

ITEM 254 PAVEMENT PLANING, AS PER PLAN (VARIABLE DEPTH) 0" - 2":

THIS ITEM IS INTENDED TO BE USED FOR THE LID REPLACEMENT OF THE TWO TYPE 2A INLETS AT STATIONS 777+95L & 777+95R. IT IS INTENDED TO RESTORE THE OPENING FOR THE INLET. SEE DETAIL SHEET 21.

ITEM 611 - INLET MISC.: TYPE NO. 2A REPLACEMENT TOP:

THIS ITEM SHALL BE TO REPLACE THE TOP SLAB AND CONCRETE APRON FOR THE TYPE 2A-11 INLETS. THE SLAB REPLACEMENT SHALL INCLUDE A NEW CASTING AND LID. THE CONCRETE APRON AND SHOULDER AREA SHALL BE CONSTRUCTED AS SHOWN IN THE DETAIL ON SHEET 21. THE APRON DEPRESSED AREA SHALL BE MILLED TO A VARIABLE DEPTH SUCH THAT THE OPENING SHALL BE RESTORED TO 4" ONCE THE 1 1/2" OVERLAY IS PLACED. THIS ITEM SHALL BE AS PER STANDARD CONSTRUCTION DRAWING I-1.2 AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE TYPE 2A PAVEMENT INLET AS SHOWN IN THE STANDARD CONSTRUCTION DRAWING.

ITEM SPECIAL - PIPE CLEANOUT, 24" AND UNDER:

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS AS DIRECTED BY THE ENGINEER.

ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT, 24" AND UNDER. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

A QUANTITY OF 200' OF ITEM SPECIAL - PIPE CLEANOUT, 24" & UNDER IS CARRIED TO THE GENERAL SUMMARY.

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DRAINAGE NOTES

FRA - 161 - 14.02

| SHEET | REFERENCE NO. | STATION | LOCATION | SIDE | 202 | | 611 | | 622 | | REMARKS |
|---------------------------------------|---------------|---------|----------|------|--|---|---------------------------------------|--|--------------------------------------|---|---------|
| | | | | | REMOVAL MISC.: EXISTING METAL BARRIER, TYPE TC-41.21 EACH | PAVEMENT PLANING, AS PER PLAN (VARIABLE DEPTH) 0" - 2" SQ YD | CATCH BASIN ADJUSTED TO GRADE EACH | INLET ADJUSTED TO GRADE, AS PER PLAN EACH | INLET MISC.: TYPE 2A REPLACEMENT TOP | CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 FT | |
| 21 | CB-1 | 777+95 | SR 161 | L | | 8 | | | 1 | | |
| 21 | CB-2 | 777+95 | SR 161 | R | | 8 | | | 1 | | |
| 21 | CB-3 | 783+50 | SR 161 | R | | | | 1 | | | |
| 22 | CB-4 | 795+58 | SR 161 | L | | | 1 | | | | |
| 27 | B-1 | 773+50 | SR 161 | C | 1 | | | | | 10 | |
| QUANTITIES CARRIED TO GENERAL SUMMARY | | | | | 1 | 16 | 1 | 1 | 2 | 10 | |

I-1.2A-11
I-1.2A-11
I-1.2A-14
CB-6

DRAINAGE ESTIMATED QUANTITIES

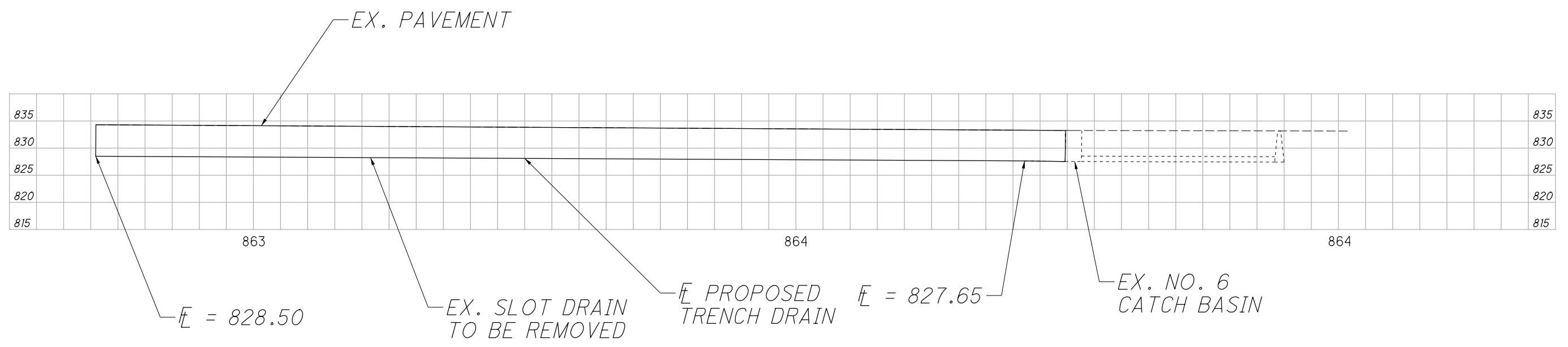
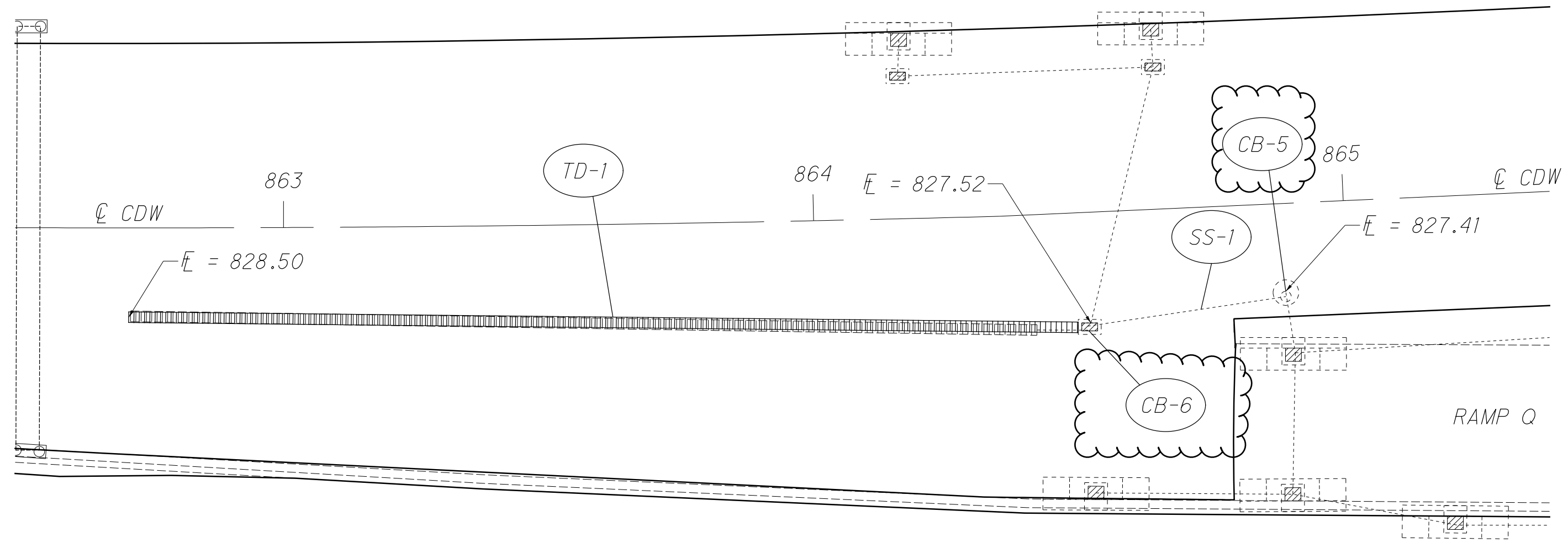


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**DRAINAGE PLAN
TRENCH DRAIN**

FRA-161-14.02

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FOR QUANTITIES, SEE SHEET NO. 24

| REF. NO. | BEGIN STATION | END STATION | 202 | | | | 611 | | 839 | | | | | | REMARKS |
|----------|---------------|-------------|--|--------------------------------|--|--|-------------------------------------|-----|---|--|--|--|--|--|---------|
| | | | SPECIAL - PIPE CLEANOUT, 24" AND UNDER FT | REMOVAL MISC: SLOT DRAIN FT | | | CATCH BASIN MISC.: CLEANOUT EACH | | TRENCH DRAIN WITH STANDARD GRATE, AS PER PLAN FT | | | | | | |
| TD-1 | 862+66 | 864+52 | | 171 | | | | 180 | | | | | | | |
| CS-1 | 864+52 | 864+88 | 36 | | | | | | | | | | | | |
| CB-5 | 864+52 | | | | | | 1 | | | | | | | | |
| CB-6 | 864+88 | | | | | | 1 | | | | | | | | |
| | | | 36 | 171 | | | 2 | 180 | | | | | | | |

QUANTITIES CARRIED TO GENERAL SUMMARY

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**DRAINAGE PLAN
TRENCH DRAIN QUANTITIES**

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ITEM 203 EMBANKMENT, AS PER PLAN:

QUANTITIES FOR ITEM 203 - EMBANKMENT HAVE BEEN PROVIDED THROUGHOUT THIS PLAN TO BUILD UP FORE-SLOPES AND ENSURE PROPER GRADING FOR THE PROPOSED ANCHOR ASSEMBLIES. THIS ITEM OF WORK INCLUDES ANY CLEARING AND GRUBBING NECESSARY TO PLACE THE EMBANKMENT AT THE LOCATIONS SPECIFIED OR DIRECTED. THE CONTRACTOR SHALL BE PREPARED TO USE EMBANKMENT AT THE LOCATIONS SPECIFIED IN THE PLANS AND ANY OTHER AREAS "AS DIRECTED BY THE ENGINEER".

SEE DETAIL ON SHEET 34

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN 3":

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN 4.5":

REPAIR AREAS SHALL BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF WORK. REPAIR AREAS SHALL CONSIST OF REMOVING 3" OR 4.5" OF PAVEMENT AND PLACING 3" OR 4.5" OF ITEM 301 - ASPHALT CONCRETE BASE, PG64-22. WORK SHALL BE PERFORMED PRIOR TO RESURFACING AND REPAIR AREAS ARE TO BE INCLUDED INTO GENERAL RESURFACING. SEE CHART ON SHEET 39.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE 1.5":

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN 1.7" - 3.0":

THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR ANY AND ALL DAMAGE THAT MAY RESULT TO CASTINGS FROM THE PLANING OPERATION. THE DEPTH OF PLANING CLOSE TO THE CASTINGS SHALL BE AS DIRECTED, TO ACHIEVE A SMOOTH RIDING FINISHED PAVEMENT. GREAT CARE SHALL BE TAKEN TO PREVENT THE REMOVAL THE EXISTING PAVEMENT CROSS-SLOPE (CROWN) DURING THE PLANING OPERATIONS.

BUTT JOINTS SHALL BE PROVIDED AT THE BEGINNING AND END OF PAVING LIMITS AND AT THE APPROACH SLABS OF ALL STRUCTURES NOT BEING PAVED.

AT NO TIME SHALL TRAFFIC BE EXPOSED TO PLANED PAVEMENT WITHIN THE TRAVELED WAY/LANE(S). AT NO TIME OUTSIDE OF THE WORK SHIFT SHALL THE SHOULDERS BE LEFT AT A HIGHER ELEVATION THAN THE DRIVING LANES. PLANED OUTSIDE SHOULDERS MAY BE EXPOSED TO TRAFFIC FOR FIVE (5) CALENDAR DAYS.

FAILURE TO COMPLY SHALL SUBJECT THE CONTRACTOR TO LIQUIDATED DAMAGES AS PER SECTION 108.07 OF CMS.

ITEM 442 - ASPHALT SURFACE COURSE, 12.5MM, TYPE A (446), AS PER PLAN (MAINLINE PAVING/CD ROAD PAVING):

GREAT CARE SHALL BE TASKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS-SLOPE (CROWN), INTERSECTION CROSS-SLOPES (CROWN), AS WELL AS ALL LONGITUDINAL SLOPES DURING THE PAVING OPERATIONS.

LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT. WHERE THE NUMBER OF MAINLINE JOINS EXCEEDS 2 (BU TNOT 4) LANES, A SINGLE COLD JOINT IS STILL REQUIRED. A COLD LONGITUDINAL JOINT IS PERMITTED BETWEEN THE SHOULDER AND MAILINE PAVEMENT. NO OTHER COLD JOINTS ARE PERMITTED IN THE SURFACE COURSE OF MAINLINE PAVEMENT.

JOINT CORING IN ACCORDANCE WITH 446.04 IS NOT REQUIRED FOR COLD LONGITUDINAL JOINTS PLACED OVER VOID REDUCING ASPHALT MEMBRANE (VRAM). CONSTRUCT COLD LONGITUDINAL JOINTS OVER VRAM USING THE SAME TECHNIQUES, EQUIPMENT, AND ROLLER PATTERNS USED ON THE REST OF THE MAT. OBTAIN 10 MAT CORES FOR EACH LOT OF MATERIAL IN ACCORDANCE WITH 446.04. PAY FACTORS FOR EACH LOT OF MATERIAL WILL BE DETERMINED ACCORDING TO TABLE 446.04-2.

ITEM 442 - ANTI-SEGREGATION EQUIPMENT:

THE QUANTITY FOR THIS ITEM IS IN CUBIC YARDS AND IS EQUAL TO THE AMOUNT OF SURFACE COURSE (EXCLUDING SHOULDERS) ON MAINLINE SR-161, CD ROADS AND RAMPS

ITEM 442 - ASPHALT SURFACE COURSE, 12.5MM, TYPE A (446), AS PER PLAN, PG76-22M (RAMP PAVING):

GREAT CARE SHALL BE TASKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS-SLOPE (CROWN), INTERSECTION CROSS-SLOPES (CROWN), AS WELL AS ALL LONGITUDINAL SLOPES DURING THE PAVING OPERATIONS.

DUE TO THE HIGH STRESS CHARACTERISTICS OF THE ASPHALT RAMPS IN THIS PLAN, APPENDIX B OF THE PAVEMENT DESIGN MANUAL APPLIES. ITEM 442 ON THE RAMPS SHALL REQUIRE A PG72-22M BINDER.

ITEM 606 - ITEM 606 - ANCHOR ASSEMBLY, (MGS) TYPE B:

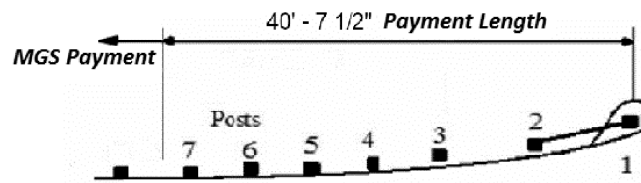
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE PAYMENT LIMIT (LENGTH) FOR THE PROPOSED ANCHOR ASSEMBLY, (MGS) TYPE B, SHALL BE 40'-7 1/2" (TO THE STANDARD MGS CONNECTION) AS DETAILED BELOW.



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, (MGS) TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - GUARDRAIL, MISC.: ALTERNATIVE GUARDRAIL PLACEMENT:

THIS ITEM SHALL BE USED WHEN THE CONTRACTOR IS REQUIRED TO USE AN ALTERNATE METHOD TO SET POSTS TO PREVENT DAMAGE TO AN UNDERGROUND OBSTACLE, SUCH AS A UTILITY. THE USE OF THIS ITEM WILL BE AS DEEMED NECESSARY BY THE ENGINEER. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO SET AND BACKFILL POSTS WHILE MEETING THE REQUIREMENTS OF THE APPLICABLE GUARDRAIL ITEM BEING PERFORMED. APPLICABLE GUARDRAIL ITEMS INCLUDE BUT ARE NOT LIMITED TO SETTING POSTS (AND SLEEVES) FOR TYPE 5, TYPE MGS, BARRIER DESIGN, ANCHOR ASSEMBLIES, AND BRIDGE TERMINAL ASSEMBLIES. PAYMENT SHALL BE AT THE UNIT BID PRICE OF EACH AND SHALL BE PAID FOR IN ADDITION TO THE APPLICABLE GUARDRAIL PLACEMENT ITEM LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED:
ITEM 606 - GUARDRAIL, MISC.: ALTERNATIVE GUARDRAIL PLACEMENT = 50 FT

GRADING AND EROSION CONTROL:

AREAS DISTURBED BY GUARDRAIL ACTIVITIES AND AREAS WHERE EMBANKMENT HAVE BEEN PLACED SHALL BE REPAIRED WITH THE QUANTITIES, AS SHOWN ON SHEET NO. 31.

ITEM 606 - CURVED RAIL ELEMENTS:

ALL RADII OF CURVED RAIL ARE ESTIMATED AND ACTUAL RADII OF PROPOSED RAIL SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING. LENGTH OF CURVED RAIL ELEMENTS, WHERE CALLED FOR IN A RUN, SHALL BE INCLUDED IN THE TOTAL LENGTH OF RUN SHOWN IN THE GUARDRAIL COLUMN AND THE CURVED RAIL ELEMENT TOTAL ARE INCLUDED WITH THE GUARDRAIL TOTALS ON THE GENERAL SUMMARY SHEET.

ITEM 606 - ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (MASH 2016):

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

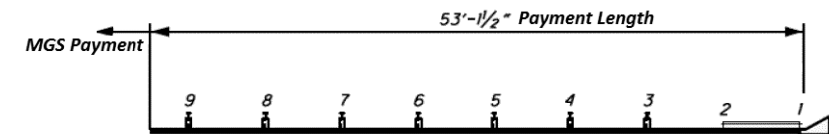
WHEN THE FACE OF THE ADJACENT (ATTACHED) GUARDRAIL IS LESS THAN 4' OFFSET FROM THE PROPOSED EDGE LINE, THE PROPOSED TYPE E ANCHOR ASSEMBLY SHALL BE INSTALLED USING A 25:1 FLARE RATE (24" OFFSET DESIGN) AS DETAILED IN THE SHOP DRAWINGS AND AS DIRECTED BY THE ENGINEER.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE PAYMENT LIMIT (LENGTH) FOR THE PROPOSED ANCHOR ASSEMBLY, (MGS) TYPE E, AS PER PLAN SHALL BE 53'-1 1/2" (TO THE STANDARD MGS CONNECTION) AS DETAILED BELOW.



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 608 WALKWAY, MISC.: CURB RAMP, CITY OF COLUMBUS (TYPE C):

ITEM 608 8" CONCRETE WALK, AS PER PLAN

ITEM 608 DETECTABLE WARNING, AS PER PLAN, TYPE E:

THIS ITEM SHALL BE AS PER ITEM 608 AND SUPPLEMENTAL SPECIFICATION 1550, OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS, LATEST EDITION.

THE SPECS CAN BE DOWNLOADED FROM THE CITY OF COLUMBUS WEB SITE: <https://www.columbus.gov/publicservice/Design-and-Construction/document-library/Standard-Drawings/>

FIRE HYDRANTS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS AND FEES THAT ARE REQUIRED FOR THE USE OF ANY FIRE HYDRANTS. A SIAMESE VALVE IS TO BE USED ON THE HYDRANT OUTLET IF A HOSE IS TO BE LEFT CONNECTED AND UNATTENDED. THIS PERMIT CAN BE OBTAINED FROM THE CITY OF COLUMBUS.

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GENERAL NOTES

FRA - 161 - 14.02

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LANE VALUE CONTRACT:

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME A LANE/SHOULDER/RAMP IS CLOSED BY THE CONTRACTOR'S ACTION WHILE NOT OTHERWISE PERMITTED BY THE LANE VALUE CONTRACT TABLE BELOW.

| LANE VALUE CONTRACT TABLE | | | | | | |
|--|--|---------------------------------|-------------------|-----------------|-----------------|--|
| SECTION | EXISTING NUMBER OF LANES PER DIRECTION | LANE CLOSURES ARE NOT PERMITTED | | | | DISINCENTIVE AMOUNTS PER MINUTE PER LANE |
| | | LANE REDUCTION | MON TO FRI | SAT. | SUN | |
| HUNTLEY ROAD (10.85) TO STRAWBERRY FARMS BLVD (15.24) | 2 | 2 TO 1 | 5AM-9AM & 3PM-6PM | NO RESTRICTIONS | NO RESTRICTIONS | \$50 |
| STRAWBERRY FARMS BLVD (15.24) TO LITTLE TURTLE WAY (17.31) MAINLINE | 2 | 2 to 1 | 5AM-9AM & 3PM-6PM | NO RESTRICTIONS | NO RESTRICTIONS | \$50 |
| I-270 (15.70) TO LITTLE TURTLE WAY (17.31) CD | 3 | 3 to 2 | 5AM-9AM & 3PM-6PM | NO RESTRICTIONS | NO RESTRICTIONS | \$75 |
| | | 3 to 1 | 5AM-8PM | 6AM-7PM | 8AM-7PM | |
| LITTLE TURTLE WAY (17.31) TO JUST WEST OF HAMILTON ROAD (18.25) | 3 | 3 to 2 | 5AM-9AM & 3PM-6PM | NO RESTRICTIONS | NO RESTRICTIONS | \$75 |
| | | 3 TO 1 | 5AM-8PM | 6AM-7PM | 8AM-7PM | |
| JUST WEST OF HAMILTON ROAD (18.25) TO JUST WEST OF HARLEM ROAD (19.49) EASTBOUND | 3 | 3 to 2 | 5AM-9AM & 3PM-6PM | NO RESTRICTIONS | NO RESTRICTIONS | \$75 |
| | | 3 TO 1 | 5AM-8PM | 6AM-7PM | 8AM-7PM | |
| JUST WEST OF HAMILTON ROAD (18.25) TO JUST WEST OF HARLEM ROAD (19.49) WESTBOUND | 2 | 2 TO 1 | 5AM-7PM | 8AM-7PM | 8AM-7PM | \$75 |
| JUST WEST OF HARLEM ROAD (19.49) TO LICKING COUNTY LINE (23.71) | 2 | 2 TO 1 | 5AM-7PM | 8AM-7PM | 8AM-7PM | \$75 |

SHORT TERM CLOSURES ARE NOT PERMITTED 6AM-9AM AND 3PM-6PM MONDAY-FRIDAY

**Ramp Closure Restrictions
State Route 161 in Franklin County**

| Secondary Route: Westerville Rd (SR-3) SLM along 161: | | | | | |
|---|------------------|---------------------|----------------|--|--|
| Ramp | Movement | No Closures Allowed | | Detour Routes | |
| | | Mon to Fri | Sat to Sun | Primary Route | Secondary Route |
| A | SR-3 to SR-161WB | No Restriction | No Restriction | SR-3 to Old Dublin Granville Rd to SR-161 | |
| B | SR-161WB to SR-3 | 6AM-9AM & 3PM-7PM | No Restriction | SR-161 to Old Dublin Granville Rd to SR-3 | |
| C | SR-3 to SR-161EB | 6AM-9AM & 3PM-7PM | No Restriction | SR-3 to I-270 E to SR-161 | SR-3 to Moorse Rd to I-270N to SR-161* |
| D | SR-161EB to SR-3 | No Restriction | No Restriction | SR-161E to Old Dublin Granville Rd to SR-3 | |

**Ramp Closure Restrictions
Interstate Route 270 in Franklin County**

| Secondary Route: State Route 161 SLM along 270: 30.53 (East Side) | | | | | |
|---|-----------------------|---------------------|----------------|---|---|
| Ramp | Movement | No Closures Allowed | | Detour Routes | |
| | | Mon to Fri | Sat to Sun | Primary Route | Secondary Route |
| A | OH-161 WB to I-270 NB | 5AM-10PM | 7AM-9PM | OH-161 W to 270 S (Ramp H) to oh-317 to 270 N | None |
| B | I-270 NB to OH-161 WB | 5AM-7PM | 8AM-7PM | 270 N to OH-161 E (Ramp C) to Sunbury Rd. to OH-161 W | 270 N to OH-3 to 270 S to OH-161 W (Ramp G) |
| C | I-270 NB to OH-161 EB | 5AM-12AM | 7AM-9PM | 270 N to OH-3 to 270 S to OH-161 E (Ramp F) | None |
| D | OH-161 EB to I-270 NB | 5AM-9AM & 3PM-7PM | No Restriction | OH-161 E to Sunbury Rd. to 270 N (Ramp A) | OH-161 E to 270 S (Ramp E) to OH-317 to 270 N |
| E | OH-161 EB to I-270 SB | 5AM-8PM | 8AM-7PM | OH-161 E to Sunbury Rd. to 270 S (Ramp H) | OH-161 E to 270 N (Ramp D) to OH-3 to 270 S |
| F | I-270 SB to OH-161 EB | 5AM-12AM | 7AM-9PM | 270 S to OH-317 to 270 N to OH-161 E (Ramp C) | None |
| G | I-270 SB to OH-161 WB | 5AM-9AM & 3PM-7PM | No Restriction | 270 S to OH-317 to 270 N to OH-161 W (Ramp B) | None |
| H | OH-161 WB to I-270 SB | 5AM-9PM | 7AM-9PM | OH-161 E to 270 N (Ramp A) to OH-3 to 270 S | None |

| Secondary Route: Sunbury Rd SLM along 161: | | | | | |
|--|-------------------------------|---------------------|------------|---|-----------------|
| Ramp | Movement | No Closures Allowed | | Detour Routes | |
| | | Mon to Fri | Sat to Sun | Primary Route | Secondary Route |
| J | SR-161 WB TO SUNBURY RD | 5AM to 9PM | 8AM to 8PM | SR-161 WB to Ramp B to Westerville Rd. SB to Ramp C to SR-161 EB to Ramp L to Sunbury Rd. | |
| K | SUNBURY RD TO SR-161 EB | 5AM to 9PM | 8AM to 7PM | Ramp M to SR-161 WB to Ramp B to Westerville Rd. SB to Ramp C to SR-161 EB | |
| L | SR161 EB TO SUNBURY RD | 6AM to 7PM | 8AM to 7PM | Ramp S (Little Turtle Way exit) to Ramp U then Ramp R to SR-161 to Sunbury Rd. | |
| M | SUNBURY RD TO SR-161 WB | 6AM to 7PM | 8AM to 7PM | Ramp K to SR-161 EB to Ramp S (Little Turtle Way exit) to Ramp U then Ramp R to SR-161 WB | |
| N | SUNBURY RD TO I-270 ACCESS RD | 5AM to 9PM | 8AM to 8PM | Ramp K to SR-161 EB to Ramp S (Little Turtle Way exit) to Ramp U to I-270 Access Rd | |
| P | I-270 ACCESS RD TO SUNBURY RD | 5AM to 9PM | 8AM to 8PM | I-270 Access Rd to Ramp T then to Ramp S (Little Turtle Way exit) to Ramp U then Ramp R to SR-161 WB to Sunbury Rd. | |
| Q | SUNBURY RD TO I-270 ACCESS RD | 5AM to 9PM | 8AM to 8PM | Ramp K to SR-161 EB to Ramp S (Little Turtle Way exit) to Ramp U then Ramp R to SR-161 WB | |

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MAINTENANCE OF TRAFFIC GENERAL NOTES

FRA - 161 - 14.02

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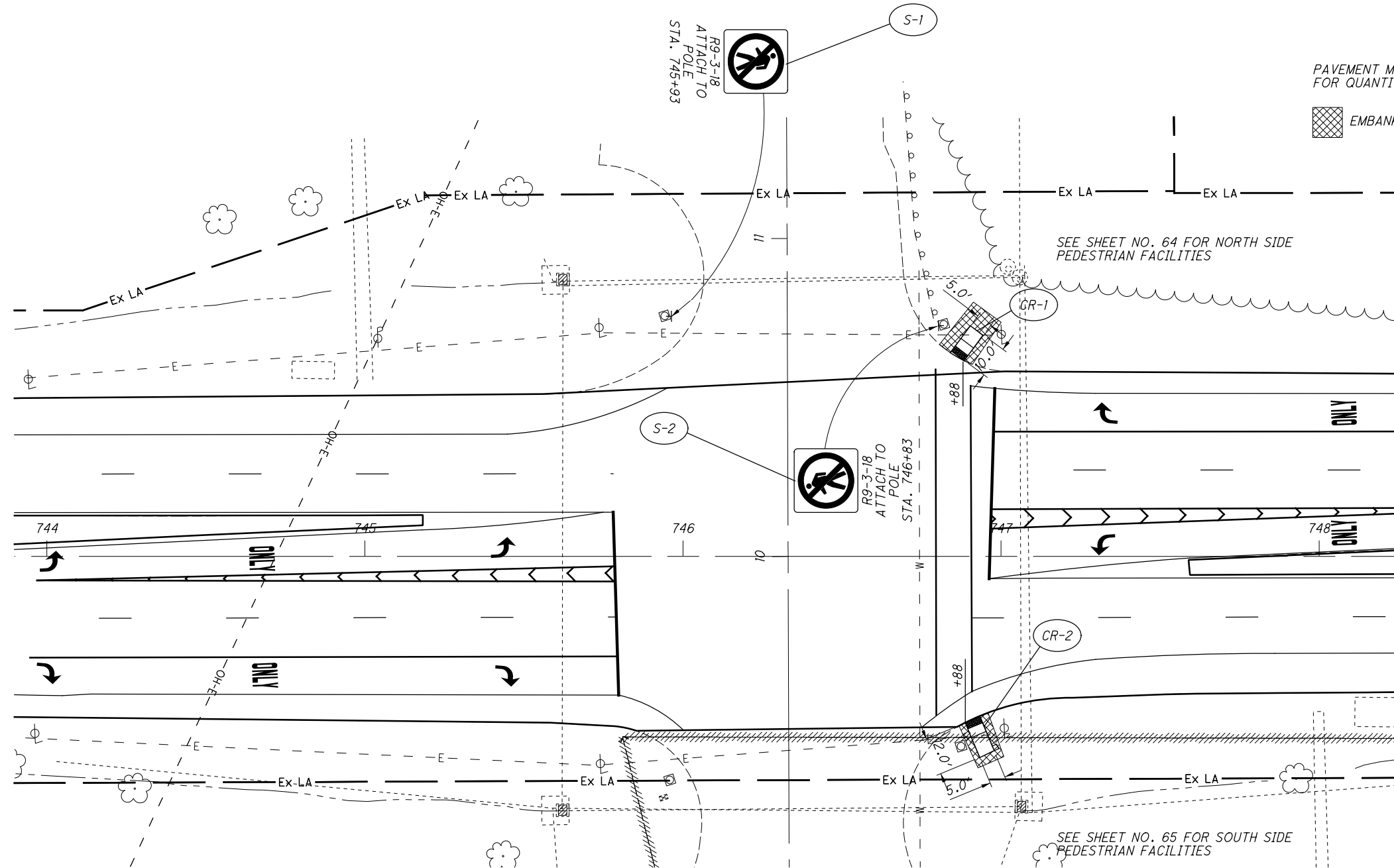
| SHEET NUM. | | | | | | | | | | PART. | | | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|------------------------|-------|---------|----|----|-----|--------|----|----|-----|-----------|-----------|-----------|-----------|---------|----------|-------------|------|---|---------------|
| 8-9 | 11-13 | 17-18 | 19 | 20 | 24 | 37-40 | 41 | 59 | 63 | 01/NHS/PV | 02/S>2/PV | 03/BRO/BR | 04/S>2/PV | | | | | | |
| ROADWAY | | | | | | | | | | | | | | | | | | | |
| | | | | | | 926.25 | | | | 926.25 | | | | 202 | 38001 | 926.25 | FT | GUARDRAIL REMOVED, AS PER PLAN | 7 |
| | | | | | | 2 | | | | 2 | | | | 202 | 42011 | 2 | EACH | ANCHOR ASSEMBLY REMOVED, TYPE E, AS PER PLAN | 7 |
| | | | | | | 1 | | | | 1 | | | | 202 | 42051 | 1 | EACH | ANCHOR ASSEMBLY REMOVED, TYPE B, AS PER PLAN | 7 |
| | | | | | | 7 | | | | 7 | | | | 202 | 47001 | 7 | EACH | BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN | 7 |
| | | 200 | | | 36 | | | | | 236 | | | | SPECIAL | 20270110 | 236 | FT | PIPE CLEANOUT, 24" AND UNDER | 7 |
| | | | | 1 | | | | | | 1 | | | | 202 | 98100 | 1 | EACH | REMOVAL MISC.: EXISTING METAL BARRIER, TYPE TC-41.21 | 7 |
| | | | | | 171 | | | | | 171 | | | | 202 | 98200 | 171 | FT | REMOVAL MISC.: SLOT DRAIN | 7 |
| | | | | | | 281.5 | | | 8.5 | 290 | | | | 203 | 20001 | 290 | CY | EMBANKMENT, AS PER PLAN | 7 |
| | | | | | | 10.5 | | | | 10.5 | | | | 209 | 15000 | 10.5 | STA | RESHAPING UNDER GUARDRAIL | |
| | | 8.75 | | | | | | | | 7.27 | 1.48 | | | 209 | 60500 | 8.75 | MILE | LINEAR GRADING | |
| | | | | | | 675 | | | | 675 | | | | 606 | 15050 | 675 | FT | GUARDRAIL, TYPE MGS | |
| | | | | | | 295 | | | | 295 | | | | 606 | 15100 | 295 | FT | GUARDRAIL, TYPE MGS WITH LONG POSTS | |
| | | | | | | 1 | | | | 1 | | | | 606 | 26050 | 1 | EACH | ANCHOR ASSEMBLY, MGS TYPE B | |
| | | | | | | 1 | | | | 1 | | | | 606 | 26151 | 1 | EACH | ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (MASH 2016) | 8 |
| | | | | | | 1 | | | | 1 | | | | 606 | 26550 | 1 | EACH | ANCHOR ASSEMBLY, MGS TYPE T | |
| | | | | | | 4 | | | | 4 | | | | 606 | 35000 | 4 | EACH | BRIDGE TERMINAL ASSEMBLY, TYPE 1 | |
| | | | | | | 3 | | | | 3 | | | | 606 | 35100 | 3 | EACH | BRIDGE TERMINAL ASSEMBLY, TYPE 2 | |
| 50 | | | | | | | | | | 50 | | | | 606 | 98000 | 50 | FT | GUARDRAIL, MISC.: ALTERNATIVE GUARDRAIL PLACEMENT | 8 |
| | | | | | | | | | | 110 | | | | 608 | 15001 | 110 | SF | CONCRETE WALK, AS PER PLAN | 8 |
| | | | | | | | | | | 2 | | | | 608 | 98200 | 2 | EACH | WALKWAY, MISC.: CURB RAMP, CITY OF COLUMBUS (TYPE C) | 8 |
| | | | | | | | | | | 4 | | | | 608 | 53021 | 4 | SF | DETECTABLE WARNING, AS PER PLAN TYPE E | 8 |
| | | | | 10 | | | | | | 10 | | | | 622 | 10100 | 10 | FT | CONCRETE BARRIER, SINGLE SLOPE, TYPE B1 | |
| | | 130 | | | | | | | | | 130 | | | SPECIAL | 90010000 | 130 | FT | KWIK KURB, REMOVE AND REPLACE | 7 |
| EROSION CONTROL | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | 3 | | | | 616 | 10000 | 3 | MGAL | WATER | |
| | | | | | | 89 | | | | 89 | | | | 659 | 00300 | 89 | CY | TOPSOIL | |
| | | | | | | 845 | | | | 845 | | | | 659 | 10000 | 845 | SY | SEEDING AND MULCHING | |
| | | | | | | 42 | | | | 42 | | | | 659 | 14000 | 42 | SY | REPAIR SEEDING AND MULCHING | |
| | | | | | | 42 | | | | 42 | | | | 659 | 15000 | 42 | SY | INTER-SEEDING | |
| | | | | | | 0.11 | | | | 0.11 | | | | 659 | 20000 | 0.11 | TON | COMMERCIAL FERTILIZER | |
| | | | | | | 0.17 | | | | 0.17 | | | | 659 | 31000 | 0.17 | ACRE | LIME | |
| | | | | | | 5 | | | | 5 | | | | 659 | 35000 | 5 | MGAL | WATER | |
| | | | | | | 2,500 | | | | 500 | | | | 832 | 30000 | 3,000 | EACH | EROSION CONTROL | |
| DRAINAGE | | | | | | | | | | | | | | | | | | | |
| | | | | 1 | | | | | | 1 | | | | 611 | 98630 | 1 | EACH | CATCH BASIN ADJUSTED TO GRADE | |
| | | | | | 2 | | | | | 2 | | | | 611 | 98690 | 2 | EACH | CATCH BASIN, MISC.:CLEANOUT | 8 |
| | | | | 1 | | | | | | 1 | | | | 611 | 99150 | 1 | EACH | INLET ADJUSTED TO GRADE | |
| | | | | 2 | | | | | | 2 | | | | 611 | 99500 | 2 | EACH | INLET, MISC.: TYPE 2A REPLACEMENT TOP | 19 |
| | | | | | 180 | | | | | 180 | | | | 839 | 30000 | 180 | FT | TRENCH DRAIN WITH STANDARD GRATE | |
| PAVEMENT | | | | | | | | | | | | | | | | | | | |
| | | | | | | 6,537 | | | | 5,301 | | | 1,236 | 251 | 01041 | 6,537 | SY | PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 3" | 8 |
| | | | | | | 39 | | | | | | | | 251 | 01041 | 39 | SY | PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 4.5" | 8 |
| | | 216,983 | | | | | | | | 187,980 | 29,003 | | | 254 | 01000 | 216,983 | SY | PAVEMENT PLANING, ASPHALT CONCRETE 1.5" | |
| | | 1,466 | | | | | | | | 1,466 | | | | 254 | 01001 | 1,466 | SY | PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN ,VARIABLE DEPTH 1.7" - 3.0" | 8 |
| | | | | 8 | | | | | | 8 | | | | 254 | 01001 | 8 | SY | PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN, VARIABLE DEPTH (0.0" - 2.0") | 19 |
| | | 18,367 | | | | | | | | 16,419 | 2,448 | | | 407 | 20000 | 18,567 | MGAL | NON-TRACKING TACK COAT | |
| | | 8,443 | | | | | | | | 8,443 | | | | 442 | 00100 | 8,443 | CY | ANTI-SEGREGATION EQUIPMENT | |
| | | 592 | | | | | | | | 592 | | | | 442 | 10000 | 592 | CY | ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) 1.5" | |
| | | 7,703 | | | | | | | | 7,703 | | | | 442 | 10001 | 7,703 | CY | ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG64-22 | 8 |
| | | 744 | | | | | | | | 744 | | | | 442 | 10001 | 744 | CY | ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M | 8 |
| | | 139 | | | | | | | | 118 | 21 | | | 67 | 10001 | 139 | CY | COMPACTED AGGREGATE, AS PER PLAN | 8 |
| 3 | | | | | | | | | | 2.5 | 0.5 | | | 617 | 25000 | 3 | MGAL | WATER | |
| | | 33,307 | | | | | | | | 33,307 | | | | 872 | 10000 | 33,307 | FT | VOID REDUCING ASPHALT MEMBRANE (VRAM) | |

GENERAL SUMMARY

FRA - 161 - 14.02

CALCULATED
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CHECKED
DKR

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PAVEMENT MARKINGS SHOWN FOR REFERENCE, FOR QUANTITIES, SEE SHEETS 42 - 45.

EMBANKMENT



**SIGNING AND CROSSWALK PLACEMENT
SR 161 AND PONDEROSA DRIVE**

FRA -161-14.02

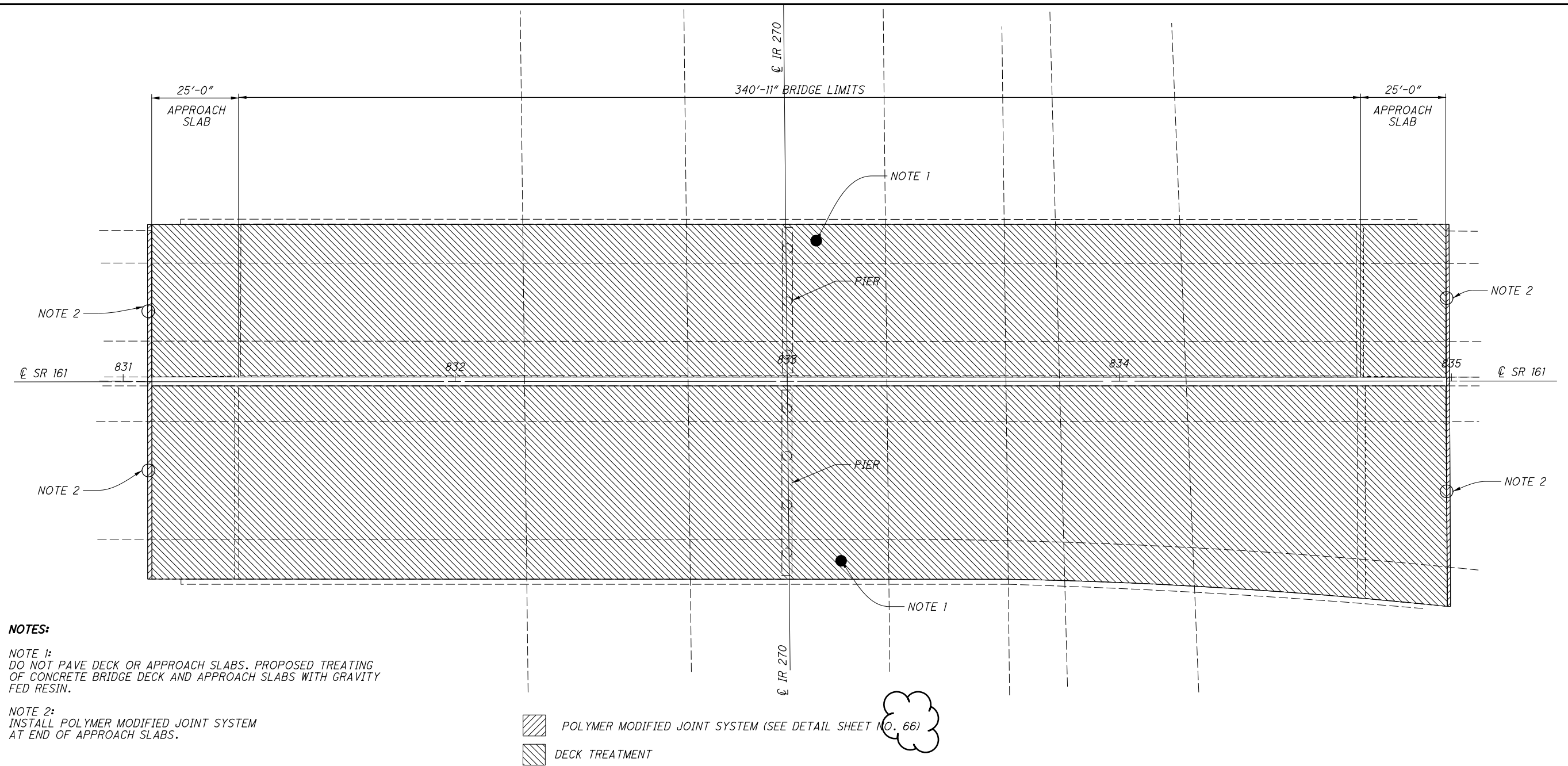
| REF. NO. | STATION | SIDE | 203 | | | | REMARKS |
|----------|---------|------|----------------------------------|--|--|---|---------|
| | | | EMBANKMENT, AS PER PLAN CY YD | 8" CONCRETE WALK, AS PER PLAN SQ FT | WALKWAY, MISC.: CURB RAMP, CITY OF COLUMBUS (TYPE C) EACH | DETECTABLE WARNING, AS PER PLAN (TYPE E) SQ FT | |
| CR-1 | 746+88 | L | 5.5 | 50 | 1 | 2 | |
| CR-2 | 746+88 | R | 3.0 | 60 | 1 | 2 | |
| | | | 8.5 | 110 | 2 | 4 | |

CITY OF COLUMBUS CURB RAMPS SHALL BE CONSTRUCTED AS PER COLUMBUS STANDARD DRAWING 2319, LATEST EDITION. THE DRAWINGS CAN BE FOUND AT: <https://www.columbus.gov/publicservice/Design-and-Construction/document-library/Standard-Drawings/>.

(S-) FOR SIGN QUANTITIES, SEE SHEET NO. 56

QUANTITIES CARRIED TO SIGNAL SUB- SUMMARY

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NOTES:
 NOTE 1:
 DO NOT PAVE DECK OR APPROACH SLABS. PROPOSED TREATING OF CONCRETE BRIDGE DECK AND APPROACH SLABS WITH GRAVITY FED RESIN.
 NOTE 2:
 INSTALL POLYMER MODIFIED JOINT SYSTEM AT END OF APPROACH SLABS.

POLYMER MODIFIED JOINT SYSTEM (SEE DETAIL SHEET NO. 66)
 DECK TREATMENT

STRUCTURE NOTES

FRA-161-1570
 SFN: 2509059
 340'-11" 2 SPAN CONTINUOUS STEEL BEAM BRIDGE OVER I-270

DECK AREA = 38,406 SQ FT

WEST APPROACH SLAB AREA = 2,624 SQ FT
 LEFT PAVEMENT JOINT - 36' WIDTH
 RIGHT PAVEMENT JOINT - 57' WIDTH

EAST APPROACH SLAB AREA = 2,875 SQ FT
 LEFT PAVEMENT JOINT - 36' WIDTH
 RIGHT PAVEMENT JOINT - 59' WIDTH

QUANTITIES CARRIED TO GENERAL SUMMARY

| 512 | 846 |
|---|---|
| TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN | POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM |
| SQ YD | CU FT |
| 4,268 | |
| 292 | 10.00 |
| | 15.83 |
| 320 | 10.00 |
| | 15.83 |
| 4,880 | 51.66 |

| |
|---|
| DESIGN AGENCY OHIO DEPT. OF TRANS. DISTRICT SIX |
| DATE MM/DD/YY 2509059 |
| REVIEWED TAP STRUCTURE FILE NUMBER 2509059 |
| DRAWN MAK REVIS XXX |
| DESIGNED MAK CHECKED TAP |
| FRANKLIN STA. STA. |
| SITE PLAN FRA-161-1571 |
| FRA-161-14.02 PID No. 107792 |
| 5 / 9 |
| 71 76 |

| SHEET NUM. | | | | | | | | PART. | | | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|------------|-------|-------|----|----|----|----|----|-----------|------------|-----------|-----------|------|----------|-------------|------|--|---------------|
| 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 01/NHS/PV | 02//S>2/PV | 03/BRO/BR | 04/S>2/PV | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | 2,037 | | | | | | | | | 2,037 | | 512 | 73500 | 2,037 | SY | TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN STRUCTURE REPAIR (FRA-161-1448) | |
| | | | | | | | | | | | | | | | | | |
| | | 2,780 | | | | | | | | 2,780 | | 512 | 73500 | 2,780 | SY | TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN STRUCTURE REPAIR (FRA-161-1456) | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 2,713 | | 512 | 73500 | 2,713 | SY | TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN STRUCTURE REPAIR (FRA-161-1505) | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 4,880 | | 512 | 73500 | 4,880 | SY | TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN STRUCTURE REPAIR (FRA-161-1570) | |
| | | | | | | | | | | 51.66 | | 846 | 0010 | 51.66 | CF | POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM STRUCTURE REPAIR (FRA-161-1638A) | |
| | | | | | | | | | | 2,356 | | 512 | 73500 | 2,356 | SY | TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN STRUCTURE REPAIR (FRA-161-1659B) | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 2,484 | | 512 | 10050 | 2,484 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) STRUCTURE REPAIR (FRA-161-1661 (L/R)) | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 5,159 | | 512 | 10050 | 5,159 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) STRUCTURE REPAIR (FRA-161-1662A) | |
| | | | | | | | | | | 2,528 | | 512 | 10050 | 2,528 | SY | SEALING OF CONCRETE SURFACES (NON-EPOXY) | |

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STRUCTURE GENERAL SUMMARY

FRA - 161 - 14.02

CALCULATED
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TAP

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76