



**OHIO TURNPIKE AND
INFRASTRUCTURE COMMISSION**

ADDENDUM NO. 1

**PROJECT NO. 59-19-01 (RE-BID)
REPAIRS AND RESURFACING
EASTBOUND AND WESTBOUND ROADWAYS
MILEPOST 8.20 TO MILEPOST 14.80
AND PARTIAL EASTBOUND SHOULDER RECONSTRUCTION
MILEPOST 2.87 TO MILEPOST 8.20
WILLIAMS COUNTY**

**OPENING DATE:
2:00 P.M. (EASTERN TIME), MARCH 7, 2019**

ATTENTION OF BIDDERS IS DIRECTED TO:

QUESTIONS RECEIVED THROUGH 3:00 PM ON FEBRUARY 28, 2019

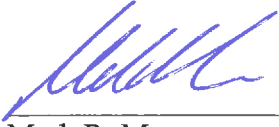
-AND-

MODIFICATIONS TO THE CONTRACT DOCUMENTS

Plan Sheet Nos. 3, 6, 7, 10, 12 and 14 of 14

Issued by the Ohio Turnpike and Infrastructure Commission through Anthony D. Yacobucci, Chief Engineer, and Mark R. Musson, Director of Contracts Administration.


Anthony D. Yacobucci 2-28-19
Date


Mark R. Musson 2/28/19
Date

ANSWERS TO QUESTIONS RECEIVED THROUGH 3:00 PM ON FEBRUARY 28, 2019:

Q#1 On plan sheet # 10/14, PB w/ with side mounted delineators is called out with no mention of the use of glare screen. Standard drawing #'s TCR-4, TCR-7, and TCR-8 all mention glare screen on the portable barrier. Additionally, SP622.B Glare Screen states when not separately itemized, the screen is incidental to SP622. However, Special Provision, Item Special – Glare Screens does state glare screen is required throughout the bi-directional zone. Is glare screen required throughout the project?

A#1 Yes, glare screens are required throughout the bi-directional zone on the portable barrier in accordance with the manufacturer's recommendations so the centerline of the glare screen is coincident with the centerline of the barrier.

Q#2 If glare screen is only required in certain locations, at what locations and limits?

A#2 Please see the response to Q#1.

Q#3 If glare screen is required, can 50" high wall be used in lieu of 32" wall with the 18" glare screen with wall height transitions?

A#3 Yes, the Contract Documents are modified to allow for 50" portable barrier without glare screen in lieu of 32" portable barrier with glare screen as specified in SP 622, Portable Barrier. If the Contractor chooses to mix 50" portable barrier with 32" portable barrier with glare screen to meet the requirements for the bi-directional zone, a maximum of two transitions from 32" portable barrier with glare screen to 50" portable barrier are required. Additionally, the Contractor shall have replacement pieces of 50" portable barrier, portable barrier transition, and 32" portable barrier, readily available on site at no additional cost to the Commission.

Q#4 On plan sheet #12/14, it appears the high-speed cross-over at MP 10.4 is shown to be used. Can you explain the purpose? Is this intended to be a phase split within stages 1 and 3 requiring portable barrier movement?

A#4 Plan Sheet 12 of 14 is revised through this Addendum No. 1 to show the crossover at MP 10.4 as merely an existing condition and not incorporated or otherwise used under this Project.

Q#5 In SP627 Stone Shoulder Protection, #67 aggregate is specified. 67's are not commonly produced nor available in the area of the project. Can 57's be used instead of 67's?

A#5 As indicated on Plan Sheet 7 of 14, the use of #57 stone in place of #67 stone for Item SP 627, Stone Shoulder Protection, is acceptable for substitution at no additional cost to the Commission.

Q#6 SP400 Asphalt Concrete Surfacing, Section III.C.2 mentions the use of a 40' contact referencing ski, can a 30' non-contact referencing ski be used for this intended purpose?

A#6 Section III., Subsection C., Paragraph 2., of SP 400 is modified through this Addendum No. 1 to allow a thirty (30) foot non-contacting referencing ski. The make, model and other defining characteristics of any proposed thirty (30) foot non-contacting referencing ski shall be submitted to the Chief Engineer for review and approval. In no instance with the Commission waive the SP 400S requirements.

Q#7 Item 617 specifically allows (minus the plan exclusion of slag) crushed stone, crushed gravel, recycled PCC, and recycled asphalt pavement (RAP). This being the case, can the millings from the SNAP installation and etc. be incorporated with the RAP berm - as in free berm?

A#7 Yes, the Contractor may incorporate the millings from the SNAP installation into Item 617.

Q#8 For the Item Special – Regrading Under Guardrail – as shown on plan sheet #5/14 Typical Section, is all the existing area under the guardrail, the full 4' wide x 2" deep, expected to be excavated as shown in the typical sections on plan sheet #5 or is it intended that only the areas higher than the typical section need excavated?

A#8 Item Special, Regrading Under Guardrail, is intended for areas where the stone shoulder protection is more than 1" above the edge of the shoulder pavement as indicated on Plan Sheet No. 7 of 14. All excess materials removed under this item shall be disposed of in accordance with SP 105.

Q#9 Can any of the excavated material from this item be utilized behind the 4' rounding area on the foreslope, blending the two areas, or does all the material need to be hauled off-site or to another location on the project?

A#9 Please see the response to Q#8.

Q#10 For the Item 617 Shoulder Preparation – as shown on plan sheet #5/14 Typical Section, is the entire section, the full 4' wide x the depth of the 617 berm, expected to be excavated or is the shoulder preparation only expected to lower the existing aggregate surface enough to at least accept some additional 617?

A#10 For Item 617, Shoulder Preparation, the Contractor shall prepare the existing surface to accept some additional Item 617. Any excess material removed shall be disposed of in accordance with SP 105.

Q#11 Can the excavated material from this item be placed on the foreslope, blending the two areas, or does all the material need to be hauled off-site or to another location on the project?

A#11 Please see the response to Q#10.

Q#12 For the areas more than 1” higher than the adjacent paved shoulder as shown on plan sheet #6/14 in the bottom left Typical Section, can the material be bladed back and used on the foreslope, blending the two areas, or does all the material need to be hauled off-site or to another location on the project?

A#12 For areas that are more than 1” higher than the adjacent paved shoulder, the Contractor shall prepare the existing shoulder to accept some additional 617 and the excess material removed shall be disposed of in accordance with SP 105.

Q#13 On plan sheet #8/14, in the left column, under Item 615 – Pavement for Maintaining Traffic, Class A, As Per Plan – Part A - Item 615 calls out ODOT standard type mixes for 441 Ty 1, 441 Ty 2, 302, and 301; are the ODOT standard mixes to be used or are the SP 404, SP 402, SP302 (not currently included in Special Provisions), or SP301 (not currently included in Special Provisions) to be used?

A#13 The Contractor shall supply the specified ODOT standard asphalt mixes in accordance with ODOT CMS Item 615.

Q#14 Is only the total 8.5” of asphalt required utilizing the existing material below the 8.5” depth as the equivalent 6” aggregate or is the existing ignored and the full CL A temporary pavement section required using the asphalt option substituting the 2.5” of asphalt for the 6” 304 which makes the total asphalt depth 11” on whatever the existing subgrade would be?

A#14 The Contractor is to install the required 8.5” asphalt buildup on the existing aggregate base. As indicated on Plan Sheet 8 of 14, contingency quantities have been included for the repair of the existing aggregate base as directed by the Chief Engineer.

Q#15 Is there a chance of getting into the existing Type 1 or Type 2 Aggregate Drains during any of the excavations described in Part A or Part B above?

A#15 Existing Type 1 or Type 2 aggregate drains may be encountered when performing full depth pavement repairs.

Q#16 How is the existing mainline edge of pavement location to be determined and if patching is required as a result of the method, will the patch material be paid for?

A#16 The Contractor is to excavate, as approved by the Chief Engineer, to locate the edge of the existing concrete base pavement to set the paving and striping limits. This operation shall be considered incidental to the cost of the Project. Repair of the excavated locations shall occur during the normal paving operations using SP 402 material.

Q#17 Item 72 in the initial bid asphalt rejuvenator emulsion does not appear in the rebid where specified in the original. Was this removed from the project?

A#17 Asphalt rejuvenator, polymer emulsion will not be required due to the change in staging of the Work for this Project.

Q#18 On Standard Drwg # TCR-7, for both approach types shown, are temporary attenuators required at the barrier wall ends? If so, under what item are the attenuators paid for?

Q#18 Standard Drawing TCB-1 requires temporary impact attenuators during the portable barrier wall setting operation only. The temporary attenuators are incidental to the setting operation and are not needed when the portable barrier is in the final configuration as indicated on Standard Drawing TCR-7.

Q#19 Several plan sheets (such as TCR-3, TCR-7, TCR-8) regarding traffic crossovers contain the note "Lighting shall be installed per ODOT Standard Construction Drawing MT-100.00." Is lighting required at each of these crossovers and if so, under what item is the lighting paid for?

Q#19 The Contract Documents are modified through this Addendum No. 1 to provide that crossover lighting, as indicated in Standard Drawings TCR-3, TCR-7 and TCR-8, are not required for this Project.

Q#20 Standard Drwg #TCB-2 shows impact attenuators on the barrier wall ends in the various crossover situations (1) Part A – under what item are the impact attenuators paid for? (2) Part B – which cross-overs will be required to be open during the portable barrier storage period?

Q#20 Temporary impact attenuators required for barrier storage are, as indicated in Standard Drawing TCB-2, considered incidental to Item SP 622, Portable Barrier. The crossovers that are required to be open during the portable barrier storage period are located at M.P. 8.20, M.P. 12.95, M.P. 13.90, and M.P. 14.80.

Q#21 In SP 622 Portable Barrier, Section B – Materials – under Portable Barrier Option #2, the seventh sentence states “each section shall be anchored to the pavement at a minimum of two points,” (1) Part A - is the anchoring still required on the mainline roadway? (2) Part B – is the anchoring still required on the bridge locations? (3) Part C – if anchoring is still required, what are the acceptable patching methods on the previously existing asphalt, the newly paved asphalt, and on the bridge locations?

A#21 If option #2 (steel portable barrier system) is used, it shall be anchored per the manufacturer’s recommendation for bidirectional traffic. If option #2 (steel portable barrier system) is used, anchoring is not required on mainline bridges. If option #2 (steel portable barrier system) is used and anchoring employed in accordance with the recommendations of the manufacturer, the Contractor shall propose a repair method to be reviewed and approved by the Chief Engineer.

Q#22 On plan sheet 6/14, in the Typical Section – Shoulder Replacement, SP 304 is listed, it looks like the pay item for 304 was changed from SP 304 to ODOT 304, can ODOT 304 be used in this application as well?

Q#22 Plan Sheet 6 of 14 is revised through this Addendum No. 1 to delete the “SP” prefix to Item 304.

Q#23 On plan sheet 10/14, in both Stages #1 and #3: (1) Part A - what are the minimum lane widths whether concrete temporary barrier wall or metal temporary barrier wall is used? (2) Part B – depending on the answer to Part A, will the existing SNAP’s be required to be removed and how will the removal and asphalt installation be paid for? (3) Part C – will SNAP removal be required beyond the project limits? (4) Part D – depending on the answer in Part A, will advance shoulder repair be required before the Stage #1 and #3 zone setups?

Q#23 The minimum lane width required will be 10 feet whether the Contractor elects Option #1 or Option #2 of SP 622. SNAPs will only be removed in the crossovers used for temporary traffic control purposes and will be removed during the normal milling and repaving operations for the resurfacing of those crossovers. Any shoulder repair work required at the crossover locations used for temporary traffic control purposes, will be performed during the resurfacing of those crossovers. All other locations should be taken care of during the normal milling and paving operations for Stage 1 and Stage 3, unless directed otherwise by the Chief Engineer, for safety reasons.

Q#24 On plan sheet 10/14, in both Stages #1 and #3, (1) Part A - should the edge line on both sides of the barrier wall be yellow? (2) Part B – on the traffic side of the wall, can the barrier side edge line be installed after the wall is set under a rolling road block?

Q#24 Plan Sheet 10 of 14 is revised through this Addendum No. 1 to clarify the temporary pavement marking colors. The Contract Documents are further modified to provide that the installation of the traffic side yellow edge line can be installed, during times of low traffic volume, utilizing a rolling road block.

Q#25 On plan sheet 10/14, in both Stages #1 and #3, in the bridge deck sections, the counter flow right side edge line is shown to be taped over, however, note #2 at the bottom of the page requires painting over and hydro-blast removal – which applies? Please note - this taping method has not worked in the past.

Q#25 Plan Note 2 on Plan Sheet No. 10 of 14 requires the tape method for the bridge decks only. Note 3 limits the removal of temporary pavement markets on resurfaced pavement to hydro-blast demolition.

Q#26 On plan sheet 10/14, note #1 at the bottom of the sheet states “these sections replace the sections on TCR-3.1.” TCR-3.1 is not included in the plans. Is the entire sheet TCR-3.1 replaced?

Q#26 Standard Drawing TCR-3.1 has been replaced with Standard Drawing TCR-4. Plan Sheet No. 10 of 14 is revised accordingly with this Addendum No. 1.

Q#27 On plan sheet 14/14, in the Full Depth Repair Notes, does note #1 apply with the Re-Bid traffic scheme?

Q#27 No. Plan Sheet No. 14 of 14 is revised with this Addendum No. 1 to strike Note 1.

Q#28 On plan sheet 3/14, in the Approach Slab Repair Notes, does note #1 apply with the Re-Bid traffic scheme?

Q#28 No. Plan Sheet No. 3 of 14 is revised with this Addendum No. 1 to strike Note 1.

Q#29 On plan sheet #7/14, in the center column, Item SP 304 is listed while the pay item in the pay item summary is ODOT 304. Is this referenced note intended to be ODOT Item 304?

A#29 Yes. Plan Sheet No. 7 of 14 is revised through this Addendum No. 1 to delete the “SP” prefix to Item 304.

Q#30 On plan sheet 10/14, in the notes in the bottom center of the page, note #3 references SP 641C. Is this intended to be SP 614C?

A#30 Yes. Plan Sheet No. 10 of 14 is revised through this Addendum No. 1 to correct the reference to SP 614C.

Q#31 On plan sheet 10/14, in the notes in the bottom center of the page, note #4 references the use of temporary tape. In the past the tape has not adhered to the bridge decks. Can this be changed to temporary paint with hydro-blasting removal?

A#31 No. Contractor to install Temporary Tape on the bridge decks as described in the Plans.

Q#32 In SP 103 Construction Phasing and Time of Completion - notes E and F state the Stage 2 work is required to be performed between June 24th and August 16th, 2019 after Stage 1 is substantially complete and before Stage 3 is started. Attempting to avoid the heavier traffic in the summer months, would it be possible to perform Stage 2 very early in the project along with Stage 1 initial work provided the Stage 1 initial barrier wall setup would be in the westbound lanes with the initial physical work happening in the eastbound lanes? The EB traffic in the area of the Stage 2 work would be pushed over to the inside lanes and could then enter the crossover to the Stage 1 bi-directional traffic area setup in the WB lanes. The Stage 2 zones are short due to the trench closure requirements. The eastern most portion of Stage 2 would connect to the crossover zone setup for Stage 1.

A#32 No. The Contractor cannot perform Stage 2 Work during the same time Stage 1 Work is being performed. The Contractor shall perform the Work in the order prescribed in SP 103 Construction Phasing and Time of Completion.

MODIFIED CONTRACT DOCUMENTS

With this Addendum No. 1, the Commission substitutes the enclosed material for the following Contract Documents:

Plan Sheet Nos.: 3, 6, 7, 10, 12 and 14 of 14.

with additions to the Plan Drawings are called out with a cloud and a revision triangle as thus:



Receipt of Addendum No. 1

Project No. 59-19-01 (RE-BID) is hereby acknowledged:

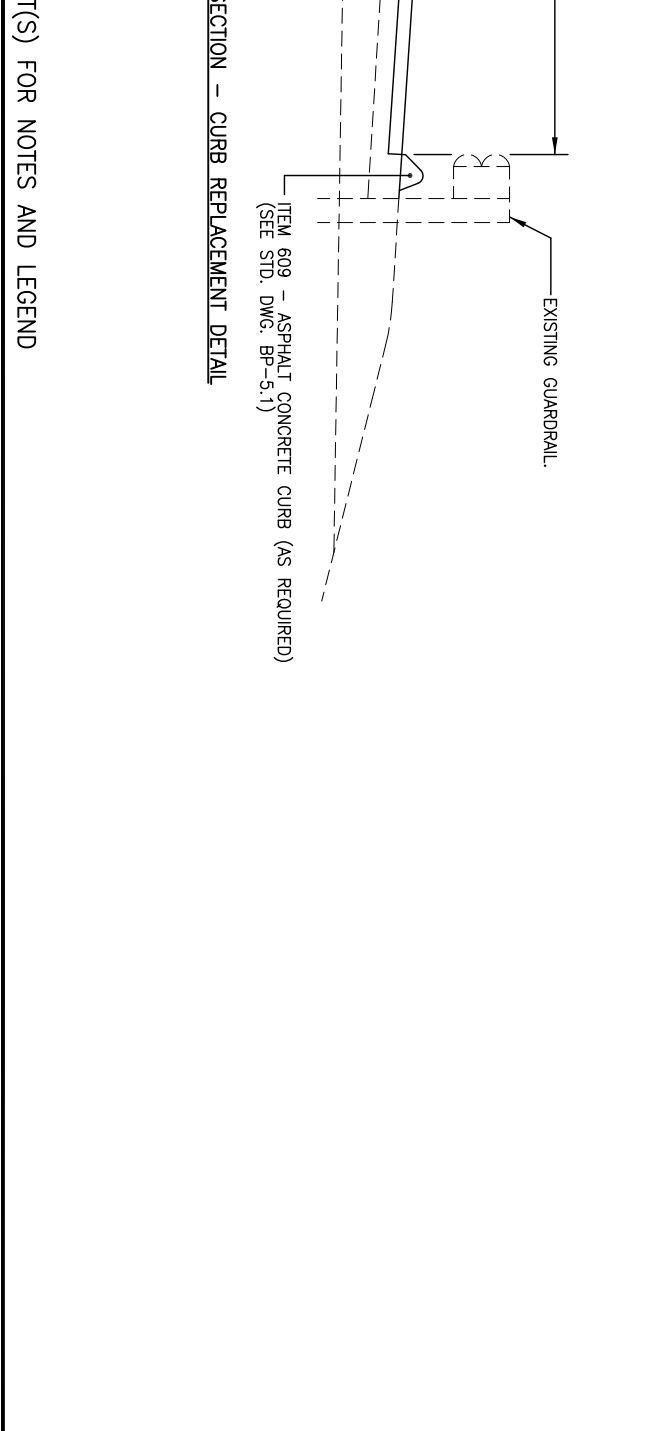
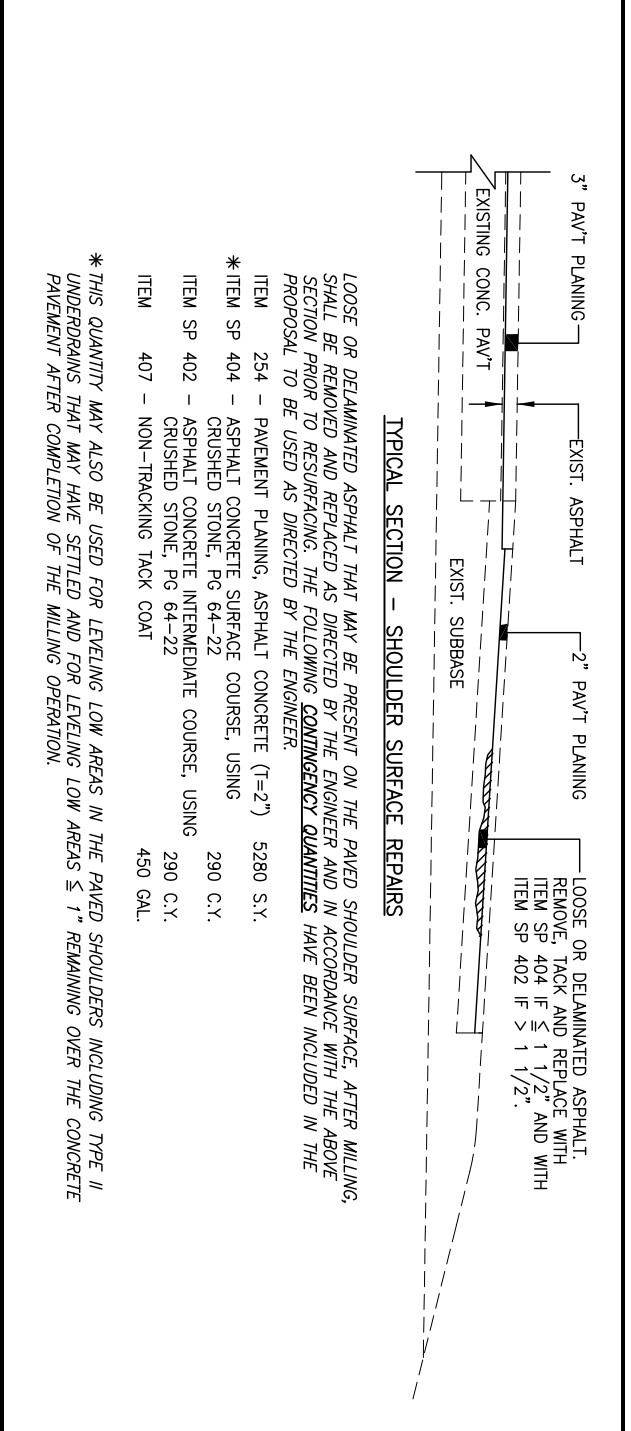
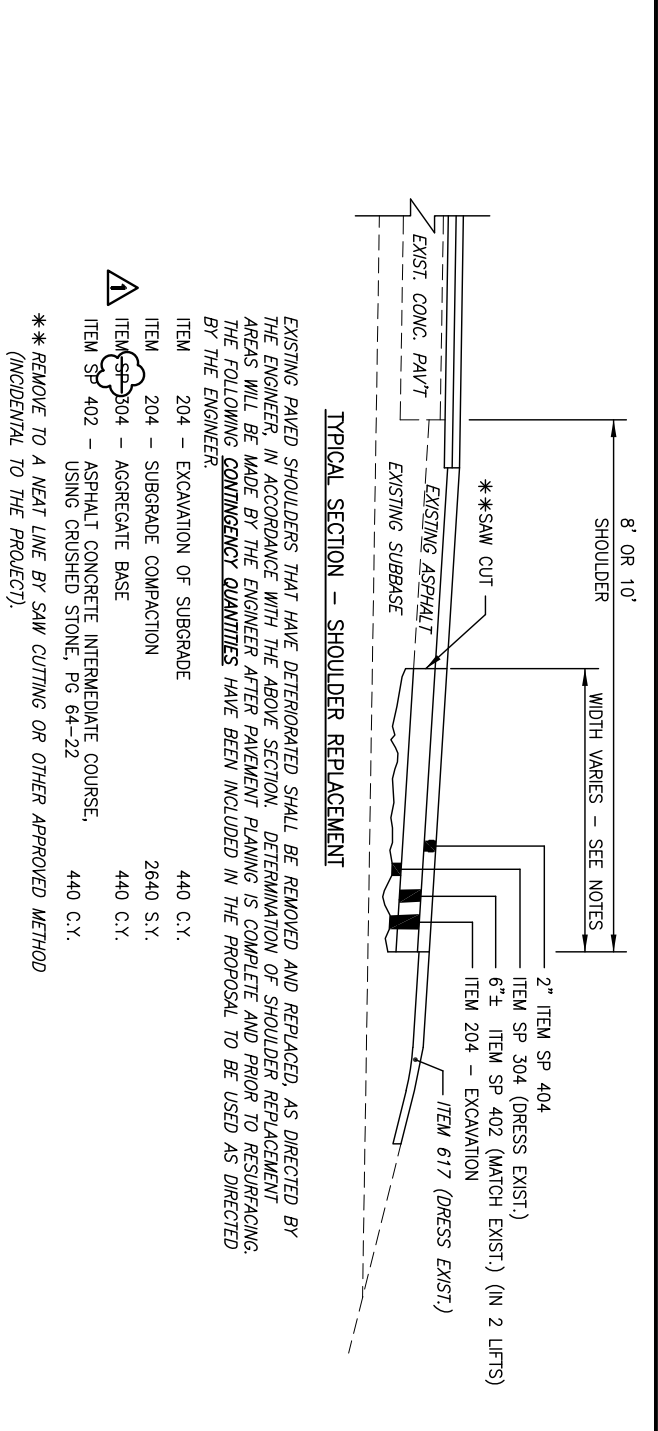
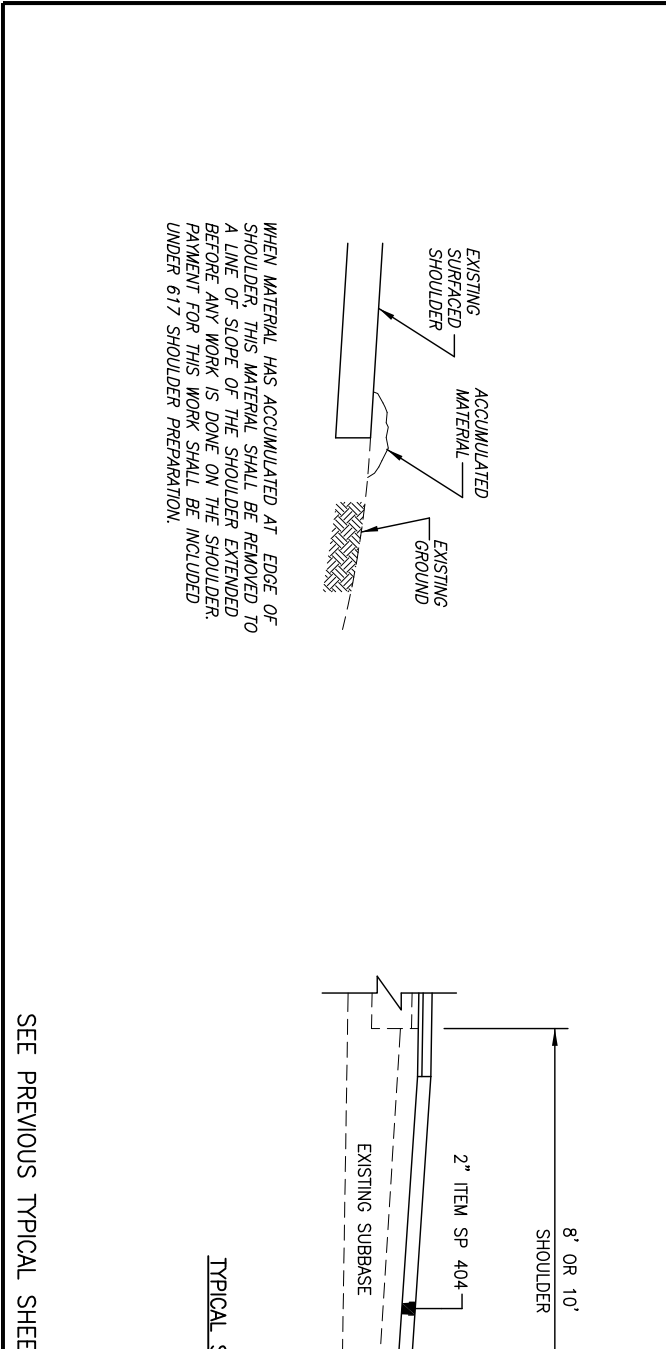
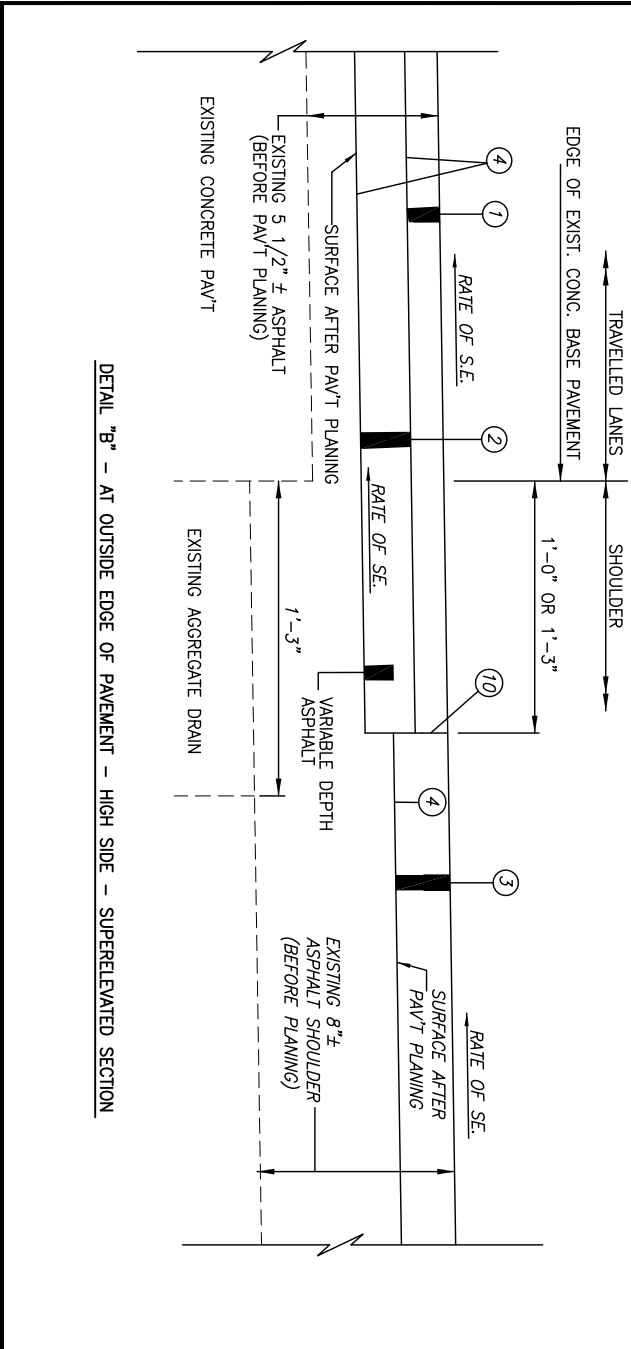
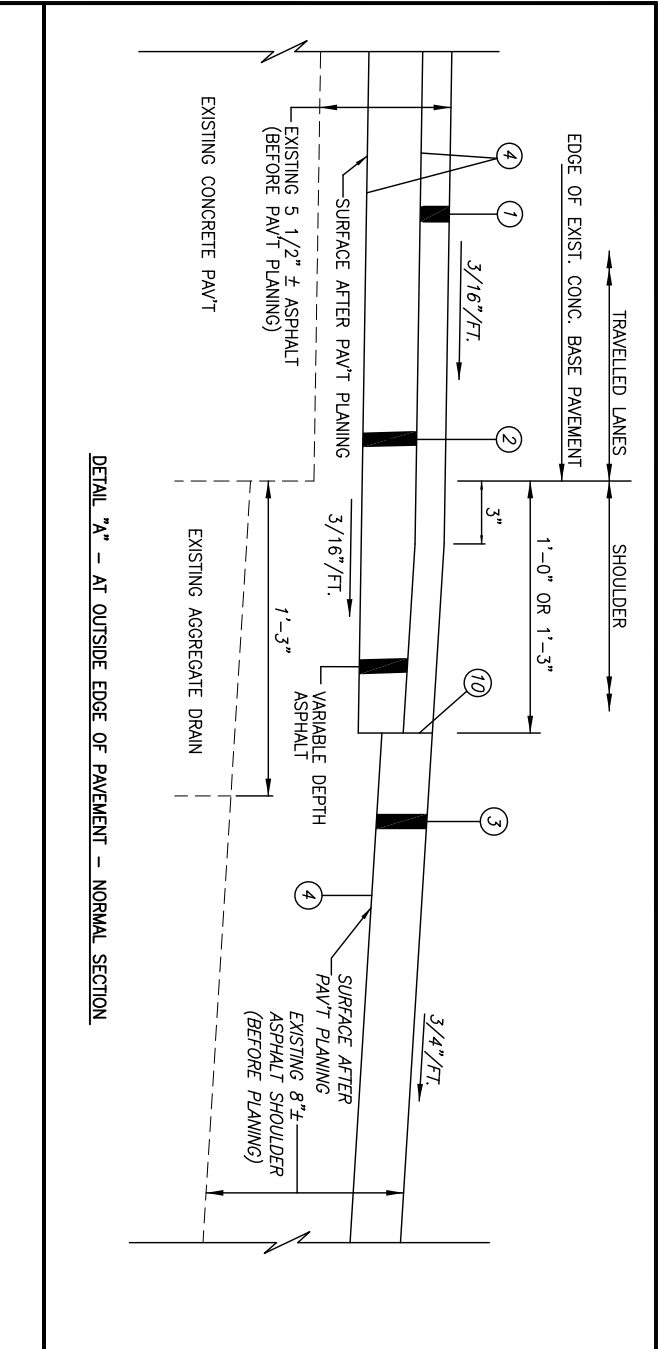
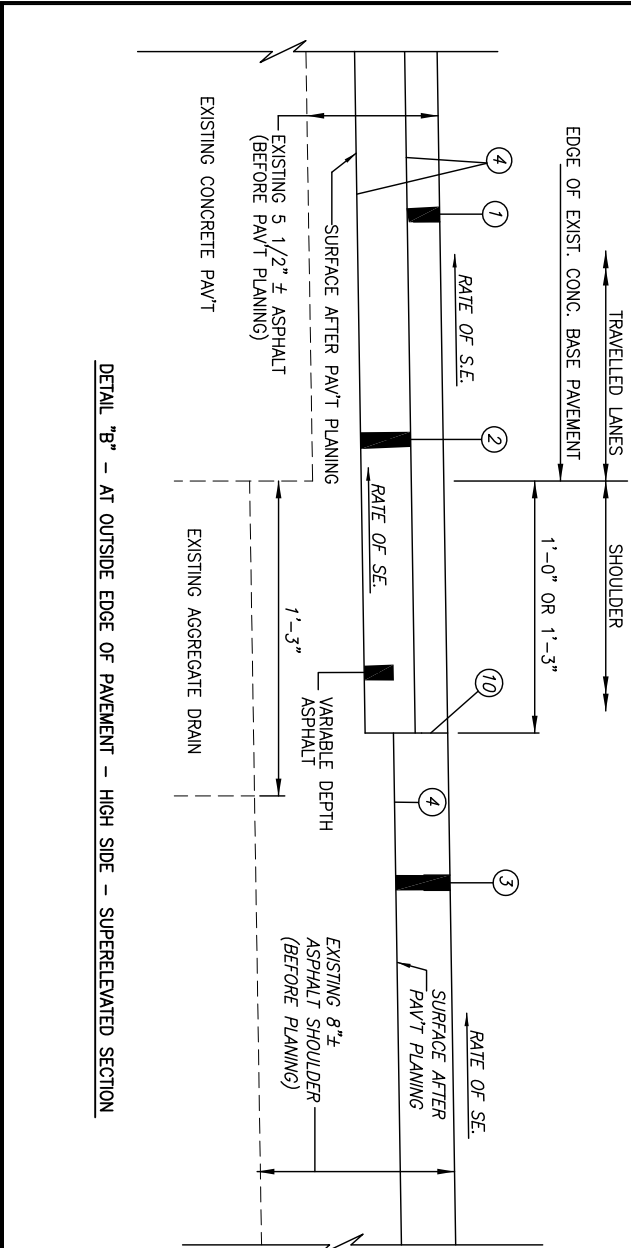
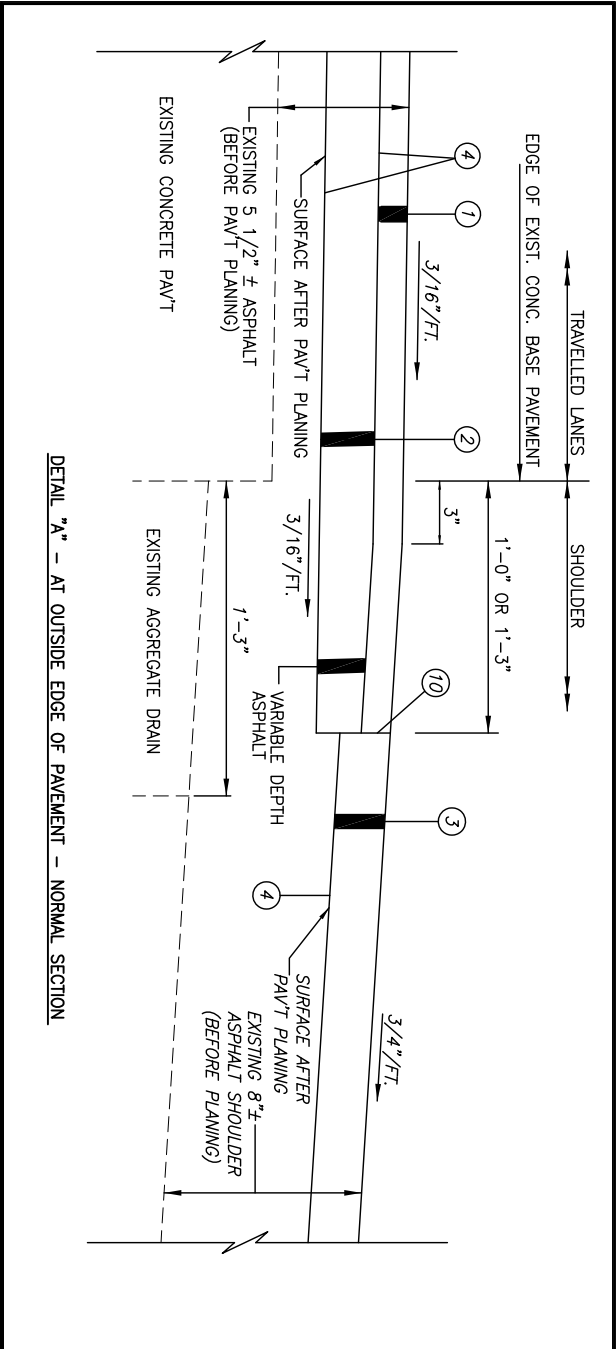
(Firm Name) _____

(Signature) _____

(Printed Name) _____

(Date) _____

**BIDDERS MUST RETURN THE ABOVE ACKNOWLEDGEMENT
OF RECEIPT OF ADDENDUM NO. 1 WITH THEIR BID.**



SAFETY AND CONTINUITY OF OPERATIONS OF TRAFFIC ON THE OHIO TURNPIKE SHALL BE OF THE UTMOST IMPORTANCE AND SHALL AT ALL TIMES BE PROTECTED AND SAFEGUARDED. THE CONTRACTOR SHALL DAILY, NOT LATER THAN 12 O'CLOCK NOON, INFORM THE CHIEF ENGINEER AS TO HIS OPERATIONS AND METHOD OF WORK FOR THE FOLLOWING DAY. WHENEVER SUCH WORK, IN THE OPINION OF THE CHIEF ENGINEER, MAY AFFECT THE SAFETY OF TRAFFIC ON THE OHIO TURNPIKE, THE METHOD OF DOING SUCH WORK SHALL BE SUBMITTED TO THE CHIEF ENGINEER FOR APPROVAL, WITHOUT WHICH IT SHALL NOT BE COMMENCED OR PROSECUTED. ANY REQUEST FOR WORK INVOLVING LANE CLOSURE(S) MUST BE SUBMITTED ON AN APPROVED LANE CLOSURE REQUEST FORM SUPPLIED BY THE COMMISSION.

EXISTING UTILITIES
AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTION SERVICE AND THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY IN THE AREA FOR APPROPRIATE MARKING. THE CONTRACTOR SHALL BE AWARE THAT WITHIN THE PROJECT LIMITS, CENTURYLINK AND THE OHIO TURNPIKE HAVE FIBER OPTIC CABLES. THE TURNPIKE CABLE RUNS ALONG THE NORTH RIGHT OF WAY AND THE CENTURYLINK CABLE RUNS PARALLEL TO THE WESTBOUND ROADWAY LEFT SHOULDER WITHIN THE MEDIAN.

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE EXISTING O.T.I.C. UNDERGROUND LIGHTING OR O.T.I.C. COMMUNICATIONS FACILITIES, THE CONTRACTOR SHALL NOTIFY O.T.I.C. DIVISION TRADES SUPERVISOR BASED ON LOCATION OF PROJECT AS INDICATED ON THE TITLE SHEET.

ITEM SP 202B – CRACK REPAIRS
THE FOLLOWING CONTINGENCY ITEMS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR USE AS DIRECTED BY THE CHIEF ENGINEER FOR PAYMENT CRACK REPAIR. THE CRACK REPAIR SHALL OCCUR PRIOR TO THE PLACEMENT OF THE ASPHALT LEVELING COURSE. CRACK REPAIR SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM:

- ITEM SP 202B--CRACK REPAIR, 1" OR LESS, USING SAND ASPHALT 50 CU.YD.
- ITEM SP 202B--CRACK REPAIR, 1" OR LESS, USING HOT JOINT SEALER 3,000 GAL.
- ITEM SP 202B--CRACK REPAIR, WIDER THAN 1" AND LESS THAN 1" 50 CU.YD.
- ITEM SP 202B--CRACK REPAIR, WIDER THAN 1" AND GREATER THAN 1" 50 CU.YD.
- ITEM SP 202B--3 CORNER CRACK REPAIR, USING ITEM SP 402 (PG 64-22) 50 CU.YD.
- ITEM SP 202B--REPAIR EXISTING EXPANSION JOINT, USING ITEM SP 404(PG 64-22) 20 CU.YD.

SOFT SUBGRADE
THE FOLLOWING CONTINGENCY ITEMS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR REPAIR OF SOFT SUBGRADE AS DIRECTED BY THE CHIEF ENGINEER FOR FULL DEPTH REPAIRS AND/OR SHOULDER RECONSTRUCTION:

- ITEM 204 – EXCAVATION OF SUBGRADE 50 CU.YD.
- ITEM 204 – EMBANKMENT 50 CU.YD.
- ITEM 204 – SUBGRADE COMPACTION 300 SQ.YD.

ITEM SP 611 – CATCH BASIN ADJUSTMENTS, GRATES AND CASTINGS, AS PER PLAN
THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR USE IN ADJUSTING, REPAIRING AND/OR REBUILDING SHOULDER CATCH BASINS, FOR CATCH BASINS, ADJUSTED TO GRADE. THE CONTRACTOR SHALL REBUILD FROM THE TOP OF PRECAST STRUCTURE TO THE BOTTOM OF THE CASTING AT THE EXISTING GRADE. THE USE OF BRICK TO REBUILD THE CATCH BASIN SHALL BE PROHIBITED. THE CONTRACTOR SHALL SAWCUT PAYMENT AROUND THE EXISTING CATCH BASIN, A MINIMUM OF 12 AROUND THE CASTING, THEN REMOVE THE CASTING AND SAWCUT ASPHALT CONCRETE. THE CONTRACTOR SHALL FORM AND POUR, USING QC-1 CONCRETE, TO REBUILD THE CATCH BASIN. TO SECURE CONCRETE TO THE EXISTING PRECAST STRUCTURE, THE CONTRACTOR SHALL INSTALL #4 DOWEL BARS, SPACED 12" O/C, 3 PER SIDE UNLESS DIRECTED OTHERWISE BY THE CHIEF ENGINEER, IN ACCORDANCE WITH CMS 509 AND 510. THE DOWEL BARS SHALL BE EMBEDDED AT LEAST 6" INTO THE EXISTING PRECAST STRUCTURE AND SECURED WITH NON SHRINK NON METALIC GROUT THAT CONFORMS TO 705.20. THE CONTRACTOR SHALL USE FORMS, SIZED TO CONFORM TO THE INTERIOR OF THE CATCH BASIN THAT WILL ENSURE A SMOOTH INTERIOR FINISH. ALL OTHER CONCRETE SURFACES SHALL HAVE A BROOMED FINISH. AFTER THE CASTING IS SET TO THE FINAL GRADE, THE AREA AROUND THE ADJUSTED CATCH BASIN CASTING SHALL BE BACK FILLED WITH QC-1 CONCRETE TO THE EXISTING SURFACE. FOR CATCH BASINS ADJUSTED TO GRADE WITH DISTANCES FROM THE TOP OF THE PRECAST STRUCTURE TO THE BOTTOM OF THE CASTING THAT ARE LESS THAN 4", THE SAME METHOD SHALL BE USED TO REBUILD THE CATCH BASINS TO GRADE, EXCEPT THAT NO FORMS OR DOWELS ARE REQUIRED.

THE EXISTING GRATE AND CASTING SHALL BE REUSED UNLESS DIRECTED OTHERWISE BY THE CHIEF ENGINEER. A CONTINGENCY QUANTITY OF CATCH BASIN GRATE AND CASTING, AS PER PLAN, HAS BEEN INCLUDED FOR USE AS DIRECTED BY THE CHIEF ENGINEER. THE REPLACEMENT GRATE AND CASTING SUPPLIED SHALL BE HEAVY DUTY AND MATCH EXISTING.

ALL SAWCUTTING, CONCRETE, DOWELS, DOWEL HOLES, GROUT, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE MENTIONED WORK SHALL BE INCLUDED IN THE BID PRICE PER ITEM:

- ITEM SP 611 – CATCH BASIN, RECONSTRUCTED TO GRADE, LESS THAN 4", AS PER PLAN 5 EACH
 - ITEM SP 611 – CATCH BASIN, RECONSTRUCTED TO GRADE, 4" –12", AS PER PLAN 5 EACH
 - ITEM SP 611 – CATCH BASIN, RECONSTRUCTED TO GRADE, GREATER THAN 12", 5 EACH
 - ITEM SP 611 – CATCH BASIN GRATE AND CASTING, AS PER PLAN 6 EACH
- OTIC STANDARD DRAWINGS CB-1 AND CB-2 ARE PROVIDED FOR INFORMATION AS TO THE TYPES OF BASINS THAT MAY NEED ADJUSTMENT.

ITEM 609 – ASPHALT CONCRETE CURB, PG. 64-22, STANDARD TYPE 1
A QUANTITY OF 1,000 FOOT IS INCLUDED IN THE ESTIMATED QUANTITIES FOR USE FOR REPAIR/REPLACEMENT OF CURBING WITHIN PROJECT LIMITS OR AS DIRECTED BY THE CHIEF ENGINEER. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, REMOVAL OF CURB, CLEANING, TACKING WITH NON-TRACKING TACK COAT AND ANY INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

ITEM SP 404A – JOINT SEALER
A CONTINGENCY QUANTITY OF 1,000 FOOT, IS INCLUDED IN THE ESTIMATED QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER FOR SEALING BUTT JOINTS AND LOCATIONS WHERE EXISTING PAYEMENT AND PROPOSED PAYEMENT MEET.

ADDITIONALLY, A QUANTITY HAS BEEN INCLUDED IN THE PLANS TO SEAL THE LONGITUDINAL JOINT CREATED DURING PART WIDTH CONSTRUCTION AT THE PLAZA RAMPS.

ITEM SP 30A – AGGREGATE BASE
A CONTINGENCY QUANTITY OF 50 C.Y. IS INCLUDED IN THE ESTIMATED QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER FOR DRESSING BASE MATERIAL UNDER THE FULL DEPTH REPAIRS.

ITEM 614 – ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN
THIS ITEM SHALL CONSIST OF THE CONTRACTOR PROVIDING APPROXIMATELY 50 CU.YD. OF ITEM 614--ASPHALT CONCRETE FOR MAINTAINING TRAFFIC. THIS ITEM SHALL BE USED FOR WEDGING PURPOSES TO AID IN TRANSITIONING TRAFFIC FROM NORMAL TO FINAL SURFACE AND BACK AT THE PERTINENT TOLL/SERVICE PLAZAS FOR EACH PART OF THE CONTRACT. SMOOTH TRANSITIONS BETWEEN SURFACES SHALL BE MAINTAINED AT ALL TIMES AT TOLL/SERVICE PLAZA ACCEL/DECEL. AT NO TIME SHALL TRAFFIC BE SUBJECTED TO SUDDEN DIPS, DROPOFFS, OR BUMPS. ASPHALT WEDGING OF TRANSITION AREAS SHALL BE IN ACCORDANCE WITH ODOT STANDARD DRAWING MT-101.90. MATERIAL SUPPLIED FOR THIS ITEM SHALL COMPLY WITH THE REQUIREMENTS OF 614.13.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM INCLUDING PLACING AND REMOVING THE ASPHALT CONCRETE WEDGES (WHEN NEEDED). THIS ITEM SHALL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 614--ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN.

ITEM 617/SP 627
THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR USE, OR AS DIRECTED BY THE CHIEF ENGINEER, FOR ADDING NEW MATERIAL UNDER GUARDRAIL AND ALONG SELECTED ROADWAY LOCATIONS TO BRING THE AREA UP TO GRADE AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ITEM:

- ITEM 617--SHOULDER PREPARATION 49,228 SQ.YD.
- ITEM 617--COMPACTED AGGREGATE 4,102 CU.YD.
- ITEM 617--WATER 50 M.GAL.
- ITEM SP 627--STONE SHOULDER PROTECTION 950 CU.YD.
- ITEM SPECIAL--REGRADE UNDER GUARDRAIL 11,500 SQ. YD. (*)

(*) – ITEM INCLUDED TO BE USED, AS DIRECTED BY THE CHIEF ENGINEER, TO LEVEL AREAS UNDER EXISTING AND PROPOSED GUARDRAIL LOCATIONS WHERE STONE SHOULDER PROTECTION IS MORE THAN 1" ABOVE THE EDGE OF THE SHOULDER PAYEMENT. ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NEEDED TO LOWER THE STONE PROTECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM. ALL LOCATIONS WILL BE DELINEATED BY THE CHIEF ENGINEER, UPON COMPLETION OF SHOULDER PAVING IN EACH STAGE.

ADDITIONALLY, FOR SHOULDER PREPARATION, CONTRACTOR SHALL PREPARE THE EXISTING SURFACE TO ACCEPT SOME ADDITIONAL 617. EXCESS MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH SP 105.

THE USE OF #57 STONE IN PLACE OF #67 STONE FOR ITEM SP 627, STONE SHOULDER PROTECTION IS AN ACCEPTABLE REPLACEMENT AND CAN BE PROVIDED AT NO ADDITIONAL COST TO THE COMMISSION, WHERE APPEARING THROUGHOUT THE CONTRACT DOCUMENTS #67 IS SUPPLEMENTED WITH "OR #57".

ITEM 619 – FIELD OFFICE, AS PER PLAN
THE FIELD OFFICE PROVIDED SHALL MEET THE REQUIREMENTS OF ITEM 619, TYPE B FIELD OFFICE WITH THE FOLLOWING EXCEPTION(S):
– THE FIELD OFFICE WILL BE PAID AT THE CONTRACT LUMP SUM PRICE BID, WHICH SHALL BE FULL COMPENSATION FOR FURNISHING AND MAINTAINING FACILITIES, ALL UTILITIES, HEAT, ELECTRIC, TELEPHONES, INTERNET, WEEKLY CLEANING AND REMOVAL OF FACILITIES UPON COMPLETION OF THE CONTRACT.

ITEM SP 626 – BARRIER REFLECTOR
ITEM SP 626--BARRIER REFLECTOR, TYPE A (WHITE/YELLOW) OR TYPE B (WHITE/YELLOW) SHALL CONSIST OF INSTALLING REFLECTORS AT GUARDRAIL AND/OR PARAPET WALL LOCATIONS IDENTIFIED BY THE CHIEF ENGINEER, WITHIN PROJECT LIMITS, THAT REQUIRE INSTALLATION, REPAIR, OR REPLACEMENT OF BARRIER REFLECTORS. FOR THIS PURPOSE, A CONTINGENCY QUANTITY IS INCLUDED IN THE ESTIMATED QUANTITIES FOR USE AS DIRECTED BY THE CHIEF ENGINEER.

- ITEM SP 626--BARRIER REFLECTOR TYPE A(WHITE/YELLOW) 400 EACH
- ITEM SP 626--BARRIER REFLECTOR TYPE B(WHITE/YELLOW) 400 EACH

CONTINGENCY QUANTITIES
THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE CHIEF ENGINEER" UNLESS AUTHORIZED BY THE CHIEF ENGINEER. THE ACTUAL WORK LOCATION AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED IN THE FINAL CHANGE ORDER GOVERNING THE COMPLETION OF THIS PROJECT.

INCLEMENT WEATHER
THE CONTRACTOR SHALL BE AWARE OF AND PREPARE FOR CHANGING WEATHER CONDITIONS. WHEN CONDITIONS DICTATE, OR AS DIRECTED BY THE CHIEF ENGINEER, THE CONTRACTOR SHALL PROVIDE AND UTILIZE NECESSARY EQUIPMENT TO PREVENT WATER FROM PONDING ALONG THE MILLED SURFACE AND FLOWING INTO AND ACROSS ACTIVE TRAFFIC LANES.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE ABOVE MENTIONED SHALL BE CONSIDERED INCIDENTAL TO ITEM SP 614--MAINTAINING TRAFFIC.
CONTRACTOR STAGING AREA
THE AVAILABLE CONTRACTOR STAGING AREA WILL BE EXIT 13. IF A CONTRACTOR CHOOSES A STAGING AREA WITHIN THE TURNPIKE RIGHT OF WAY OTHER THAN WHAT IS INDICATED IN THE PLANS, IT MUST BE SUBMITTED TO THE CHIEF ENGINEER FOR APPROVAL PRIOR TO USE.

THE STAGING AREA SHALL BE MAINTAINED BY THE CONTRACTOR AND RESTORED TO ORIGINAL CONDITION TO THE APPROVAL OF THE ENGINEER PRIOR TO COMPLETION OF ALL WORK.

PORTABLE CHANGEABLE MESSAGE SIGN (POMS)
THE CONTRACTOR SHALL SUPPLY 2 POMS FOR THE DURATION OF THE PROJECT. THE POMS SHALL BE AN AMERICAN SIGNAL CMS-1333 LED PORTABLE FULL-MATRIX MESSAGE BOARD OR APPROVED EQUAL AND SHALL HAVE AS A MINIMUM THE FOLLOWING FEATURES & OPTIONS:

- FULL-MATRIX
- PORTABLE
- LED
- FOCUSING LENS TO COVER EACH INDIVIDUAL LED
- WIRELESS REMOTE CONTROL
- SOLAR-POWERED (W/AMSTAR ADJUSTABLE SOLAR ASSEMBLY)
- NUMBER OF SOLAR PANELS: TWO (2)
- ONE (1), TWO (2), OR THREE (3) LINE MESSAGES
- EIGHTEEN INCH (18") CHARACTER DISPLAY
- FULL-SIZE KEYBOARD TERMINAL
- HANDHELD CONTROLLER WITH VT 100 CURSOR CONTROL COMMANDS
- LEGIBILITY DISTANCE (MOST CONDITIONS): ONE THOUSAND TWO-HUNDRED FIFTY FEET (1,250')
- INDIVIDUAL AND REMOVABLE POLYCARBONATE LENS FOR EACH ROW OF LED PANELS, WITH FLAT-BLACK SCREENING TO REDUCE GLARE
- TEMPERATURE RANGE: MINUS 30 DEGREES FARENHEIGHT TO ONE HUNDRED SIXTY-FIVE DEGREES FARENHEIGHT (-300 F TO 1650 F)
- TREES: FIFTEEN INCHES (15")
- STEEL BATTERY ENCLOSURES
- NUMBER OF BATTERIES: SIX (6) EACH 12VDC
- BATTERY ENERGY: THIRTY (30) DAYS
- TRAILER LENGTH: ONE HUNDRED NINETY-SIX INCHES (196")
- TRAILER WIDTH: ONE HUNDRED TWENTY-SIX INCHES (126")
- HEIGHT FULLY RAISED: ONE HUNDRED SIXTY-TWO INCHES (162")
- HEIGHT IN TRANSPORT POSITION: ONE HUNDRED SEVEN INCHES (107")
- TRAILER DIMENSIONS: ONE HUNDRED NINETY-SEVEN INCHES LONG (197") X SEVENTY-NINE PINTLE TWO INCHES WIDE (79.2")
- PINTLE HITCH
- NOTUP COMPLIANT
- COMPATIBLE WITH GUI SOFTWARE CURRENTLY UTILIZED WITH EXISTING CMS-1333 MODELS OPERATING ON THE OHIO TURNPIKE (EASYSOFT SOFTWARE)
- MODEM: DEPMVME OR APPROVED 4G LTE COMPATIBLE WIRELESS MODEM

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGN BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE CHIEF ENGINEER. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE CHIEF ENGINEER, RELOCATE THE POMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS, WHEN NOT IN USE, THE POMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE CHIEF ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CHIEF ENGINEER. THE SIGN SHALL HAVE TWO DIFFERENT MEMORIES (FROM AND RAW) AND CAPABILITY TO STORE UP TO 99 MESSAGES IN EACH MEMORY. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. IN ORDER TO CONVEY A MAXIMUM OF INFORMATION AT A SINGLE GLANCE, ONLY THREE LINE PRESENTATION FORMATS WITH A MAXIMUM OF THREE MESSAGE PHASES WILL BE PERMITTED. NORMALLY, ONLY A MAXIMUM OF TWO MESSAGE PHASES SHOULD BE EMPLOYED. POMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

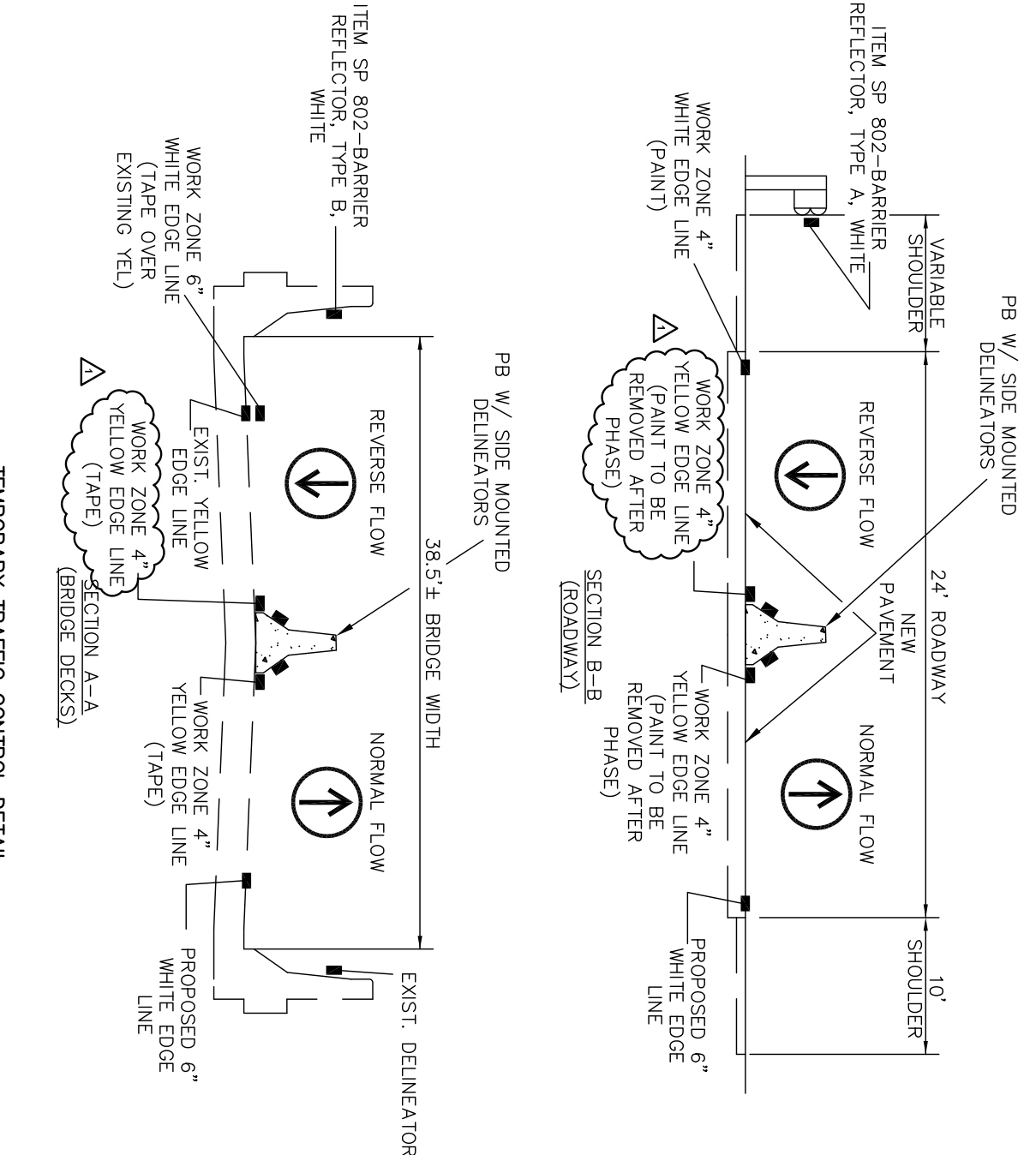
THE POMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF SP 614. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE POMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE BID FOR ITEM SP 614 – MAINTAINING TRAFFIC AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

DESIGN AGENCY			
BY	DATE		
JJS	2/27/18		
DESIGNED	CHECKED	NO.	
JJS	CAM	△	
DRAWN	IN CHARGE		
JJS	ADY		

GENERAL NOTES

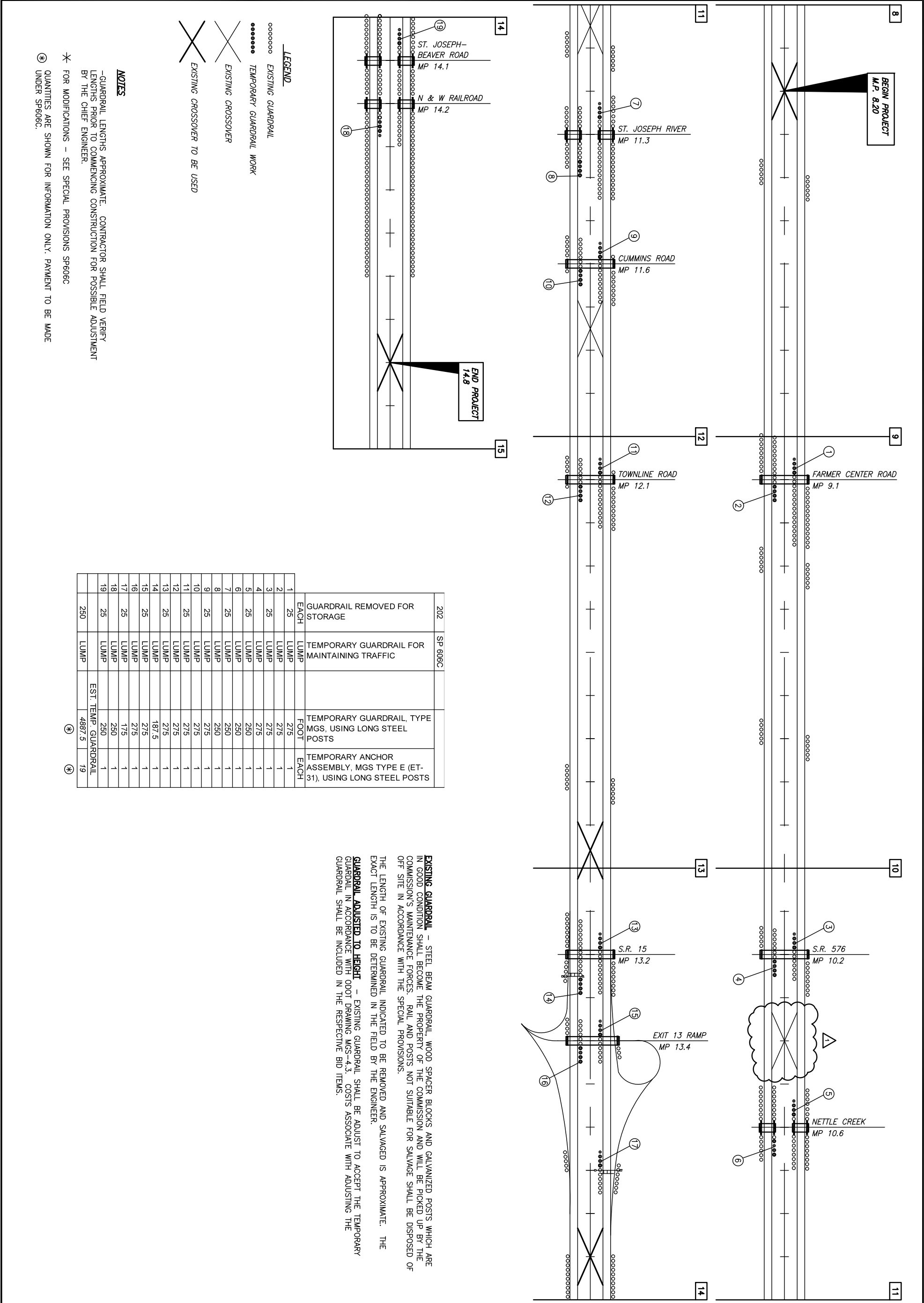
PROJECT 59-19-01



TEMPORARY TRAFFIC CONTROL DETAIL
FOR STAGE 3
BI-DIRECTIONAL ON NEW PAYEMENT

- 1 -THE ABOVE SECTIONS A-A AND B-B REPLACE THE SECTIONS ON STANDARD DRAWING TCR-4 FOR THIS PROJECT.
- 2 -THE SPECIFIED 6" TEMPORARY WHITE EDGE LINE IS TO BE PLACED OVER THE EXISTING 6" YELLOW EDGE LINE ON EXISTING PAVEMENT ONLY FOR STAGE 1 AND 3. THE SPECIFIED 6" TEMPORARY WHITE EDGE LINE (TAPE) IS TO BE PLACED OVER THE EXISTING 6" YELLOW EDGE LINE ON MAINLINE BRIDGE DECKS ONLY.
- 3 -A QUANTITY OF ITEM SP 614C HAS BEEN ADDED TO THE PLANS FOR REMOVAL OF WORK ZONE PAVEMENT MARKINGS INSTALLED ON NEWLY RESURFACED PAVEMENT. REMOVAL SHALL BE LIMITED TO WATER-BLAST ONLY AND THE CONTRACTOR SHALL DEMONSTRATE REMOVAL METHOD TO INSURE 100% REMOVAL OF LINES AS INDICATED.

MAINTENANCE OF TRAFFIC STAGE(S) 1 AND 3 - DETAILS



- LEGEND**
- EXISTING GUARDRAIL
 - TEMPORARY GUARDRAIL WORK
 - EXISTING CROSSOVER
 - EXISTING CROSSOVER TO BE USED

NOTES

- GUARDRAIL LENGTHS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY LENGTHS PRIOR TO COMMENCING CONSTRUCTION FOR POSSIBLE ADJUSTMENT BY THE CHIEF ENGINEER.

* FOR MODIFICATIONS - SEE SPECIAL PROVISIONS SP606C

⊛ QUANTITIES ARE SHOWN FOR INFORMATION ONLY. PAYMENT TO BE MADE UNDER SP606C.

202	SP 606C		TEMPORARY GUARDRAIL, TYPE MGS, USING LONG STEEL POSTS	TEMPORARY ANCHOR ASSEMBLY, MGS TYPE E (ET-31), USING LONG STEEL POSTS
1	25	LUMP	275	1
2		LUMP	275	1
3	25	LUMP	275	1
4		LUMP	275	1
5	25	LUMP	250	1
6		LUMP	250	1
7	25	LUMP	250	1
8		LUMP	250	1
9	25	LUMP	275	1
10		LUMP	275	1
11	25	LUMP	275	1
12		LUMP	275	1
13	25	LUMP	275	1
14		LUMP	187.5	1
15	25	LUMP	275	1
16		LUMP	275	1
17	25	LUMP	175	1
18		LUMP	250	1
19	25	LUMP	250	1
		LUMP	EST. TEMP. GUARDRAIL	79
	250	LUMP	4887.5	

EXISTING GUARDRAIL - STEEL BEAM GUARDRAIL, WOOD SPACER BLOCKS AND GALVANIZED POSTS WHICH ARE IN GOOD CONDITION SHALL BECOME THE PROPERTY OF THE COMMISSION AND WILL BE PICKED UP BY THE COMMISSION'S MAINTENANCE FORCES. RAIL AND POSTS NOT SUITABLE FOR SALVAGE SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

THE LENGTH OF EXISTING GUARDRAIL INDICATED TO BE REMOVED AND SALVAGED IS APPROXIMATE. THE EXACT LENGTH IS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

GUARDRAIL ADJUSTED TO HEIGHT - EXISTING GUARDRAIL SHALL BE ADJUST TO ACCEPT THE TEMPORARY GUARDRAIL IN ACCORDANCE WITH ODOT DRAWING MGS-4.3. COSTS ASSOCIATE WITH ADJUSTING THE GUARDRAIL SHALL BE INCLUDED IN THE RESPECTIVE BID ITEMS.

APPROX MILEPOST	LANE		SP 451
			FULL DEPTH PAVEMENT REPIARS (ASPHALT)
EB	RIGHT	LEFT	S.Y.
	1 8.2-8.35	X	X 266.67
	2 8.35	X	X 53.33
	3 8.85	X	X 53.33
	4 9.2	X	X 26.67
	5 10.4	X	X 53.33
	6 10.65	X	X 53.33
	7 14.3	X	X 53.33
	8 14.45	X	X 53.33
	9 14.6	X	X 53.33
	10 14.65	X	X 26.67
	11 14.68	X	X 53.33
TOTAL			746.67

APPROX MILEPOST	LANE		SP 451
			FULL DEPTH PAVEMENT REPIARS (ASPHALT)
	RIGHT	LEFT	S.Y.
	WB		
	1 10.65	X	X 26.67
	2 11.6	X	X 53.33
	3 12.25	X	X 53.33
	4 12.45	X	X 26.67
	5 13.0-13.46	X	X 133.33
	6 13.2	X	X 26.67
	7 13.4	X	X 26.67
	8 13.46	X	X 40.00
	9 13.75	X	X 13.33
	10 14.02	X	X 53.33
	11 14.03	X	X 53.33
	12 14.05	X	X 53.33
	13 14.1	X	X 53.33
TOTAL			613.33

- FULL DEPTH REPAIR NOTE(S):
- 1.- ALL FULL DEPTH REPAIRS EXCAVATED DURING A WORK SHIFT SHALL BE FILLED TO THE MILED SURFACE DURING THAT SAME WORK SHIFT. NO REPAIR SHALL BE LEFT OPEN BEYOND THE END OF THE SHIFT. THE CONTRACTOR SHALL PLAN HIS OPERATIONS ACCORDINGLY.

2.- A CONTINGENCY QUANTITY HAS BEEN ADDED TO COVER POSSIBLE FULL DEPTH REPAIRS IN THE RIGHT AND LEFT LANES FOR EB MP 8.20 TO MP 8.35 AND WB FROM MP 13.0 TO 13.5. FOR ESTIMATING PURPOSES, THE REPAIR WILL BE 5' X 24'. FINAL LOCATIONS WILL BE DETERMINED IN THE FIELD PRIOR TO COMMENCING STAGE 1, PHASE 3 AND 4 WORK.

3.- ALL FULL DEPTH REPAIRS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE CHIEF ENGINEER.

APPROX MP TO MP	202	202	606	SP 606A	606	606	606							
								PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	GUARDRAIL REMOVED	GUARDRAIL, TYPE MGS, USING LONG STEEL POSTS	ANCHOR ASSEMBLY, MGS TYPE E (ET-31), USING LONG STEEL POSTS	ANCHOR ASSEMBLY, MGS TYPE T, USING LONG STEEL POSTS	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, USING LONG STEEL POSTS	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, USING LONG STEEL POSTS
EB	EACH	FOOT	FOOT	EACH	EACH	EACH	EACH							
1 8.34-8.41 RT		437.50	400.00	1	1									
2 8.99-9.55 RT	1	412.50	375.00	1		1								
3 8.99-9.60 LT		425.00	387.50	1	1									
4 9.24-9.31 RT		425.00	387.50	1	1									
5 9.64-9.72 RT		462.50	425.00	1	1									
6 10.10-10.18 RT	1	425.00	387.50	1	1	1								
7 10.10-10.19 LT		437.50	400.00	1	1									
8 10.54-10.60 RT	1	387.50	350.00	1		1								
9 10.53-10.60 LT	1	425.00	387.50	1		1								
10 10.63-10.64 RT	1	75.00	75.00	1	1		1							
11 10.63-10.64 LT	1	87.50	87.50	1	1		1							
12 11.21-11.31 RT	1	575.00	537.50	1		1								
13 11.25-11.31 LT	1	425.00	387.50	1		1								
14 11.37-11.43 RT	1	412.50	412.50	1	1		1							
15 11.37-11.38 LT	1	87.50	87.50	1	1		1							
16 11.55-11.61 RT	1	425.00	387.50	1		1								
17 11.56-11.61 LT		400	362.5	1	1									
18 12.05-12.11 RT	1	412.5	375	1		1								
19 12.06-12.11 LT		412.5	375	1	1									
20 12.25-12.30 RT		275	237.5	1	1									
21 12.75-12.85 RT		425	387.5	1	1									
22 13.09-13.15 RT	1	450	412.5	1		1								
23 13.10-13.24 LT		825	787.5	1	1									
24 13.15-13.24 RT	1	425	425	1	1		1							
25 13.35-13.43 RT	1	412.5	375	1		1								
26 13.35-13.44 LT		450	412.5	1	1									
27 13.81-14.09 RT	1	1512.5	1475	1		1								
28 14.02-14.09 LT	1	412.5	375	1		1								
29 14.12-14.17 RT	2	212.5	212.5			1	1							
30 14.12-14.17 LT	2	262.5	262.5			1	1							
31 14.20-14.57 RT	1	1987.5	1987.5		1		1							
32 14.20-14.21 LT	1	87.5	87.5		1		1							
TOTAL	23	14887.5	14025	23	18	14	9							

APPROX MP TO MP	202	202	606	SP 606A	606	606	606
	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	GUARDRAIL REMOVED	GUARDRAIL, TYPE MGS, USING LONG STEEL POSTS	ANCHOR ASSEMBLY, MGS TYPE E (ET-31), USING LONG STEEL POSTS	ANCHOR ASSEMBLY, MGS TYPE T, USING LONG STEEL POSTS	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, USING LONG STEEL POSTS	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, USING LONG STEEL POSTS
	EACH	FOOT	FOOT	EACH	EACH	EACH	EACH
WB							
33 8.40-8.48 RT		425	387.5	1	1		
34 9.06-9.15 RT	1	425	387.5	1		1	
35 9.06-9.14 LT		412.5	375	1	1		
36 9.30-9.35 RT		437.5	400	1	1		
37 9.72-9.80 RT		437.5	400	1	1		
38 10.18-10.25 LT		425	387.5	1	1		
39 10.19-10.26 RT	1	425	387.5	1		1	
40 10.58-10.60 RT	1	87.5	87.5		1		1
41 10.58-10.60 LT	1	87.5	87.5		1		1
42 10.61-10.68 RT	1	387.5	350	1		1	
43 10.61-10.70 LT	1	412.5	375	1		1	
44 11.26-11.31 RT	1	275	275		1		1
45 11.30-11.31 LT	1	100	100				1
46 11.36-11.43 RT	1	387.5	350	1		1	
47 11.36-11.44 LT	1	425	387.5	1		1	
48 11.63-11.70 RT	1	400	362.5	1		1	
49 11.63-11.70 LT		387.5	350	1	1		
50 12.12-12.20 RT	1	400	362.5	1		1	
51 12.12-12.20 LT		412.5	375	1	1		
52 13.16-13.25 RT	1	425	387.5	1		1	
53 13.16-13.24 LT		412.5	375	1	1		
54 13.43-13.47 RT	1	237.5	200	1		1	
55 13.43-13.48 LT		325	287.5	1	1		
56 13.69-13.71 RT		225	187.5	1	1		
57 13.69-13.73 LT		325	287.5	1	1		
58 13.83-14.09 RT	1	1400	1400		1		1
59 14.08-14.09 LT	1	100	100		1		1
60 14.11-14.17 RT	2	350	350			1	1
61 14.11-14.16 LT	2	312.5	312.5			1	1
62 14.22-14.60 RT	1	2012.5	1975	1			
63 14.22-14.29 LT	1	412.5	375	1		1	
64 14.63-14.69 RT		275	237.5	1	1		
TOTAL	22	13562.5	12662.5	24	18	14	8

- GUARDRAIL NOTE(S):
- GUARDRAIL LOCATIONS AND LENGTHS APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO COMMENCING WORK. GUARDRAIL LENGTHS MAY BE ADJUSTED AT THE DIRECTION OF THE CHIEF ENGINEER.
 - GUARDRAIL GENERAL LOCATION IS IN DIRECTION OF TRAVEL.