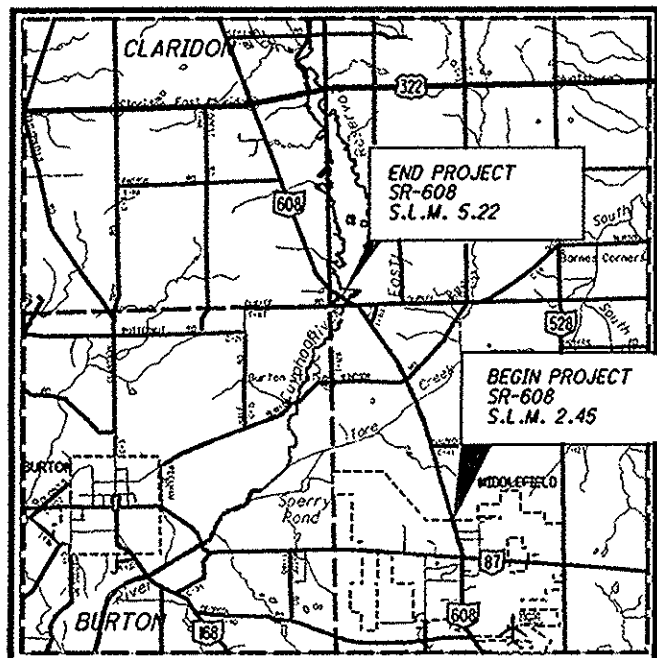


STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GEA-608-2.45

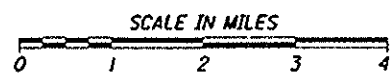
MIDDLEFIELD TOWNSHIP
HUNTSBURG TOWNSHIP

GEAUGA COUNTY



LOCATION MAP

LATITUDE: 41°28'4" LONGITUDE: 81°04'29"



PORTION TO BE IMPROVED	-----
INTERSTATE HIGHWAY	=====
STATE & FEDERAL ROUTES	====
COUNTY & TOWNSHIP ROADS	----
OTHER ROADS	-----

DESIGN DESIGNATION	SR-608 (2.45 to 4.02)	SR-608 (4.02 to 5.22)
CURRENT ADT (2010)	7,450	4,080
DESIGN YEAR ADT (2030)	11,080	7,380
DESIGN HOURLY VOLUME (2030)	1,110	740
DIRECTIONAL DISTRIBUTION	53%	56%
TRUCKS (24 HOUR B&C)	4%	5%
DESIGN SPEED	50/60mph	50/60mph
LEGAL SPEED	45/55mph	45/55mph
DESIGN FUNCTIONAL CLASSIFICATION:		
RURAL MAJOR COLLECTOR		
NHS PROJECT		

DESIGN EXCEPTIONS
NONE

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:
DISTRICT 12 PRODUCTION
OHIO DEPARTMENT OF
TRANSPORTATION

ENGINEERS SEAL:

SIGNED: *Eric M. Kallio*
DATE: 6-8-10

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	10/19/07	MT-97.10	4/17/09	800-2010	4/16/10
BP-4.1	7/16/04	MT-97.11	4/17/09		
		MT-99.20	1/16/09	832	5/5/09
GR-1.1	7/16/04				
GR-2.1	1/16/04	MT-101.90	1/16/09		
GR-3.4	1/20/06	MT-105.10	1/16/09		
GR-4.2	1/19/07				
GR-5.3	1/16/04	TC-61.30	4/16/10		
		TC-65.10	1/21/05		
		TC-65.11	1/21/05		
		TC-73.10	1/19/01		

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE RESURFACING OF S.R. 608 FROM S.L.M. 2.45 N.C.L. MIDDLEFIELD TO S.L.M 5.22 AS DETAILED IN THE PLANS IN THE TOWNSHIPS OF HUNTSBURG AND MIDDLEFIELD.

MAINTENANCE PROJECT

PROJECT EARTH DISTURBED AREA:	N/A
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED: *[Signature]*
DATE: 6-8-10 DISTRICT DEPUTY DIRECTOR

APPROVED: *[Signature]*
DATE: 6-17-10 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. NON-FEDERAL

FID NO. 83483

CONSTRUCTION PROJECT NO.

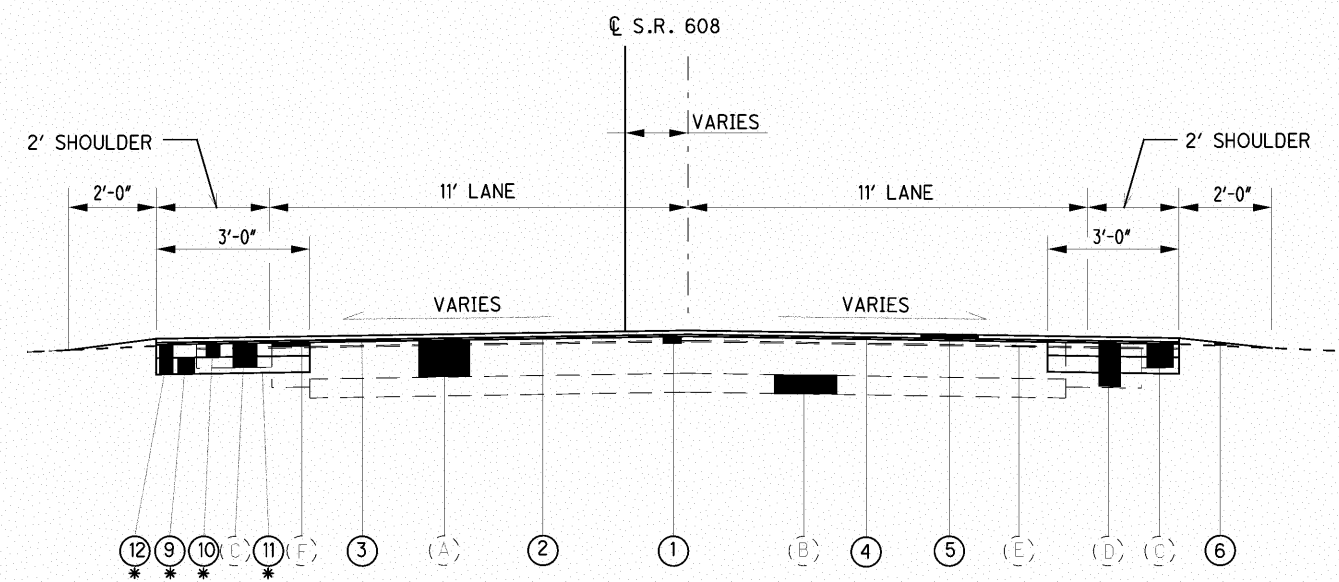
RAILROAD INVOLVEMENT NONE

GEA-608-2.45

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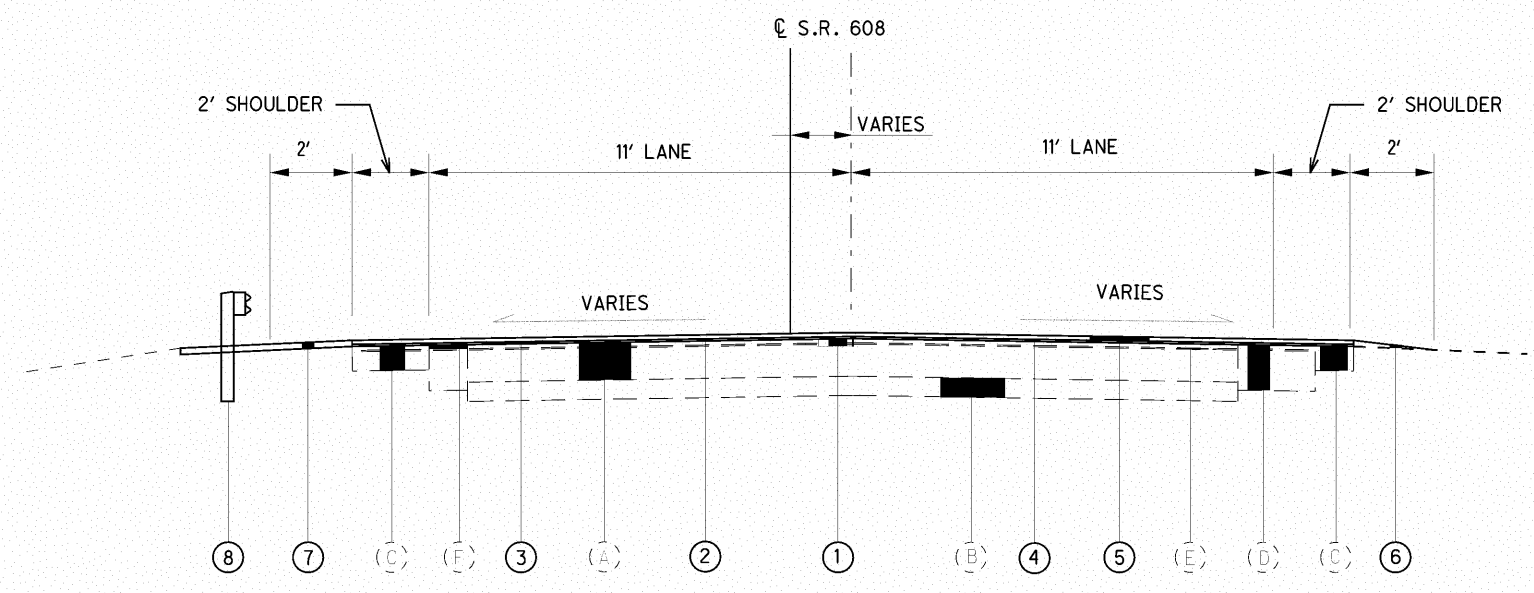
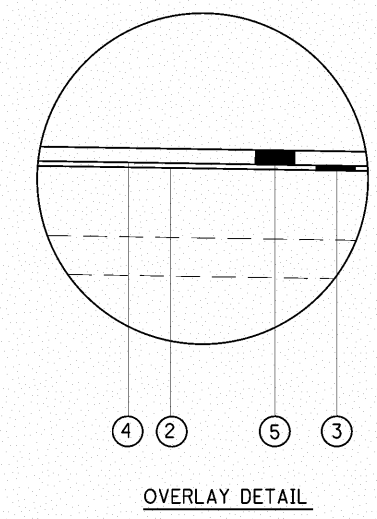
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108048
DIST 12
PID 83483
7/15/10

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* TYP. LEFT AND RIGHT SIDE SLM 2.45 TO SLM 4.02
 NORMAL SECTION
 S.L.M. 2.45 TO S.L.M. 4.02

SUSPEND PAVING OPERATIONS OVER
 BRIDGE NO. GEA-608-0512
 S.L.M. 5.11 TO S.L.M. 5.13 (80 FEET)
 AND BRIDGE NO. GEA-608-0520
 S.L.M. 5.19 TO S.L.M. 5.21 (84 FEET).



NORMAL SECTION
 S.L.M. 4.02 TO S.L.M. 5.22

PROPOSED LEGEND

EXISTING LEGEND

- (A) 12"± ASPHALT CONCRETE
- (B) 6" ASPHALT CONCRETE BASE
- (C) BITUMINOUS AGGREGATE BASE
- (D) 14 1/2"± BITUMINOUS AGGREGATE BASE
- (E) ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-28
- (F) ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, AS PER PLAN, 1.5"

- (1) ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN
- (2) ITEM 407 - TACK COAT
- (3) ITEM 448 - 1" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, VARIABLE
- (4) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- (5) ITEM 446 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN
- (6) ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
- (7) ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN
- (8) ITEM 606 - GUARDRAIL, TYPE 5
- (9) ITEM 304 - AGGREGATE BASE, 6"
- (10) ITEM 301 - ASPHALT CONCRETE BASE, 6"
- (11) ITEM 204 - SUBGRADE COMPACTION
- (12) ITEM 203 - EXCAVATION

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General

Project Description

This project involves the resurfacing of S.R. 608 (Old State Road) from the Middlefield N.C.L. to SLM 5.22 in the Townships of Middlefield and Huntsburg Geauga County.

Right of Way

All work shall be performed within the existing right of way or easements.

Existing Typical Sections

Existing typical sections have been taken from the records and are believed to represent the existing pavement, but the State of Ohio does not guarantee the accuracy of the same.

For further information in regard to the existing typical sections, the Contractor shall refer to the previous construction plans.

These plans may be reviewed at the following location:

Ohio Department of Transportation
District 12 Office
5500 Transportation Boulevard
Garfield Heights, Ohio 44125

Contingency Quantities

The Contractor shall not order materials or perform work for items designated by plan note to be used "as directed by the Engineer" unless authorized by the Engineer. The actual work locations and quantities used for such items shall be incorporated into the final change order governing completion of this project.

Equipment and Material Storage

In order to provide for the safety of the traveling public the Contractor's attention is directed to 614.03. In addition the following provisions shall apply:

1. Any removed items shall not be stored on the right of way for more than thirty (30) days.
2. The storage of equipment, materials, and vehicles within the highway right of way will be permitted. The number of areas and exact locations shall be approved by the Engineer.
3. All disturbed areas shall be returned to their original condition at no expense to the state.

Work Limits

The work limits shown on these plans are for physical construction only. Provide the installation and operation of all temporary traffic control and temporary traffic control devices required by these plans whether inside or outside these work limits.

Utilities ownership

The following utilities and owners are located within the work limits of this project. The Ohio department of transportation has used the best available information to determine the utility companies serving this area, but cannot guarantee the utility company list is complete.

Range Resources 7952 State Route 44 Ravenna, OH 44266 PH: 330-296-7611 ATTN: Charles Amschel	Dominion East Ohio Gas Company 320 Springsdale Dr. Fairlawn, OH 44333 PH: 330-664-2488 ATTN: Mike Antonius
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Illuminating Co.
6896 Miller Rd
Brecksville, OH 44141
PH: 440-717-6845
ATTN: Mark Robinson

Adesta Communications
254 Washington Ave. Extension
3 Corporate Plaza, Suite 302
Albany, NY 12203
PH 518-869-5053
ATTN: John Aiello

Staging Areas

There are no specific areas given in the plans for the Contractor to use as a staging area(s). If the Contractor wants to use an area(s) for staging, regardless if it falls within the project limits or not, the Contractor is to contact Jill Powers at 216-584-2195 at District 12 in order to apply for a permit per Section 107.02 of the CMS.

If a permit is granted, all conditions of the permit shall be met in addition to the requirements of 104.04 of the CMS, at no additional cost to the State. If the Project Engineer deems that all the conditions of the permit were not met, then 10% of the Contract bid amount for mobilization shall be withheld until all the conditions of the permit are satisfied.

Item 619 Field Office, Type B

A Type B Field Office is required for this project.

Item 619 Field Office, Type B..... **4 MONTHS**

ITEM 604 – Monument Box Adjusted to Grade, As Per Plan

All castings shall be adjusted to the finished roadway elevation by the contractor. The time between adjusting the castings and resurfacing shall be kept to an absolute minimum. No adjusting rings shall be permitted. The following quantities have been carried to the general summary.

Item 604 –Monument Box Adjusted to Grade, As Per Plan..... **2 EACH**

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Roadway

Item 209 – Linear Grading, As Per Plan

Item 448 – Asphalt Concrete Intermediate Course, Type 1, PG64-22, Under Guardrail, As Per Plan

This operation shall include removal of the existing asphalt under guardrail, placing 2 1/4" of granular material, and preparation of the graded shoulder using Item 209, Linear Grading, As Per Plan and paving under the guardrail using Item 448 Asphalt Concrete Intermediate Course, Type 1, PG64-22, Under Guardrail, As Per Plan.

Item 209, Linear Grading, As Per Plan shall consist of excavating topsoil and/or existing asphalt under guardrail, placing granular material and applying herbicide as specified in the plans and in accordance with the following:

All collected debris and topsoil, including rhizomes, roots, and other vegetative plant material shall be removed and disposed of as specified in 105.17.

The removed material shall be replaced with compactable granular material conforming to 703.16 placed to grade as detailed on the typical section or as approved by the Engineer.

Herbicide shall be EPA approved for paving under guardrail. It shall be applied to the prepared area after final leveling and grading has been completed. The application shall be just prior to paving and shall strictly adhere to the manufacturer's instructions.

Each successful bidder must be licensed by the Ohio Department of Agriculture as a commercial applicator and all persons involved in the actual spraying shall be licensed as commercial operators in the appropriate spray category. Herbicide label, material safety data sheet and copy of applicators licenses shall be submitted to the Engineer for verification prior to commencing work.

All equipment, materials, and labor required to perform the work outlined above shall be included for payment under Item 209 – Linear Grading, As Per Plan.

Paving under guardrail shall consist of placing Item 448 to the depth specified using the following methods:

Method A: 1) Set guardrail posts
2) Place Item 448

Method B: 1) Place Item 448
2) Bore asphalt at post locations (may be omitted if steel posts are used)
3) Set guardrail posts
4) Patch around posts. The materials used for patching shall be asphalt concrete approved by the Engineer. Patched areas shall be compacted using either hand or mechanical methods. Finished surfaces shall be smooth and sloped to drain away from the posts.

All equipment, materials and labor required to perform the work outlined above, with the exception of setting guardrail posts, shall be included for payment under Item 448 Asphalt Concrete Intermediate Course, Type 1, Under Guardrail, PG64-22, As Per Plan.

Item 606 - Guardrail, Type 5

The location of guardrail runs are subject to adjustments to assure that the planned installations will afford maximum protection for traffic. The intent is to upgrade and replace guardrail, generally at existing locations. Log points of the proposed end treatments are approximate. The engineer shall be satisfied that all installations will afford maximum protection for traffic.

No hazard shall be left unprotected except for the actual time necessary to remove the existing guardrail, prepare the site, and install new guardrail in a continuous

operation. The removal of all guardrail shall be as directed by the engineer. No guardrail shall be removed until the replacement material is on the site and ready for installation. Installation of the new rail shall begin immediately after the removal operation has taken place. The maximum gap length in any rail run shall be 50 feet. No gaps shall be left open at the end of the work period. Barrels may not be substituted for guardrail. Failure to comply with these requirements shall be deemed sufficient cause to order work suspended on this project until such time that the engineer is assured compliance.

Item 606 – Anchor Assembly, Type E-98

This item shall consist of furnishing and installing either of the following guardrail end terminals, or an approved equal as listed on Roadway Engineering's web page at www.dot.state.oh.us/drrc/ under Roadside Safety Devices for approved guardrail end treatments:

- 1) The ET-2000 (1997) manufactured by Trinity Industry, 1170 N. State Street, Girard, Ohio 44420 (Telephone: 330-545-4373).

The length of the ET-2000 (1997) system is considered to be 50'-0" [15.24 m] inclusive of two 25'-0" [7.62 m] long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

DWG. #	Drawing Name	DWG./REV. Date	ODOT Approval Date
SS373	ET-PLUS-50'-0" with 25' or 12'-6" Panels, 7 SYT Posts & 1 HBA Post Plan, Elevation & Sections	1/20/09	1/23/09
SS142	ET-2000 Plus 50'-0" Plan, Elevation, & Section 25'-0" Rail, Sleeve w/PL Posts 1-4	4/12/00	7/31/00
SS141	ET-2000 Plus Plan, Elevation, & Section 25'-0" Rail, HBA Posts 1-4	2/29/00	7/31/00
SS158	ET-2000 Plus 50'-0" with 12'-6" Panels & HBA Posts 1-4 Plan, Elevation, & Section	5/22/00	7/31/00

- 2) The SKT-350 manufactured by Road Systems, Inc., 2516 Mallory Lane, Stow, Ohio 44224 (Telephone: 330-346-0721)
The length of the SKT-350 system is considered to be 50'-0" [15.24 m] inclusive of four 12'-6" [7.62 m] long rail elements. Installation shall be at the locations specified in the plans, in accordance with the manufacturer's specifications as detailed on the following pre-approved shop drawings:

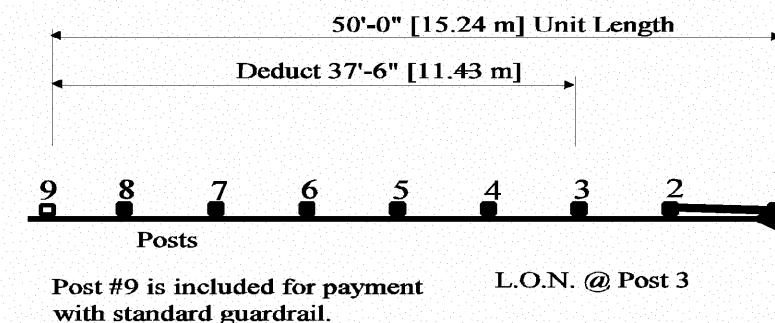
DWG. #	Drawing Name	DWG./REV. Date	ODOT Approval Date
SKT-4M	Sequential Kinking Terminal (SKT-350) Assembly with 4 Foundation Tubes	12/11/97	3/6/98
SKT Hinge CRT	Sequential Kinking Terminal SKT Assembly, Hinge CRT System	4/30/06	5/23/06

SKT-SP-S-375	SKT Terminal, 27-3/4" Top of Rail, Single Anchor, 7 Post System	3/04/09	3/23/09
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The face of the Type E-98 impact head shall be covered with a sheet of Type G reflective sheeting, per CMS 730.19, approximately 18" x 18" [450 mm x 450 mm], or 12" [300 mm] x 18" [450 mm] if applied to a rectangular ET-2000 "Plus" extruder head.

Refer to the manufacturer's instruction regarding the installation of, and the grading around, the foundation tubes and ground strut. The top of any foundation tubes should be an appropriate depth below the level line in order to maintain the finished guardrail height of 27-3/4-inches [706 mm] 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 [100 mm] above the ground line.

Payment for the above work shall be made at the unit price bid for Item 606, Anchor Assembly, Type E-98, 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.



Connection Between Existing and Proposed Guardrail

When it is necessary to splice proposed guardrail to existing guardrail, only the existing guardrail shall be cut, drilled, or punched. The connection shall be made using a "W-Beam Rail Splice" as shown in AASHTO M 180. Payment shall be included in the contract price for the respective guardrail items.

CALCULATED
CHECKED

GENERAL NOTES

GEA - 608 - 2.45

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Pavement

Profile and Alignment

Place the proposed pavement to follow the alignment and profile of the existing pavement. Place the proposed asphalt concrete overlay with a uniform thickness of 2 1/2" as shown on the typical sections.

Item 251 - Partial Depth Pavement Repair, As Per Plan A

This item shall be used for the repair of unsound, cold-patch, or pop-out areas of longitudinal joints as directed by the Engineer. This work shall be performed prior to the placement of the asphalt concrete intermediate course. The depth of the repair shall be approximately 3" below the top of the existing surface. The width of the repair will typically vary between 2' and 6', centered over the distressed area. The width and depth of the repair shall be as directed by the Engineer. The majority of this work is along the shoulders and/or the right wheel path in both directions.

The following estimated quantity has been carried to the general summary:

Item 251 Partial Depth Pavement Repair, As Per Plan A.....1100 Sq Yd

Item 251 - Partial Depth Pavement Repair, As Per Plan B

This item shall be used for the repair of unsound, cold-patch, or pop-out areas of transverse joints as directed by the Engineer. This work shall be performed prior to the placement of the asphalt concrete intermediate course. The depth of the repair shall be approximately 3" below the top of the existing surface. The width of the repair shall be 24" centered over the distressed area.

The following estimated quantity has been carried to the general summary:

Item 251 Partial Depth Pavement Repair, As Per Plan B.....700 Sq Yd

Item 253 - Pavement Repair, As Per Plan

This work item is for use as directed by the Engineer for the purpose of pavement repair for larger areas and those found that exhibit substantial deterioration and require deeper repairs than what is specified under the Item 251 repairs. All labor and materials necessary to perform this work and Section 250 of the CMS shall be included for payment under Item 253.

Depth of the pavement repair removal shall be 5" on average, measured from the top of the existing surface. The depth of the repair shall be as directed by the Engineer if unsound material is encountered after the removal of the 5 inches.

Removal may consist of any of the following: reinforced concrete, plain concrete, asphalt concrete, aggregate base, and/or earth. Removal limits shall either be saw cut, jack hammered, or ground to leave a neat, vertical surface.

The following estimated quantity is carried to the General Summary to complete this item of work:

Item 253 Pavement Repair, As Per Plan.....450 Cu Yd

Item 407 - Tack Coat

The rate of application of the 407 Tack Coat shall be subject to adjustment as directed by the Engineer. Plan quantities indicate an average application rate of 0.10 gallons per square yard of tack coat.

Item 407 - Tack Coat for Intermediate Course

The rate of application of the 407 Tack Coat for Intermediate Course shall be subject to adjustment as directed by the Engineer. Plan quantities indicate an

average application rate of 0.05 gallons per square yard of tack coat for intermediate course.

Item 446 - Asphalt Concrete Surface Course, Type 1, PG70-22M, As Per Plan

The coarse aggregate for this item shall be a blend of 50% min. air cooled blast furnace slag (ACBFS) or Trap Rock from Ontario with limestone comprising the remaining percentage.

Item 448 - Asphalt Concrete Intermediate Course, Type 1, PG64-22, Variable, As Per Plan

For this item, a third roller is required for mainline paving operations. The roller shall conform to the requirements of 401.13.

Item 448 - Asphalt Concrete Surface Course, Type 1, PG64-22, As Per Plan

The coarse aggregate for this item shall be limited to air-cooled blast furnace slag (ACBFS) or limestone.

Asphalt Concrete Surface Courses

In addition to the gutter sealing requirements specified on SCD BP-3.1 and in C&MS 401.15, after completion of the surface course, the contractor shall seal, with a certified PG binder, the following locations:

- All castings including but not limited to monuments, manholes, water valves, catch basins.
- Butt joints and feather joints including bridge approaches.
- Forward joint for driveway asphalt and trailing joint when butting to existing asphalt drive.
- Perimeter of all pavement repairs when pavement repairs are not overlaid with asphalt concrete.

The material used shall be a certified C&MS 702.01 PG binder. The width of the sealer shall be 2 inches.

Any additional costs associated with the work identified in this note shall be included in the appropriate asphalt concrete surface course item of work.

Item 617 - Compacted Aggregate, As Per Plan

This item shall be used along the shoulders. Materials shall be limited to recycled asphalt grindings.

The actual depth used will vary depending upon existing conditions. For estimating purposes, an average depth of 2 inch will be used.

Traffic Control

Item 621 - Raised Pavement Marker (RPM)

The following is an estimated quantity to be used as directed by the Engineer to place proposed raised pavement markers.

Item 621 RPM.....185 EA

Item 621 - Raised Pavement Marker Removed

The following is an estimated quantity to be used as directed by the Engineer to remove existing raised pavement marker castings.

Item 621 Raised Pavement Marker Removed.....185 EA

Pavement Markings

Prior to laying out the proposed center lines as per 641.06, the contractor shall contact Travis Bonnett, Roadway Services Engineer (216-584-2220), to obtain the most recent copy of the center line log.

Item 646 - Epoxy Pavement Markings

The following quantities are carried to the General Summary to be used as directed by the Engineer:

Item 646 Edge Line.....5.44 MILES

Item 646 Center Line.....2.77 MILES

Item 646 Stop Line.....70 FEET

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Maintenance of Traffic

Item 614 Maintaining Traffic

Generally the Contractor shall conduct his operations as to complete the proposed improvement with a minimum of hazard, delay and inconvenience to the motorists using the highway affected by the work done under this contract. In addition to the construction and material specifications, the following specific provisions are mandatory.

I. Notification

Since functional traffic control is a major concern on this project, it is essential that the motoring public be adequately forewarned of future lane closures and traffic constrictions. Therefore, the Contractor shall submit a written schedule to the Engineer, responsible law enforcement agencies, and the ODOT Public Information Office (216-584-2007) indicating the locations and dates of the lane closures at least 3 days prior to the implementation of any such closures.

II. Work Hours

Night work is NOT permitted due to the residential nature of the surrounding areas.

III. Lane Closure, Planing and Paving Restrictions

1. Maintain a minimum of one 11' lane using flaggers.
2. Place the surface course with a single cold joint located at the centerline.

IV. Maintenance of Traffic Systems

A. When Required

Whenever any part of the traveled surface is being worked upon or is otherwise not suitable for safe and convenient use by vehicles, traffic control devices sufficient to protect such areas to assure the safe and convenient passage of vehicular traffic shall be installed and maintained. Such traffic control devices and the manner in which they are used shall be consistent with these plans and the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways, hereinafter referred to as the OMUTCD. The traffic control device system shall constitute the minimum provisions for traffic control for each particular situation. Whenever the Engineer deems it necessary especially where a grade, curve, or merge conditions exists, he may direct that additional or alternative devices be used.

B. Conditions

During all parts of this project, flaggers, signing, barricades, flashing arrows, etc. shall be located as indicated in the OMUTCD or as shown in the Standard Construction Drawings. Two-way traffic shall be maintained at all times.

C. Advance Warning Signs

All advance warning signs for any condition which restricts traffic shall be erected before any such restriction is put into effect. All such signs shall be covered or removed from the view of traffic whenever they are not applicable.

D. Flashing Arrow Requirement

Whenever any part of the traveled surface is closed, the motorists shall be warned and directed by the Contractor through the use of one flashing arrow for each lane closed. Additionally, the provisions set forth in the OMUTCD and the applicable Standard Construction Drawings shall be met.

E. Flaggers and Law Enforcement Officers

The Contractor shall furnish additional flaggers as directed by the Engineer. Law Enforcement Officers (LEO's) shall be required for traffic direction only under the following circumstances: (1) if signals are non-operational, or (2) if traffic must move against signal phasing.

F. Protection of Public

Personal cars shall not be parked within the R/W.

G. Failure to Comply

If there is any failure to comply with provisions for traffic control set out in these plans and notes, or with the provisions of the OMUTCD, the highway in the vicinity of the work area shall not be considered in a condition for the safe and convenient use by the traveling public. Any failure to keep the highway, in the vicinity of the work area, in a condition for the safe and convenient use by the traveling public shall be considered a breach of this contract. Work shall be suspended until the Contractor complies with the provisions of the aforementioned items.

V. Maintenance of Traffic Materials

A. Signs

Sign dimensions and specifications, including letter sizes shall be as provided in the OMUTCD, or in design drawings provided by the Department of Transportation. The signs shall be subject to approval of the Engineer prior to the start of the project.

B. Sign Supports

Sign supports shall be of sufficient size and height as to support the signs at the appropriate height. Supports shall be adequate in mass and stability to prevent the signs from being blown over by wind or vehicular generated air turbulence.

C. Flashing Arrows

Whenever any part of the traveled surface is closed, the motorist shall be warned and diverted by the Contractor through the use of one flashing arrow barricade for each lane closed. The Contractor shall refer to Standard Construction Drawing MT-35.10 and the provisions set forth in the OMUTCD for all information regarding furnishing, maintaining, and use of flashing arrow barricades. Payment for the above shall be included in the lump sum bid for Item 614 Maintaining Traffic.

D. Drums

Drums shall be in accordance with pertinent sections of the OMUTCD. All costs for installing, maintaining and subsequent removal of said drums shall be included in the lump sum bid price for Item 614 Maintaining Traffic.

E. Cones

Cones shall be located as shown in the OMUTCD and the Standard Construction Drawings.

F. Flashers

Flashers shall be 12 volt battery-operated models with 7 inch diameter yellow lenses illuminated by rapid intermittent flashers of short duration and shall be placed on all signs at all times as required by the OMUTCD and the Standard Construction Drawings.

VI. Payment

Payment for providing, erecting, maintaining and removing temporary maintenance of traffic control devices shall be made under the lump sum price bid for Item 614 Maintaining Traffic.

Item 614 Maintaining Traffic – Uneven Pavement Signs

Immediately after planing and paving operations, W8-11-36 "UNEVEN LANES" signs shall be installed to warn motorists of elevation differences where they exist. The signs shall be installed at intervals not to exceed ½ mile. Payment for providing, erecting, maintaining and removing W8-11-36 "UNEVEN LANES" signs shall be made under the lump sum price bid for Item 614 Maintaining Traffic.

Item 614 Work Zone Pavement Markings

The following estimated quantities have been carried to the General Summary, to be used as directed by the Engineer. Place temporary markings at the locations of the permanent markings.

After the intermediate course is completed, use the following temporary markings:

Item 614 - Work Zone Center Line, Class I, 642 Paint.....**2.77 MILES**

Item 614 - Work Zone Stop Line, Class I, 642 Paint.....**70FEET**

After the surface course is placed, use the following temporary markings:

Item 614 - Work Zone Center Line, Class III, 642 Paint..... **2.77MILES**

Item 614 - Work Zone Stop Line, Class III, 642 Paint.....**70 FEET**

Item 614 Asphalt Concrete for Maintaining Traffic

This item shall be used to install and remove temporary asphalt ramps at butt joints, and drainage/utility castings, where required. Material shall be removed prior to the placement of the next course of asphalt. The following estimated quantity is carried to the general summary to accomplish this item of work.

Item 614 Asphalt Concrete for Maintaining Traffic.....**40 CU YD**

Contractor's Equipment - Operation and Storage

Vehicles and equipment shall always move with, and not across or against the flow of traffic. Vehicles and other equipment shall not park or stop except within designated work areas; and shall not enter and leave work areas in a manner which will be hazardous to, or interfere with the normal traffic flow. Personal vehicles will not be permitted to park within the right-of-way except in specific areas designated by the Engineer.

Equipment, vehicles and materials shall not be stored or parked within 30 feet of the traveled way unless 6 feet behind PCB or guardrail.

All work vehicles and equipment that enters the work zone more than once a day must be equipped with at least one flashing, rotating, or oscillating amber light that is visible in all directions of traffic for at least one quarter of a mile, day or night.

Suspension of Work

If the Contractor fails to comply with the provisions for traffic control as set forth in these plans or with provisions of the OMUTCD, the Engineer shall suspend work until the Contractor complies with the necessary requirements.

CALCULATED
CHECKED

GENERAL NOTES

GEA - 608 - 2.45

6
14

Placement of Asphalt Concrete

Two-way traffic shall be maintained at all times except that one-way traffic will be permitted for minimum periods of time consistent with the requirements of the specifications for protection of completed asphalt concrete courses.

Alternate Methods

If the Contractor so elects, he may submit alternate methods for the maintenance of traffic, provided the intent of the provisions is followed and no additional inconvenience to the traveling public results there from. No alternate plan shall be placed into effect until approval has been granted in writing, by the Director.

Maintenance of Traffic Control Zones

The Contractor shall be responsible to maintain the signs, drums and temporary pavement markings at the locations detailed in the plans or specified in the Standard Drawings. When the Contractor is notified of deficiencies he shall correct the deficiencies as soon as possible, preferably within 12 hours and no later than 24 hours.

Construction Traffic

All construction traffic shall use acceptable truck routes to access the construction area. Use of local residential streets is strictly prohibited unless allowed in writing by the local enforcement authority.

Item 614 - Law Enforcement Officer (With Patrol Car) for Assistance During Construction Operations

Use of Law Enforcement Officers (LEOs) by Contractors other than the uses specified below will not be permitted at project cost. LEOs should not be used where the OMUTCD intends that flaggers be used.

In addition to the requirements of CMS 614 and the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) shall be provided for the following traffic control tasks:

- During the entire advance preparation and closure sequence where complete blockage of traffic is required.
- During a traffic signal installation when impacting the normal function of the signal or the flow of traffic or when traffic needs to be directed through an energized traffic signal contrary to the signal display (e.g., directing motorists through a red light).

In addition to the requirement of CMS 614 and the OMUTCD, a uniformed LEO with an official patrol car (car with top-mounted emergency flashing lights and complete markings of the appropriate law enforcement agency) should be provided for the following traffic control tasks:

- For lane closures: during initial set-up periods, tear down periods, substantial shifts of a closure point or when new lane closure arrangements are initiated for long-term lane closures/shifts (for the first and last day of major changes in traffic control setup). In general, LEOs should be positioned at the point of lane restriction or road closure and to manually control traffic movements through intersections in work zones.
- When construction vehicles are entering/exiting the zone directly from/into an open lane of traffic. If a lane has been closed to provide an acceleration/deceleration lane for the vehicle, the LEO will not be required.

LEOs should not forgo their traffic control responsibilities to apprehend motorists for routine traffic violations. However, if a motorist's actions are considered to be reckless, then pursuit of the motorist is appropriate.

The LEOs work at the direction of the Contractor. The Contractor is responsible for securing the services of the LEOs with the appropriate agencies and communicating the intentions of the plans with respect to duties of the LEOs. The Engineer shall have final control over the LEOs' duties and placement, and will resolve any issues that may arise between the two parties.

The LEO should report in to the Contractor prior to the start of the shift, in order to receive instructions regarding specific work assignments during his/her shift. The LEO is expected to stay at the project site for the entire duration of his/her shift. The LEO shall report to the Contractor at the end of his/her shift. Once the LEO has completed the duties described above and still has time remaining on his/her shift, the LEO may be asked to patrol through the work zone (with flashing lights off) or be placed at a location to deter motorists from speeding. Should it be necessary to leave the project site, the LEO shall notify the Engineer. The Contractor shall provide the LEO with a two-way communication device which shall be returned to the Contractor at the end of his/her shift.

LEOs with Patrol Car required by the traffic maintenance tasks above shall be paid for on a unit price (hourly) basis under Item 614, Law Enforcement Officer with Patrol Car for Assistance. The following estimated quantities have been carried to the General Summary.

Item 614 – Law Enforcement Officer with Patrol Car for Assistance...**60 HOURS**

The hours paid shall include any minimum show-up time required by the law enforcement agency involved.

Any additional costs (administrative or otherwise) incurred by the Contractor to obtain the services of an LEO are included with the bid unit price for Item 614, Law Enforcement Officer with Patrol Car for Assistance.

Surface Condition Signs

Erect a GROOVED PAVEMENT sign (W8-H15) 250 feet (75 m) in advance of any section of roadway where traffic must travel on a planed surface. Ensure these signs are in place before opening the roadway to traffic. Erect these signs on each entrance ramp and at intersections of through routes to warn traffic of this surface condition.

Payment shall be made under the lump sum for Item 614 - Maintaining Traffic.

Item 614 Maintaining Traffic – No Edge Line Signs

Immediately after paving operations for both courses of asphalt or any other operation which obliterates the edge line pavement marking, install W8-H12a-36 "NO EDGE LINE" signs to warn motorists of any section of roadway lacking OMUTCD standard edge line markings. Erect the signs at intersections of through roads to warn entering or turning traffic of the conditions, and at least once every 2 miles along the roadway.

The following estimated quantity has been carried to the General Summary to be used as directed by the Engineer for the purpose of providing, erecting, maintaining, and removing the above-mentioned "NO EDGE LINE" signs.

Item 614 – Work Zone Marking Sign.....**8 Each**

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SHEET NUMBER													ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	6	7	9	10	11	12											
					712.5	1013	362.5						202	38000	2087.5	FT	ROADWAY	
					8	8	8						202	42206	24	EACH	ANCHOR ASSEMBLY REMOVED	
					8		8						202	47000	16	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
				1902									203	10000	1902	CU YD	EXCAVATION	
				5708									204	10000	5708	SQ YD	SUBGRADE COMPACTION	
					10.1	11.1	7.6						209	60201	28.8	STATION	LINEAR GRADING, AS PER PLAN	4
2					687.5	975	362.5						604	39501	2	EACH	MONUMENT BOX ADJUSTED TO GRADE, AS PER PLAN	3
													606	13000	2025	FT	GUARDRAIL, TYPE 5	
					6	5	8						606	22010	19	EACH	ANCHOR ASSEMBLY, TYPE E-98	
					2	3							606	26500	5	EACH	ANCHOR ASSEMBLY, TYPE T	
					8		8						606	35140	16	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
																	EROSION CONTROL	
													832	30000	1000	EACH	EROSION CONTROL	
																	PAVEMENT	
	1100												251	01001	1100	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN A	5
	700												251	01001	700	SQ YD	PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN B	5
	450												253	02001	450	CU YD	PAVEMENT REPAIR, AS PER PLAN	5
					470								254	01000	470	SQ YD	PAVEMENT PLANNING, ASPHALT CONCRETE	
					951								301	46000	951	CU YD	ASPHALT CONCRETE BASE, PG64-22	
					951								304	20000	951	CU YD	AGGREGATE BASE	
					4397								407	10000	4397	GALLON	TACK COAT	
					2130								407	14000	2130	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
					1754								446	47029	1754	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN	5
					1183								448	46021	1183	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, AS PER PLAN	5
					18.8	20.6	14.4						448	46061	53.8	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN	4
					21								448	47021	21	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN	5
					39								448	48020	39	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
					354								617	10101	354	CU YD	COMPACTED AGGREGATE, AS PER PLAN	5
																	TRAFFIC CONTROL	
	185												621	00100	185	EACH	RPM	
	185												621	54000	185	EACH	RAISED PAVEMENT MARKER REMOVED	
					20	27	24						626	00100	71	EACH	BARRIER REFLECTOR	
	5.44												646	10000	5.44	MILE	EDGE LINE	
	2.77												646	10200	2.77	MILE	CENTER LINE	
	70												646	10400	70	FT	STOP LINE	
																	MAINTENANCE OF TRAFFIC	
				60									614	11110	60	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
				8									614	12460	8	EACH	WORK ZONE MARKING SIGN	
		40											614	13000	40	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
		2.77											614	21100	2.77	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
		2.77											614	21550	2.77	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		70											614	26200	70	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
		70											614	26610	70	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
4													614	11000	LUMP	MONTH	MAINTAINING TRAFFIC	
													619	16010	4	MONTH	FIELD OFFICE, TYPE B	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													624	10000	LUMP		MOBILIZATION	

GENERAL SUMMARY

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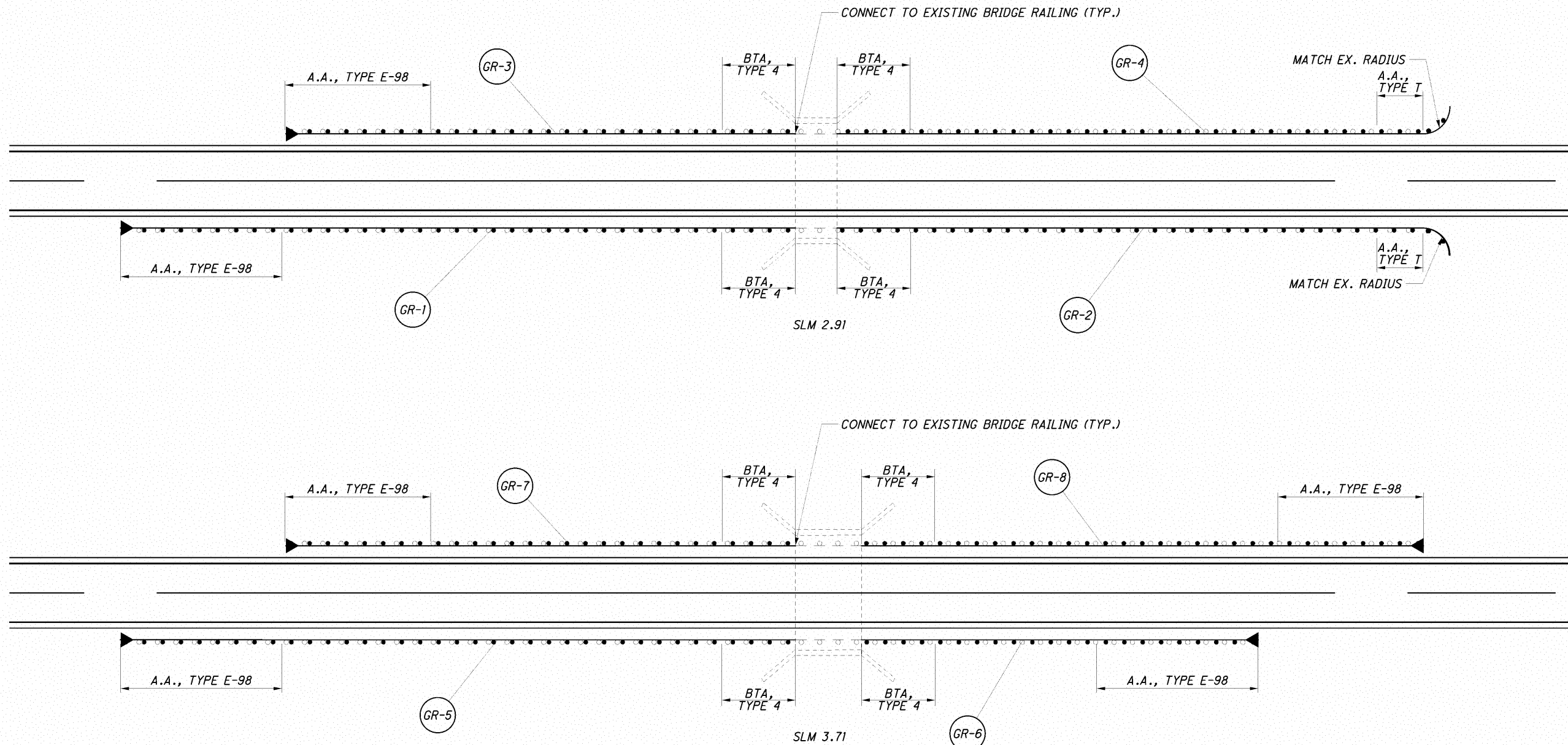
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REF. NO.	SHEET NO.	STATION TO STATION	LENGTH	BEGIN WIDTH	ENDING WIDTH	AVERAGE WIDTH	AREA	203	204	254	301	304	407	407	446	448	448	448	617
								EXCAVATION	SUBGRADE COMPACTION	PAVEMENT PLANING, ASPHALT CONCRETE, 2-1/2"	ASPHALT CONCRETE BASE, 6"	AGGREGATE BASE, 6"	TACK COAT	TACK COAT FOR INTERMEDIATE COURSE	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG70-22M, AS PER PLAN, 1-1/2"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, VARIABLE, AS PER PLAN, 1"	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN, 1-1/2"	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, (DRIVEWAYS), 1" AVG.	COMPACTED AGGREGATE, AS PER PLAN, 1" AVG.
			FT	FT	FT	FT	SQ YD	CU YD	SQ YD	SQ YD	CY YD	CY YD	GALLON	GALLON	CU YD	CU YD	CU YD	CU YD	CU YD
		SR - 608																	
		2.45 3.71	6652.80	26	26	26	19219						1922	961	801	534			164
		2.45 3.71	6652.80	6	6	6	4435	1478	4435		739	739							
		3.71 4.02	1636.80	30	27	29	5183						518	259	216	144			40
		3.71 4.02	1636.80	8	6	7	1273	424	1273		212	212							
		4.02 5.11	5755.20	26	26	26	16626						1663	831	693	462			142
		5.13 5.19	316.80	26	26	26	915						92	46	38	25			8
		5.21 5.22	52.80	26	26	26	153						15	8	6	4			1
		INTERSECTIONS																	
		NAUVOO RD.					90			90			9	5		3	4		
		BURTON-WINDSOR RD. - WEST APPROACH					117			117			12	6		3	5		
		BURTON-WINDSOR RD. - EAST APPROACH					110			110			11	6		3	5		
		DURKEE RD.					91			91			9	5		3	4		
		GURA RD.					62			62			6	3		2	3		
		DRIVEWAYS AND MAILBOX TURNOUTS																	
			5' Avg.				1400						140						39
TOTALS CARRIED TO GENERAL SUMMARY								1,902	5,708	470	951	951	4,397	2,130	1,754	1,183	21	39	356

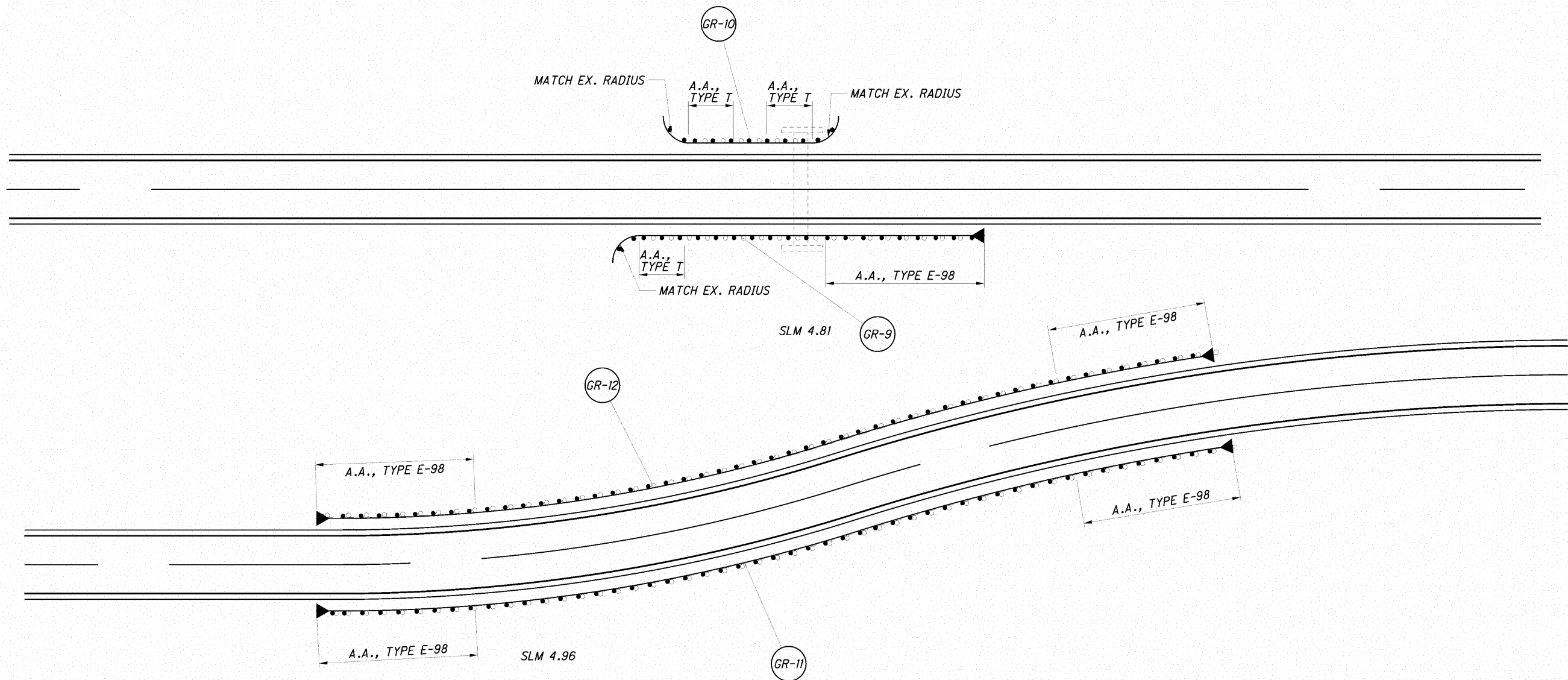
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SUBSUMMARY	
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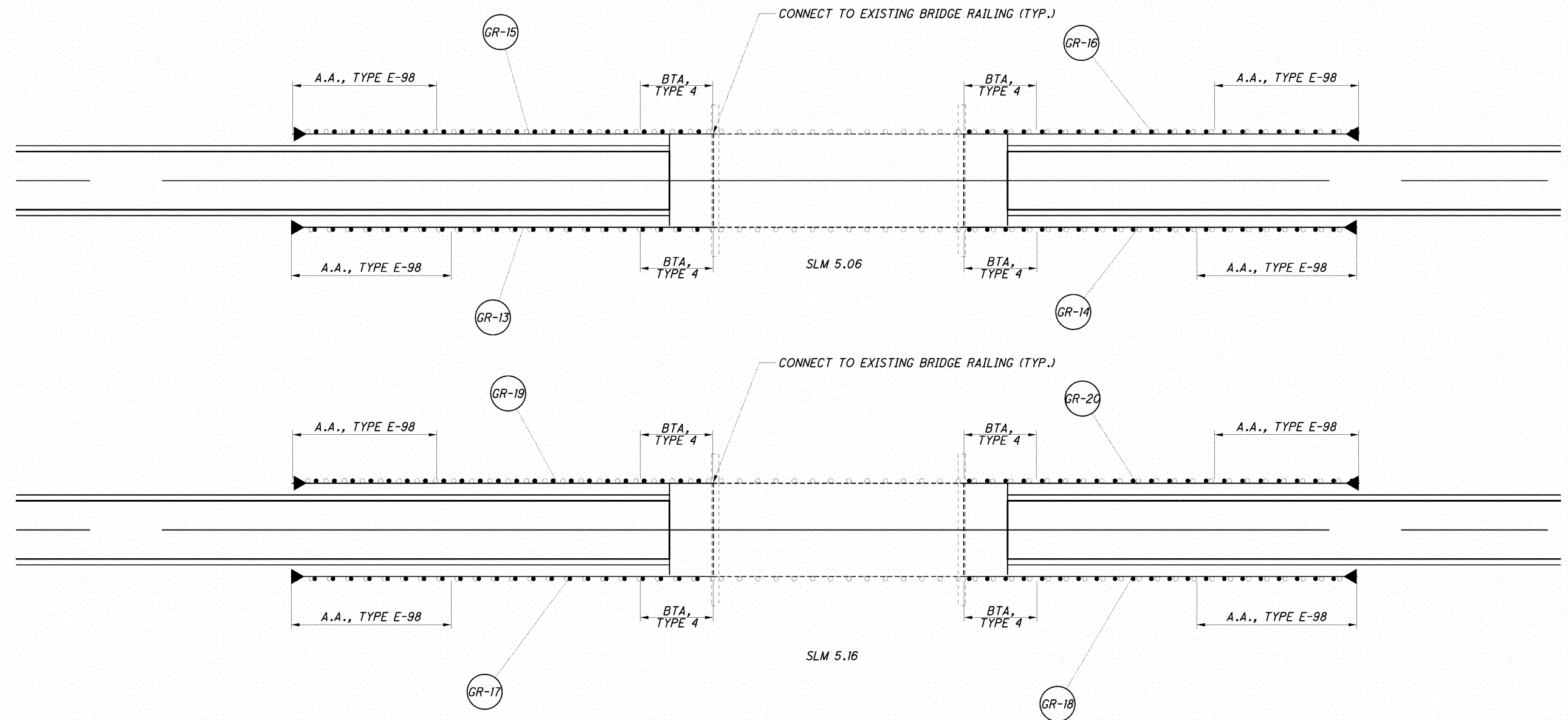


REF. NO.	SLM	SIDE	OFFSET	202		202		202		209		448		606		606		606		606		626	
				GUARDRAIL REMOVED	BRIDGE TERMINAL ASSEMBLY REMOVED	ANCHOR ASSEMBLY REMOVED	LINEAR GRADING, APP	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, APP (3" THICK, 2' WIDTH)	GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 4	BARRIER REFLECTOR	FT	EA	EA	EA	EA	EA	EA	EA	EA	EA
GR-1	2.91	RT	4	87.5	1	1	1.4	2.5	87.5	1		1	2										
GR-2	2.91	RT	4	100.0	1	1	1.0	1.9	87.5		1	3											
GR-3	2.91	LT	4	62.5	1	1	1.1	2.1	62.5	1		3											
GR-4	2.91	LT	4	137.5	1	1	1.4	2.5	125.0		1	2											
GR-5	3.71	RT	4	62.5	1	1	1.1	2.1	62.5	1		3											
GR-6	3.71	RT	4	87.5	1	1	1.4	2.5	87.5	1		2											
GR-7	3.71	LT	8	150.0	1	1	2.0	3.7	150.0	1		2											
GR-8	3.71	LT	8	25.0	1	1	0.8	1.4	25.0	1		3											
TOTALS CARRIED TO GENERAL SUMMARY				712.5	8	8	10.1	18.8	687.5	6	2	8	20										

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REF. NO.	SLM	SIDE	OFFSET	202		202	209	448	606	606	606	626					
			FT	GUARDRAIL REMOVED	ANCHOR ASSEMBLY REMOVED	LINEAR GRADING, APP	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, APP (3" THICK, 2' WIDTH)	GUARDRAIL, TYPE 5	ANCHOR ASSEMBLY, TYPE E-98	ANCHOR ASSEMBLY, TYPE T	BARRIER REFLECTOR	EA	EA	EA	EA	EA	EA
GR-9	4.81	RT	4		62.5	2	1.1	2.1	50.0	1	1		3				
GR-10	4.81	LT	4.5		62.5	2	0.6	1.2	37.5		2		3				
GR-11	4.96	RT	4		412.5	2	4.6	8.6	412.5	2			10				
GR-12	4.96	LT	4		475.0	2	4.8	8.8	475.0	2			11				
TOTALS CARRIED TO GENERAL SUMMARY					1012.5	8	11.1	20.6	975.0	5	3		27				



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REF. NO.	SLM	SIDE	OFFSET	202			209	448	606	606	606	626					
			FT	GUARDRAIL REMOVED FT	BRIDGE TERMINAL ASSEMBLY REMOVED EA	ANCHOR ASSEMBLY REMOVED EA	L INEAR GRADING, APP STA	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, APP (3" THICK, 2' WIDTH) CU YD	GUARDRAIL, TYPE 5 FT	ANCHOR ASSEMBLY, TYPE E-98 EA	BRIDGE TERMINAL ASSEMBLY, TYPE 4 EA	BARRIER REFLECTOR EA					
GR-13	5.06	RT	5.5	50.0	1	1	1.0	1.9	50.0	1	1	3					
GR-14	5.06	RT	5.5	50.0	1	1	1.0	1.9	50.0	1	1	3					
GR-15	5.06	LT	5	50.0	1	1	1.0	1.9	50.0	1	1	3					
GR-16	5.06	LT	5	50.0	1	1	1.0	1.9	50.0	1	1	3					
GR-17	5.16	RT	5	62.5	1	1	1.1	2.1	62.5	1	1	3					
GR-18	5.16	RT	5	37.5	1	1	0.9	1.6	37.5	1	1	3					
GR-19	5.16	LT	6	50.0	1	1	1.0	1.9	50.0	1	1	3					
GR-20	5.16	LT	6	12.5	1	1	0.6	1.2	12.5	1	1	3					
TOTALS CARRIED TO GENERAL SUMMARY					362.5	8	8	7.6	14.4	362.5	8	8	24				

BEGIN PROJECT
BEGIN WORK
SLM 2.45

BUTT JOINT AS PER BP-3.1

26'

SUSPEND RESURFACING OPERATIONS
AT BRIDGE NO. CUY-608-0512 FROM
S.L.M. 5.11 TO S.L.M. 5.13 (80 FEET).
SUSPEND RESURFACING OPERATIONS
AT BRIDGE NO. CUY-608-0520 FROM
S.L.M. 5.19 TO S.L.M. 5.21 (84 FEET).

OVERHEAD STRUCTURE
S.L.M. 3.23

NOTE: THE OFFSET, LENGTH, BEGINNING AND END TERMINUS
OF THE PROPOSED GUARDRAIL SHALL BE THE SAME AS
THE EXISTING GUARDRAIL EXCEPT WHERE SHOWN DIFFERENT
IN THE PLANS.

MATCH LINE
SLM 3.45
SEE THIS SHEET

S.L.M. 3.71

CL BURTON-WINDSOR RD.
S.L.M. 4.02

CL NAUYOO ROAD
S.L.M. 3.25

MATCH LINE
SLM 4.45
SEE THIS SHEET

MATCH LINE
SLM 3.45
SEE THIS SHEET

26'

30'

27'

26'

BUTT JOINT PER BP-3.1

MATCH LINE
SLM 4.45
SEE THIS SHEET

26'

CL DURKEE ROAD
S.L.M. 4.73

CL CURA ROAD
S.L.M. 4.80

BUTT JOINT PER BP-3.1

32" WIDE 5.12

32" WIDE 5.20

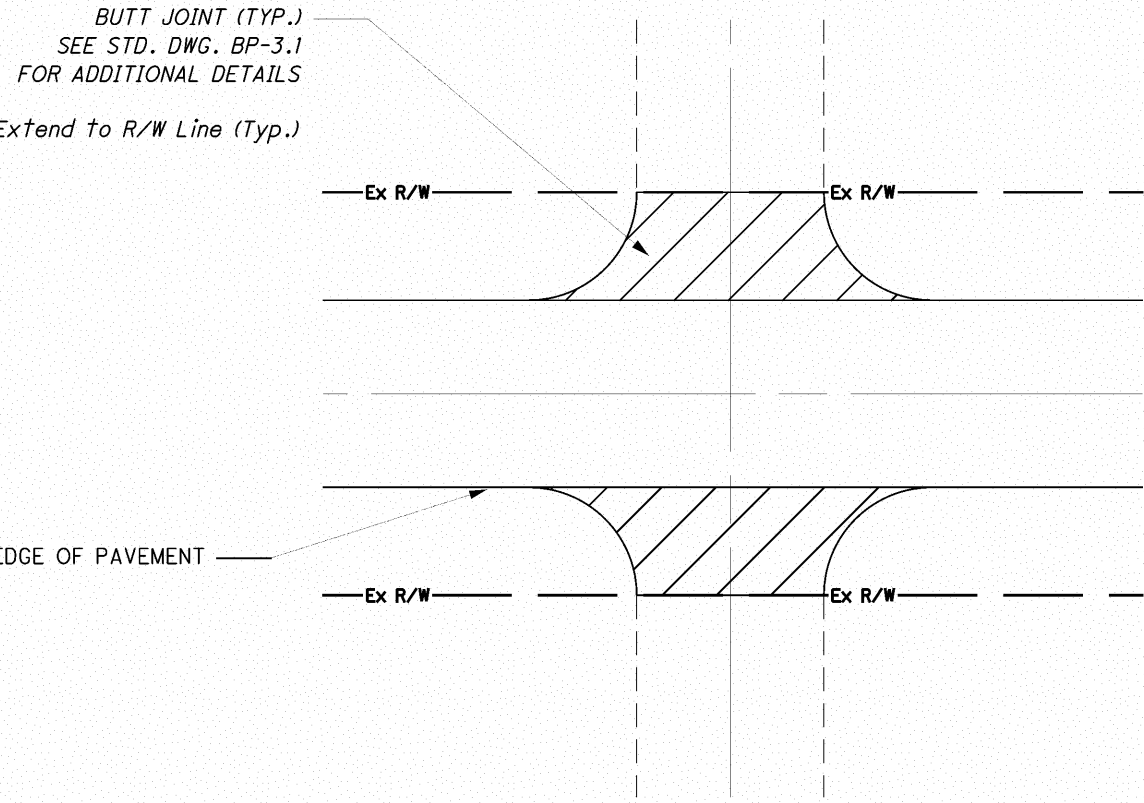
END PROJECT
END WORK
SLM 5.22

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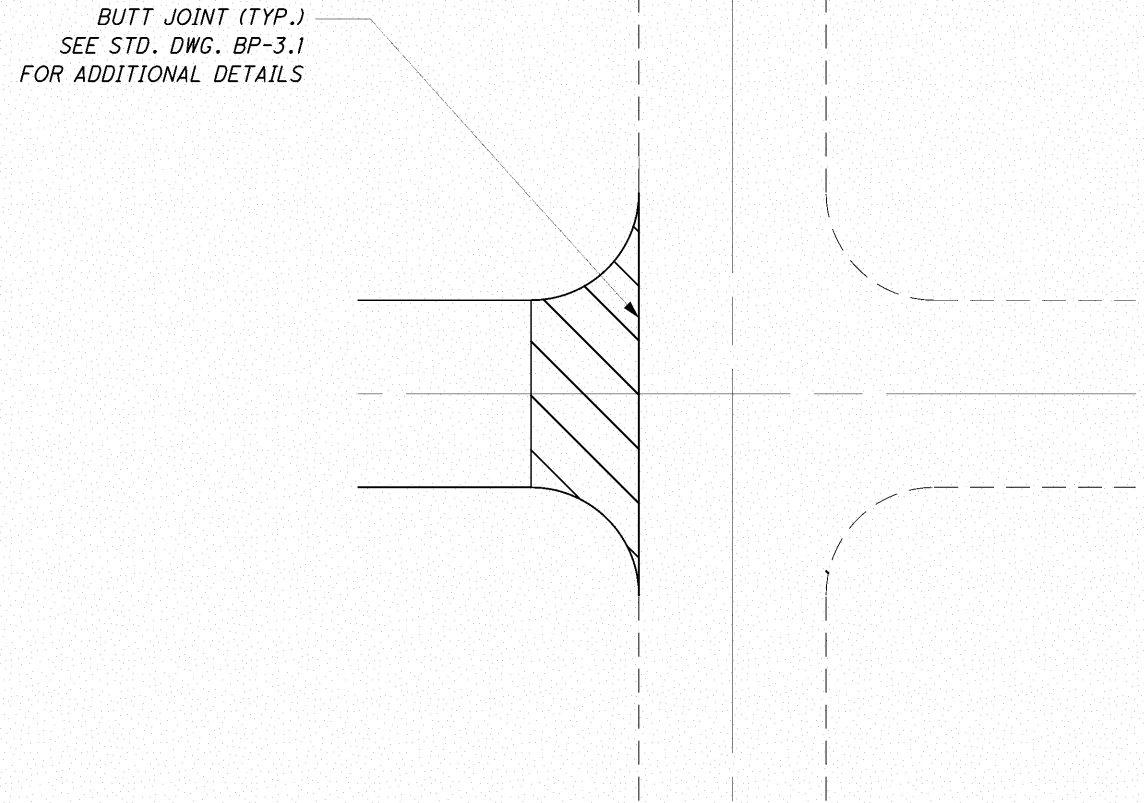
GENERAL PLAN SHEET

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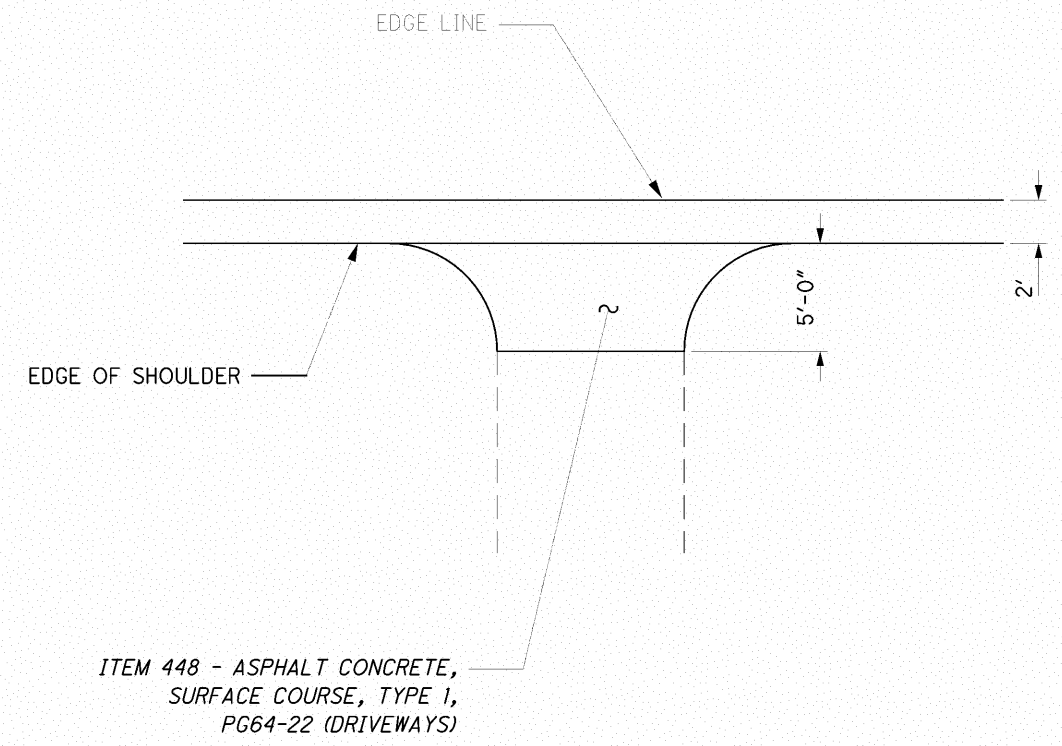
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TYPICAL ASPHALT INTERSECTION DETAIL



TYPICAL ASPHALT INTERSECTION DETAIL



DRIVEWAY APRON DETAIL

CALCULATED
CHECKED

PAVEMENT DETAILS
INTERSECTIONS AND DRIVEWAY APRONS

GEA - 608 - 2.45