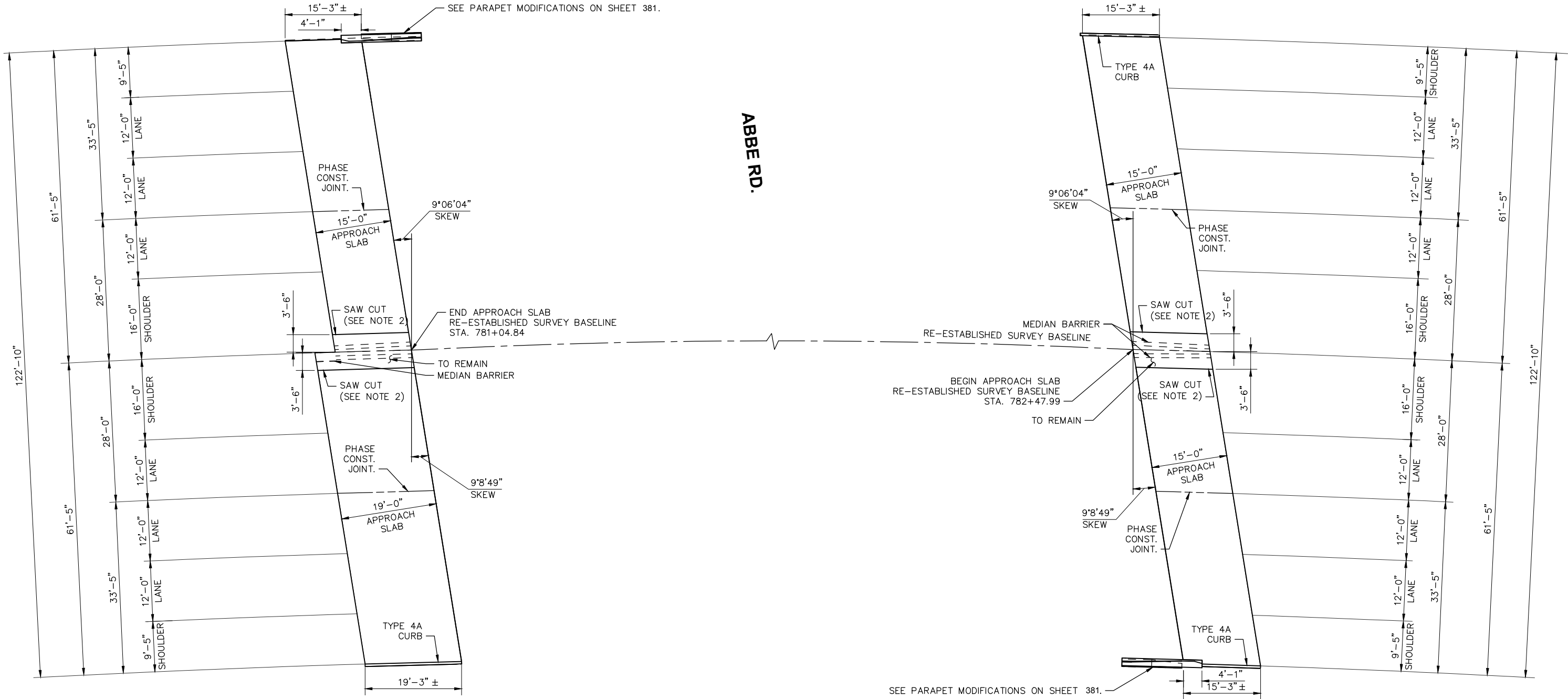


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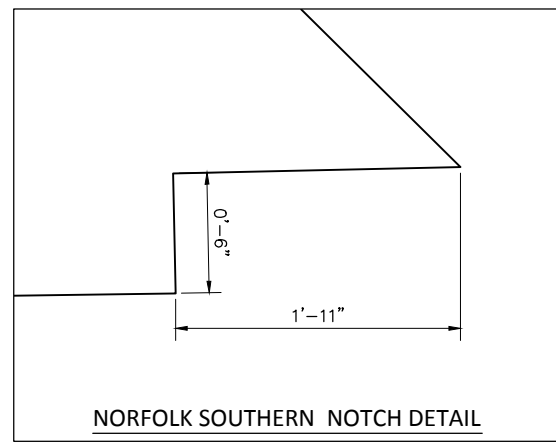
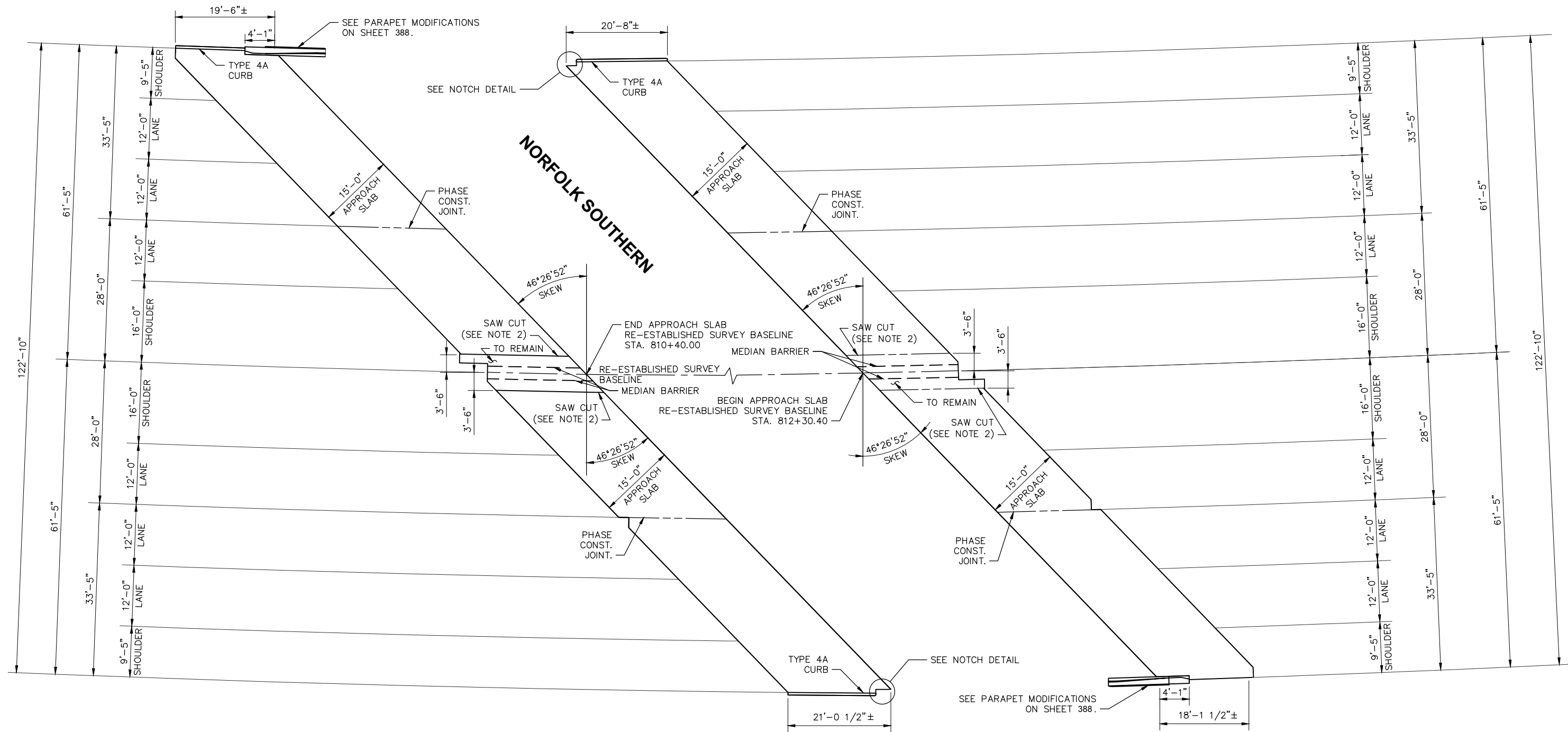
**APPROACH SLABS FOR BRIDGE OVER ABBE RD MP 147.3**

**NOTES:**

1. FOR APPROACH SLAB REINFORCING, NOTES AND ADDITIONAL DETAILS, SEE OTIC STANDARD DRAWING AS-3.
2. FOR DOWEL CONNECTION AT LONGITUDINAL JOINTS, SEE SECTION D-D ON OTIC STANDARD DRAWING AS-2. TREATMENT OF JOINT PER SP516B SHALL BE INCIDENTAL TO THIS WORK.
3. FOR TYPE 4-A INTEGRAL CURB DETAILS, SEE ODOT STANDARD DRAWING BP-5.1.
4. REMOVAL OF THE EXISTING APPROACH SLAB IS INCLUDED UNDER ITEM 202 - PAVEMENT REMOVED. NEW APPROACH SLAB IS INCLUDED UNDER ITEM SP 526 - CLASS C CONCRETE, APPROACH SLAB, USING TYPE 1 CEMENT (T=12"). SEE ROADWAY GENERAL SUMMARY FOR QUANTITIES.
5. FOR PROPOSED ELEVATIONS, SEE SHEETS 263 - 276 .



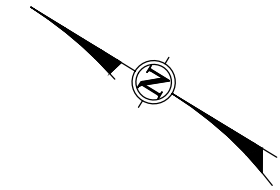
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NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b> <b>APPROACH SLAB DETAILS</b> OHIO TURNPIKE OVER ABBE ROAD M.P. 147.3 LORAIN COUNTY			
<b>GPD GROUP</b> <small>Glenn, Pyle, Schwaner, Burns &amp; DeHaven, Inc.</small> 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100			
DESIGNED:	RDH	CHECKED:	EAF
DRAWN:	RTG	IN CHARGE:	MRG
DATE:		11/25/14	
SCALE:		N.T.S.	
PROJECT NO. 39-15-01A SHEET 346 OF 405			



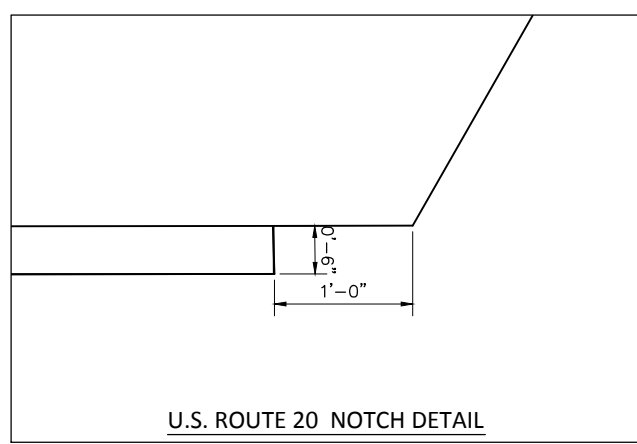
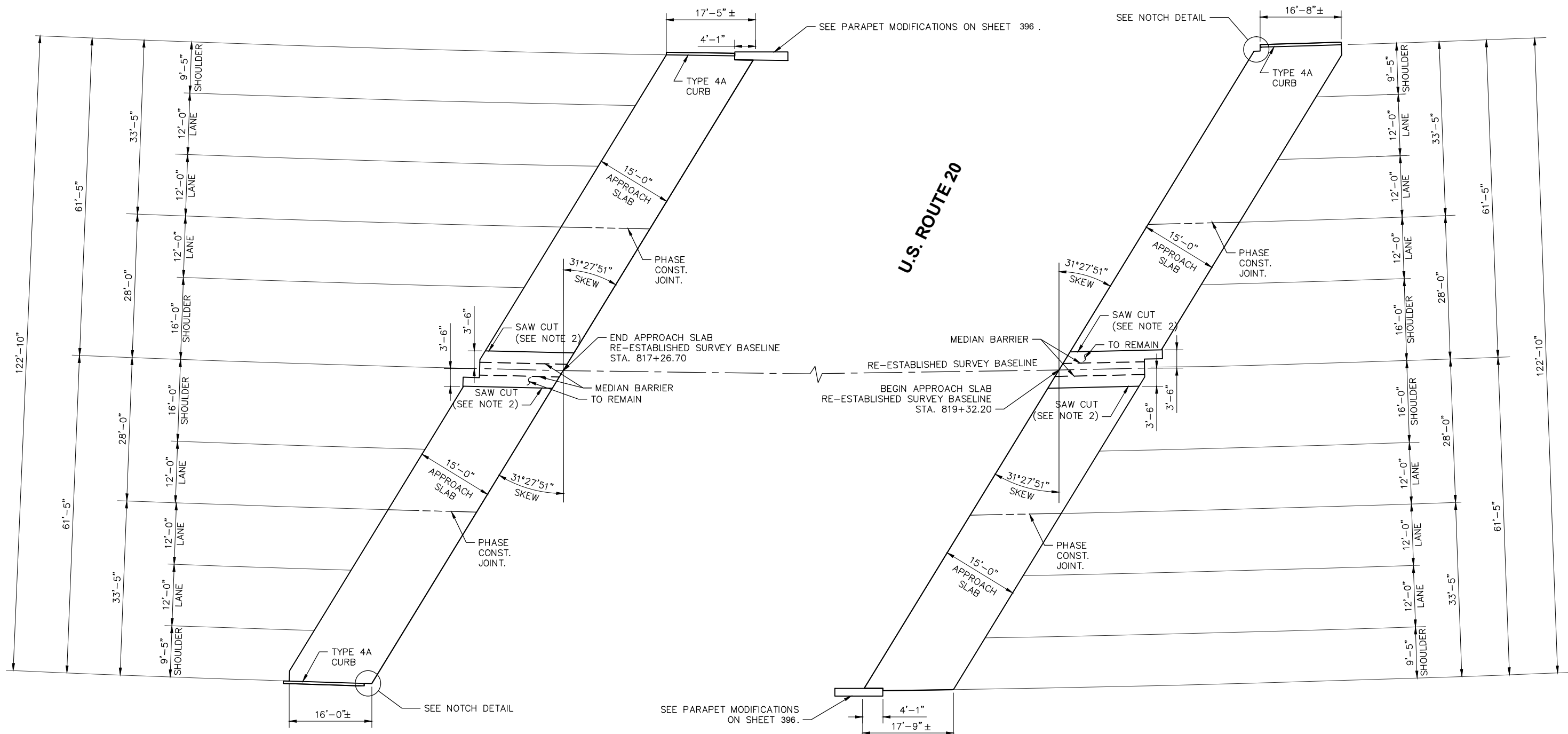
**APPROACH SLABS FOR BRIDGE OVER NORFOLK SOUTHERN MP 147.9**

**NOTES:**

1. FOR APPROACH SLAB REINFORCING, NOTES AND ADDITIONAL DETAILS, SEE OTIC STANDARD DRAWING AS-3.
2. FOR DOWEL CONNECTION AT LONGITUDINAL JOINT BETWEEN EXISTING AND PROPOSED APPROACH SLABS, SEE SECTION D-D ON OTIC STANDARD DRAWING AS-2. TREATMENT OF JOINT PER SP516B SHALL BE INCIDENTAL TO THIS WORK.
3. FOR TYPE 4-A INTEGRAL CURB DETAILS, SEE ODOT STANDARD DRAWING BP-5.1.
4. REMOVAL OF THE EXISTING APPROACH SLAB IS INCLUDED UNDER ITEM 202 - PAVEMENT REMOVED. NEW APPROACH SLAB IS INCLUDED UNDER ITEM SP 526 - CLASS C CONCRETE, APPROACH SLAB, USING TYPE 1 CEMENT (T=12"). SEE ROADWAY GENERAL SUMMARY FOR QUANTITIES.
5. FOR PROPOSED ELEVATIONS, SEE SHEETS 263 - 276.



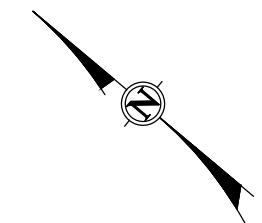
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NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b> <b>APPROACH SLAB DETAILS</b> OHIO TURNPIKE OVER NORFOLK SOUTHERN M.P. 147.9 LORAIN COUNTY			
<b>GPD GROUP</b> <small>Glenn, Pyle, Schwaner, Sauer &amp; DeHaven, Inc.</small> 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100			
DESIGNED:	RDH	CHECKED:	EAF
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PROJECT NO. 39-15-01A SHEET 347 OF 405			



**APPROACH SLABS FOR BRIDGE OVER U.S. ROUTE 20 MP 148.0**

**NOTES:**

1. FOR APPROACH SLAB REINFORCING, NOTES AND ADDITIONAL DETAILS, SEE OTIC STANDARD DRAWING AS-3.
2. FOR DOWEL CONNECTION AT LONGITUDINAL JOINTS, SEE SECTION D-D ON OTIC STANDARD DRAWING AS-2. TREATMENT OF JOINT PER SP516B SHALL BE INCIDENTAL TO THIS WORK.
3. FOR TYPE 4-A INTEGRAL CURB DETAILS, SEE ODOT STANDARD DRAWING BP-5.1.
4. REMOVAL OF THE EXISTING APPROACH SLAB IS INCLUDED UNDER ITEM 202 - PAVEMENT REMOVED. NEW APPROACH SLAB IS INCLUDED UNDER ITEM SP 526 - CLASS C CONCRETE, APPROACH SLAB, USING TYPE 1 CEMENT (T=12"). SEE ROADWAY GENERAL SUMMARY FOR QUANTITIES.
5. FOR PROPOSED ELEVATIONS, SEE SHEETS 263 - 276.



1	ADDENDUM #3	CLH	12/16/14
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NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b> <b>APPROACH SLAB DETAILS</b> OHIO TURNPIKE OVER U.S. ROUTE 20 M.P. 148.0 LORAIN COUNTY			
<b>GPD GROUP</b> <small>Glenn, Pyle, Schroyer, Stumm &amp; DeHaven, Inc.</small> 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100			
DESIGNED:	RDH	CHECKED:	EAF
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PROJECT NO. 39-15-01A SHEET 348 OF 405			

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**CONSTRUCTION SPECIFICATIONS**

THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIALS SPECIFICATIONS DATED JANUARY, 2010, AND THE SPECIAL PROVISIONS CONTAINED IN THE CONTRACT DOCUMENTS SHALL GOVERN THIS PROJECT.

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS

- OHIO TURNPIKE STANDARD DJ-1 DATED 6-25-07
- OHIO TURNPIKE STANDARD DJ-2 DATED 6-25-07
- OHIO TURNPIKE STANDARD DJ-4 DATED 6-25-07
- OHIO TURNPIKE STANDARD DJ-5 DATED 6-25-07
- ODOT STANDARD FB-1-82 DATED 5-10-82

**SCOPE OF WORK**

THE SCOPE OF MAINTENANCE REPAIR WORK AT EACH STRUCTURE GENERALLY INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING. THE SEQUENCE OF ITEMS LISTED BELOW DOES NOT INDICATE THE ACTUAL SEQUENCE OF CONSTRUCTION.

**A. MAINLINE OHIO TURNPIKE OVER LAKE AVENUE M.P. 144.4**

1. REMOVE AND REPLACE EXPANSION JOINTS AND ARMOR AT ALL ABUTMENTS FULL WIDTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES PER OTIC SPECIFICATIONS SP202 AND SP533, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN THE PARAPETS.
2. AS DIRECTED BY THE ENGINEER, PATCH THE CONCRETE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB, IN ACCORDANCE WITH ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B. THIS INCLUDES REPAIR OF POTHOLES, SCALING OF THE WEARING SURFACE, ETC.
3. AS DIRECTED BY THE ENGINEER, PERFORM FULL DEPTH CONCRETE REPAIR AT THE ABUTMENT SLABS. THIS WORK SHALL BE PERFORMED AND PAID USING SP519 PATCHING CONCRETE STRUCTURES TO CORRECT DEEPLY SPALLED ENDS OF THE ABUTMENT SLABS WHICH ARE NOT PRACTICAL TO REPAIR USING ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B.
4. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.
5. PATCH CONCRETE SURFACES OF THE FASCIA AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.
6. REMOVE AND REPLACE THE UPPER 8 INCHES OF THE OUTSIDE PARAPETS FOR THE FULL LENGTH OF BOTH THE EASTBOUND AND WESTBOUND BRIDGES PER THE ITEM SPECIAL - REPLACEMENT OF PARAPET REINFORCEMENT STEEL.
7. SEAL CONSTRUCTION JOINTS AND ALL CRACKS ON ABUTMENT SLABS AND DECK SLAB, AS DIRECTED BY THE ENGINEER, USING HIGH MOLECULAR WEIGHT METHACRYLATE SEALER/CRACK FILLER PER ITEM SP516B.
8. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN ON THE PLANS PER SP536.
9. WEATHERPROOF ENTIRE WEARING SURFACE OF THE APPROACH SLABS, ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB PER SP536.
10. CLEAN, PAINT AND/OR RESET ABUTMENT BEARINGS PER THE BEARING DETAILS SHOWN IN THE PLANS. ALL WORK TO BE PER SP516G, 516H AND 516K. PAINTING TO BE PER SP514A.
11. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS)
12. REPLACE THE CURTAIN WALL AT THE FORWARD ABUTMENT WESTBOUND LANES AS PER SP519 PATCHING CONCRETE STRUCTURES.

**B. MAINLINE OHIO TURNPIKE OVER THE CSX RAILROAD M.P. 144.6**

1. SEAL CONSTRUCTION JOINTS IN ACCORDANCE WITH SP516B.
2. REMOVE AND REPLACE EXPANSION JOINT AND ARMOR AT THE FORWARD PIER IN THE WESTBOUND STRUCTURE. REMOVE AND REPLACE EXPANSION JOINTS AND ARMOR IN THE TWO OUTSIDE LANES AND OUTSIDE SHOULDERS AT ALL OTHER ABUTMENT AND PIER EXPANSION JOINTS. USE OTIC SPECIFICATIONS SP202 AND SP533H, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN THE PARAPETS.
3. REMOVE AND REPLACE THE EXPANSION JOINT SEALS IN THE REMAINING LOCATIONS WITHIN THE INSIDE LANE AND INSIDE SHOULDERS USING OTIC SPECIFICATIONS SP202, SP533F AND SP533G. THE WORK UNDER SP533G WILL INCLUDE REPAIR OF SPALLED OR DETERIORATED PARAPET CONCRETE IMMEDIATELY ADJACENT TO EXPANSION JOINT ARMOR.
4. AS DIRECTED BY THE ENGINEER, PATCH THE CONCRETE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB, IN ACCORDANCE WITH ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B. THIS INCLUDES REPAIR OF POTHOLES, SCALING OF THE WEARING SURFACE, ETC.

5. AS DIRECTED BY THE ENGINEER, PERFORM FULL DEPTH CONCRETE REPAIR AT THE ABUTMENT SLABS. THIS WORK SHALL BE PERFORMED AND PAID USING SP519 PATCHING CONCRETE STRUCTURES TO CORRECT DEEPLY SPALLED ENDS OF THE ABUTMENT SLABS WHICH ARE NOT PRACTICAL TO REPAIR USING ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B.
6. PATCH CONCRETE SURFACES OF THE OUTSIDE AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.
7. REMOVE AND REPLACE THE UPPER 8 INCHES OF THE OUTSIDE PARAPETS FOR THE FULL LENGTH OF THE WESTBOUND STRUCTURE PER THE ITEM SPECIAL - REPLACEMENT OF PARAPET REINFORCING STEEL.
8. SEAL CRACKS WITHIN THE THIRD LANE AND INSIDE SHOULDER ABUTMENT SLABS AND DECK SLAB, AS DIRECTED BY THE ENGINEER, USING HIGH MOLECULAR WEIGHT METHACRYLATE SEALER PER ITEM SP516B.
9. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN ON THE PLANS PER SP536.
10. WEATHERPROOF ENTIRE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB AS PER SP536.
11. REPLACE, REBUILD OR REPAIR BEARINGS DESIGNATED AND SHOWN IN THE PLANS.
12. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS).
13. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.

**C. MAINLINE OHIO TURNPIKE OVER STATE ROUTE-57/LORAIN BLVD. M.P. 145.1**

1. REMOVE AND REPLACE EXPANSION JOINTS AND ARMOR AT ALL ABUTMENTS AND PIERS FULL WIDTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES PER OTIC SPECIFICATIONS SP202 AND SP533, INCLUDING REPAIR OF SPALLED OR DETERIORATED PARAPET CONCRETE ADJACENT TO JOINT ARMOR.
2. AS DIRECTED BY THE ENGINEER, PATCH THE CONCRETE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB, IN ACCORDANCE WITH ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B. THIS INCLUDES REPAIR OF ANY ISOLATED POTHOLES, SCALING OF THE WEARING SURFACE ALONG JOINT ARMOR, ETC.
3. AS DIRECTED BY THE ENGINEER, PERFORM FULL DEPTH CONCRETE REPAIR AT THE ABUTMENT SLABS. THIS WORK SHALL BE PERFORMED AND PAID FOR USING SP519 PATCHING CONCRETE STRUCTURES TO CORRECT DEEPLY SPALLED ENDS OF THE ABUTMENT SLABS WHICH ARE NOT PRACTICAL TO REPAIR USING ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B.
4. PATCH CONCRETE SURFACES OF THE OUTSIDE AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.
5. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.
6. SEAL CONSTRUCTION JOINTS AND ALL CRACKS ON ABUTMENT SLABS AND DECK SLAB, AS DIRECTED BY THE ENGINEER, USING HIGH MOLECULAR WEIGHT METHACRYLATE SEALER/CRACK FILLER PER ITEM SP516B.
7. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN ON THE PLANS PER SP536A.
8. WEATHERPROOF ENTIRE WEARING SURFACE OF THE APPROACH SLABS, ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB PER SP536.
9. REMOVE AND REPLACE THE UPPER 8 INCHES OF THE OUTSIDE PARAPET FOR THE FULL LENGTH OF THE EASTBOUND STRUCTURE PER ITEM SPECIAL - REPLACEMENT OF PARAPET REINFORCING STEEL.
10. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS).

**D. MAINLINE OHIO TURNPIKE OVER THE BLACK RIVER M.P. 145.9**

1. SEAL CONSTRUCTION JOINTS IN ACCORDANCE WITH SP516B.
2. REMOVE AND REPLACE EXPANSION JOINTS AND ARMOR AT ALL ABUTMENTS FULL WIDTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES PER OTIC SPECIFICATIONS SP202 AND SP533, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN THE PARAPETS.
3. AS DIRECTED BY THE ENGINEER, PATCH THE CONCRETE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB, IN ACCORDANCE WITH ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B. THIS INCLUDES REPAIR OF POTHOLES, SCALING OF THE WEARING SURFACE, ETC.

4. PATCH CONCRETE SURFACES OF THE OUTSIDE AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.
5. REMOVE AND REPLACE THE UPPER 8 INCHES OF THE OUTSIDE PARAPET FOR THE FULL LENGTH OF THE WESTBOUND STRUCTURE PER ITEM SPECIAL - REPLACEMENT OF PARAPET REINFORCING STEEL.
6. SEAL CONSTRUCTION JOINTS AND ALL CRACKS ON ABUTMENT SLABS AND DECK SLAB, AS DIRECTED BY THE ENGINEER, USING HIGH MOLECULAR WEIGHT METHACRYLATE SEALER PER ITEM SP516B.
7. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN ON THE PLANS PER SP536.
8. WEATHERPROOF ENTIRE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB PER SP536.
9. RESET, REBUILD, REPAIR, OR CLEAN AND PAINT ALL ABUTMENT BEARINGS DESIGNATED AND SHOWN ON THE PLANS.
10. CLEAN AND PAINT RUSTED GIRDER ENDS AT ALL BEARINGS REQUIRING WORK, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP514A.
11. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.
12. REMOVE AND REPLACE THE 32" LONG OUTSIDE PARAPET SECTION ON THE WINGWALL JUST BEYOND THE WESTBOUND FORWARD ABUTMENT AS SHOWN IN THE PLANS.
13. CLEAN ALL SCUPPERS AND THEIR OUTLETS AS DIRECTED BY THE ENGINEER TO ASSURE OPEN DRAINAGE.
14. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS).

**E. MAINLINE OHIO TURNPIKE OVER ABBE ROAD M.P. 147.3**

1. REMOVE AND REPLACE EXPANSION JOINTS AND ARMOR AT THE ABUTMENTS AND PIERS IN THE TWO OUTSIDE LANES AND OUTSIDE SHOULDERS OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES IN ACCORDANCE WITH OTIC SPECIFICATIONS SP202 AND SP533H, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN THE PARAPETS.
2. REMOVE AND REPLACE EXPANSION JOINT COMPRESSION SEALS AT THE ABUTMENTS AND PIERS IN THE THIRD LANE AND INSIDE SHOULDER OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES IN ACCORDANCE WITH OTIC SPECIFICATION SP533F.
3. AS DIRECTED BY THE ENGINEER, PATCH THE CONCRETE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB, IN ACCORDANCE WITH ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B. THIS INCLUDES REPAIR OF POTHOLES, SCALING OF THE WEARING SURFACE, ETC.
4. PATCH CONCRETE SURFACES OF THE OUTSIDE PARAPET OF THE EASTBOUND STRUCTURE AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.
5. REMOVE AND REPLACE THE OUTSIDE PARAPET FOR THE FULL LENGTH OF THE WESTBOUND SUPERSTRUCTURE PER SP202, 509, AND SP511A.
6. SEAL CONSTRUCTION JOINTS AND ALL CRACKS WITHIN THE ABUTMENT SLABS AND DECK SLAB, AS DIRECTED BY THE ENGINEER, USING HIGH MOLECULAR WEIGHT METHACRYLATE SEALER PER ITEM SP516B.
7. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN ON THE PLANS PER SP536.
8. WEATHERPROOF ENTIRE WEARING SURFACE OF THE APPROACH SLABS, ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB PER SP536.
9. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.
10. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS).

**F. MAINLINE OHIO TURNPIKE OVER THE NORFOLK SOUTHERN RAILROAD M.P. 147.9**

1. REMOVE AND REPLACE ALL EXPANSION JOINTS AND ARMOR AT ALL ABUTMENTS FULL WIDTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES PER OTIC SPECIFICATIONS SP202 AND SP533, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN PARAPETS.
2. REMOVE THE EXISTING CONCRETE WEARING SURFACE FOR THE FULL WIDTH ON EASTBOUND AND WESTBOUND BRIDGE DECKS AND ABUTMENT SLABS USING HYDRODEMOLITION AS PER SP848.
3. SOUND THE CONCRETE DECK AND ABUTMENT SLABS AFTER HYDRODEMOLITION AND REPAIR AREAS IDENTIFIED IN THE FIELD PER REQUIREMENTS OF SP848.
4. EPOXY INJECT ANY CRACKS 1/8" WIDE OR LARGER WITHIN THE BRIDGE DECK AND ABUTMENT SLABS PER SP516A AND AS DIRECTED BY THE ENGINEER.
5. NOT MORE THAN 24 HOURS PRIOR TO PLACING THE OVERLAY, PREPARE SURFACES BY CLEANING IN ACCORDANCE WITH SP848.
6. PLACE NEW CONCRETE OVERLAY AS PER PLANS TO ACHIEVE FINAL GRADE IN ACCORDANCE WITH SP848.
7. SEAL CONSTRUCTION JOINTS IN ACCORDANCE WITH SP516B.
8. PATCH CONCRETE SURFACES OF THE OUTSIDE AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.

9. REMOVE AND REPLACE THE UPPER 8 INCHES OF THE OUTSIDE PARAPETS FOR THE FULL LENGTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES PER ITEM SPECIAL - REPLACEMENT OF PARAPET REINFORCING STEEL.
10. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN IN THE PLANS PER SP536A.
11. WEATHERPROOF ENTIRE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB PER SP536.
12. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.
13. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS).

**G. MAINLINE OHIO TURNPIKE OVER U.S. ROUTE 20/CENTER RIDGE ROAD M.P. 148.0**

1. REMOVE AND REPLACE EXPANSION JOINTS AND ARMOR AT THE PIERS IN THE TWO OUTSIDE LANES AND OUTSIDE SHOULDERS OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES IN ACCORDANCE WITH OTIC SPECIFICATIONS SP202 AND SP533H, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN THE PARAPETS.
2. REMOVE AND REPLACE EXPANSION JOINT SEALS AT THE PIER JOINTS IN THE THIRD LANE AND INSIDE SHOULDER OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES IN ACCORDANCE WITH OTIC SPECIFICATION SP533G, INCLUDING EXPANSION JOINT ARMOR MODIFICATIONS WITHIN THE PARAPETS.
3. REMOVE AND REPLACE EXPANSION JOINT SEALS AT THE ABUTMENTS FULL WIDTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES IN ACCORDANCE WITH OTIC SPECIFICATION SP533F.
4. AS DIRECTED BY THE ENGINEER, PATCH THE CONCRETE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB, IN ACCORDANCE WITH ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS, TYPE B. THIS INCLUDES REPAIR OF POTHOLES, SCALING OF THE WEARING SURFACE, ETC.
5. PATCH CONCRETE SURFACES OF THE OUTSIDE AND MEDIAN PARAPETS AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH SP519.
6. REMOVE AND REPLACE THE 8 INCH PORTION OF THE OUTSIDE PARAPETS FOR THE FULL LENGTH OF BOTH THE EASTBOUND AND WESTBOUND STRUCTURES PER ITEM SPECIAL - REPLACEMENT OF PARAPET REINFORCING STEEL.
7. SEAL CONSTRUCTION JOINTS AND ALL CRACKS WITHIN THE ABUTMENT SLABS AND DECK SLAB, AS DIRECTED BY THE ENGINEER, USING HIGH MOLECULAR WEIGHT METHACRYLATE SEALER PER ITEM SP516B.
8. WEATHERPROOF PARAPET AND DECK EDGE SURFACES WITHIN THE LIMITS SHOWN ON THE PLANS PER SP536.
9. WEATHERPROOF ENTIRE WEARING SURFACE OF THE ABUTMENT SLABS AND SUPERSTRUCTURE DECK SLAB PER SP536.
10. RECONSTRUCT THE EASTBOUND FORWARD ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AND THE WESTBOUND REAR ABUTMENT SLAB TRANSITION PARAPET AT THE OUTSIDE SHOULDER AS SHOWN ON THE PLANS.
11. REMOVE AND REPLACE THE APPROACH SLABS (SEE ROADWAY PLANS).


**CONTINGENCY QUANTITIES**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE ESTIMATED QUANTITIES FOR ITEMS DESIGNATED BY PLAN NOTES TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED IN WRITING BY THE CHIEF ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE CHIEF ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

**UTILITIES LINES**

THE CONTRACTOR SHALL PROTECT THE EXISTING UTILITY LINES IN THE VICINITY OF THE STRUCTURES WHILE PERFORMING ANY WORK. THE CONTRACTOR AND UTILITY COMPANY(IES) ARE REQUESTED TO COOPERATE BY ARRANGING WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER BE HELD TO A MINIMUM. ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY COMPANY(IES).

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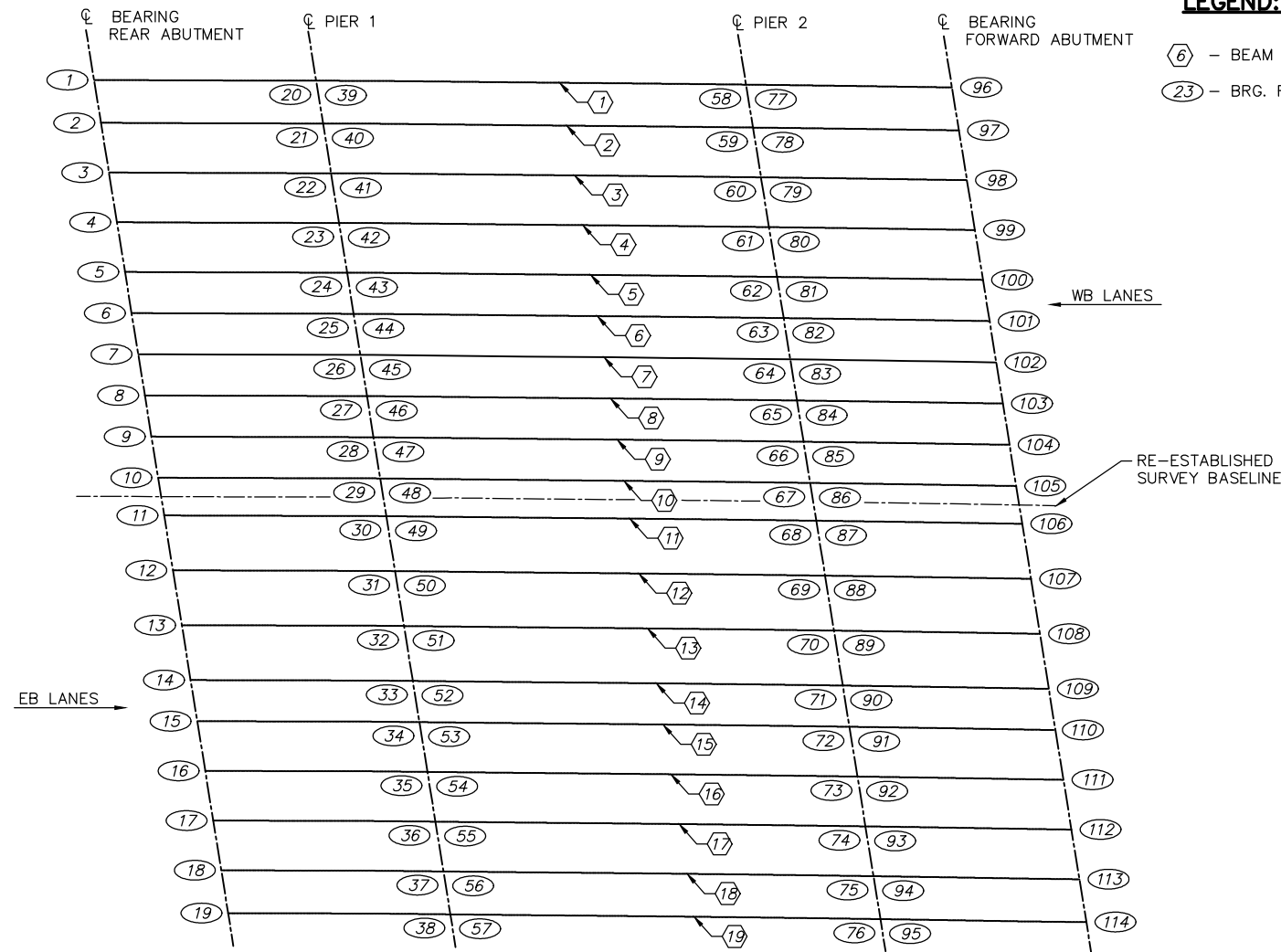
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NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b> <b>GENERAL NOTES STRUCTURES</b> M.P. 144.4, 144.6, 145.1, 145.9, 147.3, 147.9, 148.0  520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100			
DESIGNED:	EAF	CHECKED:	RDH
DRAWN:	GPD	IN CHARGE:	MRG
		DATE:	11/25/14
		SCALE:	NTS
PROJECT NO. 39-15-01A SHEET 349 OF 405			

STRUCTURE ESTIMATED QUANTITIES - CSX RAILROAD MP 144.6

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	CONTINGENCY	AS PER PLAN SHEET
SP202	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED				LUMP		
SP509	100	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN					100	350
509	830	POUND	EPOXY COATED REINFORCING STEEL	830					
510	52	EACH	DOWEL HOLES, WITH NONSHRINK, NONMETALLIC GROUT	52					
SP511A	5	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE I CEMENT	5					
513	10	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN					10	350
SP514A	60	EACH	FIELD PAINTING OF EXISTING BEARINGS, SYSTEM OZEU	15	45				
SP511A	26	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE DECK SLAB, USING SHRINKAGE COMPENSATING CEMENT			26			
SP511A	7	CU. YD.	CLASS S CONCRETE, ABUTMENT SLABS, USING SHRINKAGE COMPENSATING CEMENT	7					
SP516A	120	FT.	CRACK REPAIR USING EPOXY INJECTION					120	
SP516B	1988	FT.	SEALING OF CONSTRUCTION JOINTS	374		1494	120		350
SP516G	12	EACH	REPLACE EXPANSION BEARING DEVICE					12	
SP519	90	SQ. FT.	PATCHING CONCRETE STRUCTURES			40		50	350
SP527	LUMP	LUMP	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES				LUMP		
SP533F	74	FT.	REPLACEMENT OF COMPRESSION SEAL WITH CONTINUOUS ELASTOMER SEAL			74			
SP533G	99	FT.	REPLACEMENT OF STRIP SEAL WITH CONTINUOUS ELASTOMER SEAL			99			
SP533H	327	FT.	CONTINUOUS ELASTOMER SEAL IN STRUCTURAL STEEL JOINT			327			
SP536	523	SQ. YD.	CONCRETE WEATHERPROOFING, BARRIERS AND PARAPETS	98		397	28		
SP536	2376	SQ. YD.	CONCRETE WEATHERPROOFING, DECK, ABUTMENT SLABS AND APPROACH SLABS	291		1698	387		
SPECIAL	12	EACH	REPOSITION ELASTOMERIC EXPANSION BEARING	7	5				350, 359
SPECIAL	5	EACH	REBUILD GROUT SETTING BED BENEATH BEARING MASONRY PLATE		5				359
SPECIAL	6	EACH	REPLACE EXISTING FIXED STEEL BEARING AT PIER		6				359
SPECIAL	2	EACH	REPLACE EXISTING ELASTOMERIC FIXED BEARING		2				359
SPECIAL	14	SQ. YD.	PATCHING CONCRETE BRIDGE DECKS, TYPE B	8		1		5	350
SPECIAL	256	FT.	REPLACEMENT OF PARAPET REINFORCING STEEL			256			350, 362

NOTES:  
1. FOR GENERAL NOTES, SEE SHEETS 349 & 350 .

1	ADDENDUM NO. 3	TJW	12/16/14
-	-	-	-
NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
ESTIMATED QUANTITIES OHIO TURNPIKE OVER CSX RAILROAD M.P. 144.6 LORAIN COUNTY			
<b>GPD GROUP</b> 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2101			
DESIGNED:	RFV	CHECKED:	RDH DATE: 11/25/14
DRAWN:	CLH	IN CHARGE:	MRG SCALE: N.T.S.
<b>PROJECT NO: 39-15-01A SHEET 358 OF 405</b>			



**BEARING LOCATION PLAN**

**LEGEND:**

- ⑥ - BEAM LINE NUMBERS
- ②③ - BRG. REF. NUMBERS

**NOTES:**

THE WORK ON THE BEARINGS ON THE CSX RAILROAD BRIDGE (MP 144.6) SHALL BE AS FOLLOWS:

1. BEARING NUMBERS 6-9, 11-13, 25-30, 44-49, 69-71, 88-90 AND 101-109 REQUIRE NO WORK.
2. BEARING NUMBERS 2, 4, 10, 14, 15, 17, 18, 20-23, 24, 31-35, 39, 40-43, 50-54, 59, 63-68, 72-75, 77-87, 92-94, 96-99 AND 111-114 SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH ITEM SP514A FIELD PAINTING OF EXISTING BEARINGS - SYSTEM OZEU.
3. BEARING NUMBERS 1, 3, 5, 16, 19, 100 AND 110 SHALL BE REPOSITIONED IN ACCORDANCE WITH THE NOTE "ITEM SPECIAL - REPOSITION ELASTOMERIC EXPANSION BEARING". THESE BEARINGS SHALL ALSO BE CLEANED AND PAINTED IN ACCORDANCE WITH SP514A INCLUDING BEAM FLANGE AREAS 6" FROM BEARING COMPONENTS ATTACHED TO THE BEARING. PAINTING SHALL BE INCIDENTAL TO THIS ITEM SPECIAL.
4. BEARING NUMBERS 58, 60-62 AND 91 ARE ALSO TO BE REPOSITIONED IN ACCORDANCE WITH THE NOTE ITEM "SPECIAL - REPOSITION ELASTOMERIC EXPANSION BEARING". THESE BEARINGS SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH SP514A INCLUDING BEAM FLANGE AREAS 6" FROM BEARING COMPONENTS ATTACHED TO THE BEARING. PAINTING SHALL BE INCIDENTAL TO THIS ITEM SPECIAL - REPOSITION ELASTOMERIC EXPANSION BEARING. IN ADDITION, ANY CRACKED OR OTHERWISE DETEIORATED GROUT SURROUNDING THE MASONRY PLATE SHALL BE REMOVED PRIOR TO PAINTING. IF THE DETEIORATED GROUT EXTENDS UNDERNEATH THE MASONRY PLATE, NONSHRINK MORTAR MEETING THE REQUIREMENTS OF ODOT CMS 705.22 SHALL BE PLACED UNDER THE FULL BEARING SURFACE OF THE MASONRY PLATE PRIOR TO REPAINTING THE STEEL. THE FULL COST OF REMOVING EXISTING DETEIORATED GROUT AND PLACING NEW GROUT BENEATH MASONRY PLATES SHALL BE INCLUDED WITH ITEM SPECIAL - REBUILD GROUT SETTING BED BENEATH BEARING MASONRY PLATE.  
THE FULL COST OF REMOVING EXISTING DETEIORATED GROUT AND PLACING NEW GROUT BENEATH MASONRY PLATES SHALL BE INCLUDED WITH ITEM SPECIAL - REBUILD GROUT SETTING BED BENEATH BEARING MASONRY PLATE.
5. BEARING NUMBERS 36-38 & 55-57 SHALL BE REMOVED AND REPLACED WITH NEW FIXED STEEL BEARING ASSEMBLIES IN ACCORDANCE WITH THE NOTES AND DETAILS SHOWN ON THESE PLANS.
6. BEARING NUMBERS 76 AND 95. SHALL BE REMOVED AND REPLACED WITH NEW LAMINATED ELASTOMERIC BEARING ASSEMBLIES IN ACCORDANCE WITH THE NOTES AND DETAILS SHOWN ON THESE PLANS.
7. FOR BEARING DETAILS, SEE SHEET 360.

**ITEM SPECIAL - REPLACE EXISTING FIXED STEEL BEARING AT PIER**

THIS ITEM CONSISTS OF THE COMPLETE REMOVAL OF THE EXISTING BEARING ASSEMBLY AND REPLACEMENT WITH A NEW BEARING, AS SHOWN IN THE PLANS, IN THE SAME LOCATION. THE BEARINGS SPECIFIED FOR REPLACEMENT UNDER THIS ITEM OCCUR AT A PIER WITH TWO LINES OF BEARINGS WHICH ARE SEATED ON A COMMON MASONRY PLATE. BOTH BEARINGS AND THEIR COMMON MASONRY PLATE SHALL BE REMOVED AND REPLACED. EACH PAIR OF BEARINGS WILL BE PAID FOR AS TWO INDIVIDUAL BEARING REPLACEMENTS. EXISTING ANCHOR BOLTS SHALL NOT BE RE-USED. REMOVE THE BEARINGS BY CUTTING THE SOLE PLATES FROM THE BOTTOM FLANGES OF THE BEAMS, THEN JACK THE BEAMS TO REMOVE THE LOAD FROM THE BEARINGS. REMOVE THE SOLE PLATES, MASONRY PLATE AND ANY SHIMS AND THE LEAD SHEET. ANCHOR BOLTS SHALL BE REMOVED FLUSH WITH THE CONCRETE BEAM SEAT. THEN CLEAN, REPAIR AND LEVEL THE CONCRETE BEAM SEAT AS NECESSARY.

GRIND THE BOTTOM FLANGES OF THE BEAMS TO A BEARING FIT. SET THE TWO NEW SOLE PLATES ONTO THE ANCHOR BOLTS TAPPED & THREADED INTO THE MASONRY PLATE. SET THE NEW MASONRY PLATE AND SOLE PLATE ASSEMBLY ON NEW SHEET LEAD. SHIM THE MASONRY PLATE IF NECESSARY SO THAT THE NEW BEARING IS FIRMLY SEATED. DRILL AND GROUT THE NEW ANCHOR BOLTS THROUGH THE HOLES IN THE MASONRY PLATE INTO THE CONCRETE BEAM SEAT. RESET BEAMS DOWN ON BEARING, WELDING TO LOAD PLATES. TIGHTEN ANCHOR BOLTS AFTER GROUT IS FULLY SET. PERFORM SANDBLASTING AND PAINTING PER SP514A INCLUDING BEAM FLANGE AREAS 6" FROM BEARING COMPONENTS ATTACHED TO THE BEARING. PAINTING SHALL BE INCIDENTAL TO THIS ITEM SPECIAL.

**ITEM SPECIAL - REPLACE EXISTING ELASTOMERIC FIXED BEARING**

THIS ITEM CONSISTS OF THE COMPLETE REMOVAL OF THE EXISTING ELASTOMERIC FIXED BEARING ASSEMBLY AND REPLACEMENT WITH A NEW BEARING, IN THE SAME LOCATION. THE BEARINGS SPECIFIED FOR REPLACEMENT UNDER THIS ITEM OCCUR AT A PIER WITH TWO LINES OF BEARINGS WHICH ARE SEATED ON A COMMON MASONRY PLATE. BOTH BEARINGS AND THEIR COMMON MASONRY PLATE SHALL BE REMOVED. EACH PAIR OF BEARINGS WILL BE PAID FOR AS TWO INDIVIDUAL BEARING REPLACEMENTS. THIS WORK SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF SP 516G, AND AS DESCRIBED HEREIN. REMOVE THE BEARING BY CUTTING THE LOAD PLATE FROM THE BOTTOM FLANGE OF THE BEAM. THEN JACK THE BEAM TO REMOVE THE LOAD FROM THE BEARING. REMOVE THE LOAD PLATE AND THE ATTACHED ELASTOMERIC BEARING. THEN REMOVE THE MASONRY PLATE AND ANY SHIMS AND THE LEAD SHEET. REMOVE THE ANCHOR BOLTS FLUSH WITH THE SURFACE OF THE BEAM SEAT. CLEAN, REPAIR AND LEVEL THE CONCRETE BEAM SEAT AS NECESSARY.

GRIND THE BOTTOM FLANGE OF THE BEAM TO A BEARING FIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATELY MEASURING THE DISTANCE FROM THE BEAM FLANGE TO THE FINISHED BEAM SEAT. THIS MEASUREMENT SHALL BE USED TO ADJUST THE THICKNESS OF THE NEW LOAD PLATES SO THAT THE NEW BEARING WILL HAVE FIRM BEARING WHEN INSTALLED. SET THE NEW ELASTOMERIC BEARING, WHICH HAS BEEN VULCANIZE BONDED TO THE NEW LOAD PLATE, ONTO THE BEAM SEAT. RESET BEAM DOWN ON BEARING, WELDING TO LOAD PLATE. WELDING SHALL OCCUR AT AN AMBIENT TEMPERATURE OF BETWEEN 50° F AND 70° F WITH THE BEARING IN A VERTICAL POSITION. WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES. QUENCHING TO ACCELERATE COOLING IS NOT PERMITTED. THE CONTRACTOR SHALL OVER SIZE THE WIDTH OF THE NEW LOAD PLATE TO PROVIDE SUFFICIENT CLEARANCE FOR DRILLING AND INSTALLING NEW ANCHOR RODS IN TO THE BEAM SEAT. EMBED ANCHOR RODS 1'-4" INTO THE BEAM SEAT. PERFORM SANDBLASTING AND PAINTING PER SP514A INCLUDING BEAM FLANGE AREAS 6" FROM BEARING COMPONENTS ATTACHED TO THE BEARING. PAINTING SHALL BE INCIDENTAL TO THIS ITEM SPECIAL.

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Date: Dec 17, 2014 Time: 1:24:58 PM  
Technician: Jhines

1	ADDENDUM 3	TJW	12/16/14
-	-	-	-
NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>BEARING LOCATION PLAN</b>			
OHIO TURNPIKE OVER CSX RAILROAD			
M.P. 144.6 LORAIN COUNTY			
<b>GPD GROUP</b> <small>Geac, Sys, Software, Sales &amp; Services, Inc.</small>			
520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2101			
DESIGNED:	RDH	CHECKED:	EAF
DRAWN:	GPD	IN CHARGE:	MRG
DATE:		11/25/14	
SCALE:		NTS	
<b>PROJECT NO. 39-15-01A SHEET 359 OF 405</b>			



STRUCTURE ESTIMATED QUANTITIES - S.R. 57 ROAD MP 145.1

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	CONTINGENCY	AS PER PLAN SHEET
SP202	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED				LUMP		
SP509	100	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN					100	350
509	828	POUND	EPOXY COATED REINFORCING STEEL	828					
510	44	EACH	DOWEL HOLES, WITH NONSHRINK, NONMETALLIC GROUT	44					
SP511A	7	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE I CEMENT	5		2			
SP511A	46	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE DECK SLAB, USING SHRINKAGE COMPENSATING CEMENT			46			
SP511A	13	CU. YD.	CLASS S CONCRETE, ABUTMENT SLABS, USING SHRINKAGE COMPENSATING CEMENT	13					
513	10	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN					10	350
SP516B	2792	△ FT.	SEALING OF CONSTRUCTION JOINTS	764		1908	120		350
SP519	69	SQ. FT.	PATCHING CONCRETE STRUCTURES			19		△ 50	350
SP527	LUMP	LUMP	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES				LUMP		
SP533	299	FT.	CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT			299			
△ SP533H	299	LIN FT	CONTINUOUS ELASTOMER SEAL IN STRUCTURAL STEEL JOINT			299			401
SP536	588	SQ. YD.	CONCRETE WEATHERPROOFING, PARAPETS AND BARRIERS	79		475	34		
SP536	3364	SQ. YD.	CONCRETE WEATHERPROOFING, DECK, ABUTMENT SLABS AND APPROACH SLABS	414		2511	439		
SPECIAL	6	SQ. YD.	PATCHING CONCRETE BRIDGE DECKS, TYPE B			1		5	350
SPECIAL	172	FT.	REPLACEMENT OF PARAPET REINFORCING STEEL			172			350, 369

NOTES:  
 1. FOR GENERAL NOTES, SEE SHEETS 349 & 350.

1	ADDENDUM 3	TJW	12/16/14
-	-	-	-
NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND                  INFRASTRUCTURE COMMISSION</b> ESTIMATED QUANTITIES OHIO TURNPIKE OVER STATE ROUTE 57 M.P. 145.1 LORAIN COUNTY			
 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100			
DESIGNED:	RFV	CHECKED:	RDH
DRAWN:	CLH	IN CHARGE:	MRG
DATE:	11/25/14	SCALE:	N.T.S.
PROJECT NO. 39-15-01A SHEET 366 OF 405			

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 Date: Dec 16, 2014 Time: 8:47 am Plotted: 12/16/14 8:53  
 Technician: chuff







STRUCTURE ESTIMATED QUANTITIES - NS RAILROAD MP 147.9

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER - STRUCTURE	GENERAL	CONTINGENCY	AS PER PLAN SHEET
SP202	LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED				LUMP		
SP509	100	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN					100	350
509	824	POUND	EPOXY COATED REINFORCING STEEL	824					
510	44	EACH	DOWEL HOLES, WITH NONSHRINK, NONMETALLIC GROUT	44					
SP511A	5	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE I CEMENT	5					
513	10	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN					10	350
SP516A	50	FT	CRACK REPAIR USING EPOXY INJECTION					50	
SP516B	1922	FT	SEALING OF CONSTRUCTION JOINTS	553		1285	84		350
SP519	50	SQ. FT.	PATCHING CONCRETE STRUCTURES					50	350
SP527	LUMP	LUMP	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES				LUMP		
SP533	355	FT	CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT			355			390
SP536	582	SQ. YD.	CONCRETE WEATHERPROOFING, BARRIERS AND PARAPETS	98		444	40		
SP536	2931	SQ. YD.	CONCRETE WEATHERPROOFING, DECK, ABUTMENT SLABS AND APPROACH SLABS	455		2077	399		
SP848	2532	SQ. YD.	CLASS S CONCRETE OVERLAY USING HYDRODEMOLITION	455		2077			
SP848	2532	SQ. YD.	SURFACE PREPARATION USING HYDRODEMOLITION	455		2077			
SP848	49	CU. YD.	CLASS S CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	9		40			
SP848	9	SQ. YD.	HAND CHIPPING	1		8			
SP848	LUMP	LUMP	TEST SLAB				LUMP		
SP848	34	CU. YD.	FULL-DEPTH REPAIR	16		18			
SPECIAL	358	FT	REPLACEMENT OF PARAPET REINFORCING STEEL			358			388
SPECIAL	LUMP	LUMP	TEMPORARY ACCESS				LUMP		385


1

NOTES

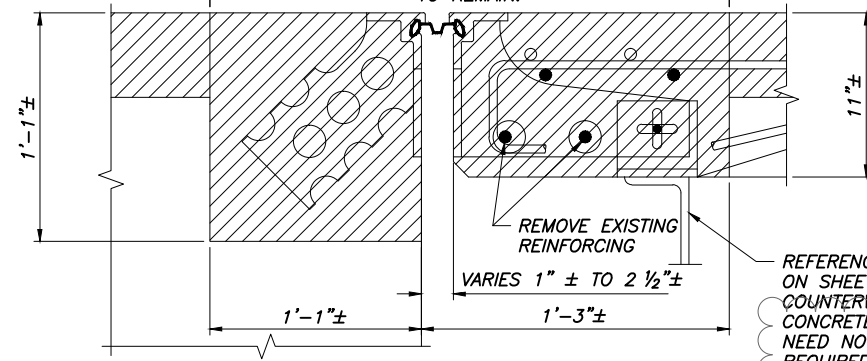
- FOR GENERAL NOTES, SEE SHT. 349, 350, 385.

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Date: Dec 17, 2014 Time: 1:28 PM User: jhines

Technician: Jhines

1	ADDENDUM 3	TJW	12/16/14
-	-	-	-
NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b> ESTIMATED QUANTITIES OHIO TURNPIKE OVER NS RAILROAD M.P. 147.9 LORAIN COUNTY			
 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2101			
DESIGNED:	RFV	CHECKED:	RDH DATE: 11/25/14
DRAWN:	CLH	IN CHARGE:	MRG SCALE: N.T.S.
PROJECT NO: 39-15-01A SHEET 387 OF 405			

REMOVAL INCLUDED WITH REMOVAL SHALL BE IN ACCORDANCE WITH SP 202 AND, REMOVAL INCLUDED WITH  
 ITEM SP 848 SHALL BE INCLUDED WITH SP 202 FOR PAYMENT. ITEM SP 848  
 EXCEPT AS NOTED, ALL EXISTING REINFORCING BARS ARE  
 TO REMAIN.

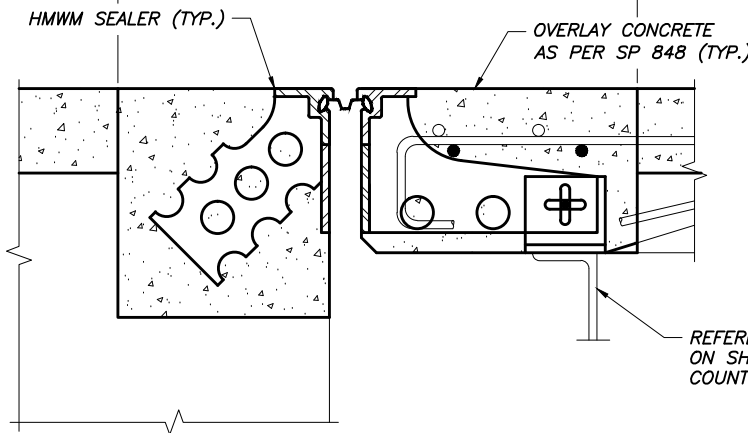


**REMOVAL DETAILS**

(ALL REINFORCING NOT SHOWN.  
 EXISTING REINFORCING TO REMAIN,  
 EXCEPT AS NOTED)

REFERENCE EXISTING DETAILS  
 ON SHEET 391 FOR DETAILS OF  
 COUNTERWEIGHT.  
 CONCRETE REMOVAL LIMITS  
 NEED NOT EXCEED THOSE  
 REQUIRED FOR REPLACEMENT  
 OF JOINT ARMOR. IT IS NOT  
 REQUIRED TO REPLACE  
 COUNTER WEIGHT CONCRETE  
 FULL DEPTH.

JOINT ARMOR SHALL BE FABRICATED AND INSTALLED IN  
 ACCORDANCE WITH OTIC STANDARD DRAWING DJ-1 AND  
 SP 533. CONCRETE SHALL BE INCLUDED FOR PAYMENT  
 WITH ITEM SP 848 - FULL DEPTH REPAIR. JOINT  
 ARMOR AND CONTINUOUS STRIP SEAL SHALL BE  
 INCLUDED WITH ITEM SP 533.



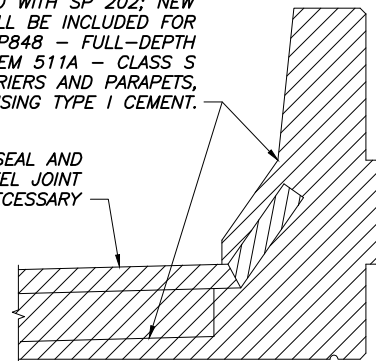
**PROPOSED CONSTRUCTION DETAILS**

(ALL REINFORCING NOT SHOWN.  
 EXISTING REINFORCING TO REMAIN)

**ITEM SP 533 - CONTINUOUS STRIP SEAL  
 IN STRUCTURAL STEEL JOINT**

CONCRETE REMOVAL SHALL BE  
 INCLUDED WITH SP 202; NEW  
 CONCRETE SHALL BE INCLUDED FOR  
 PAYMENT WITH ITEM SP848 - FULL-DEPTH  
 REPAIR AND ITEM 511A - CLASS S  
 CONCRETE, BARRIERS AND PARAPETS,  
 USING TYPE I CEMENT.

REMOVE EXISTING SEAL AND  
 STRUCTURAL STEEL JOINT  
 AS NECESSARY



**ITEM SP 533 - CONTINUOUS STRIP SEAL  
 IN STRUCTURAL STEEL JOINT - REMOVAL DETAIL**

**NOTES:**

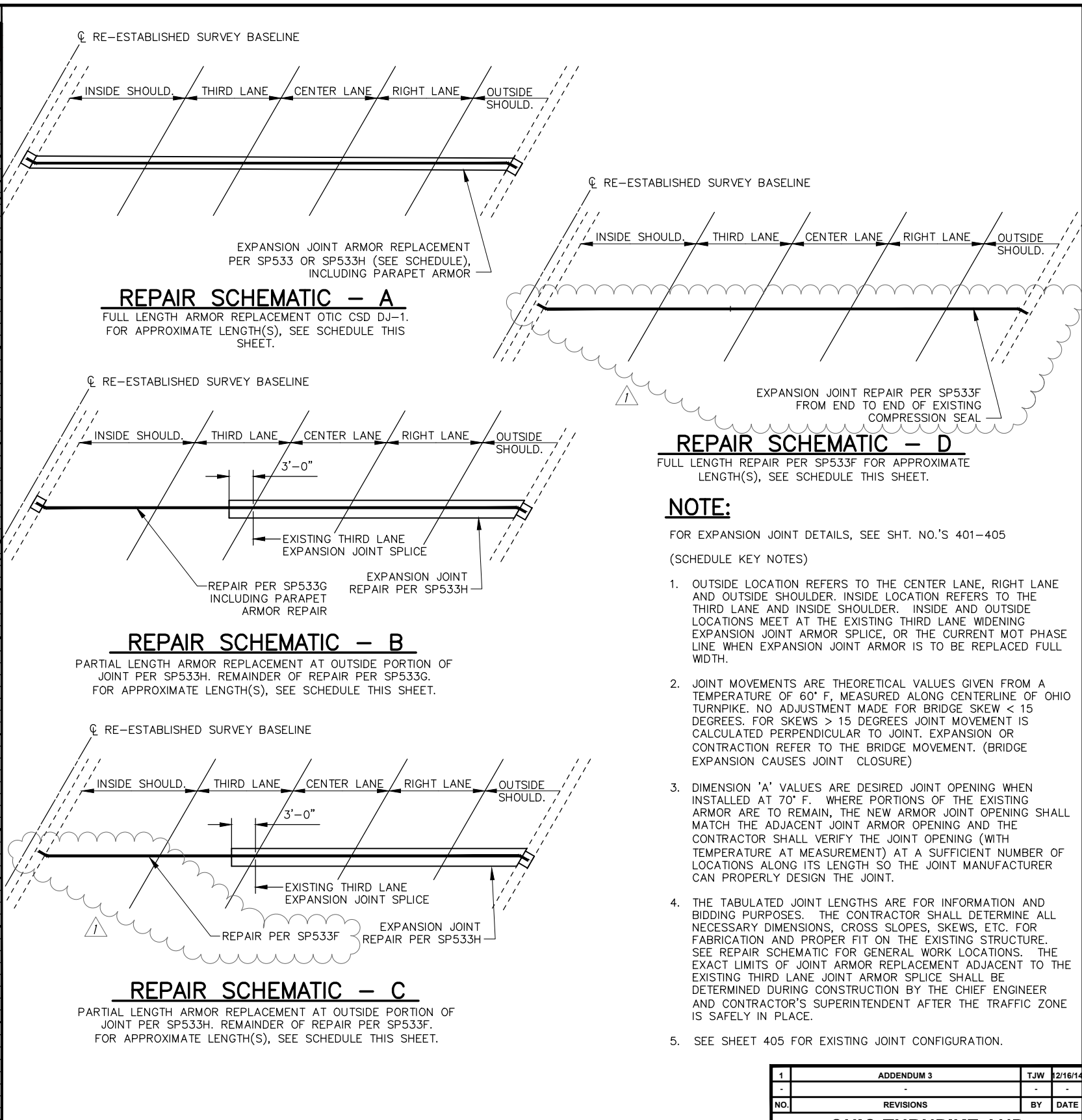
1. THE CONTRACTOR IS TO FIELD VERIFY JOINT OPENING DIMENSIONS (WITH TEMPERATURE AT MEASUREMENT) AT A SUFFICIENT NUMBER OF LOCATIONS ALONG ITS LENGTH SO THAT THE JOINT MANUFACTURER CAN PROPERLY DESIGN THE JOINT.
2. TRIM BEAM ENDS, AS NECESSARY, AND AS DIRECTED/APPROVED BY THE CHIEF ENGINEER. INCLUDE WITH ITEM SP 202 FOR PAYMENT.

**LEGEND**

- REMOVAL LIMITS
- EXPANSION JOINT MATERIAL

1	ADDENDUM 3	TJW	12/16/14
NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>DECK JOINT DETAILS</b>			
OHIO TURNPIKE OVER NORFOLK SOUTHERN RR M.P. 147.9 LORAIN COUNTY			
<b>GPD GROUP</b> 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2101			
DESIGNED: CAC	CHECKED: CMM	DATE: 11/25/14	
DRAWN: ADY	IN CHARGE: ADY	SCALE: N.T.S.	
PROJECT NO. 39-15-01A SHEET 390 OF 405			

BRIDGE	LOCATION (1)		EXISTING JOINT TYPE	JOINT SKEW +/-	JOINT MOVEMENT (2)			DIM. 'A' (3) (INCH)	SP533F REPAIR		SP533G REPAIR		SP533H REPAIR		SP533 REPAIR	
					CONTR.	EXP.	TOTAL		REPAIR SCHEMATIC	LENGTH (4) (FT)	REPAIR SCHEMATIC	LENGTH (4) (FT)	REPAIR SCHEMATIC	LENGTH (4) (FT)	REPAIR SCHEMATIC	LENGTH (4) (FT)
					(INCH)	(INCH)	(INCH)									
EASTBOUND LAKE AVENUE MP 144.4	REAR ABUT	OUTSIDE	STRIP SEAL	1° 00' 07"	0.20	0.14	0.34	1 7/8					A	34.3		
	REAR ABUT	INSIDE	STRIP SEAL		0.20	0.14	0.34	1 7/8					A	27.3		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	34.3		
	FWD ABUT	INSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	27.3		
WESTBOUND LAKE AVENUE MP 144.4	REAR ABUT	OUTSIDE	STRIP SEAL	1° 00' 07"	0.20	0.14	0.34	1 7/8					A	34.3		
	REAR ABUT	INSIDE	STRIP SEAL		0.20	0.14	0.34	1 7/8					A	27.3		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	34.3		
	FWD ABUT	INSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	27.3		
EASTBOUND CSX RAILROAD MP 144.6	REAR ABUT	OUTSIDE	STRIP SEAL	9° 19' 00"	0.22	0.15	0.37	1 3/4					B	37.7		
	REAR ABUT	INSIDE	STRIP SEAL		0.22	0.15	0.37	1 3/4		B	24.6		C	37.7		
	REAR PIER	OUTSIDE	COMPR SEAL		0	0	0	1 1/2								
	REAR PIER	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
	FWD PIER	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					C	37.7		
	FWD PIER	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
	FWD ABUT	OUTSIDE	STRIP SEAL		0.21	0.14	0.35	1 3/4					B	37.7		
	FWD ABUT	INSIDE	STRIP SEAL		0.21	0.14	0.35	1 3/4		B	24.6					
WESTBOUND CSX RAILROAD MP 144.6	REAR ABUT	OUTSIDE	STRIP SEAL	9° 19' 00"	0.22	0.15	0.37	1 3/4					B	37.7		
	REAR ABUT	INSIDE	STRIP SEAL		0.22	0.15	0.37	1 3/4		B	24.6					
	REAR PIER	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					C	37.7		
	REAR PIER	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
	FWD PIER	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					A	34.7		
	FWD PIER	INSIDE	COMPR SEAL		0	0	0	1 1/2					A	27.6		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.21	0.14	0.35	1 3/4					B	37.7		
	FWD ABUT	INSIDE	STRIP SEAL		0.21	0.14	0.35	1 3/4		B	24.6					
EASTBOUND SR-57/LORAIN BLVD MP 145.1	REAR ABUT	OUTSIDE	COMPR SEAL	27° 05' 50"	0	0	0	1 1/2					A	47.5		
	REAR ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2					A	30.5		
	REAR PIER	OUTSIDE	STRIP SEAL		0.51	0.34	0.85	1 7/8					A	48.4		
	REAR PIER	INSIDE	STRIP SEAL		0.51	0.34	0.85	1 7/8					A	30.5		
	FWD PIER	OUTSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	51.7		
	FWD PIER	INSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	30.5		
	FWD ABUT	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					A	52.5		
	FWD ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2					A	30.5		
WESTBOUND SR-57/LORAIN BLVD MP 145.1	REAR ABUT	OUTSIDE	COMPR SEAL	27° 05' 50"	0	0	0	1 1/2					A	38.4		
	REAR ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2					A	30.5		
	REAR PIER	OUTSIDE	STRIP SEAL		0.51	0.34	0.85	1 7/8					A	38.4		
	REAR PIER	INSIDE	STRIP SEAL		0.51	0.34	0.85	1 7/8					A	30.5		
	FWD PIER	OUTSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	38.4		
	FWD PIER	INSIDE	STRIP SEAL		0.54	0.36	0.90	1 7/8					A	30.5		
	FWD ABUT	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					A	38.4		
	FWD ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2					A	30.5		
EASTBOUND BLACK RIVER MP 145.9	REAR ABUT	OUTSIDE	STRIP SEAL	NONE	1.71	1.14	2.85	2 3/8					A	34.3		
	REAR ABUT	INSIDE	STRIP SEAL		1.71	1.14	2.85	2 3/8					A	24.5		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.76	0.51	1.27	2 3/8					A	34.3		
	FWD ABUT	INSIDE	STRIP SEAL		0.76	0.51	1.27	2 3/8					A	24.5		
WESTBOUND BLACK RIVER MP 145.9	REAR ABUT	OUTSIDE	STRIP SEAL	NONE	1.71	1.14	2.85	2 3/8					A	34.3		
	REAR ABUT	INSIDE	STRIP SEAL		1.71	1.14	2.85	2 3/8					A	24.5		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.76	0.51	1.27	2 3/8					A	34.3		
	FWD ABUT	INSIDE	STRIP SEAL		0.76	0.51	1.27	2 3/8					A	24.5		
EASTBOUND ABBE ROAD MP 147.3	REAR ABUT	OUTSIDE	COMPR SEAL	9° 06' 04" VARIES	0	0	0	1 1/2					C	37.7		
	REAR ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
	REAR PIER	OUTSIDE	COMPR SEAL		0.19	0.13	0.32	1 1/2					C	37.7		
	REAR PIER	INSIDE	COMPR SEAL		0.19	0.13	0.32	1 1/2		C	24.6					
	FWD PIER	OUTSIDE	COMPR SEAL		0.58	0.39	0.97	1 1/2					C	37.7		
	FWD PIER	INSIDE	COMPR SEAL		0.58	0.39	0.97	1 1/2		C	24.6					
	FWD ABUT	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					C	37.7		
	FWD ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
WESTBOUND ABBE ROAD MP 147.3	REAR ABUT	OUTSIDE	COMPR SEAL	9° 06' 04" VARIES	0	0	0	1 1/2					C	37.7		
	REAR ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
	REAR PIER	OUTSIDE	COMPR SEAL		0.19	0.13	0.32	1 1/2					C	37.7		
	REAR PIER	INSIDE	COMPR SEAL		0.19	0.13	0.32	1 1/2		C	24.6					
	FWD PIER	OUTSIDE	COMPR SEAL		0.58	0.39	0.97	1 1/2					C	37.7		
	FWD PIER	INSIDE	COMPR SEAL		0.58	0.39	0.97	1 1/2		C	24.6					
	FWD ABUT	OUTSIDE	COMPR SEAL		0	0	0	1 1/2					C	37.7		
	FWD ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		C	24.6					
EASTBOUND N-S RAILROAD MP 147.9	REAR ABUT	OUTSIDE	STRIP SEAL	46° 26' 52"	0.53	0.36	0.89	1 7/8					A	49.4		
	REAR ABUT	INSIDE	STRIP SEAL		0.53	0.36	0.89	1 7/8					A	39.2		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.21	0.14	0.35	1 7/8					A	49.4		
	FWD ABUT	INSIDE	STRIP SEAL		0.21	0.14	0.35	1 7/8					A	39.2		
WESTBOUND N-S RAILROAD MP 147.9	REAR ABUT	OUTSIDE	STRIP SEAL	46° 26' 52"	0.53	0.36	0.89	1 7/8					A	49.4		
	REAR ABUT	INSIDE	STRIP SEAL		0.53	0.36	0.89	1 7/8					A	39.2		
	FWD ABUT	OUTSIDE	STRIP SEAL		0.21	0.14	0.35	1 7/8					A	49.4		
	FWD ABUT	INSIDE	STRIP SEAL		0.21	0.14	0.35	1 7/8					A	39.2		
EASTBOUND US-20/CENTER RIDGE RD MP 148.0	REAR ABUT	OUTSIDE	COMPR SEAL	31° 27' 51"	0	0	0	1 1/2		D	40					
	REAR ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		D	31.8					
	REAR PIER	OUTSIDE	STRIP SEAL		0.23	0.15	0.38	2 1/2				B	43			
	REAR PIER	INSIDE	STRIP SEAL		0.23	0.15	0.38	2 1/2			B	28.8				
	FWD PIER	OUTSIDE	STRIP SEAL		0.73	0.49	1.12	2 1/2				B	43			
	FWD PIER	INSIDE	STRIP SEAL		0.73	0.49	1.12	2 1/2			B	28.8				
	FWD ABUT	OUTSIDE	COMPR SEAL		0	0	0	1 1/2		D	40					
	FWD ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		D	31.8					
WESTBOUND US-20/CENTER RIDGE RD MP 148.0	REAR ABUT	OUTSIDE	COMPR SEAL	31° 27' 51"	0	0	0	1 1/2		D	40					
	REAR ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		D	31.8					
	REAR PIER	OUTSIDE	STRIP SEAL		0.23	0.15	0.38	2 1/2				B	43			
	REAR PIER	INSIDE	STRIP SEAL		0.23	0.15	0.38	2 1/2			B	28.8				
	FWD PIER	OUTSIDE	STRIP SEAL		0.73	0.49	1.12	2 1/2				B	43			
	FWD PIER	INSIDE	STRIP SEAL		0.73	0.49	1.12	2 1/2			B	28.8				
	FWD ABUT	OUTSIDE	COMPR SEAL		0	0	0	1 1/2		D	40					
	FWD ABUT	INSIDE	COMPR SEAL		0	0	0	1 1/2		D	31.8					



- NOTE:**  
FOR EXPANSION JOINT DETAILS, SEE SHT. NO.'S 401-405 (SCHEDULE KEY NOTES)
- OUTSIDE LOCATION REFERS TO THE CENTER LANE, RIGHT LANE AND OUTSIDE SHOULDER. INSIDE LOCATION REFERS TO THE THIRD LANE AND INSIDE SHOULDER. INSIDE AND OUTSIDE LOCATIONS MEET AT THE EXISTING THIRD LANE WIDENING EXPANSION JOINT ARMOR SPLICE, OR THE CURRENT MOT PHASE LINE WHEN EXPANSION JOINT ARMOR IS TO BE REPLACED FULL WIDTH.
  - JOINT MOVEMENTS ARE THEORETICAL VALUES GIVEN FROM A TEMPERATURE OF 60° F, MEASURED ALONG CENTERLINE OF OHIO TURNPIKE. NO ADJUSTMENT MADE FOR BRIDGE SKEW < 15 DEGREES. FOR SKEWS > 15 DEGREES JOINT MOVEMENT IS CALCULATED PERPENDICULAR TO JOINT. EXPANSION OR CONTRACTION REFER TO THE BRIDGE MOVEMENT. (BRIDGE EXPANSION CAUSES JOINT CLOSURE)
  - DIMENSION 'A' VALUES ARE DESIRED JOINT OPENING WHEN INSTALLED AT 70° F. WHERE PORTIONS OF THE EXISTING ARMOR ARE TO REMAIN, THE NEW ARMOR JOINT OPENING SHALL MATCH THE ADJACENT JOINT ARMOR OPENING AND THE CONTRACTOR SHALL VERIFY THE JOINT OPENING (WITH TEMPERATURE AT MEASUREMENT) AT A SUFFICIENT NUMBER OF LOCATIONS ALONG ITS LENGTH SO THE JOINT MANUFACTURER CAN PROPERLY DESIGN THE JOINT.
  - THE TABULATED JOINT LENGTHS ARE FOR INFORMATION AND BIDDING PURPOSES. THE CONTRACTOR SHALL DETERMINE ALL NECESSARY DIMENSIONS, CROSS SLOPES, SKEWS, ETC. FOR FABRICATION AND PROPER FIT ON THE EXISTING STRUCTURE. SEE REPAIR SCHEMATIC FOR GENERAL WORK LOCATIONS. THE EXACT LIMITS OF JOINT ARMOR REPLACEMENT ADJACENT TO THE EXISTING THIRD LANE JOINT ARMOR SPLICE SHALL BE DETERMINED DURING CONSTRUCTION BY THE CHIEF ENGINEER AND CONTRACTOR'S SUPERINTENDENT AFTER THE TRAFFIC ZONE IS SAFELY IN PLACE.
  - SEE SHEET 405 FOR EXISTING JOINT CONFIGURATION.

1	ADDENDUM 3	TJW	12/16/14
-	-	-	-
NO.	REVISIONS	BY	DATE

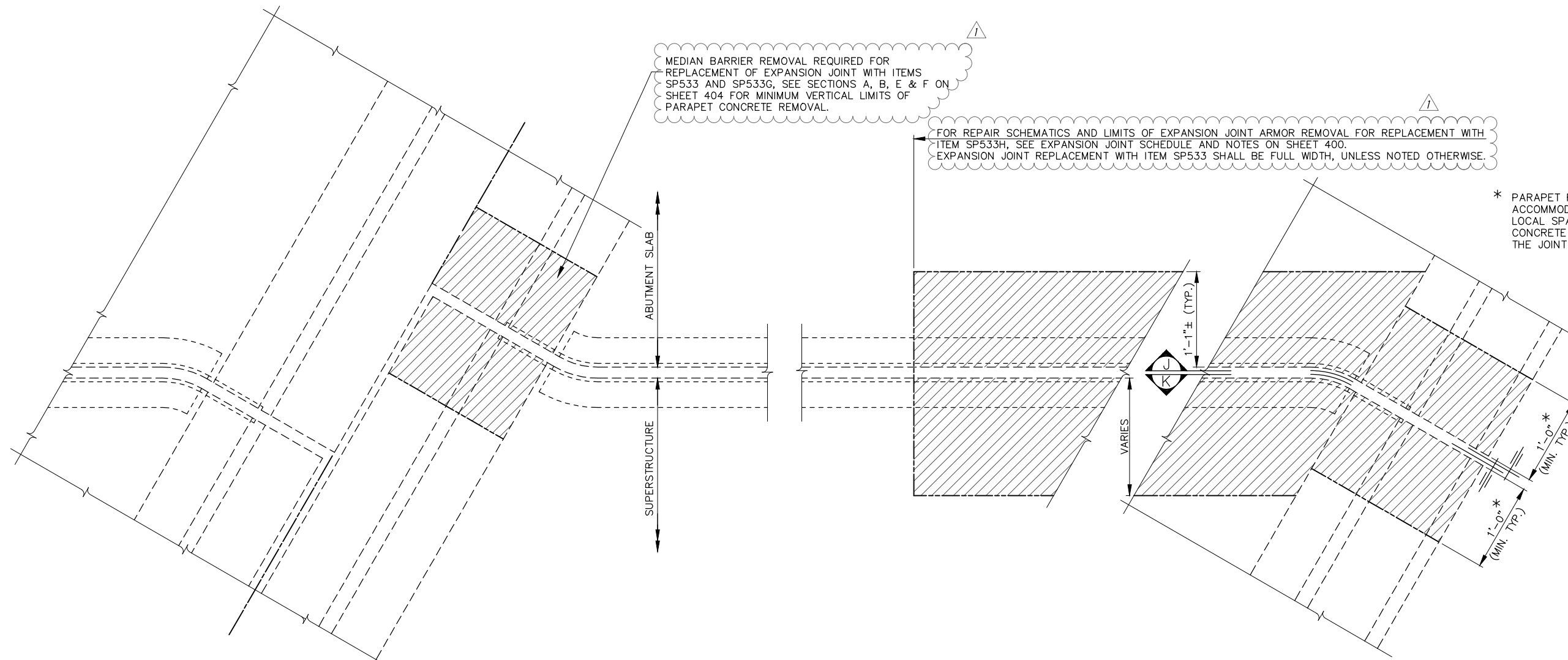
**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**  
EXPANSION JOINT DETAILS STRUCTURES  
MP 144.4, 144.6, 145.1, 145.9, 147.3, 147.9, 148.0 LORAIN COUNTY

**GPD GROUP**  
520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100

DESIGNED: TJW	CHECKED: DJC	DATE: 11/25/14
DRAWN: RPR	IN CHARGE: MRG	SCALE: N.T.S.

**PROJECT NO. 39-15-01A SHEET 400 OF 405**

Drawing File: c:\2014\2014161\structures\LOR0805\201401.dwg  
 Date: Dec 17, 2014 Time: 1:50 PM  
 Technician: Jhines



MEDIAN BARRIER REMOVAL REQUIRED FOR REPLACEMENT OF EXPANSION JOINT WITH ITEMS SP533 AND SP533G, SEE SECTIONS A, B, E & F ON SHEET 404 FOR MINIMUM VERTICAL LIMITS OF PARAPET CONCRETE REMOVAL.

FOR REPAIR SCHEMATICS AND LIMITS OF EXPANSION JOINT ARMOR REMOVAL FOR REPLACEMENT WITH ITEM SP533H, SEE EXPANSION JOINT SCHEDULE AND NOTES ON SHEET 400. EXPANSION JOINT REPLACEMENT WITH ITEM SP533 SHALL BE FULL WIDTH, UNLESS NOTED OTHERWISE.

\* PARAPET REMOVAL LIMITS SHALL ACCOMMODATE THE REPAIR OF ANY LOCAL SPALLING OF CONCRETE OR CONCRETE DETERIORATION ADJACENT TO THE JOINT ARMOR.

**MEDIAN BARRIER**

**FASCIA PARAPET**

REMOVAL OF EXISTING ROADWAY AND PARAPET JOINT ARMOR FOR REPLACEMENT WITH ITEMS SP533 AND SP533H

**LEGEND:**

INDICATES LIMITS OF STRUCTURE REMOVAL PER ITEM SP202

**NOTE:**

FOR SECTIONS J & K, SEE SHT. NO. 404.

**EXPANSION JOINT REMOVAL PLAN ITEMS SP533, SP533G & SP533H**

Drawing File: C:\2014\2014161\structures\LOR\080EXP\ITD03.dwg Layout: Model Date: Dec 17, 2014 Time: 1:52 pm Plot: 1/27/2015 Technician: Jhines

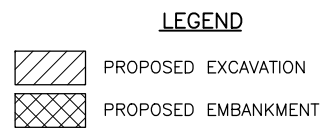
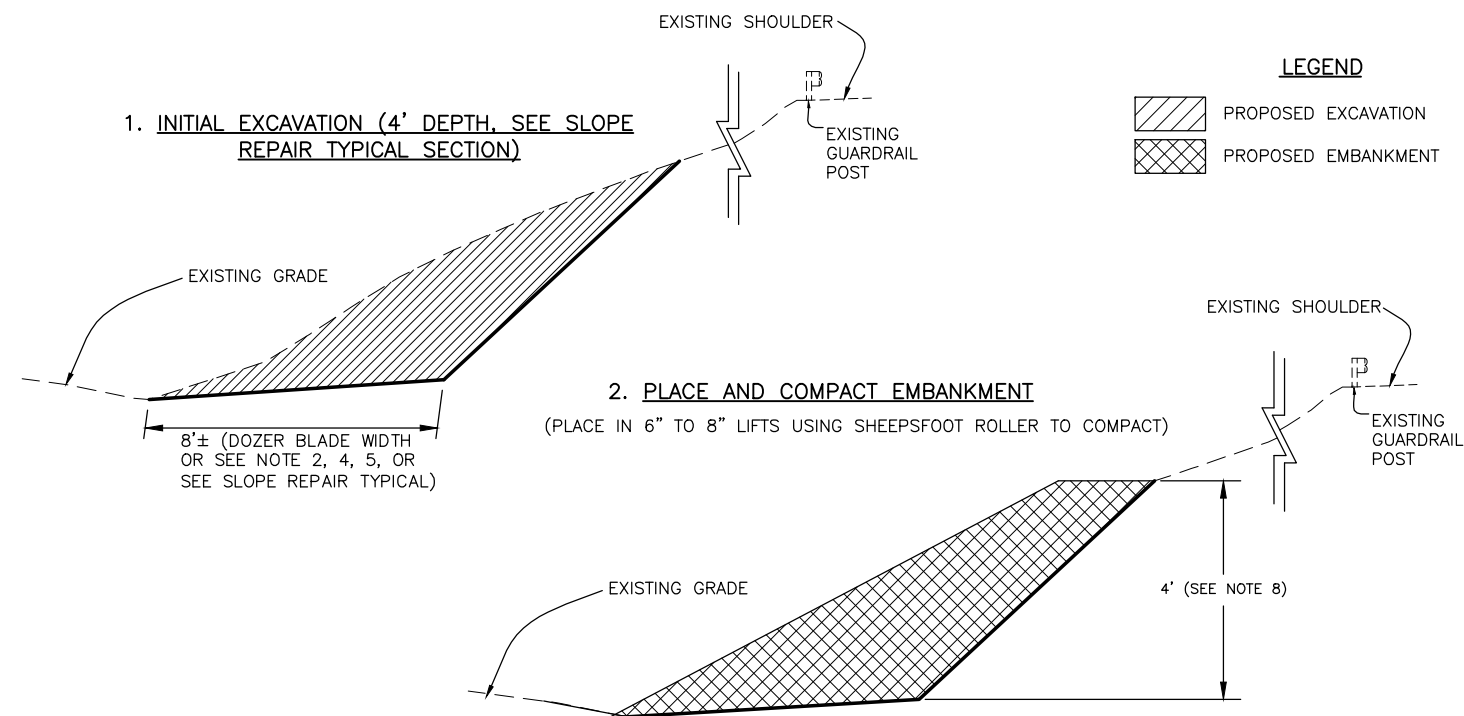
1	ADDENDUM 3	TJW	12/16/14
-	-	-	-
NO.	REVISIONS	BY	DATE

**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**  
**EXPANSION JOINT DETAILS STRUCTURES**  
 MP 144.4, 144.6, 145.1, 145.9, 147.3, 147.9, 148.0 LORAIN COUNTY

**GPD GROUP**  
 Giam, Pyle, Schuman, Burns & DeLaven, Inc.  
 520 South Main Street, Suite 2531, Akron, Ohio 44311 Fax 330-572-2100

DESIGNED: TJW	CHECKED: DJC	DATE: 11/25/14
DRAWN: RPR	IN CHARGE: MRG	SCALE: N.T.S.

**PROJECT NO. 39-15-01A SHEET403 OF 405**



**SLOPE REPAIR SEQUENCE OF CONSTRUCTION**

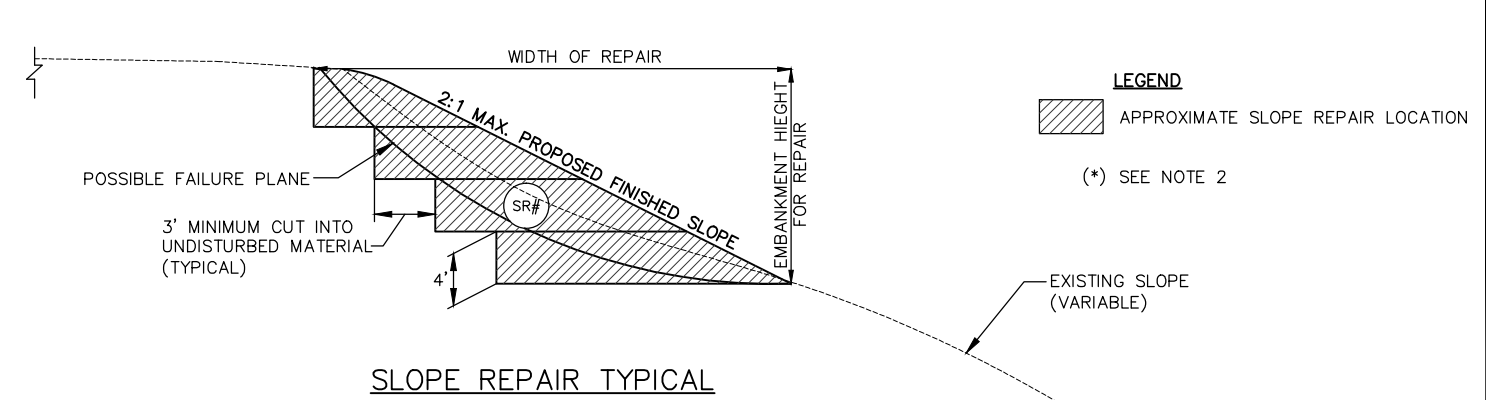
**NOTES**

- (1) - THE GENERAL AREA OF SLOPE FAILURE REPAIRS ARE SHOWN ON THE PLAN AND PROFILE SHEETS. THIS ITEM SHALL CONSIST OF EXCAVATING, DRYING THE SOIL AND EMBANKING THE EXISTING SLOPE MATERIAL WITH THE INCLUSION OF A LIMESTONE SAND TO REBUILD THE SLOPES IN ACCORDANCE WITH THE NOTES AND DETAILS ON THIS SHEET. THE QUANTITIES OF EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION TO BE PAID FOR SHALL BE THE NUMBER OF CUBIC YARDS OF REMOVED AND PLACED TO REESTABLISH THE EXISTING SLOPES.
- (2) - THE FAILURE PLANE SHOWN AND THE LIMITS OF CORRECTIVE WORK ARE ESTIMATED. THE ACTUAL FAILURE PLANE SHALL BE DETERMINED BY CAREFUL TRENCHING NORMAL TO THE EMBANKMENT PRIOR TO ANY EXCAVATION AND/OR REMOVAL OF THE FAILED EMBANKMENT MATERIAL. THE PRESENCE OF, AND LOCATION OF, THE FAILURE PLANE SHALL BE VERIFIED BY THE CHIEF ENGINEER AND COMMISSION'S TESTING LAB.
- (3) - THE CONTRACTOR SHALL REMOVE THE EXISTING SLOPE MATERIAL AND SPREAD THE SOIL OUT TO SUITABLY DRY IT. THE CONTRACTOR SHALL THEN MIX ONE (1) INCH OF A LIMESTONE SAND PER EIGHT (8) INCH LIFT (APPROXIMATELY 10% RATIO BY VOLUME BLENDED IN THE CLAY SOILS). THIS MODIFIED SOIL SHALL BE PLACED / BENCHING AS SHOWN ON THE SLOPE REPAIR TYPICAL AND COMPACTED IN ACCORDANCE WITH ITEM 203. THE CONTRACTOR SHALL ALSO PROVIDE THE MEANS AND METHOD BY WHICH THE CONTRACTOR INTENDS ON DRYING AND MIXING THE EXISTING EMBANKMENT MATERIAL WITH THE LIMESTONE SAND FOR REVIEW AND APPROVAL BY THE CHIEF ENGINEER.
- (4) - BENCHING AND LIMITS OF CORRECTIVE WORK SHOWN ON THE PLANS SHALL BE MODIFIED, IF NECESSARY, IN ACCORDANCE WITH THE FIELD CONDITIONS TO ENSURE THAT THE FAILURE PLANE IS LOCATED AND MATERIAL IS REMOVED AND REPLACED TO THE DIMENSIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE CHIEF ENGINEER.
- (5) - BENCHES SHALL BE CUT INTO SOFT OR LOOSE MATERIAL AND EXTEND A MINIMUM OF 3 FEET BEYOND THE FAILURE PLANE INTO FIRM AND STABLE MATERIAL.
- (6) - THE TOP 6 INCHES OF EMBANKMENT REMAINING AFTER REMOVAL TO THE SPECIFIED DEPTH SHALL BE COMPACTED TO A MINIMUM DENSITY OF 98% (AASHTO T-99) PRIOR TO PLACING NEW EMBANKMENT MATERIAL.
- (7) - THE SURFACE OF BENCHED AREAS SHALL BE SLOPED TO DRAIN DURING INCLEMENT WEATHER TO PREVENT SATURATION OF THE CONSTRUCTED BENCHES.
- (8) - PLACEMENT AND COMPACTION OF EMBANKMENT SHALL BE DONE IN NO MORE THAN 8" LIFTS.
- (9) - THE SLOPE REPAIR SEQUENCE OF CONSTRUCTION SHOWN ON THIS SHEET CORRESPONDS TO THE SLOPE REPAIR TYPICAL ON THIS SHEET. THE REPAIR SEQUENCE IN OTHER AREAS SHALL BE CONSTRUCTED IN SIMILAR SEQUENTIAL ORDER BEGINNING WITH INITIAL FILL.
- (10) - ALL EMBANKMENT MATERIAL UNDER ITEM 203, SHALL BE TESTED BY THE COMMISSION TO INSURE THAT THE MATERIAL HAS AN EFFECTIVE FRICTION ANGLE OF 28 DEGREES OR GREATER. THE TESTING RESULTS OF THE COMMISSION'S TESTING AGENCY SHALL BE THE DETERMINING FACTOR FOR THIS REQUIREMENT. THE TEST RESULTS OF THE CONTRACTOR'S TESTING AGENCY WILL NOT BE CONSIDERED FOR THIS REQUIREMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING/EXCAVATING A SAMPLE OF DIRT, 0 TO 3 FEET BELOW GRADE FOR EACH SLOPE AREA TO BE TESTED BY THE COMMISSION'S TESTING AGENCY.
- (11) - ALTHOUGH A TYPICAL CROSS SECTION IS PROVIDED INDICATING PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION THROUGHOUT THE PROJECT, NO WAIVER OF SPECIFICATION IS INTENDED. ALL OTHER SLOPE EMBANKMENT AREAS SHALL BE BENCHING AS SET FORTH IN THE ITEM 203. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER ITEM 203.
- (12) - IF THE REQUIREMENTS OF NOTE 10 ARE NOT MET, A CONTINGENCY QUANTITY OF 2500 CY OF ITEM SPECIAL - LIMESTONE SAND HAS BEEN CARRIED TO THE GENERAL SUMMARY TO IMPROVE THE SOIL AS DIRECTED BY THE COMMISSION'S TESTING AGENCY. THE ADDITIONAL SAND SHALL BE INCORPORATED IN A UNIFORM THICKNESS OF LIMESTONE SAND PER EIGHT (8") INCH LIFT PRIOR TO EMBANKING THE SOIL. THE LIMESTONE SAND SHALL MEET THE REQUIREMENTS OF LIMESTONE FINE AGGREGATE IN ACCORDANCE WITH 703 OF THE CMS.

**BENCHING UNDERCUT AND REPLACEMENT**

IF UNSUITABLE MATERIAL AND/OR UNSTABLE SOIL IS ENCOUNTERED AT THE BOTTOM OF THE BENCH CUT, UNDERCUT THE UNSUITABLE/UNSTABLE MATERIAL TO A DEPTH OF 1.5 FEET BELOW THE BOTTOM OF THE BENCH CUT AND REPLACE WITH ITEM 203 GRANULAR MATERIAL, TYPE C, WITH ITEM 204 GEOTEXTILE FABRIC, 712.09 TYPE A. THE FOLLOWING ESTIMATED CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE CHIEF ENGINEER FOR BENCHING UNDERCUT AND REPLACEMENT.

ITEM 203 - GRANULAR MATERIAL, TYPE C	170 CY
ITEM 204 - GEOTEXTILE FABRIC, 712.09 TYPE A	340 SY



**NOTES**

- (1) - NUMBER OF BENCHES VARIES PER HEIGHT
- (2) - GEOTECHNICAL REPORT FOR THIS PROJECT IS AVAILABLE FOR REVIEW AT THE COMMISSION'S ADMINISTRATION BUILDING IN BERA, OHIO.

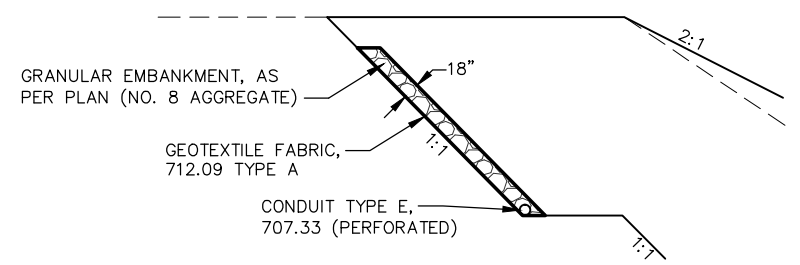
SLOPE REPAIR AREA (SL- )	MILE POST	LENGTH FEET	LENGTH DESIGNATED FOR REPAIR FEET	APPROXIMATE WIDTH OF REPAIR FEET	EMBAKMENT HEIGHT FOR REPAIR (*) FEET	NUMBER OF BENCHES EACH	203	203	659	659	671	
							EXCAVATION INCLUDING EMBANKMENT, AS PER PLAN (#) CU. YD.	BORROW CU. YD.	TOPSOIL CU. YD.	SEEDING AND MULCHING SQ. YD.	EROSION CONTROL MAT, TYPE B SQ. YD.	
1	144.37	144.39	60	100	42	18	4.5	1067	533	34	311	311
5	144.58	144.62	200	240	82	36	9	5120	2560	211	1920	1920
6	144.69	144.71	50	90	68	28	7	1493	747	61	550	550
7	144.74	144.78	125	165	64	28	7	2738	1369	103	935	935
11	145.27	145.30	80	120	26	8	2	569	284	19	173	173
12	147.57	147.59	75	115	48	20	5	1363	681	49	447	447
13	147.81	147.84	110	150	70	30	7.5	2667	1333	106	967	967
16	144.50	144.55	270	310	72	32	8	5879	2939	242	2204	2204
17	144.74	144.76	75	115	70	30	7.5	2044	1022	84	767	767
18	144.87	144.89	60	100	79	30	7.5	1778	889	82	744	744
20	145.00	145.02	50	90	54	20	5	1067	533	42	380	380
22	145.53	145.56	150	190	31	12	3	1351	676	35	317	317
23	145.56	145.58	70	110	33	14	3.5	913	456	31	281	281
TOTALS CARRIED TO GENERAL SUMMARY								28047	14024	1100	9997	9997

- (\*) - EMBANKMENT HEIGHT FOR REPAIR IS MEASURED FROM THE TOP OF THE SLOPE DOWN. SOME INSTANCES DO NOT EXTEND TO THE BOTTOM OF THE SLOPE OR EMBANKMENT.
- (#) - THE ESTIMATED QUANTITIES FOR EXCAVATION INCLUDING EMBANKMENT, AS PER PLAN ARE APPROXIMATE AND BASED ON A SET REMOVAL AREA OF 16' X 4' X LENGTH DESIGNATED FOR REPAIR X NUMBER OF BENCHES. THE ACTUAL EXCAVATION AND EMBANKMENT QUANTITIES SHALL BE VERIFIED BY FIELD SURVEY. THE CONTRACTOR SHALL FIELD SURVEY THE SLOPE REPAIR AREA PRIOR TO, DURING, AND AFTER EXCAVATION AND EMBANKMENT OPERATIONS. THE SURVEY SHALL GENERATE CROSS SECTIONS AT 100 FOOT INTERVALS. AVERAGE END AREAS WILL BE USED TO DETERMINE THE ACTUAL AMOUNT OF MATERIAL REMOVED AND REPLACED. THE COST OF SURVEYING, GENERATING CROSS SECTIONS AND QUANTITIES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION WILL BE GRANTED.

**BENCHING SLOPE DRAINS**

IF WET, UNSTABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION OF THE BENCHING, SLOPE DRAINS SHALL BE INSTALLED AT THE BACK OF THE EXCAVATION AS DETAILED BELOW. THESE DRAINS SHALL CONSIST OF ITEM 203 GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE), ITEM 204 GEOTEXTILE FABRIC, 712.09 TYPE A, AND ITEM 603 CONDUIT TYPE E, 707.31 (TYPE CP). THE GRANULAR EMBANKMENT SHALL BE PLACED IN LIFTS AS THE BENCHING BACKFILL IS CONSTRUCTED. TRANSVERSE OUTLET DRAINS SHALL OUTLET FROM THE AGGREGATE DRAIN AT THE LOW END OF THE BENCHES. THESE OUTLET DRAINS SHALL CONSIST OF ITEM 603 CONDUIT TYPE F, 707.33 WITH ITEM 603 PRECAST REINFORCED CONCRETE OUTLETS. TRANSVERSE OUTLET SHALL BE INSTALLED AT A MINIMUM 1 PERCENT SLOPE AND OUTLET THROUGH THE FACE OF THE SLOPE. PROVIDE ITEM 601 ROCK CHANNEL PROTECTION WITH FILTER FABRIC LINING OR OTHER EROSION PROTECTION BELOW THE OUTLETS, EXTENDING TO THE TOE OF THE SLOPE. THE FOLLOWING ESTIMATED CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE CHIEF ENGINEER FOR BENCHING SLOPE DRAINS.

ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE)	70 CY
ITEM 204 - GEOTEXTILE FABRIC, 712.09 TYPE A	370 SY
ITEM 603 - CONDUIT TYPE E, 707.31 (TYPE CP)	300 LF
ITEM 603 - CONDUIT TYPE F, 707.33	80 LF
ITEM 603 - PRECAST REINFORCED CONCRETE OUTLET	4 EACH
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	2 CY



**BENCHING SLOPE DRAIN DETAIL**

1	ADDENDUM NO. 3	CLH	12/16/14
NO.	REVISIONS	BY	DATE

**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**  
SLOPE REPAIR DETAIL 1

**RESOURCE INTERNATIONAL, INC.**  
6350 PRESIDENTIAL GATEWAY  
COLUMBUS, OH 43231

DESIGNED: BRT	CHECKED: JPS	DATE: 11/11/14
DRAWN: FRM	IN CHARGE: JAM	SCALE: N.T.S.

CONTRACT 39-15-01 SHEET 1 OF 1

Drawing File: c:\2014\2014161\geotechnical\Sheets\14-0200(1)\_SLOPE REPAIR NOTES.DWG Layout: Model Date: Dec 17, 2014 Time: 14:45:11 User: jps

Technician: chuff

PLAN INSERT SHEET 1



P:\\$PROJECTS\43 Bridge Repairs & Resurfacing\43-14-08 NS Bridge Overlay (OTIC)\04 Design Phase\431408 - Temporary Easement - 39-15-01.dwg, 12/18/2014 11:15:25 AM, chuck.cvitkovich



**NOTE:**

THE TEMPORARY EASEMENT IDENTIFIED ON THIS DRAWING IS PROVIDED FOR THE CONTRACTOR TO ACCESS THE CONSTRUCTION SITE. THIS TEMPORARY EASEMENT IS PROVIDED FOR INGRESS AND EGRESS ONLY. THE CONTRACTOR SHALL NOT STORE EQUIPMENT AND/OR MATERIALS FOR THE PROJECT WITHIN THE TEMPORARY EASEMENT. PRIOR TO UTILIZING THE TEMPORARY EASEMENT, THE CONTRACTOR SHALL CONDUCT A VIDEO AND WRITTEN PRE-CONSTRUCTION SURVEY OF THE TEMPORARY EASEMENT. THIS SURVEY SHALL BE CONDUCTED BY THE CONTRACTOR, THE CHIEF ENGINEER, AND THE PROPERTY OWNER. COPIES OF THE SURVEY SHALL BE APPROVED AND MAINTAINED BY BOTH THE PROPERTY OWNER AND THE CHIEF ENGINEER. A POST-CONSTRUCTION CONDITION SURVEY SHALL BE SIMILARLY CONDUCTED, APPROVED AND DISTRIBUTED. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE TEMPORARY EASEMENT TO ORIGINAL CONDITION AS INDICATED IN THE POST-CONSTRUCTION CONDITION SURVEY. THE RESTORATION OF THE TEMPORARY EASEMENT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE GRANTED. IF THE CONTRACTOR FAILS TO EITHER REPAIR, HAVE REPAIRED, OR PAY AGREED REPAIR COSTS TO THE OWNER OF THE PROPERTY, THE COMMISSION WILL WITHHOLD FINAL PAYMENT OF MONIES DUE THE CONTRACTOR UNTIL SUCH REPAIRS ARE COMPLETED AND/OR NEGOTIATED COSTS PAID AND A COPY OF THE SIGNED RELEASE FROM THE PROPERTY OWNER IS PROVIDED TO THE COMMISSION. THE CONTRACTOR SHALL NOT INTERRUPT THE BUSINESS OPERATIONS OF THE PROPERTY OWNER. THE CONTRACTOR SHALL PROMPTLY MOVE EQUIPMENT AND VEHICLES AS REQUIRED BY THE PROPERTY OWNER SO AS NOT TO IMPEDE UPON THE BUSINESS OPERATIONS.

**NOTES:**

- ESTABLISH ACCESS ROAD AND INSTALL TEMPORARY GATE AND LOCK IN ACCORDANCE WITH ITEM SPECIAL - TEMPORARY ACCESS. SEE GENERAL NOTE NO. 14 ON SHEET 385 FOR ITEM SPECIAL - TEMPORARY ACCESS.
- ALL WORK PERFORMED WITHIN NORFOLK SOUTHERN RAILWAY RIGHT-OF-WAY SHALL COMPLY WITH THE REQUIREMENTS OF SP 827B, INCLUDING BUT NOT LIMITED TO, TRACK CLEARANCES, CONSTRUCTION PROCEDURES, DEBRIS SHIELDS, BALLAST AND TRACK PROTECTION, FLAGGING, HAULING ACROSS RAILROAD, AND EQUIPMENT AND PERSONNEL ON THE RAILROAD RIGHT-OF-WAY. THE CONTRACTOR WILL NOT BE PERMITTED TO INSTALL A TEMPORARY CROSSING ACROSS THE TRACKS.
- AFTER COMPLETION OF REPAIRS, REMOVE THE TEMPORARY ACCESS ROAD AND RESTORE THE SITE IN ACCORDANCE WITH ITEM SPECIAL - TEMPORARY ACCESS ROAD. SEE GENERAL NOTE NO. 14 ON SHEET 385 FOR ITEM SPECIAL - TEMPORARY ACCESS.

NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>TEMPORARY EASEMENT</b>			
OHIO TURNPIKE OVER NORFOLK SOUTHERN RR			
M.P. 147.9 LORAIN COUNTY			
DESIGNED:	CAC	CHECKED:	CMM
DATE:	12/27/2013	IN CHARGE:	ADY
SCALE:	N.T.S.		
<b>PROJECT 39-15-01A SHEET 3 OF</b>			



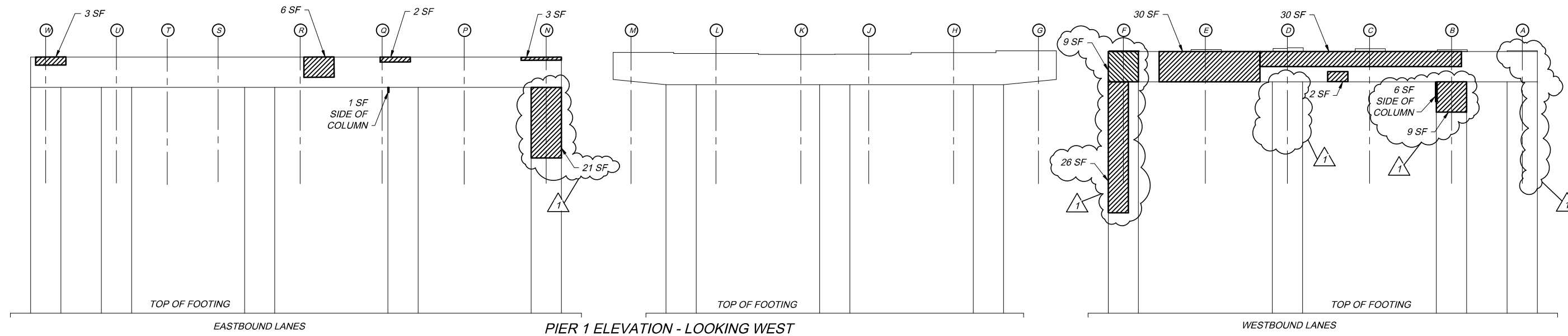
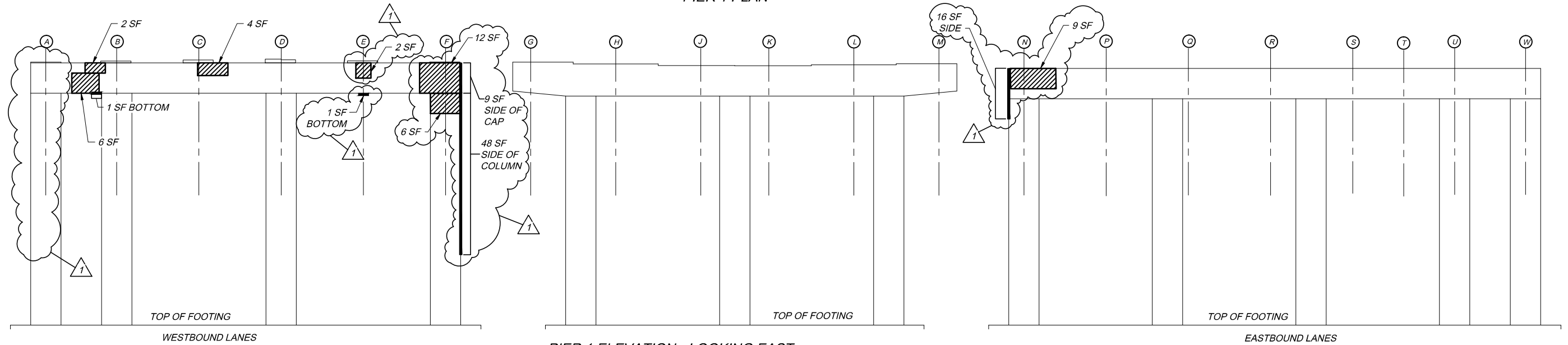
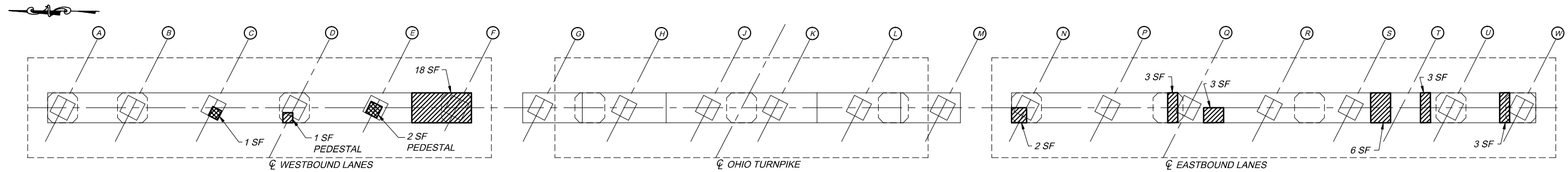
**GENERAL QUANTITIES**

39-15-01B											
ITEM	TOTAL	UNIT	DESCRIPTION	M.P. 145.1		M.P. 147.3		M.P. 148.0		M.P. 151.8	
				ABUT.	PIERS	ABUT.	PIERS	ABUT.	PIERS	ABUT.	PIERS
SP 509	400	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	-	-	-	-	-	-	-	-
SP 516A	188	LF	CRACK REPAIR USING EPOXY INJECTION	46	2	21	11	14	11	72	11
SP 516H	2	EA	REHABILITATION OF FIXED BEARING ASSEMBLY	-	-	1	1	-	-	-	-
SP 516K	10	EA	REBUILD EXPANSION BEARING DEVICE	-	-	-	10	-	-	-	-
SP 516M	19	EA	RESET EXISTING ROCKER BEARING	-	-	-	-	-	15	4	-
516	54	EA	BEARING RETROFIT	-	54	-	-	-	-	-	-
516	LUMP	-	JACKING AND TEMPORARY SUPPORT	-	-	-	-	-	-	-	-
SP 519	2948	SF	PATCHING CONCRETE STRUCTURES	65	813	56	1060	76	487	68	323
SP 519C	101	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	-	47	-	42	-	12	-	0
SP 536	3884	SY	CONCRETE WEATHERPROOFING, SUBSTRUCTURE	280	1680	195	470	195	470	186	408

Dec 17, 2014 - 3:10pm G:\OTC\2013-11-15 - Substructure Repair Assignment\OT Ramp Plans\General Summary.dwg

NO.	ADDENDUM #3	YC	12/17/14
	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>GENERAL QUANTITIES</b> STRUCTURES M.P. 145.1, 147.3, 148.0 & 151.8 LORAIN COUNTY			
 <b>CONSULTING ENGINEERING, INC.</b> <small>CIVIL, STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149</small>			
DESIGNED:	ER	CHECKED:	YC
DRAWN:	HW	IN CHARGE:	RC
		DATE:	04/30/14
		SCALE:	N.T.S.
<b>PROJECT 39-15-01B SHEET 3 OF 26</b>			

Dec 17, 2014 - 11:29am G:\OTC\2013-11-15 - Substructure Repair Assignment\57 Plans\SR57-PIER 1.dwg



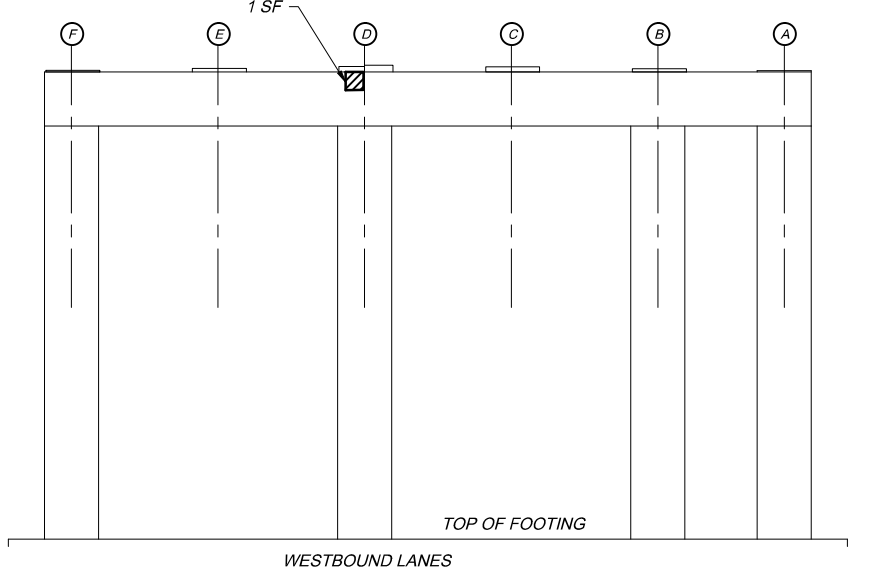
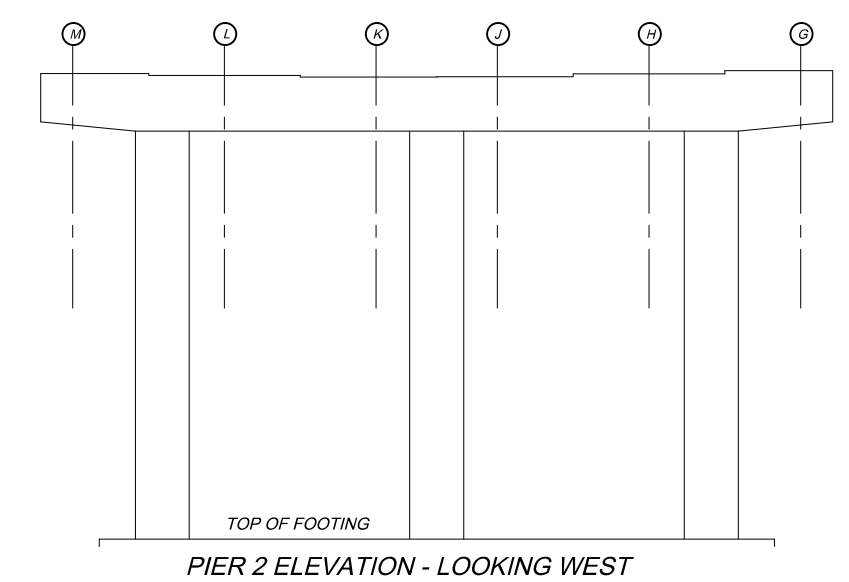
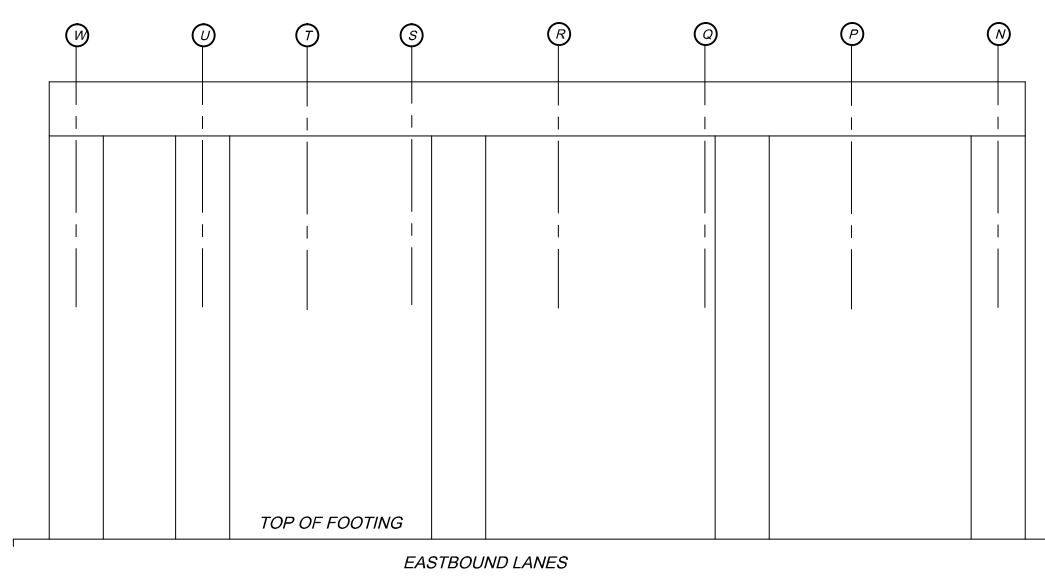
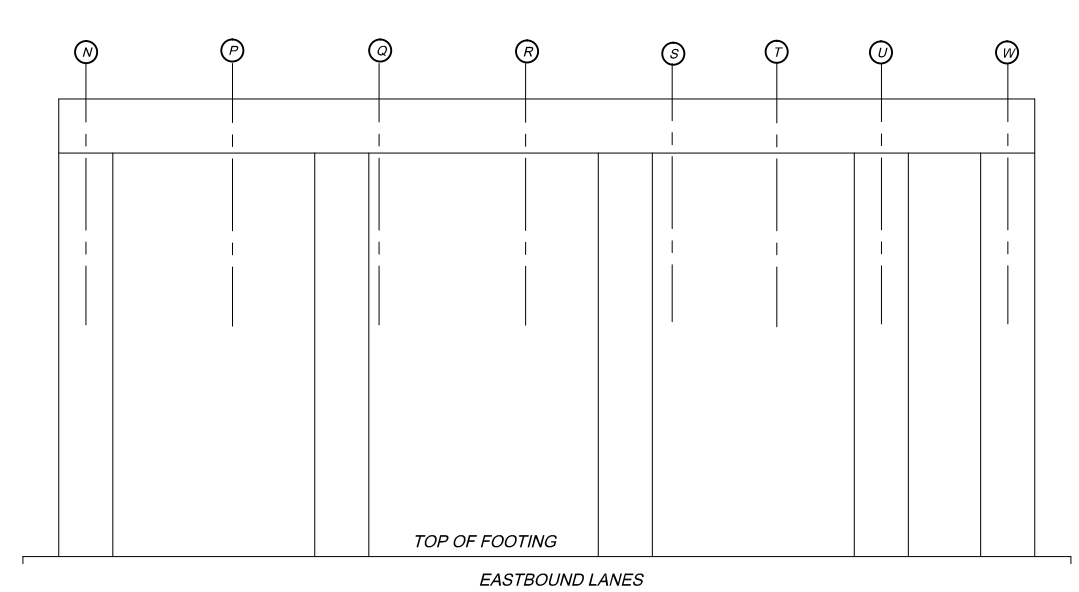
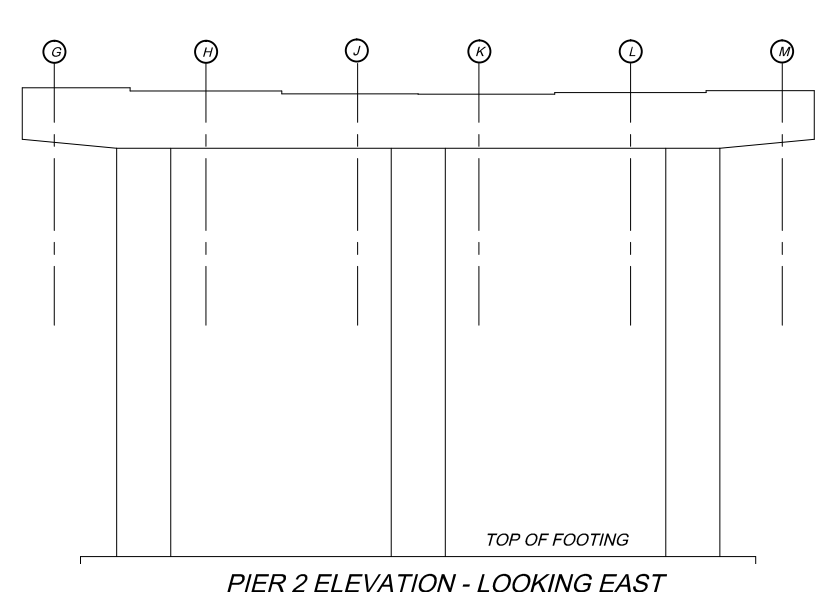
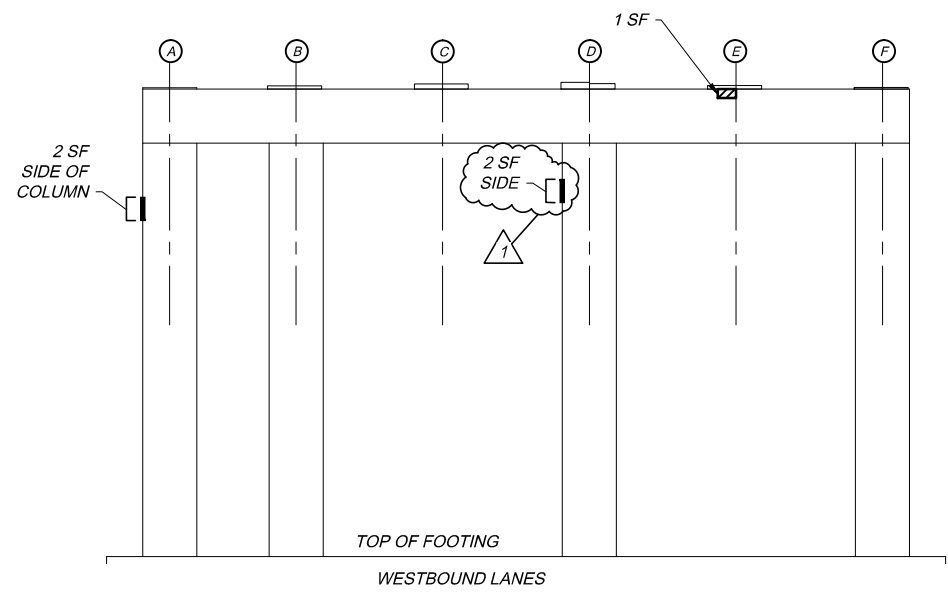
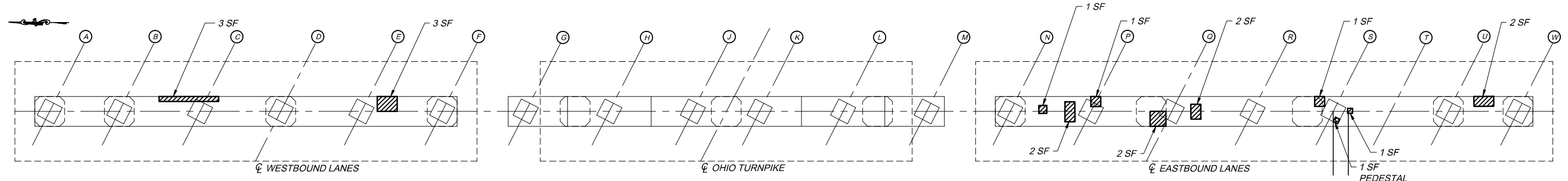
**NOTE:**  
 1. FOR ITEM BEARING RETROFIT, SEE TYPICAL BEARING RETROFIT DETAIL ON SHEET 6 AND NOTE 12 ITEM 516 BEARING RETROFIT ON SHEET 2.  
 2. BEARING RETROFIT LOCATIONS FOR PIER 1 ARE AT BEAM LINES: A, B, D, E, G, H, J, K, L, M, T, U, W ON EACH SPAN.

PIER 1				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	0	0
BEARING RETROFIT	EA	516	-	26 <sup>1</sup>
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	306 <sup>1</sup>	455 <sup>1</sup>
PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR	SF	SP 519C	3	5
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	560

- LEGEND**
- CRACK REPAIR USING EPOXY INJECTION
  - AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - AREA OF PATCHING PER SP 519C. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - BEAM LINE FOR LOCATION REFERENCE

ADDENDUM #3	HW 12/17/14
REVISIONS	BY DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>	
<b>PIER 1 REPAIRS</b>	
OHIO TURNPIKE OVER S.R. 57	
M.P. 145.1 LORAIN COUNTY	
<b>CONSULTING ENGINEERING, INC.</b>	
CIVIL, STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149	
DESIGNED: ER	CHECKED: YC
DRAWN: HW	IN CHARGE: RC
DATE: 04/30/14	SCALE: N.T.S.
<b>PROJECT 39-15-01B SHEET 8 OF 26</b>	

Dec 17, 2014 - 11:29am G:\OTC\2013-11-15 - Substructure Repair Assignment\US 57 Plans\SR57-PIER 2.dwg

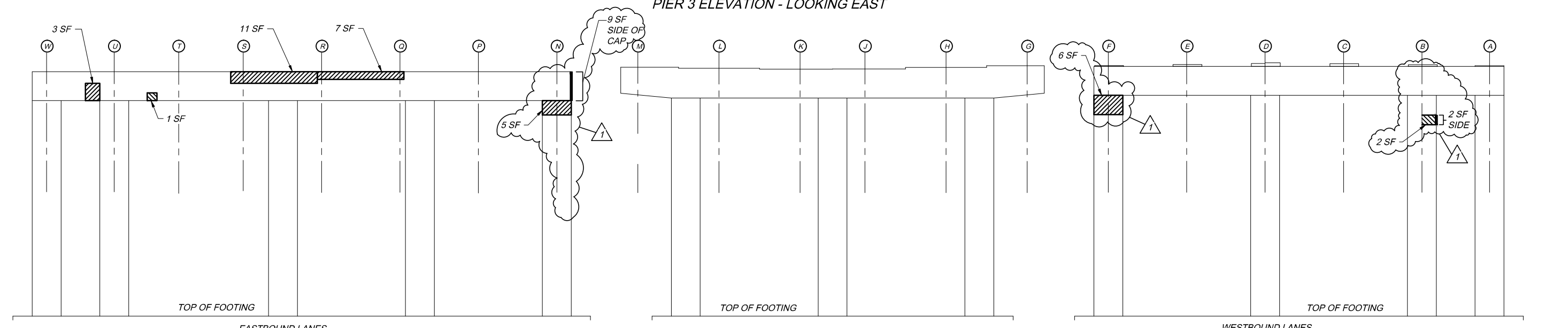
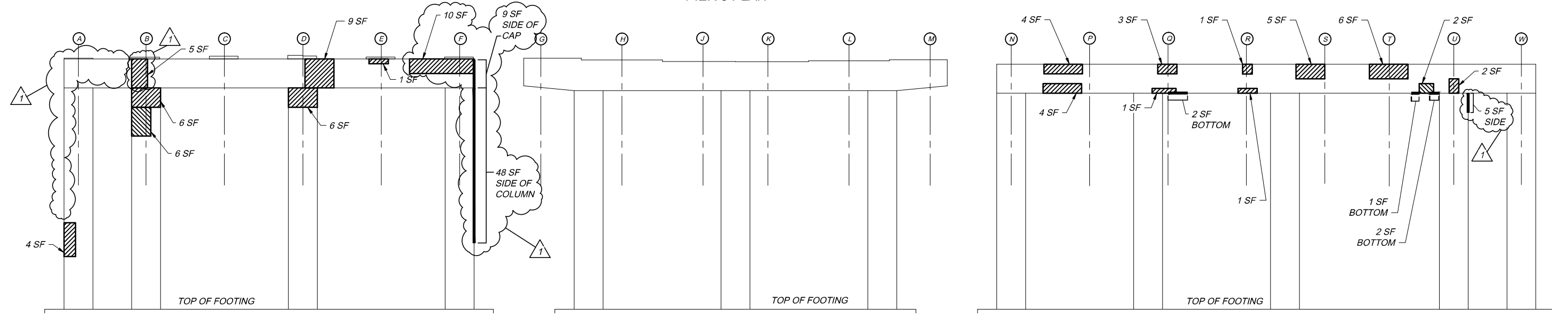
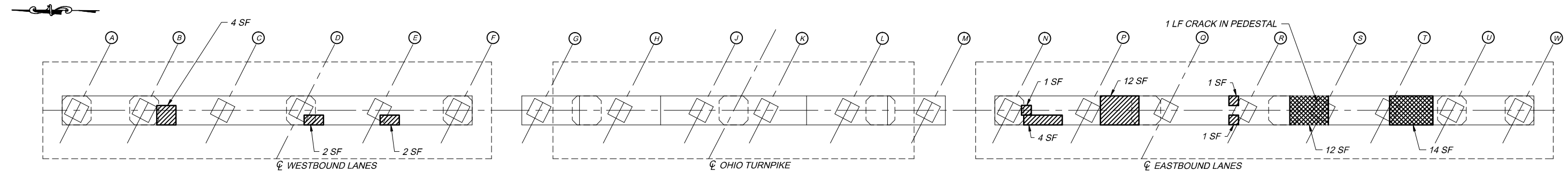


PIER 2				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	0	0
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	23	34
PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR	SF	SP 519C	1	2
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	560

- LEGEND**
- CRACK REPAIR USING EPOXY INJECTION
  - AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - AREA OF PATCHING PER SP 519C. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - BEAM LINE FOR LOCATION REFERENCE

ADDENDUM #3	HW	12/17/14
NO. REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>		
<b>PIER 2 REPAIRS</b>		
OHIO TURNPIKE OVER S.R. 57		
M.P. 145.1 LORAIN COUNTY		
<b>CONSULTING ENGINEERING, INC.</b>		
CIVIL STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149		
DESIGNED: ER	CHECKED: YC	DATE: 04/30/14
DRAWN: HW	IN CHARGE: RC	SCALE: N.T.S.
<b>PROJECT 39-15-01B SHEET 9 OF 26</b>		

Dec 17, 2014 - 11:29am C:\OTC\2013-11-15 - Substructure Repair Assignment\US 57 Plans\SR57-PIER 3.dwg



**NOTE:**  
 1. FOR ITEM BEARING RETROFIT, SEE TYPICAL BEARING RETROFIT DETAIL ON SHEET 6 AND NOTE 12 ITEM 516 BEARING RETROFIT ON SHEET 2.  
 2. BEARING RETROFIT LOCATIONS FOR PIER 3 ARE AT BEAM LINES: A, B, C, D, E, F, G, H, J, K, L, M, U, W ON EACH SPAN.

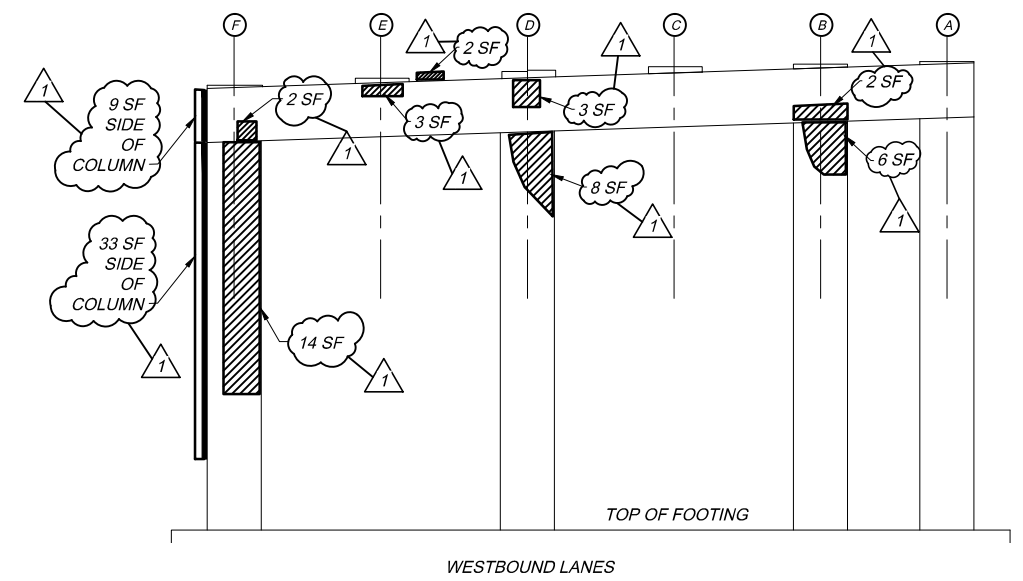
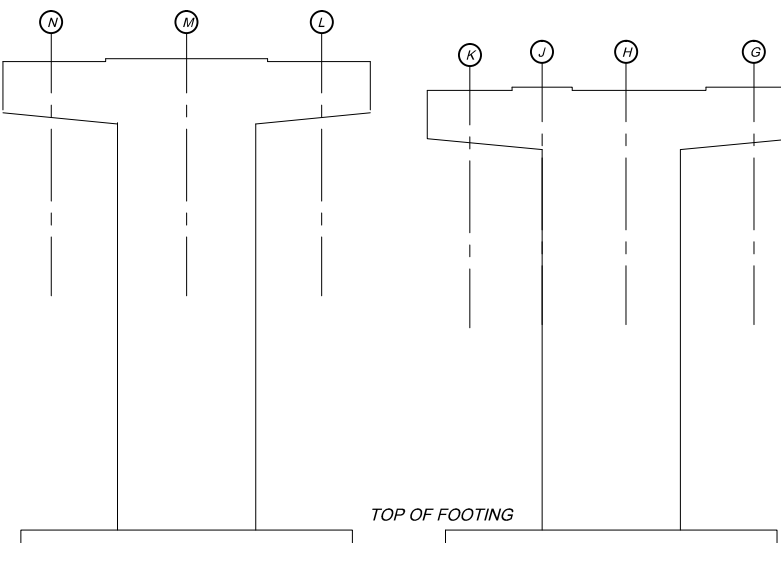
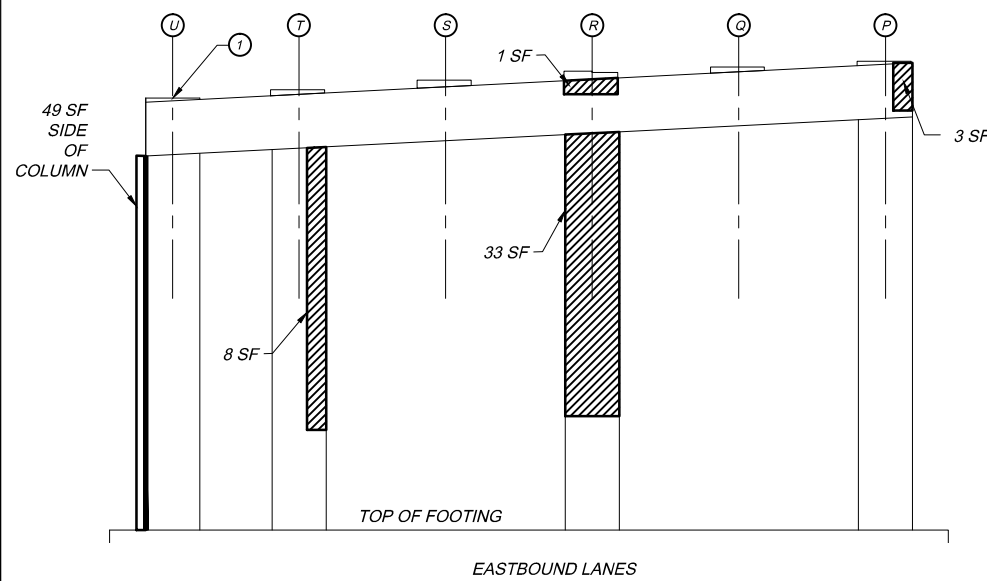
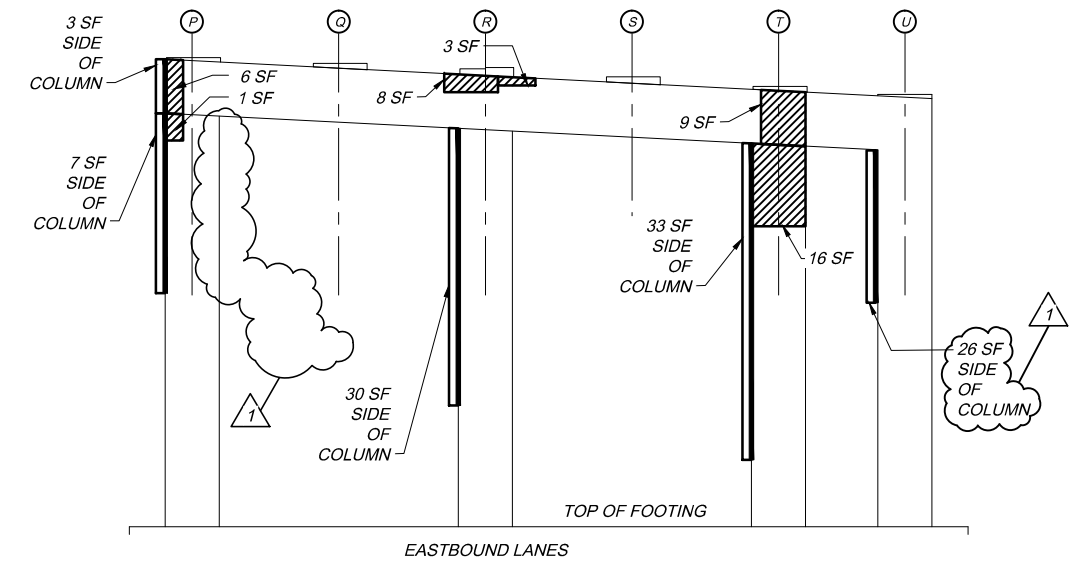
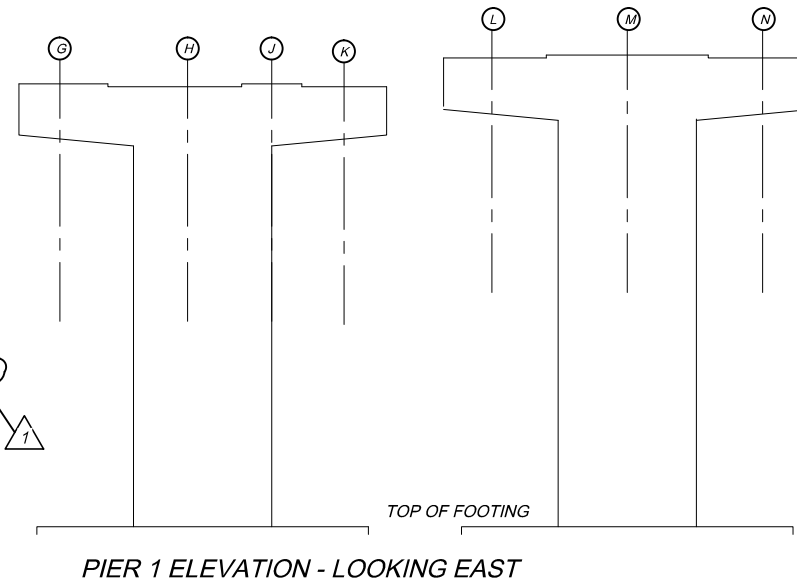
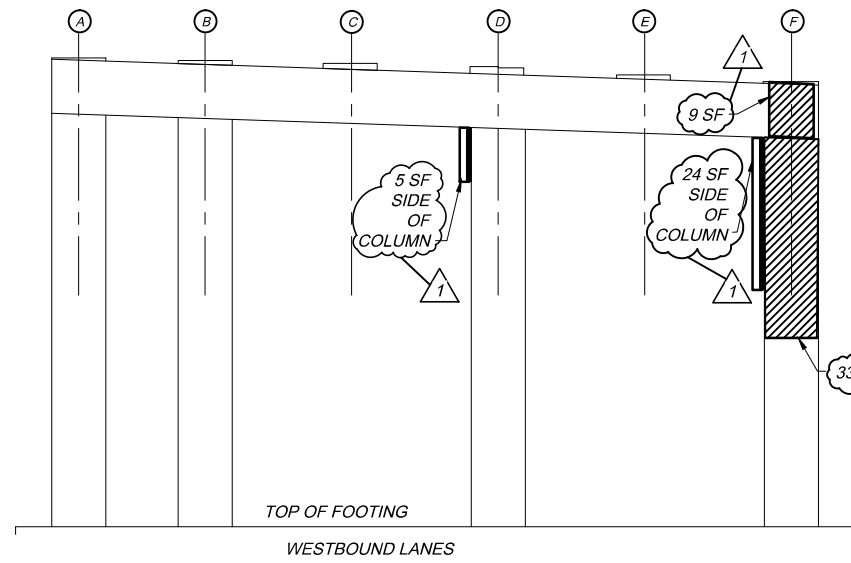
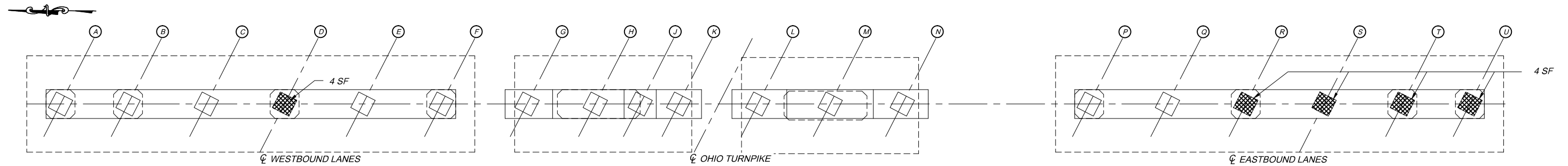
PIER 3				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	1	2
BEARING RETROFIT	EA	516	-	28
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	216	324
PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR	SF	SP 519C	26	40
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	560

**LEGEND**

- CRACK REPAIR USING EPOXY INJECTION
- AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- AREA OF PATCHING PER SP 519C. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- BEAM LINE FOR LOCATION REFERENCE

ADDENDUM #3		HW	12/17/14
REVISIONS		BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>PIER 3 REPAIRS</b>			
OHIO TURNPIKE OVER S.R. 57			
M.P. 145.1 LORAIN COUNTY			
CONSULTING ENGINEERING, INC. CIVIL, STRUCTURAL ENGINEERS/SURVEYORS 19477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44148			
DESIGNED: ER	CHECKED: YC	DATE: 04/30/14	
DRAWN: HW	IN CHARGE: RC	SCALE: N.T.S.	
<b>PROJECT 39-15-01B SHEET 10 OF 26</b>			

Dec 17, 2014 - 11:30am G:\OTC\2013-11-15 - Substructure Repair Assignment\Abbe Rd. Plans\Abbe-PIER 1.dwg



① **CODED NOTE:**  
THE LOCATION AT BEARING LINE FOR REHABILITATION OF FIXED BEARING ASSEMBLY, PER ITEM SP 516H.

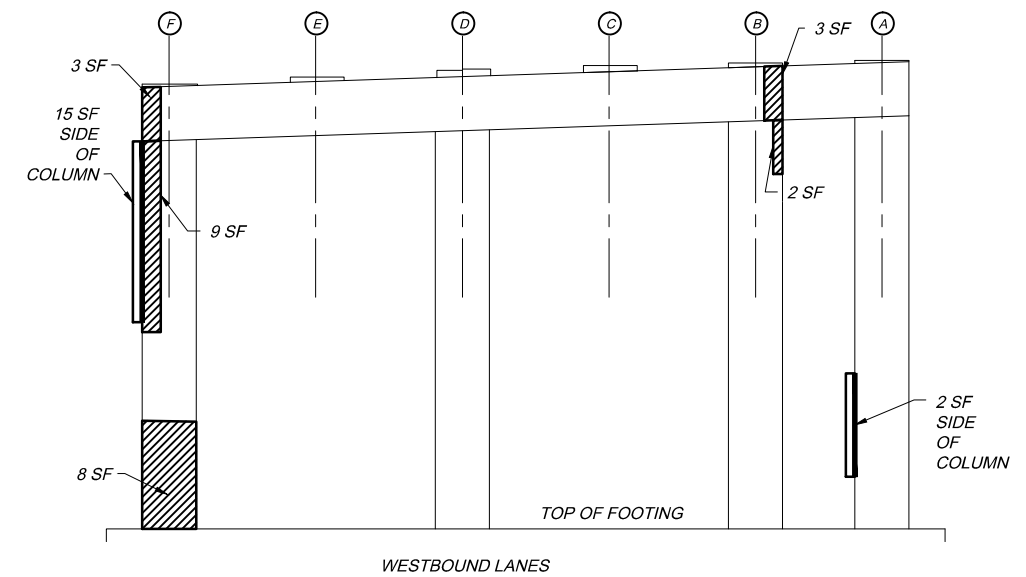
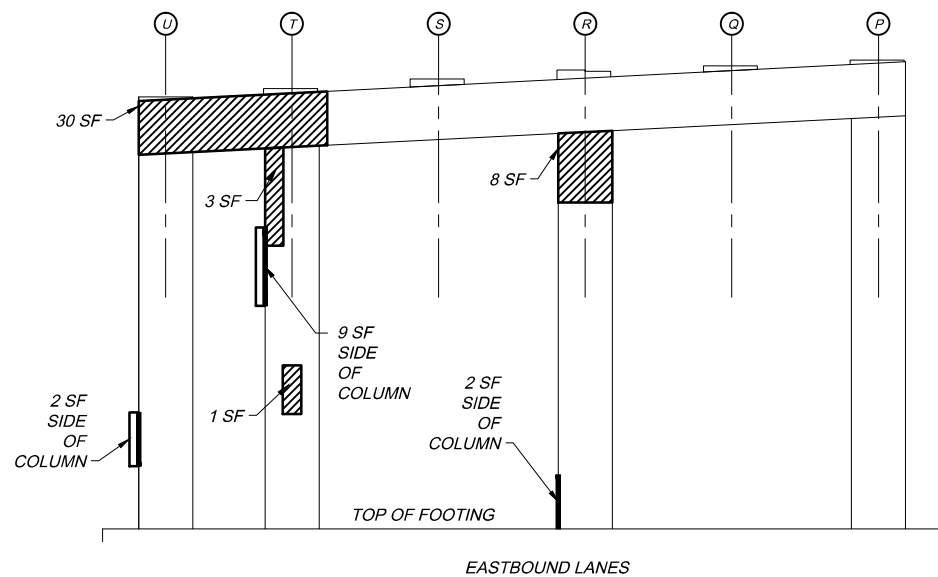
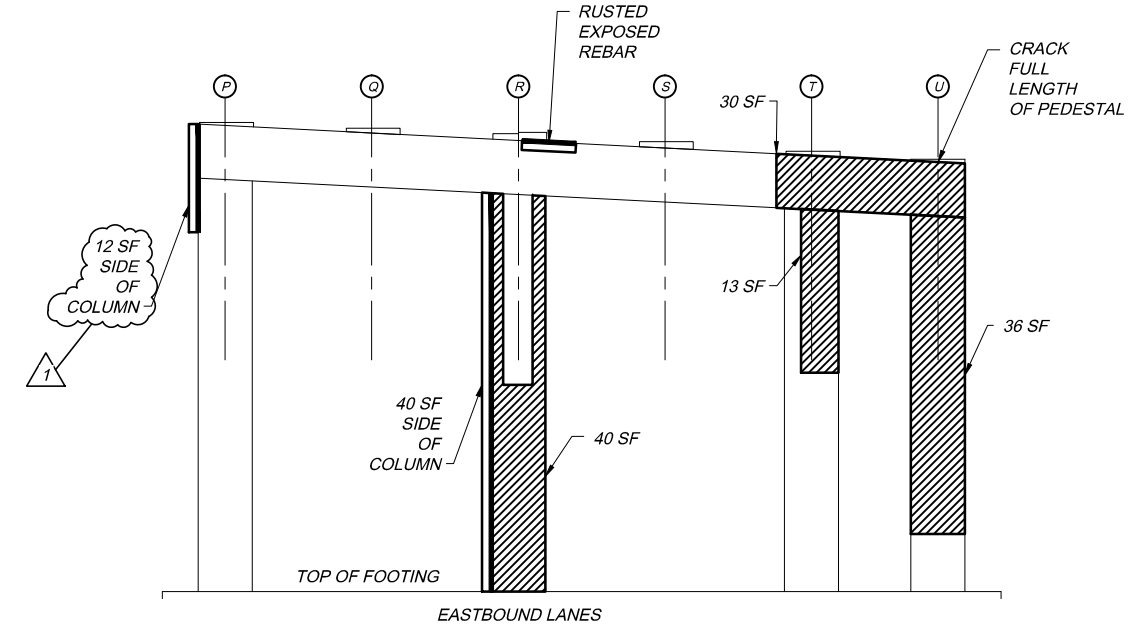
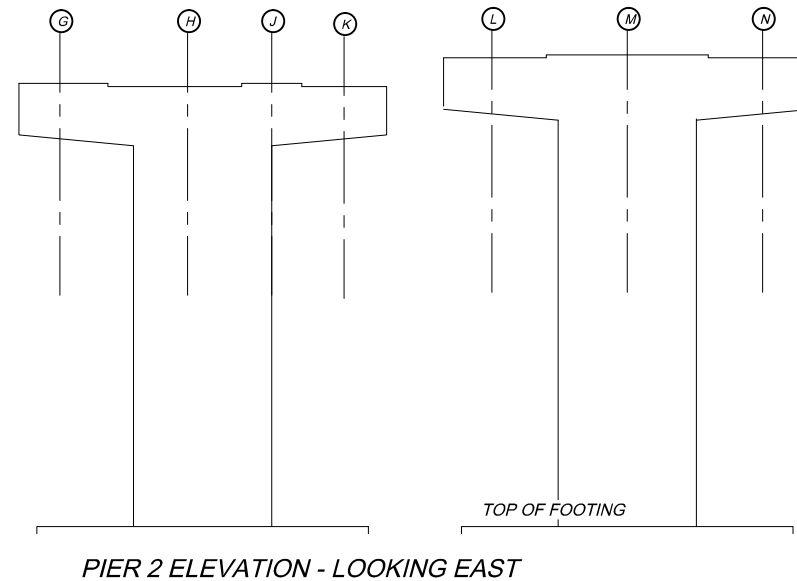
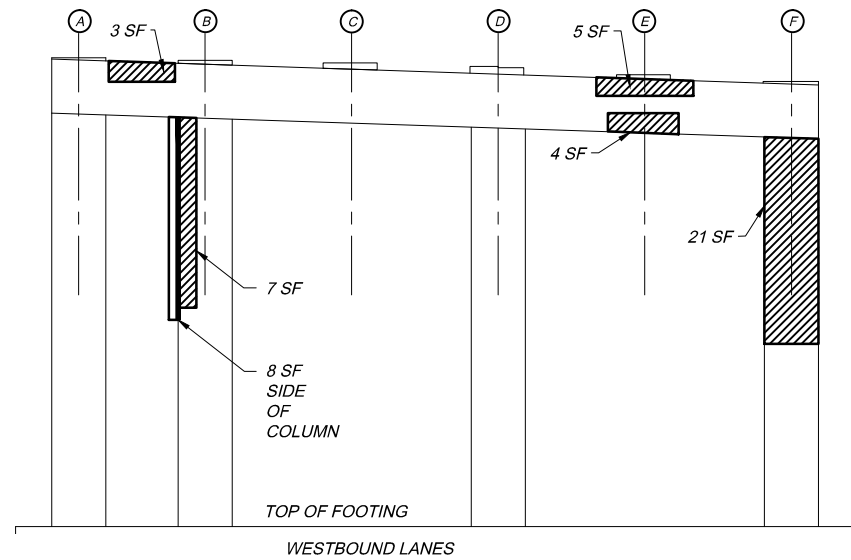
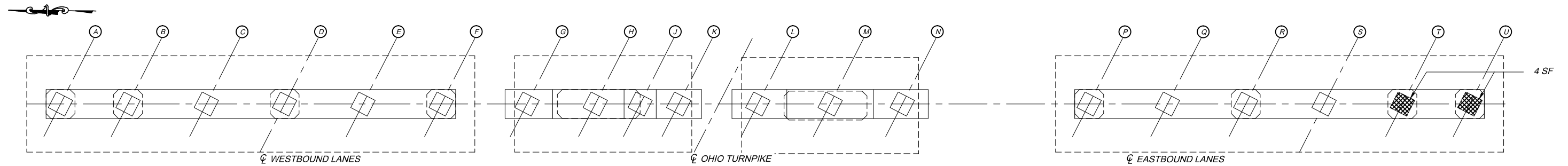
PIER 1				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	0	0
REHABILITATION OF FIXED BEARING ASSEMBLY	EA	SP 516H	-	1
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	389 ①	583 ①
PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR	SF	SP 519C	20	30
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	235

**LEGEND**

- CRACK REPAIR USING EPOXY INJECTION
- AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- AREA OF PATCHING PER SP 519C. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- BEAM LINE FOR LOCATION REFERENCE
- CODED NOTE ON THIS SHEET

ADDENDUM #3 NO. REVISIONS	HW DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>	
<b>PIER 1 REPAIRS</b> OHIO TURNPIKE OVER ABBE ROAD M.P. 147.3 LORAIN COUNTY	
 <b>CONSULTING ENGINEERING, INC.</b> CIVIL, STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149	
DESIGNED: YC	CHECKED: ER
DRAWN: YC	IN CHARGE: RC
DATE: 04/30/14 SCALE: N.T.S.	
<b>PROJECT 39-15-01B SHEET 14 OF 26</b>	

Dec 17, 2014 - 11:30am G:\OTC\2013-11-15 - Substructure Repair Assignment\Abbe Rd. Plans\Abbe-PIER 2.dwg



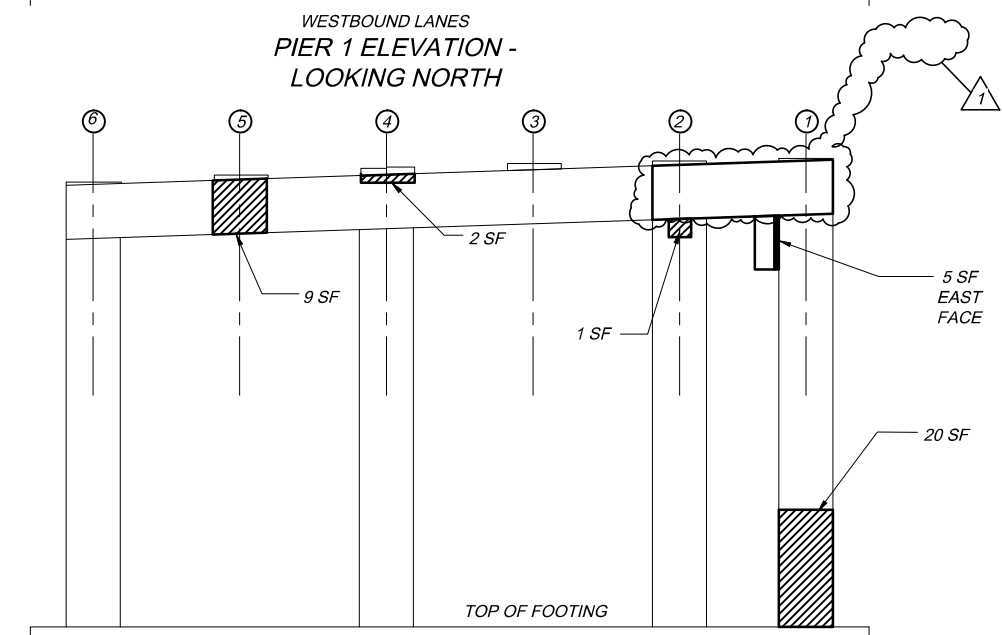
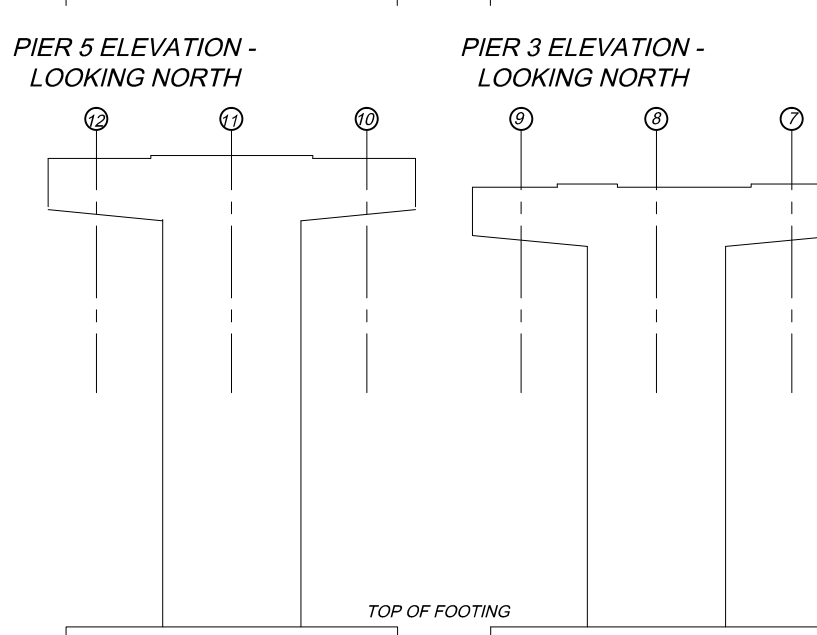
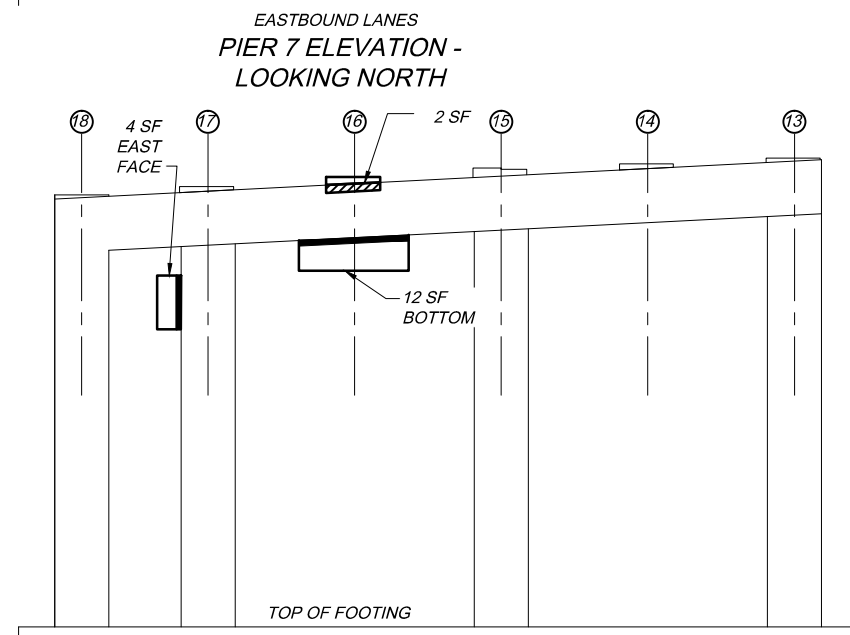
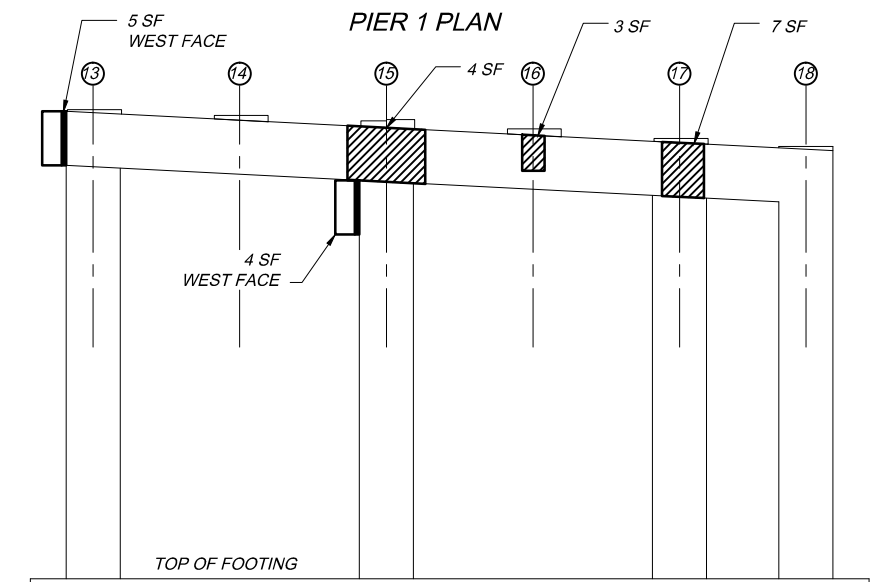
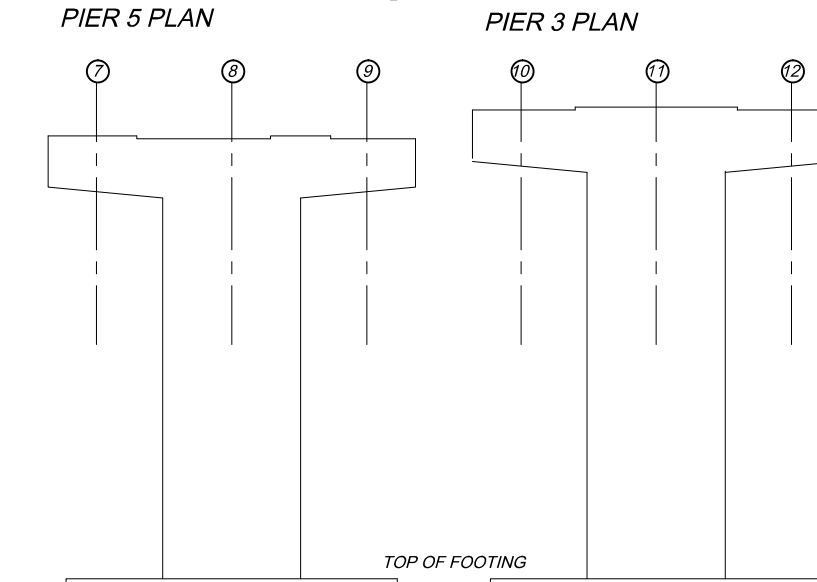
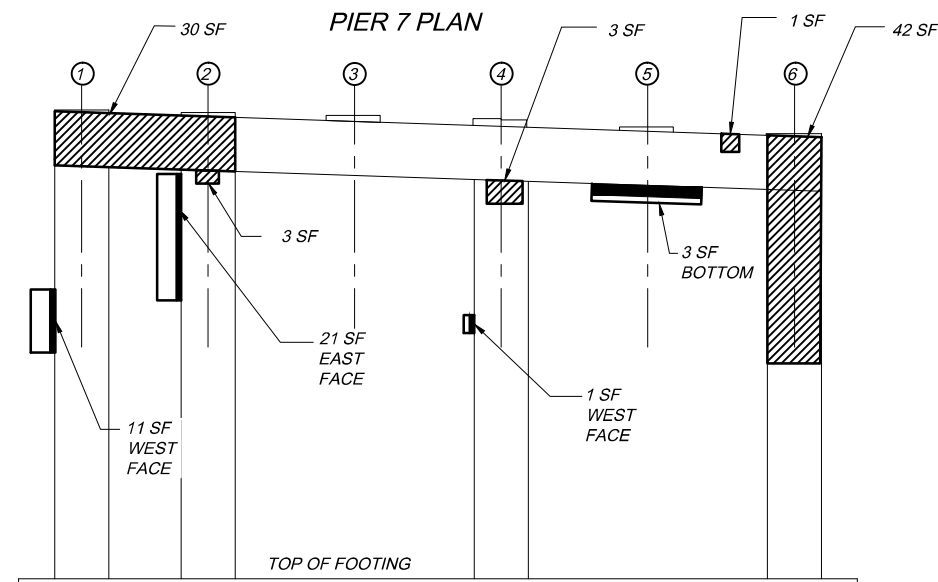
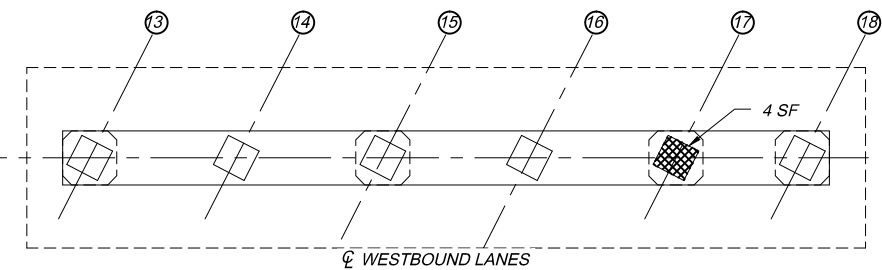
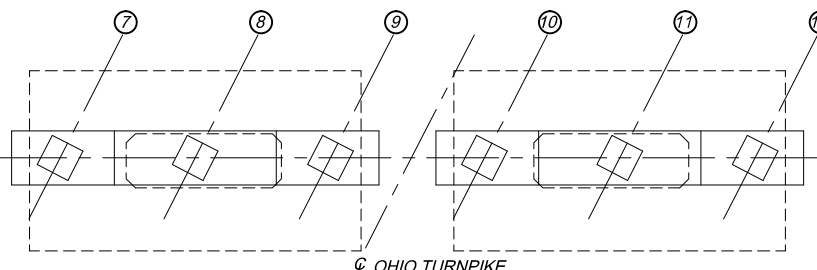
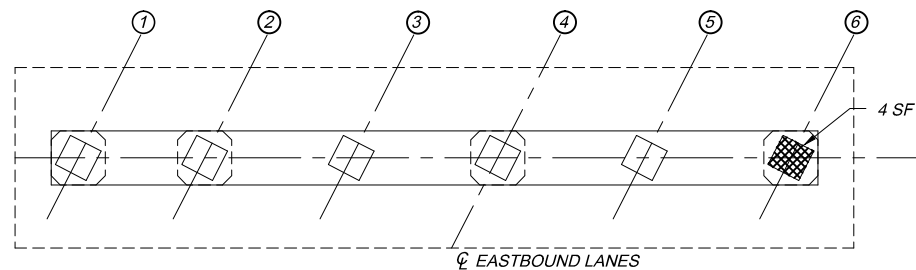
NOTE:  
1. REBUILD EXPANSION BEARING DEVICE LOCATIONS FOR PIER 2, SPAN 2 ARE AT BEAM LINES: B, C, D, E, F, P, Q, R, S, T.

PIER 2				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	7	11
REBUILD EXPANSION BEARING DEVICE	EA	SP 516K	-	10
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	316	477
PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR	SF	SP 519C	8	12
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	235

- LEGEND
- CRACK REPAIR USING EPOXY INJECTION
  - AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - AREA OF PATCHING PER SP 519C. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - BEAM LINE FOR LOCATION REFERENCE

ADDENDUM #3	HW	12/17/14
REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>		
PIER 2 REPAIRS		
OHIO TURNPIKE OVER ABBE ROAD		
M.P. 147.3 LORAIN COUNTY		
<b>CONSULTING ENGINEERING, INC.</b>		
<small>CIVIL STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44148</small>		
DESIGNED: YC	CHECKED: ER	DATE: 04/30/14
DRAWN: YC	IN CHARGE: RC	SCALE: N.T.S.
<b>PROJECT 39-15-01B SHEET 15 OF 26</b>		

Dec 17, 2014 - 11:30am G:\OTC\2013-11-15 - Substructure Repair Assignment\US 20 Plans\SR20-PIER 1.dwg



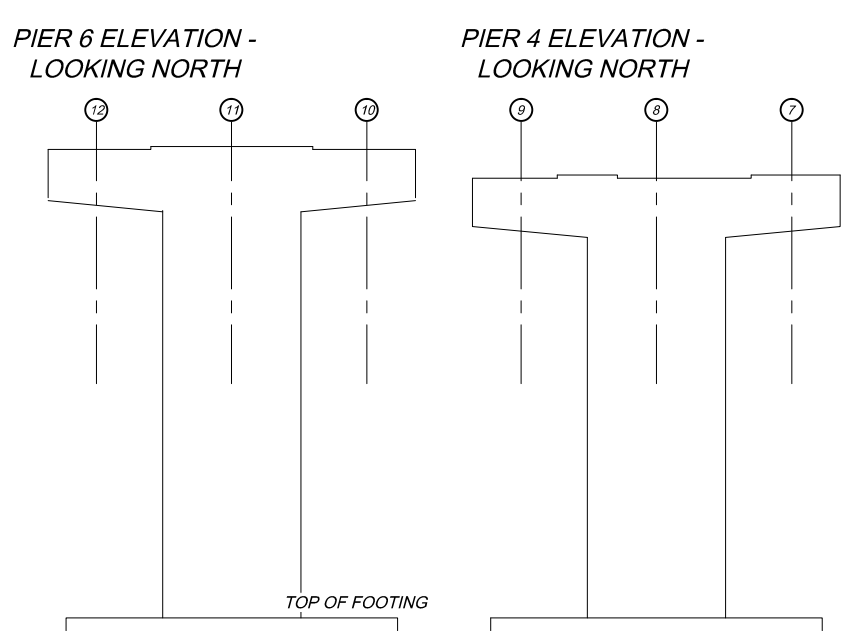
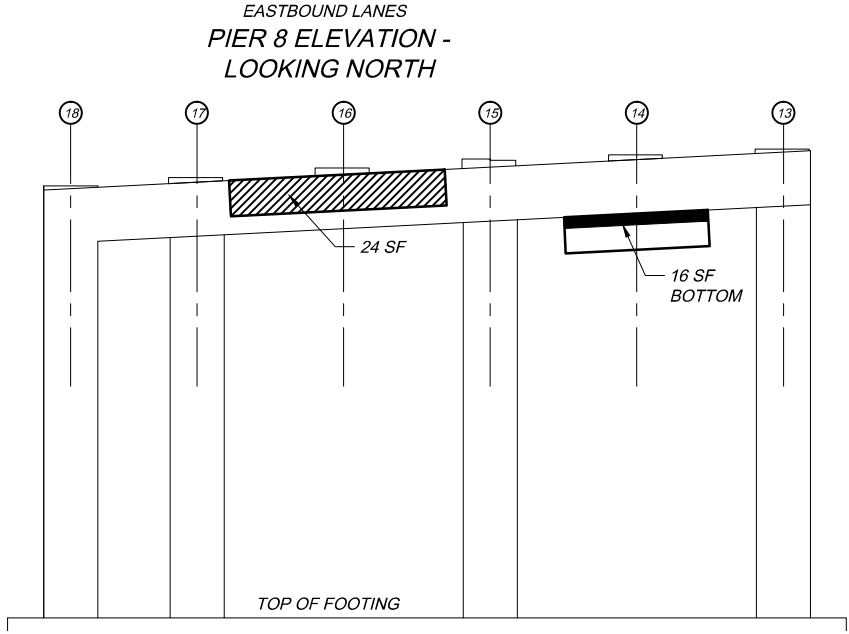
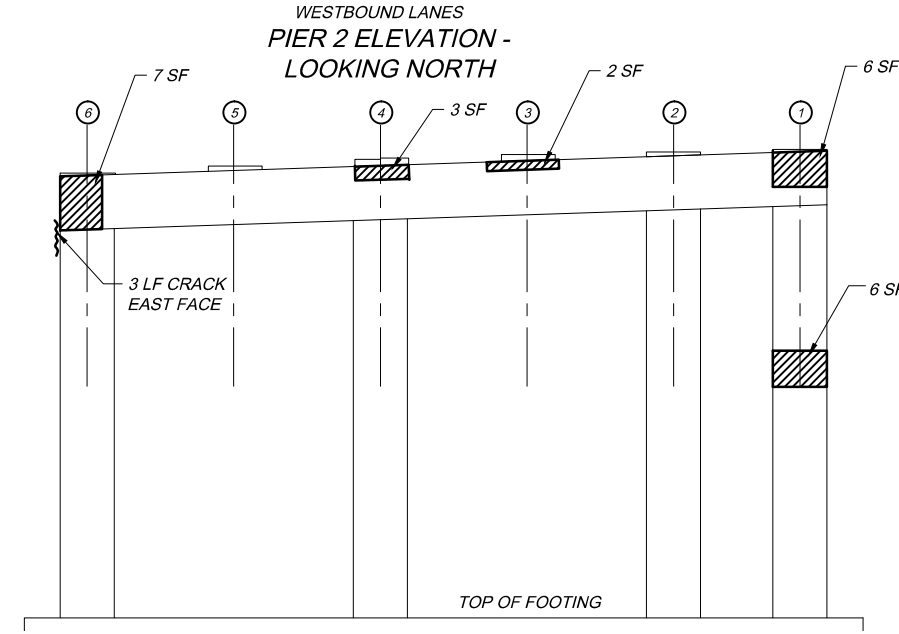
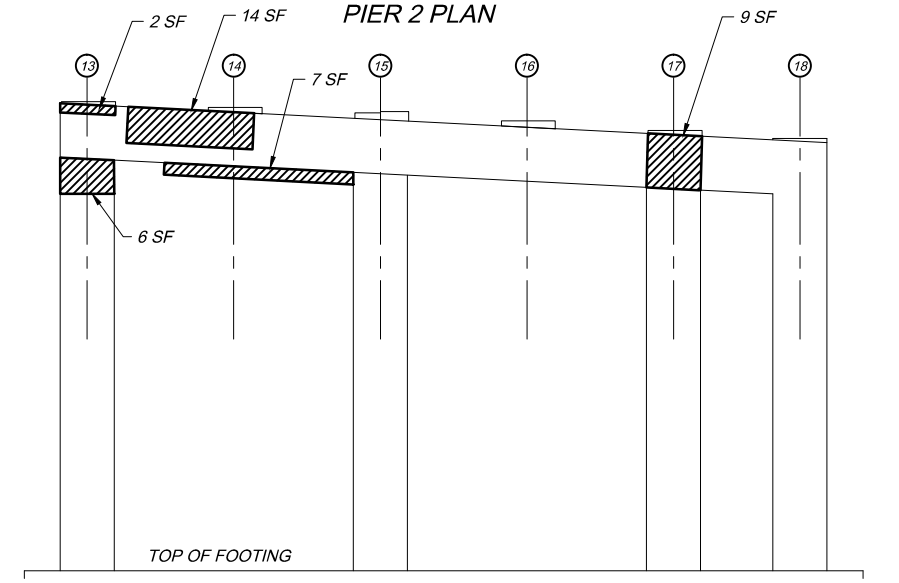
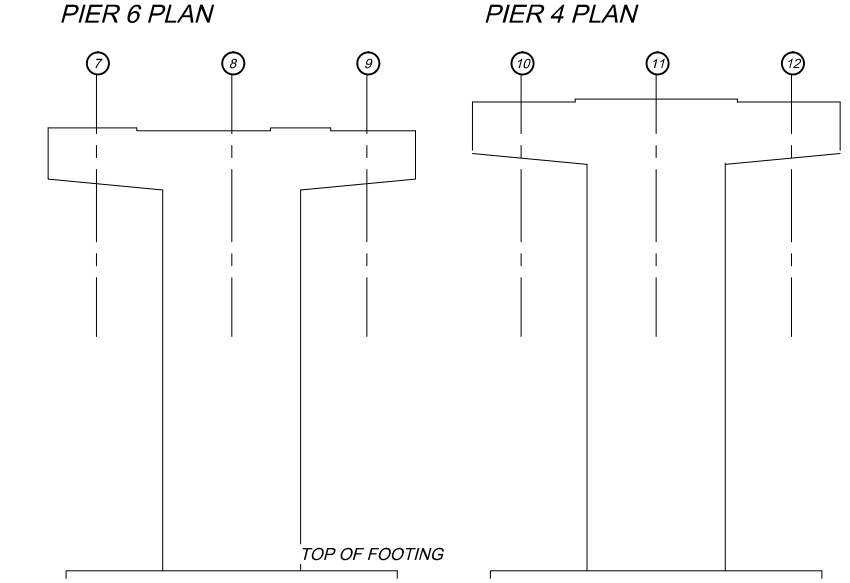
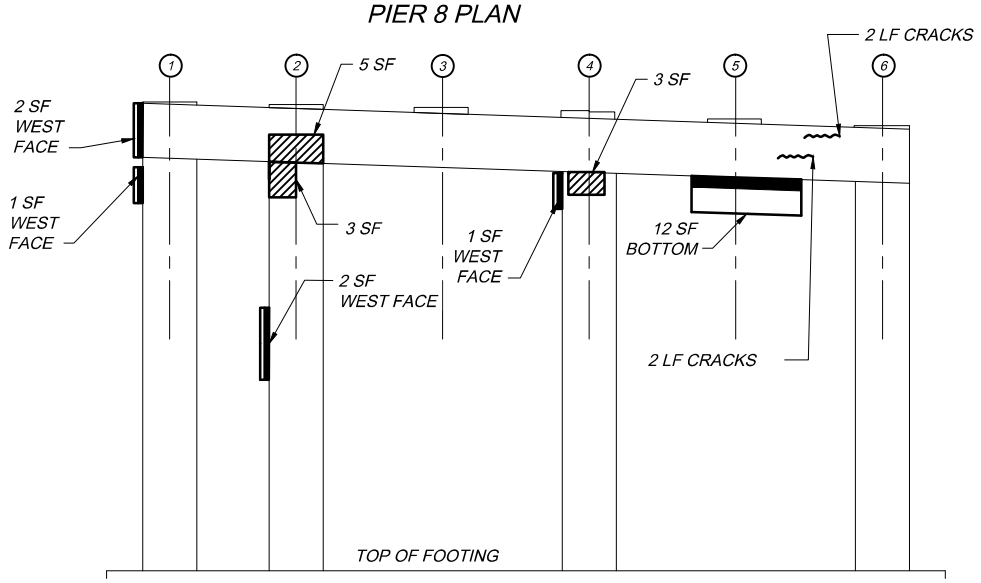
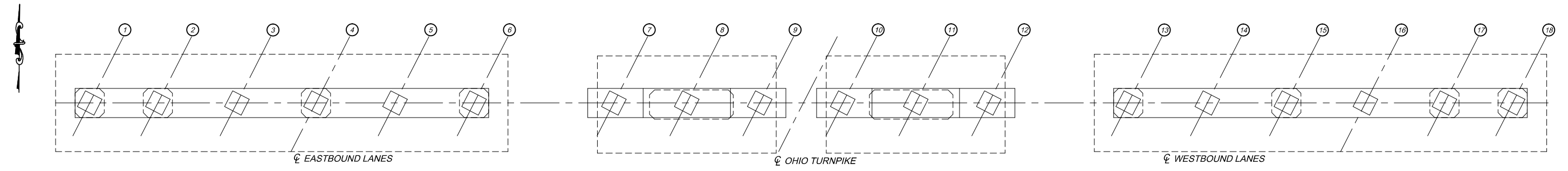
NOTE:  
LOCATIONS OF RESET EXISTING ROCKER BEARING AT  
PIERS 1, 5 & 7, SPAN 1, ARE AT BEAM LINES 1, 2, 3, 6, 9, 16, 18.

PIERS 1, 3, 5, 7				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	0	0
RESET EXISTING ROCKER BEARING	EA	SP 516M	-	7
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	193	290
PATCHING OF CONCRETE STRUCTURES WITH TROWELABLE MORTAR	SF	SP 519C	8	12
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	235

- LEGEND**
- CRACK REPAIR USING EPOXY INJECTION
  - AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - AREA OF PATCHING PER SP 519C. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
  - BEAM LINE FOR LOCATION REFERENCE

ADDENDUM #3	HW	12/17/14
REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>		
<b>PIERS 1, 3, 5, 7 REPAIRS</b>		
<b>OHIO TURNPIKE OVER US 20</b>		
M.P. 148.0 LORAIN COUNTY		
<small>CIVIL STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149</small>		
DESIGNED: ER	CHECKED: YC	DATE: 04/30/14
DRAWN: ER	IN CHARGE: RC	SCALE: N.T.S.
<b>PROJECT 39-15-01B SHEET 19 OF 26</b>		

Dec 17, 2014 - 11:30am G:\OTC\2013-11-15 - Substructure Repair Assignment\US 20 Plans\SR20-PIER 2.dwg



NOTE:  
RESET EXISTING ROCKER BEARING LOCATIONS FOR  
PIERS 2 & 8, SPAN 3 ARE AT BEAM LINES 1, 3, 4, 12, 15, 16, 18  
AND PIER 2, SPAN 2 AT BEAM LINE 13.

PIERS 2, 4, 6, 8				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	7	11
RESET EXISTING ROCKER BEARING	EA	SP 516M	-	8
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	131	197
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	235

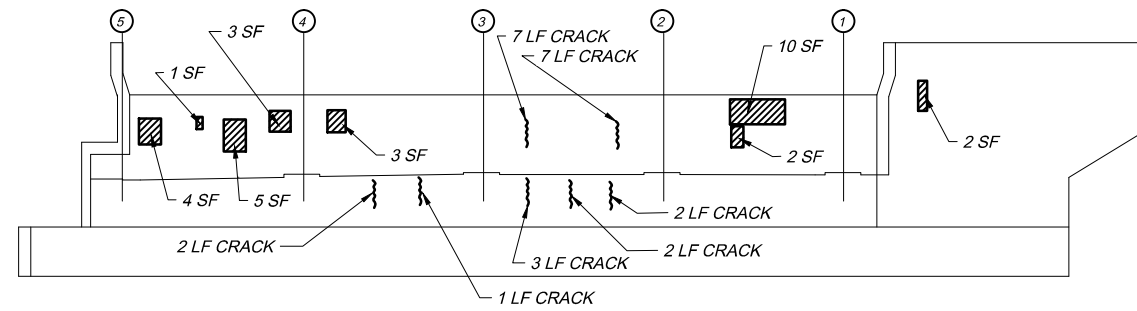
**LEGEND**

- CRACK REPAIR USING EPOXY INJECTION
- AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- BEAM LINE FOR LOCATION REFERENCE

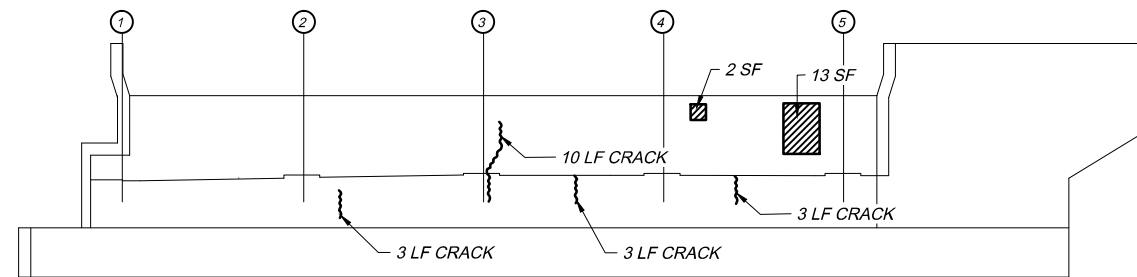
ADDENDUM #3	HW	12/17/14
REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>		
<b>PIERS 2, 4, 6, 8 REPAIRS</b>		
<b>OHIO TURNPIKE OVER US 20</b>		
M.P. 148.0	LORAIN COUNTY	
<small>CIVIL STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44148</small>		
DESIGNED: ER	CHECKED: YC	DATE: 04/30/14
DRAWN: ER	IN CHARGE: RC	SCALE: N.T.S.
<b>PROJECT 39-15-01B SHEET 20 OF 26</b>		



Dec 17, 2014 - 11:39am G:\OTC\2013-11-15 - Substructure Repair Assignment\OT Ramp Plans\I-480-EB-ABUT.dwg



WEST ABUTMENT ELEVATION -LOOKING WEST



EAST ABUTMENT ELEVATION -LOOKING EAST

NOTE:  
RESET EXISTING ROCKER BEARING LOCATIONS AT WEST ABUTMENT IS AT GIRDER 5 AND EAST ABUTMENT ARE AT GIRDERS 3, 4, 5.

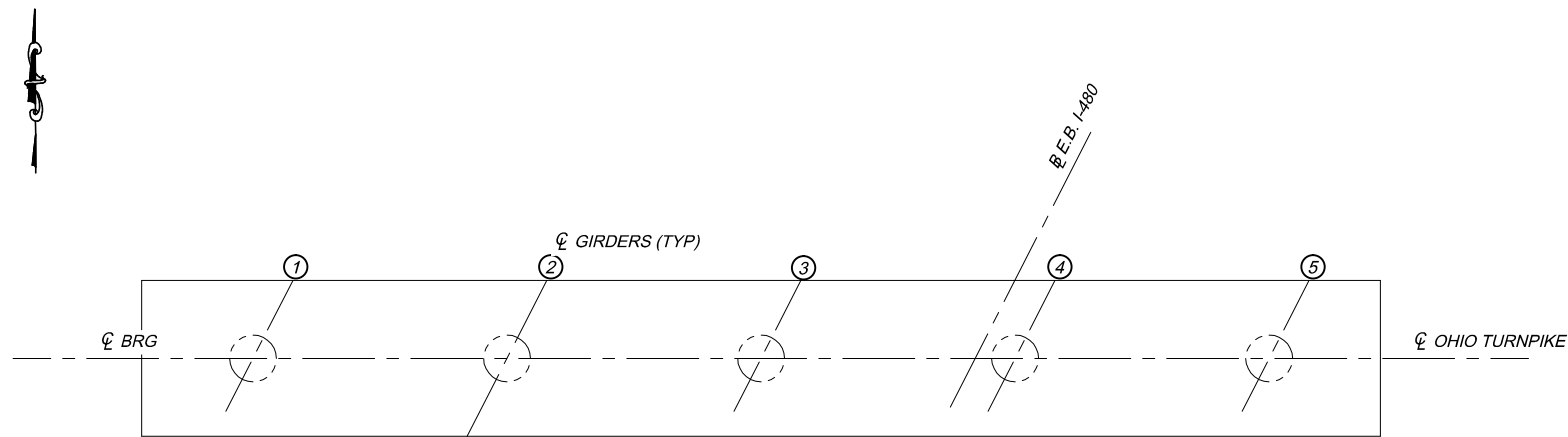
ABUTMENTS				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	48	72
RESET EXISTING ROCKER BEARING	EA	SP 516M	-	4
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	45  1	68  1
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	186

LEGEND

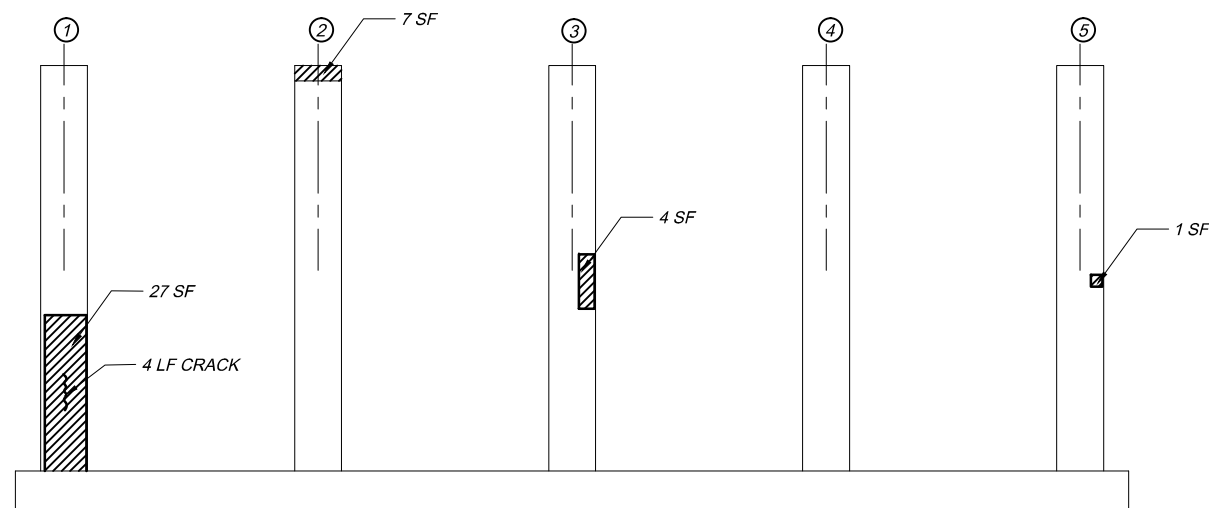
- CRACK REPAIR USING EPOXY INJECTION
- AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- BEAM LINE FOR LOCATION REFERENCE

	ADDENDUM #3	HW	12/17/14
NO.	REVISIONS	BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>ABUTMENT REPAIRS</b>			
OHIO TURNPIKE RAMP OVER OHIO TURNPIKE			
M.P. 151.8 LORAIN COUNTY			
<b>CONSULTING ENGINEERING, INC.</b>			
CIVIL, STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149			
DESIGNED:	ER	CHECKED:	YC
DRAWN:	HW	IN CHARGE:	RC
DATE:	04/30/14	SCALE:	N.T.S.
<b>PROJECT 39-15-01B SHEET 23 OF 26</b>			

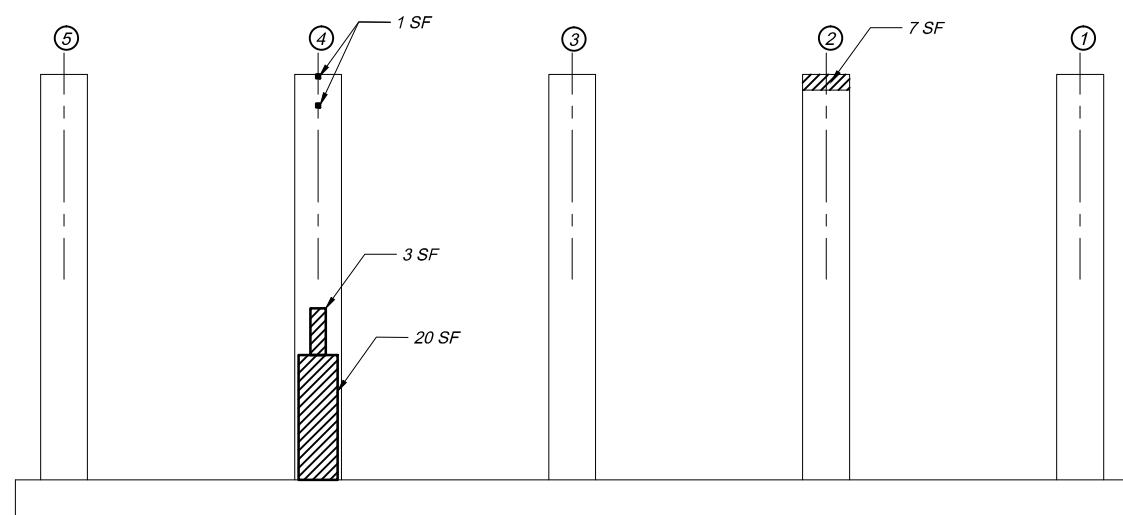
Dec 17, 2014 - 11:31am C:\OTC\2013-11-15 - Substructure Repair Assignment\OT Ramp Plans\Ramp-P1.dwg



PIER 1 PLAN



PIER 1 ELEVATION - LOOKING EAST



PIER 1 ELEVATION - LOOKING WEST

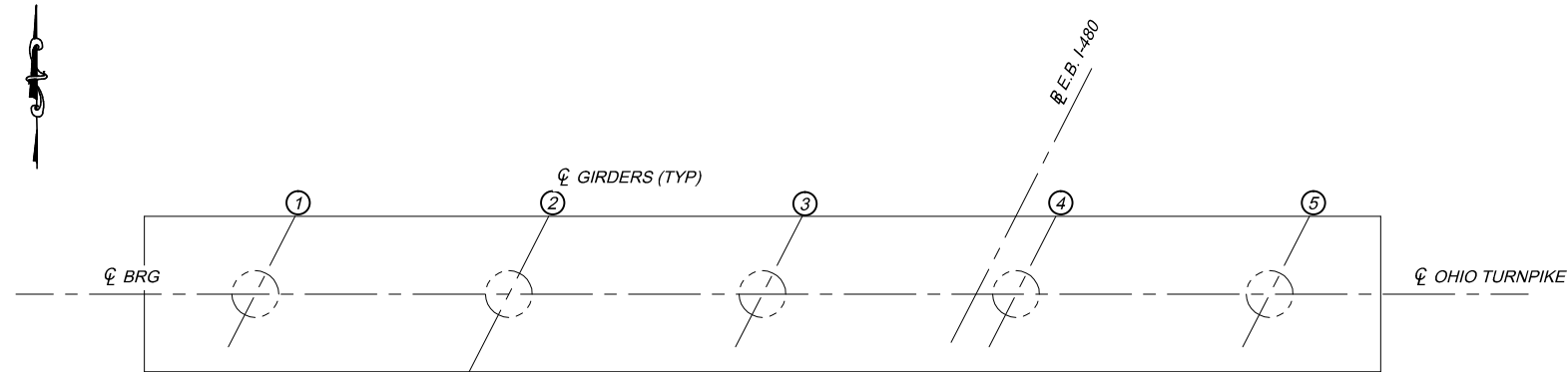
PIER 1				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	4	6
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	71 $\triangle$ 1	107 $\triangle$ 1
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	136

**LEGEND**

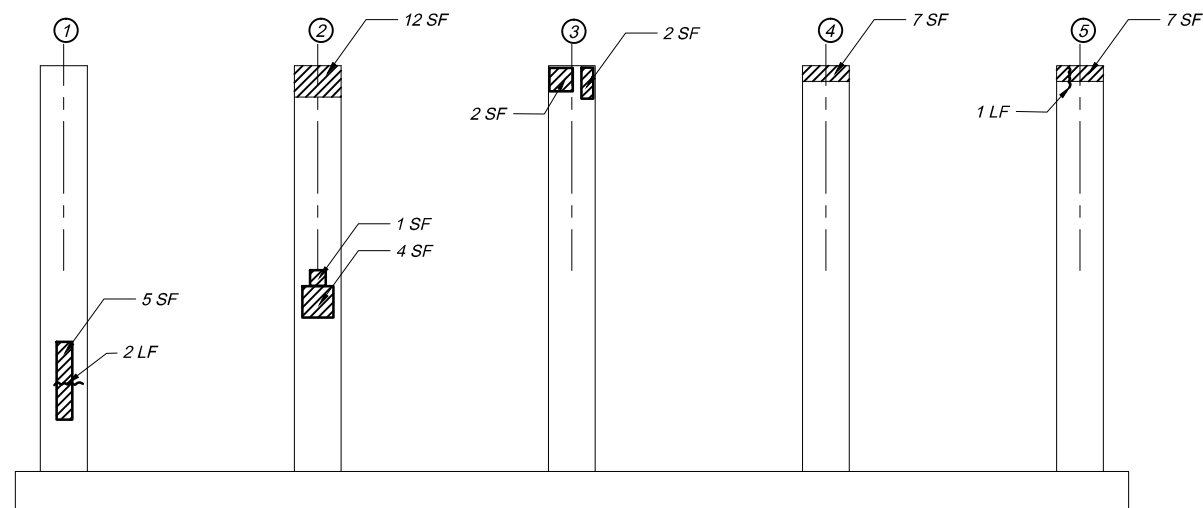
- CRACK REPAIR USING EPOXY INJECTION
- AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- BEAM LINE FOR LOCATION REFERENCE

ADDENDUM #3		HW	12/17/14	
REVISIONS		BY	DATE	
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>				
<b>PIER 1 REPAIRS</b>				
OHIO TURNPIKE RAMP OVER OHIO TURNPIKE				
M.P. 151.8 LORAIN COUNTY				
<b>CONSULTING ENGINEERING, INC.</b> <small>CIVIL, STRUCTURAL ENGINEERS/SURVEYORS          13477 PROSPECT ROAD, SUITE 101B          STRONGSVILLE, OHIO 44149</small>				
DESIGNED: YC	CHECKED: ER	DATE: 04/30/14		
DRAWN: HW	IN CHARGE: RC	SCALE: N.T.S.		
<b>PROJECT 39-15-01B SHEET 24 OF 26</b>				

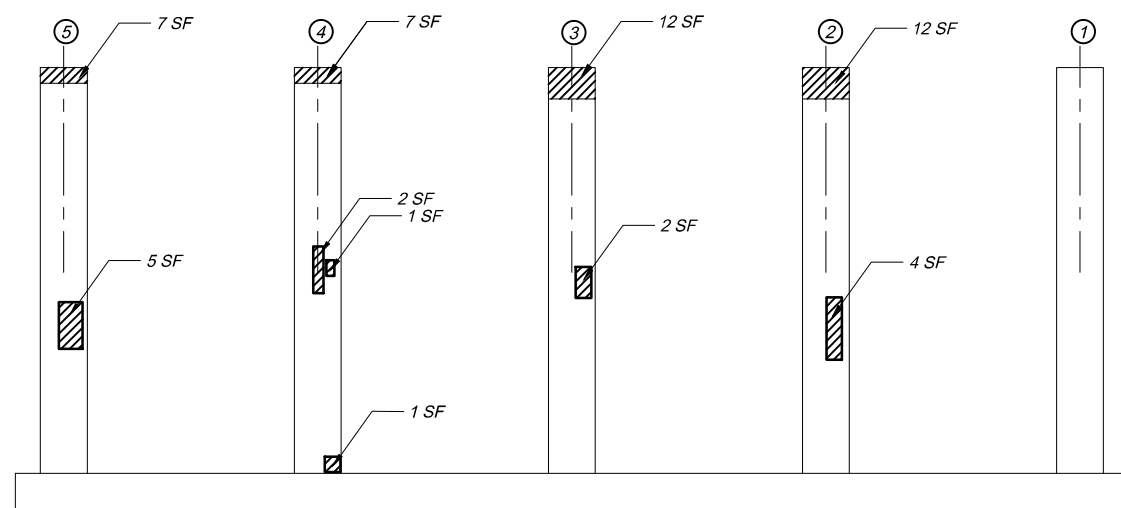
Dec 17, 2014 - 11:31am G:\OTC\2013-11-15 - Substructure Repair Assignment\OT Ramp Plans\Ramp-P2.dwg



PIER 2 PLAN



PIER 2 ELEVATION - LOOKING EAST



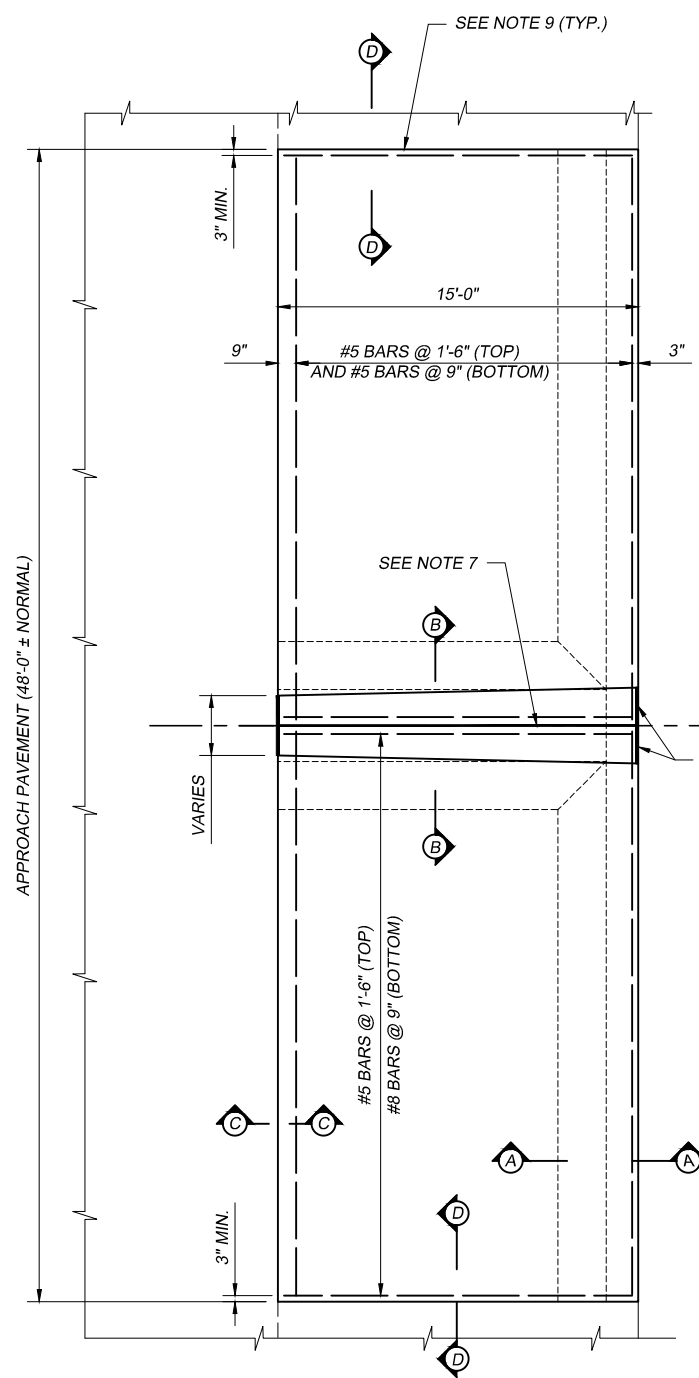
PIER 2 ELEVATION - LOOKING WEST

PIER 2				
DESCRIPTION	UNIT	ITEM	MEASURED QUANTITIES	ESTIMATED QUANTITIES
CRACK REPAIR USING EPOXY INJECTION	LF	SP 516A	3	5
PATCHING OF CONCRETE STRUCTURES	SF	SP 519	93 $\triangle$ 1	140 $\triangle$ 1
CONCRETE WEATHERPROOFING, SUBSTRUCTURE	SY	SP 536	-	136

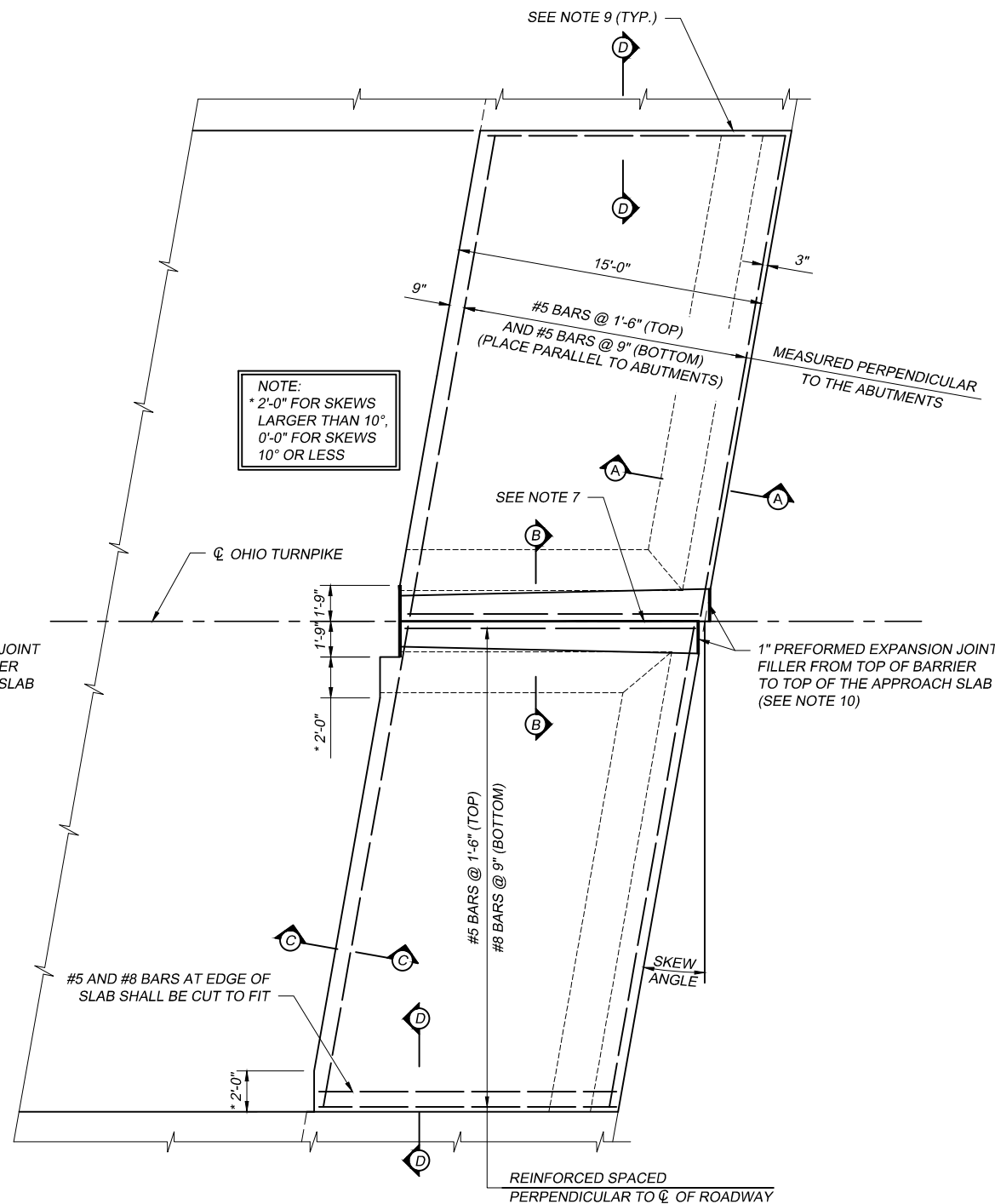
**LEGEND**

- CRACK REPAIR USING EPOXY INJECTION
- AREA OF PATCHING PER SP 519. ALL REPAIR QUANTITIES ARE ESTIMATED AND SUBJECT TO FIELD ADJUSTMENT
- BEAM LINE FOR LOCATION REFERENCE

-		-	-
ADDENDUM #3		HW	12/17/14
REVISIONS		BY	DATE
<b>OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION</b>			
<b>PIER 2 REPAIRS</b>			
OHIO TURNPIKE RAMP OVER OHIO TURNPIKE			
M.P. 151.8 LORAIN COUNTY			
<b>CONSULTING ENGINEERING, INC.</b>			
CIVIL, STRUCTURAL ENGINEERS/SURVEYORS 13477 PROSPECT ROAD, SUITE 101B STRONGSVILLE, OHIO 44149			
DESIGNED: YC	CHECKED: ER	DATE: 04/30/14	
DRAWN: HW	IN CHARGE: RC	SCALE: N.T.S.	
<b>PROJECT 39-15-01B SHEET 25 OF 26</b>			



PLAN  
(SHOWING NON-SKEWED BRIDGE)



PLAN  
(SHOWING SKEWED BRIDGE)

**NOTES:**

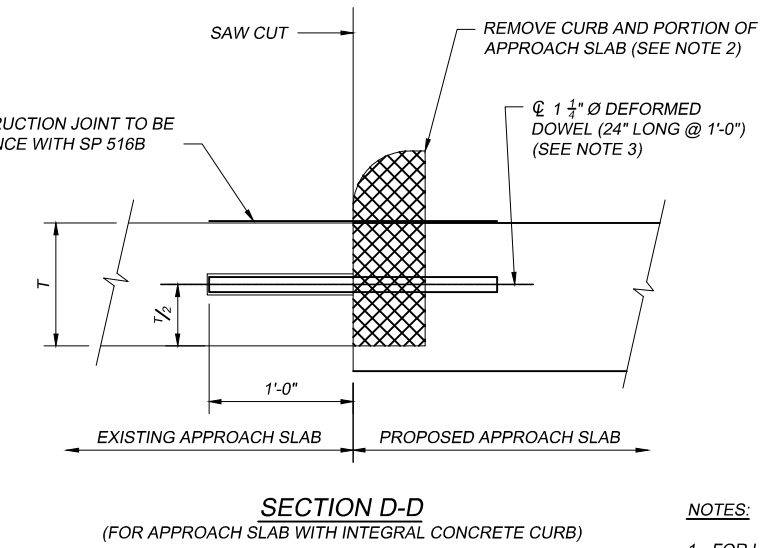
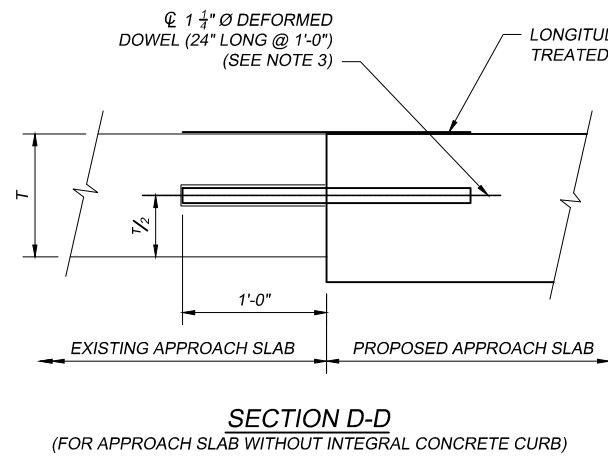
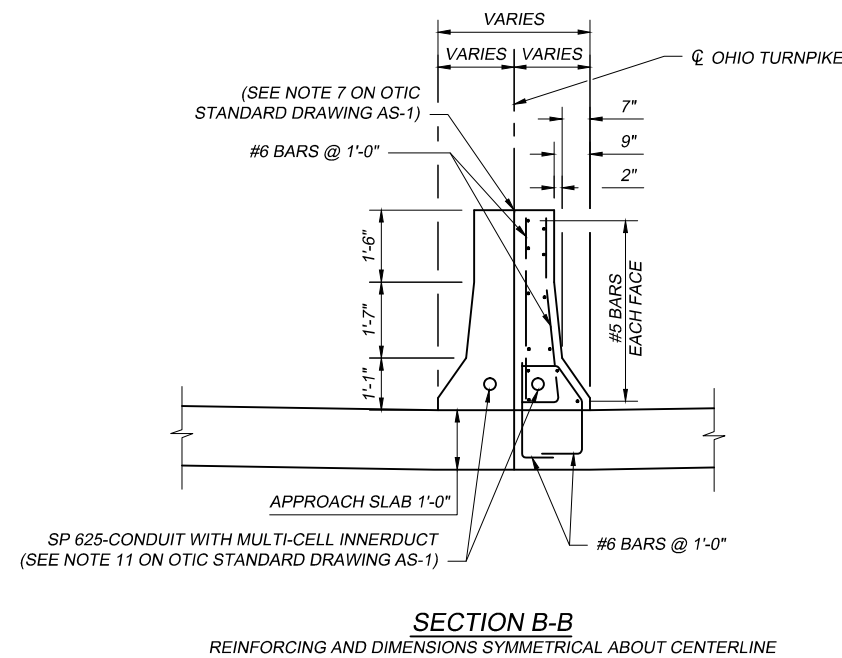
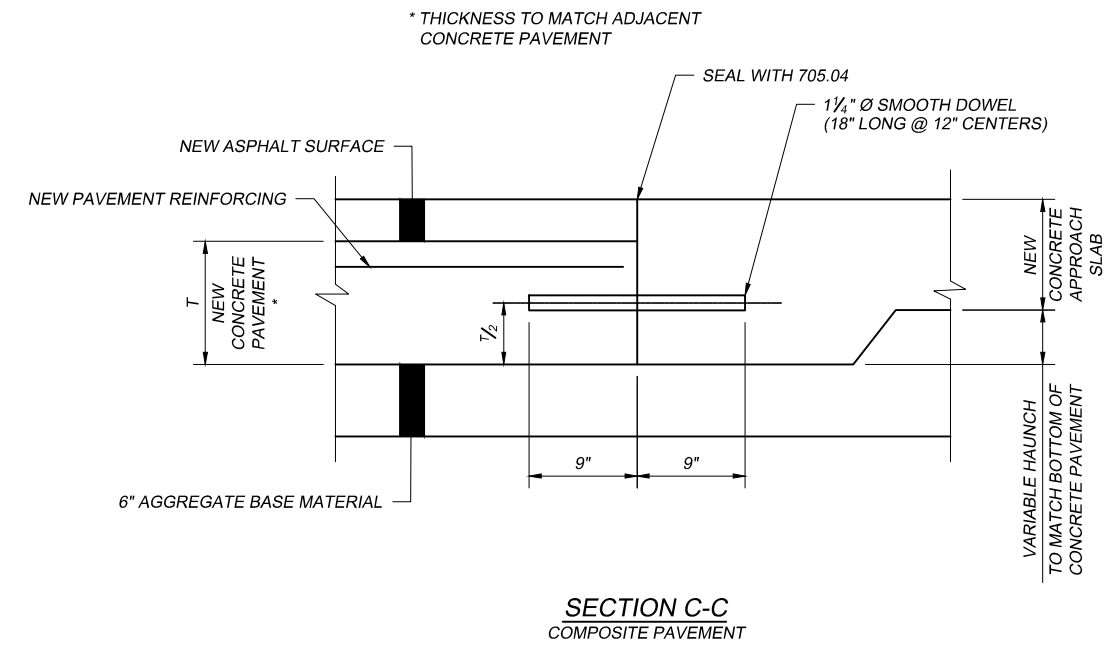
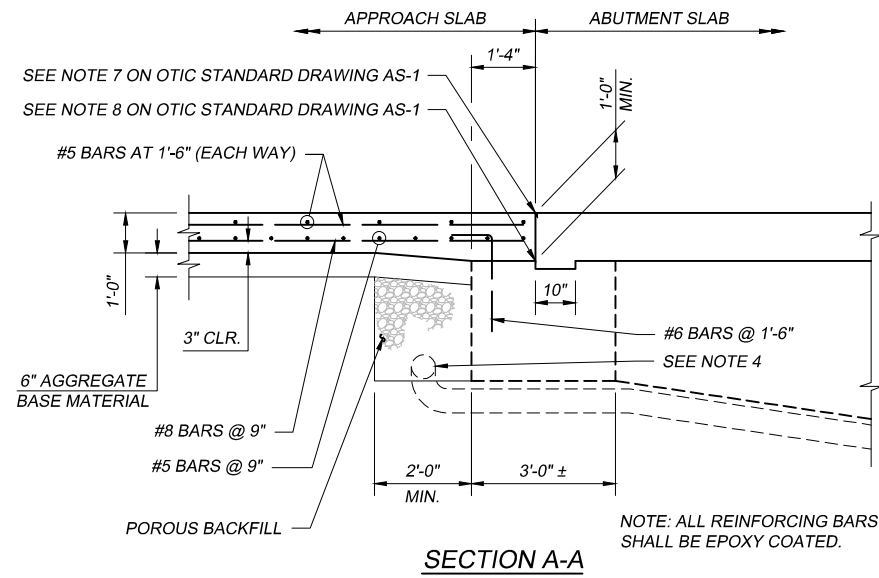
1. THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS. THE PROJECT PLANS WILL SHOW SKEW, ESTIMATED QUANTITY (SQ. YDS.), AND SPECIAL NOTES AND DETAILS, WHERE NECESSARY, FOR CONDITIONS OTHER THAN THOSE INDICATED HEREON. THE APPROACH SLAB SHALL BE ADAPTED TO FIT THE ENDS OF THE BRIDGE AND THE APPROACH PAVEMENT.
2. CONCRETE: CLASS C USING TYPE I CEMENT. REINFORCING STEEL: GRADE 60 MIN YIELD STRENGTH 60,000 P.S.I., SHALL BE EPOXY COATED AND AS PER SP 509.
3. LONGITUDINAL CONSTRUCTION JOINTS REQUIRED FOR STAGE CONSTRUCTION SHALL BE AS PER 511.12 AND SHALL BE TREATED IN ACCORDANCE WITH SP 516B.
4. CROWN SHALL CONFORM TO THAT OF THE BRIDGE DECK. IF THE RATE OF CROWN OF THE BRIDGE DECK DIFFERS FROM THAT OF THE APPROACH ASPHALT PAVEMENT, A SMOOTH TRANSITION SHALL BE PROVIDED ON THE APPROACH ASPHALT PAVEMENT AT A TRANSITION RATE OF 1 TO 200.
5. TRANSVERSE JOINT DETAILS AT THE APPROACH PAVEMENT END OF THE APPROACH SLAB SHALL BE AS DETAILED ON OTIC STANDARD DRAWING AS-2.
6. BASE MATERIAL SHALL BE SP 304-AGGREGATE BASE.
7. GROOVE AND SEAL WITH 705.04 AS PER ODOT STANDARD DRAWING BP-2.1
8. TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
9. THE JOINT BETWEEN THE EXISTING AND THE NEW APPROACH SLABS SHALL BE AS SHOWN IN SECTION 'D-D'.
10. 1" PREFORMED EXPANSION JOINT FILLER SHALL BE PER 705.03
11. THE TWO 4" DIAMETER PVC CONDUITS WITH MULTI-CELL INNERDUCT SHALL COMPLY WITH SP 625.
12. FOR SECTIONS 'A-A', 'B-B', 'C-C' AND 'D-D' AND ADDITIONAL INFORMATION, SEE OTIC STANDARD DRAWING AS-2.
13. THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR SP 526, CLASS C CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12"):
  - : ALL JOINTS, INCLUDING DOWEL HOLES, DOWELS, AND GROUT
  - : GROOVE AND JOINT SEA
  - : TYPE 'A' WATERPROOFING
  - : 1" PREFORMED EXPANSION JOINT FILLER
  - : MEDIAN BARRIERS
  - : REINFORCING STEEL
  - : POROUS BACKFILL
  - : 6" PERFORATED CORRUGATED PLASTIC PIPE, 6" CORRUGATED PLASTIC PIPE, AND PRECAST REINFORCED CONCRETE OUTLET PER ODOT STANDARD DRAWING DM 1.1.1.

**OHIO TURNPIKE AND  
INFRASTRUCTURE COMMISSION**

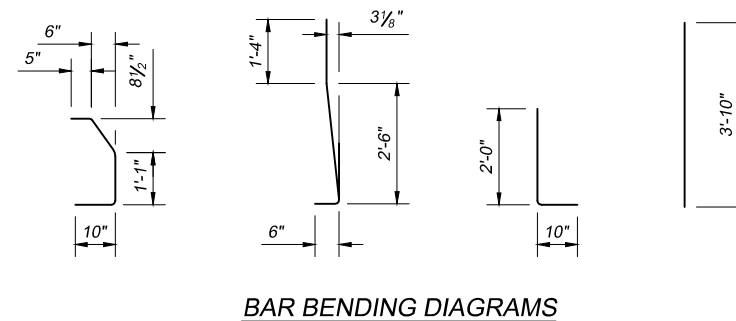
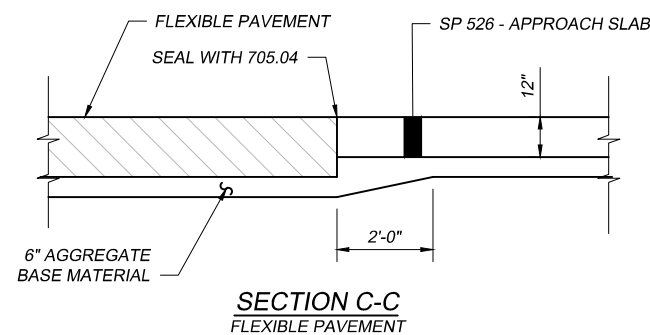
**REINFORCED CONCRETE  
APPROACH SLAB -  
MEDIAN WIDENING**

DATE: NOVEMBER 28, 2014 SCALE: N.T.S.

O.T.I.C. STANDARD DRAWING AS-1



- NOTES:**
- FOR LOCATIONS OF SECTIONS 'A-A', 'B-B', 'C-C' AND 'D-D' AND ADDITIONAL NOTES, SEE OTIC STANDARD DRAWING AS-1.
  - THE REMOVAL SHALL BE PER 202.05 OF THE ODOT CMS BUT THE COST OF THE REMOVAL SHALL BE INCIDENTAL TO THE COST OF SP 526.
  - DRILL 1 3/4" Ø HOLE INTO EXISTING CONCRETE PARTIALLY FILL WITH NONSHRINKING GROUT BEFORE INSERTING DOWEL PER 510.03 AND THE COST IS INCIDENTAL TO THE COST OF SP 526 (APPROACH SLAB)
  - 6" DRAIN PIPE SHALL BE PERFORATED CORRUGATED PLASTIC PIPE, SLOPED AT 1/8" / FT. TO DRAIN. THE 6" NON-PERFORATED DRAIN PIPE SHALL BE OUTLETTED AT A 2% PREFERRED MINIMUM SLOPE ONTO THE ADJACENT EMBANKMENT. PROVIDE A PRECAST REINFORCED CONCRETE OUTLET PER ODOT STANDARD DRAWING DM 1.1.



**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**

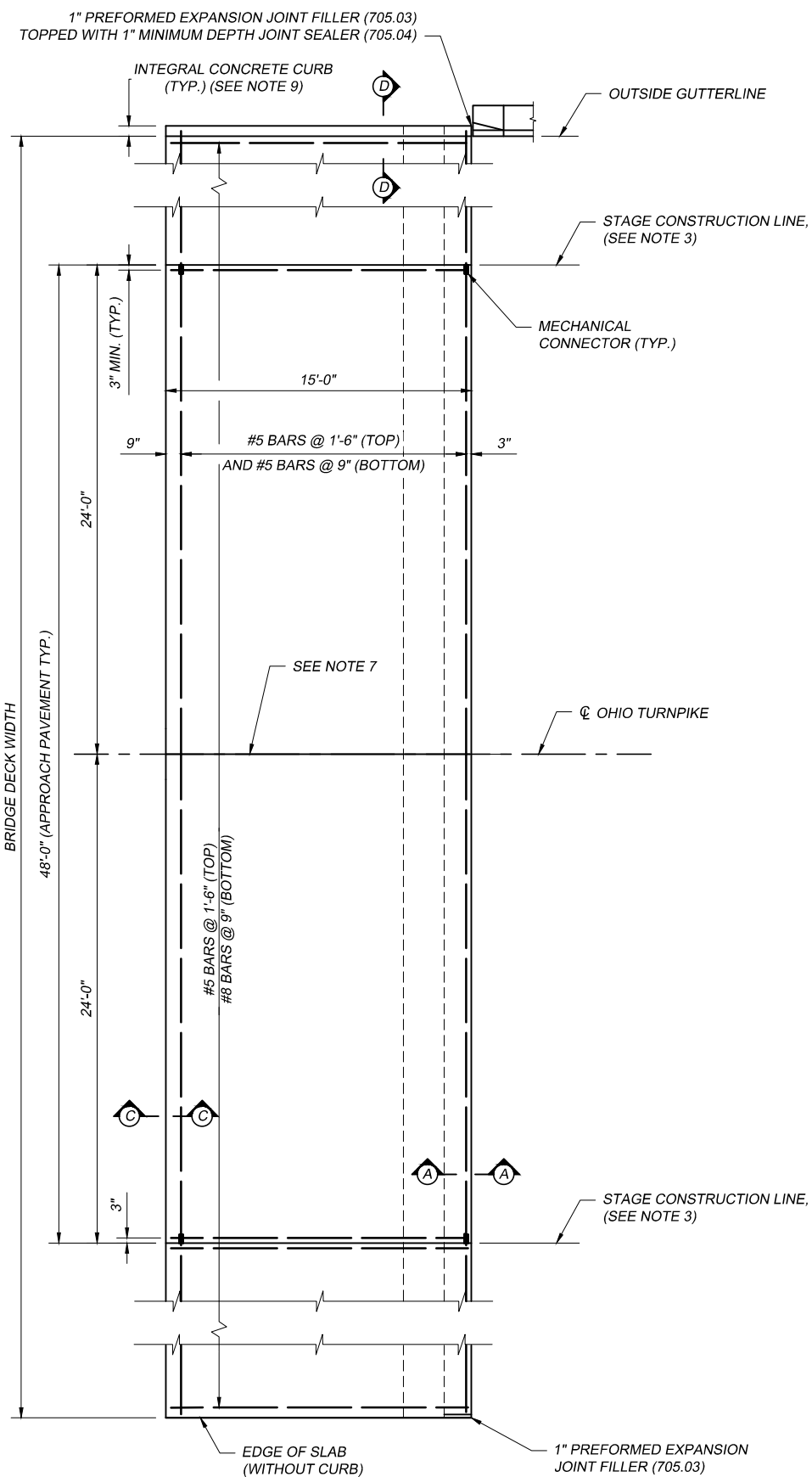
REINFORCED CONCRETE APPROACH SLAB SECTIONS AND DETAILS - MEDIAN WIDENING

DATE: NOVEMBER 28, 2014 SCALE: N.T.S.

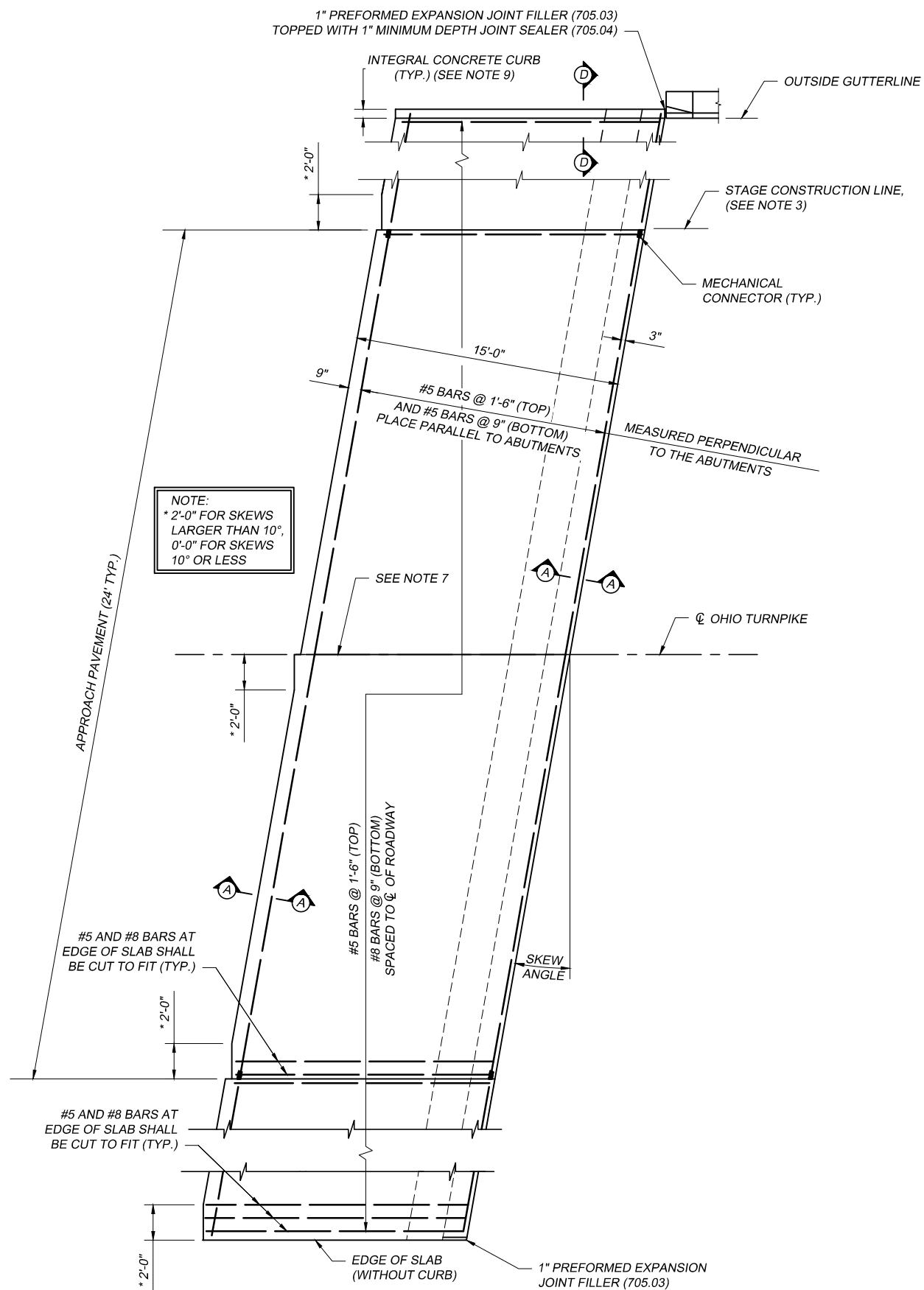
O.T.I.C. STANDARD DRAWING AS-2

AS-2\_11-28-14.DWG; 12/05/14 - 3:03pm

AS-3\_11-28-14.DWG; 12/05/14 - 3:03pm



**PLAN**  
(SHOWING NON-SKEWED APPROACH SLAB)



**PLAN**  
(SHOWING SKEWED APPROACH SLAB)

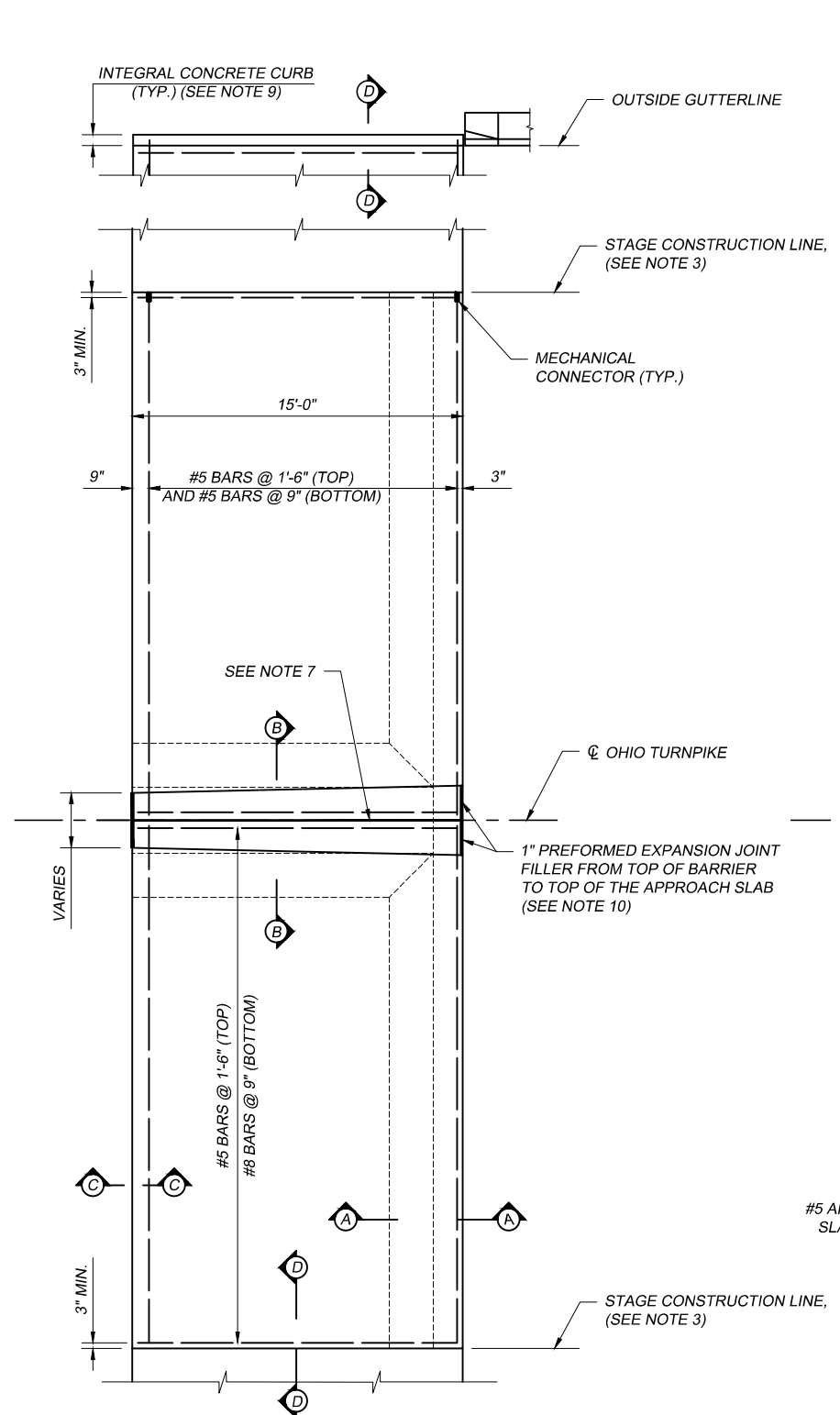
**NOTES:**

- THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS. THE PROJECT PLANS WILL SHOW SKEW, CURBS (IF ANY), ESTIMATED QUANTITY (SQ. YDS.), AND SPECIAL NOTES AND DETAILS, WHERE NECESSARY FOR CONDITIONS OTHER THAN THOSE INDICATED HEREON. THE APPROACH SLAB SHALL BE ADAPTED TO FIT THE ENDS OF THE BRIDGE AND THE APPROACH PAVEMENT.
- CONCRETE: CLASS C USING TYPE I CEMENT. REINFORCING STEEL: GRADE 60 MIN YIELD STRENGTH 60,000 P.S.I., SHALL BE EPOXY COATED AND AS PER SP 509.
- LONGITUDINAL CONSTRUCTION JOINTS REQUIRED FOR STAGE CONSTRUCTION SHALL BE AS PER 511.12 AND SHALL BE TREATED IN ACCORDANCE WITH SP 516B.
- CROWN SHALL CONFORM TO THAT OF THE APPROACH PAVEMENT AND BRIDGE DECK. IF THE RATE OF CROWN OF THE BRIDGE DECK DIFFERS FROM THAT OF THE APPROACH PAVEMENT, A SMOOTH TRANSITION SHALL BE PROVIDED ON THE APPROACH PAVEMENT AT A TRANSITION RATE OF 1 TO 200.
- TRANSVERSE JOINT DETAILS AT THE APPROACH PAVEMENT END OF THE APPROACH SLAB SHALL BE AS DETAILED ON OTIC STANDARD DRAWING AS-5.
- BASE MATERIAL SHALL BE SP 304-AGGREGATE BASE.
- GROOVE AND SEAL WITH 705.04 AS PER ODOT STANDARD DRAWING BP-2.1.
- TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
- THE INTEGRAL CONCRETE CURB SHALL BE PROVIDED ON THE NEW APPROACH SLAB AS INDICATED ON THE PROJECT PLANS AND SHOWN IN SECTION 'D-D'.
- 1" PERFORMED EXPANSION JOINT FILLER SHALL BE PER 705.03.
- CURBS, BRIDGES WITH SIDEWALKS: FOR BRIDGES CONSTRUCTED WITH RAISED SIDEWALKS, DEFLECTOR PARAPETS OR OTHER TYPES OF CONSTRUCTION WHICH RETAIN ROADWAY SURFACE DRAINAGE, THE APPROACH SLABS SHALL EITHER INCLUDE INTEGRAL CURBS OR BE CONSTRUCTED IN CONJUNCTION WITH BRIDGE CURBS. CURB HEIGHT SHALL BE TRANSITIONED UNIFORMLY BETWEEN BRIDGE CURB HEIGHT AND APPROACH CURB HEIGHT IN LENGTH AS FOLLOWS: WHERE WINGWALL EXTENDS BEYOND END OF APPROACH SLAB, USE A MINIMUM LENGTH OF 10 FT BEYOND END OF WINGWALL, WHERE THE APPROACH SLAB EXTENDS BEYOND THE END OF WINGWALL, TRANSITION IN THIS LENGTH, HOWEVER, THE TRANSITION LENGTH SHALL NOT BE LESS THAN 10 FT AND THE TRANSITION SHALL EXTEND BEYOND THE END OF THE APPROACH SLAB IF NECESSARY. CURB PLACEMENT SHALL BE IN ACCORDANCE WITH ODOT STANDARD DRAWING BR-1.
- APPROACH SLAB WIDTH SHALL EXTEND FROM GUTTER LINE TO GUTTER LINE AND BE 6" WIDER FOR EACH CURB BEYOND THE END OF THE PARAPETS.
- FOR SECTIONS 'A-A', 'C-C' AND 'D-D' AND ADDITIONAL INFORMATION SEE OTIC STANDARD DRAWING AS-5.
- THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR SP 526, CLASS C CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12"):

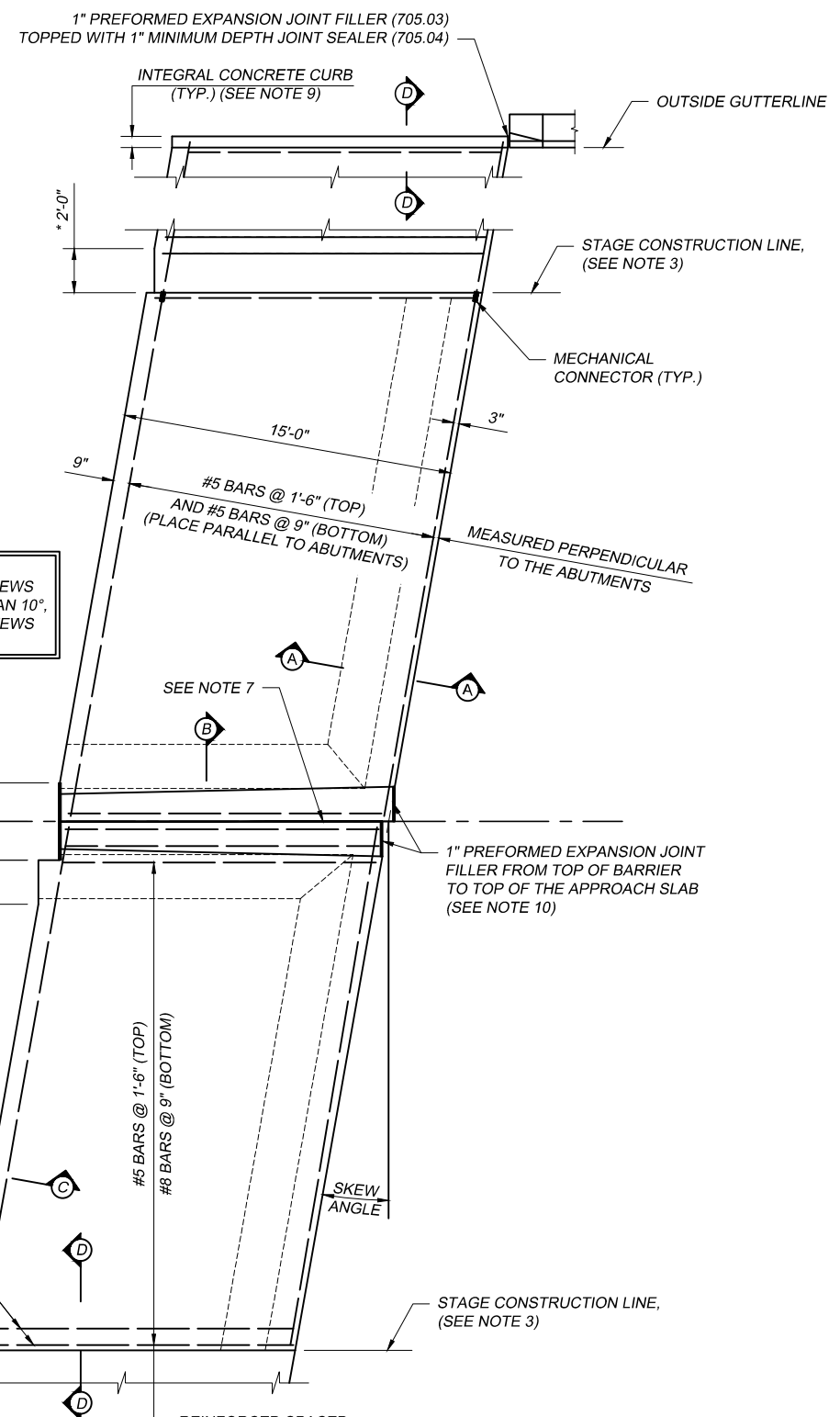
- : ALL JOINTS, INCLUDING DOWEL HOLES, DOWELS, AND GROUT
- : GROOVE AND JOINT SEAL
- : TYPE 'A' WATERPROOFING
- : 1" PERFORMED EXPANSION JOINT FILLER
- : MEDIAN BARRIERS
- : REINFORCING STEEL
- : POROUS BACKFILL
- : 6" PERFORATED CORRUGATED PLASTIC PIPE, 6" CORRUGATED PLASTIC PIPE, AND PRECAST REINFORCED CONCRETE OUTLET PER ODOT STANDARD DRAWING DM 1.1.

**OHIO TURNPIKE AND  
INFRASTRUCTURE COMMISSION**  
**REINFORCED CONCRETE  
APPROACH SLAB -  
CELLULAR ABUTMENTS**

DATE: NOVEMBER 28, 2014 SCALE: N.T.S.  
O.T.I.C. STANDARD DRAWING AS-3



PLAN  
(SHOWING NON-SKEWED BRIDGE)



PLAN  
(SHOWING SKEWED BRIDGE)

NOTE:  
\* 2'-0" FOR SKEWS  
LARGER THAN 10°,  
0'-0" FOR SKEWS  
10° OR LESS

NOTES:

- THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS. THE PROJECT PLANS WILL SHOW SKEW, ESTIMATED QUANTITY (SQ. YDS.), AND SPECIAL NOTES AND DETAILS, WHERE NECESSARY FOR CONDITIONS OTHER THAN THOSE INDICATED HEREON. THE APPROACH SLAB SHALL BE ADAPTED TO FIT THE ENDS OF THE BRIDGE AND THE APPROACH PAVEMENT.
- CONCRETE: CLASS C USING TYPE I CEMENT. REINFORCING STEEL: GRADE 60 MIN YIELD STRENGTH 60,000 P.S.I., SHALL BE EPOXY COATED AND AS PER SP 509.
- LONGITUDINAL CONSTRUCTION JOINTS REQUIRED FOR STAGE CONSTRUCTION SHALL BE AS PER 511.12 AND SHALL BE TREATED IN ACCORDANCE WITH SP 516B.
- CROWN SHALL CONFORM TO THAT OF THE BRIDGE DECK. IF THE RATE OF CROWN OF THE BRIDGE DECK DIFFERS FROM THAT OF THE APPROACH ASPHALT PAVEMENT, A SMOOTH TRANSITION SHALL BE PROVIDED ON THE APPROACH ASPHALT PAVEMENT AT A TRANSITION RATE OF 1 TO 200.
- TRANSVERSE JOINT DETAILS AT THE APPROACH PAVEMENT END OF THE APPROACH SLAB SHALL BE AS DETAILED ON OTIC STANDARD DRAWING AS-5.
- BASE MATERIAL SHALL BE SP 304-AGGREGATE BASE.
- GROOVE AND SEAL WITH 705.04 AS PER ODOT STANDARD DRAWING BP-2.1
- TYPE A WATERPROOFING SHALL NOT EXTEND ABOVE THE BOTTOM OF THE GROOVE INTO WHICH THE JOINT SEALER IS TO BE PLACED. IT SHALL BE APPLIED TO THE ENTIRE AREA OF THE ABUTMENT OR SUPERSTRUCTURE WHICH COMES INTO CONTACT WITH THE APPROACH SLAB.
- THE JOINT BETWEEN THE EXISTING AND THE NEW APPROACH SLABS SHALL BE AS SHOWN IN SECTION 'D-D'.
- 1" PREFORMED EXPANSION JOINT FILLER SHALL BE PER 705.03
- THE TWO 4" DIAMETER PVC CONDUITS WITH MULTI-CELL INNERDUCT SHALL COMPLY WITH SP 625.
- FOR SECTIONS 'A-A', 'B-B', 'C-C' AND 'D-D' AND ADDITIONAL INFORMATION, SEE OTIC STANDARD DRAWING AS-5.
- THE FOLLOWING ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE YARD FOR SP 526, CLASS C CONCRETE, APPROACH SLAB, USING TYPE I CEMENT (T=12"):

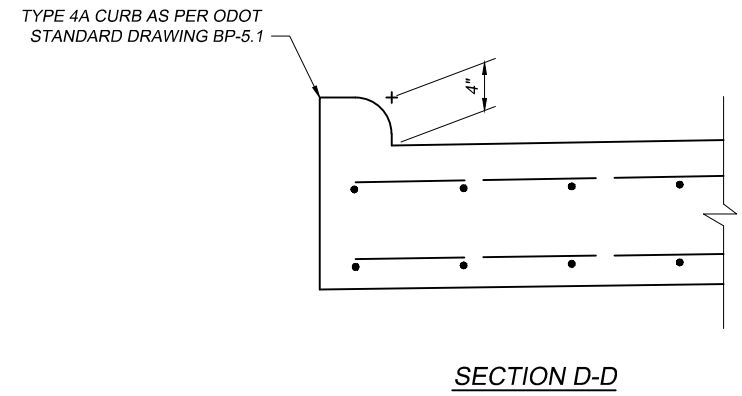
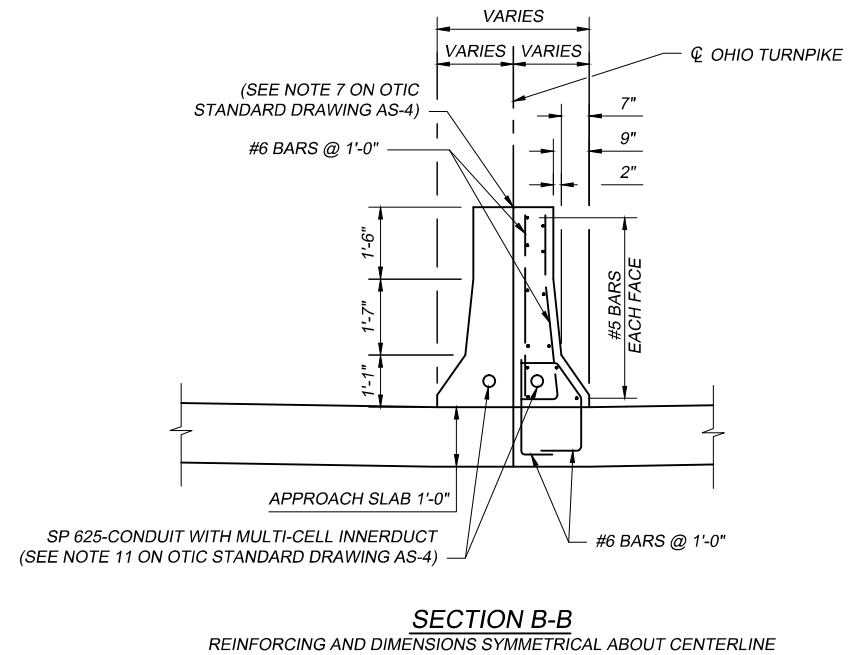
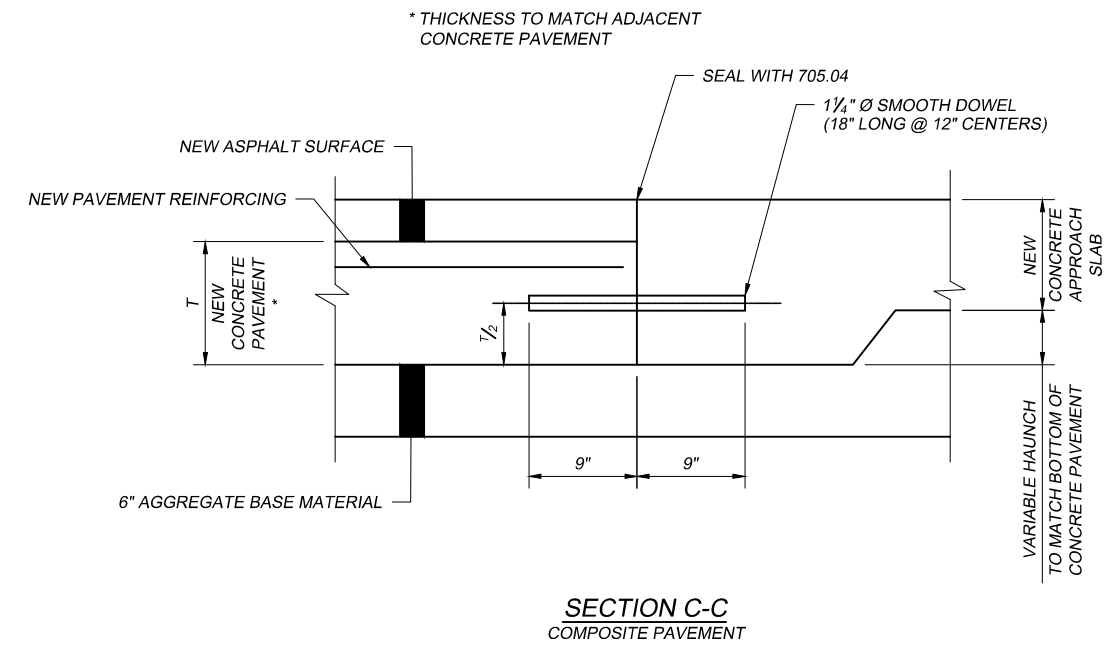
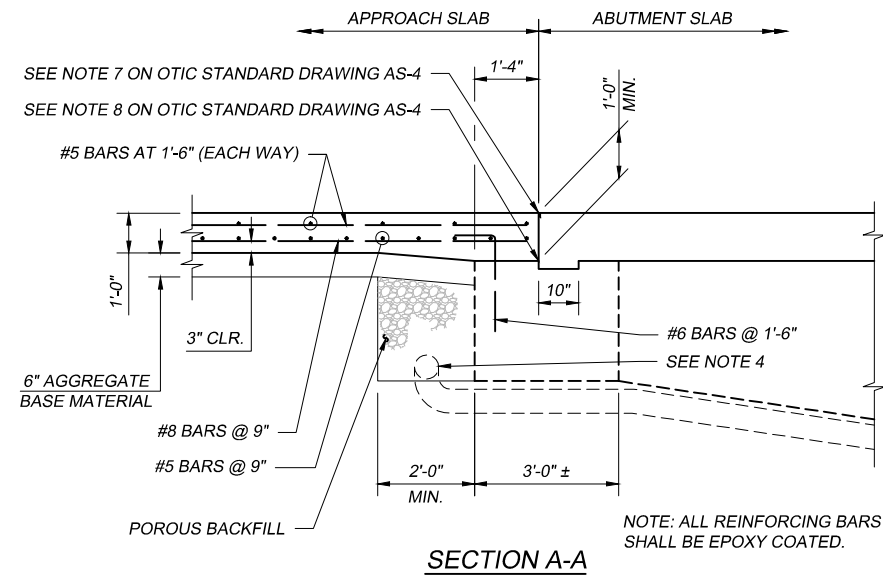
- : ALL JOINTS, INCLUDING DOWEL HOLES, DOWELS, AND GROUT
- : GROOVE AND JOINT SEA
- : TYPE 'A' WATERPROOFING
- : 1" PREFORMED EXPANSION JOINT FILLER
- : MEDIAN BARRIERS
- : REINFORCING STEEL
- : POROUS BACKFILL
- : 6" PERFORATED CORRUGATED PLASTIC PIPE, 6" CORRUGATED PLASTIC PIPE, AND PRECAST REINFORCED CONCRETE OUTLET PER ODOT STANDARD DRAWING DM 1.1.

**OHIO TURNPIKE AND  
INFRASTRUCTURE COMMISSION**

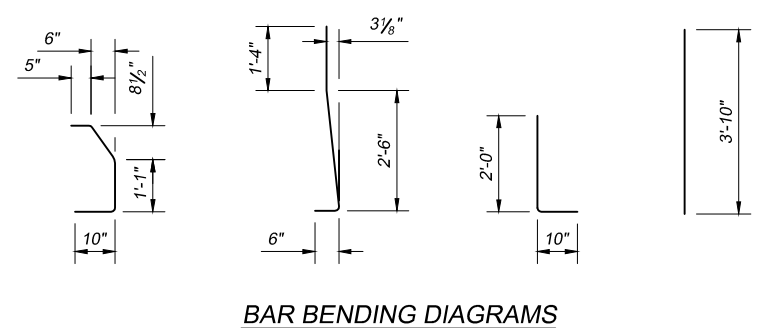
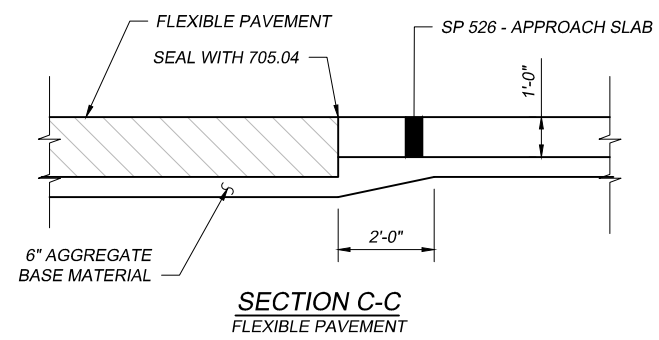
**REINFORCED CONCRETE  
APPROACH SLAB -  
FULL WIDTH REPLACEMENT**

DATE: NOVEMBER 28, 2014 SCALE: N.T.S.

O.T.I.C. STANDARD DRAWING AS-4



- NOTES:
- FOR LOCATIONS OF SECTIONS 'A-A', 'B-B', 'C-C' AND 'D-D' AND ADDITIONAL NOTES, SEE OTIC STANDARD DRAWING AS-4.
  - THE POROUS BACKFILL AND THE DRAIN PIPES ARE PROVIDED IN THE NEW WIDENED SECTION ONLY. SEE ABUTMENT DETAILS FOR ADDITIONAL INFORMATION.
  - DRILL  $1\frac{3}{4}$ "  $\varnothing$  HOLE INTO EXISTING CONCRETE PARTIALLY FILL WITH NONSHRINKING GROUT BEFORE INSERTING DOWEL PER 510.03 AND THE COST IS INCIDENTAL TO THE COST OF SP 526 (APPROACH SLAB)
  - 6" DRAIN PIPE SHALL BE PERFORATED CORRUGATED PLASTIC PIPE, SLOPED AT  $\frac{1}{8}$ " / FT. TO DRAIN. THE 6" NON-PERFORATED DRAIN PIPE SHALL BE OUTLETTED AT A 2% PREFERRED MINIMUM SLOPE ONTO THE ADJACENT EMBANKMENT. PROVIDE A PRECAST REINFORCED CONCRETE OUTLET PER ODOT STANDARD DRAWING DM 1.1.



**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**

REINFORCED CONCRETE APPROACH SLAB SECTIONS AND DETAILS - FULL WIDTH REPLACEMENT

DATE: NOVEMBER 28, 2014 | SCALE: N.T.S.

O.T.I.C. STANDARD DRAWING AS-5

AS-5\_11-28-14.DWG; 12/05/14 - 3:04pm