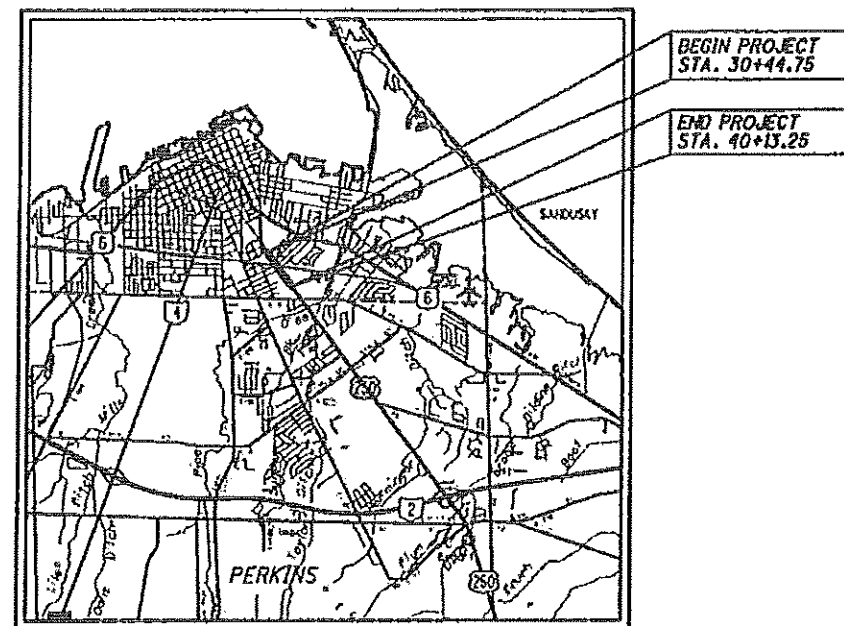




LOCATION MAP

LATITUDE: 41°26'20" LONGITUDE: 82°41'39"



PORTION TO BE IMPROVED \_\_\_\_\_  
 INTERSTATE HIGHWAY \_\_\_\_\_  
 STATE & FEDERAL ROUTES \_\_\_\_\_  
 COUNTY & TOWNSHIP ROADS \_\_\_\_\_  
 OTHER ROADS \_\_\_\_\_

### DESIGN DESIGNATION

|                                   |        |
|-----------------------------------|--------|
| CURRENT ADT (2018).....           | 23,000 |
| DESIGN YEAR ADT (2038).....       | 25,000 |
| DESIGN HOURLY VOLUME (2038).....  | 2,200  |
| DIRECTIONAL DISTRIBUTION.....     | 53%    |
| TRUCKS (24 HOUR B&C).....         | 6%     |
| DESIGN SPEED.....                 | 35 MPH |
| LEGAL SPEED.....                  | 35 MPH |
| DESIGN FUNCTIONAL CLASSIFICATION: |        |
| PRINCIPLE ARTERIAL (RURAL)        |        |
| NHS PROJECT.....                  | YES    |

**DESIGN EXCEPTIONS:**

NONE

|                                                                                                                                                                  |                                                       |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------|
| <h2 style="text-align: center;">UNDERGROUND UTILITIES</h2> <p style="text-align: center;">CONTACT BOTH SERVICES<br/>CALL TWO WORKING DAYS<br/>BEFORE YOU DIG</p> |                                                       |                                                                                     |
|                                                                               | <p>CALL<br/><b>1-800-362-2764</b><br/>(TOLL FREE)</p> |  |
| <p style="text-align: center;"><b>OHIO UTILITIES PROTECTION SERVICE<br/>NON-MEMBERS<br/>MUST BE CALLED DIRECTLY</b></p>                                          |                                                       |                                                                                     |
| <p style="text-align: center;"><b>OIL &amp; GAS PRODUCERS UNDERGROUND<br/>PROTECTION SERVICE CALL: 1-800-925-0988</b></p>                                        |                                                       |                                                                                     |



PLAN PREPARED BY:  
*ms consultants, inc.*  
 CONSULTING ENGINEERS, ARCHITECTS & PLANNERS  
 333 E. FEDERAL STREET  
 YOUNGSTOWN, OHIO 44503  
 PHONE 330-744-5321

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

ERI - 250 - 00.59

CITY OF SANDUSKY  
ERIE COUNTY

INDEX OF SHEETS:

|                        |       |
|------------------------|-------|
| TITLE SHEET            | 1     |
| TYPICAL SECTION        | 2     |
| GENERAL NOTES          | 3     |
| GENERAL SUMMARY        | 4     |
| MAINTENANCE OF TRAFFIC | 5-12  |
| PLAN AND PROFILE       | 13-14 |
| TRAFFIC CONTROL        | 15-19 |
| STRUCTURE PLANS        | 20-52 |

# GRADE SEPARATION WITH THE NORFOLK SOUTHERN RAILROAD

[illegible]

### PROJECT DESCRIPTION

THIS PROJECT WILL PROVIDE BRIDGE REPAIRS FOR THE ERI-250-0059 STRUCTURE OVER NORFOLK SOUTHERN RAILROAD, 42ND STREET AND BUTLER STREET. BRIDGE REPAIR WORK INCLUDES: REHABILITATING EXPANSION JOINTS, PATCHING PORTIONS OF OUTSIDE PARAPETS AND SAFETY CURBS, PATCHING PORTIONS OF SUBSTRUCTURES, SEALING OF PATCH REPAIR AREAS, SEAL ENTIRE SURFACE OF CONCRETE DECK AND PAINTING OF BEAM ENDS ADJACENT TO EXPANSION JOINTS. WORK ALSO INCLUDES MAINTENANCE OF TRAFFIC, PAVEMENT MARKING AND SIGNING.

PROJECT EARTH DISTURBED AREA: 0.06 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.250 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A  
(NOT REQUIRED)

## 2016 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 5-6 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

OHIO DEPARTMENT OF TRANSPORTATION

APPROVED [Signature]  
DATE 11/8/2014 DISTRICT DEPUTY DIRECTOR

APPROVED *Young Hwang*  
DATE *12-22-16* DIRECTOR, DEPARTMENT OF  
TRANSPORTATION

FEDERAL PROJECT NO.

E-140784

**FID NO.**

6309

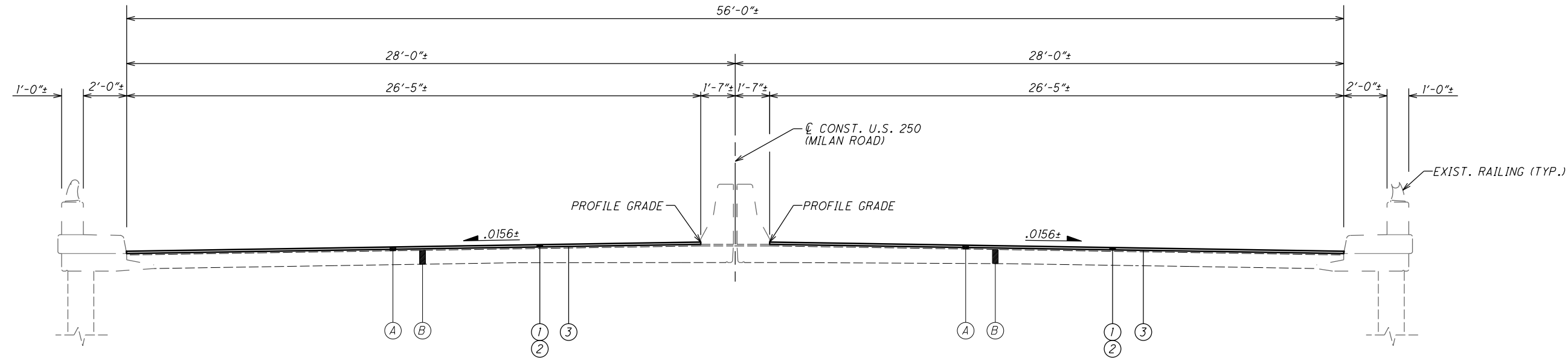
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT

NORFOLK SOUTHERN

ERI-250-00.59

52



**NORMAL SECTION - U.S. 250 (MILAN RD.)**

STA. 30+44.75 TO STA. 30+46.75 (ROADWAY)  
STA. 30+46.75 TO STA. 30+69.75 (APPROACH SLAB)  
STA. 39+88.25 TO STA. 40+11.25 (APPROACH SLAB)  
STA. 40+11.25 TO STA. 40+13.25 (ROADWAY)

**EXISTING LEGEND**

- (A) EXISTING ASPHALT CONCRETE (VARIABLE DEPTH)
- (B) EXISTING CONCRETE APPROACH SLAB AND/OR CONCRETE PAVEMENT (D = 15"±) (ROADWAY)

**PROPOSED LEGEND**

- (1) ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448) (T=1 1/2")
- (2) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"
- (3) ITEM 407 - NON-TRACKING TACK COAT (0.075 GAL./S.Y.)

**NOTE:**  
ALL EXISTING DIMENSIONS ARE ±

GENERAL

### UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

COLUMBIA GAS OF OHIO  
ATTN: ROB LANGFORD  
1800 BROAD AVE.  
FINDLAY, OHIO 45840  
(419) 427-3227

CITY OF SANDUSKY  
ATTN: JANE CULLEN  
222 MEIGS STREET  
SANDUSKY, OHIO 44870  
(419) 627-5932

AT&T OHIO  
ATTN: ROB FEY  
130 N. ERIE STREET, ROOM 206  
TOLEDO, OHIO 43604  
(419) 245-5004

ERIE COUNTY ENGINEER'S OFFICE  
2700 COLUMBUS AVE.  
SANDUSKY, OHIO 44870  
(419) 627-7710

OHIO EDISON CO.  
ATTN: JIM ROHRBACHER  
2508 W. PERKINS AVE.  
SANDUSKY, OHIO 44870  
(419) 627-6881

OHIO EDISON TRANSMISSION  
ATTN: BRINTON McINTOSH  
76 SOUTH MAIN STREET  
AKRON, OHIO 44308  
(330) 761-6084 (OFFICE)

ALL UTILITIES WILL REMAIN IN PLACE, INCLUDING OVERHEAD  
ELECTRIC LINES WHICH WILL REMAIN ENERGIZED, DURING  
CONSTRUCTION.

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

### EXISTING PLANS

EXISTING PLANS ENTITLED ERI-250-0.48,  
ERI-250-(0.48)(VAR) & ERI-250-0058 MAY BE INSPECTED IN  
THE ODOT DISTRICT 3 OFFICE IN ASHLAND, OHIO.

### WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

### SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

## PROJECT CONTROL

POSITIONING METHOD: GPS  
MONUMENT TYPE: B

### VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID 09

### HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83/2011  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE  
NORTH ZONE NAD83  
COMBINED SCALE FACTOR: 1.00007108400  
ORIGIN OF COORDINATE  
SYSTEM: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

**DRAINAGE**

### EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED  
IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611 - 6" CONDUIT, TYPE F 10 FT.

605 - 6" UNCLASSIFIED PIPE UNDERDRAINS 10 FT.

PAVEMENT

### PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY (WITH A UNIFORM THICKNESS OF 1.5 INCHES) AS SHOWN ON THE TYPICAL SECTIONS.

| SHEET NUMBER |       |      |       |  |  |  |  |             | OFFICE<br>CALCS. | PARTICIPATION |     | ITEM  | ITEM<br>EXT. | GRAND<br>TOTAL | UNIT                                                                      | DESCRIPTION                                      | SEE<br>SHEET<br>NO. |
|--------------|-------|------|-------|--|--|--|--|-------------|------------------|---------------|-----|-------|--------------|----------------|---------------------------------------------------------------------------|--------------------------------------------------|---------------------|
| 3            | 5     | 15   | 24    |  |  |  |  | 01/ BRO/ BR |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           | DRAINAGE                                         |                     |
| 10           |       |      |       |  |  |  |  |             | 10               |               | 605 | 13300 | 10           | FT             | 6" UNCLASSIFIED PIPE UNDERDRAINS                                          | 3                                                |                     |
| 10           |       |      |       |  |  |  |  |             | 10               |               | 611 | 01500 | 10           | FT             | 6" CONDUIT, TYPE F                                                        | 3                                                |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           | PAVEMENT                                         |                     |
|              |       |      |       |  |  |  |  |             | 299              | 299           | 254 | 01000 | 299          | SY             | PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"                                  |                                                  |                     |
|              |       |      |       |  |  |  |  |             | 22               | 22            | 407 | 20000 | 22           | GAL            | NON-TRACKING TACK COAT                                                    | 3                                                |                     |
|              |       |      |       |  |  |  |  |             | 12               | 12            | 442 | 20000 | 12           | CY             | ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (448)                     |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           | TRAFFIC CONTROL                                  |                     |
|              |       | 1.10 |       |  |  |  |  |             | 1.10             |               | 646 | 10000 | 1.10         | MILE           | EDGE LINE, 4"                                                             |                                                  |                     |
|              |       | 0.69 |       |  |  |  |  |             | 0.69             |               | 646 | 10100 | 0.69         | MILE           | LANE LINE, 4"                                                             |                                                  |                     |
|              |       | 670  |       |  |  |  |  |             | 670              |               | 646 | 10300 | 670          | FT             | CHANNELIZING LINE, 8"                                                     |                                                  |                     |
|              |       | 57   |       |  |  |  |  |             | 57               |               | 646 | 10400 | 57           | FT             | STOP LINE                                                                 |                                                  |                     |
|              |       | 186  |       |  |  |  |  |             | 186              |               | 646 | 10600 | 186          | FT             | TRANSVERSE/DIAGONAL LINE                                                  |                                                  |                     |
|              |       | 31   |       |  |  |  |  |             | 31               |               | 646 | 20502 | 31           | FT             | DOTTED LINE, 4"                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           | STRUCTURES SPAN 20 FOOT AND OVER (ERI-250-00.59) |                     |
|              |       |      | LS    |  |  |  |  |             | LS               |               | 202 | 11203 | LS           |                | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN             | 22                                               |                     |
|              |       |      | 914   |  |  |  |  |             | 914              |               | 509 | 10000 | 914          | LB             | EPOXY COATED REINFORCING STEEL                                            |                                                  |                     |
|              |       |      | 100   |  |  |  |  |             | 100              |               | 509 | 20001 | 100          | LB             | REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN | 22                                               |                     |
|              |       |      | 24    |  |  |  |  |             | 24               |               | 510 | 10000 | 24           | EACH           | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT                             |                                                  |                     |
|              |       |      | 15    |  |  |  |  |             | 15               |               | 511 | 34410 | 15           | CY             | CLASS QC2 CONCRETE, SUPERSTRUCTURE                                        |                                                  |                     |
|              |       |      | 42    |  |  |  |  |             | 42               |               | 512 | 10100 | 42           | SY             | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)                             |                                                  |                     |
|              |       |      | 5,528 |  |  |  |  |             | 5,528            |               | 512 | 10300 | 5,528        | SY             | SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN                             |                                                  |                     |
|              |       |      | 12    |  |  |  |  |             | 12               |               | 513 | 95030 | 12           | EACH           | STRUCTURAL STEEL, MISC.: RECONNECT (RE-WELD) EXISTING CROSS-FRAME MEMBER  | 34                                               |                     |
|              |       |      | 4,376 |  |  |  |  |             | 4,376            |               | 514 | 00050 | 4,376        | SF             | SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL                          |                                                  |                     |
|              |       |      | 4,376 |  |  |  |  |             | 4,376            |               | 514 | 00056 | 4,376        | SF             | FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT                   |                                                  |                     |
|              |       |      | 4,376 |  |  |  |  |             | 4,376            |               | 514 | 00060 | 4,376        | SF             | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT                        |                                                  |                     |
|              |       |      | 4,376 |  |  |  |  |             | 4,376            |               | 514 | 00066 | 4,376        | SF             | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT                              |                                                  |                     |
|              |       |      | 6     |  |  |  |  |             | 6                |               | 514 | 00504 | 6            | MNHR           | GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL                |                                                  |                     |
|              |       |      | 4     |  |  |  |  |             | 4                |               | 514 | 10000 | 4            | EACH           | FINAL INSPECTION REPAIR                                                   |                                                  |                     |
|              |       |      | 60    |  |  |  |  |             | 60               |               | 516 | 11211 | 60           | FT             | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN  | 32                                               |                     |
|              |       |      | 127   |  |  |  |  |             | 127              |               | 516 | 31000 | 127          | FT             | JOINT SEALER                                                              |                                                  |                     |
|              |       |      | 4,803 |  |  |  |  |             | 4,803            |               | 519 | 11101 | 4,803        | SF             | PATCHING CONCRETE STRUCTURE, AS PER PLAN                                  | 23,51                                            |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           | MAINTENANCE OF TRAFFIC                           |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              | 2.11  |      |       |  |  |  |  |             | 2.11             |               | 614 | 22200 | 2.11         | MILE           | WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1                              |                                                  |                     |
|              | 1,100 |      |       |  |  |  |  |             | 1,100            |               | 614 | 24400 | 1,100        | FT             | WORK ZONE DOTTED LINE, CLASS 1, 704.06, TYPE 1                            |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              | LS    |      |       |  |  |  |  |             | LS               |               | 614 | 11000 | LS           |                | MAINTAINING TRAFFIC                                                       | 5                                                |                     |
|              |       |      |       |  |  |  |  |             | 12               |               | 619 | 16010 | 12           | MNTH           | FIELD OFFICE, TYPE B                                                      |                                                  |                     |
|              |       |      |       |  |  |  |  |             | LS               |               | 623 | 10000 | LS           |                | CONSTRUCTION LAYOUT STAKES AND SURVEYING                                  |                                                  |                     |
|              |       |      |       |  |  |  |  |             | LS               |               | 624 | 10000 | LS           |                | MOBILIZATION                                                              |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |
|              |       |      |       |  |  |  |  |             |                  |               |     |       |              |                |                                                                           |                                                  |                     |

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES ON THE PROJECT IN ACCORDANCE WITH ITEM 614 MAINTAINING TRAFFIC AND AS DESCRIBED BELOW.

1. ALL SIGNS, BARRICADES, SIGN SUPPORTS, DRUMS, FLAGGERS AND INCIDENTALS FOR TRAFFIC CONTROL SHALL BE FURNISHED, ERECTED, MAINTAINED AND REMOVED BY THE CONTRACTOR IN CONFORMANCE WITH THE MOST RECENT REVISION, CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD). ALL SIGNS USED FOR THE MAINTENANCE OF TRAFFIC SHALL BE NEW OR LIKE NEW CONDITION SUBJECT TO THE APPROVAL OF THE ENGINEER. DEVICES USED TO MAINTAIN TRAFFIC SHALL BE REMOVED IMMEDIATELY AFTER THE TERMINATION OF SAID WORK. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.

2. ON US 250 AT LEAST ONE LANE IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES DURING CONTRUCTION.

WITH THE EXCEPTION OF SEPARATE PAY ITEMS, PAYMENTS FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE APPLICABLE MAINTAINING TRAFFIC ITEMS.

### NOTIFICATION OF CONSTRUCTION INITIATION

AT LEAST FOURTEEN (14) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT [d03.pio@dot.state.oh.us](mailto:d03.pio@dot.state.oh.us), THE WORK ZONE TRAFFIC MANAGER AT [d03.mot@dot.state.oh.us](mailto:d03.mot@dot.state.oh.us), AND AARON KLEIN AT THE CITY OF SANDUSKY VIA EMAIL ([aklein@ci.sandusky.oh.us](mailto:aklein@ci.sandusky.oh.us)) OR PHONE (419-627-5829) OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

ANY DETOUR ROUTES SHALL BE COORDINATED WITH THE CITY OF SANDUSKY.

ODOT WILL NOTIFY PROPERTY OWNERS, EMERGENCY SERVICE PROVIDERS AND MOTORISTS IN ADVANCE OF THE ROAD CLOSURE AND DETOUR.

### LANES OPEN DURING HOLIDAYS AND SPECIAL EVENTS

NO WORK SHALL BE PERFORMED AND THE SAME NUMBER OF LANES AS WERE AVAILABLE AT THE START OF THE PROJECT SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

HOLIDAYS  
CHRISTMAS  
FOURTH OF JULY  
NEW YEARS EVE  
LABOR DAY  
MEMORIAL DAY  
THANKSGIVING

SPECIAL EVENTS  
CEDAR POINT PEAK SEASON,  
MID-MAY - MID-SEPTEMBER  
& HALLOWEEN WEEKENDS  
TO BE CONFIRMED WITH  
AARON KLEIN AT THE CITY  
OF SANDUSKY BEFORE  
BEGINNING WORK

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN  
DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY  
FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO  
DETERMINE THIS PERIOD:

| DAY OF HOLIDAY                  | TIME ALL LANES MUST<br>BE OPEN TO TRAFFIC   |
|---------------------------------|---------------------------------------------|
| SUNDAY                          | 12:00N FRIDAY THROUGH<br>6:00 AM MONDAY     |
| MONDAY                          | 12:00N FRIDAY THROUGH<br>6:00 AM TUESDAY    |
| TUESDAY                         | 12:00N MONDAY THROUGH<br>6:00 AM WEDNESDAY  |
| WEDNESDAY                       | 12:00N TUESDAY THROUGH<br>6:00 AM THURSDAY  |
| THURSDAY                        | 12:00N WEDNESDAY THROUGH<br>6:00 AM FRIDAY  |
| THURSDAY<br>(THANKSGIVING ONLY) | 6:00 AM WEDNESDAY THROUGH<br>6:00 AM MONDAY |
| FRIDAY                          | 12:00N THURSDAY THROUGH<br>6:00 AM MONDAY   |
| SATURDAY                        | 12:00N FRIDAY THROUGH<br>6:00 AM MONDAY     |

## NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

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

| NOTIFICATION TIME FRAME TABLE  |                           |                                                      |
|--------------------------------|---------------------------|------------------------------------------------------|
| ITEM                           | DURATION OF CLOSURE       | NOTIFICATION DUE TO DISTRICT 3 COMMUNICATIONS OFFICE |
| RAMP AND ROAD CLOSURES         | >= 2 WEEKS                | 14 BUSINESS DAYS PRIOR TO CLOSURE                    |
|                                | >= 12 HOURS AND < 2 WEEKS | 7 BUSINESS DAYS PRIOR TO CLOSURE                     |
|                                | < 12 HOURS                | 2 BUSINESS DAYS PRIOR TO CLOSURE                     |
| LANE CLOSURES/<br>RESTRICTIONS | >= 2 WEEKS                | 7 BUSINESS DAYS PRIOR TO CLOSURE                     |
|                                | < 2 WEEKS                 | 2 BUSINESS DAYS PRIOR TO CLOSURE                     |

**LANE CLOSURE/REDUCTION REQUIRED**

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS ON US-250 SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

### ***DROP-OFFS IN WORK ZONES***

ALL DROP-OFFS DURING CONSTRUCTION SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

**UNAUTHORIZED LANE USE**

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

| UNAUTHORIZED LANE USE CHART                                            |                                                                  |                   |                                      |                   |                                                        |
|------------------------------------------------------------------------|------------------------------------------------------------------|-------------------|--------------------------------------|-------------------|--------------------------------------------------------|
| SECTION<br>(SLM)                                                       | EXISTING<br>NUMBER<br>OF<br>THROUGH<br>LANES<br>PER<br>DIRECTION | LANE<br>REDUCTION | LANE CLOSURES<br>NOT PERMITTED       |                   | DISINCENTIVE<br>AMOUNT<br>PER<br>MINUTE<br>PER<br>LANE |
|                                                                        |                                                                  |                   | MON.<br>TO<br>FRI.                   | SAT.<br>&<br>SUN. |                                                        |
| US 250                                                                 |                                                                  |                   |                                      |                   |                                                        |
| ERI-250-<br>00.59                                                      | 2                                                                | 2 TO 1            | 7 AM TO<br>8 AM &<br>4 PM TO<br>6 PM | NO<br>RESTRICTION | \$50                                                   |
| SHORT TERM CLOSURES ARE NOT PERMITTED<br>7AM-8AM AND 4PM-6PM MON.-FRI. |                                                                  |                   |                                      |                   |                                                        |

### SEQUENCE OF CONSTRUCTION

NOTE: THE CONTRACTOR MAY BEGIN CONSTRUCTION WITH EITHER PHASE 1 OR PHASE 2. OVER THE PEAK CEDAR POINT TIMES, FOR THE EASTBOUND, WESTBOUND, AND BUTLER ST. RAMP, FULL LANES AND SHOULDERS SHALL BE OPEN TO TRAFFIC. ALL LANES SHALL BE RESTRIPTED TO THEIR ORIGINAL LANE PATTERN.

PHASE 1 (SHEETS 7-9)

1) CLOSE THE OUTSIDE LANE OF U.S. 250 IN BOTH THE EASTBOUND AND WESTBOUND DIRECTIONS, AND PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS TO PLACE TRAFFIC IN THE PATTERN SHOWN ON THE PHASE 1 MAINTENANCE OF TRAFFIC PLAN SHEETS. THE RAMP TO BUTLER STREET WILL BE CLOSED AND THE TRAFFIC DETOURED AS SHOWN ON SHEET 6.

2) CONSTRUCT BRIDGE IMPROVEMENTS TO OUTSIDE PARAPETS AND CURBS, OUTSIDE JOINTS AND APPROACH SLABS.

3) REVISE MARKINGS AS NECESSARY AND OPEN U.S. 250 TO TRAFFIC TO THE ORIGINAL LANE PATTERN.

PHASE 2 (SHEETS 10-12)

1) CLOSE THE INSIDE LANE OF U.S. 250 IN BOTH THE EASTBOUND AND WESTBOUND DIRECTIONS, AND PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICES TO PLACE TRAFFIC IN THE PATTERN SHOWN ON THE PHASE 2 MAINTENANCE OF TRAFFIC PLAN SHEETS.

2) CONSTRUCT BRIDGE IMPROVEMENTS TO INSIDE LANES.

3) REVISE MARKINGS AS NECESSARY AND OPEN U.S. 250 TO TRAFFIC TO THE ORIGINAL LANE PATTERN.

### METHOD OF PAYMENT

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OMUTCD.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 MAINTAINING TRAFFIC LUMP SUM

| SHEET NO.                        | STATION<br><br>* QUANTITY DIFFERS<br>STATION RANGE,<br>SEE PLAN |       | SIDE | 614                                                       | 614                                                         | 614                                                             |
|----------------------------------|-----------------------------------------------------------------|-------|------|-----------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------|
|                                  |                                                                 |       |      | WE                                                        | YE                                                          | WD                                                              |
|                                  |                                                                 |       |      | WORK ZONE EDGE LINE CLASS I,<br>740.06, TYPE I, WHITE, 6" | WORK ZONE EDGE LINE, CLASS<br>I, 740.06, TYPE I, YELLOW, 6" | WORK ZONE DOTTED LINE,<br>CLASS I, 740.06, TYPE I,<br>WHITE, 6" |
|                                  | FROM                                                            | TO    |      | FT/MI                                                     | FT/MI                                                       | FT                                                              |
|                                  | US-250 - Phase I                                                |       |      |                                                           |                                                             |                                                                 |
| 3                                | 22+80                                                           | 41+62 | RT   | 1882                                                      |                                                             |                                                                 |
|                                  | 22+80                                                           | 25+55 | RT   |                                                           |                                                             | 275                                                             |
|                                  | 28+99                                                           | 45+36 | LT   | 1637                                                      |                                                             |                                                                 |
| 4                                | 30+71                                                           | 45+36 | LT   |                                                           | 1465                                                        |                                                                 |
|                                  | 30+71                                                           | 39+89 | RT   |                                                           | 918                                                         |                                                                 |
| 5                                | 42+61                                                           | 45+36 | LT   |                                                           |                                                             | 275                                                             |
|                                  |                                                                 |       |      |                                                           |                                                             |                                                                 |
|                                  | US-250 - Phase 2                                                |       |      |                                                           |                                                             |                                                                 |
| 6                                | 26+83*                                                          | 31+03 |      |                                                           | 532                                                         |                                                                 |
|                                  | 27+46                                                           | 41+62 | RT   |                                                           | 1416                                                        |                                                                 |
|                                  | 27+46                                                           | 30+21 | RT   |                                                           |                                                             | 275                                                             |
|                                  | 28+97                                                           | 45+36 | LT   |                                                           | 1639                                                        |                                                                 |
| 7                                | 30+63                                                           | 32+15 | LT   | 152                                                       |                                                             |                                                                 |
|                                  | 30+70                                                           | 39+94 | RT   | 924                                                       |                                                             |                                                                 |
|                                  | 34+49                                                           | 39+99 | LT   | 550                                                       |                                                             |                                                                 |
| 8                                | 42+61                                                           | 45+36 | LT   |                                                           |                                                             | 275                                                             |
|                                  |                                                                 |       |      |                                                           |                                                             |                                                                 |
|                                  | GRAND TOTAL                                                     |       |      | 5145                                                      | 5970                                                        | 1100                                                            |
|                                  | TOTAL (FT)                                                      |       |      | 11115                                                     |                                                             |                                                                 |
|                                  | TOTAL (MI)                                                      |       |      | 2.11                                                      |                                                             |                                                                 |
| TOTAL CARRIED TO GENERAL SUMMARY |                                                                 |       |      | 2.11                                                      |                                                             | 1100                                                            |

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Printed: 9/26/2016 @ 8:24:28 AM By: mneider  
File: \\youngstown-fst1\n60\08308\mot\sheets\08308MB001.dgn

2. TURN OFF ELECTRONIC LANE USE SIGN WHILE THE BUTLER ST. DETOUR IS IN EFFECT.



LEGEND

|    |                                                                  |
|----|------------------------------------------------------------------|
| WE | ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I, WHITE   |
| YE | ITEM 614 - WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I, YELLOW  |
| WD | ITEM 614 - WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I, WHITE |

WORK ZONE SIGN

● ● ● *DRUMS*

← TRAFFIC FLOW ARROW  
(FOR REFERENCE ONLY)

 WORK AREA

 TYPE 'A' WARNING LIGHT

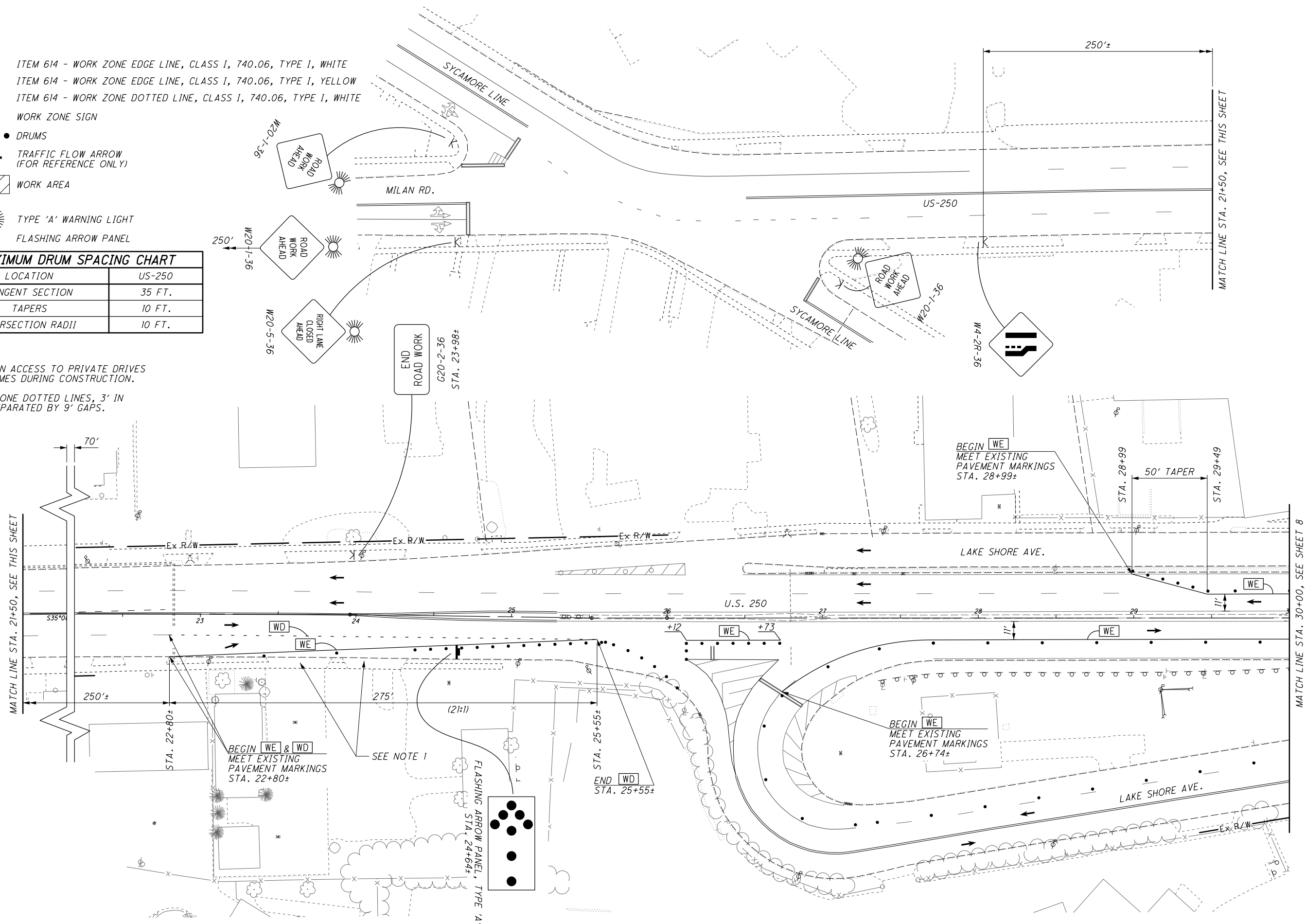
**FLASHING ARROW PANEL**

| <b>MAXIMUM DRUM SPACING CHART</b> |               |
|-----------------------------------|---------------|
| <i>LOCATION</i>                   | <i>US-250</i> |
| <i>TANGENT SECTION</i>            | <i>35 FT.</i> |
| <i>TAPERS</i>                     | <i>10 FT.</i> |
| <i>INTERSECTION RADII</i>         | <i>10 FT.</i> |

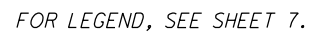
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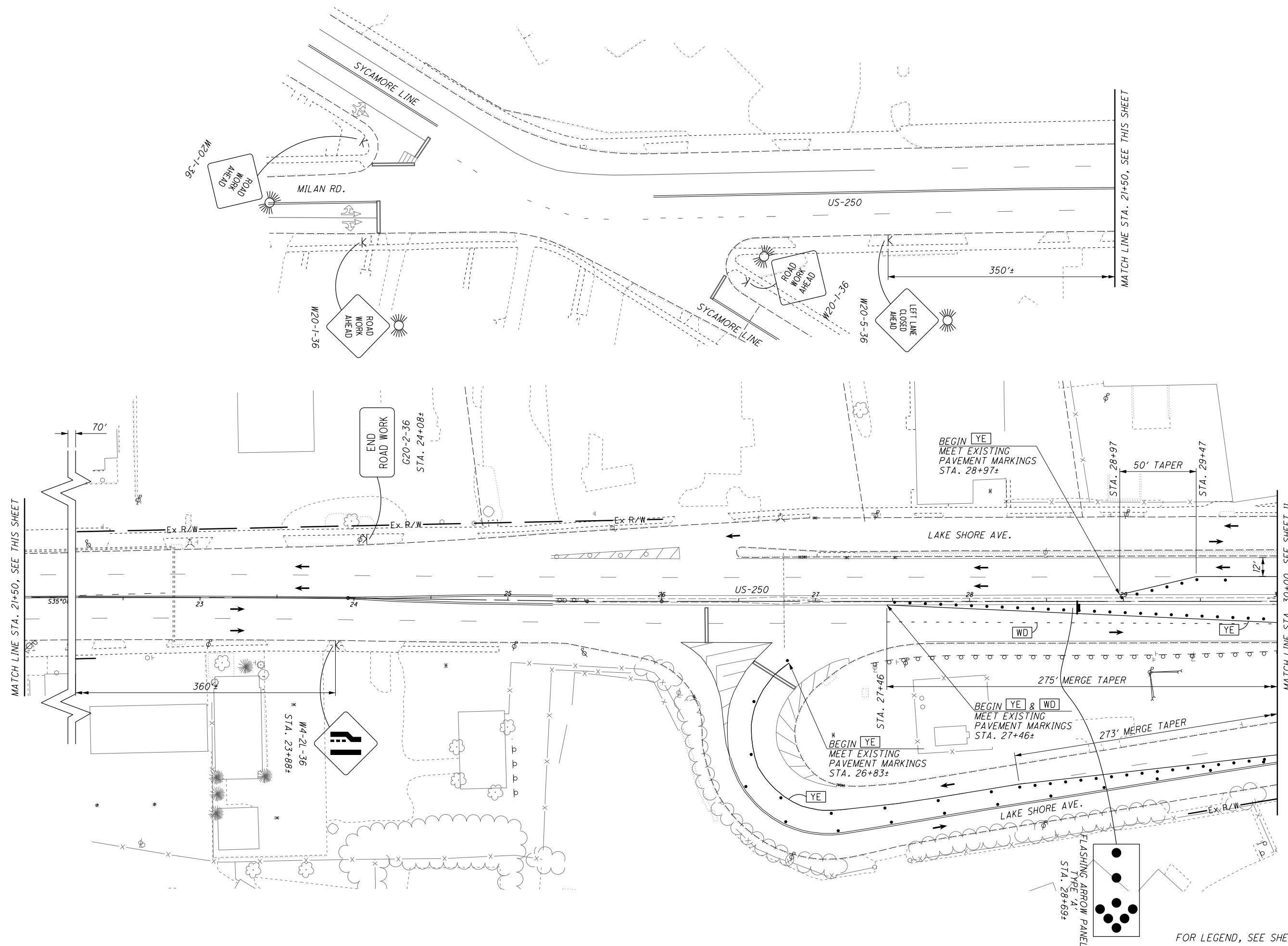
1. MAINTAIN ACCESS TO PRIVATE DRIVES AT ALL TIMES DURING CONSTRUCTION.

2. WORK ZONE DOTTED LINES, 3' IN LENGTH SEPARATED BY 9' GAPS.

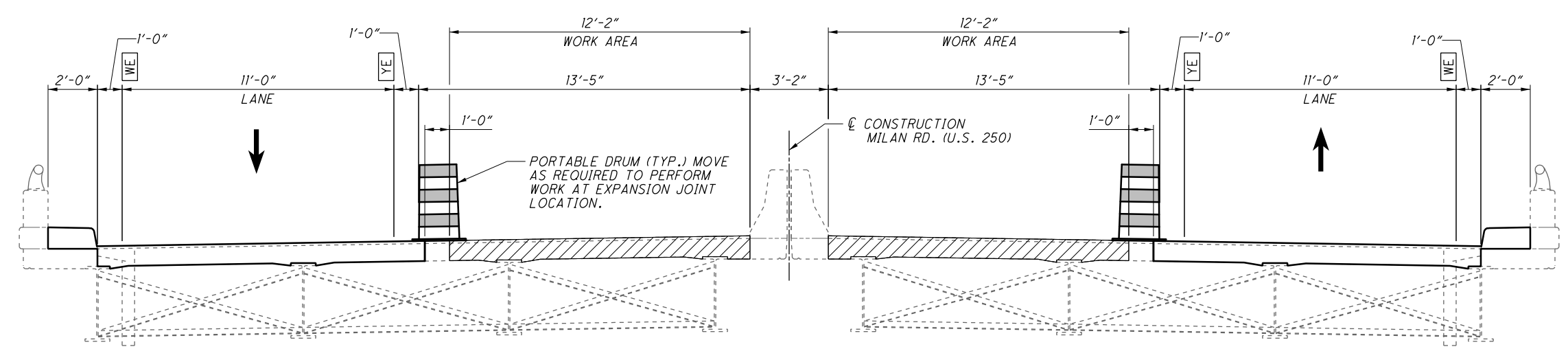




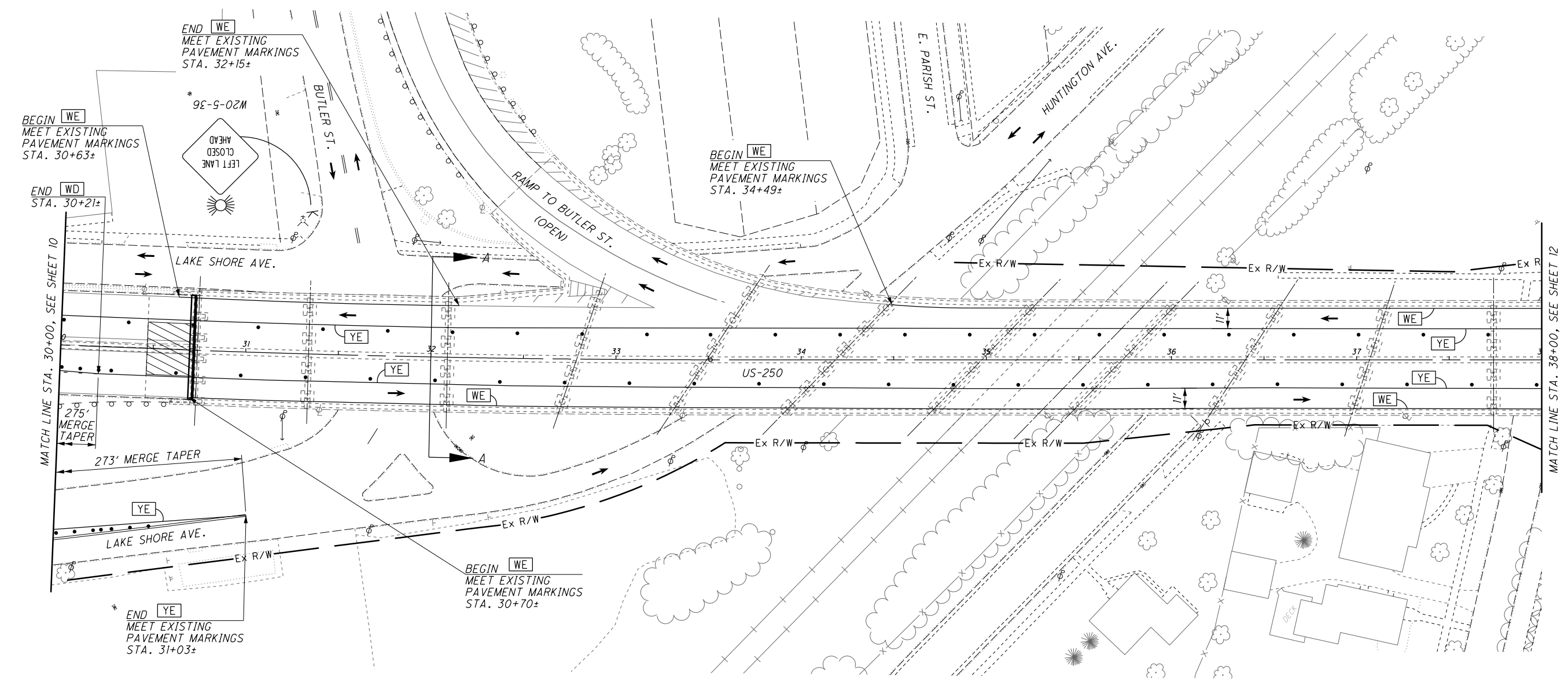




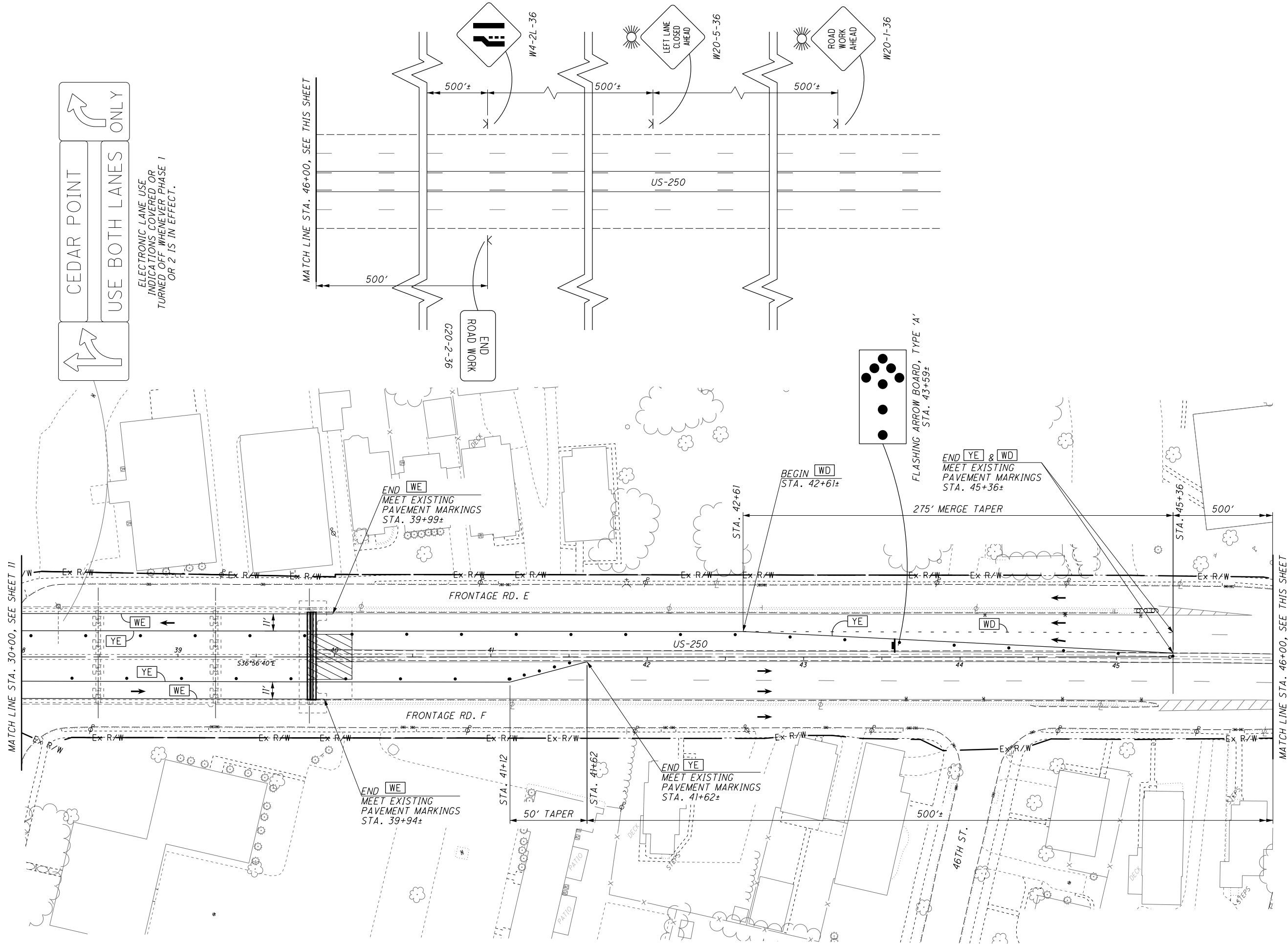
FOR LEGEND, SEE SHEET 7.

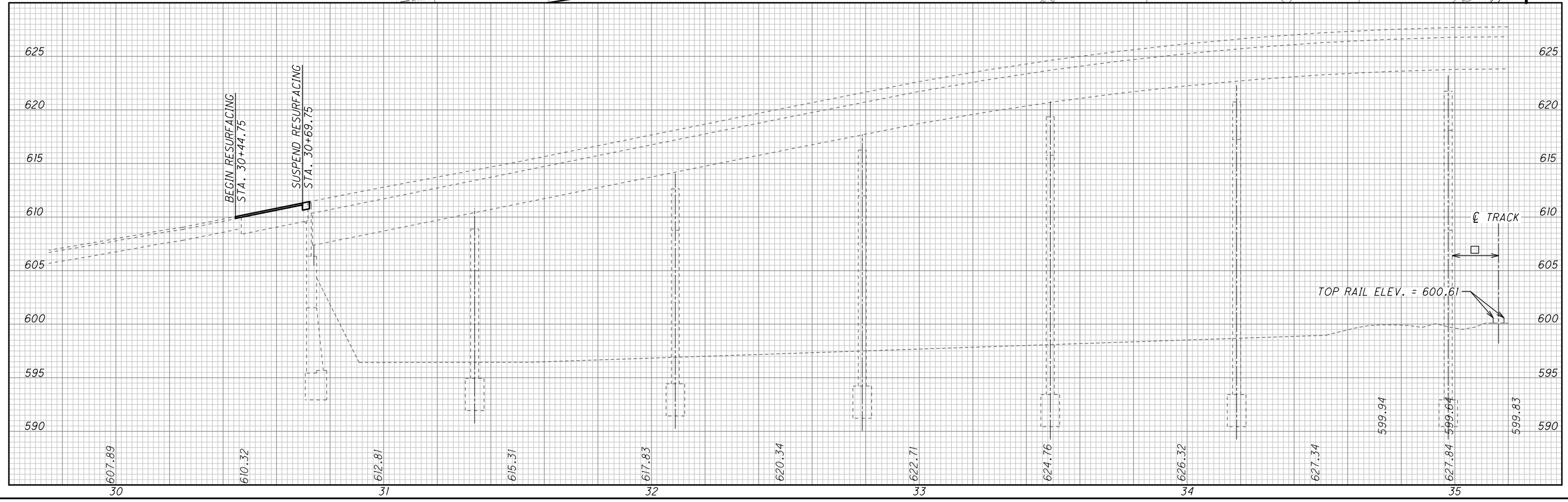
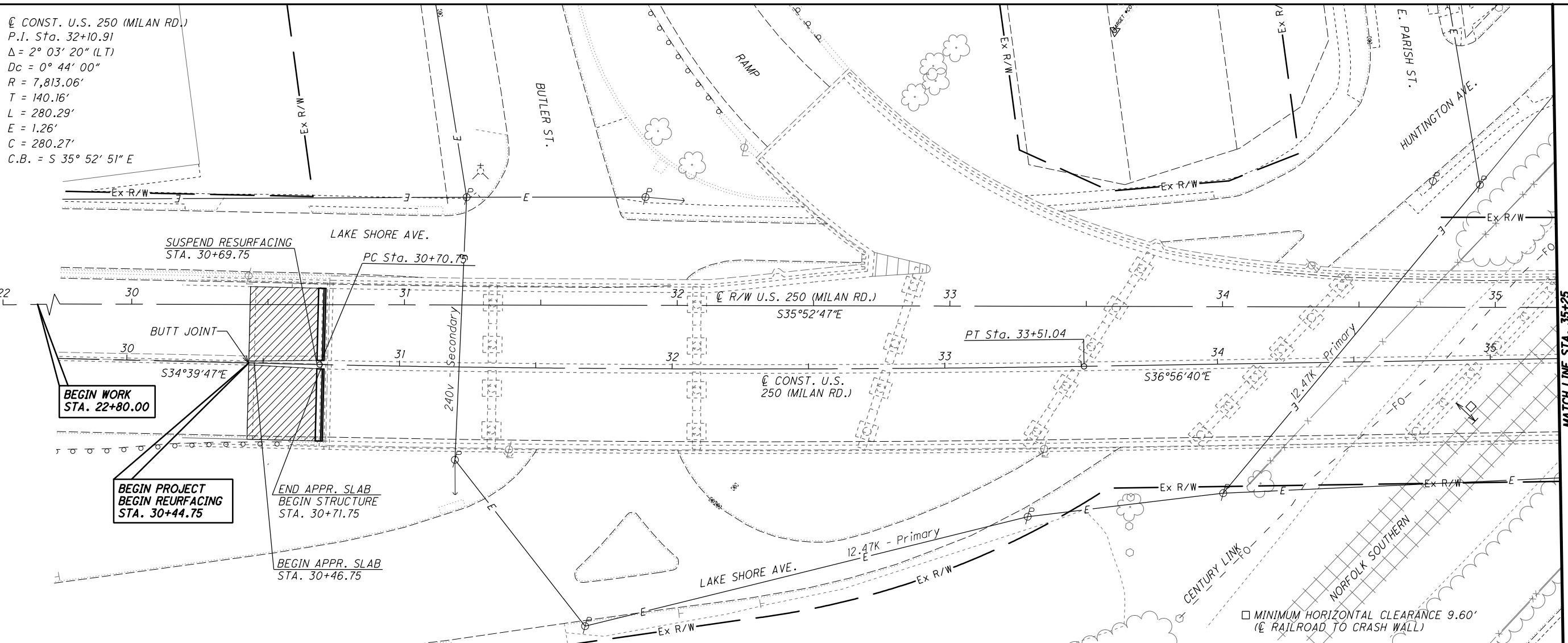


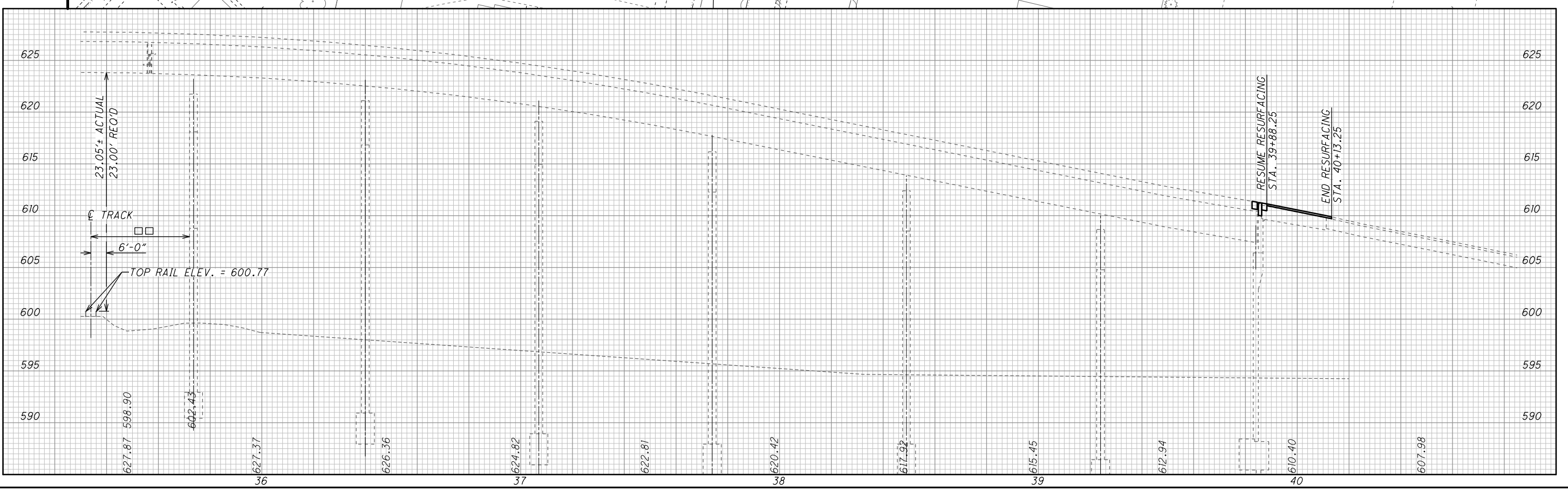
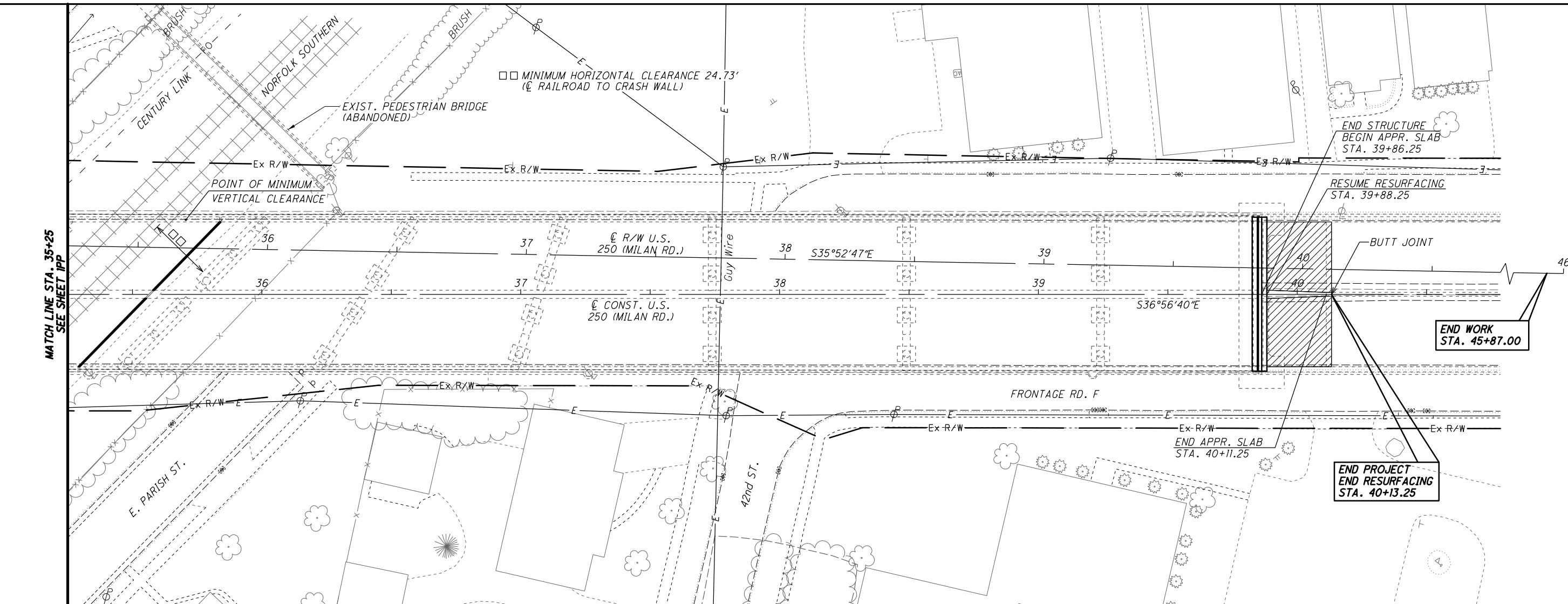
PHASE 2 (SECTION A-A)



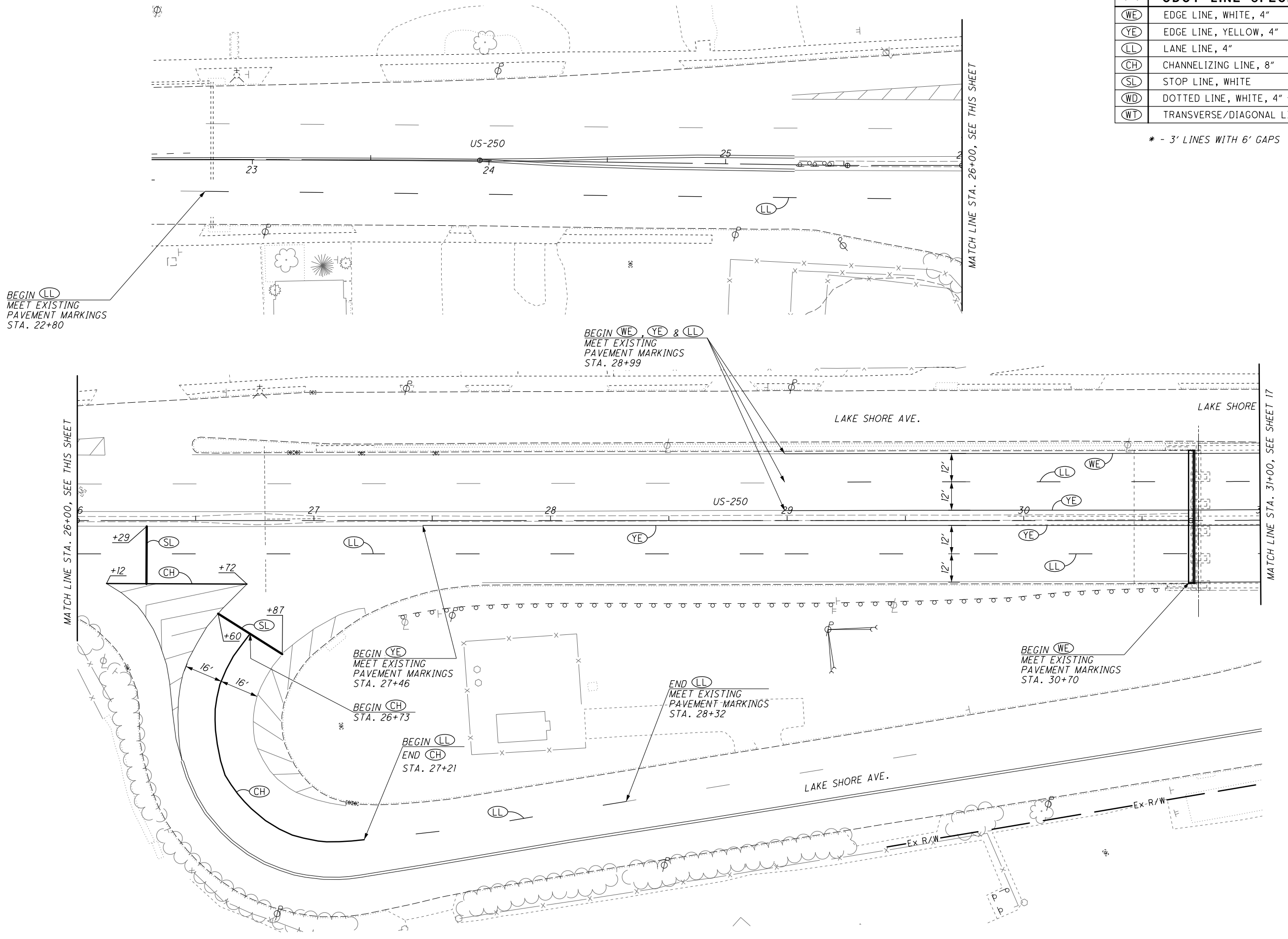
FOR LEGEND, SEE SHEET 7.





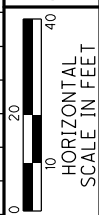






| ITEM<br>646 | LEGEND<br>ODOT LINE SPECIFICATIONS |
|-------------|------------------------------------|
| (WE)        | EDGE LINE, WHITE, 4"               |
| (YE)        | EDGE LINE, YELLOW, 4"              |
| (LL)        | LANE LINE, 4"                      |
| (CH)        | CHANNELIZING LINE, 8"              |
| (SL)        | STOP LINE, WHITE                   |
| (WD)        | DOTTED LINE, WHITE, 4" *           |
| (WT)        | TRANSVERSE/DIAGONAL LINE, WHITE    |

\* - 3' LINES WITH 6' GAPS

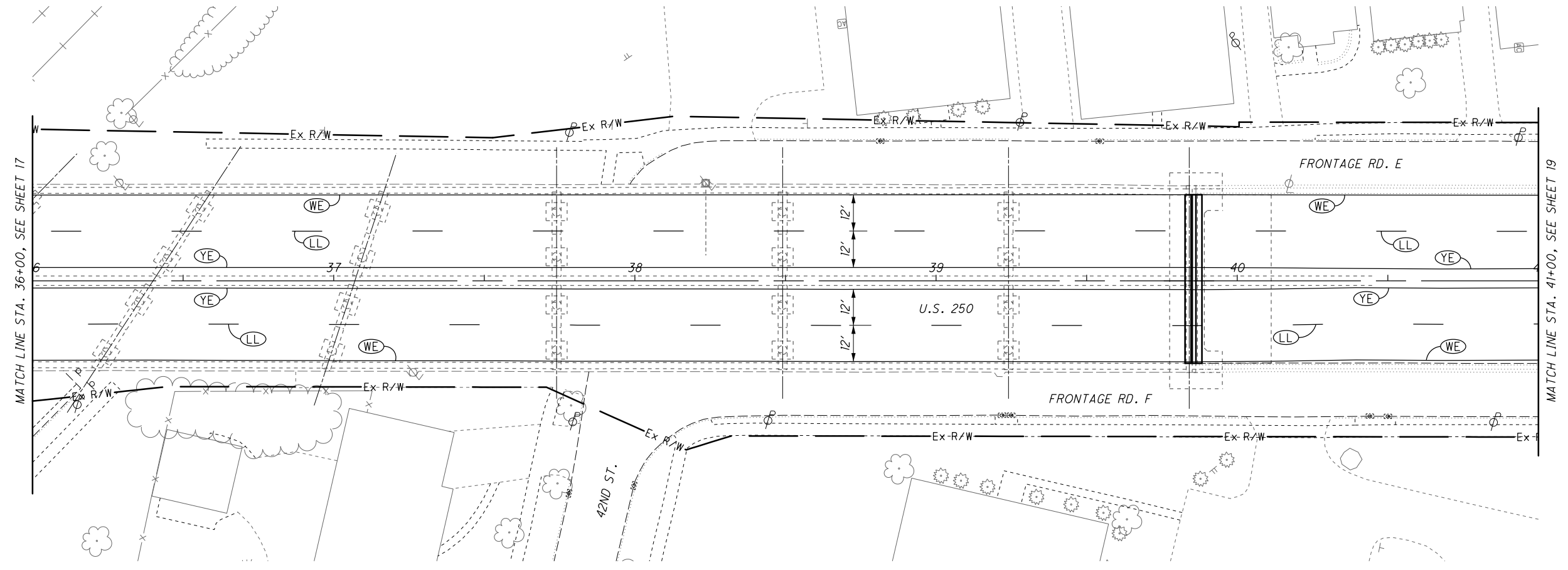


|            |         |
|------------|---------|
| CALCULATED | CHECKED |
|------------|---------|

**PAVEMENT MARKING PLAN**  
**STA. 26+00 TO STA. 31+00**

**ERI-250-00.59**



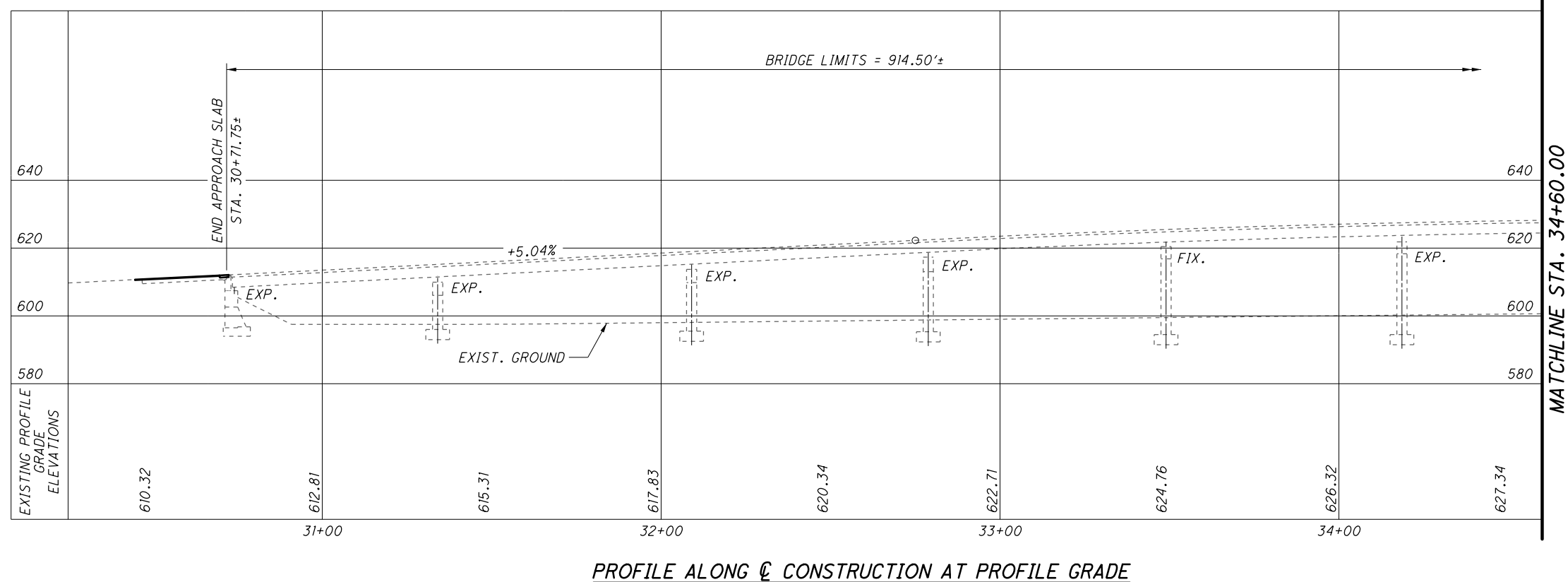
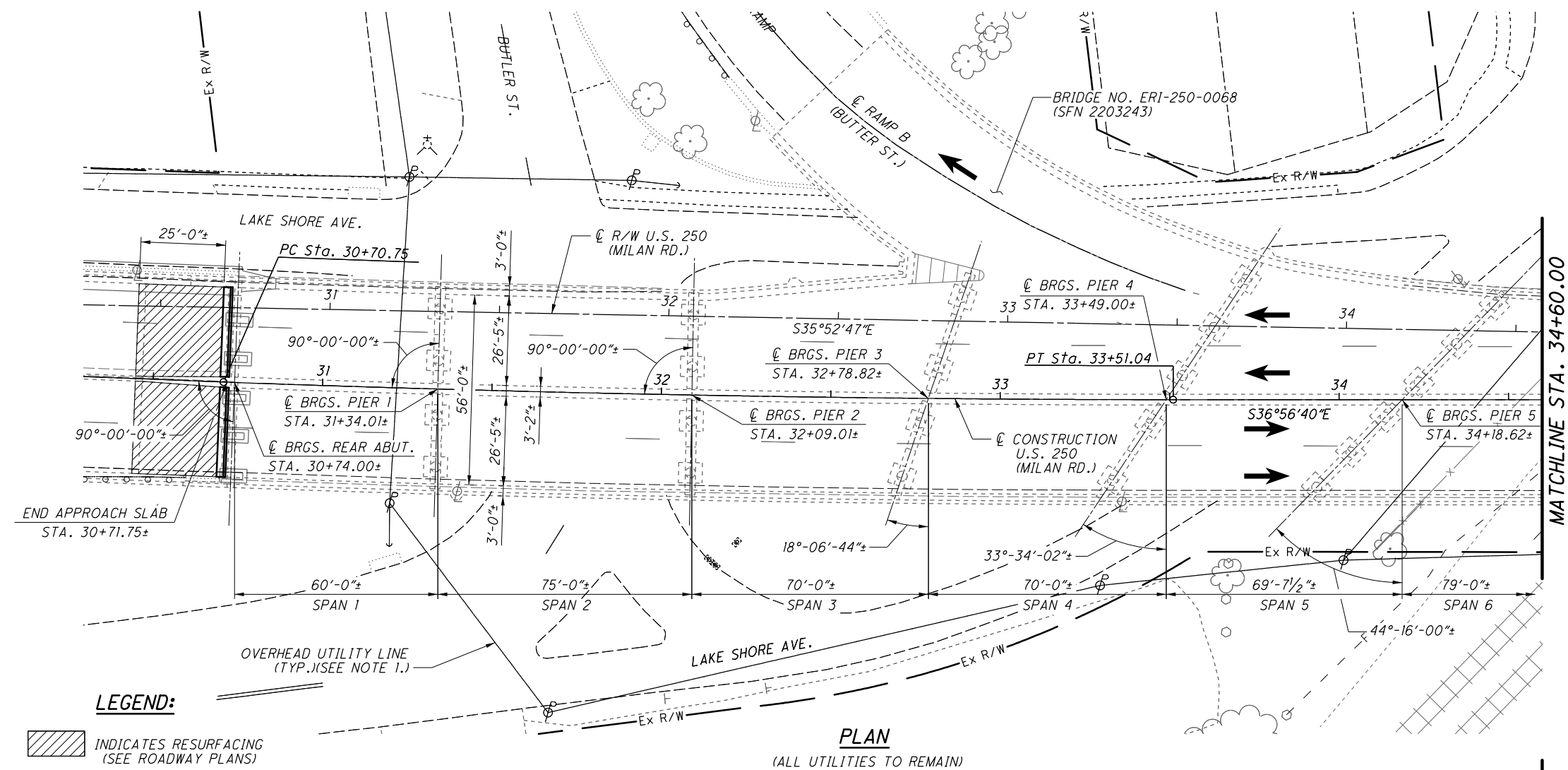


FOR LEGEND, SEE SHEET 16.

|                                           |              |                                                   |               |          |
|-------------------------------------------|--------------|---------------------------------------------------|---------------|----------|
| CALCULATED<br>0                           | CHECKED<br>0 | PAVEMENT MARKING PLAN<br>STA. 36+00 TO STA. 41+00 | ERI-250-00.59 | 18<br>52 |
|                                           |              |                                                   |               |          |
| 0 10 20 40<br>HORIZONTAL<br>SCALE IN FEET |              | ms consultants, inc.                              |               |          |



ms consultants, inc.



DESIGN TRAFFIC:  
2018 ADT = 23,000      2018 ADTT = 1380  
2038 ADT = 25,000      2038 ADTT = 1500  
DIRECTIONAL DISTRIBUTION = 53%

HORIZONTAL CURVE DATA:

$P.I. Sta. 32+10.91$   
 $\Delta = 2^{\circ} 03' 20'' (LT)$   
 $Dc = 0^{\circ} 44' 00''$   
 $R = 7,813.06'$   
 $T = 140.16'$   
 $L = 280.29'$   
 $E = 1.26'$   
 $C = 280.27'$   
 $C.B. = S 35^{\circ} 52' 51'' E$

NOTE:

1. SEE ROADWAY PLANS FOR VOLTAGE IN OVERHEAD UTILITY LINES.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED SPAN 8  
CONCRETE DECK AND SUBSTRUCTURE

SPANS: 60'-0"±, 75'-0"±, 70'-0"±, 70'-0"±, 69'-7½"±,  
79'-0"±, 76'-0"±, 66'-4½"±, 67'-0"±, 67'-0"±,  
75'-0"±, 75'-0"±, 60'-0"± c/c BEARINGS

ROADWAY: 26'-5"± TOE OF OUTSIDE SAFETY CURB TO  
TOE OF MEDIAN PARAPET (EACH DIRECTION)

LOADING: CF400(57)

SKEW: VARIES 0°± AT ENDS TO 44°-16'± AT CENTER

WEARING SURFACE: 2½"± THK. MICRO-SILICA MODIFIED CONC.

APPROACH SLABS: AS-1-54 (25'-0"± LONG)

ALIGNMENT: 0°-44'± CURVE, TANGENT

SUPERELEVATION: NONE

STRUCTURAL FILE NUMBER: 2203189

DATE BUILT: 1968 REHABILITATED: 1986

DISPOSITION: PATCHING AND MINOR REPAIRS

---

*PROPOSED STRUCTURE*

MAINTENANCE STATEMENT

PROPOSED WORK: REMOVE AND REPLACE EXP. JT. AT THE FWD. ABUT. PATCH AREAS OF SUBSTRUCTURE CONCRETE SURFACES. SEAL REAR ABUT. AND HINGE EXP. JTS. WITH CRACK SEALER. SEAL DECK WITH HMWM. PAINT ENDS OF BEAMS WITHIN 10'-0" OF EACH DECK JT. REPLACE PORTIONS OF REAR ABUT. BACKWALL AND APPR. SLAB. PATCH OUTSIDE CURB & PARAPETS. SEAL SELECTED AREAS OF CONCRETE REPAIR.

SPANS: SAME

ROADWAY: SAME

LOADING: SAME

SKEW: SAME

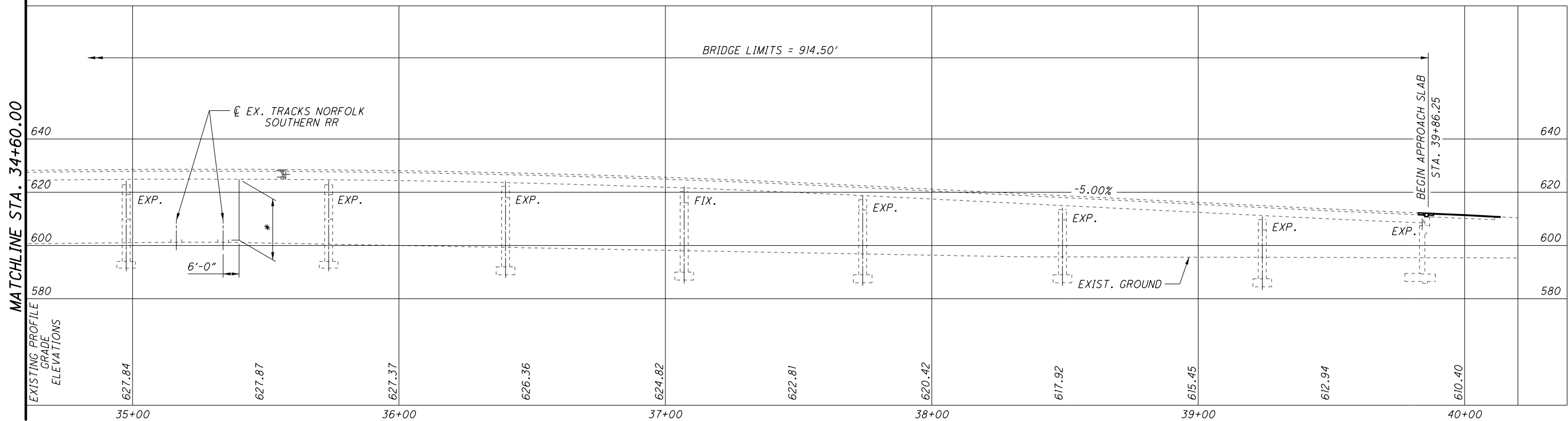
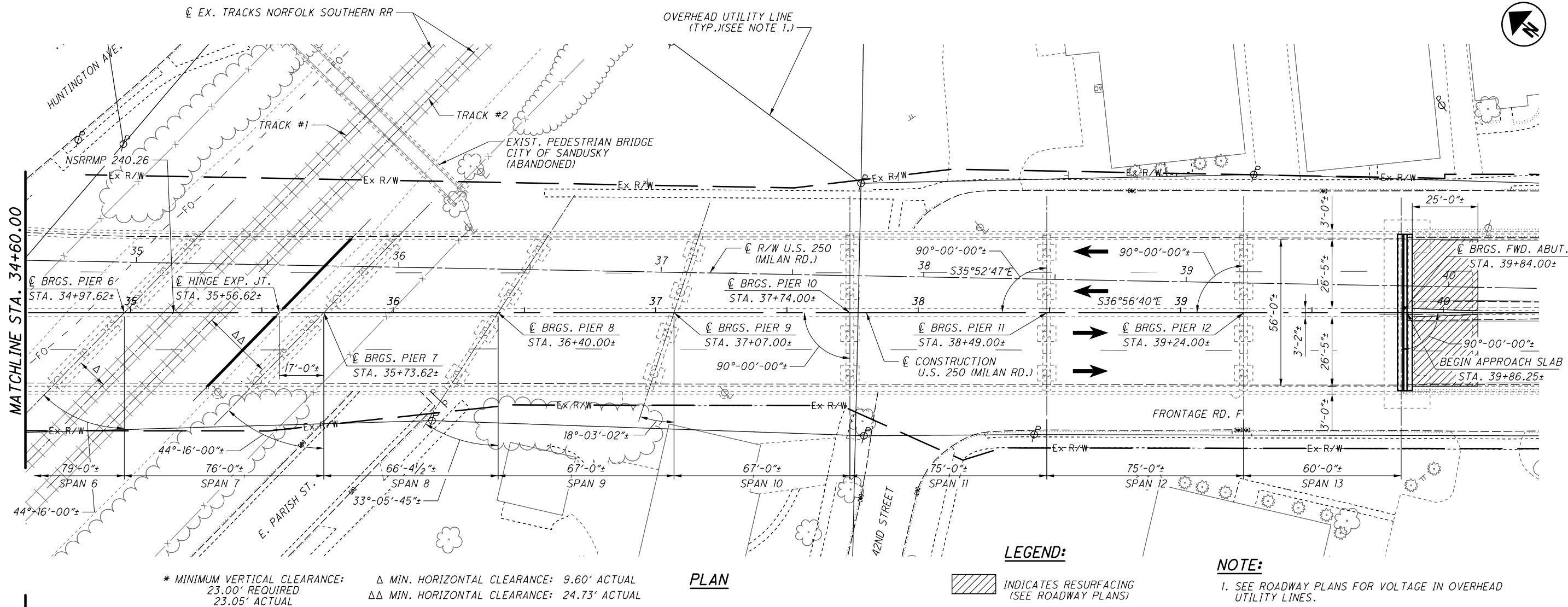
WEARING SURFACE: SAME

APPROACH SLABS: SAME

ALIGNMENT: SAME

LATITUDE: N 41°-26'-20"

LONGITUDE: W 82°-41'-39"







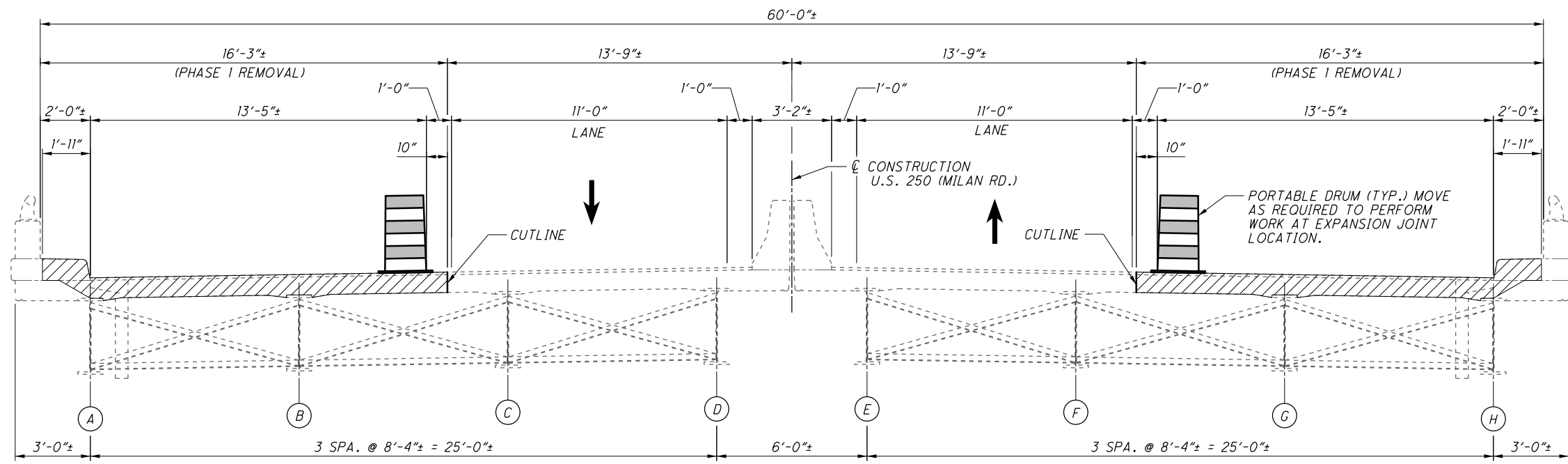
| ESTIMATED QUANTITIES |           |       |          |                                                                           |        |       |        |         |             |
|----------------------|-----------|-------|----------|---------------------------------------------------------------------------|--------|-------|--------|---------|-------------|
| ITEM                 | ITEM EXT. | TOTAL | UNIT     | DESCRIPTION                                                               | ABUTS. | PIER  | SUPER. | GENERAL | SEE SHEET   |
| 202                  | 11203     | LS    |          | PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN             |        |       |        | LS      | 3/33        |
| 509                  | 10000     | 914   | LB       | EPOXY COATED REINFORCING STEEL                                            |        |       | 914    |         |             |
| 509                  | 20001     | 100 * | LB       | REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN |        |       |        | 100 *   | 3/33        |
| 510                  | 10000     | 24    | EACH     | DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT                             |        |       | 24     |         |             |
| 511                  | 34410     | 15    | CY       | CLASS QC2 CONCRETE, SUPERSTRUCTURE                                        |        |       | 15     |         |             |
| 512                  | 10100     | 42    | SY       | SEALING OF CONCRETE SURFACES (EPOXY URETHANE)                             | 42     |       |        |         |             |
| 512                  | 10300     | 5528  | SY       | SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN                             |        |       | 5528   |         |             |
| 513                  | 95030     | 12    | EACH     | STRUCTURAL STEEL, MISC.: RECONNECT (RE-WELD) EXISTING CROSSFRAME MEMBER   |        |       | 12     |         | 15/33       |
| 514                  | 00050     | 4376  | SF       | SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL                          |        |       | 4376   |         |             |
| 514                  | 00056     | 4376  | SF       | FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT                   |        |       | 4376   |         |             |
| 514                  | 00060     | 4376  | SF       | FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT                        |        |       | 4376   |         |             |
| 514                  | 00066     | 4376  | SF       | FIELD PAINTING STRUCTURAL STEEL, FINISH COAT                              |        |       | 4376   |         |             |
| 514                  | 00504     | 6     | MAN HOUR | GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL                |        |       | 6      |         |             |
| 514                  | 10000     | 4     | EACH     | FINAL INSPECTION REPAIR                                                   |        |       | 4      |         |             |
| 516                  | 11211     | 60    | FT       | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN  |        |       | 60     |         | 13/33       |
| 516                  | 31000     | 127   | FT       | JOINT SEALER                                                              |        |       | 127    |         |             |
| 519                  | 11101     | 4803  | SF       | PATCHING CONCRETE STRUCTURE, AS PER PLAN                                  | 92.5   | 247.5 | 4463   |         | 4/33, 32/33 |
|                      |           |       |          |                                                                           |        |       |        |         |             |
|                      |           |       |          |                                                                           |        |       |        |         |             |
|                      |           |       |          |                                                                           |        |       |        |         |             |

\* INDICATES CONTINGENCY QUANTITY



(TO BE PERFORMED IN 2 PHASES)

- $$\frac{25}{52}$$



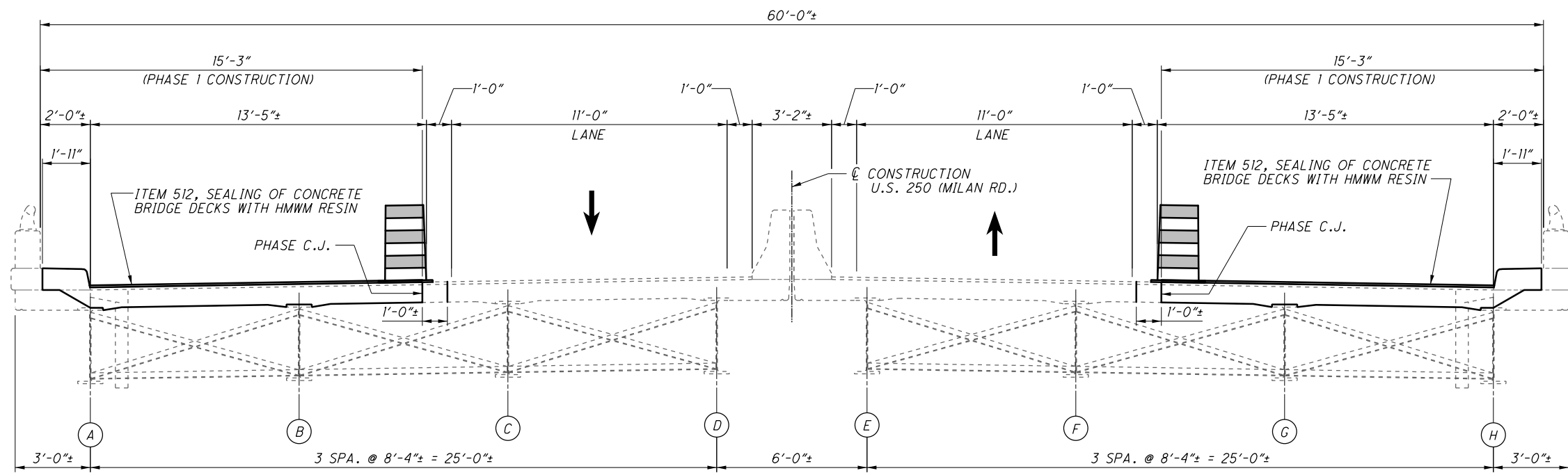
**NOTE:**

DURING NON-CONSTRUCTION HOURS AFTER CONCRETE REMOVAL AT FORWARD ABUTMENT EXPANSION JOINT LOCATION, THE CONTRACTOR SHALL PLACE A STEEL PLATE(S), FIXED FROM SLIDING, OVER THE ENTIRE OPENED AREA. MINIMUM THICKNESS OF PLATE SHALL BE  $\frac{3}{4}$ ". THE MINIMUM LENGTH OF PLATE SHALL BE 36" LARGER THAN THE OPENING. INCLUDE WITH ITEM 202 FOR PAYMENT.

**PHASE 1 REMOVAL**  
(AT  $\bar{C}$  BEARING FORWARD ABUTMENT)

**LEGEND:**

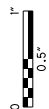
- ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.



**PHASE 1 CONSTRUCTION**  
(AT  $\bar{C}$  BEARING FORWARD ABUTMENT)



C+H+H  
C+H+H



C

C

C

C

C

C

C

C

C

C

C

C

C

C

C

C

C

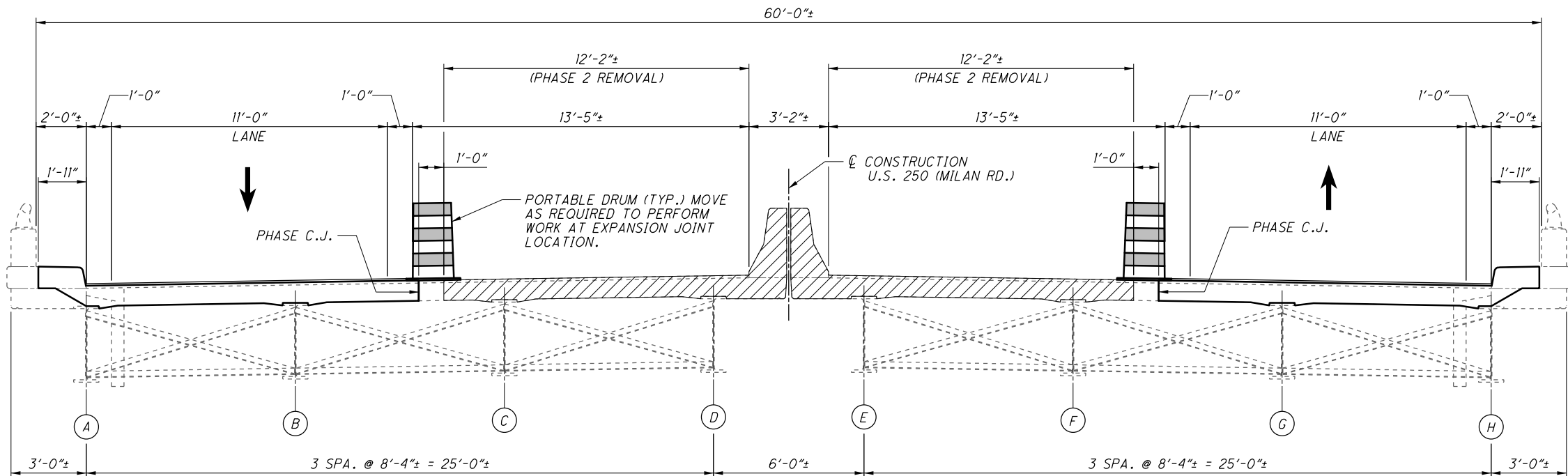
C

C

C

C

C



#### NOTE:

DURING NON-CONSTRUCTION HOURS AFTER CONCRETE REMOVAL AT FORWARD ABUTMENT EXPANSION JOINT LOCATION, THE CONTRACTOR SHALL PLACE A STEEL PLATE(S), FIXED FROM SLIDING, OVER THE ENTIRE OPENED AREA. MINIMUM THICKNESS OF PLATE SHALL BE  $\frac{3}{4}$ ". THE MINIMUM LENGTH OF PLATE SHALL BE 36" LARGER THAN THE OPENING. INCLUDE WITH ITEM 202 FOR PAYMENT.

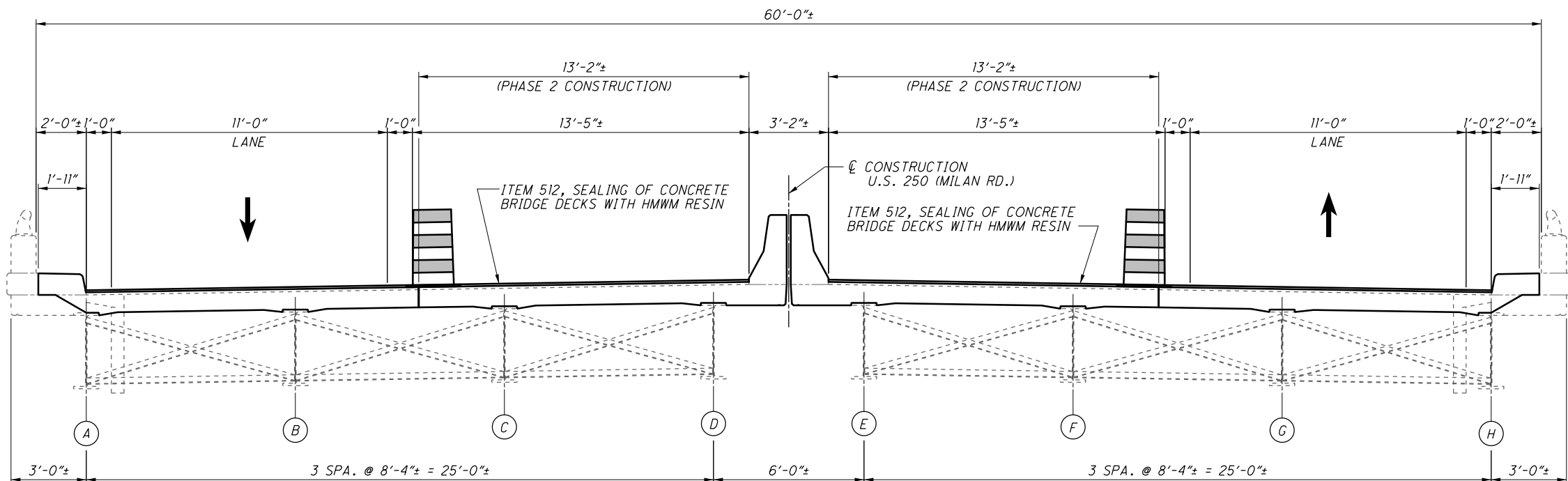
#### PHASE 2 REMOVAL

(AT  $\text{CL}$  BEARING FORWARD ABUTMENT)

#### LEGEND:



- ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.



#### PHASE 2 CONSTRUCTION

(AT  $\text{CL}$  BEARING FORWARD ABUTMENT)

DESIGN AGENCY  
ms consultants, inc.



DATE  
10-23-15  
REVIEWED  
JDH  
STRUCTURE FILE NUMBER  
2203189

DRAWN  
KRM  
CHECKED  
LAW  
DESIGNED  
SJR

#### PHASE 2 REMOVAL AND CONSTRUCTION

BRIDGE NO. ERI-250-0059

OVER THE NORFOLK SOUTHERN RR, 42ND STREET AND BUTLER STREET

ERI-250-00.59

PID No. 90939

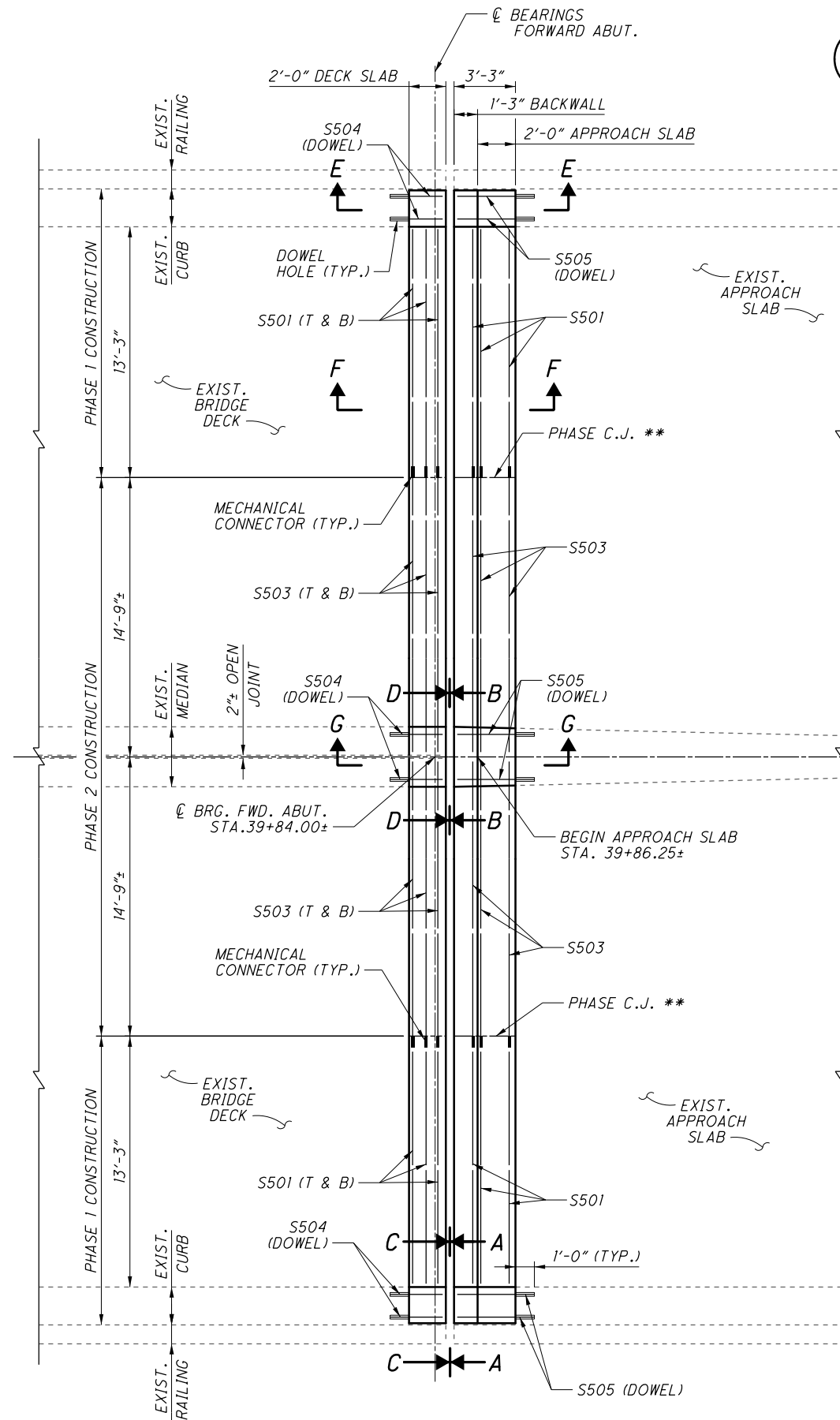
8 / 33

27  
52



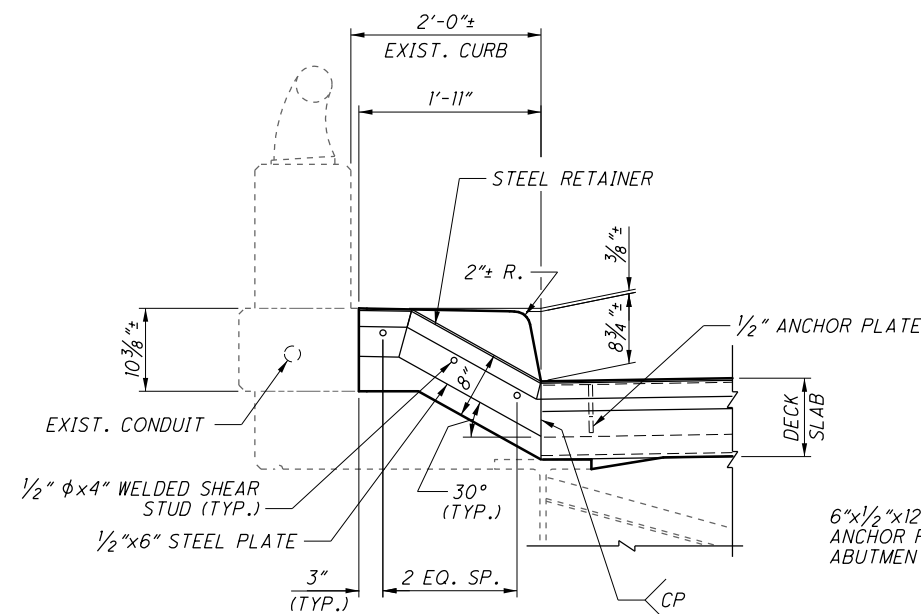
1. FOR SECTIONS A-A AND B-B SEE SHEET 10/33.





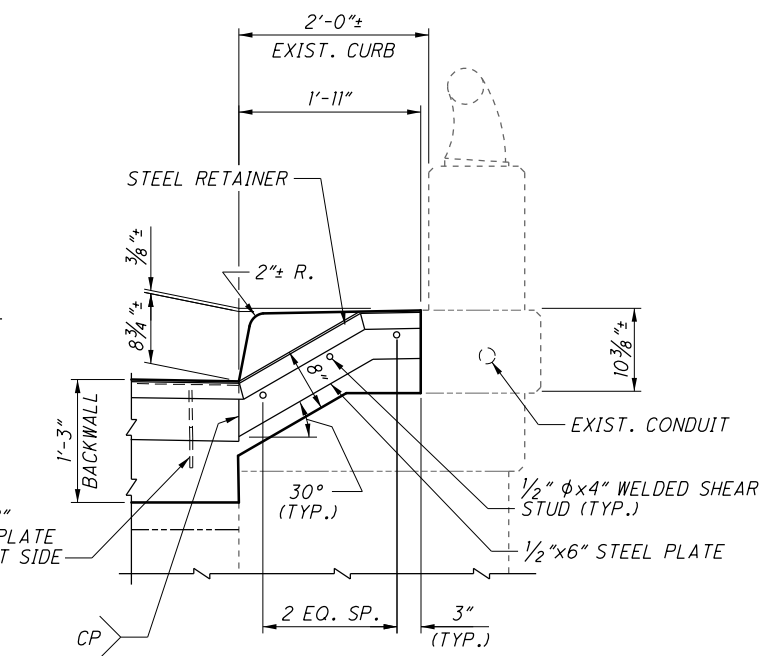
*FORWARD ABUTMENT PLAN*

**\*\* - SEE SHEET 12/33 FOR PHASED CONSTRUCTION JOINT DETAILS.**



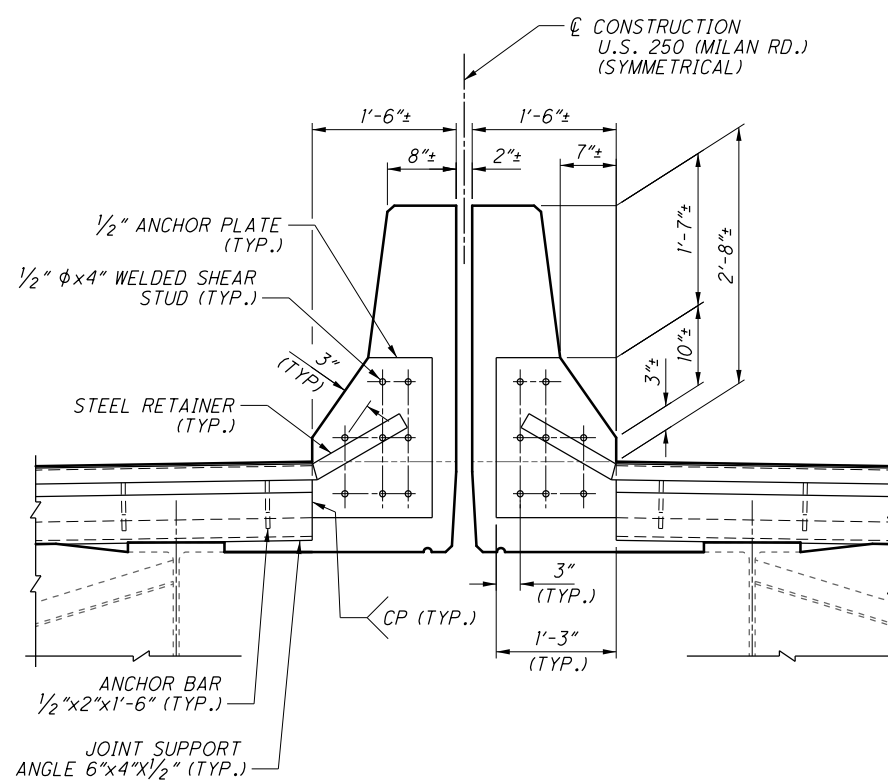
VIEW A-A

(TYPICAL JOINT ARMOR AT BRIDGE DECK CURB)



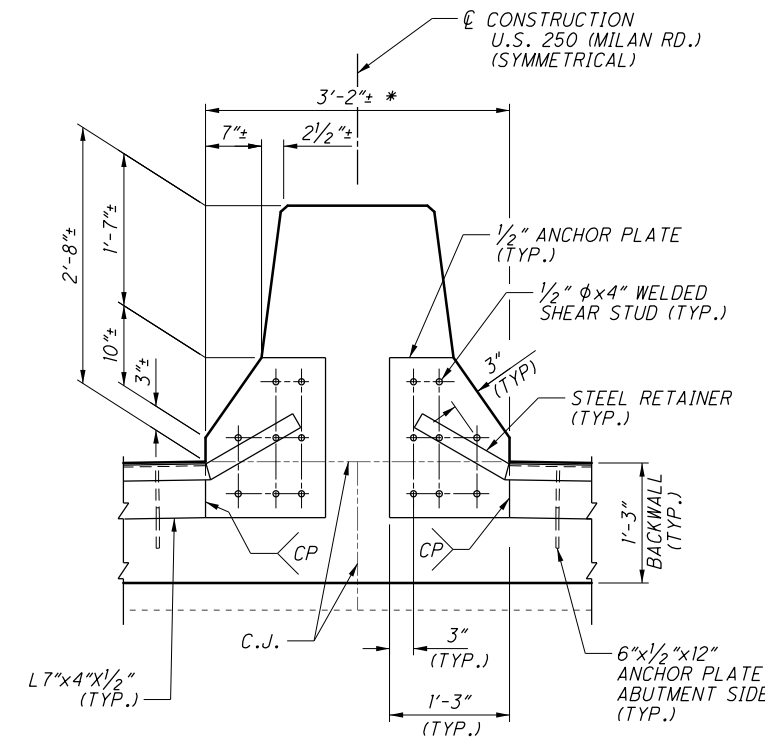
VIEW C-C

(TYPICAL JOINT ARMOR AT APPROACH SLAB CURB DETAIL ON BACKWALL)



VIEW B-B

(JOINT ARMOR AT BRIDGE DECK MEDIAN BARRIER.)



VIEW D-D

(JOINT ARMOR AT APPROACH SLAB MEDIAN BARRIER ON BACKWALL)

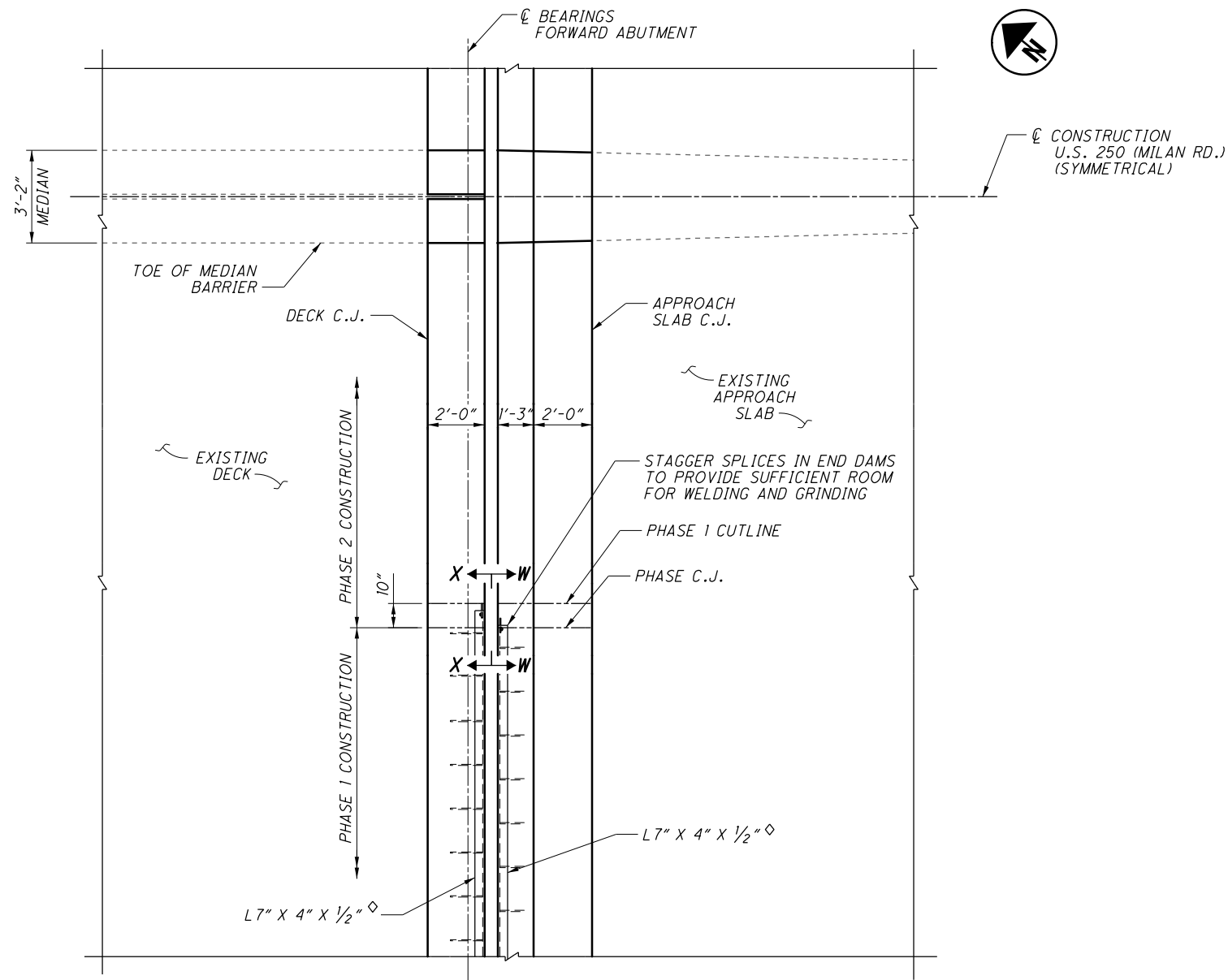
\* - WIDTH VARIES. MATCH EXISTING AT ENDS.

**NOTES:**

1. FOR SECTIONS F-F, SEE SHEET 12/33.

2. FOR SECTIONS E-E AND G-G SEE SHEET 14/33.

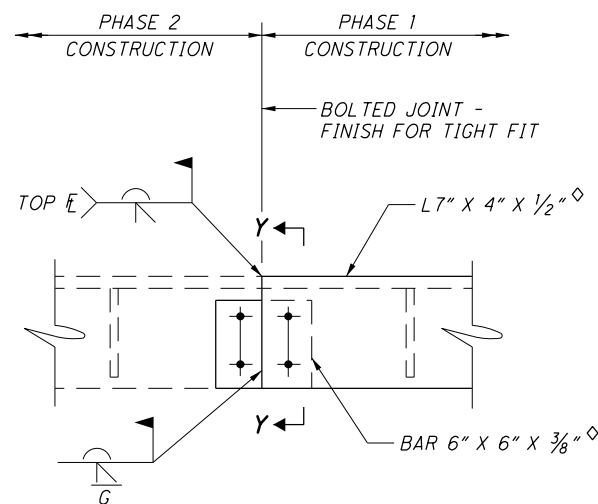




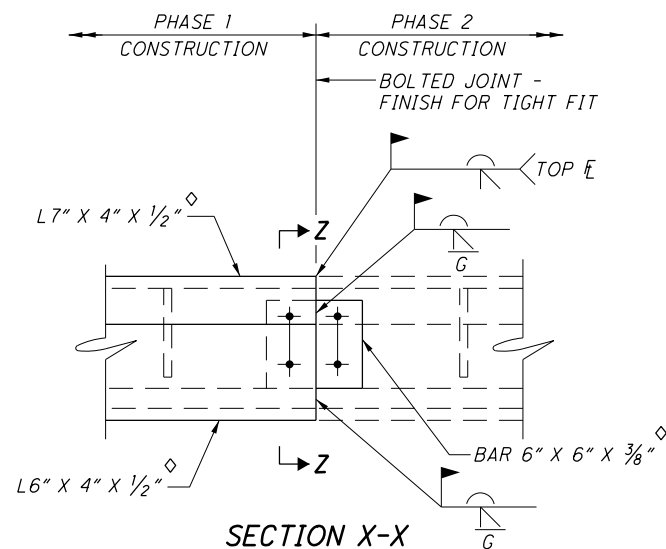
PARTIAL PLAN - FORWARD ABUTMENT  
END DAM/FIELD SPLICE DETAIL

LEGEND:

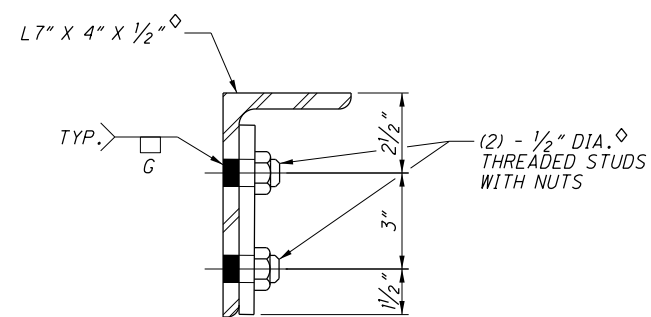
- ◇ INCLUDE FOR PAYMENT WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.



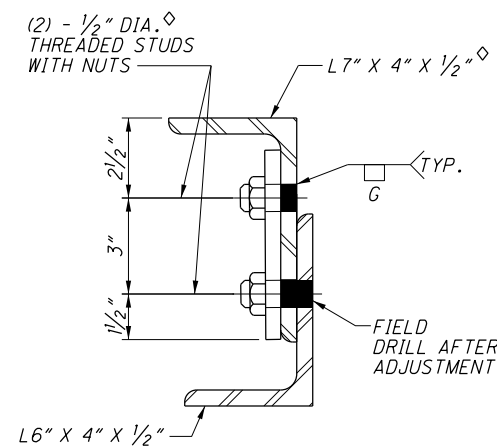
SECTION W-W  
(AT ABUTMENT)



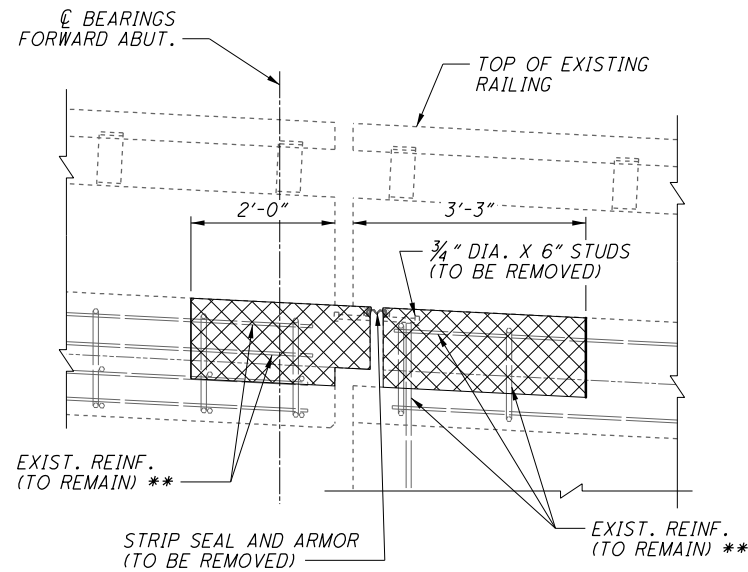
SECTION X-X  
(AT DECK)



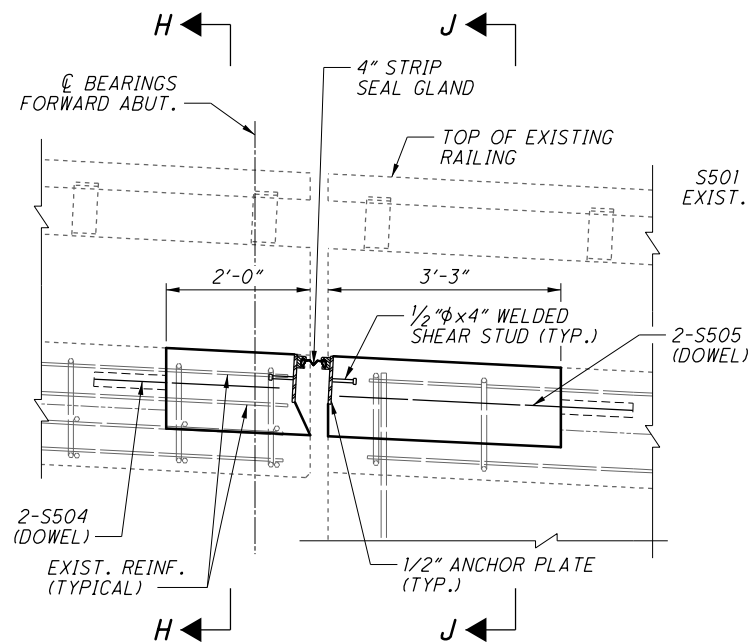
SECTION Y-Y



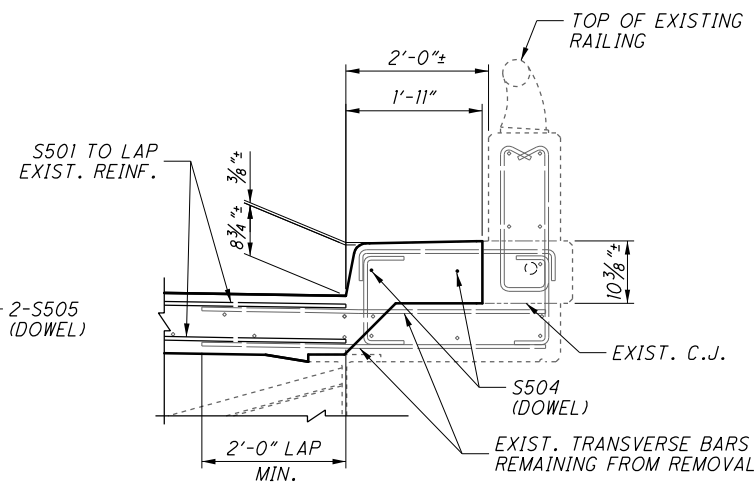
SECTION Z-Z



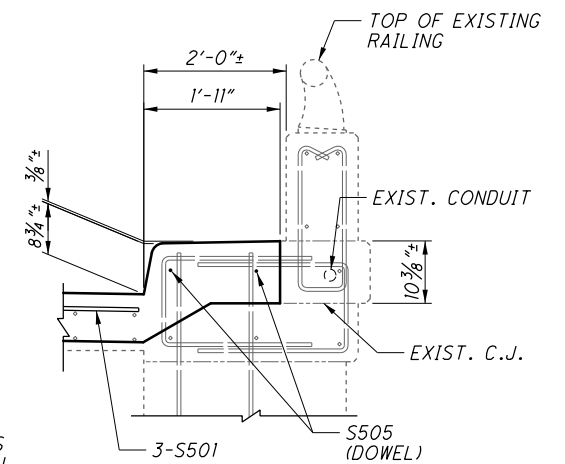
SECTION E-E  
(AT CURB REMOVAL)



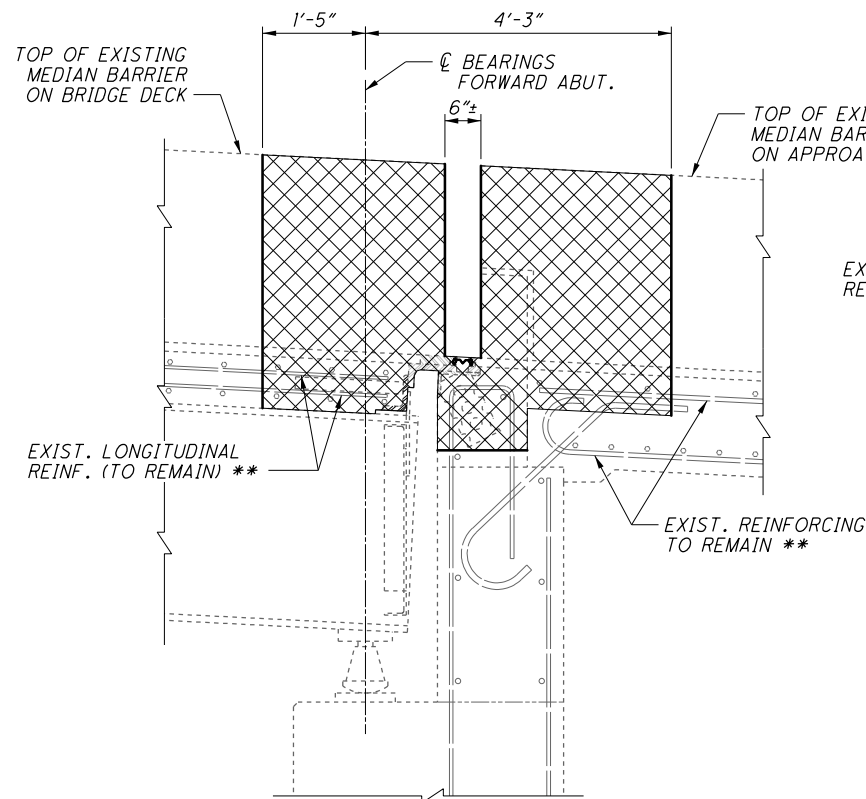
SECTION E-E  
(AT CURB REHABILITATION)



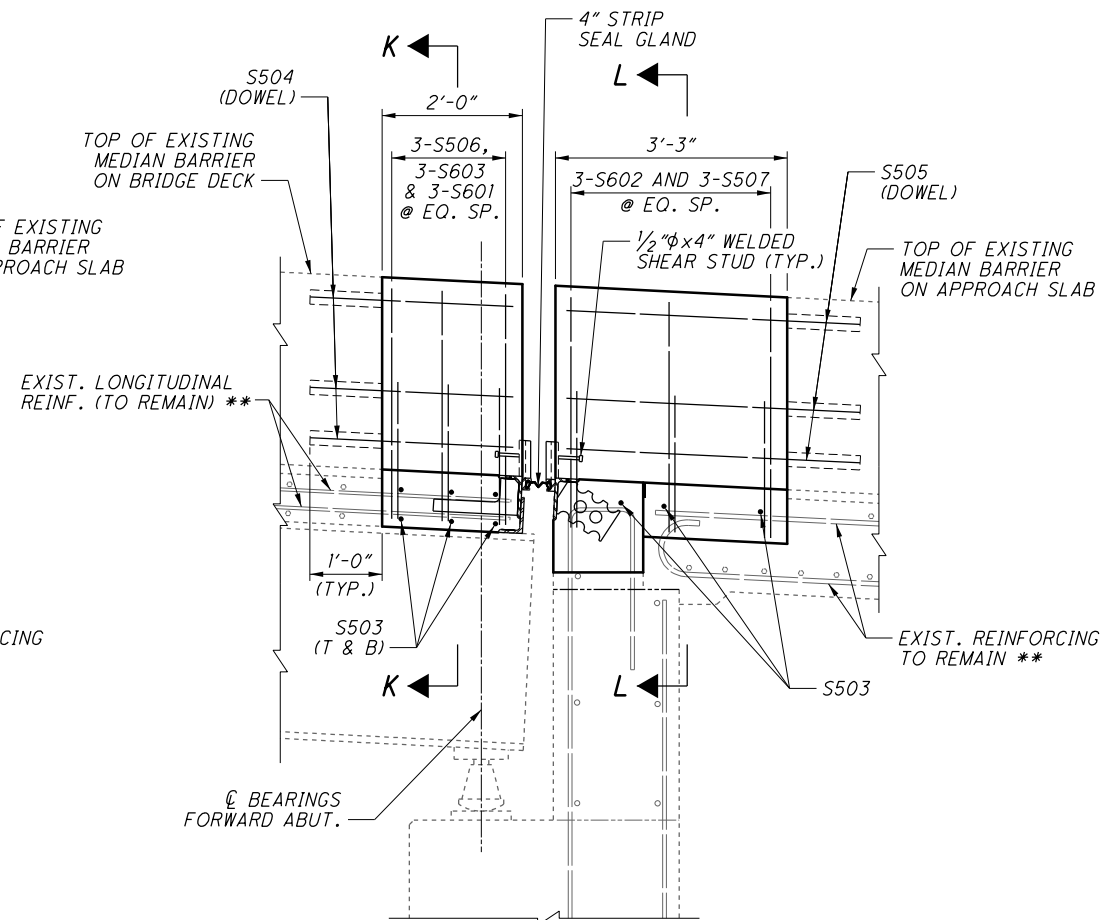
SECTION H-H  
(AT CURB REHABILITATION)



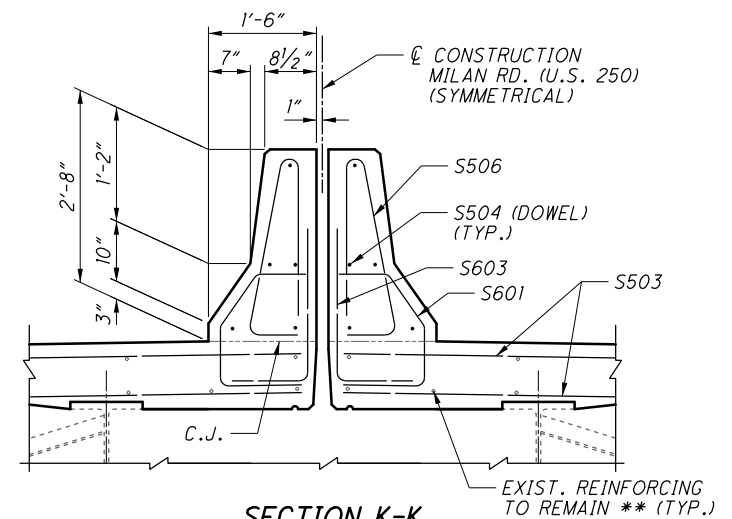
SECTION J-J  
(AT CURB REHABILITATION)



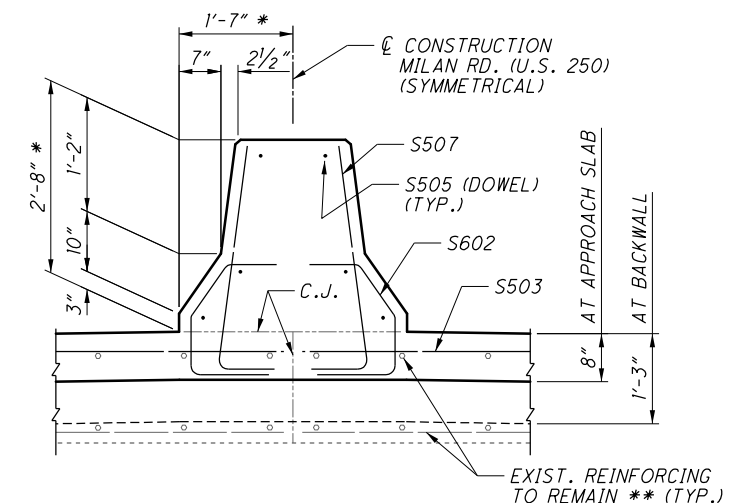
**SECTION G-G**  
(AT FORWARD ABUTMENT MEDIAN REMOVAL)



**SECTION G-G**  
(AT FORWARD ABUTMENT MEDIAN REHABILITATION)



SECTION K-K TO I  
(AT MEDIAN DECK SLAB REHABILITATION)



**SECTION L-L**  
(AT MEDIAN APPROACH SLAB REHABILITATION)

LEGEND:

\* SIZE IS APPROXIMATE, FIELD VERIFY.

**\*\* THE CONTRACTOR HAS THE OPTION TO REMOVE THE EXISTING REINFORCING COMPLETELY, INSTEAD OF SALVAGING THE EXISTING BARS, PROVIDED DOWELS ARE PLACED (PER CMS ITEM 510) WITHIN THE EXISTING SUBSTRUCTURE. THE SPACING AND SIZE OF DOWELS SHOULD MATCH THE SPACING AND SIZE OF THE EXISTING BARS.**



ITEM 202 - PORTIONS OF STRUCTURE  
REMOVED, OVER 20' SPAN, AS PER PLAN

NOTES:

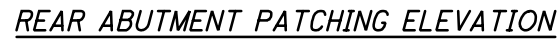
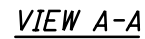
1. FOR ADDITIONAL STRIP SEAL DETAILS, SEE SCD EXJ-4-87.
2. DOWEL BARS SHALL BE EMBEDDED A MINIMUM OF 1'-0".
3. FOR LOCATION OF SECTION E-E AND G-G, SEE SHEET 11/33.



**NOTES:**

CLEAN AND PAINT ALL STRUCTURAL STEEL INCLUDING STEEL BEAMS,  
AND CROSSFRAMES, STIFFENERS, HINGES, AND CONNECTION PLATES

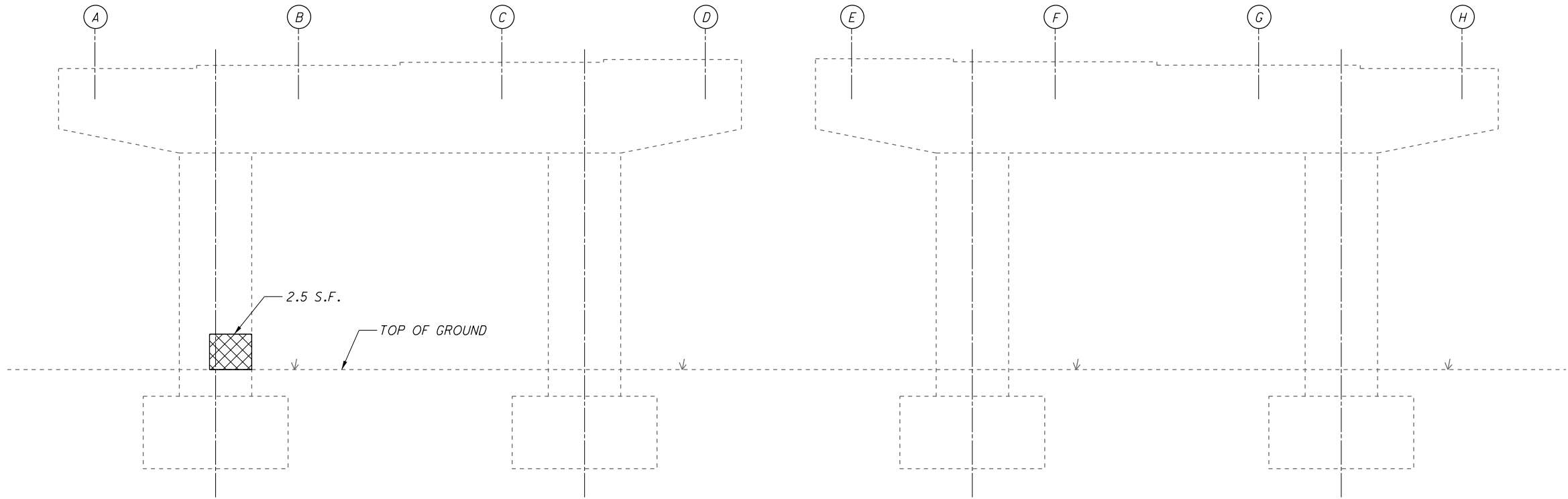
- INCLUDE WITH ITEM 513, STRUCTURAL STEEL, MISC.: RECONNECT (RE-WELD)  
EXISTING CROSSFRAME MEMBER FOR PAYMENT.



|                                                                                                                                                    |                                                                                                                                                                                                                       |                                                                   |                            |                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------|------------------------------|
| <p align="center"><u><b>KEY</b></u></p>                                                                                                            | <p align="center"><u><b>ITEM 519 – PATCHING CONCRETE STRUCTURES, AS PER PLAN</b></u></p>                                                                                                                              | <p align="center"><u><b>ESTIMATED PATCHING QUANTITIES</b></u></p> |                            |                              |
|  - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519 | <p>PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.</p> <p>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.</p> | <p align="center">(SQ. FEET)</p>                                  |                            |                              |
|                                                                                                                                                    | <p>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.</p>                                                                                             | <p>LOCATION</p>                                                   | <p>MEASURED QUANTITIES</p> | <p>ESTIMATED QUANTITIES</p>  |
|                                                                                                                                                    |                                                                                                                                                                                                                       | <p>REAR ABUT.</p>                                                 | <p align="center">35.0</p> | <p align="center">52.5 *</p> |
|                                                                                                                                                    |                                                                                                                                                                                                                       | <p>TOTAL</p>                                                      | <p align="center">35.0</p> | <p align="center">52.5 *</p> |

ms consultants, inc.





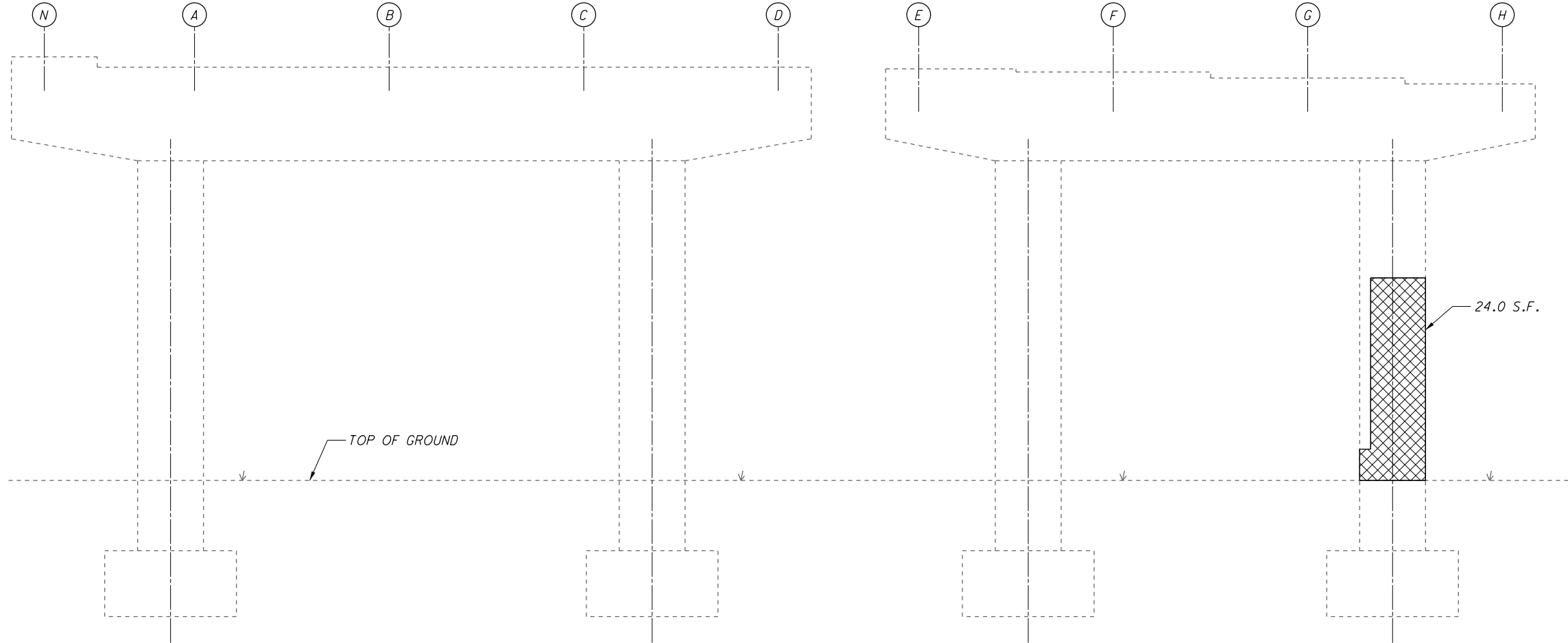
| KEY                                                                                                                                                | ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN                                                                                                                                                                                                                                                                                     | ESTIMATED PATCHING QUANTITIES |                     |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|----------------------|
|  - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519 | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.<br><br>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.<br><br>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. | (SQ. FEET)                    |                     |                      |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          | LOCATION                      | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          | PIER NO. 1                    | 2.5                 | 4.0 *                |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          |                               |                     |                      |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          | TOTAL                         | 2.5                 | 4.0 *                |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.



|                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                 |                     |                                                                   |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------|--|--|
| <p align="center"><u><b>KEY</b></u></p>                                                                                                                                   |  | <p align="center"><u><b>ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN</b></u></p>                                                                                                                                                                                                                                                        |                     | <p align="center"><u><b>ESTIMATED PATCHING QUANTITIES</b></u></p> |  |  |
| <p>          - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519       </p> |  | <p>PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.</p> <p>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.</p> <p>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.</p> |                     | <p align="center">(SQ. FEET)</p>                                  |  |  |
|                                                                                                                                                                           |  | LOCATION                                                                                                                                                                                                                                                                                                                                        | MEASURED QUANTITIES | ESTIMATED QUANTITIES                                              |  |  |
|                                                                                                                                                                           |  | PIER NO. 2                                                                                                                                                                                                                                                                                                                                      | 2.0                 | 3.0 *                                                             |  |  |
|                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                 |                     |                                                                   |  |  |
|                                                                                                                                                                           |  | TOTAL                                                                                                                                                                                                                                                                                                                                           | 2.0                 | 3.0 *                                                             |  |  |

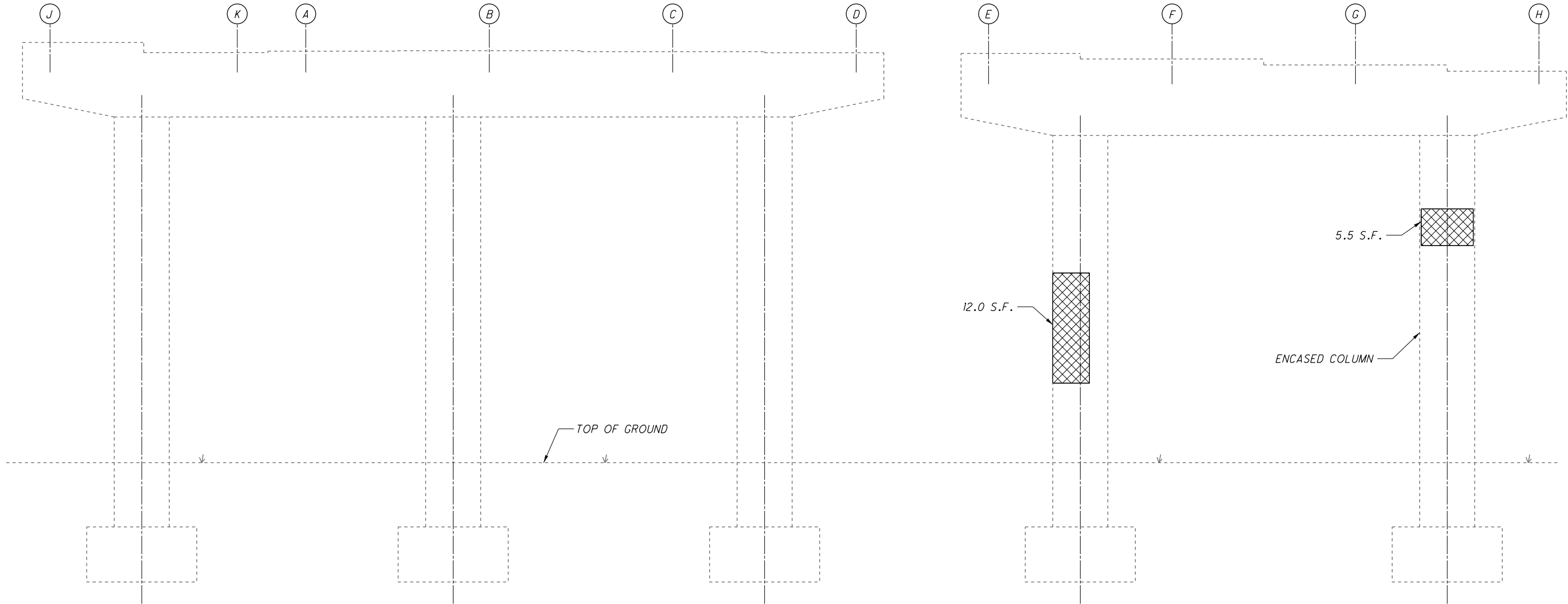
NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.



ELEVATION  
(WEST FACE)

| KEY                                                                                 |                                                                | ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN                                                                                                                                                                                        | ESTIMATED PATCHING QUANTITIES |                     |                      |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|----------------------|
|                                                                                     |                                                                | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.                                                                                                                                                       | (SQ. FEET)                    |                     |                      |
|  | - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519 | * ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.<br><br>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. | LOCATION                      | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                     |                                                                |                                                                                                                                                                                                                                             | PIER NO. 3                    | 24.0                | 36.0 *               |
|                                                                                     |                                                                |                                                                                                                                                                                                                                             |                               |                     |                      |
|                                                                                     |                                                                |                                                                                                                                                                                                                                             | TOTAL                         | 24.0                | 36.0 *               |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.



|                                                                                                                                                                          |  |                                                                                                                    |  |                                      |                     |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|--|--------------------------------------|---------------------|----------------------|
| <u>KEY</u>                                                                                                                                                               |  | <u>ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN</u>                                                        |  | <u>ESTIMATED PATCHING QUANTITIES</u> |                     |                      |
| <div></div> <div>- AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519</div> |  | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.                              |  | (SQ. FEET)                           |                     |                      |
|                                                                                                                                                                          |  | * ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.  |  | LOCATION                             | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                                          |  |                                                                                                                    |  | PIER NO. 4                           | 17.5                | 26.0 *               |
|                                                                                                                                                                          |  |                                                                                                                    |  |                                      |                     |                      |
|                                                                                                                                                                          |  | EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. |  | TOTAL                                | 17.5                | 26.0 *               |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.



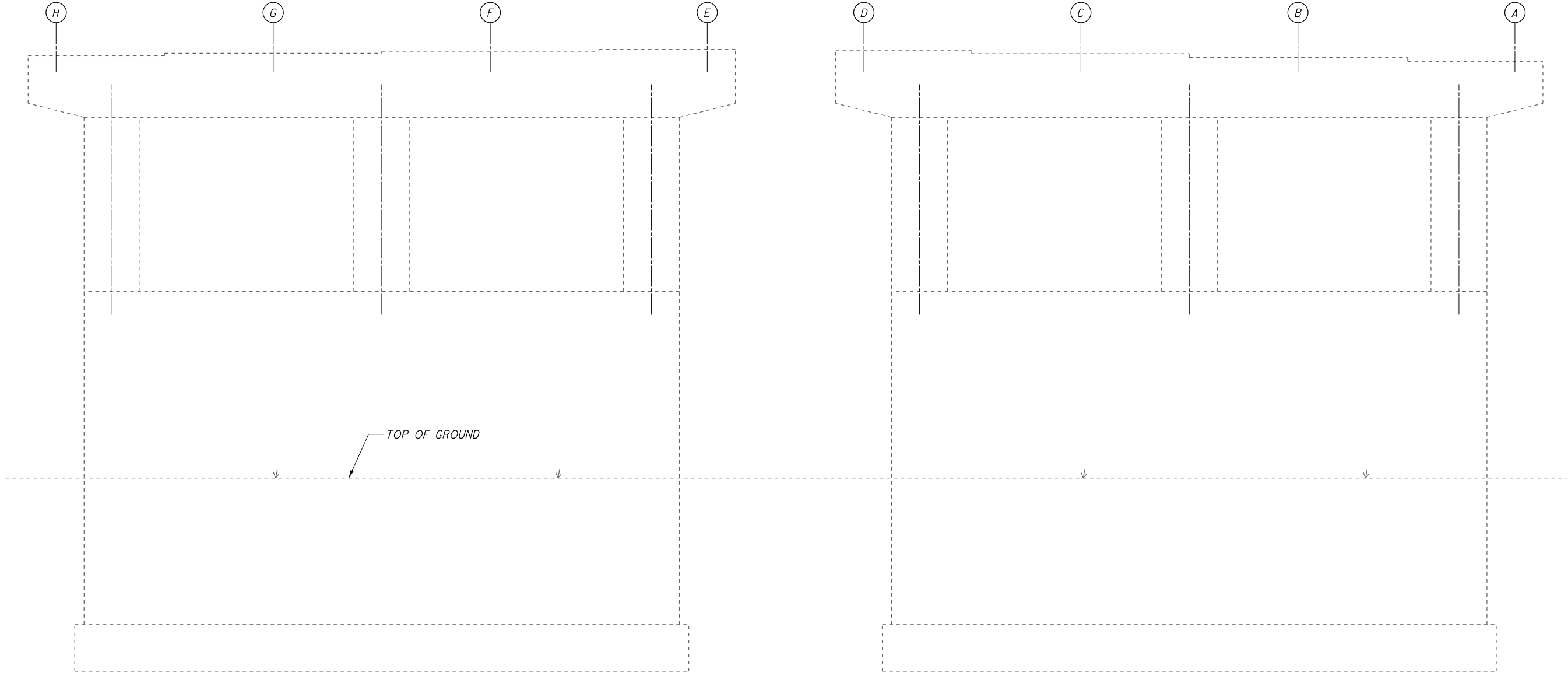
ELEVATION  
(EAST FACE)

|                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                 |                     |                                                                   |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------|--|--|
| <p align="center"><b><u>KEY</u></b></p>                                                                                                                                                  |  | <p align="center"><b><u>ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN</u></b></p>                                                                                                                                                                                                                                                        |                     | <p align="center"><b><u>ESTIMATED PATCHING QUANTITIES</u></b></p> |  |  |
| <p align="center">          - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519       </p> |  | <p>PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.</p> <p>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.</p> <p>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.</p> |                     | <p align="center">(SQ. FEET)</p>                                  |  |  |
|                                                                                                                                                                                          |  | LOCATION                                                                                                                                                                                                                                                                                                                                        | MEASURED QUANTITIES | ESTIMATED QUANTITIES                                              |  |  |
|                                                                                                                                                                                          |  | PIER NO. 6                                                                                                                                                                                                                                                                                                                                      | 0.0                 | 0.0 *                                                             |  |  |
|                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                 |                     |                                                                   |  |  |
|                                                                                                                                                                                          |  | TOTAL                                                                                                                                                                                                                                                                                                                                           | 0.0                 | 0.0 *                                                             |  |  |

**NOTE:**  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.

NO PATCHING IS TO BE PERFORMED



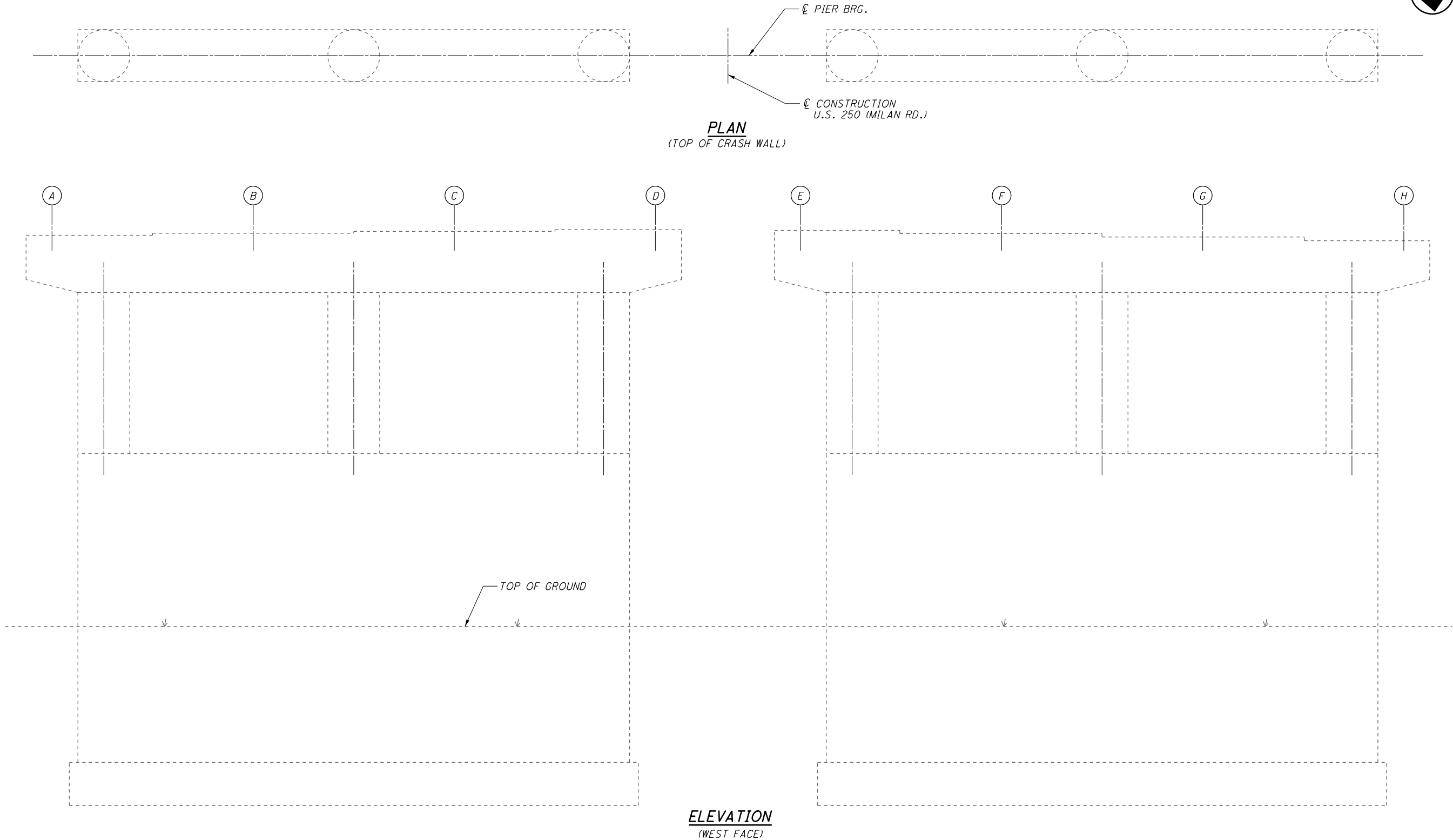


ELEVATION  
(EAST FACE)

| KEY                                                                                                                                                |  | ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN                                                               |                     |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
|  - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519 |  | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.                              |                     |                      |
|                                                                                                                                                    |  | * ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.  |                     |                      |
|                                                                                                                                                    |  | EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. |                     |                      |
|                                                                                                                                                    |  | ESTIMATED PATCHING QUANTITIES                                                                                      |                     |                      |
|                                                                                                                                                    |  | (SQ. FEET)                                                                                                         |                     |                      |
|                                                                                                                                                    |  | LOCATION                                                                                                           | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                    |  | PIER NO. 7                                                                                                         | 0.0                 | 0.0 *                |
|                                                                                                                                                    |  |                                                                                                                    |                     |                      |
|                                                                                                                                                    |  | TOTAL                                                                                                              | 0.0                 | 0.0 *                |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.

NO PATCHING IS TO BE PERFORMED



| KEY                                                                                                                                                           |  | ESTIMATED PATCHING QUANTITIES                                                                                      |                     |                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
| <div> - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519</div> |  | ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN                                                               |                     |                      |
|                                                                                                                                                               |  | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.                              |                     |                      |
|                                                                                                                                                               |  | * ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.  |                     |                      |
|                                                                                                                                                               |  | EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. |                     |                      |
|                                                                                                                                                               |  | LOCATION                                                                                                           | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                               |  | PIER NO. 7                                                                                                         | 0.0                 | 0.0 *                |
|                                                                                                                                                               |  |                                                                                                                    |                     |                      |
|                                                                                                                                                               |  | TOTAL                                                                                                              | 0.0                 | 0.0 *                |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.

NO PATCHING IS TO BE PERFORMED

ELEVATION  
(EAST FACE)

|                                                                                                                                                                          |                                                                                                                    |                                      |                     |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------|----------------------|
| <u>KEY</u>                                                                                                                                                               | <u>ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN</u>                                                        | <u>ESTIMATED PATCHING QUANTITIES</u> |                     |                      |
| <div></div> <div>- AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519</div> | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.                              | (SQ. FEET)                           |                     |                      |
|                                                                                                                                                                          | * ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.  | LOCATION                             | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                                          | EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. | PIER NO. 8                           | 4.5                 | 7.0 *                |
|                                                                                                                                                                          |                                                                                                                    |                                      |                     |                      |
|                                                                                                                                                                          |                                                                                                                    | TOTAL                                | 4.5                 | 7.0 *                |

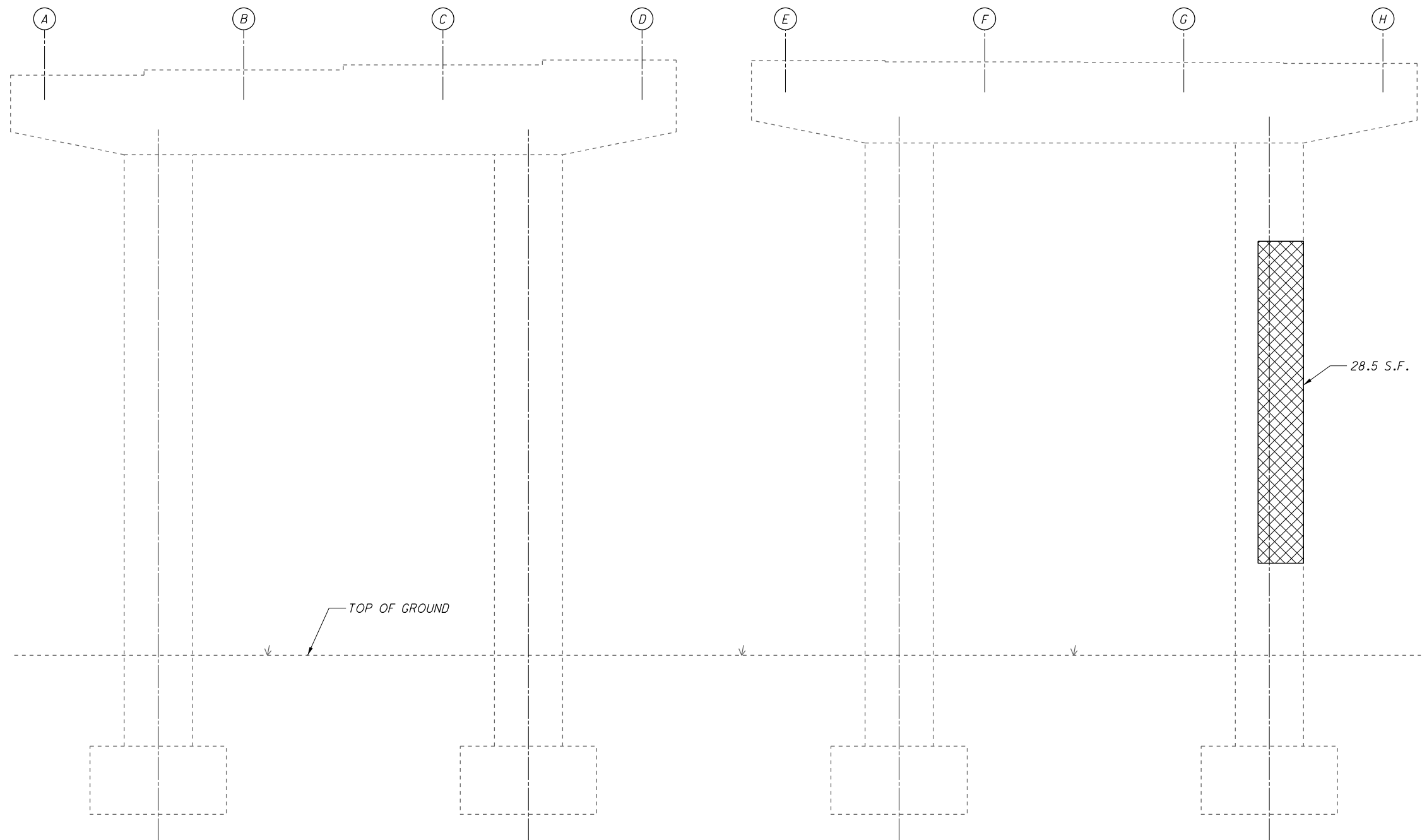
NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.

ELEVATION  
(WEST FACE)

|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                 |                                                                                  |                            |                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------|------------------------------|
| <p align="center"><u><b>KEY</b></u></p>                                                                                                            | <p align="center"><u><b>ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN</b></u></p>                                                                                                                                                                                                                                                        | <p align="center"><u><b>ESTIMATED PATCHING QUANTITIES</b></u><br/>(SQ. FEET)</p> |                            |                              |
|  - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519 | <p>PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.</p> <p>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.</p> <p>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.</p> | <p>LOCATION</p>                                                                  | <p>MEASURED QUANTITIES</p> | <p>ESTIMATED QUANTITIES</p>  |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                 | <p>PIER NO. 8</p>                                                                | <p align="center">21.0</p> | <p align="center">31.5 *</p> |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                 |                                                                                  |                            |                              |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                 | <p align="center">TOTAL</p>                                                      | <p align="center">21.0</p> | <p align="center">31.5 *</p> |

NOTE:

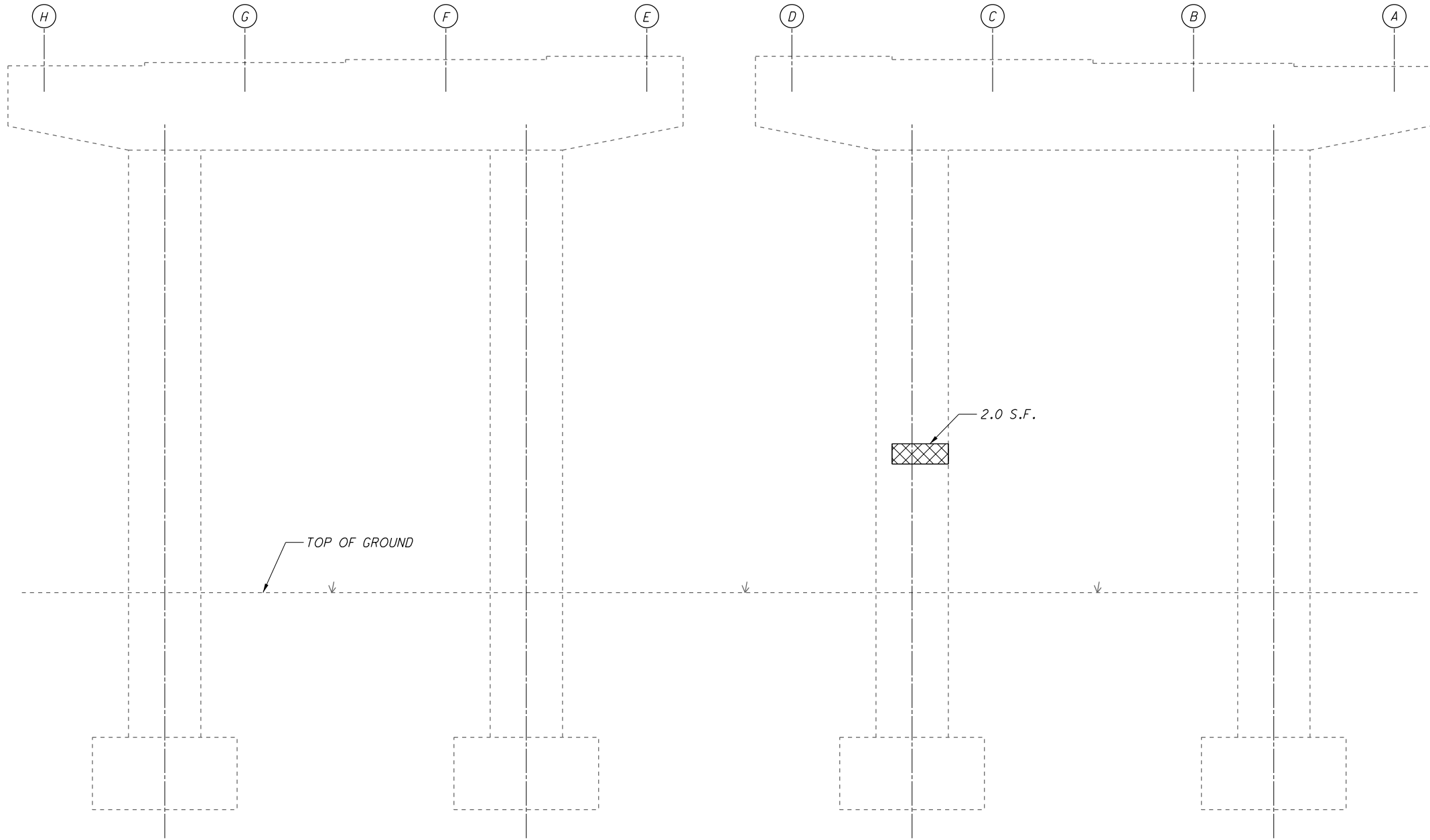
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.



ELEVATION  
(WEST FACE)

|                                                                                                                                                           |  |                                                                                                                           |  |                                                    |                     |                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------|---------------------|----------------------|
| <p><b><u>KEY</u></b></p>                                                                                                                                  |  | <p><b><u>ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN</u></b></p>                                                 |  | <p><b><u>ESTIMATED PATCHING QUANTITIES</u></b></p> |                     |                      |
| <p>PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.</p>                                                              |  | <p>PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.</p>                              |  | <p>(SQ. FEET)</p>                                  |                     |                      |
| <p> - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519</p> |  | <p>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.</p>  |  | LOCATION                                           | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                           |  |                                                                                                                           |  | PIER NO. 9                                         | 28.5                | 43.0 *               |
|                                                                                                                                                           |  |                                                                                                                           |  |                                                    |                     |                      |
|                                                                                                                                                           |  | <p>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY.</p> |  | TOTAL                                              | 28.5                | 43.0 *               |

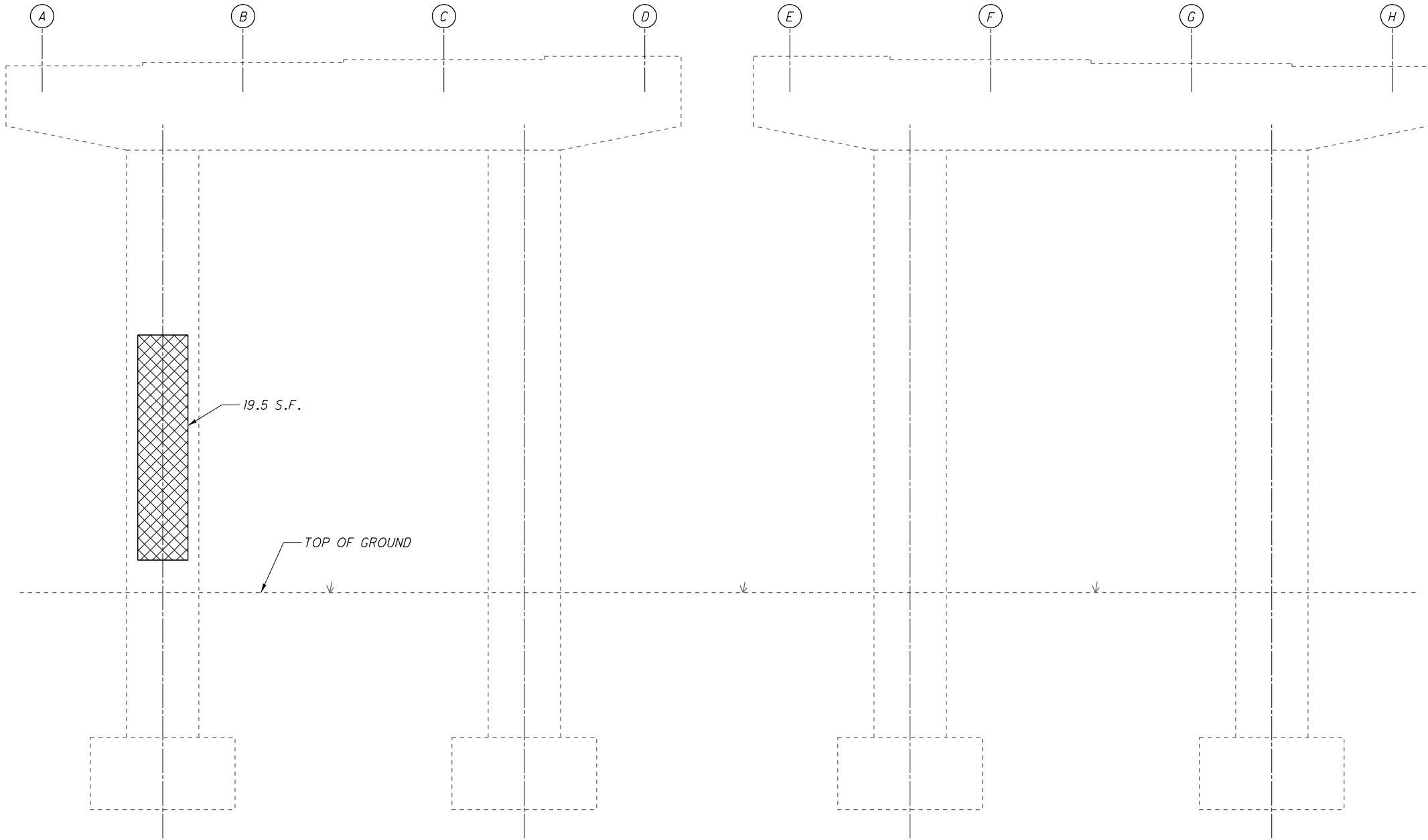
**NOTE:** ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.



**ELEVATION**  
(EAST FACE)

| KEY                                                                                                                                                | ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN                                                                                                                                                                                                                                                                                     | ESTIMATED PATCHING QUANTITIES |                     |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------|----------------------|
|  - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519 | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.<br><br>* ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.<br><br>EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. | (SQ. FEET)                    |                     |                      |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          | LOCATION                      | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          | PIER NO. 10                   | 2.0                 | 3.0 *                |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          |                               |                     |                      |
|                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                          | TOTAL                         | 2.0                 | 3.0 *                |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.

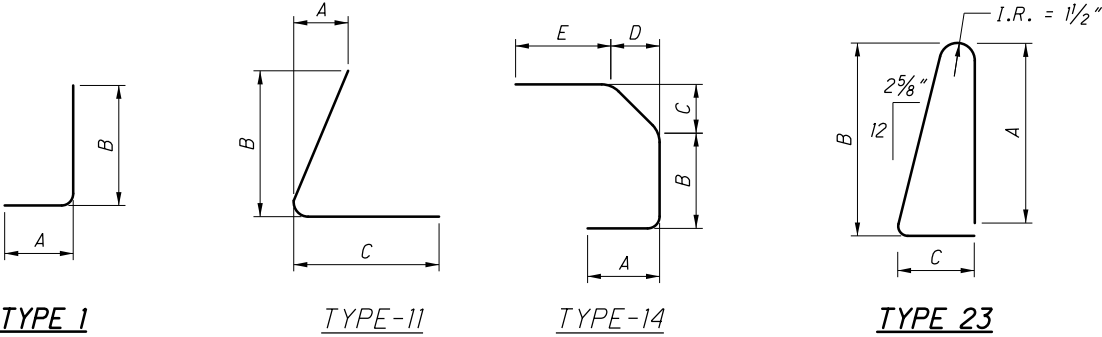


| KEY                                                                                                                                                           |  | ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN                                                               |                     |                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------|---------------------|----------------------|
| <div> - AREA OF SPALLING OR DELAMINATION TO BE REPAIRED PER ITEM 519</div> |  | PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN MAY 2015.                              |                     |                      |
|                                                                                                                                                               |  | * ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.  |                     |                      |
|                                                                                                                                                               |  | EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD FOR FINAL PAY QUANTITY. |                     |                      |
|                                                                                                                                                               |  | ESTIMATED PATCHING QUANTITIES                                                                                      |                     |                      |
|                                                                                                                                                               |  | (SQ. FEET)                                                                                                         |                     |                      |
|                                                                                                                                                               |  | LOCATION                                                                                                           | MEASURED QUANTITIES | ESTIMATED QUANTITIES |
|                                                                                                                                                               |  | PIER NO. 10                                                                                                        | 19.5                | 29.0 *               |
|                                                                                                                                                               |  |                                                                                                                    |                     |                      |
|                                                                                                                                                               |  | TOTAL                                                                                                              | 19.5                | 29.0 *               |

NOTE:  
ALL REPAIR AREAS DESIGNATED AS  SHALL BE SEALED AS PER ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEALING SHALL BE CLEAR AND OVERLAP REPAIR AREA A MINIMUM OF 6". COLOR SHALL MATCH EXISTING.

NO WORK IS REQUIRED ON PIERS 11 AND 12





| REINFORCING LIST |       |        |                    |      |            |        |           |       |       |
|------------------|-------|--------|--------------------|------|------------|--------|-----------|-------|-------|
| MARK             | TOTAL | LENGTH | WEIGHT<br>(POUNDS) | TYPE | DIMENSIONS |        |           |       |       |
|                  |       |        |                    |      | A          | B      | C         | D     | E     |
| S501*            | 24    | 13'-0" | 325                | STR  |            |        |           |       |       |
| S502             | 6     | 13'-1" | 82                 | STR  |            |        |           |       |       |
| S503             | 18    | 14'-8" | 275                | STR  |            |        |           |       |       |
| S504             | 14    | 2'-10" | 41                 | STR  |            |        |           |       |       |
| S505             | 10    | 4'-1"  | 43                 | STR  |            |        |           |       |       |
| S506             | 6     | 5'-5"  | 34                 | 23   | 2'-2"      | 2'-5"  | 0'-9"     |       |       |
| S507             | 6     | 4'-2"  | 26                 | 11   | 0'-6"      | 3'-0"  | 0'-9"     |       |       |
| S601             | 6     | 3'-5"  | 31                 | 14   | 1'-0"      | 0'-10" | 0'-8 1/2" | 0'-6" | 0'-8" |
| S602             | 6     | 3'-3"  | 29                 | 14   | 1'-0"      | 0'-8"  | 0'-8 1/2" | 0'-6" | 0'-8" |
| S603             | 6     | 3'-1"  | 28                 | 1    | 1'-0"      | 2'-3"  |           |       |       |
| TOTAL =          |       |        | 914                |      |            |        |           |       |       |

LEGEND:

\* - INDICATED BARS WITH MECHANICAL CONNECTORS. SEE NOTE 3.

NOTES:

1. BAR SIZE: THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, AN A601 IS A #6 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.
2. ALL REINFORCING SHALL BE EPOXY COATED.
3. MECHANICAL SPLICE CONNECTORS SHALL BE INCLUDED FOR PAYMENT WITH REINFORCING STEEL.