCKS TO BE PLACED AGAINST UNDISTURBED EARTH. USE ADDITIONAL CONCRETE AS REQUIRED FOR OVER EXCAVATION.

THRUST BLOCKS SHALL BE CONSTRUCTED WITH CLASS "B" PORTLAND CEMENT CONCRETE, 2500 PSI, MINIMUM.

**5** TYPICAL THRUST BLOCKING DETAILS (WATER)
SCALE: N.T.S.




**6** AIR RELEASE VALVE ASSEMBLY
SCALE: N.T.S.




A. ROCKWELL WATER METER WITH: SEALED REGISTER, STD. GALLONS READING ROCKSYN CHAMBER & PISTON, PLASTIC BOTTOM PLATE, BRONZE CAPSCREWS & LID.

B. FORD ANGLE YOKE BALL VALVE

C. FORD METER EXPANSION FITTING

D. FORD ANGLE CASCADING DUAL CHECK VALVE

E. FORD YOKE BAR

**7** WATER METER SETTING
SCALE: N.T.S.

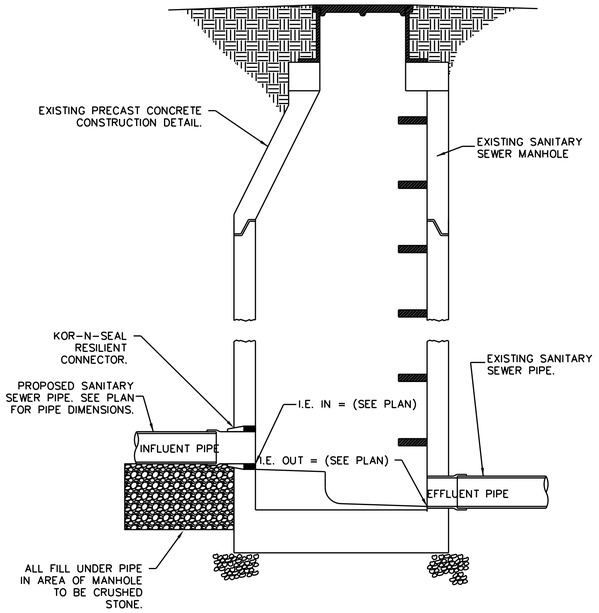
PRELIMINARY NOT FOR CONSTRUCTION

SCALE: N.T.S.

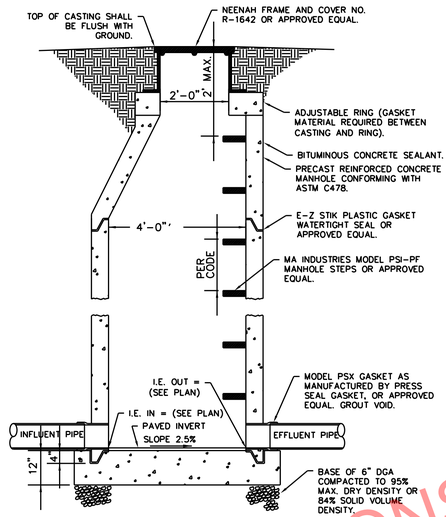
UTILITY DETAILS

FILE NAME: C:\DCWORK.DIR\DMS730744\UI2.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
Power InRoads v8.11.9.397

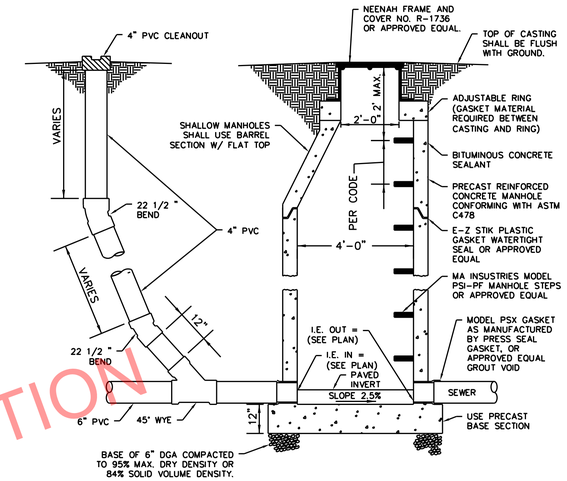
| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U13 |



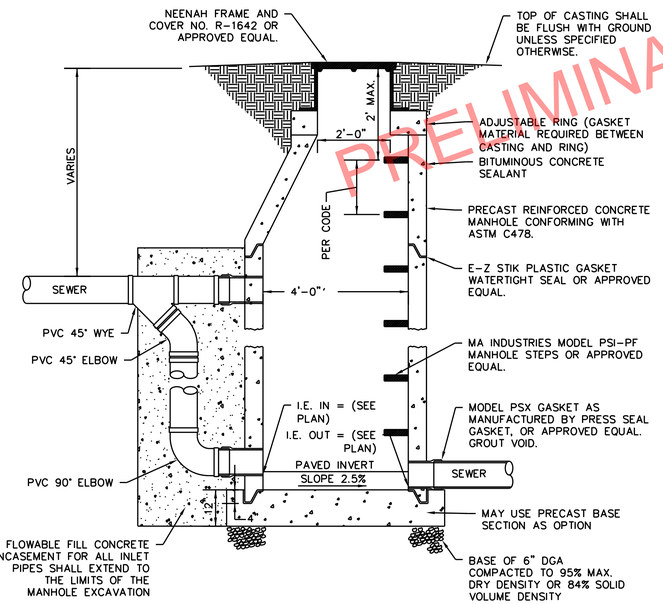

**1** CONNECTION TO EXISTING MANHOLE
SCALE: N.T.S.



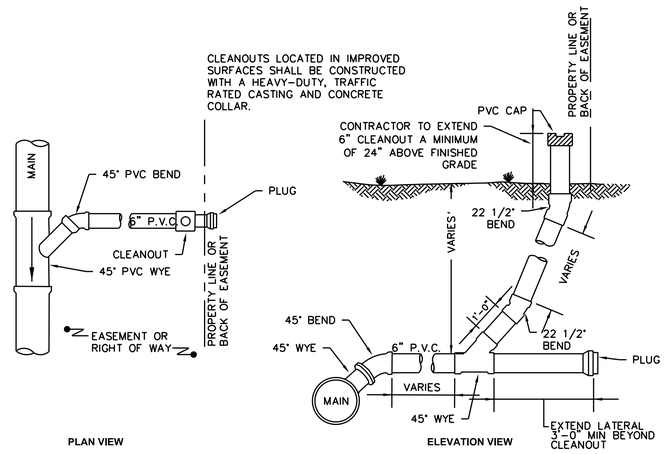

**2** 48"Ø SANITARY SEWER MANHOLE
SCALE: N.T.S.




**3** SANITARY SEWER MANHOLE WITH LATERAL
SCALE: N.T.S.




**4** SANITARY SEWER DROP MANHOLE
SCALE: N.T.S.




**5** SERVICE LATERAL WITH CLEANOUT (UNIMPROVED)
SCALE: N.T.S.

PRELIMINARY NOT FOR CONSTRUCTION

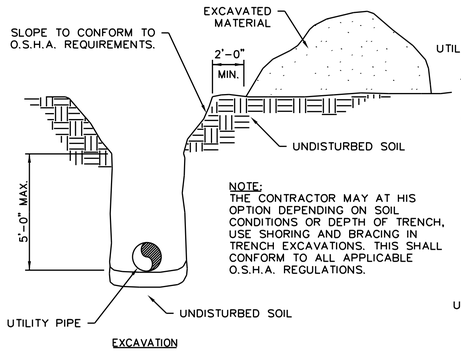
STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

SCALE: N.T.S.

UTILITY DETAILS

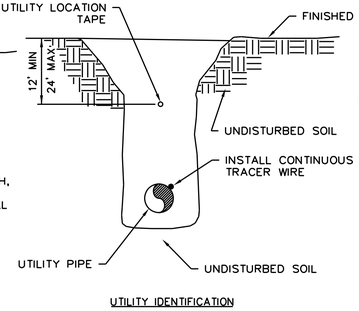
Power InRoads v8.11.9.397 E-SHEET NAME: USER: dcurtsinger DATE PLOTTED: January 27, 2020 FILE NAME: C:\DCWORK..DIR\DMS730744\U13.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | UI4 |

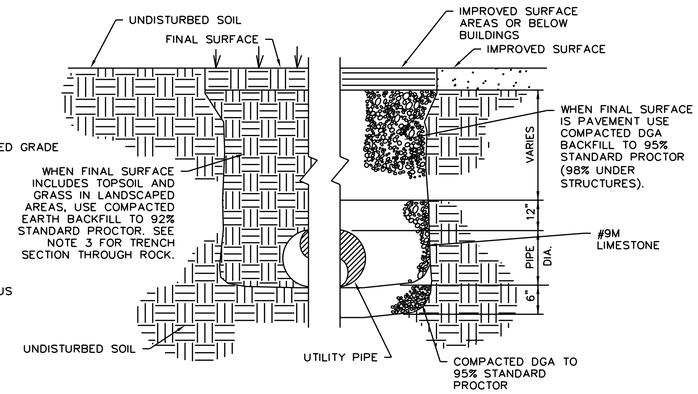



NOTE:
THE CONTRACTOR MAY AT HIS OPTION DEPENDING ON SOIL CONDITIONS OR DEPTH OF TRENCH, USE SHORING AND BRACING IN TRENCH EXCAVATIONS. THIS SHALL CONFORM TO ALL APPLICABLE O.S.H.A. REGULATIONS.

EXCAVATION



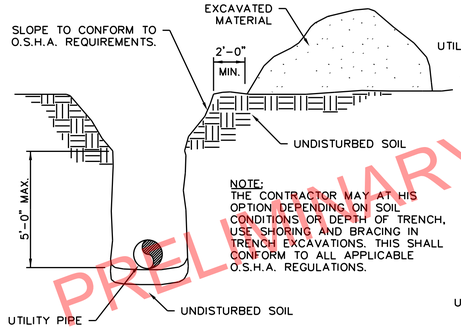

UTILITY IDENTIFICATION




NOTES:
1. TRENCH WIDTH IS OUTSIDE PIPE DIAMETER PLUS 24".
2. COMPACTED BACKFILL SHALL BE PLACED TO A ONE FOOT MIN. DEPTH OF COVER. THE INITIAL BACKFILL SHALL BE A MATERIAL FREE FROM ROCKS GREATER THAN 1/2" DIA., SOIL CLODS OR FROZEN MATERIAL. IF AUTOMATIC TAMPERS ARE USED, CARE SHALL BE EXERCISED TO AVOID DAMAGE TO THE PIPE.
3. TRENCH SECTION CUT INTO ROCK SHALL HAVE 6" BEDDING OF COMPACTED DGA TO 95% STANDARD PROCTOR BELOW PIPE FOLLOWED BY #9M LIMESTONE BACKFILLED TO 12" ABOVE TOP OF PIPE.

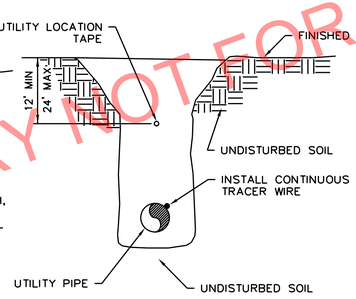
BACKFILL

**1** UTILITY TRENCH DETAILS FOR FORCED SYSTEM
SCALE: N.T.S.

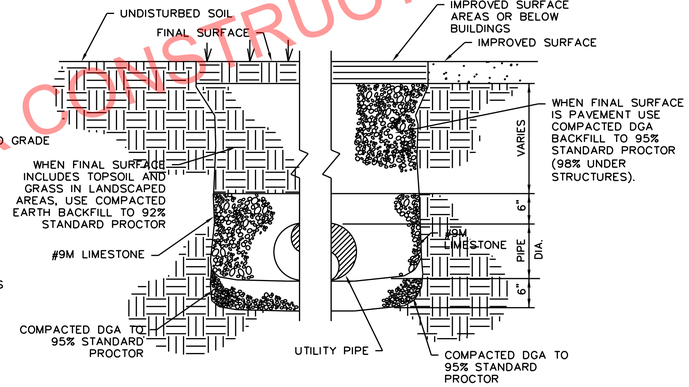



NOTE:
THE CONTRACTOR MAY AT HIS OPTION DEPENDING ON SOIL CONDITIONS OR DEPTH OF TRENCH, USE SHORING AND BRACING IN TRENCH EXCAVATIONS. THIS SHALL CONFORM TO ALL APPLICABLE O.S.H.A. REGULATIONS.

EXCAVATION



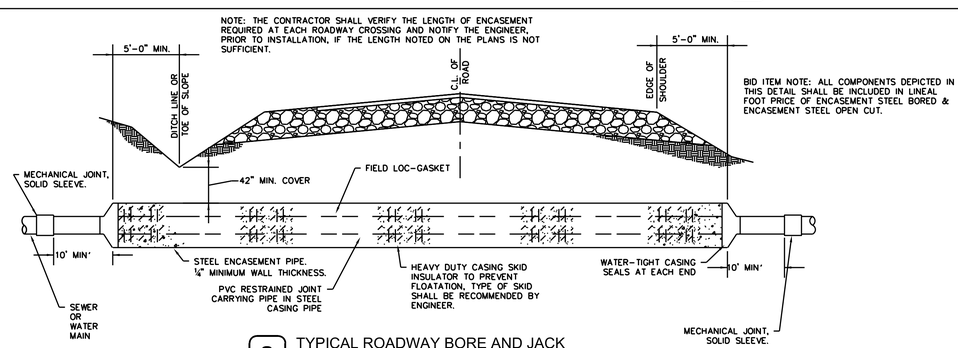

UTILITY IDENTIFICATION
(NOT REQUIRED FOR STORMSEWER)




NOTES:
1. TRENCH WIDTH IS OUTSIDE PIPE DIAMETER PLUS 24".
2. COMPACTED BACKFILL SHALL BE PLACED TO A ONE FOOT MIN. DEPTH OF COVER. THE INITIAL BACKFILL SHALL BE A MATERIAL FREE FROM ROCKS GREATER THAN 1/2" DIA., SOIL CLODS OR FROZEN MATERIAL. IF AUTOMATIC TAMPERS ARE USED, CARE SHALL BE EXERCISED TO AVOID DAMAGE TO THE PIPE.

BACKFILL

**2** UTILITY TRENCH DETAILS FOR GRAVITY SYSTEM
SCALE: N.T.S.




**3** TYPICAL ROADWAY BORE AND JACK
SCALE: N.T.S.

PRELIMINARY NOT FOR CONSTRUCTION

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER
01-27-2020

SCALE: N.T.S.

UTILITY DETAILS

Power InRoads v8.11.9.397 | E-SHEET NAME: | USER: dcurtsinger DATE PLOTTED: January 27, 2020 | FILE NAME: C:\DCWORK.DIR\DMS730744\UI4.DGN

| COUNTY OF | ITEM NO. | SHEET NO. |
|---|---|---|
| LIVINGSTON | 1-1142.00 | U15 |

# GENERAL SUMMARY

| ITEM | DESCRIPTION | UNIT | US 60 | KY 70 | | TOTAL |
|---|---|---|---|---|---|---|
| 01314 | PLUG PIPE | EACH | 3 | 1 | | 4 |
| 02690 | SAFELOADING | CY | 16 | 0 | | 16 |
| 05985 | SEEDING AND PROTECTION | SY | 1350 | 24 | | 1374 |
| 14000 | W AIR RELEASE VALVE | EACH | 1 | 1 | | 2 |
| 14008 | W ENCASEMENT STEEL BORED RANGE 3 | LF | 196 | 59 | | 255 |
| 14019 | W FIRE HYDRANT ASSEMBLY | EACH | 3 | 1 | | 4 |
| 14021 | W FIRE HYDRANT REMOVE | EACH | 2 | 1 | | 3 |
| 14025 | W METER 1 INCH | EACH | 9 | 1 | | 10 |
| 14058 | W PIPE PVC 04 INCH | LF | 652 | 0 | | 652 |
| 14059 | W PIPE PVC 06 INCH | LF | 578 | 200 | | 778 |
| 14074 | W PLUG EXISTING MAIN | EACH | 4 | 0 | | 4 |
| 14077 | W SERV PE/PLST LONG SIDE 1 IN | EACH | 2 | 0 | | 2 |
| 14082 | W SERV PE/PLST SHORT SIDE 1 IN | EACH | 7 | 1 | | 8 |
| 14089 | W TAPPING SLEEVE & VALVE SIZE 1 | EACH | 1 | 1 | | 2 |
| 14094 | W TIE-IN 06 INCH | EACH | 2 | 1 | | 3 |
| 14105 | W VALVE 06 INCH | EACH | 4 | 2 | | 6 |
| 14156 | W METER REMOVE | EACH | 6 | 1 | | 7 |
| 15000 | S BYPASS PUMPING | EACH | 1 | 0 | | 1 |
| 15017 | S ENCASEMENT STEEL BORED RANGE 4 | LF | 86 | 0 | | 86 |
| 15023 | S ENCASEMENT STEEL OPEN CUT RANGE 4 | LF | 130 | 0 | | 130 |
| 15090 | S LATERAL SHORT SIDE 06 INCH | EACH | 8 | 0 | | 8 |
| 15092 | S MANHOLE | EACH | 7 | 0 | | 7 |
| 15093 | S MANHOLE ABANDON/REMOVE | EACH | 4 | 0 | | 4 |
| 15094 | S MANHOLE ADJUST TO GRADE | EACH | 1 | 0 | | 1 |
| 15096 | S MANHOLE CASTING WATERTIGHT | EACH | 10 | 0 | | 10 |
| 15097 | S MANHOLE RECONSTRUCT INVERT | EACH | 1 | 0 | | 1 |
| 15099 | S MANHOLE TAP EXISTING | EACH | 2 | 0 | | 2 |
| 15101 | S MANHOLE WITH DROP | EACH | 1 | 0 | | 1 |
| 15112 | S PIPE PVC 08 INCH | LF | 1169 | 0 | | 1169 |
| 15136 | S LATERAL LOCATE | EACH | 8 | 0 | | 8 |
| | | | | | | |
| | | | | | | |

PRELIMINARY NOT FOR CONSTRUCTION

## UTILITY COMPANIES

SMITHLAND WATER WORKS
310 WILSON AVENUE
SMITHLAND, KY 42081
PHONE: (270) 928-2446
CONTACT: CHUCK BLACK
(270) 559-7619 CELL
(270) 928-4890 WATER PLANT

CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT
716 LIVINGSTON WATER PLANT ROAD
SALEM, KY 42078
PHONE: (270) 988-2680
CONTACT: RONNIE SLAYDEN
(270) 988-2060 WATER PLANT

GENERAL UTILITY NOTES AND INSTRUCTIONS APPLICABLE TO ALL UTILITY WORK MADE A PART OF THE ROAD CONSTRUCTION CONTRACT:

THE CONTRACTOR SHOULD BE AWARE OF THE FOLLOWING UTILITY NOTES AND KYTC UTILITY BID ITEMS DESCRIPTIONS SHALL SUPERSEDE, REPLACE AND TAKE PRECEDENCE OVER ANY AND ALL CONFLICTING INFORMATION THAT MAY BE CONTAINED IN UTILITY OWNER SUPPLIED SPECIFICATIONS CONTAINED IN THE CONTRACT.

WHERE INFORMATION MAY HAVE BEEN OMITTED FROM THESE NOTES, BID ITEM DESCRIPTIONS, UTILITY OWNER SUPPLIED SPECIFICATIONS OR PLANS; THE KYTC STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHALL BE REFERENCED.

STATE OF KENTUCKY
KENNETH D. McDANIEL
21911
LICENSED PROFESSIONAL ENGINEER

01-27-2020

GENERAL UTILITY NOTES

1. ALL UTILITIES ARE SHOWN IN THEIR GENERAL LOCATION. PRIOR TO INITIATING CONSTRUCTION, ALL UTILITIES SHALL BE FIELD LOCATED. CONTRACTOR SHALL EXPOSE UTILITIES LOCATED WITHIN THE DISTURBED LIMITS UTILIZING MANUAL EXCAVATION WHERE NEEDED TO AVOID DAMAGE TO THE UTILITY. NOTIFY THE ENGINEER OF CONFLICTS WHICH MAY AFFECT PROPER COMPLETION OF THE WORK. TAKE MEASURES TO PROTECT THE UTILITIES FROM DAMAGE DURING CONSTRUCTION. COORDINATE REPAIRS OF DAMAGED UTILITIES WITH THE UTILITY OWNERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REQUIRED UTILITY REPAIR OR REPLACEMENT.

2. PROPOSED PIPING IS SHOWN IN ITS PLANNED LOCATION. CONTRACTOR SHALL MAKE ALL MINOR ADJUSTMENTS OF THE LOCATION AND GRADE OF THE PROPOSED PIPING TO INSURE COMPLETE INTEGRATION OF ALL PROPOSED PIPING WITH EXISTING AND PROPOSED PIPING AND STRUCTURES. IN MAKING THESE MINOR ADJUSTMENTS, THE CONTRACTOR SHALL NOT DEVIATE BEYOND THE EXISTING OR PROPOSED EASEMENTS.

3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MISCELLANEOUS FITTINGS, ITEMS OR PROVISIONS THAT ARE NOT SPECIFICALLY LISTED ON THIS DRAWING OR ON THE SCHEDULES IN THIS DRAWING, THAT ARE REQUIRED FOR CONSTRUCTION, TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM, AT NO ADDITIONAL COST TO THE OWNER OR DEVELOPER.

4. ALL WATER LINE FITTINGS SHALL BE MECHANICAL JOINT DUCTILE IRON WITH A MINIMUM TENSILE STRENGTH OF 25,000 PSI AND WITH A WALL THICKNESS EQUIVALENT OF DUCTILE IRON CLASS 54 AND A WORKING PRESSURE RATING OF 350 PSI.

5. ALL WATER & SANITARY SEWER MAINS SHALL MAINTAIN 42 INCHES OF COVER BELOW PROPOSED GRADE MEASURED FROM GROUND SURFACE TO THE TOP OF THE MAIN. IF EXISTING GRADE IS LOWER THAN PROPOSED GRADE, INSTALL MAINS 42 INCHES BELOW EXISTING GRADE IF MAINS ARE TO BE 'LIVE' PRIOR TO PLACEMENT OF PROPOSED FILL.

6. ALL MATERIALS, INSTALLATION AND TESTING SHALL BE IN CONFORMANCE WITH THE LOCAL UTILITY OWNER AND GOVERNING STATE STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND FOLLOWING ALL SPECIFICATIONS OF THESE LOCAL OR STATE GOVERNING AGENCIES, REGARDLESS IF THEY ARE OR ARE NOT SPECIFICALLY NOTED HEREIN. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND UNDERSTANDING ALL SPECIFICATIONS AND STANDARDS PRIOR TO COMMENCEMENT OF ANY WORK.

7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE LOCAL UTILITY OWNER 48 HOURS PRIOR TO TESTING THE SANITARY SEWER MAINS. THE ENGINEER AND A REPRESENTATIVE FROM THE LOCAL UTILITY OWNER MUST BE ON-SITE TO WITNESS ALL TESTING.

8. ALL SANITARY SEWER MAINS MUST MAINTAIN A 10 FEET HORIZONTAL SEPARATION FROM WATER MAINS UNDER NORMAL CIRCUMSTANCES. IN SPECIAL CASES, AS APPROVED BY THE LOCAL UTILITY OWNER, SANITARY SEWER MAINS CAN HAVE AN 18" HORIZONTAL AND 18" VERTICAL SEPARATION, PROVIDED THE WATER MAIN IS ABOVE THE SEWER MAIN. SEE DETAILS.

9. WITHOUT REGARD TO THE MATERIALS ENCOUNTERED, ALL EXCAVATION SHALL BE UNCLASSIFIED. ANY REFERENCE TO ROCK, EARTH OR ANY OTHER MATERIAL ON THE PLAN, WHETHER IN NUMBER, WORDS, LETTERS, OR LINES IS FOR INFORMATION ONLY AND IS NOT TO BE AN INDICATION OF A CLASSIFIED EXCAVATION. UNAUTHORIZED EXCAVATION SHALL BE BACKFILLED AT THE CONTRACTOR'S EXPENSE WITH COMPACTED EARTH, GRAVEL, OR OTHER MATERIAL AS APPROVED AND DIRECTED BY THE ENGINEER. ANY UNSUITABLE MATERIAL ENCOUNTERED SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE.

10. THE CONTRACTOR SHALL BACKFILL TRENCHES PER THE TRENCH DETAIL ON THE THE DETAILS SHEET.

11. SMITHLAND WATER WORKS AND CRITTENDEN-LIVINGSTON COUNTY WATER DISTRICT HAS FIRST RIGHTS TO SALVAGE. THE CONTRACTOR SHALL NOT DEMOLISH, REMOVE, OR DISPOSE OF ANY ITEMS WITHOUT NOTIFYING SMITHLAND WATER WORKS. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF DEBRIS, EXCESS MATERIALS, ETC. FROM THE PROJECT AND DISPOSE AT AN APPROVED LOCATION AT NO ADDITIONAL COST TO THE OWNER.

12. THE CONTRACTOR SHALL NOT STORE EXCAVATED MATERIAL IN LOCATIONS THAT BLOCK STORM DRAINAGE. THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION CONTROL AND SILTATION CAUSED FROM THE EXCAVATIONS ON THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING EXCESS DEBRIS THAT IS CARRIED ONTO ADJACENT ROADWAYS FROM THE CONSTRUCTION OF THIS PROJECT ON A DAILY BASIS.

13. THE CONTRACTOR SHALL RESTORE ALL SURFACE CONDITIONS (CONCRETE, ASPHALT, GRAVEL, GRASS, LANDSCAPE, ETC.) DISTURBED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT TO A CONDITION EQUAL TO OR EXCEEDING PRE-CONSTRUCTION CONDITIONS.

14. THE CONTRACTOR SHALL HAVE A LICENSED PROFESSIONAL LAND SURVEYOR REPLACE ANY AND ALL SURVEY MONUMENTS, PROPERTY CORNERS, ETC., DISTURBED BY THE CONSTRUCTION OF THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER.

15. CONTRACTOR SHALL PROTECT ALL SURROUNDING AREAS DURING THE COURSE OF CONSTRUCTION. CONTRACTOR SHALL REPAIR OR REPLACE, TO A CONDITION EQUAL TO OR GREATER THAN THE PRE-CONSTRUCTION CONDITION, ANY DAMAGES TO ON-SITE OR OFF-SITE PROPERTIES OR APPURTENANCES CAUSED BY THE CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.

16. PROTECTION OF EXISTING UTILITIES:
THE EXISTING UTILITIES SHOWN ON THE PLANS ARE SHOWN AS BEST KNOWN AT THE TIME THE PLANS WERE DDEVELOPED AND ARE TO BE USED AS A GUIDE ONLY BY THE CONTRACTOR. THE CONTRACTOR SHALL USE ALL MEANS AT HIS DISPOSAL TO ACCURATELY LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, PRIOR TO EXCAVATION. THE CONYTRACTOR SHALL PROTECT THESE UTILITIES DURING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION THAT ARE SHOWN OR NOT SHOWN ON THE PLANS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

17. NOTICE TO UTILITY OWNERS OF THE START OF WORK:
ONE MONTH BEFORE CONSTRUCTION IS TO START ON A UTILITY, THE UTILITY CONTRACTOR SHALL MAKE NOTICE TO THE KYTC SECTION ENGINEER AND THE UTILITY OWNER OF WHEN WORK ON A UTILITY IS ANTICIPATED TO START. THE UTILITY CONTRACTOR SHALL AGAIN MAKE CONFIRMATION NOTICE TO THE SECTION ENGINEER AND THE UTILITY OWNER ONE WEEK BEFORE UTILITY WORK IS TO ACTUALLY START.

18. UTILITY SHUTDOWNS:
THE CONTRACTOR SHALL NOT SHUT DOWN ANY ACTIVE AND IN-SERVICE MAINS, UTILITY LINES OR SERVICES FOR ANY REASON UNLESS SPECIFICALLY GIVEN PERMISSION TO DO SO BY THE UTILITY OWNER. THE OPENING AND CLOSING OF VALVES AND OPERATING OF OTHER ACTIVE UTILITY FACILITIES FOR MAIN, UTILITY LINE OR UTILITY SERVICE SHUT DOWNS ARE TO BE PERFORMED BY THE UTILITY OWNER UNLESS SPECIFIC PERMISSION IS GIVEN TO THE CONTRACTOR BY THE OWNER TO MAKE SHUTDOWNS. IF AND WHEN THE UTILITY OWNER GIVES THE CONTRACTOR PERMISSION TO SHUTDOWN MAINS, UTILITY LINES OR UTILITY SERVICES, THE CONTRACTOR SHALL DO SO FOLLOWING THE RULES, PROCEDURES AND REGULATIONS OF THE UTILITY OWNER. ANY PERMISSION GIVEN BY THE UTILITY OWNER TO THE CONTRACTOR TO SHUTDOWN ACTIVE AND IN-SERVICE MAINS, UTILITY LINES OR SERVICES SHALL BE COMMUNICATED TO THE KYTC SECTION ENGINEER BY THE UTILITY OWNER THAT SUCH PERMISSION HAS BEEN GIVEN.
NOTICE TO CUSTOMERS OF UTILITY SHUT DOWNS IS SOMETIMES REQUIRED TO BE PERFORMED BY THE UTILITY CONTRACTOR. THE CONTRACTOR MAY BE REQUIRED; BUT, IS NOT LIMITED TO, MAKING NOTICE TO UTILITY CUSTOMERS IN A CERTAIN MINIMUM AMOUNT OF TIME IN ADVANCE OF THE SHUT DOWN AND BY WHATEVER MEANS OF COMMUNICATION SPECIFIED BY THE UTILITY OWNER. THE MEANS OF COMMUNICATION TO THE CUSTOMER MAY BE; BUT IS NOT LIMITED TO, A DOOR HANGER, NOTICE BY NEWSPAPER AD, TELEPHONE CONTACT, OR ANY COMBINATION OF COMMUNICATION METHODS DEEMED NECESSARY, CUSTOMARY AND APPROPRIATE BY THE UTILITY OWNER. THE CONTRACTOR SHOULD REFER TO THE UTILITY OWNER SPECIFICATIONS FOR REQUIREMENTS ON CUSTOMER NOTICE.
ANY PROCEDURE THE UTILITY OWNER MAY REQUIRE THE CONTRACTOR TO PERFORM BY SPECIFICATION OR PLAN NOTE AND ANY EXPENSE THE CONTRACTOR MAY INCUR TO COMPLY WITH THE UTILITY OWNER'S SHUT DOWN PROCEDURE AND NOTICE TO CUSTOMERS SHALL BE CONSIDERED AN INCIDENTAL EXPENSE TO THE UTILITY CONSTRUCTION.

19. CUSTOMER SERVICE AND LATERAL ABANDONMENTS:
WHEN TEMPORARY OR PERMANENT ABANDONMENT OF CUSTOMER WATER, GAS, OR SEWER SERVICES OR LATERALS ARE NECESSARY DURING RELOCATION OF UTILITIES INCLUDED IN THE CONTRACT, THE UTILITY CONTRACTOR SHALL PERFORM THESE ABANDONMENTS AS PART OF THE CONTRACT AS INCIDENTAL WORK. NO SEPARATE PAYMENT WILL BE MADE FOR SERVICE LINE AND LATERAL ABANDONMENTS. THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIALS TO ACCOMPLISH THE TEMPORARY OR PERMANENT ABANDONMENT IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND/OR AS DIRECTED BY THE ENGINEER. ABANDONMENT MAY INCLUDE, BUT IS NOT LIMITED TO, DIGGING DOWN ON A WATER OR GAS MAIN AT THE TAP TO TURN OFF THE TAP VALVE OR CORPORATION STOP AND/OR CAPPING OR PLUGGING THE TAP, DIGGING DOWN ON A SEWER TAP AT THE MAIN AND PLUGGING OR CAPPING THE TAP, DIGGING DOWN ON A SERVICE LINE OR LATERAL AT A LOCATION SHOWN ON THE PLANS OR AGREEABLE TO THE ENGINEER AND CAPPING OR PLUGGING, OR PERFORMING ANY OTHER WORK NECESSARY TO ABANDON THE SERVICE OR LATERAL TO SATISFACTORILY ACCOMPLISH THE FINAL RELOCATION.

20. STATIONS AND DISTANCES:
ALL STATIONS AND DISTANCES, WHEN INDICATED FOR UTILITY PLACEMENT IN UTILITY RELOCATION PLANS OR SPECIFICATIONS, ARE APPROXIMATE; THEREFORE, SOME MINOR ADJUSTMENT MAY HAVE TO BE MADE DURING CONSTRUCTION TO FIT ACTUAL FIELD CONDITIONS. ANY CHANGES IN EXCESS OF 6 INCHES OF PLAN LOCATION SHALL BE REVIEWED AND APPROVED JOINTLY BY THE KYTC SECTION ENGINEER OR DESIGNATED REPRESENTATIVE AND UTILITY OWNER ENGINEER OR DESIGNATED REPRESENTATIVE. CHANGES IN LOCATION WITHOUT PRIOR APPROVAL SHALL BE REMEDIED BY THE CONTRACTOR AT HIS OWN EXPENSE IF THE UNAUTHORIZED CHANGE CREATES AN UNACCEPTABLE CONFLICT OR CONDITION.

21. RESTORATION:
TEMPORARY AND PERMANENT RESTORATION OF PAVED OR STONE AREAS DUE TO UTILITY CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THE UTILITY WORK. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. TEMPORARY RESTORATION SHALL BE AS DIRECTED BY THE KYTC SECTION ENGINEER. PERMANENT RESTORATION SHALL BE 'IN-KIND' AS EXISTING.
RESTORATION OF SEED AND SOD AREAS WILL BE MEASURED AND PAID UNDER THE APPROPRIATE SEEDING AND SODDING BID ITEMS ESTABLISHED IN THE CONTRACT FOR ROADWAY WORK.

UTILITY PLANS

US 60
UTILITY SUMMARY SHEET

FILE NAME: C:\DGNWORK..\DMS73074\U15.DGN
USER: dcurtsinger
DATE PLOTTED: January 27, 2020
E-SHEET NAME:
MicroStation v8.11.9.357