

SUGGESTED SEQUENCE OF CONSTRUCTION

AT LEAST ONE LANE OF TRAFFIC WILL BE MAINTAINED AT ALL TIMES ON US-20 & BUS-20 (E. STATE ST.) FOR THE DURATION OF WORK WITH THE EXCEPTION OF THE WB US-20 LEFT EXIT TO WB BUS-20 (E. STATE ST.)

CR-198 / CR-229 INTERSECTION WITH US-20 TO BE PERMANENTLY CLOSED UPON COMPLETION, AND OPENING, OF THE U-TURN MOVEMENTS.

PHASE 1 CONSTRUCTION

CONSTRUCT U-TURN BUMPOUT AT THE WESTERN PROJECT LIMITS, APPROXIMATELY 500' WEST OF THE BUS-20 (E. STATE ST.) INTERSECTION WITH CR-198.

PHASE 1 TRAFFIC

EB BUS-20 (E. STATE ST.) TRAFFIC WILL BE REDUCED TO ONE LANE. UTILIZING THE EXISTING INSIDE LANE ADJACENT TO THE WORK ZONE FOR THE U-TURN BUMPOUT.

PHASE 1A CONSTRUCTION

RECONSTRUCT THE CENTER MEDIAN OF BUS-20 (E. STATE ST.) FROM THE WESTERN PROJECT LIMITS TO THE INTERSECTION WITH CR-198. WORK TO INCLUDE THE CREATION OF THE [WB TO EB] U-TURN-LANE, THE [EB TO WB] LEFT-TURN-LANE, NEW CONCRETE CURB AND GUTTER, AND NECESSARY DRAINAGE IMPROVEMENTS.

PHASE 1A TRAFFIC

BUS-20 (E. STATE ST.) WILL BE REDUCED TO ONE LANE OF TRAFFIC IN EACH DIRECTION, UTILIZING THE EXISTING OUTSIDE LANE ADJACENT THE MEDIAN WORK ZONE. THE INTERSECTION WITH CR-198 WILL REMAIN OPERATIONAL. DRIVES WITHIN THE WORK ZONE WILL BE RESTRICTED TO RIGHT-IN, RIGHT-OUT MOVEMENTS ONLY.

PHASE 2 CONSTRUCTION

THE FOLLOWING PROPOSED FEATURES WILL BE CONSTRUCTED IN THIS PHASE:

1. THE PROPOSED ROUNDABOUT (RAB) AND ALL CONNECTORS
 - 1A. GROUND IMPROVEMENTS TO PRECEED PAVING OPERATIONS
 - 1B. COMPLETE SPECIAL BENCHING AND DITCH UNDERCUTS WHERE APPLICABLE
2. THE EB US-20 TO WB BUS-20 (E. STATE ST.) BYPASS RAMP
 - 2A. GROUND IMPROVEMENTS TO PRECEED PAVING OPERATIONS
 - 2B. COMPLETE SPECIAL BENCHING AND DITCH UNDERCUTS WHERE APPLICABLE
3. THE MEDIAN ON BUS-20, EAST OF THE CR-198 INTERSECTION
4. THE CR-198 CUL-DE-SAC AND IMPROVEMENTS AT CR-198/CR-229 (BEELER ROAD) AT THE (EXISTING) INTERSECTION WITH US-20

PHASE 2 TRAFFIC

THE CR-198 INTERSECTION WITH US-20 IS TO BE (PERMANENTLY) CLOSED.

EB US-20 TRAFFIC TO BE REDUCED TO ONE-LANE APPROACHING THE (NOW CLOSED) INTERSECTION WITH CR-198. TRAFFIC TO UTILIZE THE INSIDE LANE TO ALLOW SPACE FOR THE WB BUS-20 BYPASS RAMP WORK ZONE.

THE WB US-20 EXIT TO BUS-20 (TOWARDS FREMONT) TO BE CLOSED AND TRAFFIC DETOURED AS SHOWN IN THE PLANS.

WB US-20 TRAFFIC TO BE REDUCED TO ONE LANE AND SHIFTED TO THE OUTSIDE SHOULDER TO ALLOW SPACE FOR THE WORK ZONE.

EB BUS-20 TRAFFIC TO BE REDUCED TO ONE-LANE, UTILIZING THE OUTSIDE LANE AND SHOULDER AFTER THE INTERSECTION WITH CR-198. DRIVES WITHIN THE WORK ZONE WILL BE RESTRICTED TO RIGHT-IN, RIGHT-OUT MOVEMENTS ONLY.

PHASE 2 TRAFFIC (CONT.)

WB BUS-20 TRAFFIC TO BE RE-OPENED WEST OF THE INTERSECTION WITH CR-198.

PHASE 2A CONSTRUCTION

THE FOLLOWING PROPOSED FEATURES WILL BE CONSTRUCTED IN THIS PHASE:

1. CONSTRUCTION OF THE CENTER MEDIAN AT THE BUS-20 (E. STATE ST.) INTERSECTION WITH CR-198.
2. RECONSTRUCTION OF THE MEDIAN SHOULDERS ON US-20 AT THE (CLOSED) CR-198 /US-20 INTERSECTION
3. CONSTRUCTION OF THE U-TURN BUMPOUT AT THE EASTERN PROJECT LIMITS, IN THE NORTHWEST QUADRANT OF THE US-20 INTERSECTION WITH SR-19 / SHOCK ROAD.
 - 3A. REMOVAL AND REPLACEMENT OF TRAFFIC SIGNALS AT THIS INTERSECTION.

PHASE 2A TRAFFIC

CR-198 TRAFFIC TO BE PERMANENTLY RESTRICTED TO RIGHT-IN, RIGHT-OUT MOVEMENTS AT THE INTERSECTION WITH BUS-20 (E. STATE ST.) THE WESTERN U-TURN AND ROUNDABOUT ARE TO BE FULLY OPERATIONAL PRIOR TO THE CLOSURE OF THE THROUGH MOVEMENTS AT THE CR-198 INTERSECTION WITH BUS-20.

EB BUS-20 TRAFFIC TO BE REDUCED TO ONE-LANE IN THE EXISTING OUTSIDE LANE APPROACHING THE U-TURN BUMPOUT AND MAINTAINED THROUGH THE THE WORK ZONE AT THE CR-198 INTERSECTION.

TWO LANES OF TRAFFIC TO BE MAINTAINED ON WB BUS-20. TRAFFIC TO BE SHIFTED TO THE OUTSIDE SHOULDER THROUGH THE WORK ZONE AT THE CR-198 INTERSECTION.

TWO LANES OF TRAFFIC IN EACH DIRECTION TO BE MAINTAINED ON US-20 ADJACENT THE WORK ZONE AT THE MEDIAN CONSTRUCTION AT THE (NOW CLOSED) CR-198/US-20 INTERSECTION. TRAFFIC TO BE SHIFTED TO THE OUTSIDE SHOULDER THROUGH THE WORK ZONE.

REDUCE WB US-20 TRAFFIC TO ONE LANE, UTILIZING THE EXISTING INSIDE LANE APPROACHING THE INTERSECTION WITH SR-19 / SHOCK ROAD TO ALLOW SPACE FOR THE WORK ZONE AT THE U-TURN BUMPOUT. SHIFT SB SR-19/SHOCK ROAD TRAFFIC APPROACHING THE INTERSECTION TO ALLOW SPACE FOR THE WORK ZONE.

PHASE 3 CONSTRUCTION

RESURFACE PORTIONS OF BUS-20 (E. STATE ST.) AND WB US-20.

UPGRADE EB US-20 PAVEMENT MARKINGS THROUGH THE INTERCHANGE.

PHASE 3 TRAFFIC

FOR EB BUS-20 (E. STATE ST.), AT LEAST ONE LANE OF TRAFFIC IS TO BE MAINTAINED USING SCD MT-95.30 WHERE FEASIBLE.

FOR WB US-20, AT LEAST ONE LANE OF TRAFFIC TO BE MAINTAINED USING SCD MT-95.30. FOR WORK AREAS WITHIN A SINGLE LANE SECTION, SCD MT-98.29 SHOULD BE USED. BYPASS LANE TRAFFIC MAY BE DETOURED THROUGH THE ROUNDABOUT FOR SHORT-TERM OPERATIONS.

NIGHT OR WEEKEND WORK IS ANTICIPATED FOR SINGLE LANE RESURFACING LOCATIONS.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

| NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE | | |
|---|------------------------|--|
| ITEM | DURATION OF CLOSURE | NOTICE DUE TO PERMITS & PIO |
| RAMP & ROAD CLOSURES | >=2 WEEKS | 21 CALENDAR DAYS PRIOR TO CLOSURE |
| | > 12 HOURS & < 2 WEEKS | 14 CALENDAR DAYS PRIOR TO CLOSURE |
| | <= 12 HOURS | 4 CALENDAR DAYS PRIOR TO CLOSURE |
| LANE CLOSURES & RESTRICTIONS | >= 2 WEEKS | 14 CALENDAR DAYS PRIOR TO CLOSURE |
| | < 2 WEEKS | 5 BUSINESS DAYS PRIOR TO CLOSURE |
| START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES | N/A | 14 CALENDAR DAYS PRIOR TO IMPLEMENTATION |

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

| | |
|----------------------------|------------|
| ITEM 616, WATER | 75 M. GAL. |
| ITEM 616, CALCIUM CHLORIDE | 1.5 TON |

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ALONG US-20 AND BUS-20, OTHER THAN THE CLOSURE FOR BUS-20 WB. THIS IS TO BE DONE BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, ITEM 502 STRUCTURE FOR MAINTAINING TRAFFIC, ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELLING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

NOTICE OF CLOSURE SIGN TIME TABLE

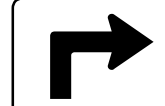
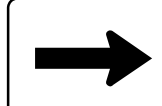


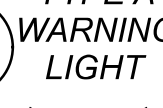
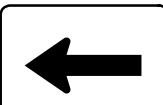
| ITEM | DURATION OF CLOSURE | SIGN DISPLAYED TO PUBLIC |
|----------------------|----------------------|-----------------------------------|
| RAMP & ROAD CLOSURES | ≥ 2 WEEKS | 14 CALENDAR DAYS PRIOR TO CLOSURE |
| | >12 HOURS & <2 WEEKS | 7 CALENDAR DAYS PRIOR TO CLOSURE |
| | ≤ 12 HOURS | 2 BUSINESS DAYS PRIOR TO CLOSURE |

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS PHONE NUMBER SHALL BE 419-373-4428

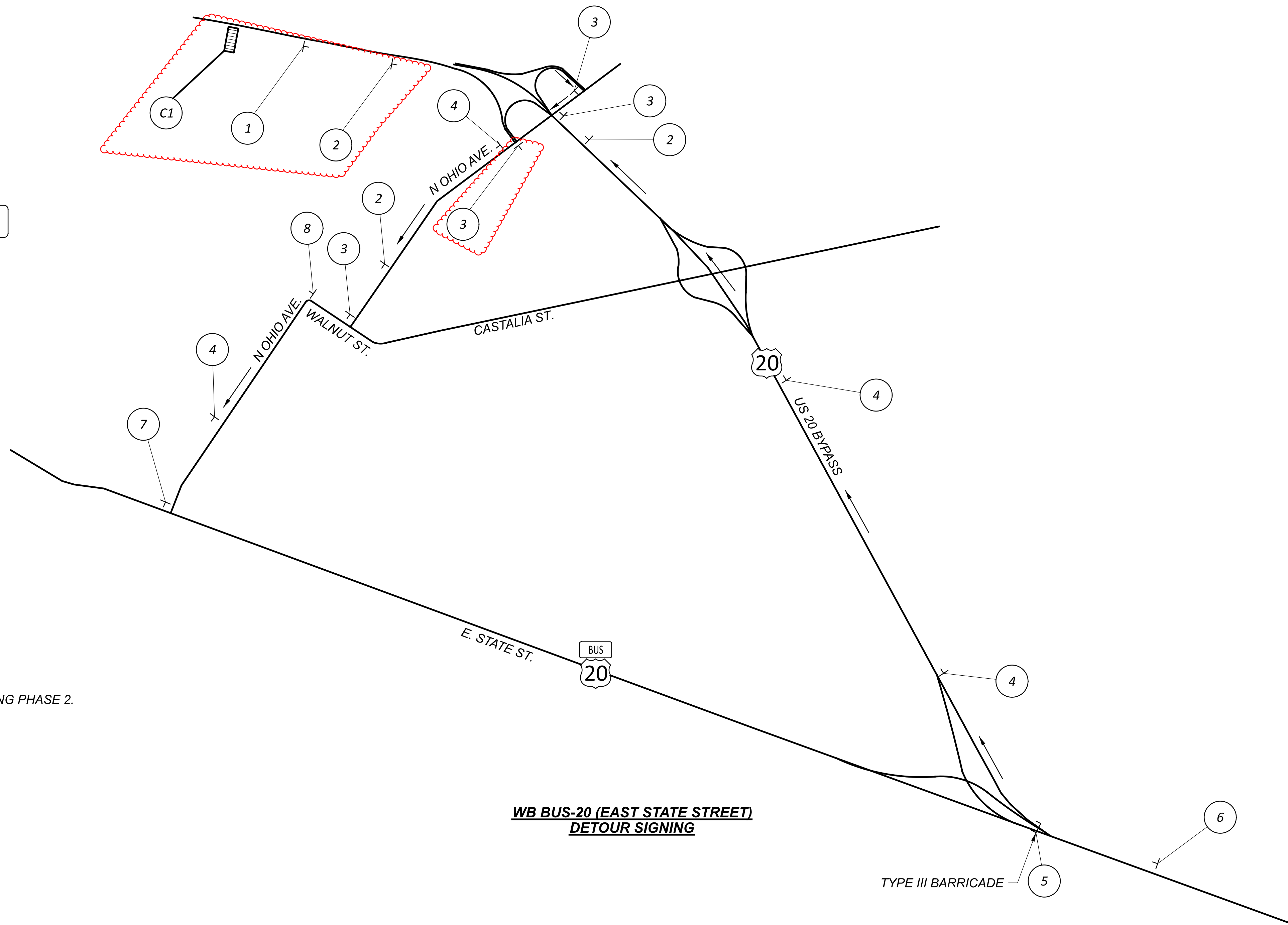
ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

| DESCRIPTION OF CRITICAL WORK | DISINCENTIVE \$ PER DAY | BEGIN | END |
|--|-------------------------|-------|-----------|
| ALL WORK NECESSARY TO ALLOW ACCESS FROM WB US-20 TO WB E. STATE ST, EB US-20 TO E. STATE ST, AND EB E. STATE ST TO WB US-20. | \$10,000 | N/A | 12/1/2026 |

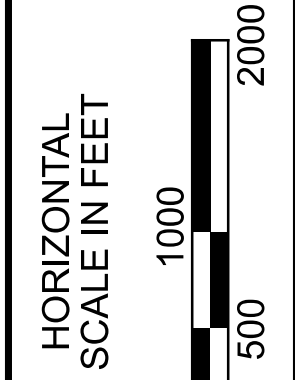
| | | | | | |
|---|---|---|---|--|--|
| <p>1</p> <p>DETOUR</p> <p>M4-8-24</p> <p>WEST</p> <p>M3-4-24</p> <p>STATE ST</p> <p>D3-1-18</p> | <p>2</p> <p>DETOUR</p> <p>M4-8-24</p> <p>WEST</p> <p>M3-4-24</p> <p>STATE ST</p> <p>D3-1-18</p> <p></p> <p>M5-1-21</p> | <p>3</p> <p>DETOUR</p> <p>M4-8-24</p> <p>WEST</p> <p>M3-4-24</p> <p>STATE ST</p> <p>D3-1-18</p> <p></p> <p>M6-1-21</p> | <p>4</p> <p>DETOUR</p> <p>M4-8-24</p> <p>WEST</p> <p>M3-4-24</p> <p>STATE ST</p> <p>D3-1-18</p> <p></p> <p>M6-3-21</p> | | |
| <p>5</p> <p>TYPE A WARNING LIGHT</p> <p></p> <p>ROAD CLOSED</p> <p>R11-2-48</p> <p>DETOUR</p> <p>M4-10R-48</p> | <p>6</p> <p>TYPE A WARNING LIGHT</p> <p></p> <p>DETOUR AHEAD</p> <p>W20-2-36</p> <p>STATE ST</p> <p>D3-1-18</p> | <p>7</p> <p>END DETOUR</p> <p>M4-8a-24</p> <p>WEST</p> <p>M3-4-24</p> <p>STATE ST</p> <p>D3-1-18</p> | | | |
| <p>8</p> <p>DETOUR</p> <p>M4-8-24</p> <p>WEST</p> <p>M3-4-24</p> <p>STATE ST</p> <p>D3-1-18</p> <p></p> <p>M6-1-21</p> | <p>PORTABLE CHANGEABLE MESSAGE SIGN</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">ACCESS CR 198 CLOSED SCREEN #1</td> <td style="padding: 5px;">DETOUR EXIT 102 FREMONT SCREEN #2</td> </tr> </table> <p>C1</p> | | ACCESS CR 198 CLOSED SCREEN #1 | DETOUR EXIT 102 FREMONT SCREEN #2 | |
| ACCESS CR 198 CLOSED SCREEN #1 | DETOUR EXIT 102 FREMONT SCREEN #2 | | | | |

NOTES:

1. FOR MAINTENANCE OF TRAFFIC SEQUENCING, SEE SHEET P.19
2. DETOUR PROVIDED FOR WB US-20 TO WB BUS-20 (E STATE ST.) TRAFFIC DURING PHASE 2.
3. ADVANCED WARNING PER OMTUCD SECTION 6C.04



**WB BUS-20 (EAST STATE STREET)
DETOUR SIGNING**




PHASE 2 DETOUR PLAN

| | |
|---|-------|
| DESIGN AGENCY | |
| M M | |
| MOTT MACDONALD | |
| <small>20445 EMERALD PKWY SUITE 100 CLEVELAND, OH 44135</small> | |
| DESIGNER | |
| RKC | |
| REVIEWER | |
| SJP 02/02/26 | |
| PROJECT ID | |
| 112222 | |
| SHEET | TOTAL |
| P.28 | 323 |

| SHEET NUM. | | | | | | | | | | | PART. | ITEM | ITEM | GRAND | UNIT | DESCRIPTION | SEE SHEET NO. | | |
|------------|--|-------|--------|--------|-----|--|-----|-----|-----|-----|-------|--------|---------|-------|-------|-------------|---------------|---|----|
| 16 | | 57 | 58 | 60 | 65 | | 222 | 225 | 229 | 283 | 288 | 01-SAF | EXT | TOTAL | | | | | |
| | | | | 10,875 | | | | | | | | | 10,875 | 605 | 11110 | 10,875 | FT | DRAINAGE (CONT.) 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC | |
| | | | | | | | | | | 40 | | | 40 | 611 | 00400 | 40 | FT | 4" CONDUIT, TYPE E | |
| | | | | 182 | | | | | | | | | 182 | 611 | 00510 | 182 | FT | 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS | |
| 50 | | | | | | | | | | | | | 50 | 611 | 00900 | 50 | FT | 6" CONDUIT, TYPE B | |
| 50 | | | | | | | | | | | | | 50 | 611 | 01400 | 50 | FT | 6" CONDUIT, TYPE E | |
| 50 | | | | | | | | | | | | | 50 | 611 | 01500 | 50 | FT | 6" CONDUIT, TYPE F | |
| | | | | 187 | | | | | | | | | 187 | 611 | 04600 | 187 | FT | 12" CONDUIT, TYPE C | |
| | | | | 40 | | | | | | | | | 40 | 611 | 05200 | 40 | FT | 12" CONDUIT, TYPE F | |
| | | | | 337 | | | | | | | | | 337 | 611 | 05901 | 337 | FT | 15" CONDUIT, TYPE B, AS PER PLAN | 16 |
| | | | | 356 | | | | | | | | | 356 | 611 | 06100 | 356 | FT | 15" CONDUIT, TYPE C | |
| | | | | 24 | | | | | | | | | 24 | 611 | 06700 | 24 | FT | 15" CONDUIT, TYPE F | |
| | | | | 139 | | | | | | | | | 139 | 611 | 10600 | 139 | FT | 24" CONDUIT, TYPE C | |
| | | | | 129 | | | | | | | | | 129 | 611 | 25001 | 129 | FT | 66" CONDUIT, TYPE A, AS PER PLAN, 706.02 | 16 |
| | | | | 10 | | | | | | | | | 10 | 611 | 26001 | 10 | FT | 72" CONDUIT, TYPE A, AS PER PLAN, 707.01 | 16 |
| | | | | 12 | | | | | | | | | 12 | 611 | 98180 | 12 | EACH | CATCH BASIN, NO. 3A | |
| | | | | 4 | | | | | | | | | 4 | 611 | 98470 | 4 | EACH | CATCH BASIN, NO. 2-2B | |
| | | | | 13 | | | | | | | | | 13 | 611 | 98630 | 13 | EACH | CATCH BASIN ADJUSTED TO GRADE | |
| | | | | 1 | | | | | | | | | 1 | 611 | 98634 | 1 | EACH | CATCH BASIN RECONSTRUCTED TO GRADE | |
| | | | | 8 | | | | | | | | | 8 | 611 | 98645 | 8 | EACH | CATCH BASIN GRATE, AS PER PLAN | 16 |
| | | | | 12 | | | | | | | | | 12 | 611 | 99710 | 12 | EACH | PRECAST REINFORCED CONCRETE OUTLET | |
| | | | | | | | | | | | | | | | | | | PAVEMENT | |
| | | | 17,522 | | | | | | | | | | 17,522 | 254 | 01000 | 17,522 | SY | PAVEMENT PLANING, ASPHALT CONCRETE, 3.75" | |
| 1,525 | | | | | | | | | | | | | 1,525 | 254 | 01000 | 1,525 | SY | PAVEMENT PLANING, ASPHALT CONCRETE, 1.5" | |
| | | | 14,457 | | | | | | | | | | 14,457 | 255 | 20000 | 14,457 | FT | FULL DEPTH PAVEMENT SAWING | |
| | | | 3,590 | | | | | | | | | | 3,590 | 301 | 56000 | 3,590 | CY | ASPHALT CONCRETE BASE, PG64-22, (449) | |
| | | | | 24 | | | | | | | | | 24 | 301 | 56100 | 24 | CY | ASPHALT CONCRETE BASE, PG64-22, (449), (DRIVEWAYS) | |
| | | | 3,793 | | 171 | | | | | | | | 3,964 | 304 | 20000 | 3,964 | CY | AGGREGATE BASE | |
| 115 | | | 2,967 | | 54 | | | | | | | | 3,136 | 407 | 10000 | 3,136 | GAL | TACK COAT | |
| | | | | | 41 | | | | | | | | 41 | 441 | 70500 | 41 | CY | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS) | |
| | | | | | 39 | | | | | | | | 39 | 441 | 70700 | 39 | CY | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS) | |
| | | | | | | | | | | | | | 25 | 441 | 70800 | 25 | CY | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), (UNDER GUARDRAIL) | |
| 64 | | | 1,657 | | | | | | | | | | 1,721 | 442 | 10000 | 1,721 | CY | ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) | |
| | | | 2,475 | | | | | | | | | | 2,475 | 442 | 10100 | 2,475 | CY | ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446) | |
| | | | 433 | | | | | | | | | | 433 | 452 | 19200 | 433 | SY | NON-REINFORCED CONCRETE PAVEMENT, MISC.: 8" CONCRETE SLAB STAMPED AND SEALED | 16 |
| | | 5,775 | | | | | | | | | | | 5,775 | 609 | 12000 | 5,775 | FT | COMBINATION CURB AND GUTTER, TYPE 2 | |
| | | 233 | | | | | | | | | | | 233 | 609 | 26000 | 233 | FT | CURB, TYPE 6 | |
| | | 315 | | | | | | | | | | | 315 | 609 | 31000 | 315 | FT | COMBINATION CURB AND GUTTER, TYPE 9 | |
| | | 546 | | | | | | | | | | | 546 | 609 | 33001 | 546 | FT | CURB, TYPE 10, AS PER PLAN | 17 |
| | | | 243 | | | | | | | | | | 243 | 609 | 70000 | 243 | SY | 4" CONCRETE MEDIAN | |
| 1.04 | | | 0.77 | | | | | | | | | | 1.81 | 618 | 40600 | 1.81 | MILE | RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE) | |
| | | | | | | | | | | | | | | | | | | TRAFFIC CONTROL | |
| | | | | | | | | 449 | | | | | 449 | 621 | 00100 | 449 | EACH | RPM | |
| | | | | | | | 200 | | | | | | 200 | 621 | 54000 | 200 | EACH | RAISED PAVEMENT MARKER REMOVED | |
| | | 57 | | | | | | | | | | | 57 | 626 | 00110 | 57 | EACH | BARRIER REFLECTOR, TYPE 2, (BI-DIRECTIONAL) | |
| | | | | | | | | | | | | | 347.5 | 630 | 02100 | 347.5 | FT | GROUND MOUNTED SUPPORT, NO. 2 POST | |
| | | | | | | | | | | | | | 1,466.5 | 630 | 03100 | 1,466.5 | FT | GROUND MOUNTED SUPPORT, NO. 3 POST | |
| | | | | | | | | | | | | | 42.4 | 630 | 07600 | 42.4 | FT | GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12 | |
| | | | | | | | | | | | | | 2 | 630 | 09000 | 2 | EACH | BREAKAWAY STRUCTURAL BEAM CONNECTION | |
| | | | | | | | | | | | | | 2 | 630 | 72330 | 2 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 10 | |
| | | | | | | | | | | | | | 2 | 630 | 72410 | 2 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1 | |
| | | | | | | | | | | | | | 4 | 630 | 72420 | 4 | EACH | OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2 | |
| | | | | | | | | | | | | | 57 | 630 | 75000 | 57 | EACH | SIGN ATTACHMENT ASSEMBLY | |
| | | | | | | | | | | | 15 | | 988.29 | 630 | 80100 | 988.29 | SF | SIGN, FLAT SHEET | |
| | | | | | | | | | | | | | 55 | 630 | 80200 | 55 | SF | SIGN, GROUND MOUNTED EXTRUSHEET | |
| | | | | | | | | | | | | | 2,019.5 | 630 | 80224 | 2,019.5 | SF | SIGN, OVERHEAD EXTRUSHEET | |
| | | | | | | | | | | | | | 2 | 630 | 84500 | 2 | EACH | GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION | |

GENERAL SUMMARY

DESIGN AGENCY

MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135
 DESIGNER
RKC
 REVIEWER
 SJP 02/02/26
 PROJECT ID
 112222
 SHEET TOTAL
 P.53 | 323

| SHEET NUM. | | | | | | PART. | ITEM | ITEM | GRAND | UNIT | DESCRIPTION | SEE SHEET NO. |
|------------|-----|--|-------|-----|-------|--------|------|-------|-------|------|--|---------------|
| 225 | 229 | | 288 | 289 | 290 | 01-SAF | EXT | TOTAL | | | | |
| | | | | | | | | | | | TRAFFIC CONTROL (CONT.) | |
| | 14 | | 2 | | | 16 | 630 | 84511 | 16 | EACH | RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN | 222 |
| | 103 | | | | | 103 | 630 | 84900 | 103 | EACH | REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL | |
| | 3 | | | | | 3 | 630 | 85400 | 3 | EACH | REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL | |
| | 100 | | | | | 100 | 630 | 86002 | 100 | EACH | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | |
| | 4 | | | | | 4 | 630 | 86102 | 4 | EACH | REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL | |
| | 2 | | | | | 2 | 630 | 86292 | 2 | EACH | REMOVAL OF GROUND MOUNTED WOODEN BOX BEAM SUPPORT AND DISPOSAL | |
| | 5 | | | | | 5 | 630 | 87400 | 5 | EACH | REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL | |
| | 1 | | | | | 1 | 630 | 89706 | 1 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 | |
| | 1 | | | | | 1 | 630 | 89804 | 1 | EACH | REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115 | |
| 0.13 | | | | | | 0.13 | 646 | 10010 | 0.13 | MILE | EDGE LINE, 6" | |
| 0.07 | | | | | | 0.07 | 646 | 10200 | 0.07 | MILE | CENTER LINE | |
| 54 | | | | | | 54 | 646 | 10400 | 54 | FT | STOP LINE | |
| 1,200 | | | | | | 1,200 | 646 | 10600 | 1,200 | FT | TRANSVERSE/DIAGONAL LINE | |
| 14 | | | | | | 14 | 646 | 20300 | 14 | EACH | LANE ARROW | |
| 4 | | | | | | 4 | 646 | 20320 | 4 | EACH | WRONG WAY ARROW | |
| 5 | | | | | | 5 | 646 | 20350 | 5 | EACH | LANE REDUCTION ARROW | |
| 52 | | | | | | 52 | 646 | 20800 | 52 | FT | YIELD LINE | |
| 6.94 | | | | | | 6.94 | 807 | 12010 | 6.94 | MILE | WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6" | |
| 1.37 | | | | | | 1.37 | 807 | 12110 | 1.37 | MILE | WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6" | |
| 0.35 | | | | | | 0.35 | 807 | 12200 | 0.35 | MILE | WET REFLECTIVE EPOXY PAVEMENT MARKING, CENTER LINE | |
| 5,499 | | | | | | 5,499 | 807 | 12310 | 5,499 | FT | WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12" | |
| 381 | | | | | | 381 | 807 | 12410 | 381 | FT | WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6" | |
| 3,980 | | | | | | 3,980 | 807 | 12430 | 3,980 | FT | WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 12" | |
| | | | | | | | | | | | LIGHTING | |
| | | | | | 18 | 18 | 625 | 00450 | 18 | EACH | CONNECTION, FUSED PULL APART | |
| | | | | | 12 | 12 | 625 | 00480 | 12 | EACH | CONNECTION, UNFUSED PERMANENT | |
| | | | | | 9 | 9 | 625 | 10490 | 9 | EACH | LIGHT POLE, CONVENTIONAL, AT10B40 | |
| | | | | | 9 | 9 | 625 | 14000 | 9 | EACH | LIGHT POLE FOUNDATION, 24" X 6' DEEP | |
| | | | | | 9 | 9 | 625 | 18000 | 9 | EACH | BRACKET ARM, 10' | |
| | | | | | 3,900 | 3,900 | 625 | 23200 | 3,900 | FT | NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE | |
| | | | | | 1,350 | 1,350 | 625 | 23400 | 1,350 | FT | NO. 10 AWG POLE AND BRACKET CABLE | |
| | | | | | 105 | 105 | 625 | 25402 | 105 | FT | CONDUIT, 2", 725.05 | |
| | | | | | 60 | 60 | 625 | 25904 | 60 | FT | CONDUIT, JACKED OR DRILLED, 725.05, 2" | |
| | | | | | 9 | 9 | 625 | 26252 | 9 | EACH | LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), TYPE II, 200W | |
| | | | | | 1,240 | 1,240 | 625 | 29002 | 1,240 | FT | TRENCH, 24" DEEP | |
| | | | | | 60 | 60 | 625 | 29400 | 60 | FT | TRENCH IN PAVED AREA | |
| | | | | | 4 | 4 | 625 | 30700 | 4 | EACH | PULL BOX, 725.08, 18" | |
| | | | | 1 | 1 | 1 | 625 | 34001 | 1 | EACH | POWER SERVICE, AS PER PLAN | 289 |
| | | | | LS | LS | LS | 625 | 39000 | LS | | TEMPORARY LIGHTING | 289 |
| | | | | | | | | | | | TRAFFIC SIGNALS | |
| | | | 10 | | 1,135 | 1,145 | 625 | 25400 | 1,145 | FT | CONDUIT, 2", 725.04 | |
| | | | 41 | | | 41 | 625 | 25500 | 41 | FT | CONDUIT, 3", 725.04 | |
| | | | 20 | | | 20 | 625 | 25600 | 20 | FT | CONDUIT, 4", 725.04 | |
| | | | 120 | | | 120 | 625 | 25900 | 120 | FT | CONDUIT, JACKED OR DRILLED, 3" | |
| | | | 71 | | | 71 | 625 | 29000 | 71 | FT | TRENCH | |
| | 14 | | 2 | | | 2 | 625 | 30706 | 2 | EACH | PULL BOX, 725.08, 24" | |
| | | | 3 | | 9 | 26 | 625 | 32000 | 26 | EACH | GROUND ROD | |
| | | | 71 | | | 71 | 625 | 36011 | 71 | FT | UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN | |
| | | | 1 | | | 1 | 625 | 76000 | 1 | EACH | ARC FLASH CALCULATIONS AND LABEL (US-20) | 282 |
| | | | 13 | | | 13 | 632 | 05006 | 13 | EACH | VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK | |
| | | | 1,580 | | | 1,580 | 632 | 40500 | 1,580 | FT | SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG | |
| | | | 40 | | | 40 | 632 | 69200 | 40 | FT | POWER CABLE, 2 CONDUCTOR, NO. 4 AWG | |
| | | | 35 | | | 35 | 632 | 69700 | 35 | FT | SERVICE CABLE, 3 CONDUCTOR, NO. 8 AWG | |
| | | | 1 | | | 1 | 632 | 70001 | 1 | EACH | POWER SERVICE, AS PER PLAN | 282 |

GENERAL SUMMARY

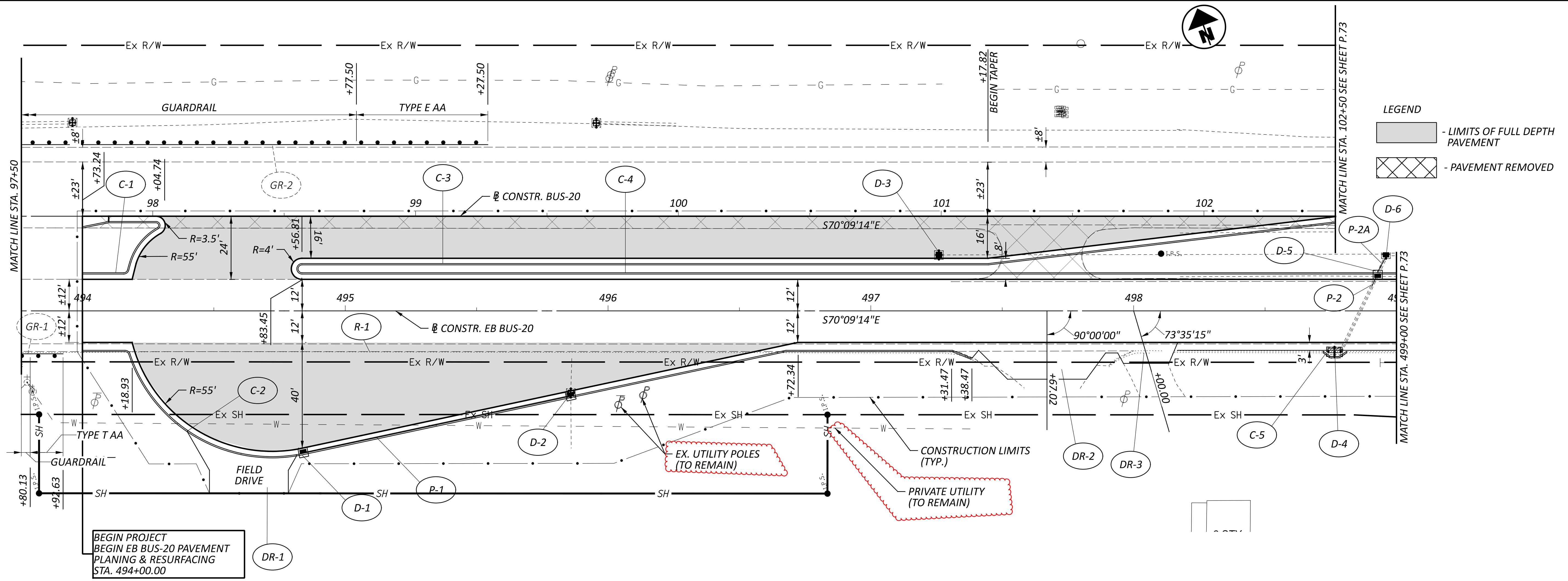
DESIGN AGENCY
M M
MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135
 DESIGNER
RKC
 REVIEWER
 SJP 02/02/26
 PROJECT ID
 112222
 SHEET TOTAL
 P.54 323

| SHEET NO. | REFERENCE NO. | STATION | | SIDE | 602 | 601 | 601 | 601 | 601 | 611 | 611 | 611 | 611 | 611 | 611 | 611 | 611 | 611 | 611 | 611 | 611 | 605 | 611 | 611 | | | |
|---------------------|---------------|------------|-----------|-------|-------|-----|-----|-----|-----|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|------|
| | | FROM | TO | | CY | SY | SY | CY | CY | EACH | EACH | EACH | EACH | EA | FT | FT | FT | FT | FT | FT | FT | FT | FT | FT | FT | FT | EACH |
| 71 | D-1 | 494+84.00 | | RT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 71 | D-2 | 495+86.00 | | RT | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 71 | P-1 | 494+84.00 | 495+86.00 | RT | | | | | | | | | | 102 | | | | | | | | | | | | | |
| 71 | D-3 | 497+25.00 | | LT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 71 | P-2 | 498+88.00 | 498+93.00 | LT | | | | | | | | | | 6 | | | | | | | | | | | | | |
| 71 | P-2A | 498+93.00 | 498+96.00 | LT | | | | | | | | | | 8 | | | | | | | | | | | | | |
| 73 | P-2B | 498+96.00 | 498+96.00 | LT | | | | | | | | | | 12 | | | | | | | | | | | | | |
| 73 | D-7 | 498+96.00 | | LT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 71 | D-6 | 498+96.00 | | LT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 71 | D-5 | 498+93.00 | | LT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 71 | D-4 | 498+77.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 73 | P-3 | 501+96.00 | 502+00.00 | LT | | | | | | | | | | 6 | | | | | | | | | | | | | |
| 73 | P-3A | 501+96.00 | 501+92.00 | LT | | | | | | | | | | 6 | | | | | | | | | | | | | |
| 73 | D-8 | 501+96.00 | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 73 | D-9 | 502+06.00 | | LT | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 73 | P-4 | 502+07.00 | 502+06.00 | LT | | | | | | | | | | 8 | | | | | | | | | | | | | |
| 73 | D-10 | 502+07.00 | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 73 | D-11 | 502+13.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | D-15 | 504+11.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | D-15A | 504+11.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | P-6 | 504+11.00 | 504+11.00 | LT | | | | | | | | | | 6 | | | | | | | | | | | | | |
| 75 | P-6A | 504+11.00 | 504+11.00 | LT | | | | | | | | | | 6 | | | | | | | | | | | | | |
| 75 | D-14 | 504+11.00 | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 75 | P-5 | 504+11.00 | 504+11.00 | LT | | | | | | | | | | | | | | | 17 | | | | | | | | |
| 75 | D-13 | 504+11.00 | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 75 | D-12 | 504+11.00 | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 75 | D-16 | 504+92.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | D-17 | 506+05.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | D-18 | 506+75.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | D-19 | 506+80.00 | | LT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | D-20 | 506+80.00 | | LT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 75 | P-7 | 506+80.00 | | LT | | | | | | | | | | 19 | | | | | | | | | | | | | |
| 77 | D-20A | 510+31.00 | | LT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 75 | P-7A | 510+31.00 | 510+31.00 | LT | | | | | | | | | | 8 | | | | | | | | | | | | | |
| 77 | D-21 | 510+31.00 | | LT | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 77 | D-22 | 510+32.00 | | RT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 82 | D-23 | 122+48.00 | | LT | | 6 | | 14 | | | | | | | | | | | | | | | | | | | |
| 82 | D-24 | 122+52.00 | | RT | | | | 5 | | | | | | | | | | | | | | | | | | | |
| 85 | D-25 | 412+06.38 | | RT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 85 | P-9 | 411+18.50 | 412+06.38 | | | | | | | | | | | | | | | | | | 85 | | | | | | |
| 85 | D-26 | 411+18.50 | | RT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 85 | P-8 | 1003+00.00 | 411+18.50 | | | | | | | | | | | | | | | | | | 36 | | | | | | |
| 85 | D-27 | 1003+00.00 | | LT | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 85 | D-28 | 412+06.38 | | | 0.25 | | | | | | | | | | | | | | | | | | | | | | |
| 85 | D-29 | 412+06.38 | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| 85 | P-10 | 412+06.38 | 412+06.38 | LT | | | | | | | | | | | | | | | | | | | | | | | |
| 85 | D-30 | 412+94.94 | | RT | | | | | | 1 | | | | | | | | | | | 24 | | | | | | |
| 85 | P-11 | 412+94.94 | 412+06.38 | | | | | | | | | | | | | | | | | | | | | | | | |
| 87 | D-33 | 902+67.95 | | LT | | | | | | | | 1 | | | | | | | | | | | | | | | |
| 87 | D-34 | 902+62.69 | | LT | | | | | | | | | | | | | | | | | | | | | | | |
| 87 | D-35 | 902+62.33 | | RT | | | | | | | | | | | | | | | | | | | | | | | |
| 87 | P-12 | 902+67.95 | 902+68.10 | LT/RT | | | | | | | | | | | | | | | | | | | | | | | |
| 87 | D-36 | 902+68.10 | | RT | 0.25 | | | | | | | | | | | | | | | | | | | | | | |
| 88 | D-37 | 350+46.44 | | RT | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 88 | D-38 | 351+33.58 | | RT | | | | | | | | | 1 | | | | | | | | | | | | | | |
| 91 | D-39 | 363+21.55 | | LT | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 93 | D-40 | 519+55.00 | | LT | | 6 | | 14 | | | | | | | | | | | | | | | | | | | |
| 93 | D-41 | 523+11.00 | | LT | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 93 | D-42 | 523+12.00 | | RT | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 97 | D-43 | 306+28.00 | | RT | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 100 | D-44 | 202+19.43 | | RT | 17.50 | | | | | | | | | | | | | | | | | | | | | | |
| 100 | D-45 | 202+19.43 | | RT | | | | | | 5 | | | | | | | | | | | | | | | | | |
| 100 | P-13 | 202+19.43 | 202+16.40 | RT | | | | | | | | | | | | | | | | | | | | | | | |
| SUBTOTAL THIS SHEET | | | | | 18.00 | 12 | 52 | 33 | 9 | 12 | 2 | 13 | 0 | 8 | 187 | 0 | 261 | 17 | 24 | 0 | 0 | 10 | 0 | 0 | 0 | | |

DRAINAGE SUBSUMMARY

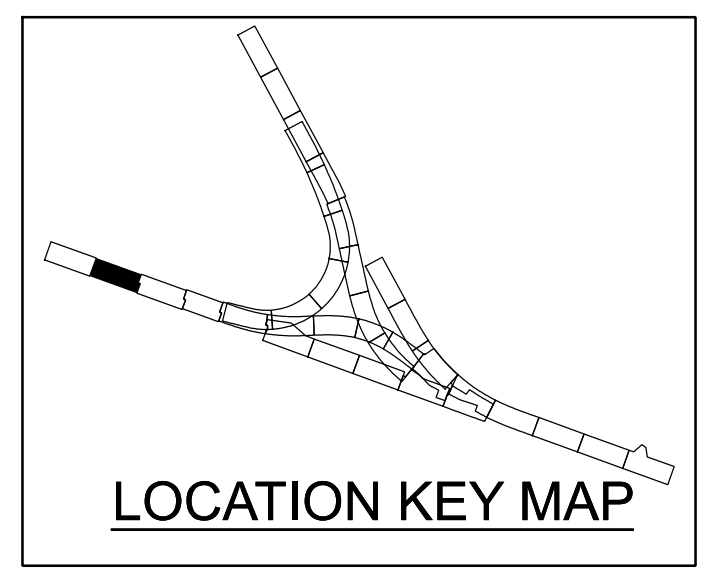
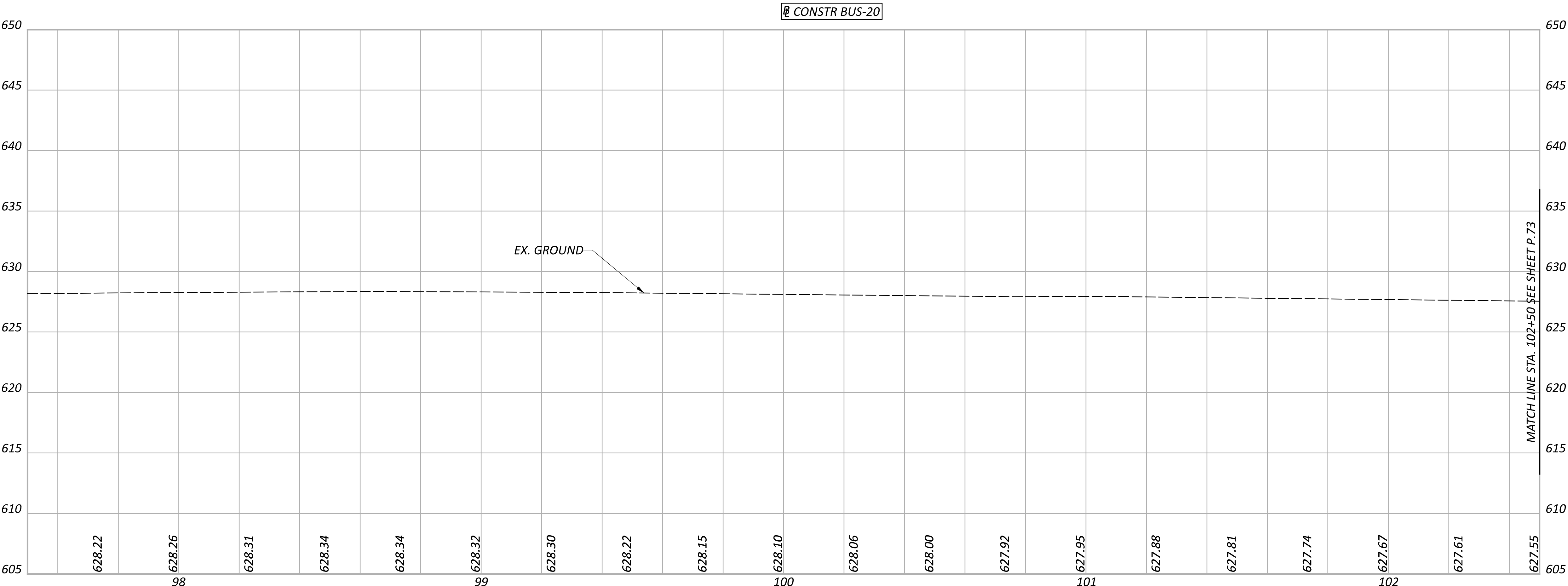
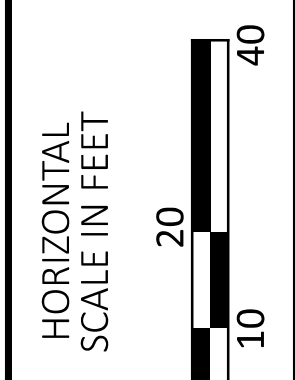
DESIGN AGENCY

MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135
 DESIGNER
RKC
 REVIEWER
SJP 02/02/26
 PROJECT ID
112222
 SHEET TOTAL
P.59 | 323



LEGEND

- [Solid Grey Box] - LIMITS OF FULL DEPTH PAVEMENT
- [Cross-hatched Box] - PAVEMENT REMOVED



**PLAN AND PROFILE - BUS-20
 STA. 97+50 TO STA. 102+50**

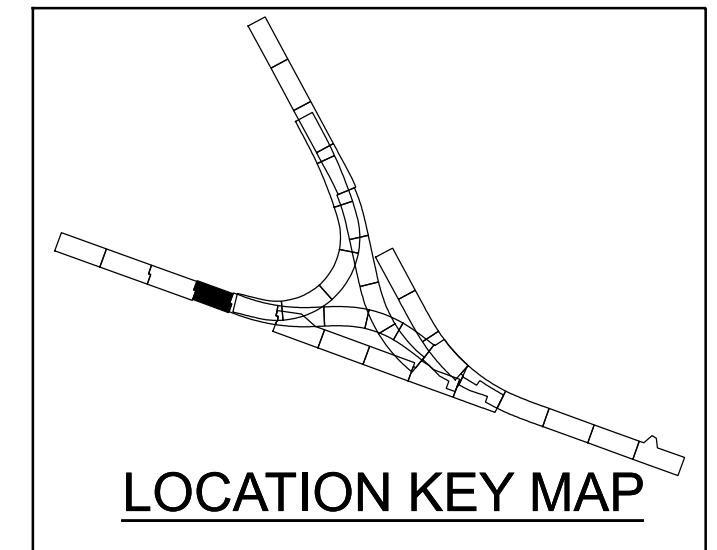
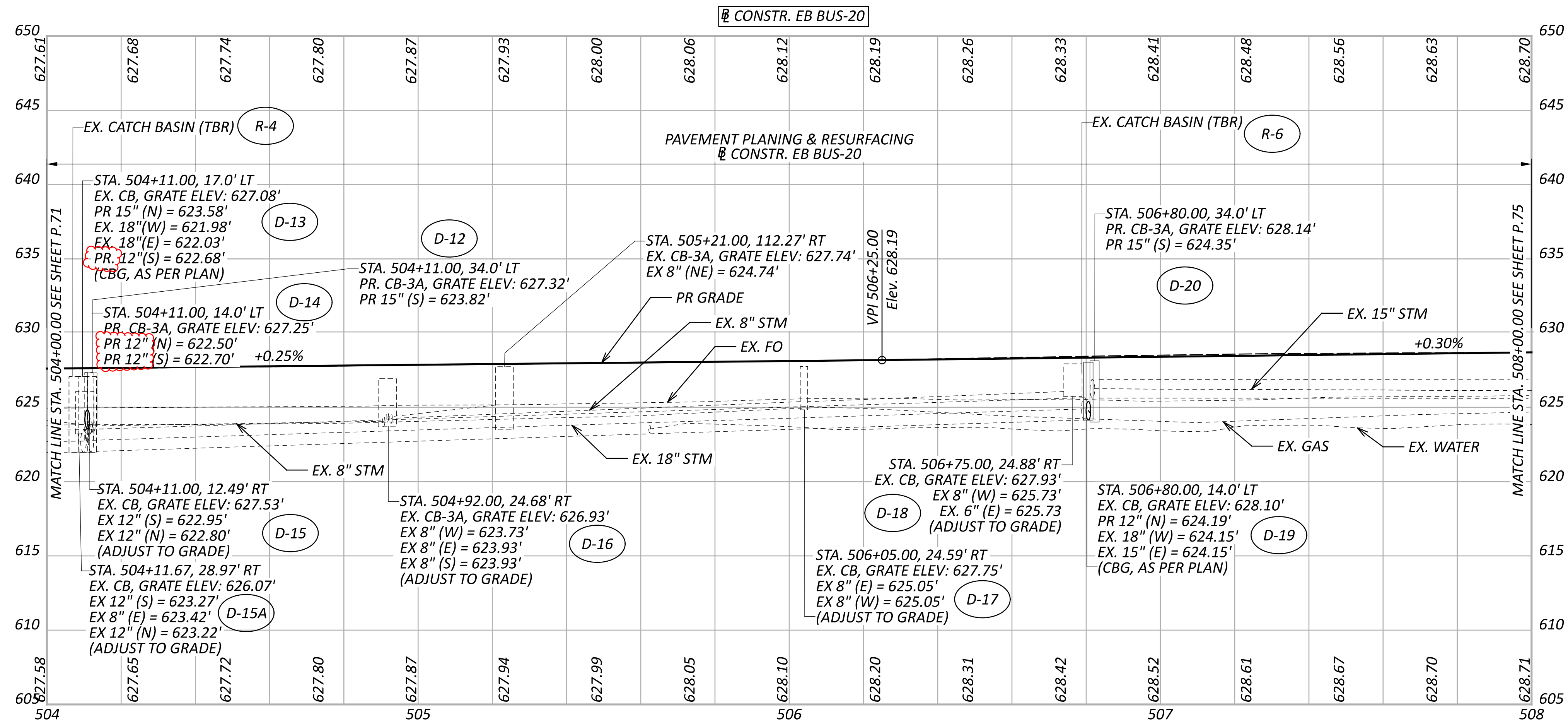
DESIGN AGENCY
M M
MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135

DESIGNER
 JCS

REVIEWER
 SJP 02/02/26

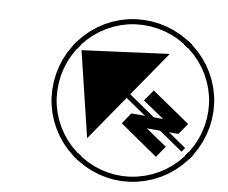
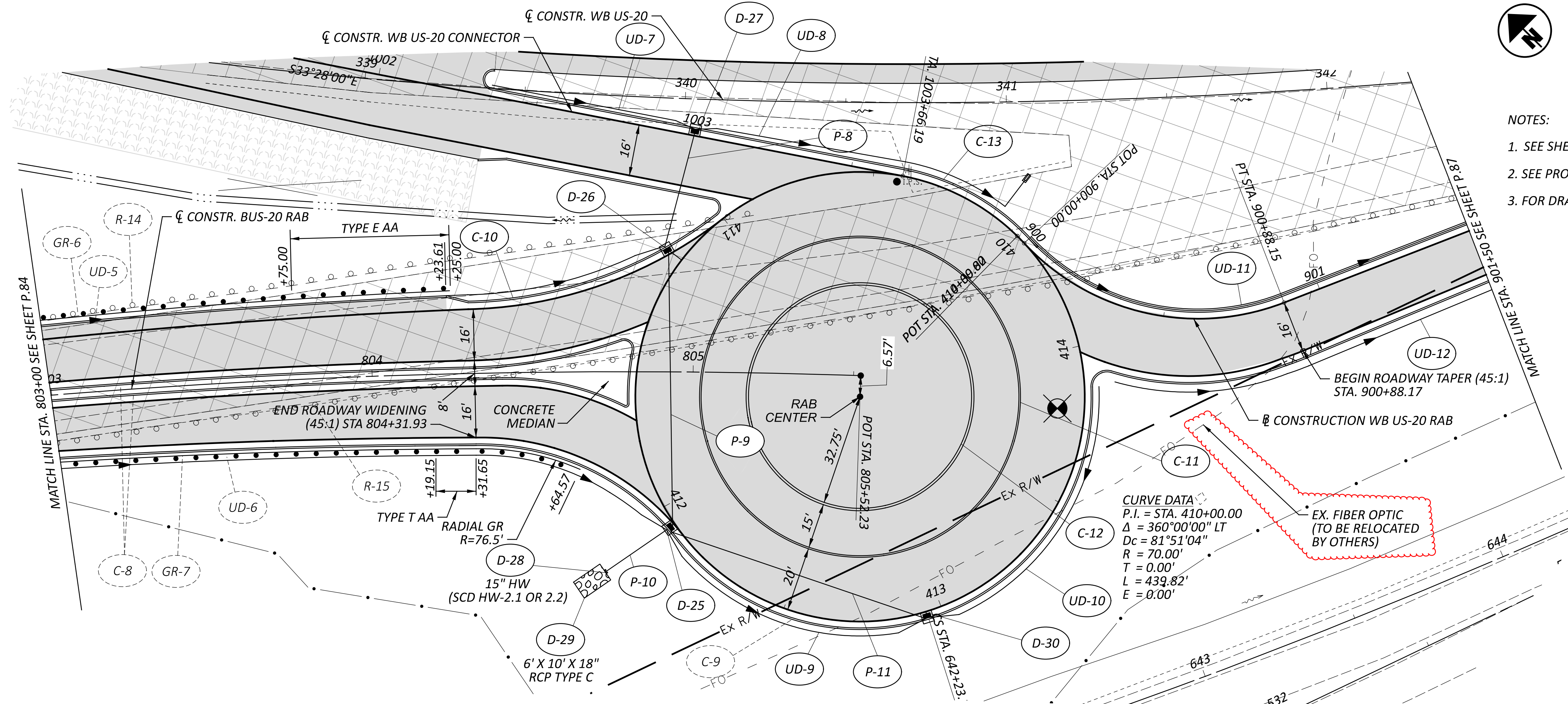
PROJECT ID
 112222

SHEET TOTAL
 P.71 323

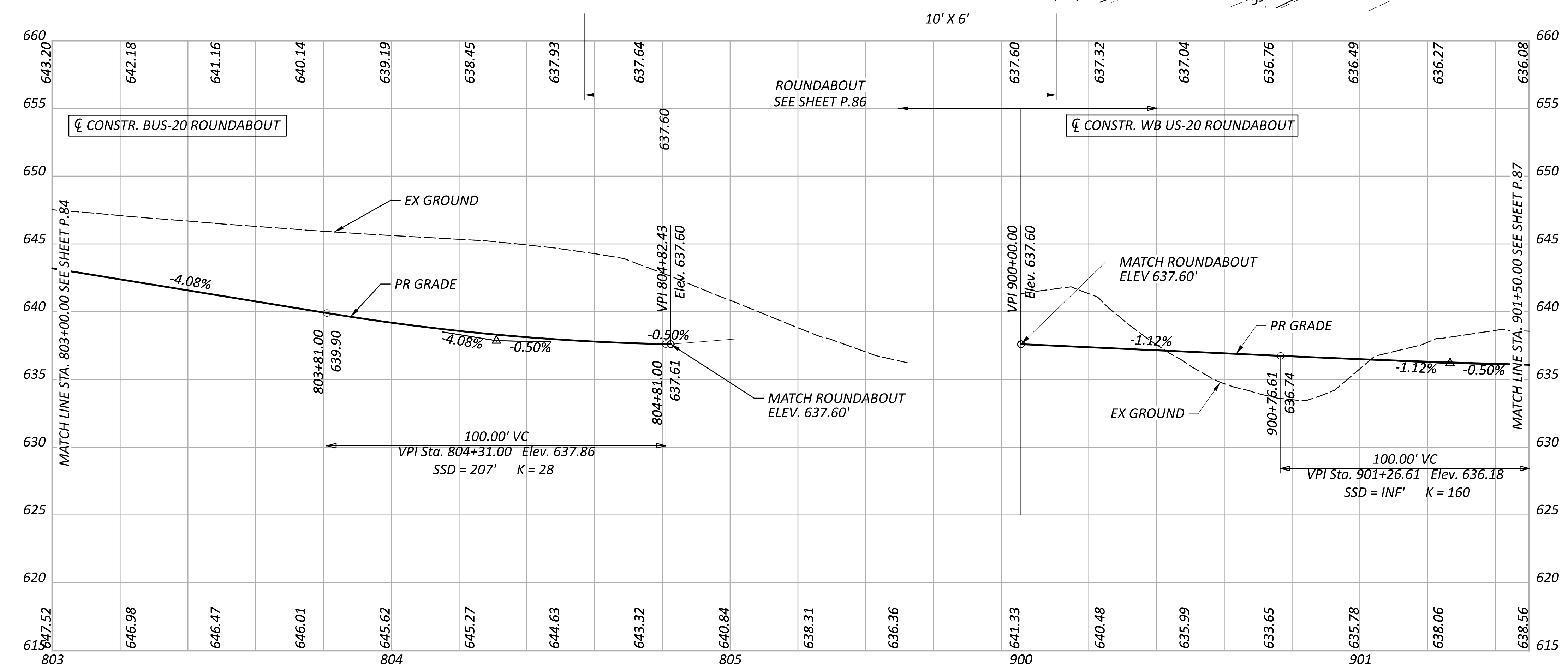
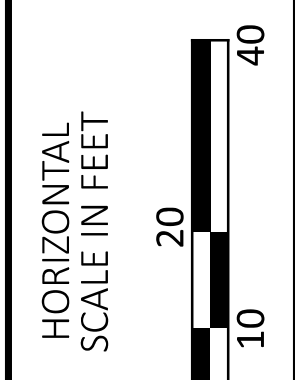


PROFILE SHEET - EB BUS-20
 STA. 504+00 TO STA. 508+00

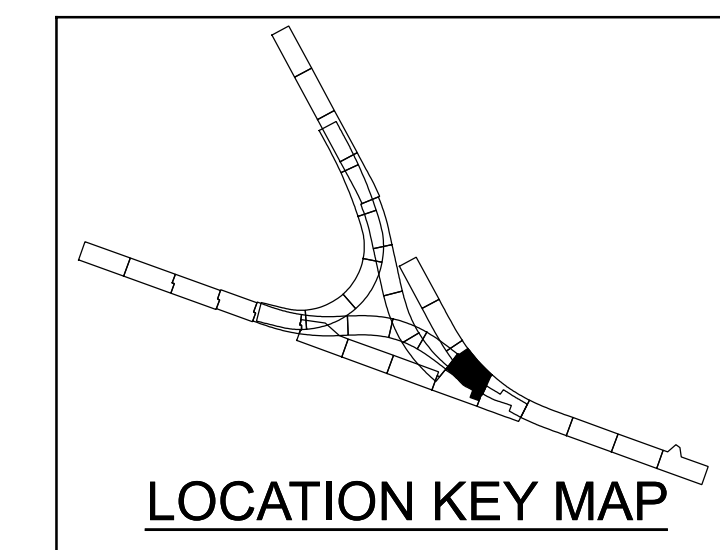
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|---------------|--------------|
| DESIGN AGENCY | M M |
| DESIGNER | JCS |
| REVIEWER | SJP 02/02/26 |
| PROJECT ID | 112222 |
| SHEET TOTAL | P.76 323 |



- NOTES:
1. SEE SHEET P.217 FOR ADDITIONAL ROUNDABOUT DETAILS.
 2. SEE PROJECT SCHEMATIC FOR CURVE DETAILS.
 3. FOR DRAINAGE FEATURES IN ROUNDABOUT, SEE SHEET P.86



- LEGEND
- LIMITS OF FULL DEPTH PAVEMENT
 - PAVEMENT REMOVED
 - RAB = ROUNDABOUT



PLAN AND PROFILE - BUS-20 ROUNDABOUT
 BUS-20 RAB STA. 803+00 TO WB US-20 RAB STA. 901+50

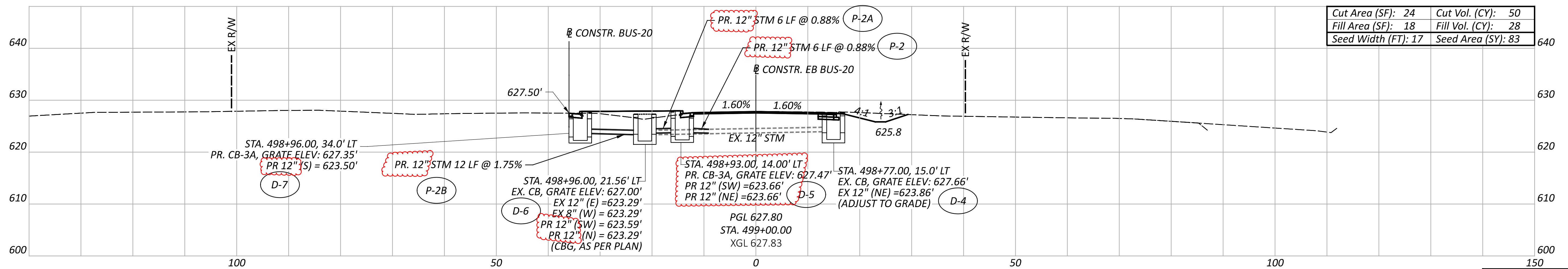
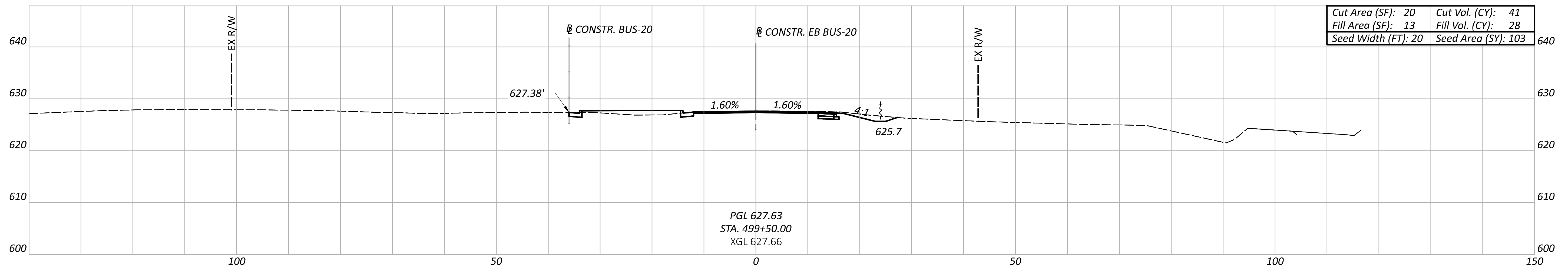
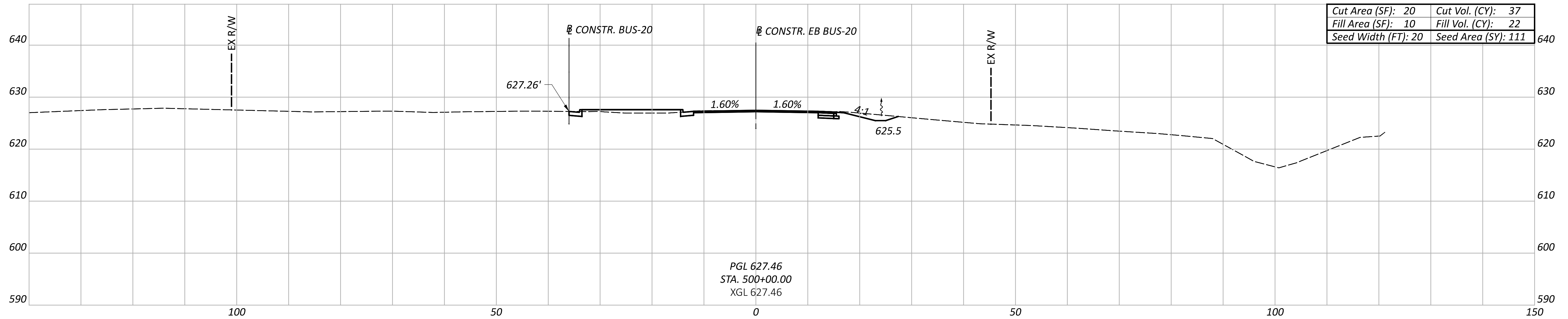
DESIGN AGENCY
M M
MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135

DESIGNER
 JCS

REVIEWER
 SJP 02/02/26

PROJECT ID
 112222

SHEET TOTAL
 P.85 323



CROSS SECTIONS - EB BUS-20
 STA. 499+00 TO STA. 500+00

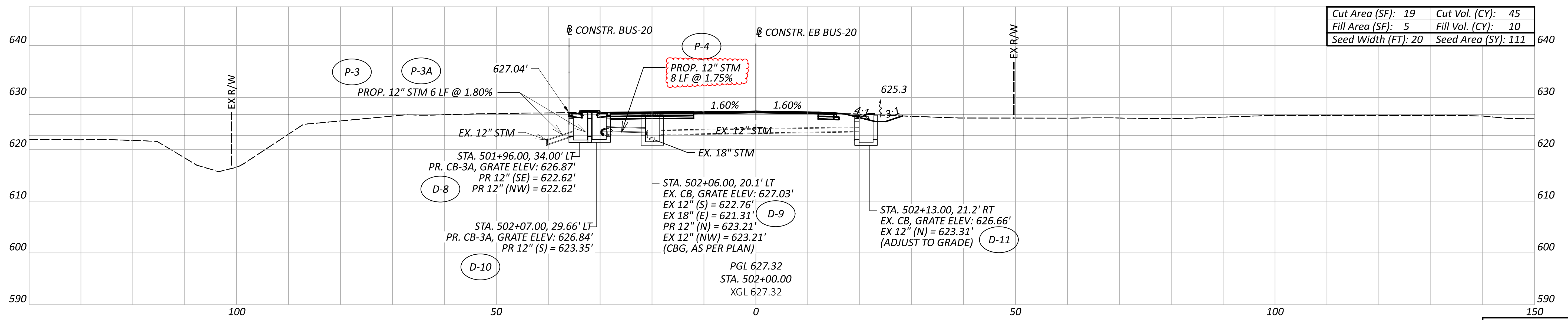
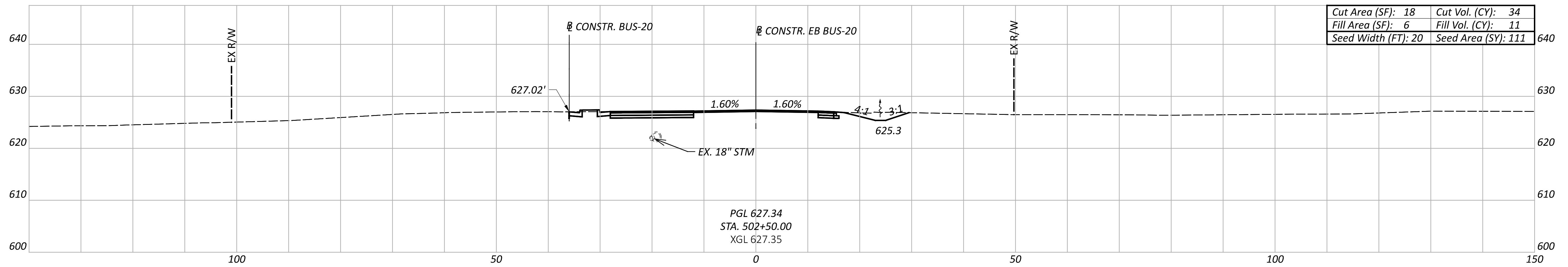
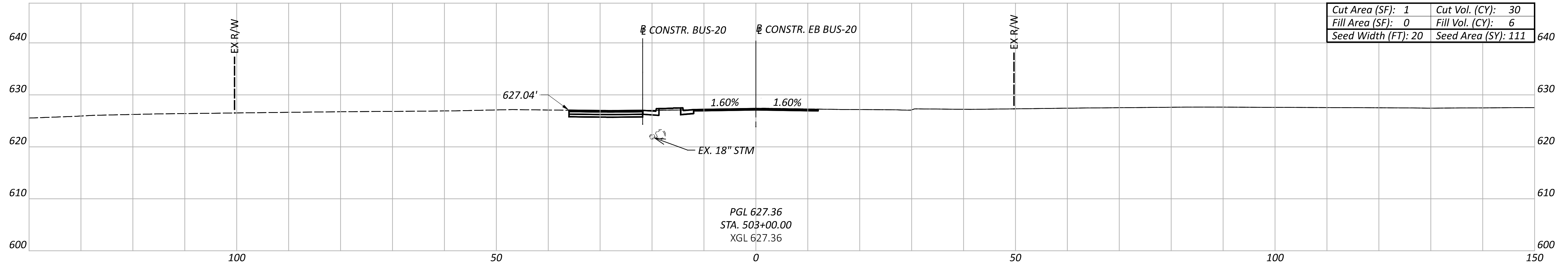
DESIGN AGENCY
M M
MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135

DESIGNER
 TEH

REVIEWER
 SJP 02/02/26

PROJECT ID
 112222

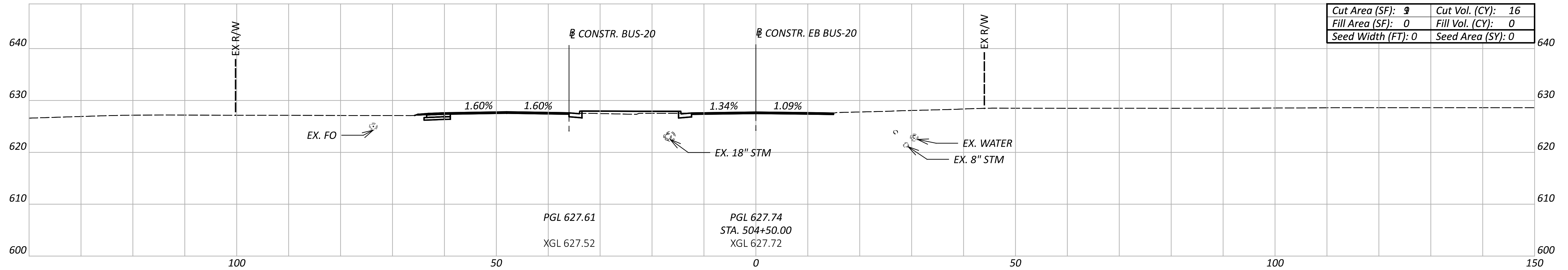
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| Sheet Totals | | | 112222 |
| Seeding | Cut | Fill | TOTAL |
| | | | P.162 323 |



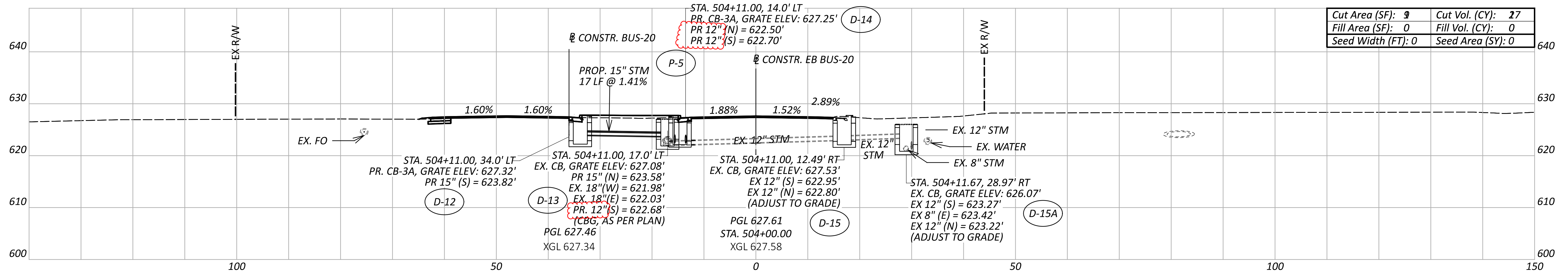
CROSS SECTIONS - EB BUS-20
 STA. 502+00 TO STA. 503+00

DESIGN AGENCY
M M
MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135
 DESIGNER
TEH
 REVIEWER
 SJP 02/02/26
 PROJECT ID
 112222
 SHEET TOTAL
 P.164 323

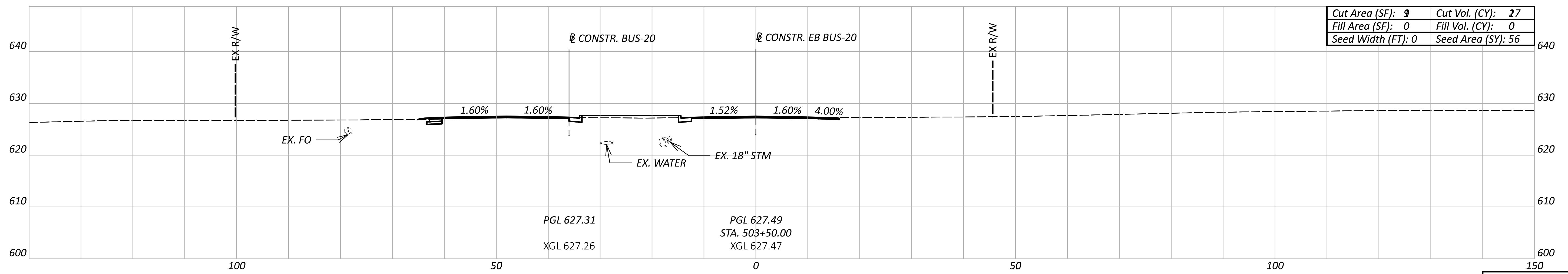
| | | |
|--------------|--------|------|
| Sheet Totals | 112222 | |
| Seeding | Cut | Fill |
| | | |



| | | | |
|------------------|---|-----------------|----|
| Cut Area (SF): | 9 | Cut Vol. (CY): | 16 |
| Fill Area (SF): | 0 | Fill Vol. (CY): | 0 |
| Seed Width (FT): | 0 | Seed Area (SY): | 0 |



| | | | |
|------------------|---|-----------------|----|
| Cut Area (SF): | 9 | Cut Vol. (CY): | 27 |
| Fill Area (SF): | 0 | Fill Vol. (CY): | 0 |
| Seed Width (FT): | 0 | Seed Area (SY): | 0 |



| | | | |
|------------------|---|-----------------|----|
| Cut Area (SF): | 9 | Cut Vol. (CY): | 27 |
| Fill Area (SF): | 0 | Fill Vol. (CY): | 0 |
| Seed Width (FT): | 0 | Seed Area (SY): | 56 |

CROSS SECTIONS - EB BUS-20
 STA. 503+50 TO STA. 504+50

DESIGN AGENCY
M M
MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135

DESIGNER
 TEH

REVIEWER
 SJP 02/02/26

PROJECT ID
 112222

SHEET TOTAL
 P.165 TOTAL 323

| | | | |
|--------------|-----|------|-----------|
| Sheet Totals | | | 112222 |
| Seeding | Cut | Fill | TOTAL |
| | | | P.165 323 |

621 RAISED PAVEMENT MARKER REMOVED

IN AREAS WHERE THE RAISED PAVEMENT MARKER CASTINGS CANNOT BE REPLACED BECAUSE OF PAVEMENT CONDITIONS, USE THIS ITEM INSTEAD OF ITEM 621 RPM, INSTALLATION ONLY TO COMPENSATE THE CONTRACTOR FOR REMOVAL OF THE EXISTING RPM AND RESTORATION OF THE PAVEMENT.

ALL BROKEN, CRACKED, FRAGMENTED OR PARTIAL REMNANTS OF RAISED PAVEMENT MARKERS OR MISSING RAISED PAVEMENT MARKERS SHALL BE TOTALLY REMOVED AND THE PAVEMENT RESTORED AS DESCRIBED IN CONSTRUCTION AND MATERIAL SPECIFICATION ITEM 621.08.

THE FOLLOWING IS AN ESTIMATED QUANTITY TO BE USED AS DIRECTED BY THE ENGINEER FOR THE ABOVE WORK:

621 200 EACH RAISED PAVEMENT MARKER REMOVED

ITEM 630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN

THE FOLLOWING OVERHEAD SIGN SUPPORT FOUNDATIONS SHALL BE INSTALLED PER TC-21.11 OR TC-21.21, EXCEPT THAT FOR THE SPECIAL FOUNDATION DESIGNS:

1. THE DRILLED SHAFT DIMENSIONS AND STEEL REINFORCEMENT SHALL BE ADJUSTED ACCORDING TO TABLE A.
2. THE TIE BEAM DIMENSIONS AND STEEL REINFORCEMENT SHALL BE ADJUSTED ACCORDING TO TABLE B & FIGURE A.

AT EACH SIGN SUPPORT FOUNDATION LOCATION, THERE IS A REPRESENTATIVE NEARBY PROJECT SOIL BORING AS LISTED IN TABLE A. NOTE THAT AT SEVERAL LOCATIONS, SOFT TO VERY SOFT SOILS WERE ENCOUNTERED SUCH THAT EITHER THE C&MS 524.04 WET CONSTRUCTION METHOD OR THE TEMPORARY CASING CONSTRUCTION METHOD MAY BE ANTICIPATED. CHOICE OF CONSTRUCTION METHOD IS UP TO THE CONTRACTOR IN ACCORDANCE WITH C&MS 524.04. HOWEVER, THE CONTRACTOR SHOULD BE PREPARED WITH TEMPORARY CASING OR DRILLING SLURRY TO ACCOMPLISH EXCAVATIONS AT LOCATIONS WHERE SOFT TO VERY SOFT SOILS WERE ENCOUNTERED. SEE THE ATTACHED BORING LOGS FOR SPECIFIC DETAILS OF THE SOIL CONDITIONS ENCOUNTERED AT EACH SOIL BORING LOCATION.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EACH, ITEM 630, RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN FOR EACH OF THE SPECIAL FOUNDATION DESIGNS INSTALLED IN ACCORDANCE WITH TC-21.11 OR TC-21.21. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY.

ITEM 630 - RIGID OVERHEAD SIGN SUPPORT FOUNDATION, 16 EACH AS PER PLAN

TABLE B

| MARK | NO. | LENGTH | TYPE |
|------|--|------------------|----------|
| 502 | 12" c/c | DS ϕ -6" | BENT |
| 601 | 36" DS ϕ = 6 42" DS ϕ = 8 60" DS ϕ = 10 | DS ϕ -6" | STRAIGHT |
| 602 | 2 | C+ DS ϕ -6" | STRAIGHT |
| 603 | 36" DS ϕ = 6 42" DS ϕ = 8 60" DS ϕ = 10 | C+ DS ϕ -6" | BENT |

NOTE: DS ϕ = DRILLED SHAFT DIAMETER

FIGURE A

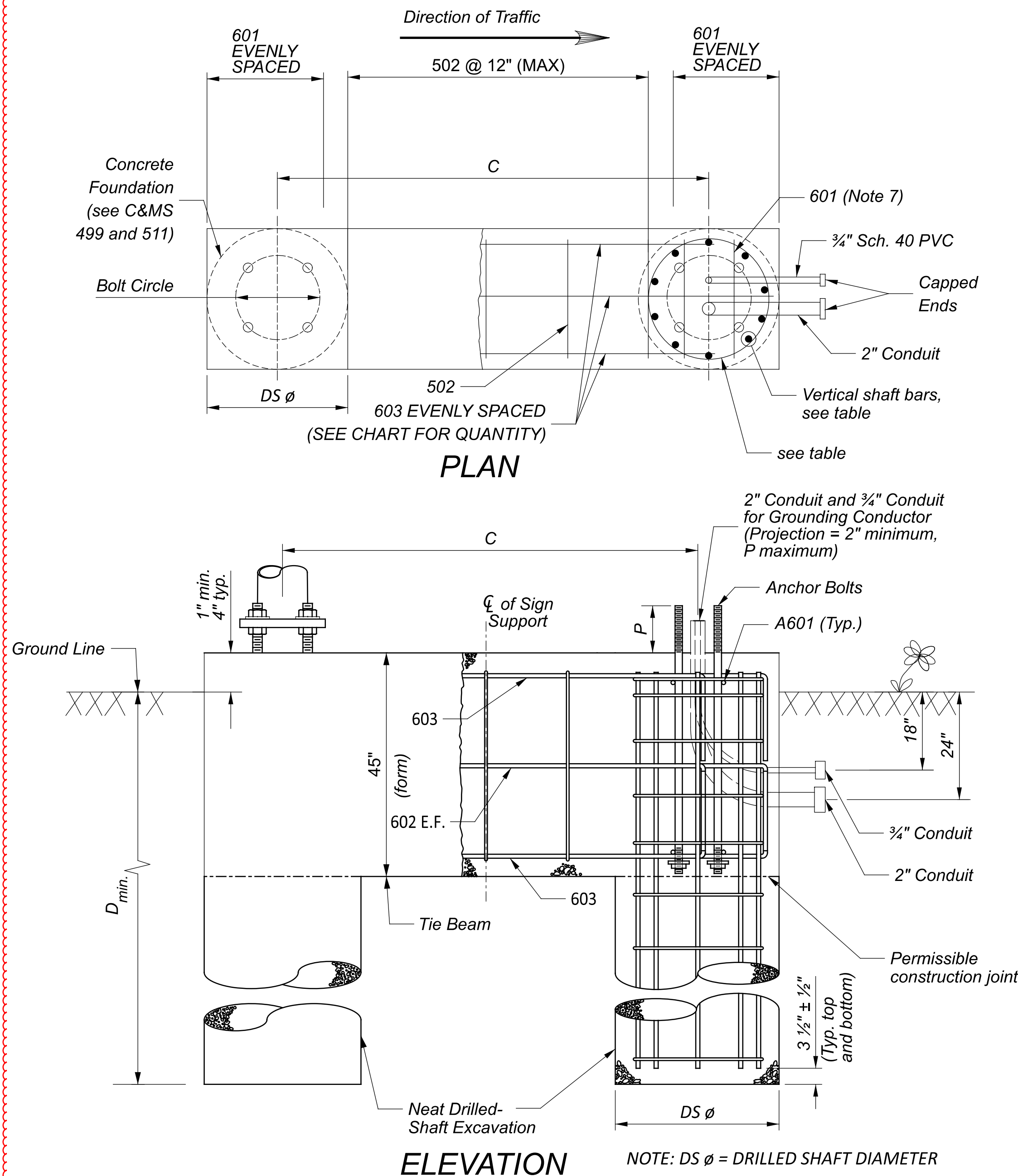



TABLE A

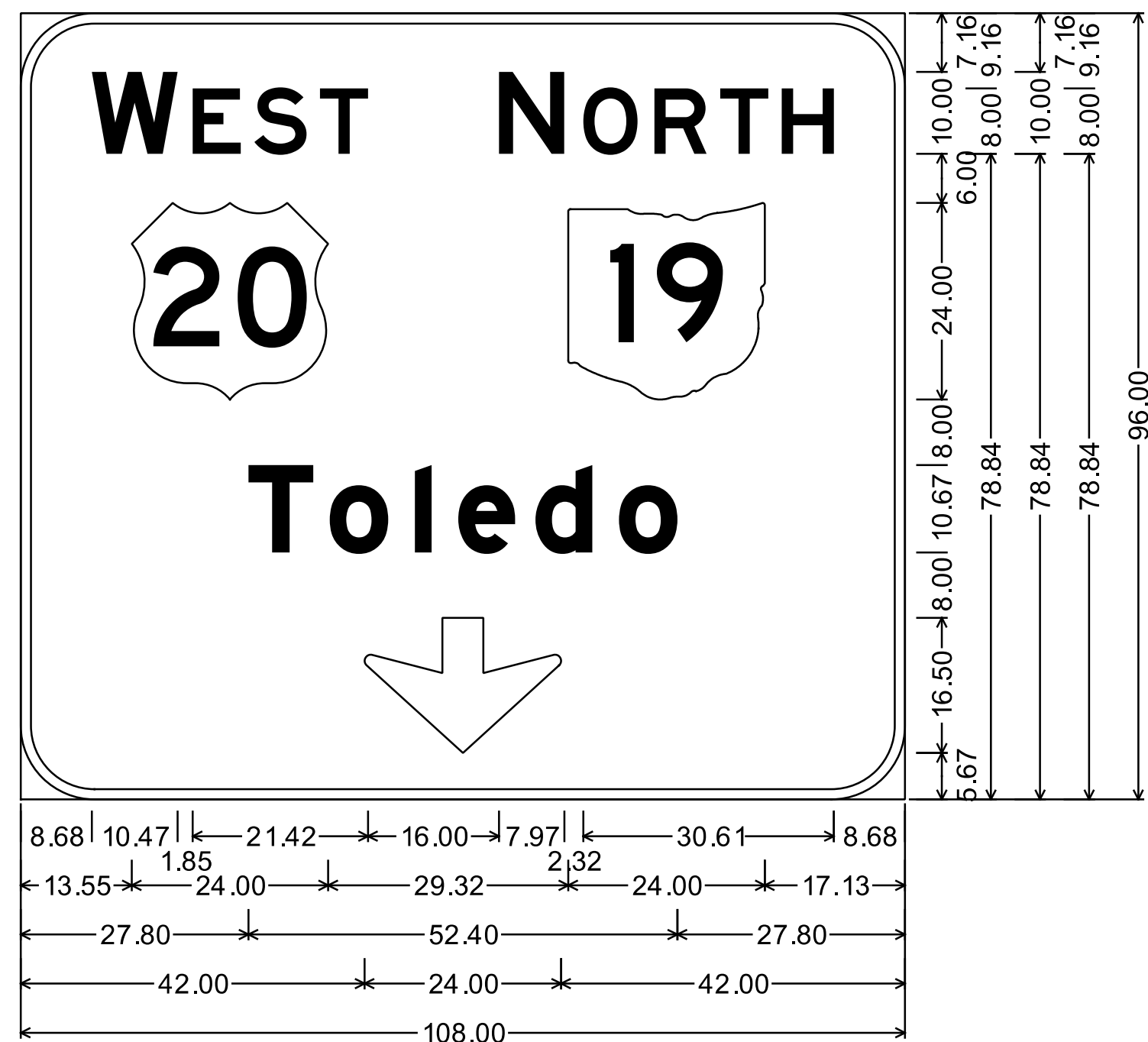
| SIGN REFERENCE NO. | LOCATION DESCRIPTION | GRID COORDINATES (US SURVEY FEET) | | REFERENCE SHEET NO. | | SUPPORT TYPE | DESIGN NO. | FOUNDATION DESIGN | ANCHOR BOLT CIRCLE DIA. (IN) | DRILLED SHAFT DIA. (IN) | DESIGN FOUNDATION DEPTH (FT) | SHAFT LONG. BARS | SHAFT TIE BARS | SHAFT CONC. COVER (IN) | SOIL BORING |
|--------------------|--|-----------------------------------|-------------|---------------------|-----------|-----------------------|------------|--------------------|------------------------------|-------------------------|------------------------------|------------------|----------------|------------------------|-------------|
| | | NORTHING | EASTING | PLAN | ELEVATION | | | | | | | | | | |
| G-1, LT | EB BUS-20 STA. 493+70 | 608944.797 | 1811425.367 | 231 | 273 | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 36 | 18 | 14 - #8 | #5 12" c/c | 3.0 | B-021-0-25 |
| G-1, RT | | 608848.488 | 1811390.740 | | | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 36 | 18 | 14 - #8 | #5 12" c/c | 3.0 | B-021-0-25 |
| G-2, LT | EB BUS-20 STA. 507+70 | 608465.336 | 1812741.348 | 234 | 274 | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 42 | 19 | 18 - #8 | #5 12" c/c | 3.0 | B-022-0-25 |
| G-2, RT | | 608370.444 | 1812706.819 | | | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 42 | 19 | 18 - #8 | #5 12" c/c | 3.0 | B-022-0-25 |
| G-3, LT | WB US-20 STA. 905+00 | 607452.497 | 1815449.406 | 241 | 275 | TC-15.116 | 1 | TC-15.116 SPECIAL | 17 | 42 | 18 | 18 - #8 | #5 12" c/c | 3.0 | B-026-0-25 |
| G-3, RT | | 607500.317 | 1815476.716 | | | TC-15.116 | 1 | TC-15.116 SPECIAL | 17 | 42 | 18 | 18 - #8 | #5 12" c/c | 3.0 | B-026-0-25 |
| G-4, LT | WB US-20 STA. 358+20 | 606951.930 | 1816584.250 | 244 | 276 | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 60 | 17 | 24 - #10 | #5 12" c/c | 6.0 | B-027-0-25 |
| G-4, RT | | 607050.200 | 1816619.868 | | | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 60 | 17 | 24 - #10 | #5 12" c/c | 6.0 | B-027-0-25 |
| G-5, LT | WB US-20, 2150' BEYOND STA. 375+00, MP 22.53 | 605662.217 | 1820188.694 | 247 | 277 | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 36 | 18 | 14 - #8 | #5 12" c/c | 3.0 | B-028-0-25 |
| G-5, RT | | 605761.832 | 1820226.709 | | | TC-15.116 | 2 | TC-15.116 SPECIAL | 17 | 36 | 18 | 14 - #8 | #5 12" c/c | 3.0 | B-028-0-25 |
| G-7 | EB US-20 STA. 565+25.00 | 614335.253 | 1811332.804 | 259 | 279 | TC-12.31 | 10 | TC-12.31 SPECIAL | 24 | 60 | 15 | 24 - #10 | #5 12" c/c | 6.0 | B-029-0-25 |
| G-8 | EB US-20 STA. 590+27.00 | 612133.577 | 1812520.099 | 259 | 280 | TC-12.31 | 10 | TC-12.31 SPECIAL | 24 | 42 | 19 | 18 - #8 | #5 12" c/c | 3.0 | B-030-0-25 |
| G-9, LT | WB US-20 STA. 616+25 | 609872.599 | 1813802.151 | 263 | 281 | TC-15.116 | 1 | TC-15.116 SPECIAL | 17 | 36 | 15 | 14 - #8 | #5 12" c/c | 3.0 | B-025-0-25 |
| G-9, RT | | 609841.347 | 1813744.216 | | | TC-15.116 | 1 | TC-15.116 SPECIAL | 17 | 36 | 15 | 14 - #8 | #5 12" c/c | 3.0 | B-025-0-25 |
| SP-1* | WB US-20 AND SHOCK RD (OH-19), N.E. CORNER | 606853.174 | 1817176.572 | 285 | 286 | TC-81.22 / (TC-12.31) | 12 | TC-12.31 DESIGN 12 | 26 | 48 | 18 | 20 - #9 | #5 12" c/c | 3.0 | B-027-0-25 |
| SP-2* | WB US-20 AND SHOCK RD (OH-19), S.E. CORNER | 606726.045 | 1817192.764 | | | TC-81.22 / (TC-12.31) | 10 | TC-12.31 DESIGN 10 | 24 | 42 | 17 | 18 - #8 | #5 12" c/c | 3.0 | B-027-0-25 |

* SP-1 AND SP-2 HAVE MAST-ARMS IN ACCORDANCE WITH TC-81.22, BUT HAVE SUPPORT POLES, ANCHOR BOLTS, AND DRILLED SHAFTS IN ACCORDANCE WITH TC-12.31 DESIGN 12 AND DESIGN 10, RESPECTIVELY. FOR SIGNAL MAST ARM DETAILS, SEE SHEET P.286

| SHEET NO. | REFERENCE NO. | LOCATION | STATION | SIDE | CODE | SIZE INCHES | | | 625 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 | 630 |
|---------------------|---------------|------------------|------------|-------|------------|-------------|---|----|------|------|-------|-----|------|-----|-----|-----|------|--------|------|-------|------|-------|-------|-------|------|------|------|------|------|------|
| | | | | | | W | x | H | EACH | FT | FT | FT | EACH | FT | FT | FT | EACH | EACH | EACH | EACH | EACH | SQ FT | SQ FT | SQ FT | EACH | EACH | EACH | EACH | EACH | EACH |
| 231 | R-1 | EB BUS-20 | 493+60.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 231 | R-2 | EB BUS-20 | 493+60.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 231 | G-1 | BUS-20 | 493+70.00 | LT/RT | Level 3 | 108 | x | 96 | 2 | | | | | | | | | | | | | | | | | | | | | |
| | | | | LT/RT | Level 3 | 108 | x | 96 | | | | | | | | | | | | | | | | | | | | | | |
| 232 | S-1 | WB BUS-20 | 97+88.00 | LT | R1-2-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 232 | S-2 | EB BUS-20 | 494+85.00 | LT | R4-7b-24 | 24 | x | 30 | 15.0 | | | | | | | | | | | | | | | | | | | | | |
| 232 | S-3 | WB BUS-20 | 101+60.00 | LT | R3-h8Ca-48 | 48 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | RT | R3-h8Ca-48 | 48 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| 233 | R-3 | EB BUS-20 | 499+04.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-4 | EB BUS-20 | 500+50.00 | RT | R5-1a-42 | 42 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | LT | R5-1a-42 | 42 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| 233 | R-4 | EB BUS-20 | 500+93.00 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 233 | R-5 | EB BUS-20 | 500+94.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-5 | EB BUS-20 | 502+50.00 | RT | R5-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-6 | S CR-198 | 106+43.00 | LT | R1-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | LT | R6-1R-48 | 48 | x | 18 | | | | | | | | | | | | | | | | | | | | | | |
| 233 | R-6 | S CR-198 | 106+55.00 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-7 | WB BUS-20 | 106+90.00 | RT | R6-1R-72 | 72 | x | 24 | 14.5 | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-8 | EB BUS-20 | 503+20.00 | LT | R6-1R-72 | 72 | x | 24 | 14.5 | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-9 | S CR-198 | 106+94.00 | RT | W14-2-36 | 36 | x | 36 | 14.5 | | | | | | | | | | | | | | | | | | | | | |
| 233 | R-7 | S CR-198 | 503+56.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 233 | S-10 | S CR-198 | 503+61.00 | RT | R1-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | RT | R6-1R-48 | 48 | x | 18 | | | | | | | | | | | | | | | | | | | | | | |
| 233 | R-8 | EB BUS-20 | 503+70.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 234 | S-11 | WB BUS-20 | 107+68.00 | LT | R5-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 234 | R-9 | EB BUS-20 | 504+18.00 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 234 | R-10 | EB BUS-20 | 505+05.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 234 | S-12 | WB BUS-20 | 109+68.00 | LT | R5-1a-42 | 42 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | RT | R5-1a-42 | 42 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| 234 | R-11 | WB BUS-20 | 110+19.00 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 234 | G-2 | BUS-20 | 507+70.00 | LT/RT | Level 3 | 108 | x | 96 | 2 | | | | | | | | | | | | | | | | | | | | | |
| | | | | RT | Level 3 | 108 | x | 96 | | | | | | | | | | | | | | | | | | | | | | |
| 235 | R-12 | EB BUS-20 CONN | 1602+08.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 235 | R-13 | WB BUS-20 BYPASS | 255+36.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 235 | R-14 | WB BUS-20 BYPASS | 225+19.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 235 | R-15 | EB BUS-20 CONN | 1602+84.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 235 | S-13 | WB BUS-20 CONN | 701+94.00 | RT | R5-1a-42 | 42 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | RT | R5-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | LT | R5-1a-42 | 42 | x | 30 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | LT | R5-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 236 | R-16 | WB BUS-20 BYPASS | 223+05.00 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 236 | S-14 | EB BUS-20 CONN | 1604+60.00 | LT | W4-3R-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 236 | R-17 | WB BUS-20 CONN | 703+42.00 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 236 | S-15 | WB BUS-20 CONN | 704+15.00 | RT | R5-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | RT | W6-3-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 236 | S-16 | EB BUS-20 CONN | 1605+28.00 | RT | R4-7b-36 | 36 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 236 | R-18 | BUS-20 | 120+47.00 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 239 | S-17 | BUS-20 | 130+00.00 | RT | W2-6-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | W13-1P-24 | 24 | x | 24 | | | | | | | | | | | | | | | | | | | | | | |
| 239 | S-18 | BUS-20 RAB | 801+90.00 | LT | W6-3-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | R5-1-48 | 48 | x | 48 | | | | | | | | | | | | | | | | | | | | | | |
| 239 | S-19 | BUS-20 RAB | 802+21.00 | LT | R4-7b-24 | 24 | x | 30 | 15.0 | | | | | | | | | | | | | | | | | | | | | |
| SUBTOTAL THIS SHEET | | | | | | | | | 4 | 58.5 | 544.5 | 0.0 | 0 | 0 | 0 | 2 | 12 | 314.50 | 0.00 | 288.0 | 0 | 4 | 29 | 0 | 27 | 0 | 0 | 0 | 0 | 0 |

SIGNING SUBSUMMARY

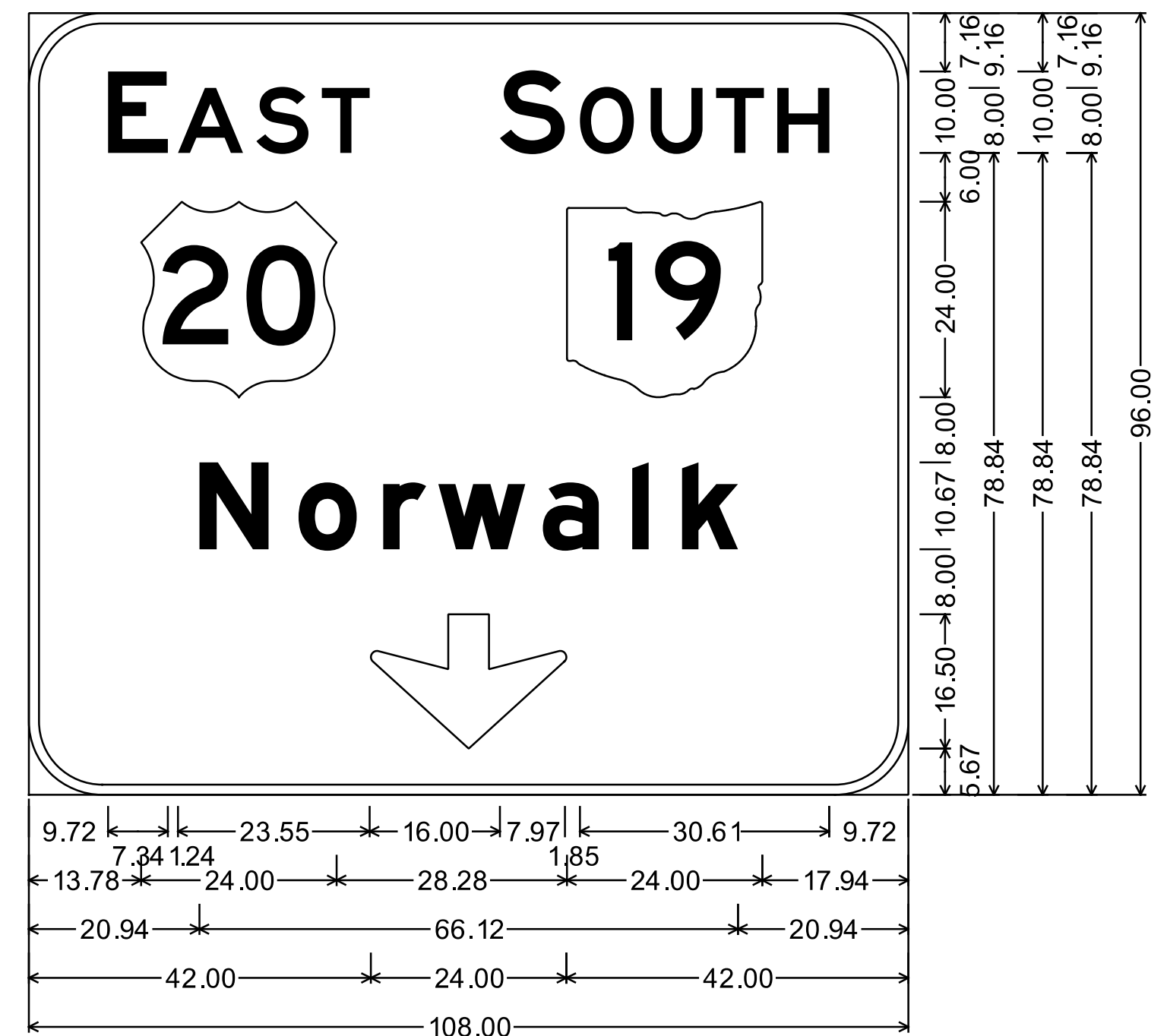
DESIGN AGENCY

MOTT MACDONALD
 20445 EMERALD PKWY
 SUITE 100
 CLEVELAND, OH 44135
 DESIGNER
RKC
 REVIEWER
SJP 02/02/26
 PROJECT ID
112222
 SHEET TOTAL
 P.226 323



9.00" Radius, 1.25" Border, White on Green;
 "WEST", E; US 20 M1-4; "NORTH", E;
 State Highway 19 M1-H5-24-2; "Toledo", E Mod;
 Down Arrow C-2 & C-3 - 16.00" 270°;

Table of letter and object lefts

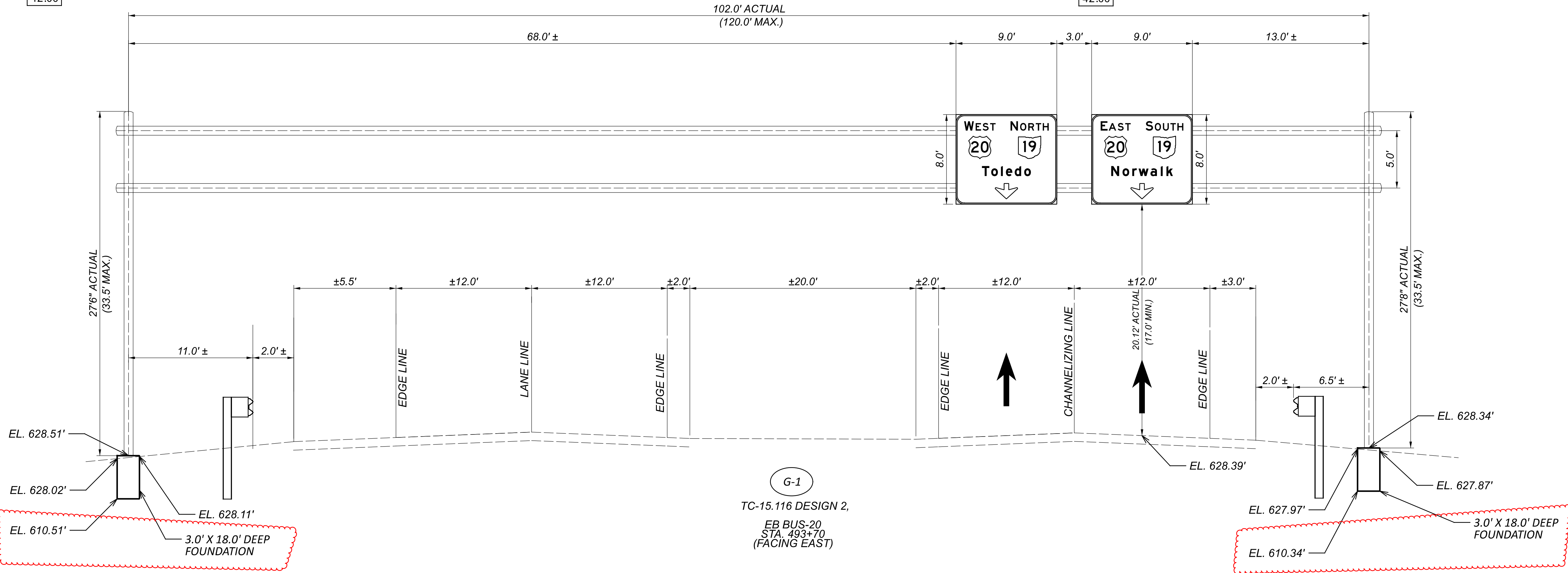
| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| W | E | S | T | N | O | R | T | H |
| 8.68 | 21.00 | 28.53 | 36.55 | 58.42 | 68.71 | 77.40 | 85.42 | 92.95 |
| Ⓜ | Ⓜ | | | | | | | |
| 13.55 | 66.87 | | | | | | | |
| T | o | l | e | d | o | | | |
| 27.80 | 37.74 | 48.14 | 53.44 | 62.86 | 73.06 | | | |
| ↓ | | | | | | | | |
| 42.00 | | | | | | | | |

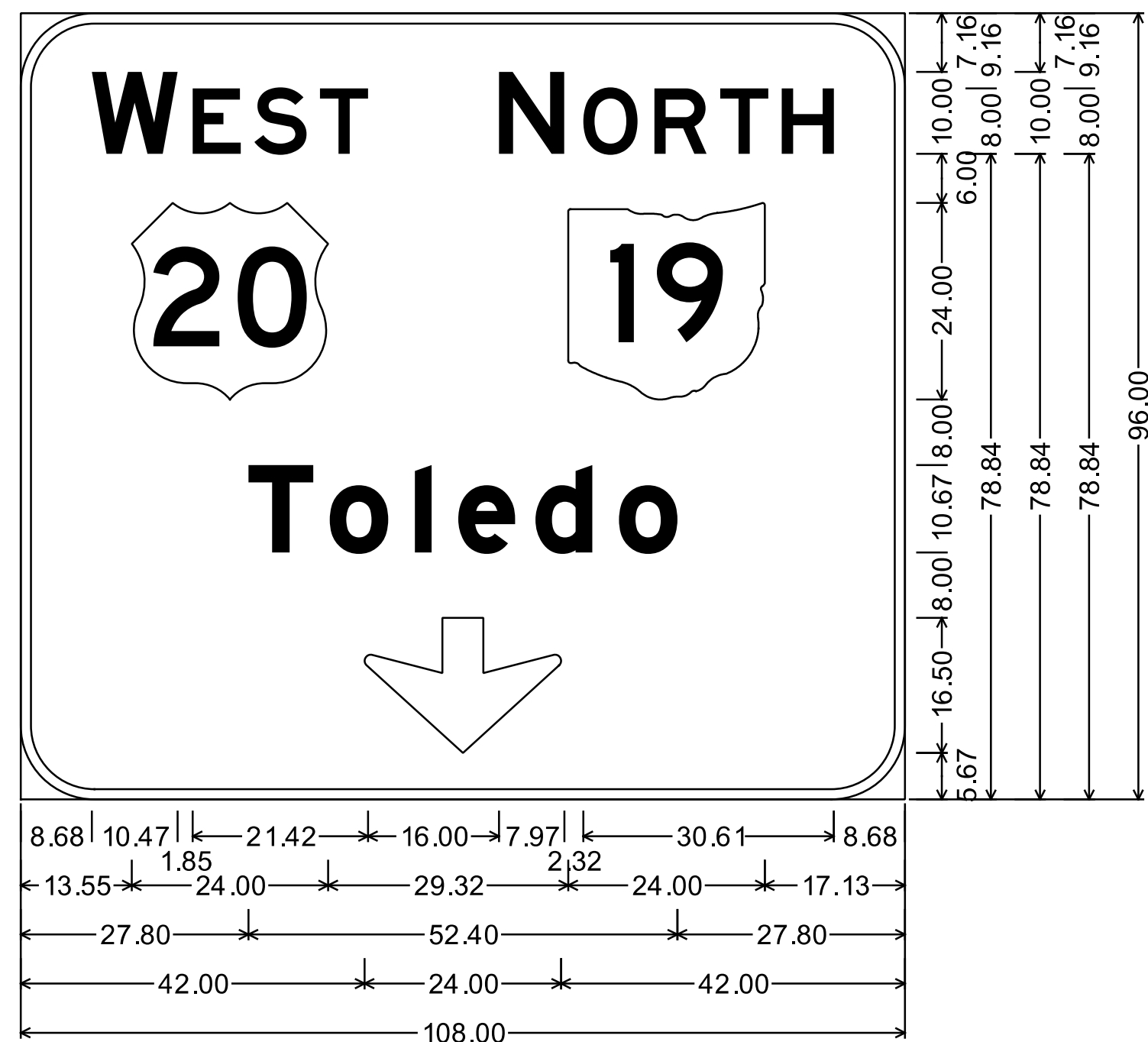


9.00" Radius, 1.25" Border, White on Green;
 "EAST", E; US 20 M1-4; "SOUTH", E;
 State Highway 19 M1-H5-24-2; "Norwalk", E Mod;
 Down Arrow C-2 & C-3 - 16.00" 270°;

Table of letter and object lefts

| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| E | A | S | T | S | O | U | T | H |
| 9.72 | 18.30 | 27.95 | 35.97 | 57.85 | 67.67 | 76.36 | 84.38 | 91.91 |
| Ⓜ | Ⓜ | | | | | | | |
| 13.78 | 66.06 | | | | | | | |
| N | o | r | w | a | l | k | | |
| 20.94 | 33.10 | 43.50 | 50.27 | 63.11 | 74.08 | 80.19 | | |
| ↓ | | | | | | | | |
| 42.00 | | | | | | | | |

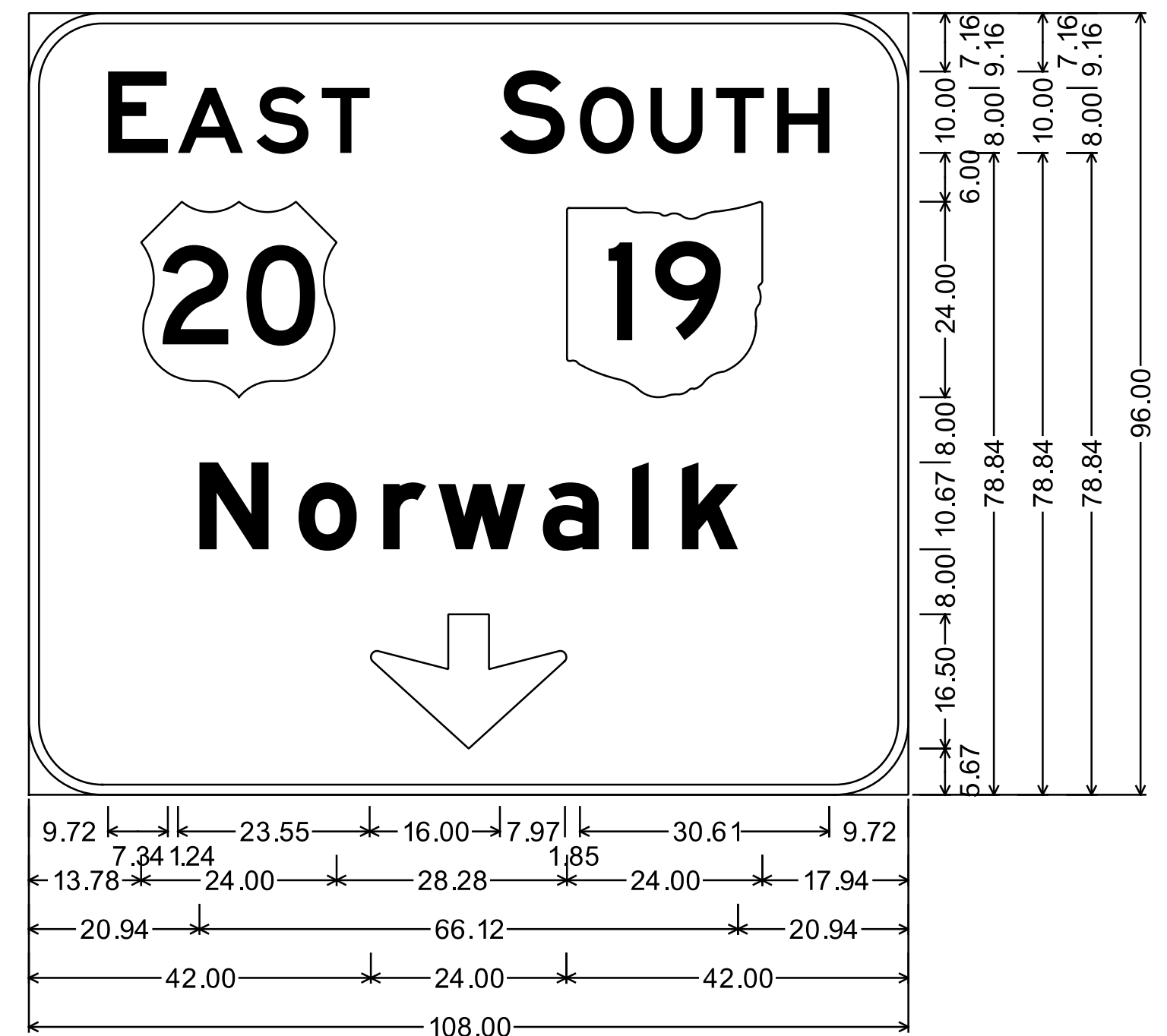




9.00" Radius, 1.25" Border, White on Green;
 "WEST", E; US 20 M1-4; "NORTH", E;
 State Highway 19 M1-H5-24-2; "Toledo", E Mod;
 Down Arrow C-2 & C-3 - 16.00" 270°;

Table of letter and object lefts

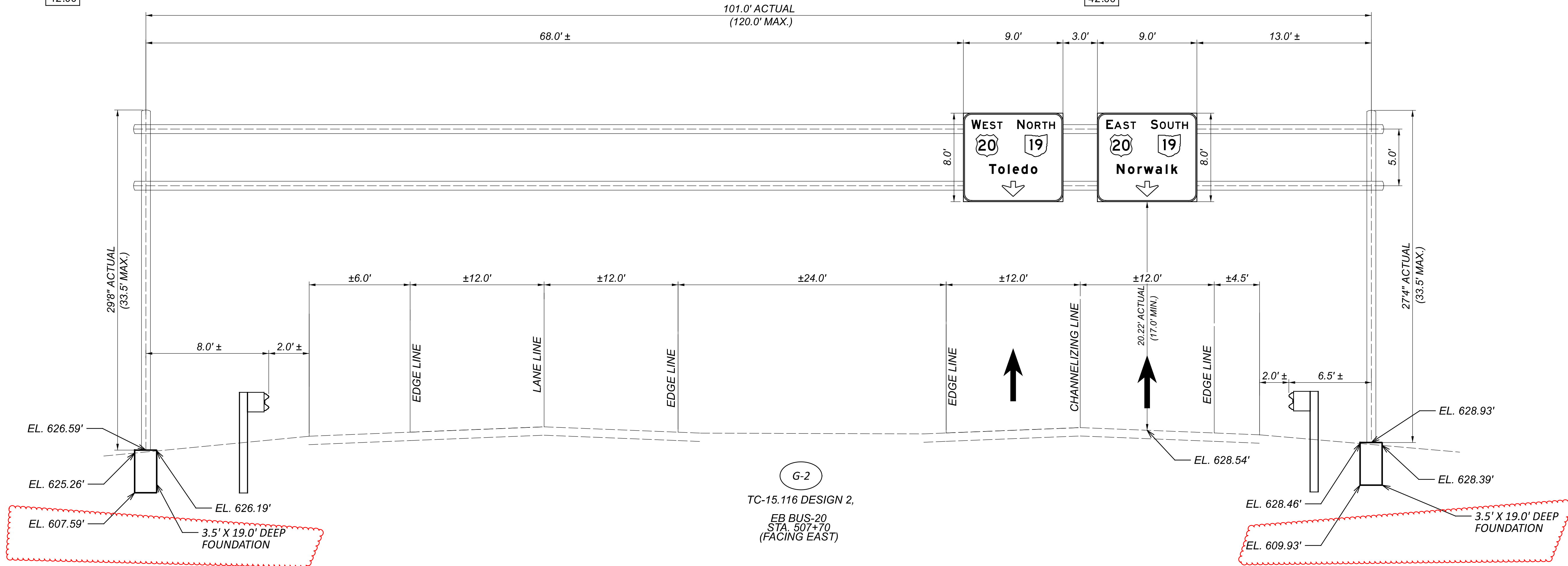
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|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| W | E | S | T | N | O | R | T | H |
| 8.68 | 21.00 | 28.53 | 36.55 | 58.42 | 68.71 | 77.40 | 85.42 | 92.95 |
| Ⓜ | Ⓜ | | | | | | | |
| 13.55 | 66.87 | | | | | | | |
| T | o | l | e | d | o | | | |
| 27.80 | 37.74 | 48.14 | 53.44 | 62.86 | 73.06 | | | |
| ↓ | | | | | | | | |
| 42.00 | | | | | | | | |



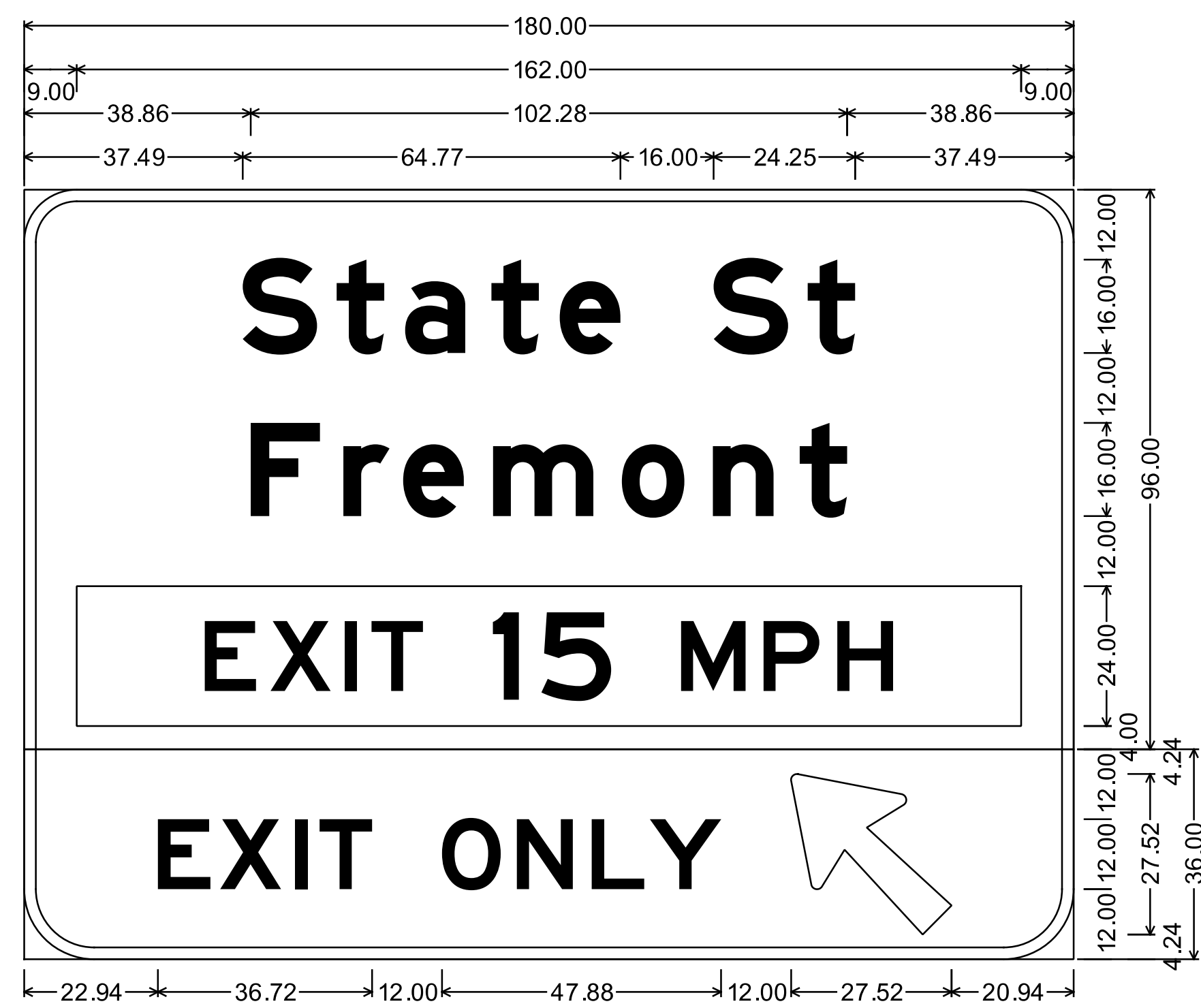
9.00" Radius, 1.25" Border, White on Green;
 "EAST", E; US 20 M1-4; "SOUTH", E;
 State Highway 19 M1-H5-24-2; "Norwalk", E Mod;
 Down Arrow C-2 & C-3 - 16.00" 270°;

Table of letter and object lefts

| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| E | A | S | T | S | O | U | T | H |
| 9.72 | 18.30 | 27.95 | 35.97 | 57.85 | 67.67 | 76.36 | 84.38 | 91.91 |
| Ⓜ | Ⓜ | | | | | | | |
| 13.78 | 66.06 | | | | | | | |
| N | o | r | w | a | l | k | | |
| 20.94 | 33.10 | 43.50 | 50.27 | 63.11 | 74.08 | 80.19 | | |
| ↓ | | | | | | | | |
| 42.00 | | | | | | | | |



G-2
 TC-15.116 DESIGN 2,
 EB BUS-20
 STA. 507+70
 (FACING EAST)

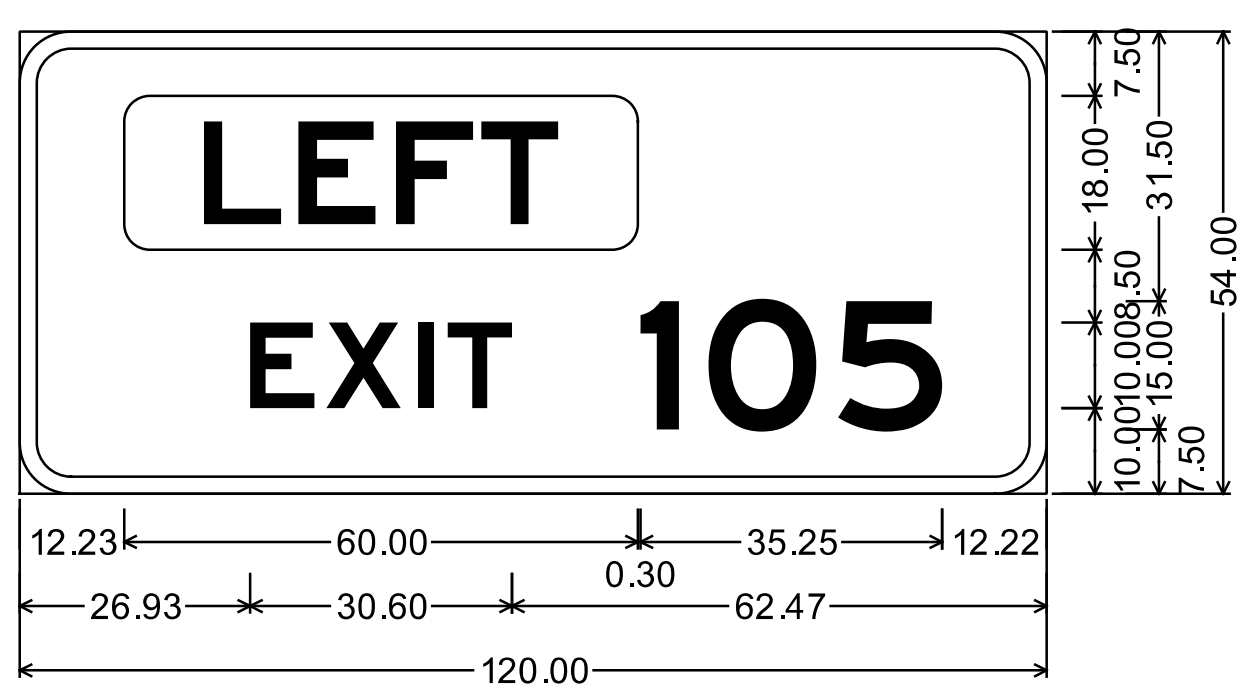


9.00" Radius, 2.00" Border, White on Green;
 "State St", E Mod; "Fremont", E Mod; Rectangle Yellow;

12.00" Radius, 2.00" Border, Black on Yellow;
 "EXIT", E 2K; "ONLY", E 2K; Arrow A-1 - 35.00" 135°;

Table of letter and object lefts

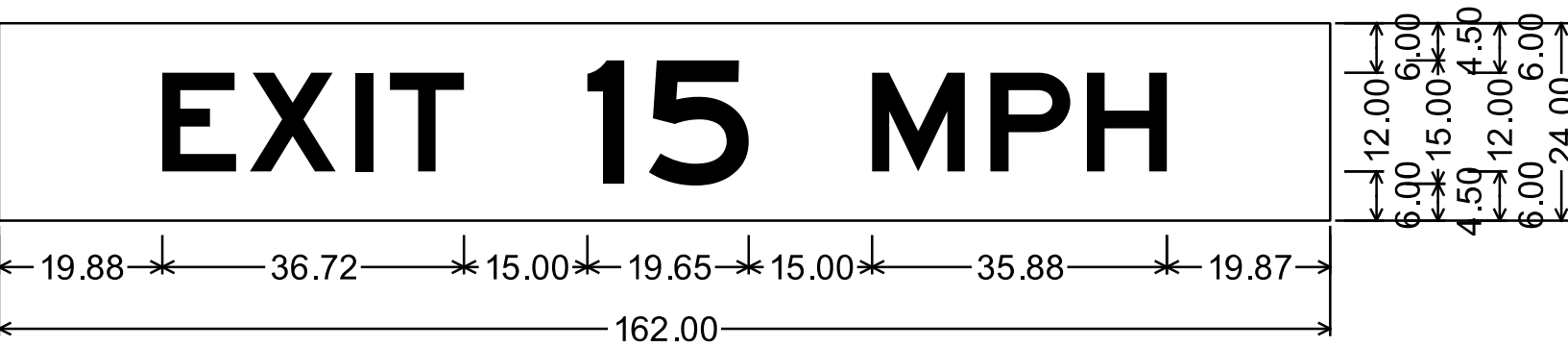
| | | | | | | | | |
|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| S | t | a | t | e | S | t | | |
| 37.49 | 53.60 | 65.34 | 80.13 | 91.86 | 118.26 | 134.37 | | |
| F | r | e | m | o | n | t | | |
| 38.86 | 54.76 | 65.01 | 80.44 | 102.52 | 118.12 | 133.01 | | |
| 9.00 | | | | | | | | |
| E | X | I | T | O | N | L | Y | ↗ |
| 22.94 | 33.62 | 46.46 | 50.66 | 71.66 | 84.50 | 97.34 | 107.30 | 131.54 |



E1-h5bP;
 6.00" Radius, 2.00" Border, White on Green;
 "EXIT", E 2K; "105", E 2K;

Table of letter and object lefts

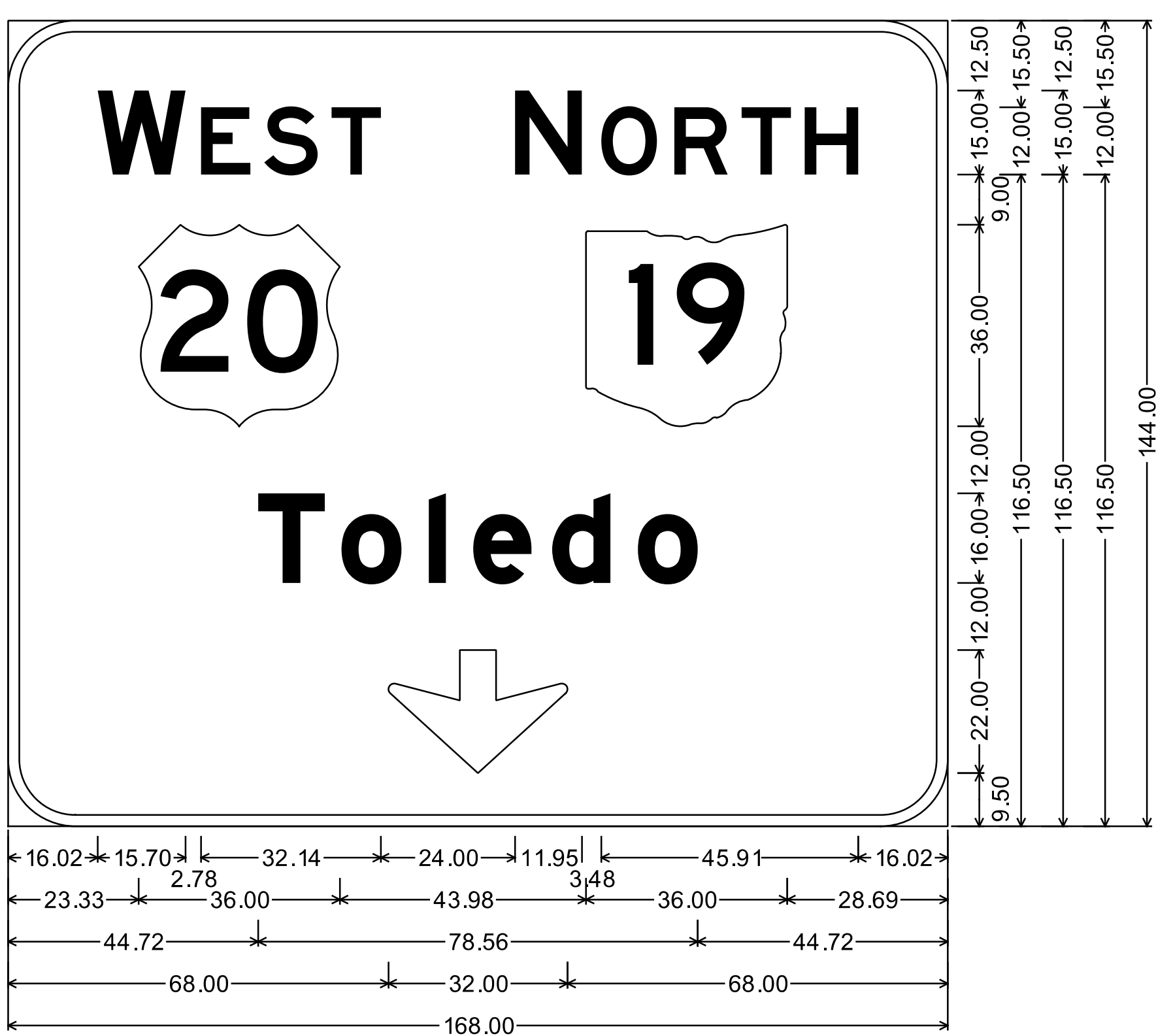
| | | | |
|-------|-------|-------|-------|
| E | X | I | T |
| 12.23 | 72.53 | 80.48 | 95.63 |
| 26.93 | 35.83 | 46.53 | 50.03 |



No border, White on Yellow;
 "EXIT" Black, E 2K; "15" Black, E 2K; "MPH" Black, E 2K;

Table of letter and object lefts

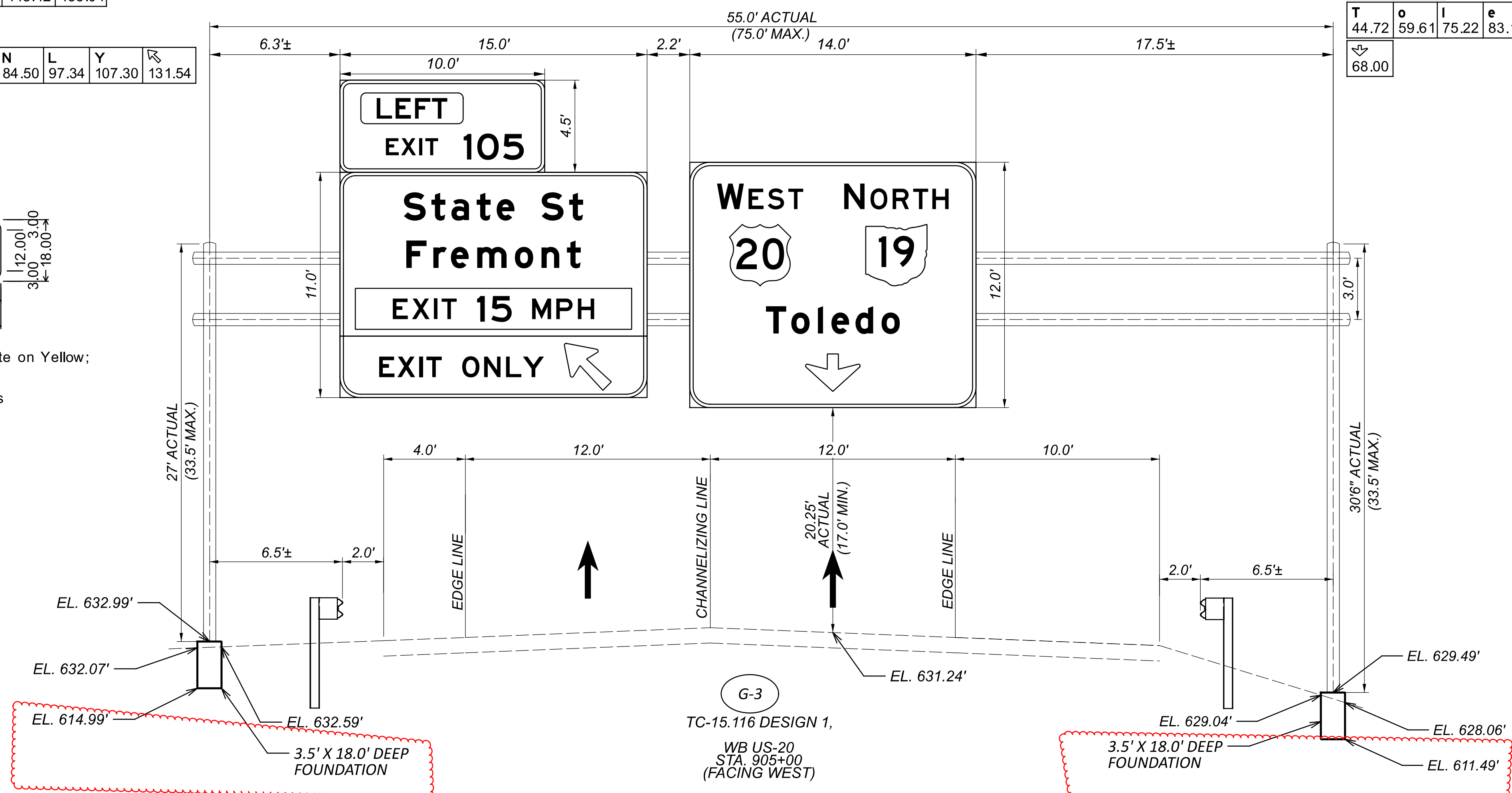
| | | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| E | X | I | T | 5 | M | P | H | |
| 19.88 | 30.56 | 43.40 | 47.60 | 71.60 | 79.10 | 106.25 | 120.65 | 132.41 |

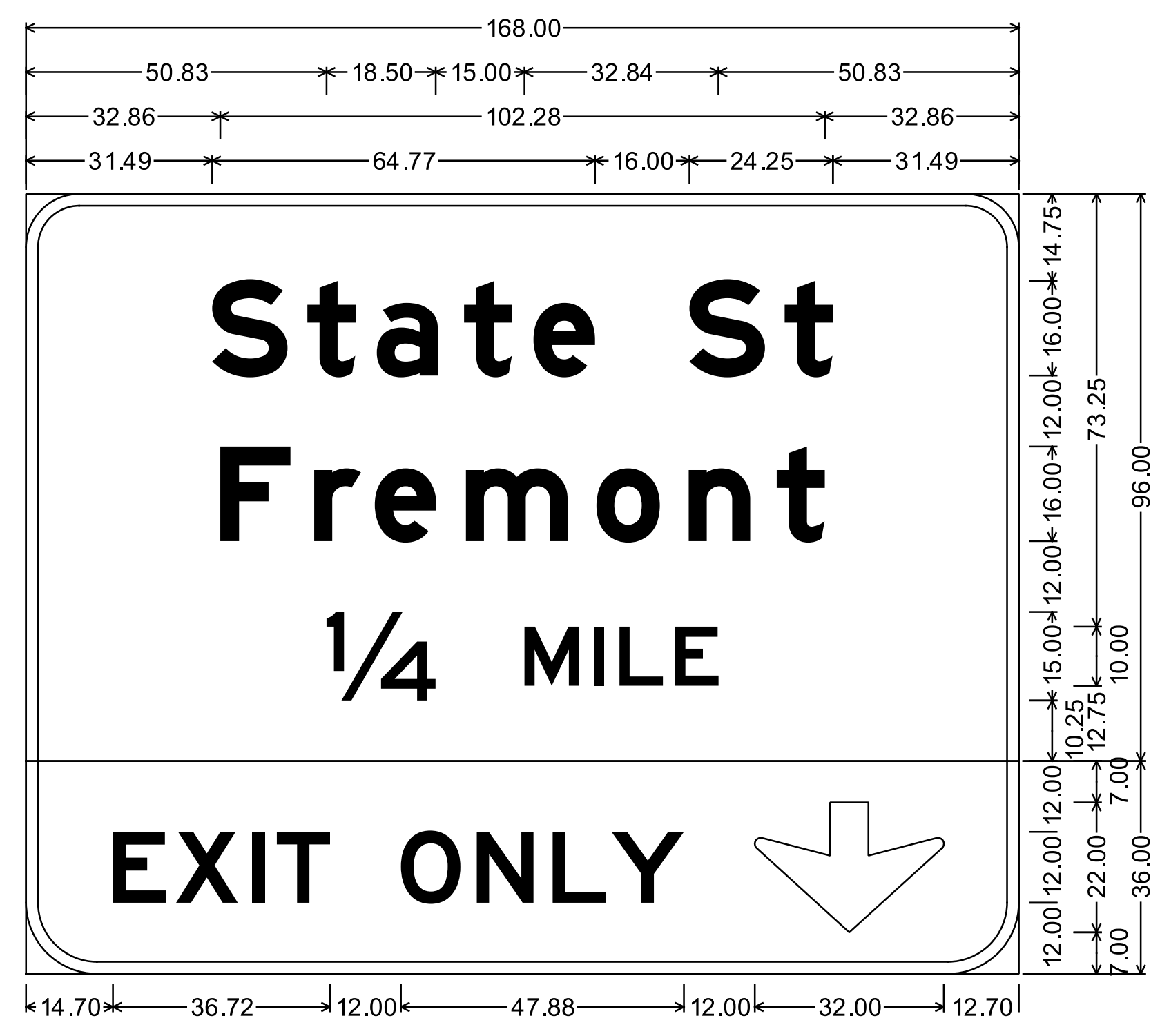


12.00" Radius, 2.00" Border, White on Green;
 "WEST", E; US 20 M1-4; "NORTH", E; State Highway 19 M1-H5-36-2;
 "Toledo", E Mod; Down Arrow C-1 - 22.00" 270°;

Table of letter and object lefts

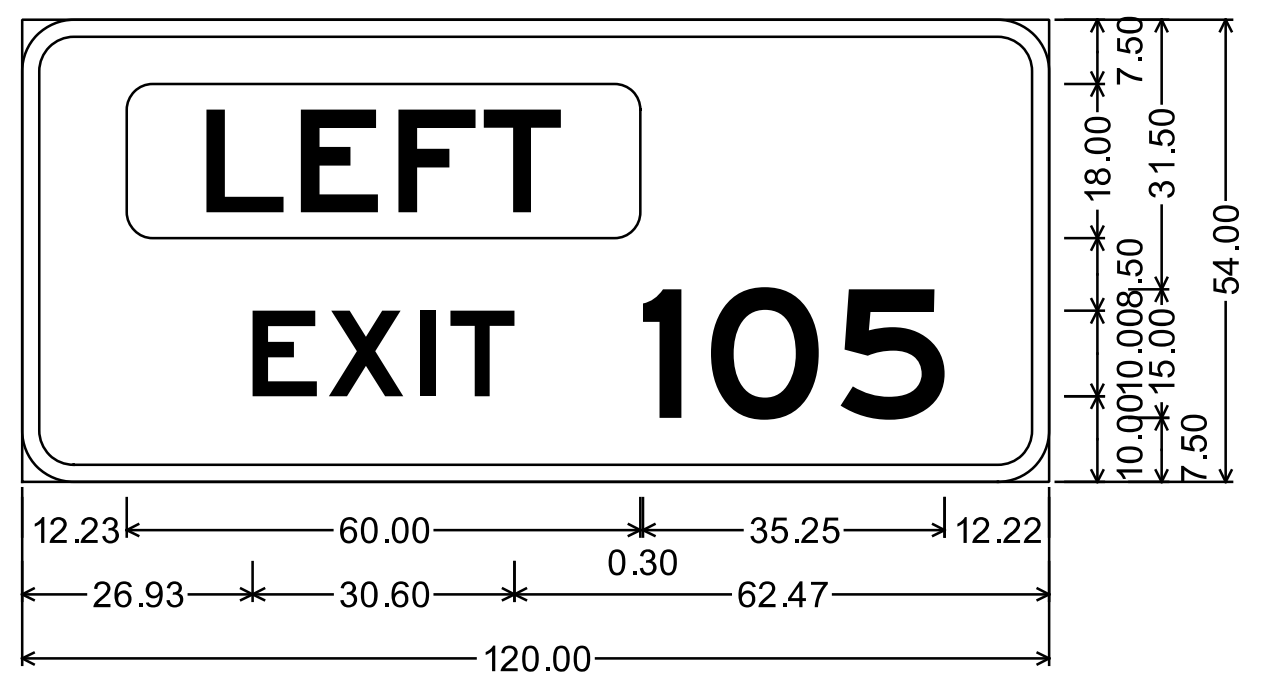
| | | | | | | | | |
|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| W | E | S | T | N | O | R | T | H |
| 16.02 | 34.50 | 45.79 | 57.82 | 90.64 | 106.07 | 119.10 | 131.14 | 142.42 |
| 9.00 | | | | | | | | |
| T | o | l | e | d | o | | | |
| 44.72 | 59.61 | 75.22 | 83.16 | 97.28 | 112.59 | | | |
| 68.00 | | | | | | | | |





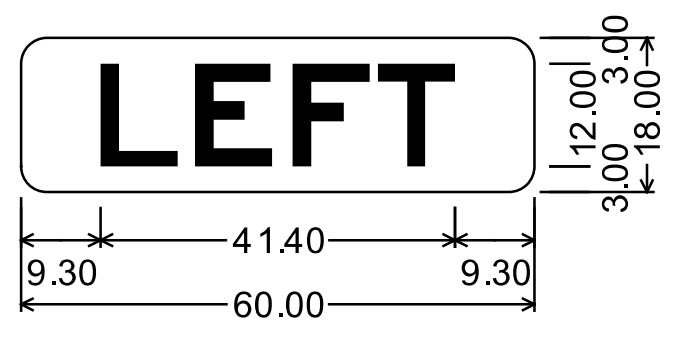
9.00" Radius, 2.00" Border, White on Green;
 "State St", E Mod; "Fremont", E Mod; "1/4 MILE", E;
 12.00" Radius, 2.00" Border, Black on Yellow;
 "EXIT", E 2K; "ONLY", E 2K; Down Arrow C-1 - 22.00" 270°;
 Table of letter and object lefts

| | | | | | | | | |
|-------|-------|-------|--------|--------|--------|--------|-------|--------|
| S | t | a | t | e | S | t | | |
| 31.49 | 47.60 | 59.34 | 74.13 | 85.86 | 112.26 | 128.37 | | |
| F | r | e | m | o | n | t | | |
| 32.86 | 48.76 | 59.01 | 74.44 | 96.52 | 112.12 | 127.01 | | |
| 1/4 | M | I | L | E | | | | |
| 50.83 | 84.33 | 96.13 | 100.42 | 109.83 | | | | |
| E | X | I | T | O | N | L | Y | ↓ |
| 14.70 | 25.38 | 38.22 | 42.42 | 63.42 | 76.26 | 89.10 | 99.06 | 123.30 |



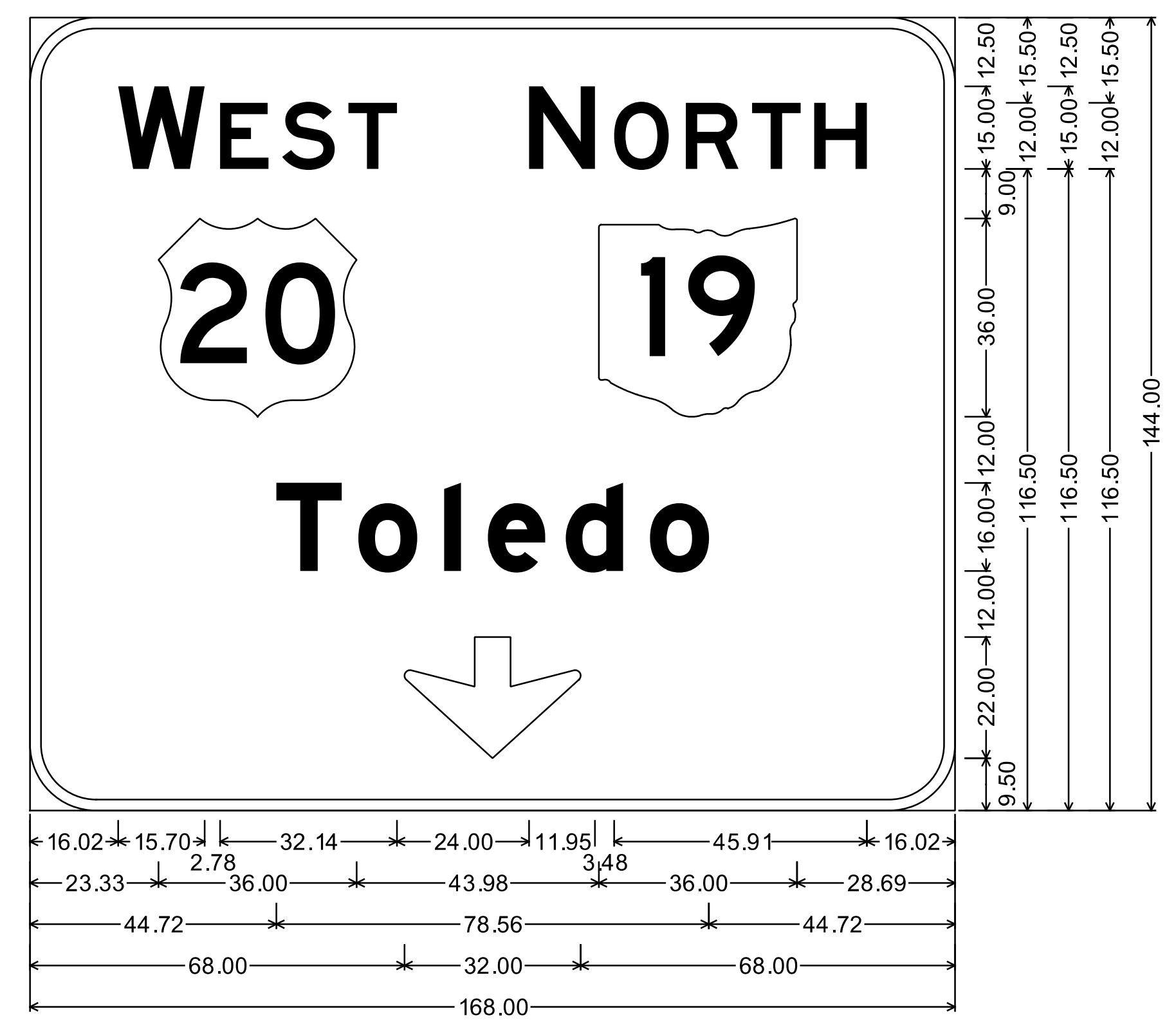
E1-h5bP;
 6.00" Radius, 2.00" Border, White on Green;
 "EXIT", E 2K; "105", E 2K;
 Table of letter and object lefts

| | | | |
|-------|-------|-------|-------|
| | I | O | S |
| 12.23 | 72.53 | 80.48 | 95.63 |
| E | X | I | T |
| 26.93 | 35.83 | 46.53 | 50.03 |



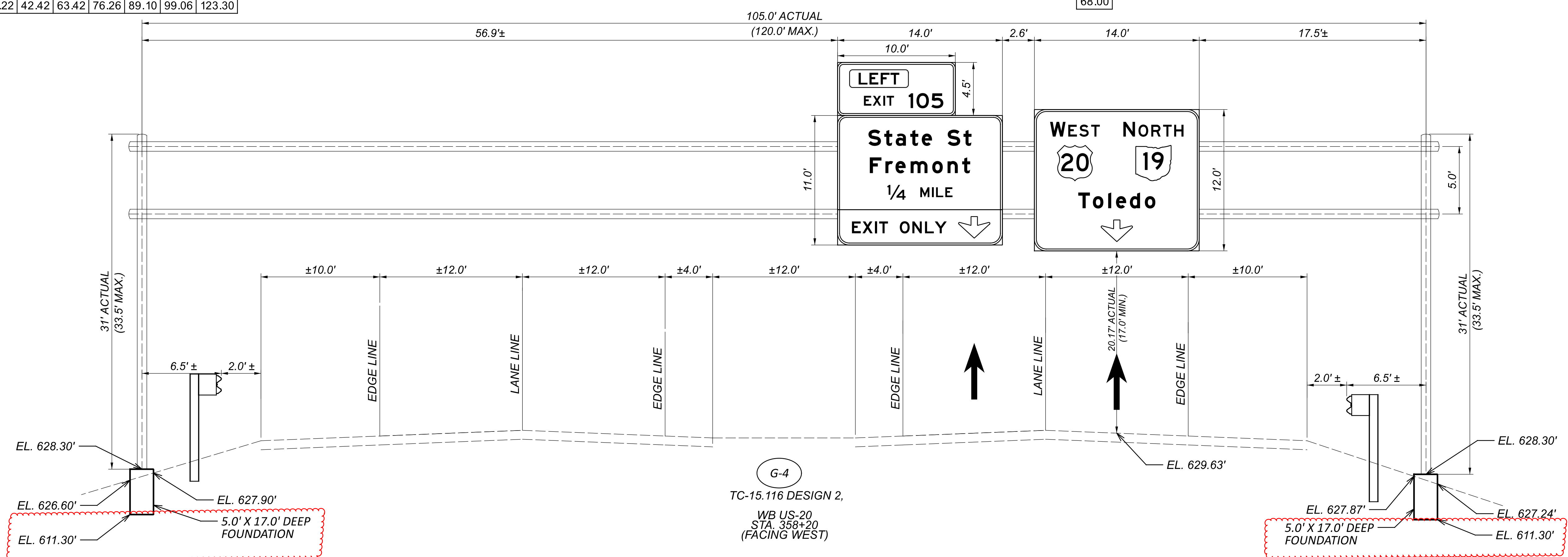
3.00" Radius, No border, White on Yellow;
 "LEFT", E 2K;
 Table of letter and object lefts

| | | | |
|------|-------|-------|-------|
| L | E | F | T |
| 9.30 | 20.34 | 31.74 | 41.70 |



12.00" Radius, 2.00" Border, White on Green;
 "WEST", E; US 20 M1-4; "NORTH", E; State Highway 19 M1-H5-36-2;
 "Toledo", E Mod; Down Arrow C-1 - 22.00" 270°;
 Table of letter and object lefts

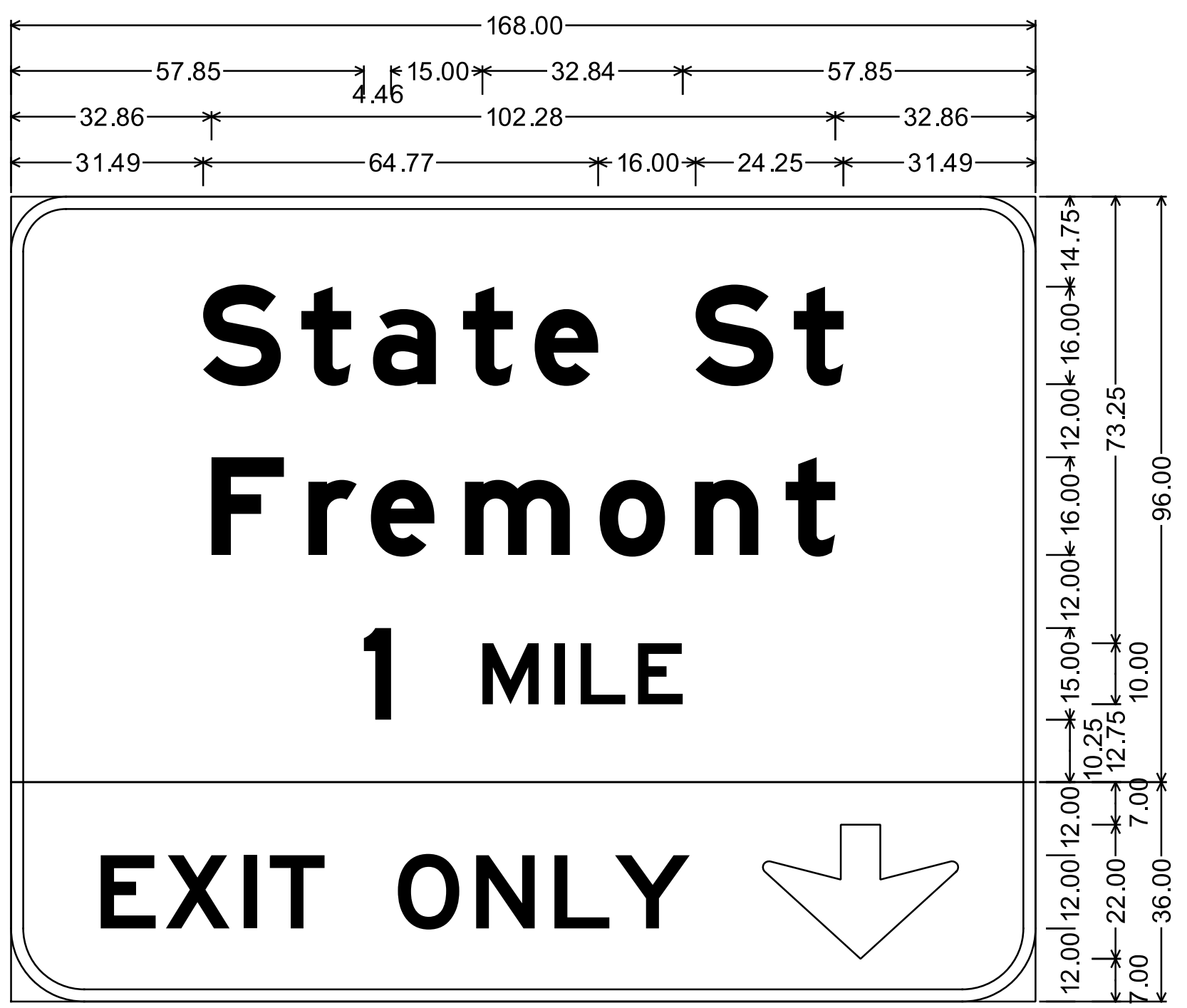
| | | | | | | | | |
|-------|--------|-------|-------|-------|--------|--------|--------|--------|
| W | E | S | T | N | O | R | T | H |
| 16.02 | 34.50 | 45.79 | 57.82 | 90.64 | 106.07 | 119.10 | 131.14 | 142.42 |
| 20 | 19 | | | | | | | |
| 23.33 | 103.31 | | | | | | | |
| T | o | i | e | d | o | | | |
| 44.72 | 59.61 | 75.22 | 83.16 | 97.28 | 112.59 | | | |
| ↓ | | | | | | | | |
| 68.00 | | | | | | | | |



G-4
 TC-15.116 DESIGN 2,
 WB US-20
 STA. 358+20
 (FACING WEST)

5.0' X 17.0' DEEP FOUNDATION
 EL. 611.30'
 EL. 626.60'
 EL. 627.90'

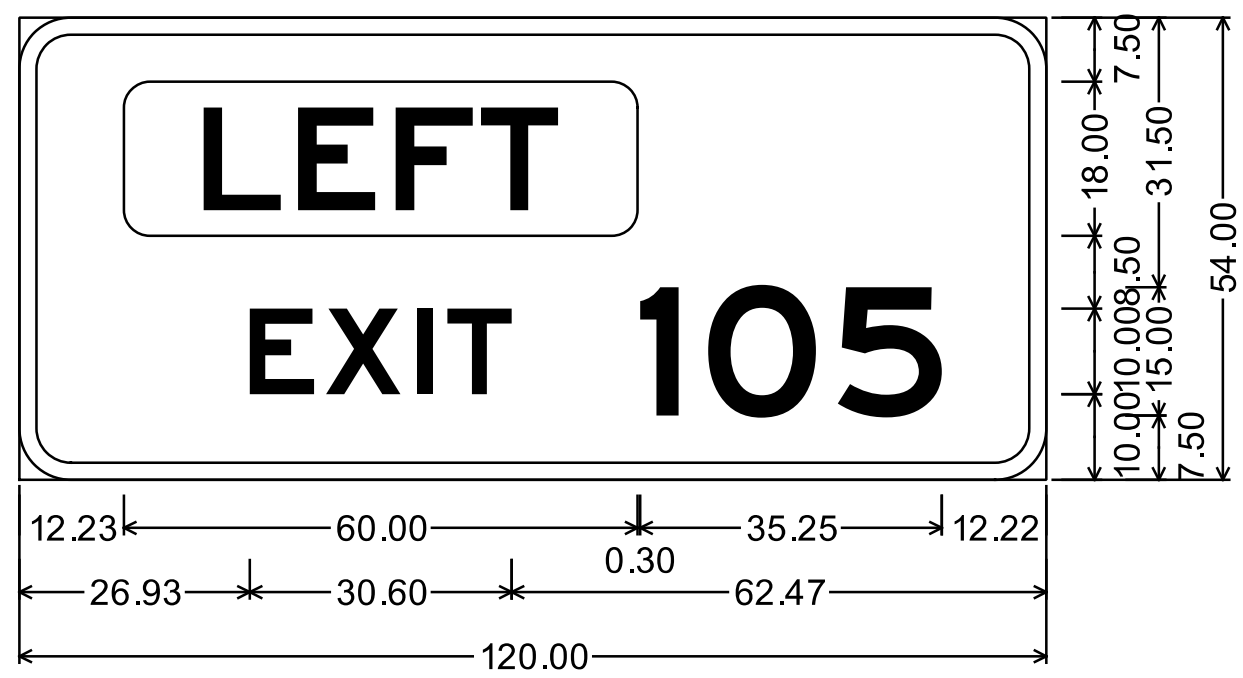
5.0' X 17.0' DEEP FOUNDATION
 EL. 611.30'
 EL. 627.24'
 EL. 627.87'



9.00" Radius, 2.00" Border, White on Green;
 "State St", E Mod; "Fremont", E Mod; "1 MILE", E;
 12.00" Radius, 2.00" Border, Black on Yellow;
 "EXIT", E 2K; "ONLY", E 2K; Down Arrow C-1 - 22.00" 270°;

Table of letter and object lefts

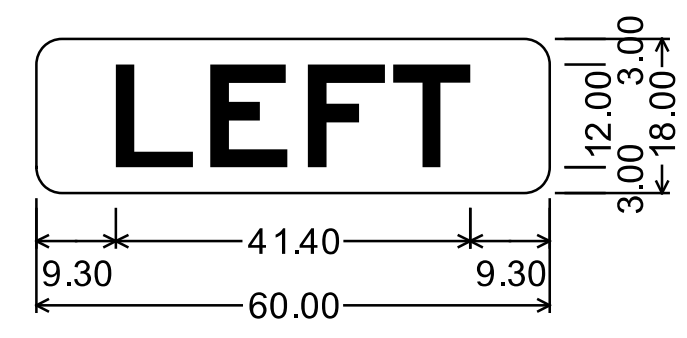
| | | | | | | | | |
|-------|-------|-------|-------|--------|--------|--------|-------|--------|
| S | t | a | t | e | S | t | | |
| 31.49 | 47.60 | 59.34 | 74.13 | 85.86 | 112.26 | 128.37 | | |
| F | r | e | m | o | n | t | | |
| 32.86 | 48.76 | 59.01 | 74.44 | 96.52 | 112.12 | 127.01 | | |
| 1 | M | I | L | E | | | | |
| 57.85 | 77.31 | 89.10 | 93.40 | 102.80 | | | | |
| E | X | I | T | O | N | L | Y | ↓ |
| 14.70 | 25.38 | 38.22 | 42.42 | 63.42 | 76.26 | 89.10 | 99.06 | 123.30 |



E1-h5bP;
 6.00" Radius, 2.00" Border, White on Green;
 "EXIT", E 2K; "105", E 2K;

Table of letter and object lefts

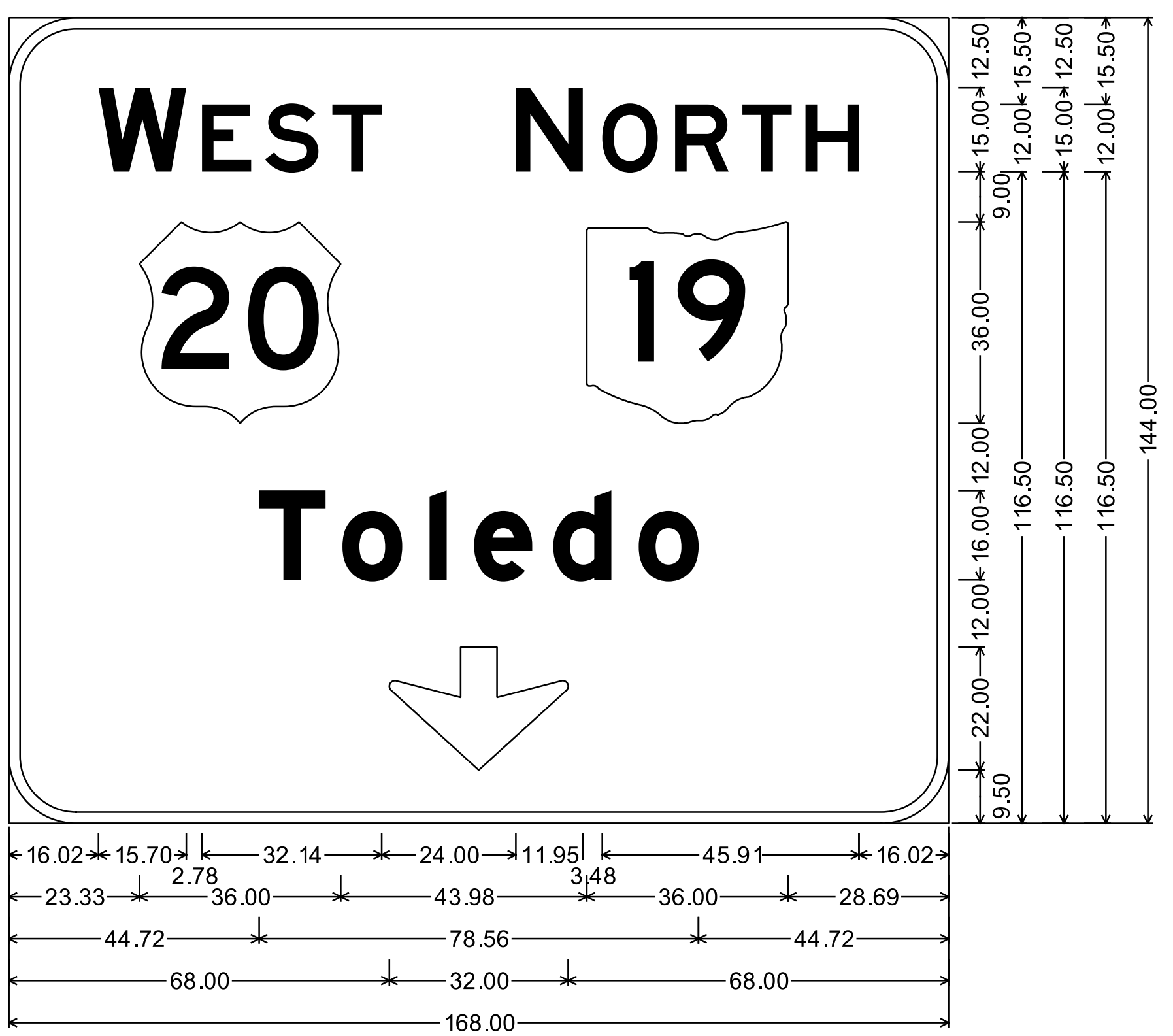
| | | | | |
|------|-------|-------|-------|---|
| L | E | X | I | T |
| 9.30 | 20.34 | 31.74 | 41.70 | |



3.00" Radius, No border, White on Yellow;
 "LEFT", E 2K;

Table of letter and object lefts

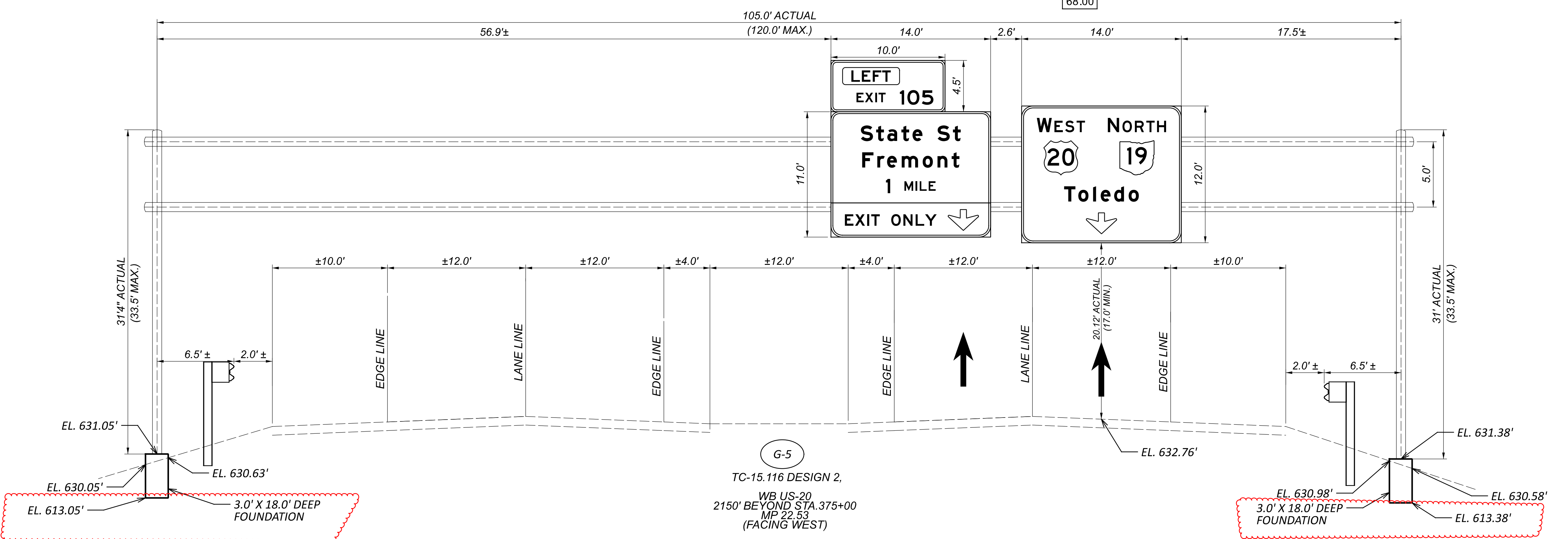
| | | | |
|------|-------|-------|-------|
| L | E | F | T |
| 9.30 | 20.34 | 31.74 | 41.70 |



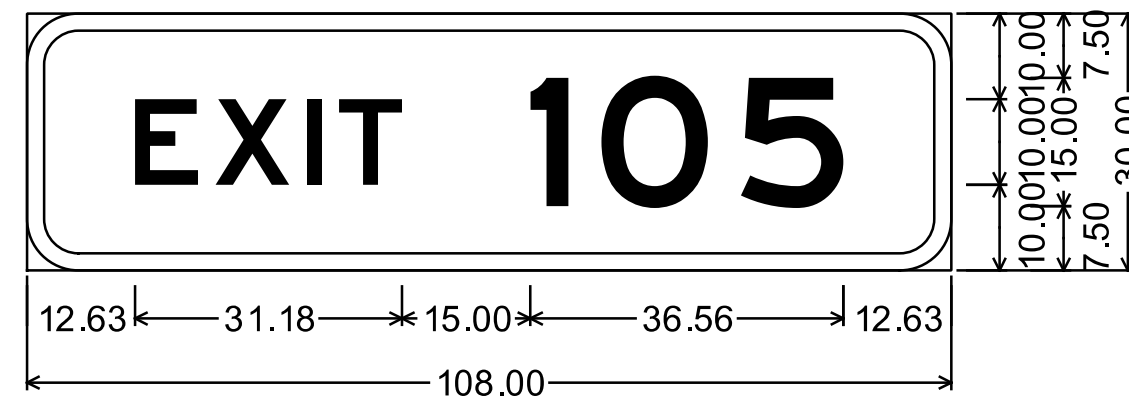
12.00" Radius, 2.00" Border, White on Green;
 "WEST", E; US 20 M1-4; "NORTH", E; State Highway 19 M1-H5-36-2;
 "Toledo", E Mod; Down Arrow C-1 - 22.00" 270°;

Table of letter and object lefts

| | | | | | | | | |
|-------|--------|-------|-------|-------|--------|--------|--------|--------|
| W | E | S | T | N | O | R | T | H |
| 16.02 | 34.50 | 45.79 | 57.82 | 90.64 | 106.07 | 119.10 | 131.14 | 142.42 |
| 20 | 19 | | | | | | | |
| 23.33 | 103.31 | | | | | | | |
| T | o | l | e | d | o | | | |
| 44.72 | 59.61 | 75.22 | 83.16 | 97.28 | 112.59 | | | |
| ↓ | | | | | | | | |
| 68.00 | | | | | | | | |



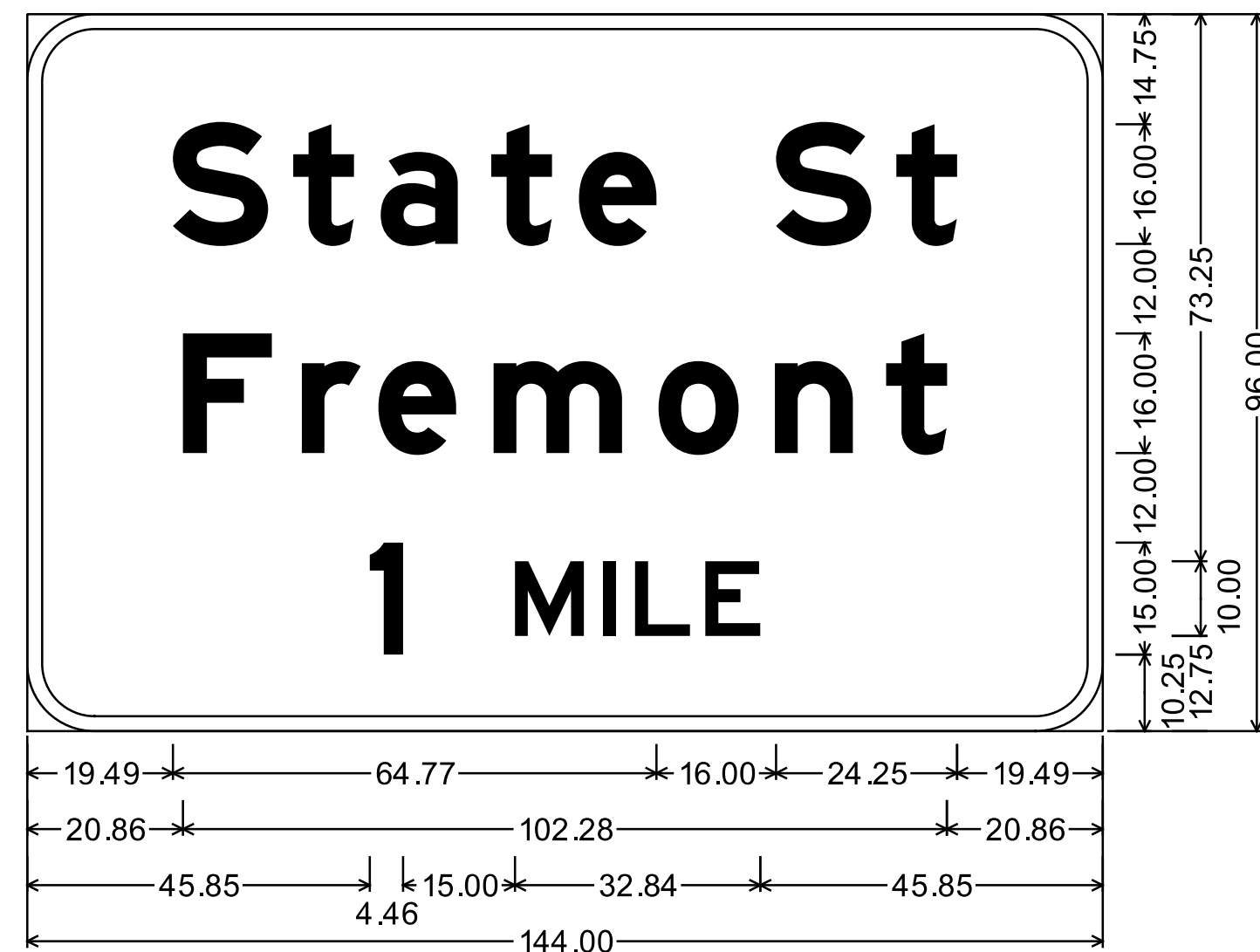
G-5
 TC-15.116 DESIGN 2,
 WB US-20
 2150' BEYOND STA.375+00
 MP 22.53
 (FACING WEST)



6.00" Radius, 2.00" Border, White on Green;
 "EXIT", E; "105", E;

Table of letter and object lefts

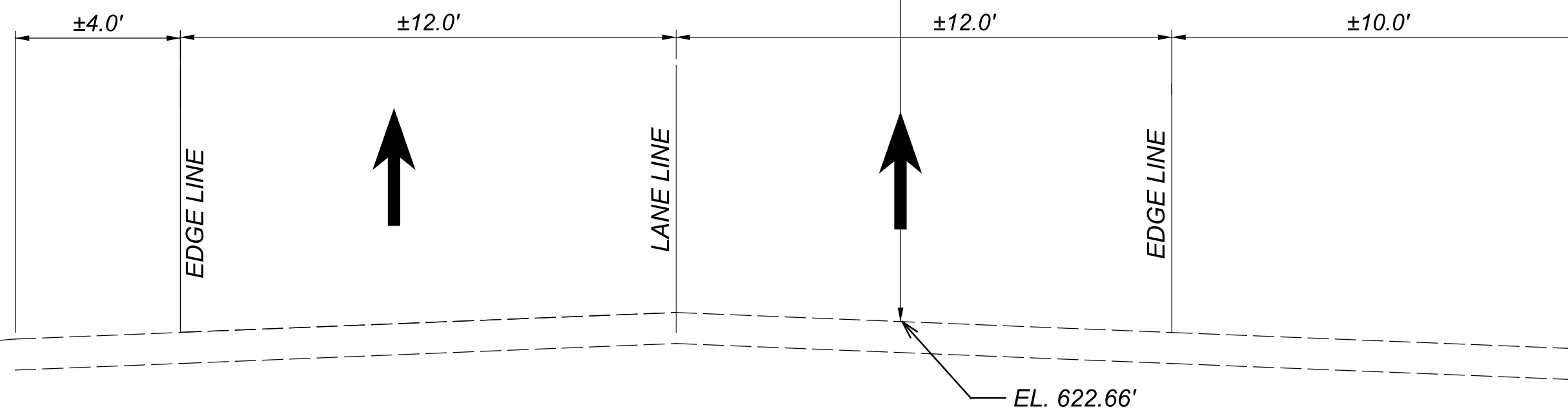
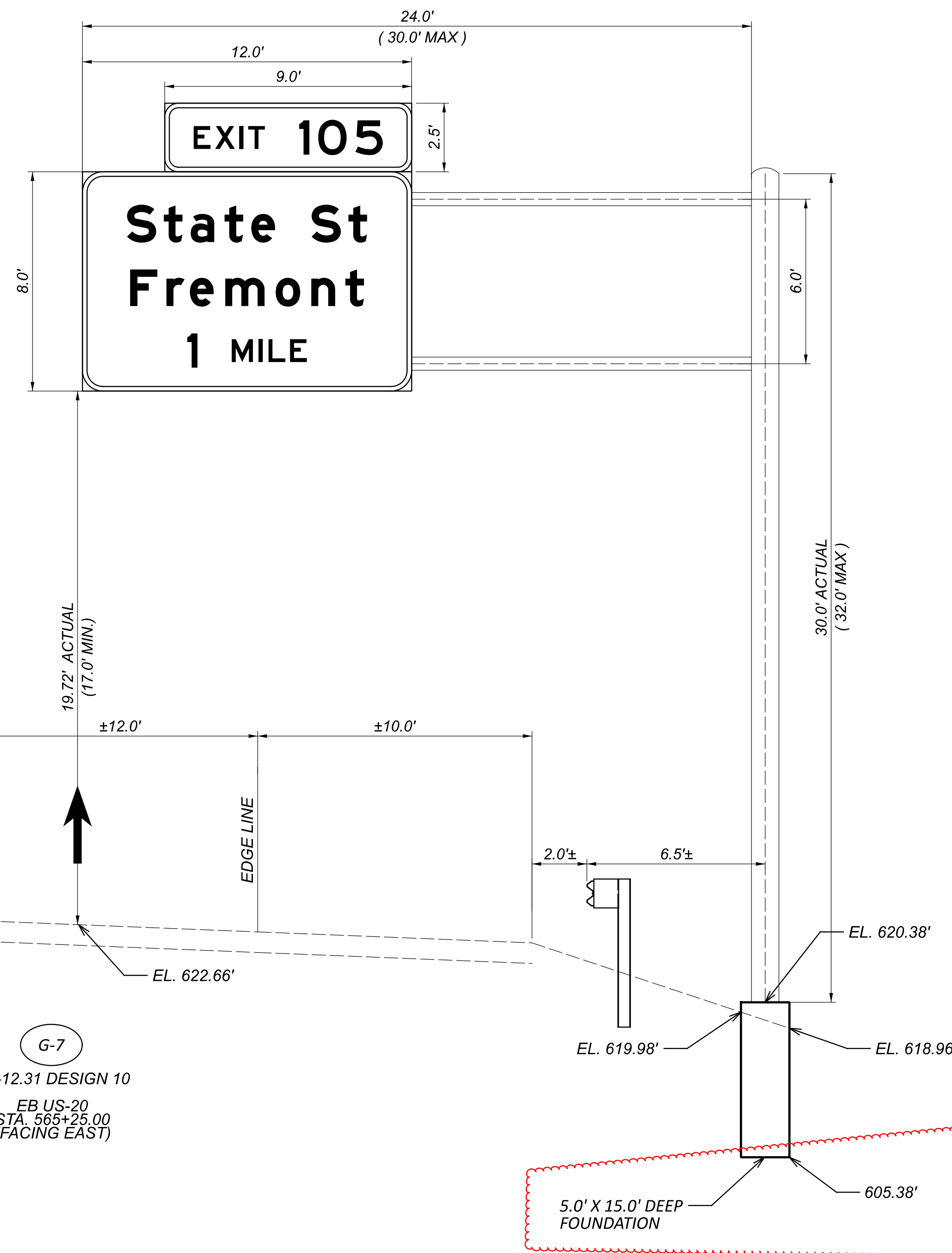
| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| E | X | I | T | 1 | 0 | 5 |
| 12.63 | 22.03 | 32.69 | 36.47 | 58.81 | 67.13 | 83.42 |



9.00" Radius, 2.00" Border, White on Green;
 "State St", E Mod; "Fremont", E Mod; "1 MILE", E;

Table of letter and object lefts

| | | | | | | |
|-------|-------|-------|-------|-------|--------|--------|
| S | t | a | t | e | S | t |
| 19.49 | 35.60 | 47.34 | 62.13 | 73.86 | 100.26 | 116.37 |
| F | r | e | m | o | n | t |
| 20.86 | 36.76 | 47.01 | 62.44 | 84.52 | 100.12 | 115.01 |
| 1 | M | I | L | E | | |
| 45.85 | 65.31 | 77.10 | 81.40 | 90.80 | | |



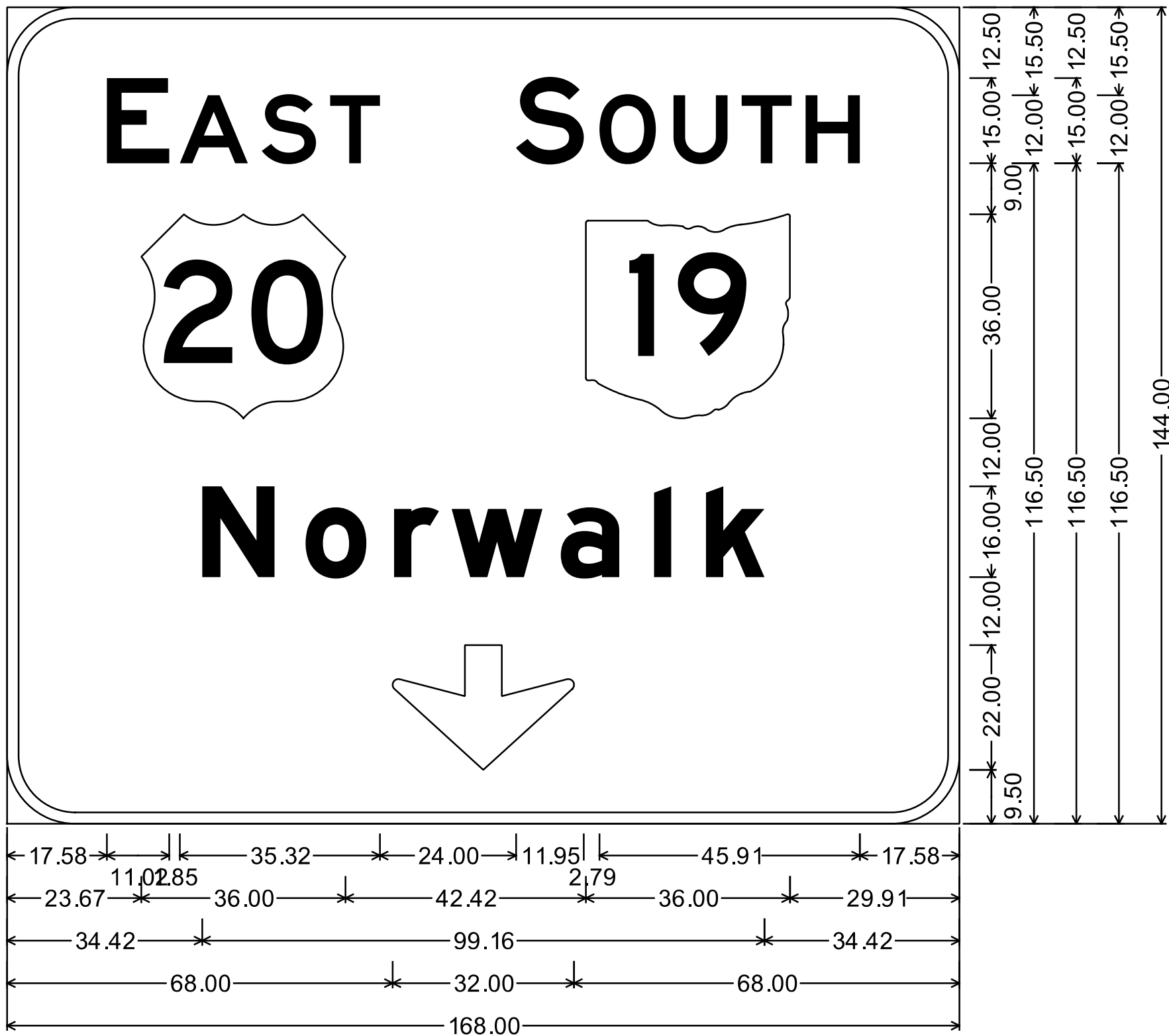
G-7
 TC-12.31 DESIGN 10
 EB US-20
 STA. 565+25.00
 (FACING EAST)

SIGN ELEVATION DETAIL

| | |
|---------------|-------------|
| DESIGN AGENCY | M M |
| DESIGNER | RKC |
| REVIEWER | SJP |
| PROJECT ID | 112222 |
| SHEET TOTAL | P.279 323 |

SAN-020-20.80

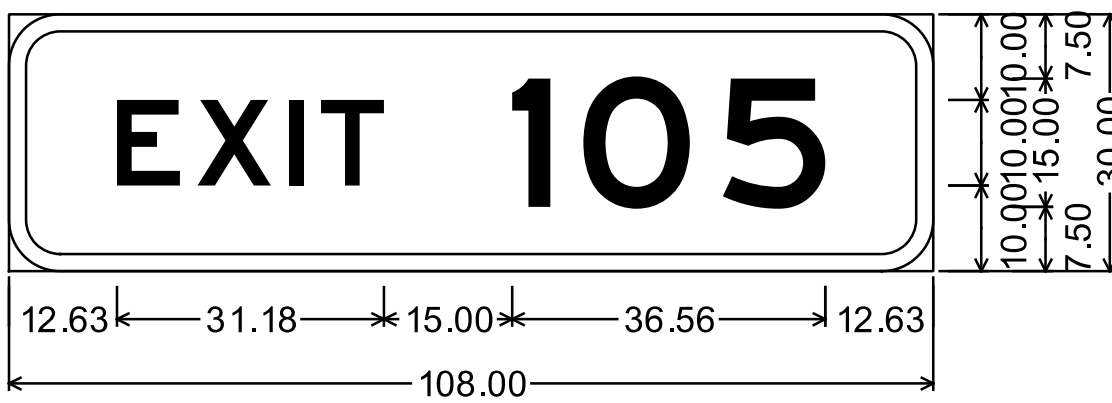
MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 3/16/2026 TIME: 4:30:13 PM USER: KC112955
 p:\mott-use-pw-bentley.com:mott-use-pw-20\Documents\507103586-SAN-20-20.80\SAN\112222\400-Engineering\Traffic\Sheets\112222_TE007.dgn



12.00" Radius, 2.00" Border, White on Green;
 "EAST", E; US 20 M1-4; "SOUTH", E; State Highway 19 M1-H5-36-2;
 "Norwalk", E Mod; Down Arrow C-1 - 22.00" 270°;

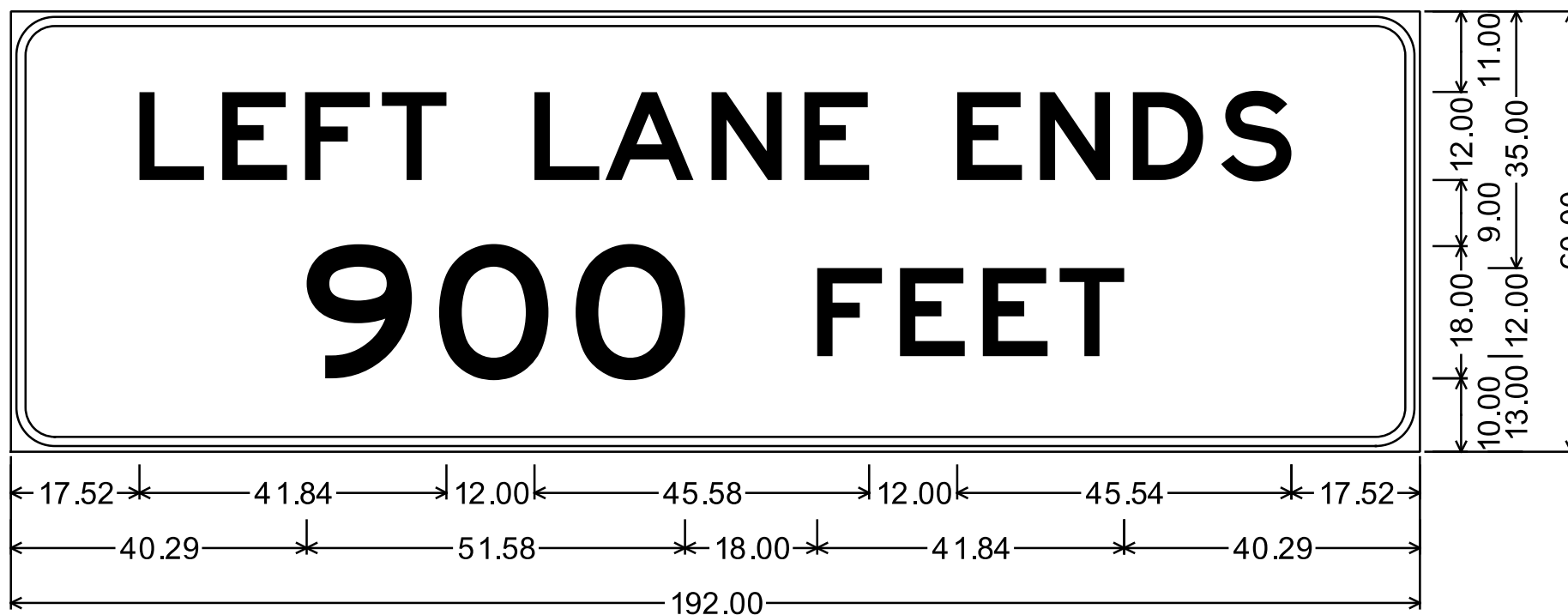
Table of letter and object lefts

| | | | | | | | | |
|-------|--------|-------|-------|-------|--------|--------|--------|--------|
| E | A | S | T | S | O | U | T | H |
| 17.58 | 30.45 | 44.92 | 56.96 | 89.77 | 104.51 | 117.54 | 129.57 | 140.86 |
| 23.67 | 102.09 | | | | | | | |
| N | o | r | w | a | l | k | | |
| 34.42 | 52.66 | 68.26 | 78.41 | 97.67 | 114.10 | 123.28 | | |
| 68.00 | | | | | | | | |



6.00" Radius, 2.00" Border, White on Green;
 "EXIT", E; "105", E;
 Table of letter and object lefts

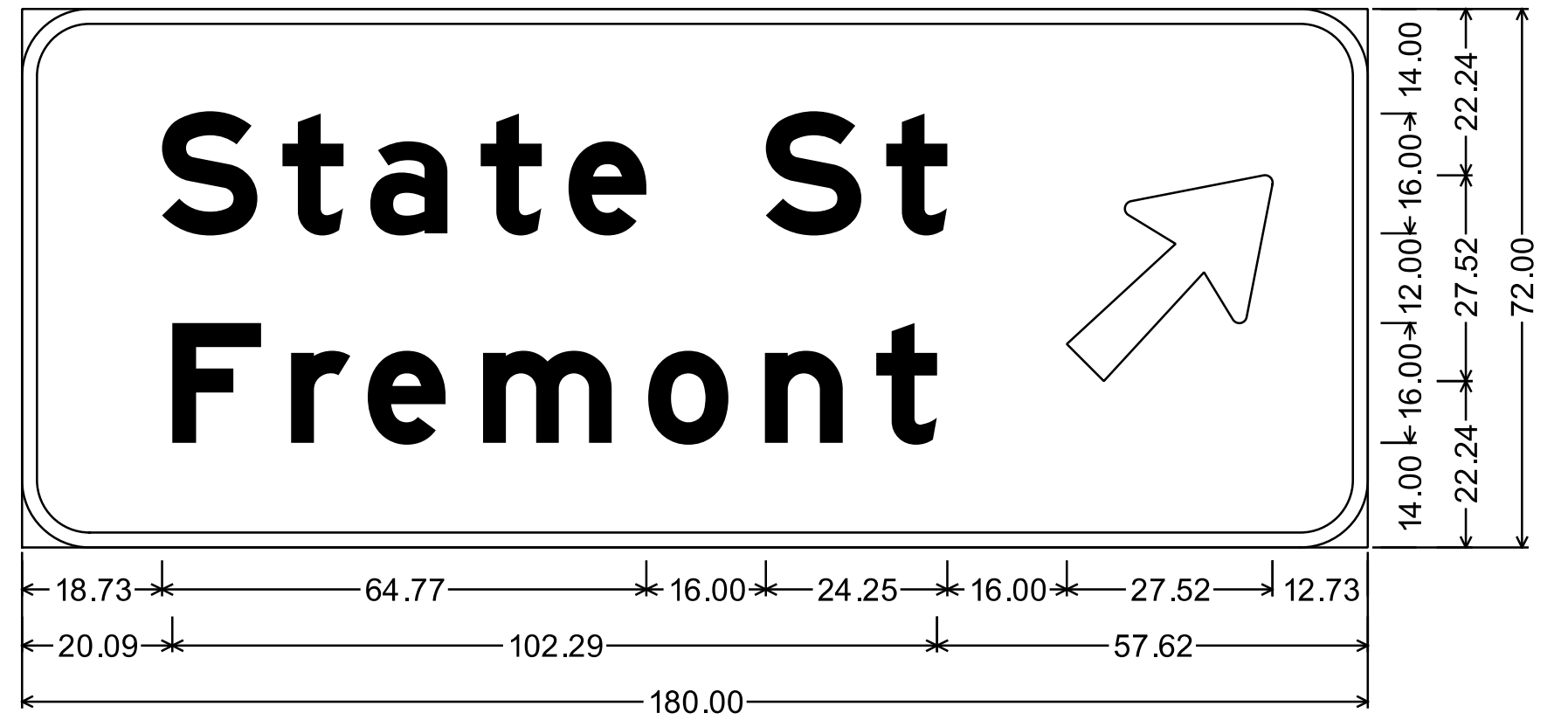
| | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| E | X | I | T | 1 | 0 | 5 |
| 12.63 | 22.03 | 32.69 | 36.47 | 58.81 | 67.13 | 83.42 |



6.00" Radius, 1.25" Border, 0.75" Indent, Black on Yellow;
 "LEFT", E; "LANE", E; "ENDS", E; "900", E; "FEET", E;

Table of letter and object lefts

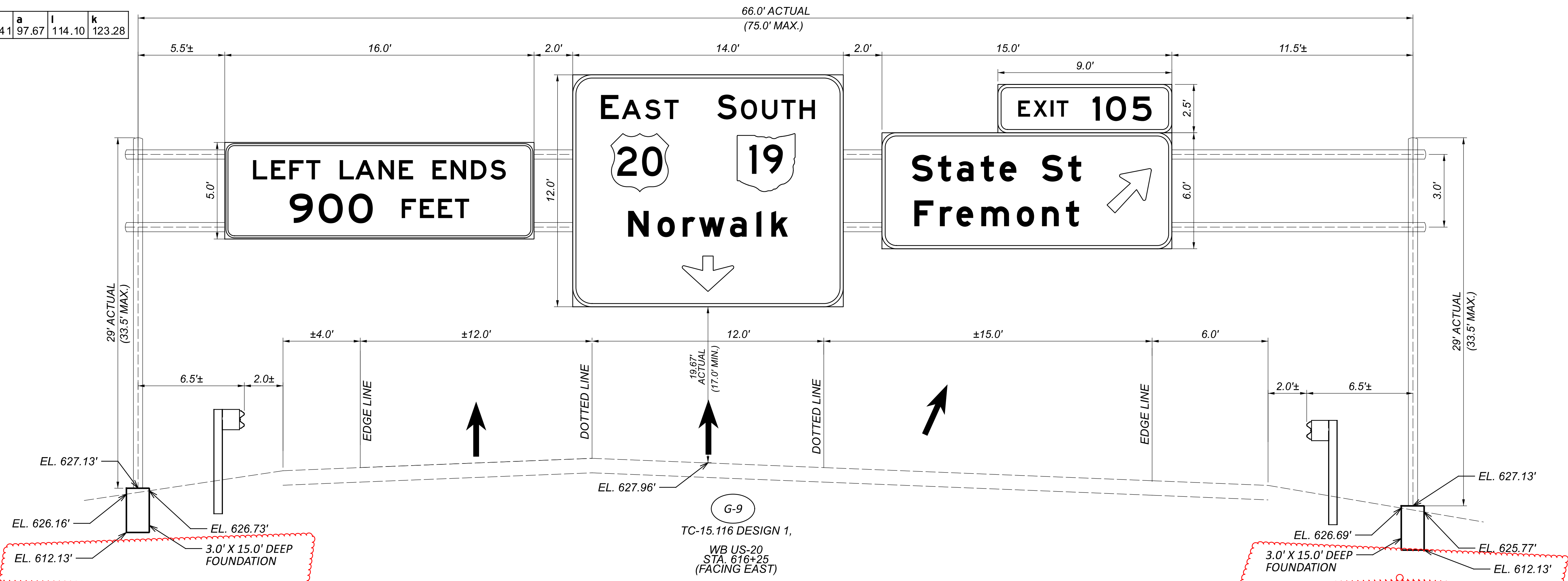
| | | | | | | | | | | | |
|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | E | F | T | L | A | N | E | E | N | D | S |
| 17.52 | 28.80 | 40.09 | 50.55 | 71.36 | 81.00 | 95.47 | 108.13 | 128.94 | 140.23 | 152.88 | 164.92 |
| 9 | 0 | 0 | F | E | E | T | | | | | |
| 40.29 | 58.34 | 76.96 | 109.87 | 121.15 | 132.44 | 142.90 | | | | | |

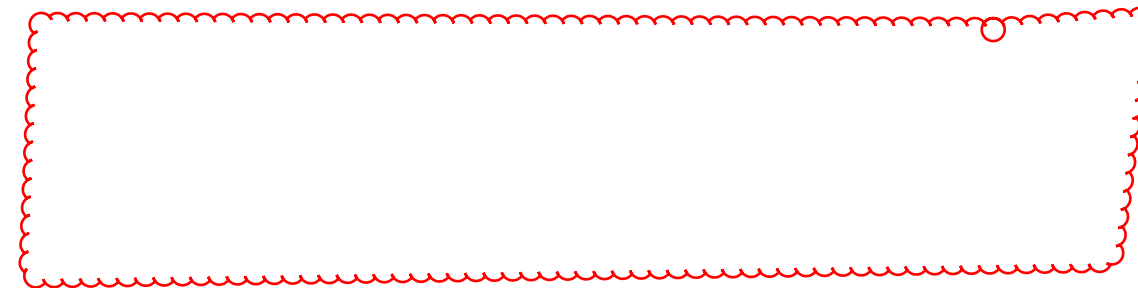


9.00" Radius, 2.00" Border, White on Green;
 "State St", E Mod; "Fremont", E Mod; Arrow A-1 - 35.00" 45°;

Table of letter and object lefts

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|--------|--------|
| S | t | a | t | e | S | t | ↗ |
| 18.73 | 34.84 | 46.58 | 61.36 | 73.10 | 99.50 | 115.61 | 139.75 |
| F | r | e | m | o | n | t | |
| 20.09 | 35.99 | 46.25 | 61.67 | 83.76 | 99.36 | 114.25 | |





ITEM 633 - CONTROLLER WORK PAD, AS PER PLAN

THIS ITEM SHALL INCLUDE THE EXCAVATION AND CONCRETE NECESSARY TO INSTALL CONTROLLER CABINET WORK PAD FOR THE COMBINATION CONTROLLER AND UNIT UNINTERRUPTIBLE POWER SUPPLY (UPS) CABINET.

IN ADDITION TO THE REQUIREMENTS OF CMS 633 & SCD TC-83.20.

THE CONTROLLER SHALL CONSTRUCT THE WORK PAD AS FOLLOWS:

- EXCAVATE A MINIMUM OF 9" BELOW GRADE
- PLACE COMPACT 6" OF MATERIAL CONFIRMING TO 304.02
- INSTALL A CAST-IN-PLACE WORK PAD THAT IS A MINIMUM OF 4" THICK

PAYMENT FOR ITEM 633 CONTROLLER WORK PAD, AS PER PLAN SHALL INCLUDE ALL EQUIPMENT, LABOR, AND MATERIALS NECESSARY TO INSTALL A NEW CONCRETE WORK PAD.

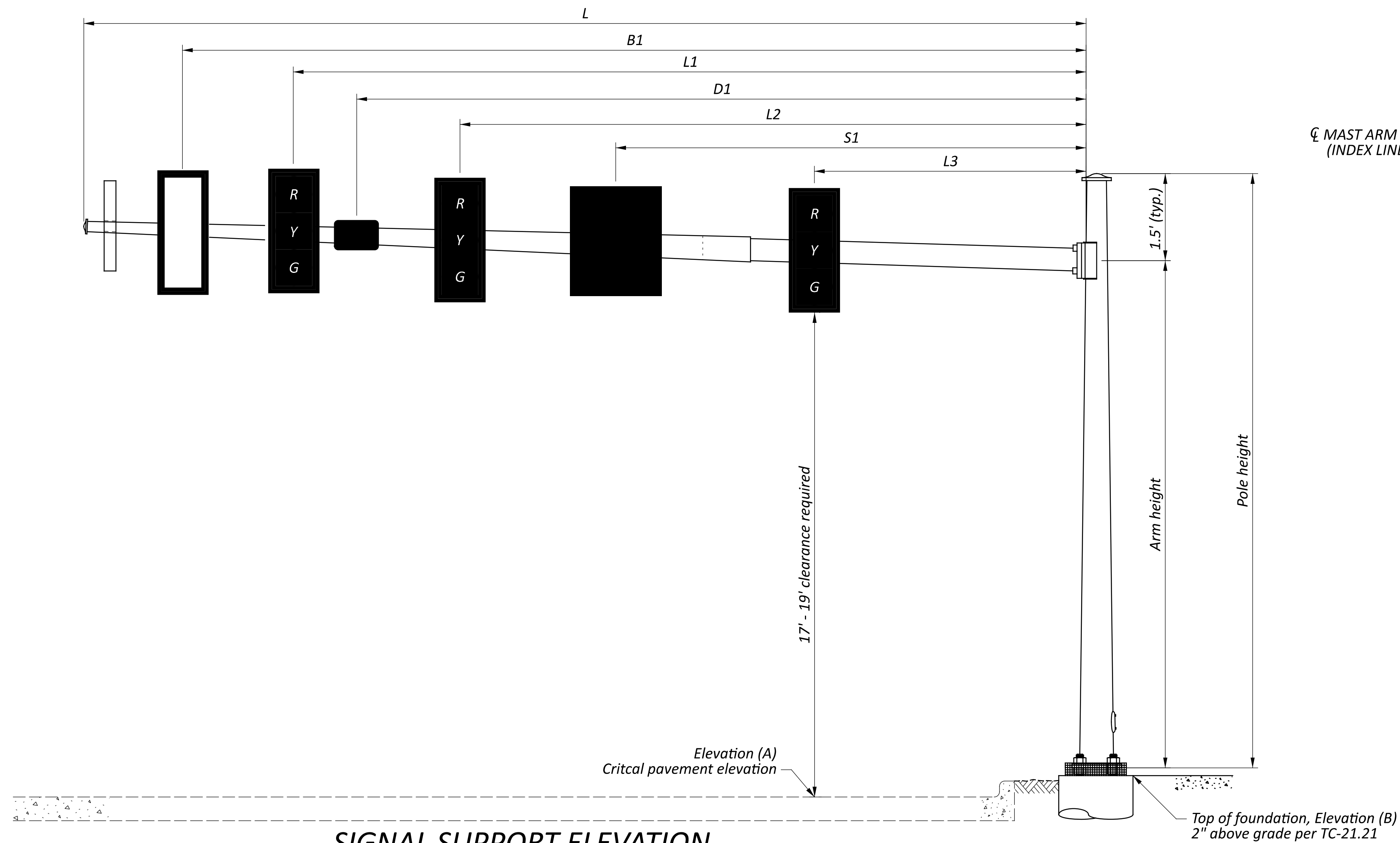
809 ATC CONTROLLER, AS PER PLAN

ALL REQUIREMENTS OF SS 809 SHALL BE FOLLOWED, ALONG WITH THE ADDITIONAL DESCRIPTION AS STATED BELOW. THE ATC CONTROLLER WILL BE PROVIDED BY THE DISTRICT WITHOUT PROGRAMMING. IN THE CASE OF A 332/336 CABINET TYPE, THE CONTROLLER WILL BE PROVIDED WITH THE POWER CORD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE CONTROLLER TO THE PROPOSED CONDITIONS ACCORDING TO THE PLANS. ODOT WILL NOT BE RESPONSIBLE FOR THE PROGRAMMING.

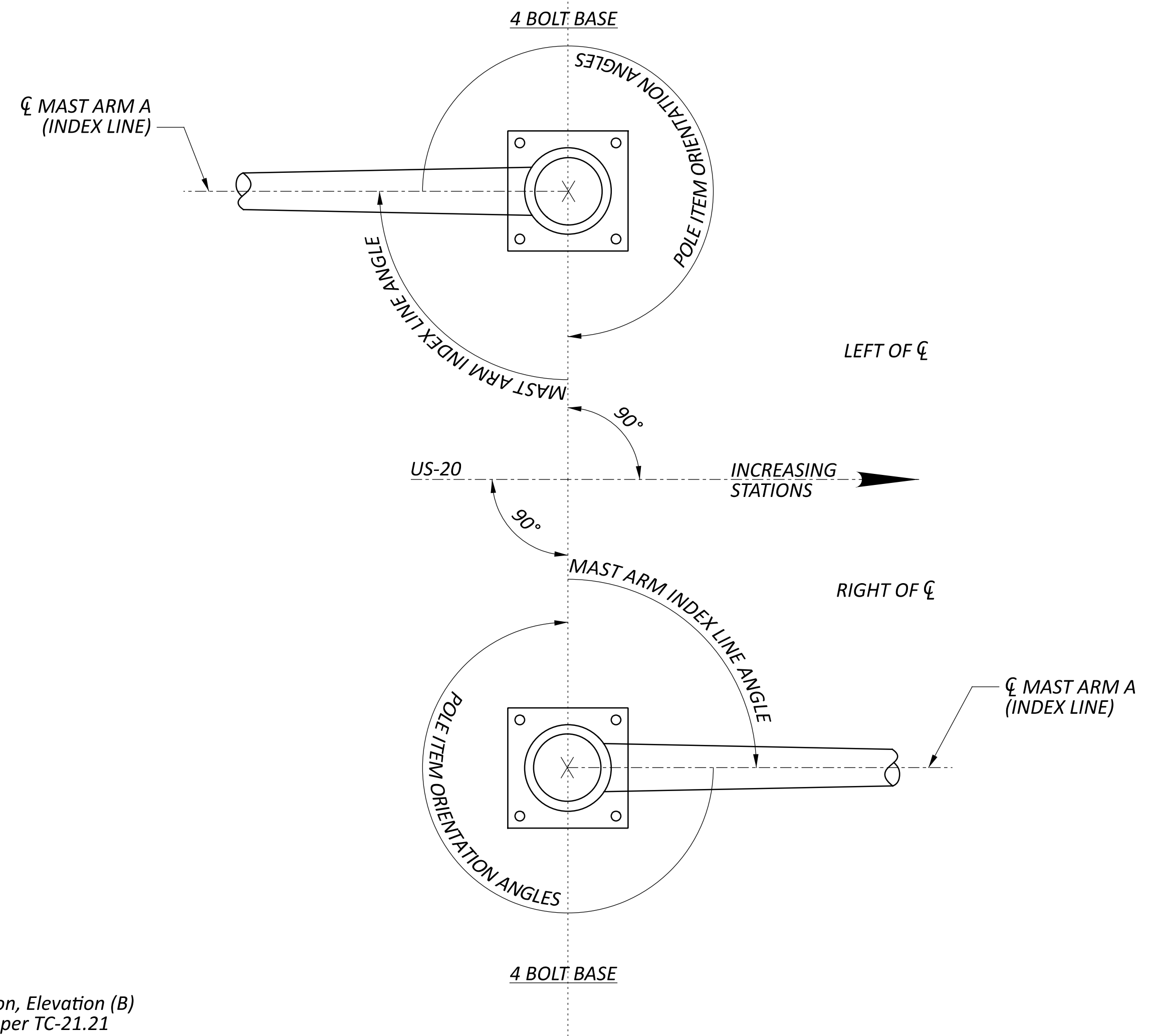
THE CONTROLLER SHALL BE LISTED ON THE TAP AND BE AN ECONOLITE COBALT AND COMPATIBLE WITH THE CABINET TYPE BEING INSTALLED.

PAYMENT SHALL BE MADE ONCE THE CONTROLLER IS PROGRAMMED, INSTALLED, TESTED, FUNCTIONING ACCORDING TO THE PLANS, AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS TO COMPLETE THE WORK.



SIGNAL SUPPORT ELEVATION

MAST ARM TABLE



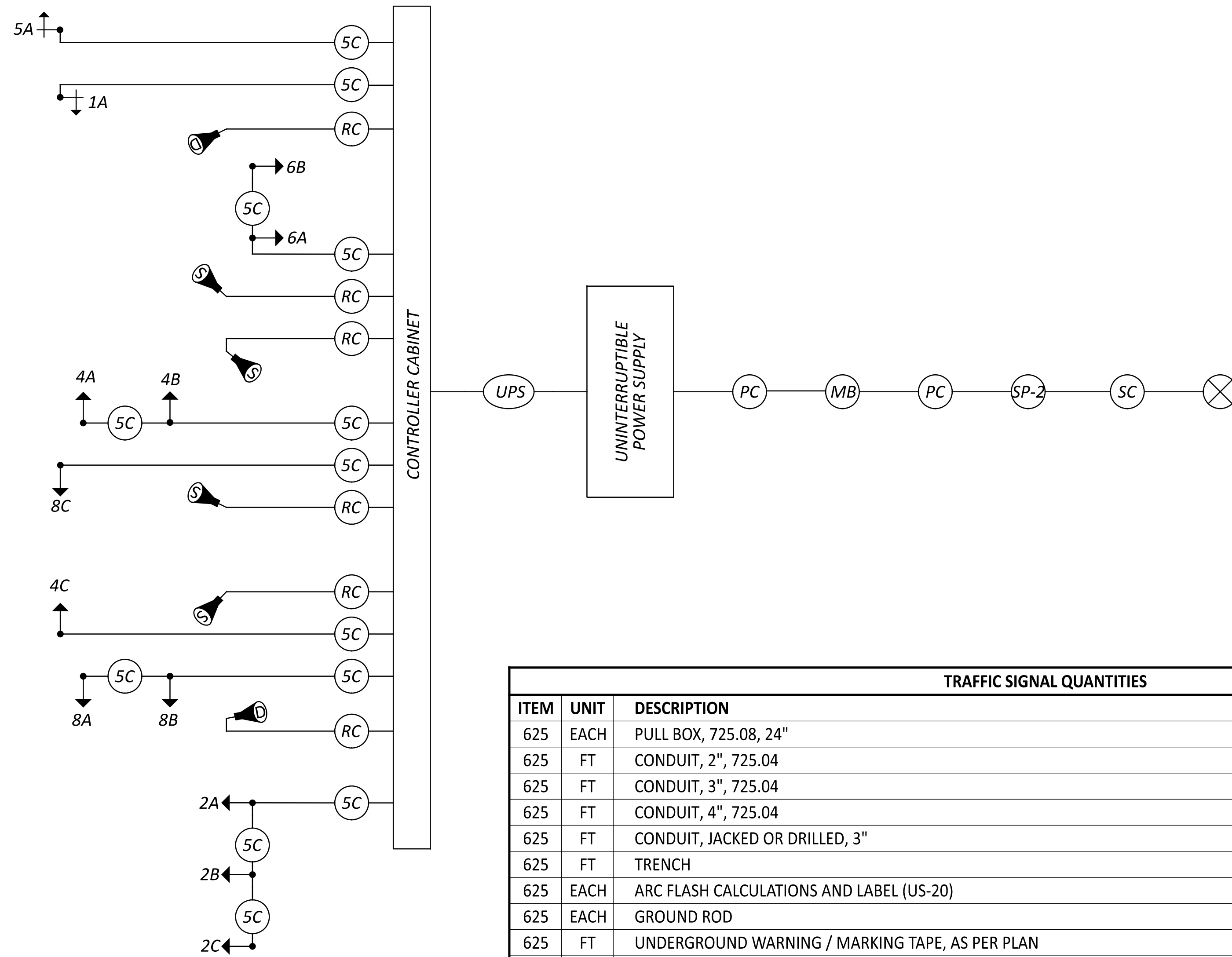
POLE ORIENTATION

NOTE:
 FOR SIGNAL SUPPORT FOUNDATION DETAILS, SEE SHEET P.222

| SUPPORT NO. | ARM DESIGNATION | STATION | OFFSET | ELEVATION | | SIGNAL SUPPORT DETAILS | | | | | | | | | | ANGLES (DEG.) FROM INDEX LINE | | | | | | | | | |
|-------------|-----------------|-----------|--------|---------------------------|--------------------------|------------------------|------------|-------------|------------|----|----|----|----|----|----|-------------------------------|--------------------------------|------------|-------------------|--------------------------|---------------|----------------|-------------|----------|---|
| | | | | A (Pavement Elevation) | B (Top of Foundation) | DESIGN TYPE | DESIGN NO. | POLE HEIGHT | ARM HEIGHT | L | L1 | L2 | L3 | D1 | B1 | S1 | MAST ARM A INDEX LINE ANGLE | MAST ARM B | PEDESTRIAN SIGNAL | PEDESTRIAN PUSHBUTTON | POWER SERVICE | SIGNAL CABINET | BRACKET ARM | HANDHOLE | CABLE ENTRANCE 12" FROM TOP OF POLE EXTENSION |
| | | | | FT | FT | | | | | | | | | | | | | | | | | | | | |
| SP-1 | A | 364+10.09 | 47' LT | 633.38 | 632.81 | TC-81.22 | 14 | 22 | 20.5 | 63 | 53 | 41 | 29 | 36 | 60 | - | 90 | 180 | - | - | - | - | - | - | - |
| | B | | | 633.1 | | TC-81.22 | 13 | | | | | | | | | | | | | | | | | | |
| SP-2 | A | 364+68.64 | 67' RT | 633.05 | 632.62 | TC-81.22 | 13 | 22 | 20.5 | 45 | 42 | 30 | 16 | 39 | - | - | 270 | 180 | - | - | - | - | - | - | - |
| | B | | | 633.17 | | TC-81.22 | 13 | | | | | | | | | | | | | | | | | | |

Note:
 1. D1 is used for distance to Detection Unit.
 2. S1 is used for distance to sign attachment.

WIRING DIAGRAM (TYPICAL)



FIELD WIRING HOOKUP CHART (TEM FORM 496-16)

| SIGNAL HEAD | INDICATION | FIELD TERMINAL | FLASH | SIGNAL HEAD | INDICATION | FIELD TERMINAL | FLASH |
|--------------------|------------|----------------|-------|--------------------|------------|----------------|-------|
| 1A (WB LT) | ← R | Φ1 R | R | 6A, 6B (WB) | R | Φ6 R | R |
| | ← Y | Φ1 Y | | | Y | Φ6 Y | |
| | ← G | Φ1 G | | | G | Φ6 G | |
| 2A, 2B, 2C (EB) | R | Φ2 R | R | 8A, 8B, 8C (NB) | R | Φ8 R | R |
| | Y | Φ2 Y | | | Y | Φ8 Y | |
| | G | Φ2 G | | | G | Φ8 G | |
| 4A, 4B, 4C (SB) | R | Φ4 R | R | | | | |
| | Y | Φ4 Y | | | | | |
| | G | Φ4 G | | | | | |
| 5A (EB LT) | ← R | Φ5 R | R | | | | |
| | ← Y | Φ5 Y | | | | | |
| | ← G | Φ5 G | | | | | |
| OVERLAPS | | | | | | | |
| LS = LOAD SWITCH | | | | | | | |

LEGEND

- TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD 12"
- ↑ TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS
- ⊙ STOP LINE RADAR DETECTION UNIT
- ⊙ ELECTRICAL PULL BOX
- ⊙ EX. TRAFFIC PULL BOX
- PROPOSED TRAFFIC PULL BOX
- ⊗ POWER SOURCE
- ⊖ SC SERVICE CABLE, 3 CONDUCTOR, NO. 8 AWG
- ⊖ PC POWER CABLE, 2 CONDUCTOR, NO. 4 AWG
- ⊖ MB METER BASE
- ⊖ UPS UNINTERRUPTIBLE POWER SUPPLY CABLE
- ⊖ 5C SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
- ⊖ RC RADAR DETECTION CABLE

| TRAFFIC SIGNAL QUANTITIES | | | |
|---------------------------|---------|--|----------|
| ITEM | UNIT | DESCRIPTION | QUANTITY |
| 625 | EACH | PULL BOX, 725.08, 24" | 2 |
| 625 | FT | CONDUIT, 2", 725.04 | 10 |
| 625 | FT | CONDUIT, 3", 725.04 | 41 |
| 625 | FT | CONDUIT, 4", 725.04 | 20 |
| 625 | FT | CONDUIT, JACKED OR DRILLED, 3" | 120 |
| 625 | FT | TRENCH | 71 |
| 625 | EACH | ARC FLASH CALCULATIONS AND LABEL (US-20) | 1 |
| 625 | EACH | GROUND ROD | 3 |
| 625 | FT | UNDERGROUND WARNING / MARKING TAPE, AS PER PLAN | 71 |
| 630 | SQ. FT. | SIGN. FLAT SHEET | 15 |
| 630 | EACH | RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN | 2 |
| 632 | EACH | VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK | 13 |
| 632 | EACH | SIGNAL SUPPORT, TYPE TC-12.31 DESIGN POLE 10, WITH MAST ARMS TC-81.22, DESIGN 13 AND DESIGN 13 | 1 |
| 632 | EACH | SIGNAL SUPPORT, TYPE TC-12.31 DESIGN POLE 12, WITH MAST ARMS TC-81.22, DESIGN 13 AND DESIGN 14 | 1 |
| 632 | FT | SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG | 1580 |
| 632 | FT | SERVICE CABLE, 3 CONDUCTOR, NO. 8 AWG | 35 |
| 632 | FT | POWER CABLE, 2 CONDUCTOR, NO. 4 AWG | 40 |
| 632 | EACH | POWER SERVICE, AS PER PLAN | 1 |
| 632 | EACH | REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN | 1 |
| 633 | EACH | CABINET, TYPE TS2, AS PER PLAN | 1 |
| 633 | EACH | CABINET FOUNDATION, AS PER PLAN | 1 |
| 633 | EACH | CONTROLLER WORK PAD, AS PER PLAN | 1 |
| 633 | EACH | UNINTERRUPTIBLE POWER SUPPLY, 1000 WATT, AS PER PLAN | 1 |
| 809 | EACH | ATC CONTROLLER, AS PER PLAN | 1 |
| 809 | EACH | ADVANCED RADAR DETECTION, AS PER PLAN, RE-USE & INSTALLATION OF EXISTING EQUIPMENT | 2 |
| 809 | EACH | STOP LINE RADAR DETECTION, AS PER PLAN | 4 |