

UTILITIES

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

CINCINNATI BELL
221 EAST 4TH STREET, BLDG. 121-900
CINCINNATI, OH 45201
513-565-7043 (MARK CONNER)
MARK.CONNER@CINBELL.COM

DUKE ENERGY - ELECTRIC
139 EAST 4TH STREET, ROOM 467A
CINCINNATI, OH 45202
513-287-3852 (CRAIG HUTCHISON)
CRAIG.HUTCHISON@DUKE-ENERGY.COM

DUKE ENERGY - GAS
139 EAST 4TH STREET, ROOM 460A
CINCINNATI, OH 45202
513-287-1205 (KELSEY PACE)
KELSEY.PACE@DUKE-ENERGY.COM

ODOT DISTRICT 8 - LIGHTING
505 SOUTH SR741
LEBANON, OH 45036
513-933-6692 (JIM T. JUDD)
JIM.JUDD@DOT.OHIO.GOV

CINCINNATI TRAFFIC
801 PLUM STREET, ROOM 320
CINCINNATI, OH 45202
513-352-3730 (LINDA KISER)
LINDA.KISER@CINCINNATI-OH.GOV

TIME WARNER CABLE
11252 CORNELL PARK DRIVE
CINCINNATI, OH 45242
513-386-5499 (KENT RIEGER)
KENT.RIEGER@CHARTER.COM

CINCINNATI METROPOLITAN SEWER DISTRICT
1600 GEST STREET
CINCINNATI, OH 45204
513-557-7188 (ROB FRANKLIN)
ROB.FRANKLIN@CINCINNATI-OH.GOV

GREATER CINCINNATI WATER WORKS
4747 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
513-591-5056 (JON HUNSEDER)
JON.HUNSEDER@GCWW.CINCINNATI-OH.GOV

TRAFFIC SURVEILLANCE:
ODOT OFFICE OF TRAFFIC OPERATIONS
1980 WEST BROAD STREET
MAIL STOP 5160
COLUMBUS, OH 43223
614-466-2168 (JASON YERAY)

HAMILTON COUNTY ENGINEER'S OFFICE
TRAFFIC ENGINEERING
223 W. GALBRAITH ROAD
CINCINNATI, OHIO 45215
513-946-8421 (JEFF NEWBY)
JEFF.NEWBY@HAMILTON-CO.ORG

UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

EXISTING PLANS

EXISTING PLANS ENTITLED BELOW, MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON OR AT THE FOLLOWING LINK:

ftp://ftp.dot.state.oh.us/pub/Contracts/Attach/

- | | |
|------------------------------|------------------------------|
| HAM-71-13.05 (1964) | HAM-71-11.44 (1993) |
| HAM-71-11.51 (1965) | HAM-71-2.92 (1995) |
| HAM-71-8.86 (1966) | HAM-22/71-11.41/12.39 (1995) |
| HAM-71-7.45 (1969) | HAM-71-1.30/9.00 (1995) |
| HAM-71-9.52 (1971) | HAM-71-1.30/9.00 (1995) |
| HAM-71+11.76 (1977) | HAM-71-3.556 (1998) |
| HAM-71-(12.72)(15.25) (1977) | HAM-71-020.889 (1999) |
| HAM-71-10.49 (1980) | HAM-71-11.08 (2001) |
| HAM-71-10.63 (1983) | HAM-71-11.44 (2004) |
| HAM/WAR-71-11.01/0.00 (1987) | HAM-71-1.51 (2008) |
| HAM-71-6.70 (1989) | GRE/HAM-PPS-FY2011 (2011) |
| HAM-71-14.08 (1990) | HAM-71-0.19 (2012) |
| HAM-71-11.51 (1991) | HAM-71-12.44 (2015) |
| HAM-71-0.69 (1991) | |

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 7 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: GEOID 12A

HORIZONTAL POSITIONING

THE HORIZONTAL COORDINATES EXPRESSED HEREIN ARE BASED ON THE OHIO STATE PLANE COORDINATES SYSTEM SOUTH ZONE ON NAD 83 (2011) DATUM. THE PROJECT COORDINATES (US SURVEY FEET) ARE RELATIVE TO STATE PLANE GRID COORDINATES (METERS OR US SURVEY FEET) BY A PROJECT ADJUSTMENT FACTOR OF 1.00008994142207.
SYSTEM: 0,0,0

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. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

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.

HORIZONTAL ALIGNMENT - PART 1 VS PART 2

THE HORIZONTAL ALIGNMENT IN THE PART 1 PLANS DO NOT MATCH THE HORIZONTAL ALIGNMENT IN THE PART 2 PLANS.

THE CONTRACTOR SHALL USE THE PART 1 ALIGNMENT FOR ALL PART 1 WORK AND USE THE PART 2 ALIGNMENT FOR ALL PART 2 WORK. IF THERE IS A CONFLICT OR UNCERTAINTY BETWEEN THE ALIGNMENTS, THE ENGINEER SHALL BE NOTIFIED FOR RESOLUTION AND APPROVAL.

INTERIM COMPLETION DATE

THE CONTRACTOR SHALL COMPLETE ALL WORK ASSOCIATED WITH THE REPLACEMENT OF THE EXISTING VANDAL FENCE ON STRUCTURE HAM-71-1149 BY OCTOBER 1, 2018. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR COMPLETION OF THE TASK DESCRIBED ABOVE.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

ITS (TRAFFIC SURVEILLANCE)

ITS FACILITIES ARE NOT LISTED WITH OUPS, SO THE CONTRACTOR IS REQUIRED TO CONTACT ODOT CENTRAL OFFICE ITS LAB DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK FOR THE NEED TO MARK ODOT OWNED UTILITIES.

CENTRAL OFFICE ITS LAB
614-387-4113 - PHONE
614-887-4134 - FAX
CEN.ITS.LAB@DOT.STATE.OH.US - EMAIL

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE UTILITY PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

CLASS I PLANIMETRIC SURVEY OF EXISTING IR-71 MEDIAN AT LOCATIONS WHERE MEDIAN BARRIER, PAVED GUTTER, CONCRETE CAP ARE REMOVED AND REPLACED OR RESTORED

BEFORE ANY WORK IS STARTED ON THE PROJECT, THE CONTRACTOR SHALL PERFORM A COMPLETE CLASS I PLANIMETRIC SURVEY OF THE IR-71 MEDIAN - EDGELINE TO EDGELINE, FOR:

- 1) THE LIMITS OF THE SOUTH MOT CROSSOVER,
- 2) THE LIMITS OF THE LOWERED PROFILE/SUPER-ELEVATION CORRECTION,
- 3) FOR THE LIMITS OF THE NEW APPROACH SLAB AND BRIDGE REHABILITATION AT HAM-77-1068L/R (KENWOOD ROAD),
- 4) THE LIMITS OF THE NORTH MOT CROSSOVER

THE AREAS LISTED ARE LOCATIONS WHERE THE MEDIAN IS IMPACTED BY MOT OPERATIONS OR MODIFIED BY THE PROPOSED CONSTRUCTION. THE SURVEY IS REQUIRED SO THAT IMPACTED ELEMENTS CAN BE RESTORED TO MATCH EXISTING CONDITIONS AND/OR NEW CONDITIONS AS SHOWN IN THE PLANS.

CLASS I PLANIMETRIC SURVEY OF EXISTING IR-71 MEDIAN AT LOCATIONS WHERE MEDIAN BARRIER, PAVED GUTTER, CONCRETE CAP ARE REMOVED AND REPLACED OR RESTORED (CONT'D)

THE SURVEY SHALL INCLUDE ALL PLANIMETRIC FEATURES WITHIN THE EXISTING IR-71 MEDIAN, EDGELINE TO EDGLINE, INCLUDING BARRIERS, PAVED GUTTER, CONCRETE CAP, LIGHTING, DRAINAGE, AND UTILITIES.

THE COST FOR THE SURVEY WORK DESCRIBED ABOVE SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE BARRIER, PAVED GUTTER, CONCRETE CAP, AND UTILITIY (DRAINAGE, LIGHTING, ETC) ITEMS.

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 TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). 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 SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS < 12 HOURS & < 2 WEEKS <= 12 HOURS	21 CALENDAR DAYS PRIOR TO CLOSURE 14 CALENDAR DAYS PRIOR TO CLOSURE 4 BUSINESS DAYS PRIOR TO CLOSURE

LANE RESTRICTIONS	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE 5 BUSINESS DAYS PRIOR TO CLOSURE

START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	NOTICE DUE TO PERMITS & PIO
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

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ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE STRUCTURE AND FROM THE DOWNSTREAM CONDUIT, TO THE NEXT DRAINAGE STRUCTURE. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

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

LOCATION OF STRUCTURES FOR THE ABOVE NOTED WORK:

STATION	SLM	DESCRIPTION
419+55	9.1605	MEDIAN INLET - SB
483+73	10.5618	MEDIAN SHOULDER - SB
551+00	12.0306	MEDIAN SHOULDER - NB
555+00	12.1179	MEDIAN SHOULDER - NB
559+00	12.2052	MEDIAN SHOULDER - NB
562+50	12.2817	RIGHT SHOULDER - SB
573+63	12.5247	RIGHT SHOULDER - NB
636+25	13.8919	RIGHT SHOULDER - SB
649+95	14.1910	RIGHT SHOULDER - SB
672+31	14.6793	RIGHT SHOULDER - NB
672+81	14.6902	RIGHT SHOULDER - NB
679+28	14.8314	RIGHT SHOULDER - NB
479+50	10.4694	RIGHT SHOULDER - SB
626+00	13.6681	RIGHT CLEAR ZONE - NB
436+50	9.5306	MEDIAN PAVED GUTTER
484+00	10.5677	RIGHT SHOULDER - SB
492+15	10.7456	MEDIAN PAVED GUTTER
492+35	10.7500	MEDIAN SHOULDER - SB
641+75	14.0120	MEDIAN PAVED GUTTER
645+75	14.0993	MEDIAN PAVED GUTTER
667+00	14.5633	MEDIAN PAVED GUTTER
672+00	14.6725	MEDIAN PAVED GUTTER
679+00	14.8253	MEDIAN PAVED GUTTER

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:
 ITEM 202 SPECIAL, PIPE CLEANOUT, 24" AND UNDER 3,500 FT.
 ITEM 202 SPECIAL, PIPE CLEANOUT, 27 TO 48" 600 FT.
 ITEM 202 REMOVAL, MISC.:
 DRAINAGE STRUCTURE CLEANOUT 21 EACH

ITEM 252 - FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT

A QUANTITY OF THIS ITEM IS PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED CONCRETE PAVEMENT AND PLACING PAVEMENT REPAIR AS DETAILED ON THIS SHEET. THIS ITEM SHALL COMMENCE PRIOR TO MAINLINE PAVEMENT PLANING. REPAIRED AREAS SHALL BE PLANED AND RESURFACED NO LATER THAN 2 WEEKS AFTER REPAIR IS COMPLETED.

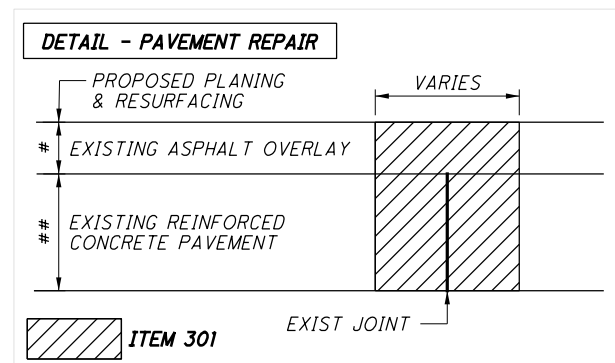
IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED.

PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 252, FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT, 6,177 SY
- 252, FULL DEPTH PAVEMENT SAWING, 27,796 FT

QUANTITY TO BE DISTRIBUTED PER THE FOLLOWING TABLE:

AREA	FROM STATION	TO STATION	SY	FT
1	398+01.73 NB 398+96.35 SB	466+24.77 NB & SB	3011	13551
2	471+12.73 NB & SB	518+36.55 NB 518+54.58 SB	2104	9466
3	524+42.97 NB 524+49.96 SB	KENWOOD ROAD	1062	4779



EXISTING DETERIORATED CONCRETE PAVEMENT SHALL BE REMOVED AND REPLACED WITH ITEM 301. THE 301 SHALL BE COMPACTED AS PER ODOT CMS 401.16 AND THE MAXIMUM COMPACTED DEPTH SHALL BE AS PER ODOT CMS 401.15. THE LOCATION AND SIZE OF THE REPAIRS SHALL BE AT THE DIRECTION OF THE ENGINEER.

MAINLINE:
 # DEPTH, 4 1/4"
 ## DEPTH VARIES, 9" TO 10"

RAMP R, RAMP A, RAMP B, RAMP C, RAMP D, RAMP E, RAMP F AND RED BANK EXPRESSWAY:
 # DEPTH, AVG 3", VARIES IN TRANSITION AREAS, 1 1/2" TO 3"
 ## DEPTH, 9"

RAMP G AND RAMP H:
 # DEPTH, AVG 4 3/4", VARIES IN TRANSITION AREAS, 4 3/4" TO 8"
 ## DEPTH, 9"

SEE PLANS FOR DETAILS AND LOCATIONS.

ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QAPAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CMS SPECIFICATIONS 455 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH

THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL I CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

- UPON APPROVAL OF CONSULTANT 20%
- PROGRESSIVE EQUIVALENT PAYMENTS 50%
- UPON SUBMISSION OF FINAL REPORT 30%.

PAYMENT FOR TESTING, INSPECTION AND QUALITY CONTROL WILL BE INCLUDED WITH THE APPROPRIATE LUMP-SUM CONCRETE ITEM.

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

ITEM 618 - RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 618 AND SCD BP-9.1, RUMBLE STRIPS SHALL BE PLACED WITH A 5' OFFSET FROM THE EDGE OF PAVEMENT FOR BOTH THE MEDIAN AND OUTSIDE SHOULDERS IN PREPARATION FOR THE POTENTIAL USE OF THE SHOULDERS FOR TRANSIT.

ITEM 618, RUMBLE STRIPS, (ASPHALT CONCRETE), AS PER PLAN SHALL BE PAID FOR PER MILE INSTALLED.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. 11 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 6 HOUR.

ITEM 254 - PAVEMENT PLANING

NO TRAFFIC IS ALLOWED ON A PLANED SURFACE. PLACE INTERMEDIATE COURSE OVER PAVEMENT PLANING PRIOR TO OPENING TO TRAFFIC.

HOT JOINTS

HOT LONGITUDINAL JOINTS ARE REQUIRED BETWEEN THE SURFACE COURSE MAINLINE PAVEMENT LANES. ON SECTIONS OF FOUR OR MORE LANES ONE COLD JOINT (ON A LANE LINE) IS PERMITTED.

One cold joint on a lane line and one on the edge line is also acceptable for the three lane section.

PROFILE MILLING OF THE PROPOSED INTERMEDIATE COURSE.

THE CONTRACTOR SHALL PROFILE MILL THE PROPOSED INTERMEDIATE ASPHALT CONCRETE COURSE, AS DIRECTED BY THE ENGINEER, PRIOR TO PLACING THE SURFACE ASPHALT COURSES. THE MILLING OPERATION IS TO REMOVE ANY SURFACE DEFORMATION OCCURRING AFTER THE INTERMEDIATE COURSE WAS PLACED THAT WILL AFFECT THE FINAL SURFACE SMOOTHNESS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 254 PAVEMENT PLANNING, ASPHALT CONCRETE, AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 254 PAVEMENT PLANNING, ASPHALT CONCRETE, AS PER PLAN 200,000 SY

ITEM 442 ANTI-SEGREGATION EQUIPMENT

PROVIDE ANTI-SEGREGATION EQUIPMENT FOR ALL ASPHALT CONCRETE COURSES OF UNIFORM THICKNESS IN ACCORDANCE WITH 401.12. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 442 ANTI-SEGREGATION EQUIPMENT 25180 CU YD

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN (NJ-SHAPED, TYPE D50, 50" H)

THE EXISTING CONCRETE MEDIAN BARRIER, TYPE D50 WITH NEW JERSEY SHAPE (50" HEIGHT) AND CONCRETE BASE SHALL BE REMOVED AT LOCATIONS NOTED IN PLANS.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS, AND EQUIPMENT NECESSARY FOR THE REMOVAL AND DISPOSAL OF BARRIER, BASE, AND REINFORCING.

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN (NJ-SHAPED, TYPE D, 32" H)

THE EXISTING CONCRETE BARRIER, TYPE D WITH NEW JERSEY SHAPE (32" HEIGHT) AND CONCRETE BASE SHALL BE REMOVED AT LOCATIONS NOTED IN PLANS.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS, AND EQUIPMENT NECESSARY FOR THE REMOVAL AND DISPOSAL OF BARRIER, BASE, AND REINFORCING.

**ITEM 622 - BARRIER TRANSITION, AS PER PLAN "A"
ITEM 622 - BARRIER TRANSITION, AS PER PLAN "B"**

THE ODOT PLAN INSERT SHEET FOR "NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION" INCLUDED IN THE PLANS HAS BEEN MODIFIED TO INCLUDE THE BARRIERS USED IN THIS PROJECT.

PLAN A - THIS SHOWS THE TRANSITION FROM A NEW JERSEY SHAPE, TYPE D50 BARRIER (50" HEIGHT) TO A SINGLE SLOPE BARRIER, TYPE B1 (57" HEIGHT). SEE SHEET 230 FOR DETAILS.

PLAN B - THIS SHOWS THE TRANSITION FROM A NEW JERSEY SHAPE, TYPE D BARRIER (32" HEIGHT) TO A SINGLE SLOPE BARRIER, TYPE B1 (57" HEIGHT). SEE SHEET 231 FOR DETAILS.

ITEM 622 - BARRIER, MISC.: NEW JERSEY SHAPE, TYPE D, 50" HEIGHT

THIS BARRIER MATCHES THE EXISTING CONCRETE MEDIAN BARRIER. THIS ITEM CONSISTS OF CONSTRUCTING A TYPE D CONCRETE BARRIER IN ACCORDANCE WITH ITEM 622. THE BARRIER HAS A NEW JERSEY SHAPE AND IS 50-INCHES IN HEIGHT. A DETAIL OF THE BARRIER IS SHOWN ON SHEET 12.

FOR INFORMATION NOT SHOWN IN THE DETAIL, REFER TO ARCHIVED SCD MC-9.3 (10-30-1992) ON SHEET 232.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTAL, AND EQUIPMENT FOR CONSTRUCTING THE ABOVE ITEM, COMPLETED AND ACCEPTED IN PLACE.

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1, AS PER PLAN

THIS END ANCHORAGE MATCHES THE STANDARD END ANCHORAGE CONFIGURATION EXCEPT THAT THE BASE WIDTH IS NARROWED AT LOCATIONS ADJACENT TO THE EXISTING TOWER LIGHT POLE FOUNDATIONS IN THE LOWERED PROFILE SECTION OF IR-71.

THIS ITEM CONSISTS OF CONSTRUCTING A SINGLE SLOPE END ANCHORAGE, TYPE B1 IN ACCORDANCE WITH ITEM 622 AND DETAIL SHOWN ON SHEET 337.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTAL, AND EQUIPMENT FOR CONSTRUCTING THE ABOVE ITEM, COMPLETED AND ACCEPTED IN PLACE.

ITEM 607 - TEMPORARY VANDAL FENCE:

PROVIDE VANDAL FENCE ALONG EVERY EDGE OF DECK THAT MAINTAINS TRAFFIC PRIOR TO ANY REMOVAL OPERATIONS FOR THE DURATION OF EACH CONSTRUCTION PHASE. AT NO TIME DURING PHASED CONSTRUCTION SHALL A DECK EDGE BE LEFT WITHOUT EITHER TEMPORARY, EXISTING OR PROPOSED VANDAL FENCE IN PLACE. THE TEMPORARY FENCE SHALL BE A MINIMUM HEIGHT OF 8-FT ABOVE THE DECK SURFACE AND SHALL EXTEND BETWEEN THE SUPERSTRUCTURE ENDS OF THE APPROACH SLABS FOR THE PHASE OF CONSTRUCTION MAINTAINING TRAFFIC. ADEQUATELY ANCHOR AND SUPPORT THE FENCE SO AS NOT TO CREATE A HAZARD WITHIN THE WORK ZONE OR TO THE TRAVELLING PUBLIC. THE TEMPORARY FENCE MAY BE ATTACHED TO THE PORTABLE TRAFFIC BARRIER BUT DO NOT LOCATE POSTS OR MESH ANY CLOSER TO TRAFFIC THAN THE TRAFFIC FACE OF THE PORTABLE TRAFFIC BARRIER. THE INTENT OF THE TEMPORARY FENCE IS TO DISCOURAGE THE DROPPING OR THROWING OF HEAVY OBJECTS OFF THE SIDE OF THE BRIDGE ONTO TRAFFIC BELOW DURING CONSTRUCTION.

PROVIDE WORKING DRAWINGS FOR EVERY TEMPORARY FENCE TO THE ENGINEER ACCORDING TO C&MS 105.02. DO NOT BEGIN WORK TO INSTALL THE TEMPORARY FENCE UNTIL RECEIVING THE ENGINEER'S ACCEPTANCE.

THE DEPARTMENT WILL MEASURE TEMPORARY FENCE BY THE FOOT ALONG THE DECK EDGE BETWEEN THE SUPERSTRUCTURE ENDS OF THE APPROACH SLAB ROUNDED TO THE NEAREST 1-FT FOR EACH APPLICATION PLACED. THE DEPARTMENT WILL PAY FOR COMPLETED AND ACCEPTED QUANTITIES OF TEMPORARY FENCE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
607	FOOT	TEMPORARY FENCE

ITEM 202 - REMOVAL, MISC.: PAVED GUTTER, AS PER PLAN

THE EXISTING CONCRETE PAVED GUTTER, INCLUDING GRANULAR BASE SHALL BE REMOVED AT LOCATIONS NOTED IN PLANS.

BACKFILL THE CAVITY CREATED BY THE REMOVAL ACCORDING TO ITEM 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS, AND EQUIPMENT NECESSARY FOR THE REMOVAL AND DISPOSAL OF GUTTER AND BASE, INCLUDING EXCAVATION AND BACKFILL.

ITEM 202 - REMOVAL, MISC.: 4" CONCRETE CAP

THE EXISTING CONCRETE CAP, LOCATED BETWEEN THE MEDIAN BARRIERS, SHALL BE REMOVED AT LOCATIONS NOTED IN PLANS. REMOVAL SHALL INCLUDE GRANULAR BASE AND POROUS BACKFILL.

BACKFILL THE CAVITY CREATED BY THE REMOVAL ACCORDING TO ITEM 202.02, EXCEPT WHEN THE CAVITY LIES WITHIN THE LIMITS OF SUBSEQUENT EXCAVATION OR OTHER WORK.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS, AND EQUIPMENT NECESSARY FOR THE REMOVAL AND DISPOSAL OF CONCRETE CAP, INCLUDING EXCAVATION AND BACKFILL.

**ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN
PAVED GUTTER, TYPE 1-4, AS PER PLAN**

THIS WORK CONSISTS OF THE CONSTRUCTION OF A CONCRETE PAVED GUTTER BETWEEN THE CONCRETE MEDIAN BARRIER WALLS IN ACCORDANCE WITH CMS ITEM 601 AND AS DETAILED IN THE PLANS. FOR INFORMATION NOT SHOWN IN THE PLAN DETAILS, REFER TO SCD DM-2-1. THIS WORK SHALL INCLUDE A COMPLETE PLANIMETRIC SURVEY OF IR-71 MEDIAN, INCLUDING SO THAT IMPACTED LOCATIONS CAN BE RESTORED TO EXISTING OR NEW CONDITIONS AS SHOWN IN THE PLANS.

THE GUTTER SHALL HAVE A MINIMUM 2-FT WIDE BOTTOM AND SIDESLOPES OF 1:1 MINIMUM AND 2:1 MAXIMUM, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

A. FOR THE SOUTH MOT CROSSOVER LIMITS:

THE EXISTING MEDIAN BARRIERS AND THE PAVED GUTTER BETWEEN THEM SHALL BE REMOVED FOR MOT CROSSOVER OPERATIONS.

AFTER COMPLETION OF THE CROSSOVER OPERATION, THE BARRIER AND PAVED GUTTER SHALL BE RESTORED TO EXISTING CONDITIONS, MATCHING THE EXISTING BARRIER SHAPE, HEIGHT, AND OFFSET (TOE), AND MATCHING THE EXISTING PAVED GUTTER SHAPE (SIDESLOPE AND BOTTOM WIDTH) AND GUTTER ELEVATION.

B. FOR THE LOWERED PROFILE AND SUPERELEVATION CORRECTION LIMITS:

THE EXISTING MEDIAN BARRIER ON SB IR-71 AND THE PAVED GUTTER BETWEEN THE MEDIAN BARRIERS SHALL BE REMOVED. THE EXISTING MEDIAN BARRIER ON NB IR-71 SHALL REMAIN AND NOT BE DISTURBED.

THE REPLACEMENT BARRIER FOR SB IR-71 WILL BE A SINGLE SLOPE BARRIER, TYPE B1. THE TOE OF THE BARRIER SHALL MATCH THE EXISTING BARRIER OFFSET.

THE PAVED GUTTER SHALL BE RECONSTRUCTED TO THE GUTTER ELEVATIONS SHOWN IN THE PLANS:

A)	STA 474+10 TO STA 476+25	==>	MATCH EXISTING GUTTER ELEVATION
B)	STA 476+25 TO STA 482+50	==>	NEW GUTTER ELEVATION
C)	STA 482+50 TO STA 486+35	==>	MATCH EXISTING GUTTER ELEVATION

C. FOR THE HAM-71-1068L/R (STEWART RD) BRIDGE REHABILITATION LIMITS:

THE EXISTING MEDIAN BARRIERS AND THE PAVED GUTTER BETWEEN THEM SHALL BE REMOVED.

THE REPLACEMENT BARRIERS WILL BE A SINGLE SLOPE BARRIER, TYPE B1 (ROADWAY) AND BRIDGE RAILING (SCD SBR-1-13). THE TOE OF THE BARRIER/RAILING SHALL MATCH THE EXISTING BARRIER OFFSET.

THE PAVED GUTTER SHALL BE RECONSTRUCTED WITH THE GUTTER ELEVATION MATCHING THE EXISTING GUTTER ELEVATION.

**ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN
PAVED GUTTER, TYPE 1-4, AS PER PLAN (CONT'D)**

D. FOR THE NORTH MOT CROSSOVER LIMITS:

THE EXISTING MEDIAN BARRIERS AND THE PAVED GUTTER BETWEEN THEM SHALL BE REMOVED FOR MOT CROSSOVER OPERATIONS.

AFTER COMPLETION OF THE CROSSOVER OPERATION, THE BARRIER AND PAVED GUTTER SHALL BE RECONSTRUCTED.

THE REPLACEMENT BARRIERS FOR WILL BE A SINGLE SLOPE BARRIER, TYPE B1. THE TOE OF THE BARRIER SHALL MATCH THE EXISTING BARRIER OFFSET.

THE PAVED GUTTER SHALL BE RECONSTRUCTED WITH THE GUTTER ELEVATION MATCHING THE EXISTING GUTTER ELEVATION.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS, FIELD SURVEY, AND EQUIPMENT NECESSARY FOR CONSTRUCTING THE ABOVE ITEM, COMPLETED AND ACCEPTED IN PLACE.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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

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

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

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

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

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC 2360 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC 26 CU. YD.

ROAD ARE NOT NORMALLY REQUIRED.

MANHOLE ADJUSTED TO GRADE, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ADJUSTMENT OF A STORM MANHOLE TO GRADE OF THE WORK ZONE CROSSOVER, USING A TRAFFIC RATED, GRATED LID COMPATIBLE WITH THE FRAME ON THE EXISTING MANHOLE. THIS ITEM WILL INCLUDE SUBSEQUENT RE-ADJUSTMENT BACK TO THE ORIGINAL RIM ELEVATION AFTER THE CROSSOVER IS REMOVED.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER.

THIS WORK SHALL INCLUDE MODIFYING AND MAINTAINING THE EXISTING LIGHTING SYSTEM ALONG I-71 THAT WILL REMAIN IN SERVICE.

ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.04, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FT (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE USED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM 2 EACH

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN (SHOULDER REBUILDING)

THE PAVEMENT COMPOSITION FOR THIS ITEM SHALL BE:

- ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A
- ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
- ITEM 442 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A
- ITEM 407 - TACK COAT
- ITEM 302 - 10" ASPHALT CONCRETE BASE, PG 64-22
- ITEM 304 - 6" AGGREGATE BASE
- ITEM 204 - SUBGRADE COMPACTION

WHERE SHOULDER RECONSTRUCTION IS PROPOSED, DO NOT DISTURB THE EXISTING UNDERDRAINS AND DRAINAGE AGGREGATE. CROSS SLOPE OF THE SHOULDER RECONSTRUCTION SHALL MATCH THE EXISTING SLOPE EXCEPT AS INDICATED BELOW.

THE PAVEMENT FOR M.O.T. SHALL BE LEFT IN PLACE

WHERE INDICATED ON SHEETS 135 & 136, VARY THE CROSS SLOPE OF THE SHOULDER TO ACCOMMODATE THE TRANSITION TO THE CROSSOVER (THE BUILDUP IN THESE AREAS SHALL FOLLOW CMS 615, CLASS A FLEXIBLE BUILDUP). WHEN THE CROSSOVER IS REMOVED, REPLACE THE PAVEMENT FOR M.O.T. WHERE THE SLOPE WAS VARIED WITH A FULL DEPTH BUILDUP EQUAL TO THE ABOVE AND CROSS SLOPE MATCHING THE EXISTING SLOPE OF THE SHOULDER PRIOR TO REMOVAL. THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE PER SY FOR PAVEMENT FOR M.O.T., AS PER PLAN.

ALL OTHER REQUIREMENTS OF CMS 615 SHALL APPLY. ALTHOUGH ESTIMATES FOR TEMPORARY EXCAVATION, EMBANKMENT, SEEDING AND OTHER WORK ARE SHOWN, THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO, AND INCLUDED WITH PAYMENT FOR ITEM 615 ROADS FOR MAINTAINING TRAFFIC.

TEMPORARY DRAINAGE FACILITIES SHOWN ON THE PLANS ARE PAID UNDER ITEM 611.

ITEM 614 WORK ZONE PAVEMENT MARKINGS, SPRAY THERMOPLASTIC, AS PER PLAN

THE CONTRACTOR SHALL PLACE THE WORK ZONE PAVEMENT MARKINGS, SPRAY THERMOPLASTIC, AS PER PLAN PER ODOT SPECIFICATION 614.11 AND ODOT SPECIFICATION 648 WITH THE EXCEPTION ODOT SPECIFICATION 648.05 SHALL BE MODIFIED TO ALLOW PLACEMENT OF THE MATERIAL AT A TEMPERATURE OF NOT LESS THAN 35 DEGREES FAHRENHEIT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS AND AT TIMES AS DIRECTED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS OF C&MS 614.11.

ITEM 614 WORK ZONE LANE LINE, CLASS I SPRAY THERMOPLASTIC, AS PER PLAN - 5 MILES

ITEM 614 WORK ZONE EDGE LINE, CLASS I SPRAY THERMOPLASTIC, AS PER PLAN - 7 MILES

ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS I, SPRAY THERMOPLASTIC, AS PER PLAN - 3800 FT

ITEM 614 WORK ZONE DOTTED LINE, CLASS I, SPRAY THERMOPLASTIC, AS PER PLAN - 3400 FT

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE ODOT INTENDS THAT FLAGGERS BE USED. USE OF LEOS SHALL BE RESTRICTED TO I-71 MAINLINE AND I-71 RAMPS, AND AS DIRECTED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

1 LEO IS NEEDED WHEN INSTALLING A SINGLE OR DOUBLE LANE CLOSURE. WHEN LANE CLOSURES ARE BEING INSTALLED IN MULTIPLE DIRECTIONS OR MULTIPLE LOCATIONS, 1 LEO IS NEEDED PER MOT WORK CREW. IN OTHER WORDS, IF THE SAME WORK CREW INSTALLS BOTH LANE CLOSURES, THEN ONLY 1 LEO IS NEEDED; IF 2 SEPARATE WORK CREWS INSTALL A LANE CLOSURE IN EACH DIRECTION, THEN 2 LEOS WILL BE NEEDED. THE LEO SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 4000 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. THE HOURS PAID SHALL INCLUDE UP TO * HOUR PRIOR TO THE START OF THE SHIFT TO RECEIVE INSTRUCTIONS FOR THE WORK ASSIGNMENTS; SPECIAL WORK ASSIGNMENTS REQUIRING ADDITIONAL TIME SHALL BE APPROVED BY THE ENGINEER PRIOR TO SCHEDULING THE LEO. THE HOURS PAID PER LEO FOR LANE CLOSURES SHALL INCLUDE THE MINIMUM SHOW-UP TIME FOR THE INITIAL SET-UP PERIOD AND THE MINIMUM SHOW-UP TIME FOR THE TEAR DOWN PERIOD; BUT NO MORE THAN THE ACTUAL INVOICED HOURS.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

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 TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). 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 AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVEABLE PAVEMENT DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE
ITEM DURATION OF CLOSURE NOTICE DUE TO PERMITS & PIO

RAMP & >= 2 WEEKS 21 CALENDAR DAYS PRIOR TO CLOSURE
ROAD > 12 HOURS & < 2 WEEKS 14 CALENDAR DAYS PRIOR TO CLOSURE
CLOSURES < 12 HOURS 4 BUSINESS DAYS PRIOR TO CLOSURE

LANE >= 2 WEEKS 14 CALENDAR DAYS PRIOR TO CLOSURE
CLOSURES & < 2 WEEKS 5 BUSINESS DAYS PRIOR TO CLOSURE
RESTRICTIONS

START OF CONSTRUCTION & 14 CALENDAR DAYS
TRAFFIC PATTERN CHANGES PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

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BJF

MAINTENANCE OF TRAFFIC GENERAL NOTES

HAM-IR71-8.42

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SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
										01/IMS/PV	02/IMS/B R	03/						
STRUCTURE OVER 20 FOOT SPAN (HAM-71-0875)																		
													LS	201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN	339
													LS	202	11203	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339
													11	202	22900	11	APPROACH SLAB REMOVED	
													LS	503	11100	LS	COFFERDAMS AND EXCAVATION BRACING	
													25	503	21100	25	UNCLASSIFIED EXCAVATION	
													508	509	10000	508	EPOXY COATED REINFORCING STEEL	
													36	510	10001	36	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	339
													4	511	45711	4	CLASS QCI CONCRETE, ABUTMENT, AS PER PLAN	348
													LS	511	81200	LS	CONCRETE, MISC.: PRESSURE WASH BEAMS SEATS AND BACKWALL	339
													1,846	512	10300	1,846	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
													LS	513	95020	LS	STRUCTURAL STEEL, MISC.: PRESSURE WASH STRUCTURAL STEEL	339
													LS	516	14800	LS	STRUCTURAL JOINT OR JOINT SEALER, MISC.: CLEAN AND RE-USE EXISTING EXPANSION JOINT ARMOR AND SEAL	348
													LS	518	21230	LS	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
													LS	518	63300	LS	STRUCTURE DRAINAGE, MISC.: SCUPPER AND DRAINAGE PIPE CLEAN OUT	340
													1,472	519	11101	1,472	PATCHING CONCRETE STRUCTURE, AS PER PLAN	340
													50	519	12300	50	PATCHING CONCRETE BRIDGE DECK - TYPE B	
													11	526	15001	11	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN	343
													1	SPECIAL	53000400	1	STRUCTURES PROTECTION OF UTILITIES	340
													684	607	39930	684	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC	
													684	607		684	TEMPORARY FENCE	
													52	608	10000	52	4" CONCRETE WALK	
STRUCTURE OVER 20 FOOT SPAN (HAM-71-0970L)																		
													LS	201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN	339
													LS	202	11203	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339
													18	510	10001	18	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	339
													2,856	512	10100	2,856	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
													2,856	512	74000	2,856	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
													174	516	11211	174	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	359
													9	516	44101	9	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 9"x1'-0"x2.17"	340
													9	516	44201	9	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 11"x1'-2"x3.41"	340
													LS	516	47000	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE	
													LS	518	63300	LS	STRUCTURE DRAINAGE, MISC.: SCUPPER AND DRAINAGE PIPE CLEAN OUT	340
													63	519	11101	63	PATCHING CONCRETE STRUCTURE, AS PER PLAN	340
													1,778	848	20000	1,778	SURFACE PREPARATION USING HYDRODEMOLITION	
													1,356	848	10201	1,356	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN 2 3/4" THICK	341
													422	848	10201	422	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN 1 3/4" THICK	341
													50	848	30200	50	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
													142	848	50000	142	HAND CHIPPING	
													LS	848	50100	LS	TEST SLAB	
													1,356	848	50320	1,356	EXISTING CONCRETE OVERLAY REMOVED 1 3/4" THICK	
													589	848	50340	589	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	
STRUCTURE OVER 20 FOOT SPAN (HAM-71-0970L) ALT. BID 1																		
													3,101	514	00050	3,101	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
													3,101	514	00056	3,101	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
													3,101	514	00060	3,101	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
													3,101	514	00066	3,101	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
													8	514	00504	8	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
													4	514	10000	4	FINAL INSPECTION REPAIR	

GENERAL SUMMARY

HAM-IR71-8.42

CALCULATED
JLG
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SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
										01/IMS/PV	02/IMS/B R	03/						
STRUCTURE OVER 20 FOOT SPAN (HAM-71-1068L)																		
												LS	201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	339
												LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339
												296	202	22900	296	SY	APPROACH SLAB REMOVED	
												12	202	98100	12	EACH	REMOVAL MISC.: SCUPPER AND DOWNSPOUT REMOVAL (EACH)	369
												LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
												83	503	21100	83	CY	UNCLASSIFIED EXCAVATION	
												134,554	509	10000	134,554	LB	EPOXY COATED REINFORCING STEEL	
												306	510	10001	306	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	339
												467	511	34447	467	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	343
												128	511	34449	128	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	343
												71	511	44110	71	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING	
												LS	511	81200	LS		CONCRETE, MISC.: SURVEYING EXISTING BRIDGE	410
												1,553	512	10100	1,553	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
												120	SPECIAL	51271500	120	SY	URETHANE TOP COAT SEALER	341
												1,553	512	74000	1,553	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
												4,053	513	20000	4,053	EACH	WELDED STUD SHEAR CONNECTORS	
												250	513	95030	250	EACH	STRUCTURAL STEEL, MISC.: WELDING CROSSFRAME STIFFENERS	392
												80	513	95030	80	EACH	STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT	339
												160	513	95030	160	EACH	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT	340
												6	513	95030	6	EACH	STRUCTURAL STEEL, MISC.: INTERMEDIATE CROSSFRAME	392
												3	513	95030	3	EACH	STRUCTURAL STEEL, MISC.: REMOVE EXISTING INTERMEDIATE CROSSFRAME	390
												2	513	95030	2	EACH	STRUCTURAL STEEL, MISC.: FIELD WELD CRACK REPAIR	390A
												1	513	95030	1	EACH	STRUCTURAL STEEL, MISC.: BEARING STIFFENER REPAIR	390A
												482	514	00050	482	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
												482	514	00056	482	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
												482	514	00060	482	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
												482	514	00066	482	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
												1	514	00504	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
												1	514	10000	1	EACH	FINAL INSPECTION REPAIR	
												413	514	20001	413	SF	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN	340
												146	516	11210	146	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
												140	516	14020	140	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	
												7	516	44201	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 11 1/2"x1'-2"x3.22"	340
												7	516	44401	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 11 1/2"x1'-1"x5.04"	340
												LS	516	47000	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE	
												LS	518	21230	LS		POROUS BACKFILL WITH GEOTEXTILE FABRIC	
												1,647	SPECIAL	51900100	1,647	SF	COMPOSITE FIBER WRAP SYSTEM	
												12	519	11101	12	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	340
												296	526	25001	296	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	343
												141	526	90010	141	FT	TYPE A INSTALLATION	
												40	SPECIAL	53000500	40	hour	STRUCTURES: STRUCTURE INSPECTION AND MECHANIZED ACCESS	340
												502	607	39900	502	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
												502	607		502	FT	TEMPORARY FENCE	

GENERAL SUMMARY

HAM-IR71-8.42

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SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
01/IMS/PV	02/TMS/BR	03/																
STRUCTURE OVER 20 FOOT SPAN (HAM-71-1068R)																		
										LS	201	11001	LS			CLEARING AND GRUBBING, AS PER PLAN	339	
										LS	202	11203	LS			PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339	
										454	202	22900	454	SY		APPROACH SLAB REMOVED		
										LS	202	98000	LS			REMOVAL MISC.: SIGN TRUSS SUPPORT BRACKETS	389	
										20	202	98100	20	EACH		REMOVAL MISC.: SCUPPER AND DOWNSPOUT REMOVAL (EACH)	368	
										LS	503	11100	LS			COFFERDAMS AND EXCAVATION BRACING		
										126	503	21100	126	CY		UNCLASSIFIED EXCAVATION		
										191,742	509	10000	191,742	LB		EPOXY COATED REINFORCING STEEL		
										294	510	10001	294	EACH		DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	339	
										763	511	34447	763	CY		CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	343	
										140	511	34449	140	CY		CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	343	
										105	511	44110	105	CY		CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING		
										LS	511	81200	LS			CONCRETE, MISC.: SURVEYING EXISTING BRIDGE	409	
										1,875	512	10100	1,875	SY		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
										105	SPECIAL	51271500	105	SY		URETHANE TOP COAT SEALER	341	
										1,875	512	74000	1,875	SY		REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		
										6,867	513	20000	6,867	EACH		WELDED STUD SHEAR CONNECTORS		
										466	513	95030	466	EACH		STRUCTURAL STEEL, MISC.: WELDING CROSSFRAME STIFFENERS	392	
										10	513	95030	10	EACH		STRUCTURAL STEEL, MISC.: INTERMEDIATE CROSSFRAME	392	
										450	514	00050	450	SF		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
										450	514	00056	450	SF		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		
										450	514	00060	450	SF		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
										450	514	00066	450	SF		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT		
										1	514	00504	1	MNHR		GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		
										1	514	10000	1	EACH		FINAL INSPECTION REPAIR		
										621	514	20001	621	SF		FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN	340	
										219	516	11210	219	FT		STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL		
										213	516	14020	213	FT		SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL		
										11	516	44201	11	EACH		ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 1'-0"x1'-2"x3.25"	340	
										11	516	44201	11	EACH		ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 11 1/2"x1'-2"x3.22"	340	
										LS	516	47000	LS			JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE		
										LS	518	21230	LS			POROUS BACKFILL WITH GEOTEXTILE FABRIC		
										1,997	SPECIAL	51900100	1,997	SF		COMPOSITE FIBER WRAP SYSTEM	341	
										64	519	11101	64	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	340	
										454	526	25001	454	SY		REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN	343	
										215	526	90010	215	FT		TYPE A INSTALLATION		
										556	607	39900	556	FT		VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC		
										556	607		556	FT		TEMPORARY FENCE		
STRUCTURE OVER 20 FOOT SPAN (HAM-71-1149)																		
										LS	202	11203	LS			PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339	
										1,226	512	10100	1,226	SY		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
										1,136	512	10300	1,136	SY		SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN		
										1,226	512	74000	1,226	SY		REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		
										LS	513	95020	LS			STRUCTURAL STEEL, MISC.: TRIM BEAM ENDS	425	
										34,950	514	00050	34,950	SF		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL		
										34,950	514	00056	34,950	SF		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT		
										34,950	514	00060	34,950	SF		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
										34,950	514	00066	34,950	SF		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT		
										24	514	00504	24	MNHR		GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		
										10	514	10000	10	EACH		FINAL INSPECTION REPAIR		
										LS	518	63300	LS			STRUCTURE DRAINAGE, MISC.: SCUPPER AND DRAINAGE PIPE CLEAN OUT	340	
										20	519	11101	20	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	340	
										1	519	12300	1	SY		PATCHING CONCRETE BRIDGE DECK - TYPE B		
										1	601	26000	1	CY		DUMPED ROCK FILL, TYPE B		

GENERAL SUMMARY

HAM-IR71-8.42

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SHEET NUM.											PART.			ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
											01/IMS/PV	02/IMS/BR	03/		EXT	TOTAL			
												568		607	39930	568	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC	
												568		607		568	FT	TEMPORARY FENCE	
												10		621	54000	10	EACH	RAISED PAVEMENT MARKER REMOVED	
												10		621	00100	10	EACH	RPM	
STRUCTURE OVER 20 FOOT SPAN (HAM-71-1181L)																			
												LS		201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	339
												LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339
												LS		202	98000	LS		REMOVAL MISC.:EXPANSION JOINT REMOVAL	433
												975		512	10100	975	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
												1,289		512	10400	1,289	SY	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
												10		SPECIAL	51271500	10	SY	URETHANE TOP COAT SEALER	341
												975		512	74000	975	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
												15,640		514	00050	15,640	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
												15,640		514	00056	15,640	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
												15,640		514	00060	15,640	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
												15,640		514	00066	15,640	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
												23		514	00504	23	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
												9		514	10000	9	EACH	FINAL INSPECTION REPAIR	
												126		516	10011	126	FT	ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN	433
												94		SPECIAL	51900100	94	SF	COMPOSITE FIBER WRAP SYSTEM	341
												153		519	11101	153	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	340
												LS		SPECIAL	60610900	LS		NOISE BARRIER REPAIR LOOSE OR MISSING SOUNDWALL SHIMS AND WOODEN MEMBERS	343
STRUCTURE OVER 20 FOOT SPAN (HAM-71-1181R)																			
												LS		201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	339
												LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	339
												LS		202	98000	LS		REMOVAL MISC.:EXPANSION JOINT REMOVAL	433
												1,023		512	10100	1,023	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
												1,283		512	10400	1,283	SY	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
												1,023		512	74000	1,023	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
												15,640		514	00050	15,640	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
												15,640		514	00056	15,640	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
												15,640		514	00060	15,640	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
												15,640		514	00066	15,640	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
												23		514	00504	23	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
												9		514	10000	9	EACH	FINAL INSPECTION REPAIR	
												126		516	10011	126	FT	ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN	433
												133		519	11101	133	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	341
												LS		SPECIAL	60610900	LS		NOISE BARRIER REPAIR LOOSE OR MISSING SOUNDWALL SHIMS AND WOODEN MEMBERS	340

GENERAL SUMMARY

HAM-IR71-8.42

ITEM 511 - CONCRETE, MISC.: PRESSURE WASH BEAMS SEATS AND BACKWALL
ITEM 513 - STRUCTURAL STEEL, MISC.: PRESSURE WASH STRUCTURAL STEEL

THIS WORK CONSISTS OF PRESSURE WASHING THE ABUTMENT SEATS AND BACKWALLS AND THE STRUCTURAL STEEL WITHIN 10 FEET OF THE ABUTMENT BACKWALL.

THE EQUIPMENT FOR PRESSURE WASHING SHALL BE OPERATED AT PRESSURES BETWEEN 1750 AND 2000 PSI AND WITH A MINIMUM FLOW RATE OF 3.5 GAL/MINUTE PROVIDED THAT THESE PRESSURES DO NOT DAMAGE THE PAINT OR OTHER COATINGS ON THE BRIDGE OR UNDERCUT THE GROUT OR HARM THE MASONRY PLATES BENEATH THE BEARINGS.

THE DEPARTMENT WILL INCLUDED THE COST OF PRESSURE WASHING IN THE LUMP SUM COST

FOR ITEM 511 - CONCRETE, MISC.: PRESSURE WASH BEAM SEATS AND BACKWALL

FOR ITEM 513 - STRUCTURAL STEEL, MISC.: PRESSURE WASH STRUCTURAL STEEL

ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT (BRIDGE HAM-71-1068L AND HAM-71-1068R)

THIS WORK CONSISTS OF PENCIL ABRASIVE BLAST CLEANING THE SUSPECTED CRACK AREA TO BE WORKED ON, DRILLING CRACKS AND ENDS OF CRACKS, GRINDING EDGES OF DRILLED HOLES, AND NON-DESTRUCTIVE TESTING AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. DISTRICT PRODUCTION DEPARTMENT (BRIDGE SECTION) APPROVAL MUST BE OBTAINED BEFORE DRILLING ANY HOLES IN THE FLANGES UNDER THIS PAY ITEM.

DRILL HOLES TO REMOVE ENTIRE CRACKS OR THE APPARENT ENDS OF THE CRACK REVEALED BY THE INITIAL NDT AND/OR VISUAL INSPECTION. GRIND SMOOTH THE EXPOSED CIRCUMFERENCE OF EACH DRILLED HOLE AND CAREFULLY INSPECT FOR CRACKS USING MAGNETIC PARTICLE EXAMINATION AND/OR DYE PENETRATION. CONTINUE DRILLING, GRINDING, AND TESTING UNTIL ALL CRACK ENDS ARE REMOVED. WHEN NO CRACKS ARE DETECTED AT A LOCATION, NO HOLES SHALL BE DRILLED UNDER THIS ITEM.

SINCE ANY OF THESE CRACKS COULD PROPAGATE INTO A TENSION ZONE, REMOVING THEIR ENDS IS IMPERATIVE. CRACKS LESS THAN 1/2" LONG, AND CRACKED AREAS OR DEFECTS LESS THAN 1/2" IN DIAMETER SHALL BE REMOVED BY A SINGLE HOLE WHEN PRACTICAL. ENDS OF CRACKS LONGER THAN 1/2", AND DEFECTS SMALLER THAN 1/2" SHALL BE DRILLED WITH 1" DIAMETER DRILL BITS. HOLES SHALL BE CAREFULLY EXAMINED FOR CRACKS IN THE PLANE OF THE PLATE. 1/2" OR 2" DIAMETER HOLES MAY BE DRILLED WHERE THE PROXIMITY OF THE CRACK END TO ADJACENT STEEL PRECLUDES DRILLING 1" DIAMETER HOLES.

THE LOCATION OF ALL HOLES SHALL BE DETERMINED BY AND DRILLED UNDER THE DIRECTION OF THE ENGINEER.

THE ACCEPTED NUMBER OF HOLES DRILLED IN THE STRUCTURAL STEEL AS DETAILED ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER EACH HOLE. PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY FOR PENCIL ABRASIVE BLAST CLEANING, DRILLING THE HOLES, GRINDING EDGE OF DRILLED HOLES AND NDT. THERE MAY BE MORE THAN ONE NDT REQUIRED AT EACH LOCATION BUT ADDITIONAL TESTING WILL BE INCLUDED IN THE COST PER LOCATION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID UNDER: ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING AND NDT (EACH).

PENCIL ABRASIVE BLASTING:

THE PENCIL ABRASIVE BLASTING REFERRED TO IN THE VARIOUS NOTES AND REPAIR ITEMS IN THESE PLANS SHALL CONFORM TO THE FOLLOWING:

CLEAN THE DESIGNATED NON-DESTRUCTIVE TESTING (NDT) AREAS OF ALL PAINT, RUST AND FOREIGN MATERIAL BY ABRASIVE BLASTING TO A SURFACE QUALITY EQUAL TO SSPC-SP10 PREPARATION GRADE SA 2 ACCORDING TO AND AS SHOWN IN SSPC-VIS 1-89. SINCE THE INTENT OF THE PENCIL ABRASIVE BLASTING IS TO ENHANCE THE VISUAL AND NDT CRACK DETECTION TECHNIQUES, A GENTLE ABRASIVE BLAST SHALL BE USED SUCH THAT THE SURFACE IS NOT PEENED OR OTHERWISE COLD WORKED. PERFORM THE ABRASIVE BLASTING USING A MAXIMUM COMPRESSED AIR PRESSURE OF 100 PSI, A HOSE NOZZLE DIAMETER OF 1/4" (+/-1/16"), AND A GRADE 30/60 COAL SLAG ABRASIVE OR EQUIVALENT. DO NOT USE BLASTING ABRASIVES CONTAINING MORE THAN ONE PERCENT FREE SILICA. BLASTERS USED FOR SURFACE PREPARATION FOR STRUCTURAL STEEL COATING CAN NOT BE USED FOR PENCIL BLASTING. AFTER THE ABRASIVE BLASTING IS COMPLETE, AIR BLOW THE AREA CLEAN.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT PENCIL ABRASIVE BLASTING CAN BE SATISFACTORILY PERFORMED ACCORDING TO THESE SPECIFICATIONS PRIOR TO THE START OF THE WORK. THE COST OF THE PENCIL ABRASIVE BLASTING HAS BEEN INCLUDED IN THE COST OF ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT.

ITEM SPECIAL - STRUCTURES: STRUCTURE INSPECTION AND MECHANIZED ACCESS (BRIDGE HAM-71-1068L AND HAM-71-1068R)

THIS WORK SHALL CONSIST OF PROVIDING ACCESS NECESSARY FOR INSPECTING THE STRUCTURE TO DETERMINE AND DOCUMENT THE LOCATIONS AND EXTENTS OF CRACK REPAIRS REQUIRED FOR BRIDGE HAM-71-1068L AS SHOWN IN THE PLANS AND OTHERWISE AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR AND ENGINEER SHALL REVIEW THE CONDITION OF THE STRUCTURE PRIOR TO THE START OF THE CONTRACT WORK TO DETERMINE IF CHANGES IN THE LISTED REPAIRS SHOULD BE MADE. REPAIRS AND LOCATIONS IDENTIFIED IN THE PLANS ARE BASED ON FIELD SURVEY AT THE TIME THE PLANS WERE FINALIZED. FINAL DETERMINATION OF LOCATIONS AND EXTENTS OF THE REPAIRS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER. ADDITIONAL REPAIRS, OR REPAIR LOCATIONS, NOT IDENTIFIED IN THE PLANS SHALL BE PERFORMED ONLY AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE APPROPRIATE PAY ITEMS.

THE CONTRACTOR SHALL SUPPLY AND MAINTAIN THROUGHOUT THE DURATION OF THE PROJECT ALL THE NECESSARY EQUIPMENT, LABOR AND MATERIALS FOR THE CONTRACTOR'S FORCES AND THE ENGINEER TO REVIEW AND DOCUMENT THE CONDITION OF ALL THE ELEMENTS OF THE STRUCTURE. MECHANIZED EQUIPMENT MAY INCLUDE, BUT IS NOT LIMITED TO PERSONNEL LIFTS, CRANES, FALL PROTECTION, CONFINED SPACE ENTRY EQUIPMENT, AND/OR OTHER ACCESS AND SAFETY EQUIPMENT REQUIRED FOR USE ON MECHANIZED, MOBILE SYSTEMS. MATERIALS MAY INCLUDE, BUT ARE NOT LIMITED TO MARKING PAINT, AS NEEDED BY THE ENGINEER.

THE CONTRACTOR SHALL ASSUME LIABILITY FOR THE SAFETY OF ALL AUTHORIZED PERSONNEL USING THE EQUIPMENT IN ITS INTENDED MANNER.

THE QUANTITY USED TO MEASURE THE WORK DESCRIBED HERE SHALL BE THE NUMBER OF HOURS MECHANIZED EQUIPMENT IS ACTIVELY IN SERVICE.

PAYMENT FOR ALL LABOR, EQUIPMENT, TOOLS, MATERIALS AND SERVICES REQUIRED FOR THIS WORK AS HEREIN DESCRIBED SHALL BE MADE AT THE CONTRACT PRICE BID PER HOUR FOR ITEM SPECIAL - STRUCTURE: STRUCTURE INSPECTION AND MECHANIZED ACCESS

ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT (BRIDGE HAM-71-1068L AND HAM-71-1068R)

THIS WORK CONSISTS OF THE FOLLOWING SEQUENCE OF OPERATIONS PERFORMED AT THE AREAS AS DESIGNATED IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

- CLEAN THE DESIGNATED AREA BY PENCIL ABRASIVE BLASTING THE PAINT AND/OR RUST FROM THE STEEL SURFACE. CLEANED AREAS SHALL BE AT LEAST 4 INCHES WIDE ALONG EACH SIDE OF A SUSPECTED CRACK LOCATION UNLESS OTHERWISE SHOWN IN THE PLANS.
- THE ENGINEER, ACCOMPANIED BY THE CONTRACTOR, SHALL CAREFULLY VISUALLY INSPECT THE CLEANED AREA. GRINDING MAY BE DIRECTED BY THE ENGINEER TO ENHANCE THE INVESTIGATION FOR CRACK PRESENCE. ALL GRINDING MUST BE DONE CAUTIOUSLY, ESPECIALLY IN TENSION ZONES. THE GRINDING MOTION SHALL BE PARALLEL TO THE FLANGE EDGE.
- NON-DESTRUCTIVELY TEST (NDT) THE AREA USING MAGNETIC PARTICLE EXAMINATION AND/OR DYE PENETRATION SO THAT THE ENGINEER MAY FURTHER INSPECT THE CRACKS.
- ALL CRACKS AND/OR CRACK TIPS THAT ARE ACCESSIBLE ARE TO BE REMOVED AS SHOWN IN THE PLANS AND PAID FOR AS ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT. ANY CRACKS INACCESSIBLE TO DRILLING ARE TO BE REMOVED AS SHOWN IN THE PLANS BY CAREFUL GRINDING, OR BY CAREFULLY ENLARGING THE DRILLED HOLES BY GRINDING, AND PAID FOR UNDER ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT.
- PERFORM STEPS 1 THROUGH 4 ON THE OTHER SIDE OF THIS LOCATION.

THE ACCEPTED NUMBER OF LOCATIONS OF WORK AS DESCRIBED IN THIS NOTE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LOCATION. THERE MAY BE MORE THAN ONE NDT REQUIRED AT EACH LOCATION BUT ADDITIONAL TESTING WILL BE INCLUDED IN THE COST PER LOCATION. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR AND EQUIPMENT NECESSARY TO CLEAN, GRIND AND PERFORM NDT ON ALL SURFACES AT EACH LOCATION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID UNDER: ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING AND NDT (EACH)

NON-USE OF ASBESTOS-CONTAINING MATERIALS

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNT OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN:

THIS ITEM CONSISTS OF FIELD PAINTING DAMAGED STRUCTURAL STEEL BY PERFORMING SURFACE PREPARATION AND APPLYING A TWO-COAT PAINT SYSTEM TO THE UNCOATED STEEL AND FEATHERED REMOVAL AREAS OF EXISTING COATINGS.

CMS 514.06 THROUGH 514.10 APPLY. REMOVE EXISTING PAINT COATING TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER ACCORDING TO SSPC-SP 15, COMMERCIAL GRADE POWER TOOL CLEANING, OR EQUAL AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 3. THE ENGINEER WILL USE THE SSPC-VIS 3 TO DETERMINE THE ACCEPTANCE OF THE COMMERCIAL GRADE POWER TOOL CLEANING. FEATHER THE EXISTING PAINT TO EXPOSE A MINIMUM OF 1/2 INCH (13 MM) OF EACH COAT. CONTAIN AND DISPOSE OF WASTE GENERATED BY THE CLEANING ACCORDING TO CMS 514.13.D.

ROUND ALL EXPOSED CORNERS OF MAIN MATERIAL AS NECESSARY TO ACHIEVE A 1/16 INCH RADIUS (1.6 MM) OR EQUIVALENT FLAT SURFACE AT A 45 DEGREE ANGLE.

APPLY THE PRIME AND INTERMEDIATE COATS OF THE SPECIFIED THREE-COAT PAINT SYSTEM, CMS 708.02, ACCORDING TO CMS 514.15, 514.16, 514.17, AND 514.20 TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER. TINT THE INTERMEDIATE COAT TO APPROXIMATELY THE SAME COLOR AS THE EXISTING FINISH COLOR. MATCH THE COLOR TO THE ENGINEERS SATISFACTION. THE ENGINEER WILL DETERMINE THE PRIME COAT THICKNESS; PRIME AND INTERMEDIATE COAT THICKNESS USING A TYPE 2 MAGNETIC GAGE AT SPOT LOCATIONS. EACH COAT OF PAINT SHALL MEET THE MINIMUM DRY FILM THICKNESS REQUIREMENTS OF CMS 514.20. APPLY PAINT AS FOLLOWS:

A. APPLY THE PRIME COAT ONLY TO THE SURFACE OF THE BARE STEEL AND THE EXISTING PRIME COAT EXPOSED BY FEATHERING. DO NOT APPLY THE PRIME COAT TO THE ADJACENT INTERMEDIATE COAT.

B. APPLY THE INTERMEDIATE COAT ONLY TO THE NEW PRIME COAT AND THE EXISTING INTERMEDIATE COAT EXPOSED BY FEATHERING. DO NOT APPLY THE INTERMEDIATE COAT TO THE ADJACENT FINISH COAT.

AT THE PERIMETER OF THE REPAIR AREA, APPLY THE PRIME AND INTERMEDIATE COATS USING A BRUSH. APPLY THE FINISH COAT USING EITHER BRUSH OR SPRAY. IN LIEU OF BRUSHING THE USE OF MASKING AREAS NOT TO BE COATED AND SPRAY TO FEATHERED REMOVAL LINES MAY BE PERFORMED.

BLENDED REPAIR AREAS WITH THE ADJACENT COATING AND PROVIDE A FINISHED SURFACE IN THE PATCHED AREAS THAT IS SMOOTH AND HAS AN EVEN PROFILE WITH THE ADJACENT SURFACE.

THE DEPARTMENT WILL MEASURE FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN BY THE NUMBER OF SQUARE FEET OF STRUCTURAL STEEL PAINTED. ALL REQUIREMENTS OF THIS SPECIFICATION ARE CONSIDERED INCIDENTAL TO THE WORK. THE DEPARTMENT WILL DETERMINE THE SURFACE AREA BY TAKING EXACT FIELD MEASUREMENTS OF ALL PAINTED SURFACES AND CALCULATIONS.

DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR: ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (SQUARE FEET)

ITEM SPECIAL - STRUCTURES: PROTECTION OF UTILITIES

BRIDGE HAM-71-0875:

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO PROTECT EXISTING UTILITIES AS APPROVED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR IS REMINDED THAT ALL EXISTING COMPONENTS AND SYSTEMS THAT ARE TO REMAIN IN USE DURING AND AFTER THIS PROJECT AND REQUIRE PROTECTION. THIS WORK INCLUDES, BUT IS NOT LIMITED TO:

- SLEEVES FOR CONDUITS INCORPORATED IN CONCRETE.
- TEMPORARY SUPPORTS DURING EXCAVATION AND BACKFILLING
- HAND DIGGING AROUND UNDERGROUND LINES
- AVOIDING OVERHEAD LINES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT THESE SYSTEMS AND COMPONENTS FOR THE DURATION OF THE CONTRACT. THE CONTRACTOR IS DIRECTED TO SECTION 107 AND PARTICULARLY TO SECTION 107.12 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

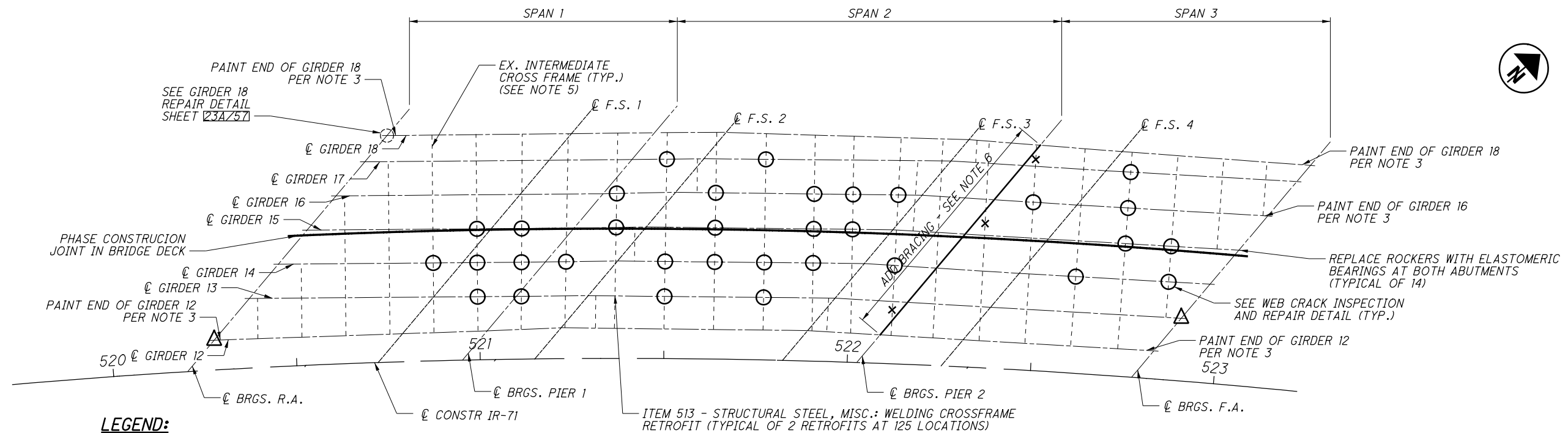
PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL - STRUCTURES: PROTECTION OF UTILITIES. THIS SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO SUCCESSFULLY PERFORM THIS ITEM OF WORK.

ITEM 516 STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

INSTALL ELASTOMERIC SEAL IN ONE CONTINUOUS PIECE.

DESIGNED SJA CHECKED XAC	DRAWN SJA REVISED	REVIEWED DWL	DATE 2/20/2017	DESIGN AGENCY BURGESS & NIPLÉ
		STRUCTURE FILE NUMBER COMBINED		312 PLUM ST. CINCINNATI, OH
COMMON STRUCTURE GENERAL NOTES 2				
COMBINED FOR ALL STRUCTURES HAM-71-8.42				
HAM-IR71-8.42		PID No. 91826		
2 / 5		340 441		

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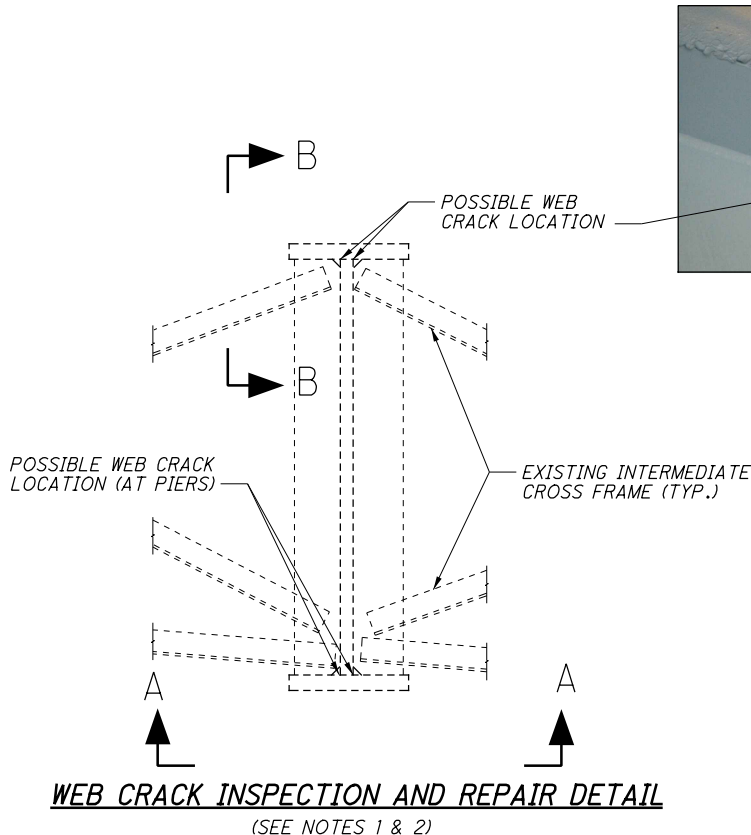
LEGEND:

- BRGS. = BEARINGS
- F.S. = FIELD SPLICE
- R.A. = REAR ABUTMENT
- F.A. = FORWARD ABUTMENT
- = SUSPECTED WEB CRACK LOCATION
- × = EXISTING INTERMEDIATE STEEL CROSS BRACING TO BE REMOVED (SEE NOTE 7)
- △ = SEE SHEET 234/57 FOR END GIRDER WEB CRACK REPAIR DETAIL

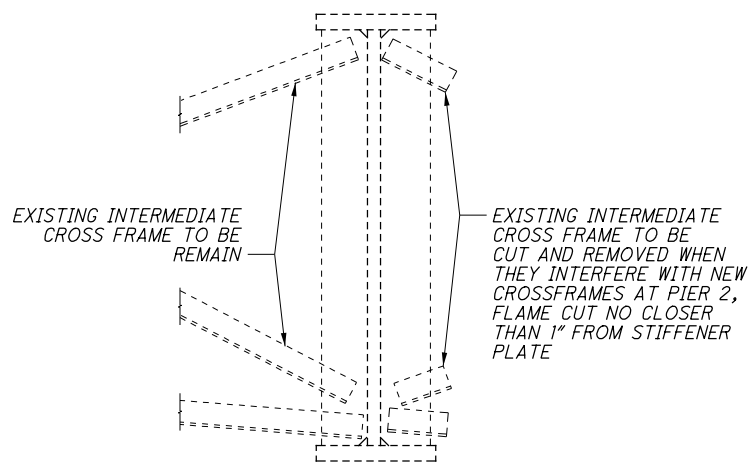
FRAMING PLAN - LEFT BRIDGE

NOTES:

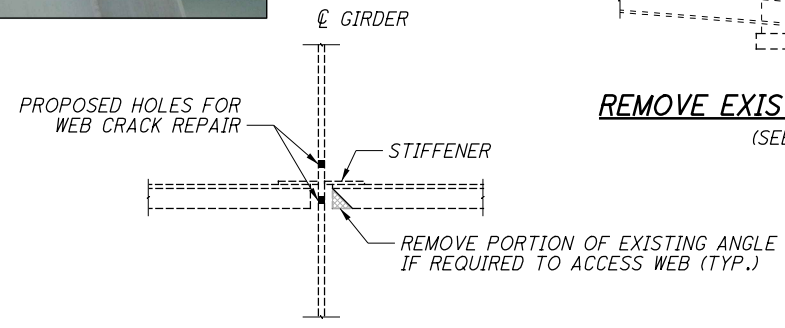
1. CONTRACTOR SHALL PROVIDE ACCESS FOR PROJECT ENGINEER TO VISUALLY INSPECT ALL INTERMEDIATE CROSS FRAME STIFFENER LOCATIONS FOR CRACKS IN WEB. THE COST OF ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO INSPECT EACH CROSS FRAME STIFFENER LOCATIONS FOR CRACKS SHALL BE INCLUDED UNDER ITEM SPECIAL STRUCTURES: STRUCTURE INSPECTION AND MECHANIZED ACCESS (HOUR).
2. RETROFIT WEB CRACKS USING THE FOLLOWING REPAIR PROCEDURE:
 - A: CLEAN AREA NEAR CRACK USING PENCIL ABRASIVE BLASTING ON EACH SIDE OF THE GIRDER WEB (SEE COMMON GENERAL NOTES SHEETS 1 & 2).
 - B: LOCATE CRACK TIPS USING DYE PENETRANT AND/OR MAGNETIC PARTICLE (NDT) TESTING. MORE THAN ONE NDT MAY BE REQUIRED BUT ADDITIONAL NDT WORK SHALL BE INCLUDED IN THE COST PER EACH LOCATION (SEE COMMON GENERAL NOTES SHEETS 1 & 2).
 - C: USING A MAGNETIC-BASE DRILL, DRILL HOLES 2" INCH DIAMETER AT TIPS OF CRACKS. A CARBIDE-TIPPED ANNULAR CUTTER SHALL BE USED FOR THE BIT (SEE COMMON GENERAL NOTES SHEETS 1 & 2).
 - D: PAINT REPAIR LOCATIONS PER ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN.
3. PAINT ALL STEEL AREAS WITHIN THE LAST 5 FEET OF FIVE GIRDER ENDS, COLOR TO MATCH EXISTING PER ITEM 514.
4. FOR TEMPORARY SHORING DETAILS SEE SHEET 24/57.
5. SEE SHEET 25/57 FOR INTERMEDIATE CROSS FRAME STIFFENER WELDING DETAILS.
6. INSTALL NEW STEEL CROSS BRACING BETWEEN EXISTING BEARING STIFFENERS OVER PIER 2 PER DETAILS ON SHEET 25/57.
7. REMOVE EXISTING INTERMEDIATE CROSSFRAMES WHEN INTERFERE WITH NEW CROSSFRAME, ALL LABOR, EQUIPMENT AND MATERIALS REQUIRED TO CUT AND REMOVE EXISTING ANGLES SHALL BE INCLUDED WITH THE UNIT PRICE FOR ITEM 513 - STRUCTURAL STEEL MISC.: REMOVE EXISTING INTERMEDIATE CROSSFRAME.



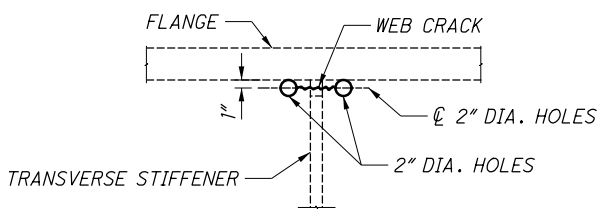
WEB CRACK INSPECTION AND REPAIR DETAIL
(SEE NOTES 1 & 2)



REMOVE EXISTING CROSSFRAME
(SEE NOTES 7)

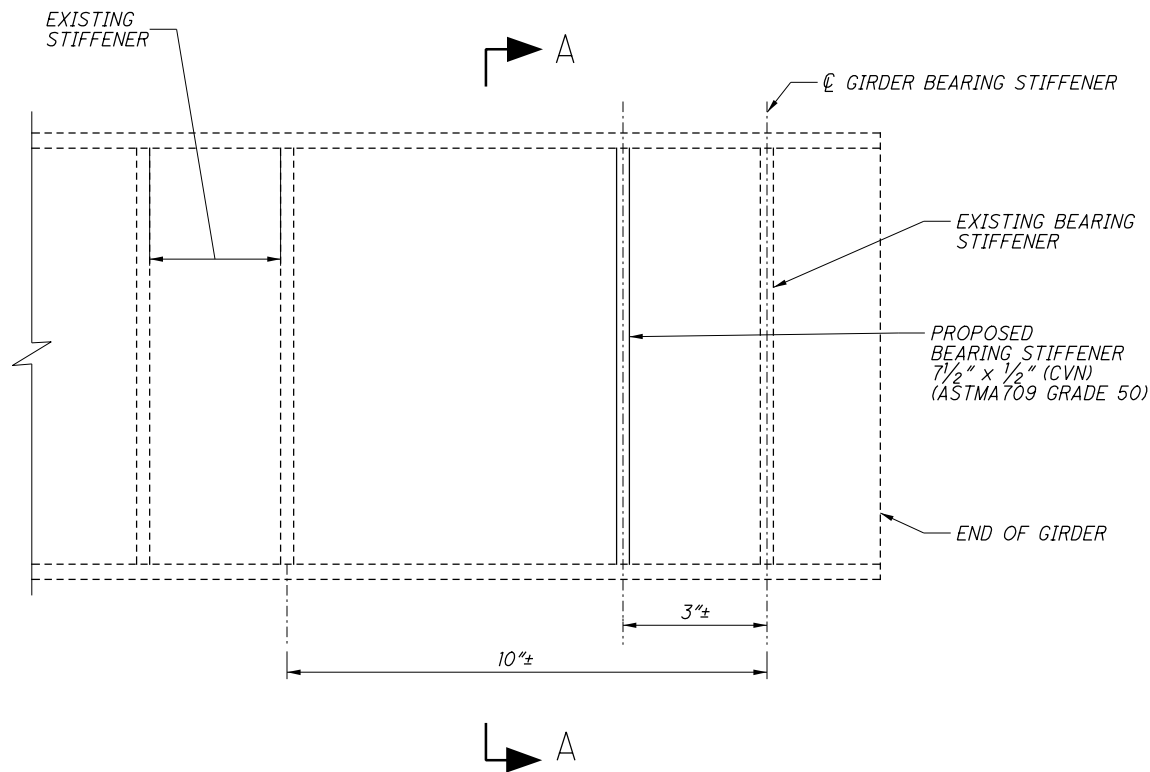


VIEW A-A

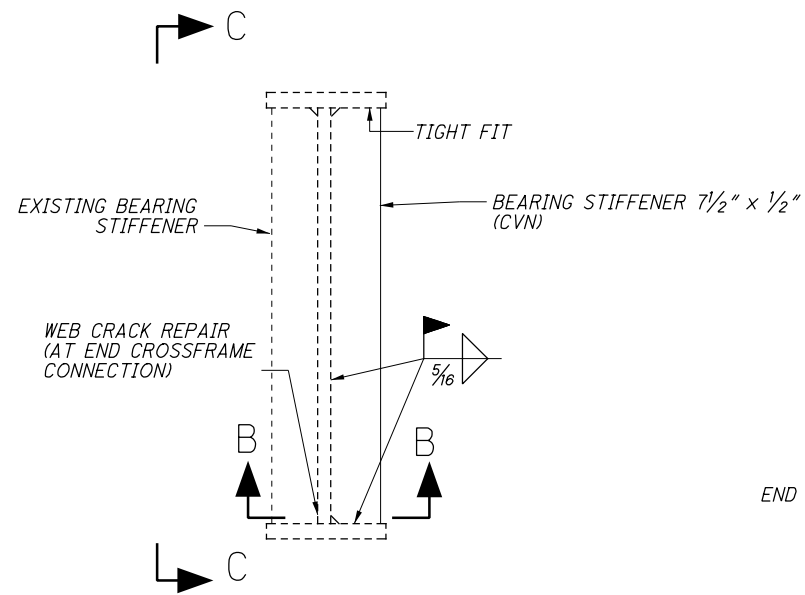


VIEW B-B

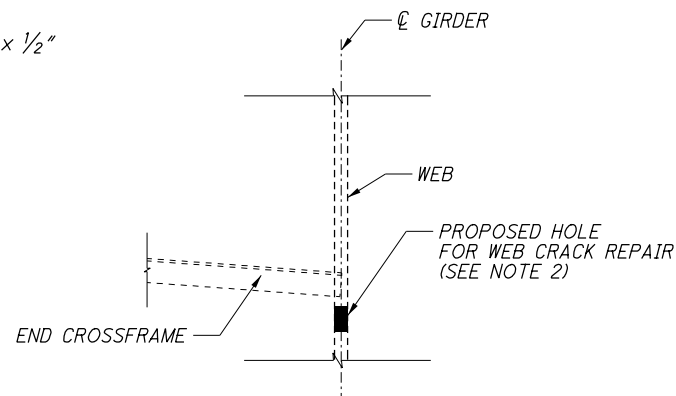
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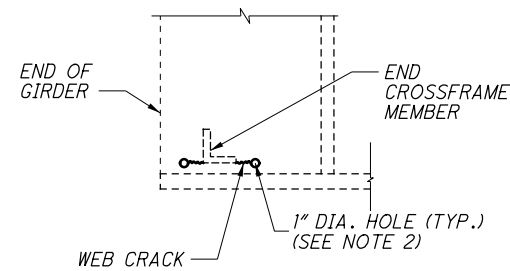
GIRDER 18 BEARING STIFFENER REPAIR DETAIL
(OUTSIDE FACE SHOWN)



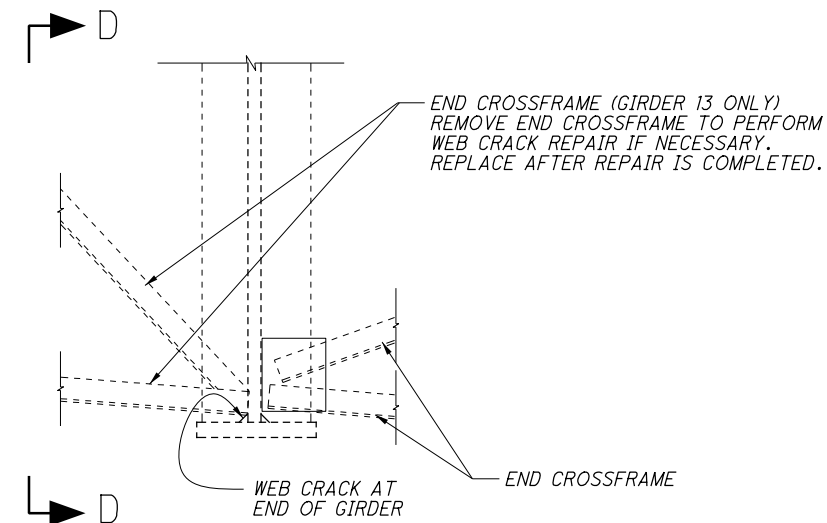
SECTION A-A
(END CROSSFRAME NOT SHOWN)



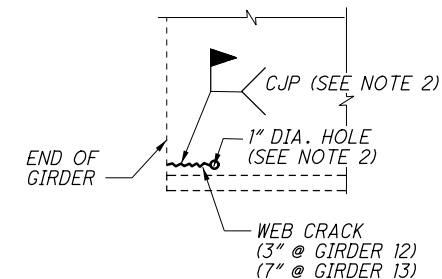
VIEW B-B



VIEW C-C



END GIRDER WEB CRACK REPAIR



SECTION D-D

NOTES:

1. WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. RETROFIT WEB CRACKS USING THE FOLLOWING REPAIR PROCEDURE:
 - A: CLEAN AREA NEAR CRACK USING PENCIL ABRASIVE BLASTING ON EACH SIDE OF THE GIRDER WEB (SEE COMMON GENERAL NOTES SHEETS 1 & 2).
 - B: LOCATE CRACK TIPS USING DYE PENETRANT AND/OR MAGNETIC PARTICLE (NDT) TESTING. MORE THAN ONE NDT MAY BE REQUIRED BUT ADDITIONAL NDT WORK SHALL BE INCLUDED IN THE COST PER EACH LOCATION (SEE COMMON GENERAL NOTES SHEETS 1 & 2).
 - C: USING A MAGNETIC-BASE DRILL, DRILL HOLES 1" INCH DIAMETER AT TIPS OF CRACKS. A CARBIDE-TIPPED ANNULAR CUTTER SHALL BE USED FOR THE BIT (SEE COMMON GENERAL NOTES SHEETS 1 & 2).
 - D: PAINT REPAIR LOCATIONS PER ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN.
 - E: FOR END GIRDER WEB CRACK REPAIR ONLY, PERFORM A COMPLETE JOINT PENETRATION (CJP) WELD TO REATTACH WEB AND FLANGE. PAYMENT FOR WELD AND ANY REMOVAL AND REPLACEMENT OF CROSSFRAMES SHALL BE INCLUDED UNDER ITEM 513-STRUCTURAL STEEL MISC.: FIELD WELD CRACK REPAIR.
 - F: FOR GIRDER 18 BEARING STIFFENER REPAIR, ALL NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIAL TO SUCCESSFULLY PERFORM THIS ITEM OF WORK IS INCLUDED IN THE ITEM 513-STRUCTURAL STEEL MISC.: BEARING STIFFENER REPAIR.

REVISED 01/23/2018 - NEW SHEET

DESIGNED MAB		DRAWN SDC	REVIEWED XAC	DATE 01/23/18	DESIGN AGENCY BURGESS & NIPLE
CHECKED SJA		REVISED XXX	STRUCTURE FILE NUMBER 3106888	312 PLUM ST. CINCINNATI, OH	
GIRDER REPAIR DETAILS					
HAM-71-1068L IR-71 OVER STEWART ROAD					
PID No. 91826		HAM-IR71-8.42		23A/57	
441		390A			

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

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

ELECTRIC:
DUKE ENERGY
139 EAST FOURTH STREET, ROOM 467A
CINCINNATI, OHIO 45202
(513) 287-3674 (AARON WRIGHT)

ELECTRIC TRANSMISSION:
DUKE ENERGY
139 EAST FOURTH STREET, ROOM 552A
CINCINNATI, OHIO 45202
(513) 287-1266 (TIM MEYER)

GAS:
DUKE ENERGY
139 EAST FOURTH STREET, ROOM 460A
CINCINNATI, OHIO 45202
(513) 287-1205 (KELSEY PACE)

TELEPHONE:
CINCINNATI BELL
221 EAST FOURTH STREET, BLDG. 121-900
CINCINNATI, OHIO 45202
(513) 565-7043 (MARK CONNER)

CINCINNATI BELL AERIAL & PLACING
209 WEST SEVENTH STREET, BLDG. 121-900
CINCINNATI, OHIO 45202
(513) 566-5120 (DORIAN JOHNSON)

WATER:
GREATER CINCINNATI WATER WORKS
4747 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
(513) 591-7362 (JON HUNSEDER)
EMERGENCIES (513) 591-7900

SANITARY:
METROPOLITAN SEWER DISTRICT (MSD)
1600 GEST STREET
CINCINNATI, OHIO 45204
(513) 557-7108 (ROB FRANKLIN)
EMERGENCIES (513) 352-4900 OR (513) 244-5500

CABLE:
CHARTER COMMUNICATIONS (FKA) TIME WARNER CABLE
11252 CORNELL PARK DRIVE
CINCINNATI, OHIO 45242
(513) 469-5483 (KENT RIEGER)

STORMWATER MANAGEMENT:
CINCINNATI STORMWATER MANAGEMENT UTILITY
225 W. GALBRAITH ROAD
CINCINNATI, OHIO 45215
(513) 352-4287 (JEFF OXENHAM)

TRAFFIC:
CITY OF CINCINNATI TRAFFIC
801 PLUM STREET, ROOM 320
CINCINNATI, OHIO 45202
(513) 352-6229 (JEFF WILHOIT)

UTILITIES (CONTINUED)

TRAFFIC MAINTENANCE:
ODOT DISTRICT 8
505 SOUTH STATE ROUTE 741
LEBANON, OH 45036
PHONE: (513) 933-6689

ITS:
ODOT OFFICE OF TRAFFIC OPERATIONS
1980 W. BROAD STREET
COLUMBUS, OH 43223
PHONE: (614) 752-8846

THE OHIO DEPARTMENT OF TRANSPORTATION HAS UTILITY FACILITIES (HIGHWAY LIGHTING, TRAFFIC SIGNALS, AND ITS) WITHIN THE LIMITS OF THIS PROJECT.

IN ADDITION TO THE INFORMATION OUTLINED IN THE UTILITY NOTE OF THIS CONTRACT, THE CONTRACTOR SHALL TAKE THE FOLLOWING ACTION TO PROTECT ODOT'S FACILITIES DURING CONSTRUCTION:

HIGHWAY LIGHTING AND TRAFFIC SIGNALS:

EVEN THOUGH ODOT IS LISTED AS A MEMBER OF THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE CONTRACTOR ON THIS PROJECT IS REQUIRED TO CONTACT ODOT, DISTRICT 8 TRAFFIC MAINTENANCE DEPARTMENT DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY DISTRICT 8 TRAFFIC MAINTENANCE AT 513-933-6689 AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK, FOR THE NEED TO MARK ODOT OWNED UTILITIES.

ITS:
ITS FACILITIES AREN'T LISTED WITH OUPS, SO THE CONTRACTOR IS REQUIRED TO CONTACT ODOT CENTRAL OFFICE ITS LAB DIRECTLY SO THAT THE ODOT UTILITIES LOCATED WITHIN THIS PROJECT ARE MARKED. THE CONTRACTOR SHALL NOTIFY ODOT CENTRAL OFFICE ITS LAB AT THE CONTACT INFORMATION LISTED BELOW AND THE PROJECT ENGINEER, FOURTEEN (14) CALENDAR DAYS IN ADVANCE OF ANY WORK FOR MARKING OF ODOT OWNED UTILITIES.

CENTRAL OFFICE ITS LAB
614-387-4113 - PHONE
614-887-4134 - FAX
CEN.ITS.LAB@DOT.OHIO.GOV - EMAIL

THE ABOVE REQUIREMENTS ARE IN ADDITION TO SECTION 105.07 & 107.16 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE UTILITY PROPOSAL NOTE.

THE CONTRACTOR SHALL NOTIFY OTHER UTILITIES THROUGH OUPS OR DIRECTLY A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY WORK.

THE COST FOR THE ABOVE DESCRIBED WORK IS INCIDENTAL TO THE OVERALL BID PRICE OF THE PROJECT.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

ITEM 206 - CURING COAT, AS PER PLAN

CURE THE CHEMICALLY STABILIZED SUBGRADE WITH RAPID SETTING EMULSIFIED ASPHALT, CONFORMING TO 702.04. NO SUBSTITUTE FOR THE EMULSIFIED ASPHALT CURE SHALL BE PERMITTED. ALL OTHER ITEMS OF ITEM 206, CHEMICALLY STABILIZED SUBGRADE SHALL APPLY.

IN STREAM WORK

IN STREAM WORK IS NOT PERMITTED BETWEEN APRIL 15 THROUGH JUNE 30, IN ORDER TO PROTECT AQUATIC HABITAT:

ALSO NO WASTEWATER OF ANY KIND SHALL BE DISCHARGED INTO DUCK CREEK. NO STORAGE OF ANY IDLE EQUIPMENT, FUELS, LUBRICANTS, OR OTHER POTENTIALLY TOXIC OR HAZARDOUS MATERIALS SHALL BE PERMITTED WITHIN THE 100-YEAR FLOODPLAIN OF DUCK CREEK.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7pm-7am. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 56 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: GPS OPUS
MONUMENT TYPE: 30" x 3/4" IRON PIN W/ CAP

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 12A

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD-83 (2011) (EPOCH 2010.0000)
ELLIPSOID: (GRS-80)
MAP PROJECTION: LAMBERT CONFORMAL
COORDINATE SYSTEM: SPC (3402 OH SOUTH)
COMBINED SCALE FACTOR: 1.000080436
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. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 237.

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.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. 49 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 15 HOURS.

ITEM 203 - EMBANKMENT USING GRANULAR MATERIAL, TYPE C, AS PER PLAN

FURNISH DURABLE, NATURAL AGGREGATE NO. 8 SIZE. PLACE THE AGGREGATE AT THE THICKNESS AND SLOPE AS SHOWN ON THE CROSS-SECTIONS. WITH ITEM 204, GEOTEXTILE FABRIC ABOVE AND BELOW.

CHANNEL EMBANKMENTS

FILL AND SLOPE PORTIONS OF THE EXISTING CHANNEL TO DRAIN AS SHOWN IN THESE PLANS. IN CHANNEL EMBANKMENT AREAS WHICH WILL NOT SUPPORT ANY PORTION OF THE NEW ROAD BED OR STRUCTURAL EMBANKMENTS, THE CONTRACTOR MAY UTILIZE EMBANKMENT METHODS MEETING THE FOLLOWING REQUIREMENTS:

CLEAR ALL WEEDS AND BRUSH IN AREAS WHERE CHANNEL EMBANKMENTS ARE TO BE PLACED. THE REQUIREMENTS FOR MOISTURE, DENSITY CONTROL, BENCHING AND SUITABLE MATERIALS IS WAIVED. PLACE THE MATERIAL IN 8-INCH LOOSE LIFTS. THE ENGINEER MAY INCREASE THE LIFT THICKNESS IN ORDER TO BRIDGE THE SOFT OR WET FOUNDATIONS DEPENDING ON THE STABILITY OF THE FOUNDATION. THE ENGINEER MAY INCREASE THE LIFT THICKNESS UP TO 24-INCHES TO OBTAIN STABILITY AT THE TOP OF THE LIFT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 203, EMBANKMENT.

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GENERAL NOTES

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SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	8	8A	49	50	51	52	144	237		03/SAF/PV								
LS										LS			201	11000	LS		CLEARING AND GRUBBING	
				5				9		14			202	20010	14	EACH	HEADWALL REMOVED	
				7,544						7,544			202	23000	7,544	SY	PAVEMENT REMOVED	
				905						905			202	30000	905	SF	WALK REMOVED	
				727						727			202	30700	727	FT	CONCRETE BARRIER REMOVED	
				1,207						1,207			202	32000	1,207	FT	CURB REMOVED	
				134						134			202	32700	134	SY	GUTTER REMOVED	
			38	599				218		855			202	35100	855	FT	PIPE REMOVED, 24" AND UNDER	
				247				74		321			202	35200	321	FT	PIPE REMOVED, OVER 24"	
				5,069						5,069			202	38000	5,069	FT	GUARDRAIL REMOVED	
				1						1			202	58000	1	EACH	MANHOLE REMOVED	
				9						9			202	58100	9	EACH	CATCH BASIN REMOVED	
				50						50			SPECIAL	20270000	50	FT	FILL AND PLUG EXISTING CONDUIT	7
								578		578			SPECIAL	20270120	578	FT	PIPE CLEANOUT, 27" TO 48"	
	386									386			SPECIAL	20270130	386	FT	PIPE CLEANOUT OVER 48"	8
				2,080						2,080			202	75000	2,080	FT	FENCE REMOVED	
				LS						LS			202	98000	LS		REMOVAL MISC.: LIGHT TOWER RETAINING WALL	
				LS						LS			202	98000	LS		REMOVAL MISC.: TWO BLOCK RETAINING WALLS (20' AND 24' LONG)	
				84,444						84,444			203	10000	84,444	CY	EXCAVATION	
				71,640						71,640			203	20000	71,640	CY	EMBANKMENT	
				438						438			203	35110	438	CY	GRANULAR MATERIAL, TYPE B	
				4,768						4,768			203	35121	4,768	CY	GRANULAR MATERIAL, TYPE C, AS PER PLAN	6
		3								3			SPECIAL	20365000	3	EACH	SETTLEMENT PLATFORM	8A
15										15			204	45000	15	hour	PROOF ROLLING	
				1,124						1,124			206	10500	1,124	TON	CEMENT	
				28,564						28,564			206	11001	28,564	SY	CURING COAT, AS PER PLAN	6
										801			206	15010	801	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
										27,763			206	15030	27,763	SY	CEMENT STABILIZED SUBGRADE, 16 INCHES DEEP	
										18			518	12500	18	EACH	SCUPPER, MISC.: PLUG SCUPPER	61
										3,450			606	15050	3,450	FT	GUARDRAIL, TYPE MGS	
										3			606	26150	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E	7
										5			606	35002	5	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
										2			606	35102	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
										1			606	35103	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	8
				1,874						1,874			607	23000	1,874	FT	FENCE, TYPE CLT	
				1,159						1,159			607	70000	1,159	FT	FENCELINE SEEDING AND MULCHING	
				1,902						1,902			608	12000	1,902	SF	5" CONCRETE WALK	
										108			608	52000	108	SF	CURB RAMP	
										3,464			622	10160	3,464	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
										7			622	25000	7	EACH	CONCRETE BARRIER END SECTION, TYPE D	
										17			622	25050	17	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
										9			623	40500	9	EACH	REFERENCE MONUMENT	
			3							3			625	32000	3	EACH	GROUND ROD	
										42			626	00102	42	EACH	BARRIER REFLECTOR, TYPE 1, TYPE 1, 1 WAY	
										45			626	00110	45	EACH	BARRIER REFLECTOR, TYPE 2, TYPE 2, 1 WAY	
										3			626	00110	3	EACH	BARRIER REFLECTOR, TYPE 2, TYPE 2, BIDIRECTIONAL	
										LS			878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

GENERAL SUMMARY

HAM-71-6.86

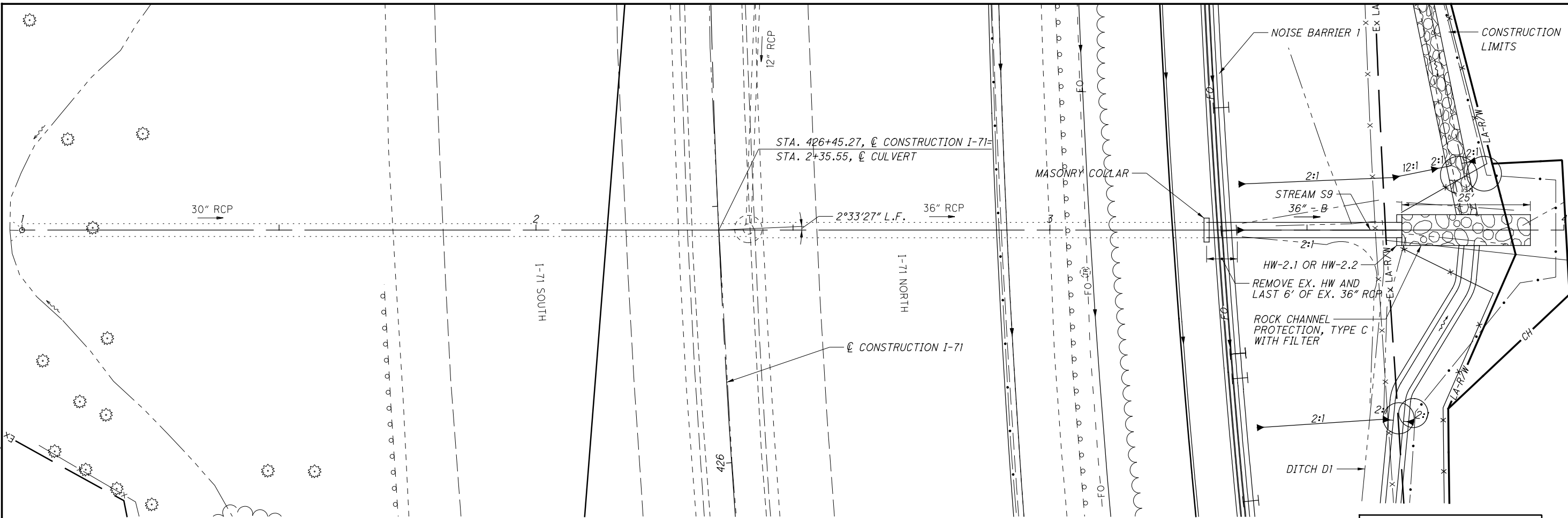
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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
8	15	50	51	52	53	55	144	148	209	223	03/SAF/PV								
					1.58		7.75							602	20000	9.33	CY	DRAINAGE CONCRETE MASONRY	
							1.43							602	20001	1.43	CY	CONCRETE MASONRY, AS PER PLAN	155
						14,321								605	11100	14,321	FT	6" SHALLOW PIPE UNDERDRAINS, 707.31, 707.41	
						376								605	13300	376	FT	6" UNCLASSIFIED PIPE UNDERDRAINS, 707.31, 707.41	
						5,898								605	14000	5,898	FT	6" BASE PIPE UNDERDRAINS, 707.31, 707.41	
									266					605	98000	266	FT	UNDERDRAINS, MISC.: BARRIER DRAINAGE	209
									18					611	00410	18	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
						537								611	00510	537	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
										310				611	00900	310	FT	6" CONDUIT, TYPE B	
100														611	00900	100	FT	6" CONDUIT, TYPE B FOR DRAINAGE CONNECTION	
100														611	01100	100	FT	6" CONDUIT, TYPE C FOR DRAINAGE CONNECTION	
100														611	01400	100	FT	6" CONDUIT, TYPE E FOR DRAINAGE CONNECTION	
100														611	01500	100	FT	6" CONDUIT, TYPE F FOR DRAINAGE CONNECTION	
					6									611	04600	6	FT	12" CONDUIT, TYPE C	
					276		57							611	05900	333	FT	15" CONDUIT, TYPE B	
					4									611	06100	4	FT	15" CONDUIT, TYPE C	
					96		291							611	06700	387	FT	15" CONDUIT, TYPE F	
					340									611	07400	340	FT	18" CONDUIT, TYPE B	
					129									611	07600	129	FT	18" CONDUIT, TYPE C	
							29							611	08700	29	FT	21" CONDUIT, TYPE A, 706.02	
					346									611	10600	346	FT	24" CONDUIT, TYPE C	
					4									611	12100	4	FT	27" CONDUIT, TYPE C	
					239									611	13400	239	FT	30" CONDUIT, TYPE B	
					235									611	13600	235	FT	30" CONDUIT, TYPE C	
							42							611	16201	42	FT	36" CONDUIT, TYPE A, AS PER PLAN	158
							38							611	16400	38	FT	36" CONDUIT, TYPE B	
							36							611	19201	36	FT	42" CONDUIT, TYPE A, AS PER PLAN	157
							35							611	20700	35	FT	48" CONDUIT, TYPE A, 706.02	
					52									611	21100	52	FT	48" CONDUIT, TYPE C	
							44							611	23600	44	FT	60" CONDUIT, TYPE A, 706.02	
							386							611	97400	386	FT	CONDUIT, MISC.: 60" CONDUIT REHABILITATION	162
								35						611	97400	35	FT	CONDUIT, MISC.: 12' X 9' CONDUIT, TYPE A, 706.05, DESIGN COVER 3 FT	146-147
					1									611	98150	1	EACH	CATCH BASIN, NO. 3	
					4									611	98180	4	EACH	CATCH BASIN, NO. 3A	
					2									611	98470	2	EACH	CATCH BASIN, NO. 2-2B	
					2									611	98510	2	EACH	CATCH BASIN, NO. 2-3	
					6									611	99114	6	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
					10		1							611	99574	11	EACH	MANHOLE, NO. 3	
						5			2					611	99710	7	EACH	PRECAST REINFORCED CONCRETE OUTLET	
							285							611	96550	285	FT	FIELD PAVING OF EXISTING PIPE, 36" CMP	
							311							611	96550	311	FT	FIELD PAVING OF EXISTING PIPE, 42" CMP	
							660							611	97400	660	FT	CONDUIT, MISC.:VIDEO LOG	
							112							611	97400	112	FT	CONDUIT, MISC.:CURED-IN-PLACE PIPE LINER (15")	
							262							611	97400	262	FT	CONDUIT, MISC.:CURED-IN-PLACE PIPE LINER (36")	
							286							611	97400	286	FT	CONDUIT, MISC.:CURED-IN-PLACE PIPE LINER (42")	
																		PAVEMENT	
	1,200				180									254	01000	1,380	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
					6,158									302	46000	6,158	CY	ASPHALT CONCRETE BASE, PG64-22	
					4,780									304	20000	4,780	CY	AGGREGATE BASE	
					1,689									407	10000	1,689	GAL	TACK COAT	
					34									407	20000	34	GAL	NON-TRACKING TACK COAT	
					664									442	00100	664	CY	ANTI-SEGREGATION EQUIPMENT	
					43									442	10000	43	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
					1,082									442	10100	1,082	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)	
					5,556									452	16060	5,556	SY	13.5" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1 WITH QC/QA	
				72										609	24510	72	FT	CURB, TYPE 4-C	
														609	26000	1,525	FT	CURB, TYPE 6	
		347	1,525	190										609	50000	537	SY	4" CONCRETE TRAFFIC ISLAND	

GENERAL SUMMARY

HAM-71-6.86

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CALCULATED JMD CHECKED FES

CULVERT DETAIL
I-71 STA. 426+45.27

HAM-71-6.86

ESTIMATED QUANTITIES TO BE CARRIED TO THE CULVERT SUBSUMMARY

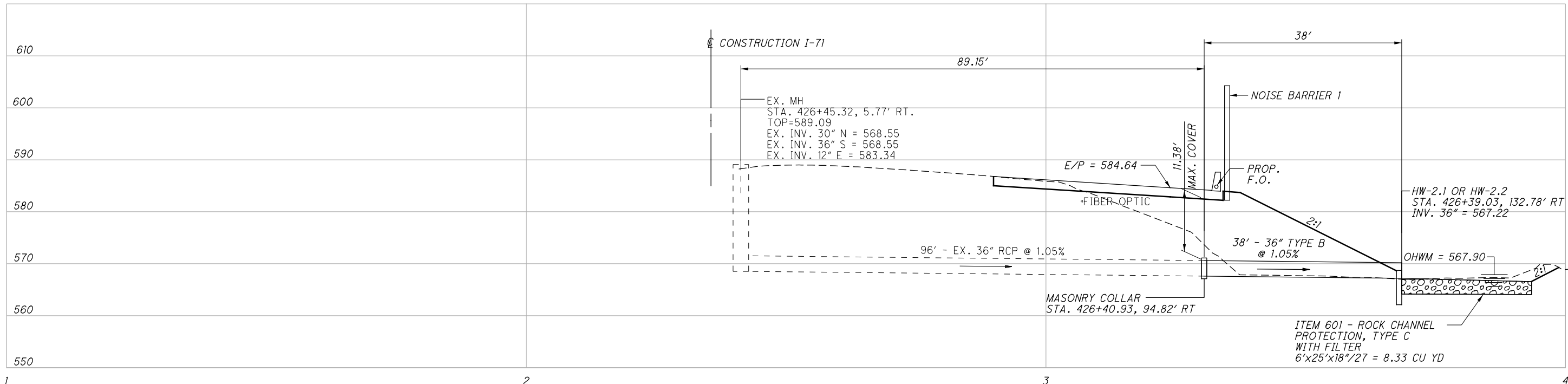
ITEM	DESCRIPTION	TOTAL	UNIT
202	HEADWALL REMOVED	1	EACH
202	PIPE REMOVED, OVER 24"	6	FT
202	PIPE CLEANOUT, 27" TO 48"	238	FT
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	8.33	CY
602	CONCRETE MASONRY	0.76	CY
611	36" CONDUIT, TYPE B	38	FT

FILL BELOW OHWM STREAM S9

MATERIAL	LENGTH (FT)	SURFACE AREA (ACRE)	VOLUME (CY)
CONCRETE	38	0.0026	4
ROCK	25	0.0035	8
EARTH	57	0.0024	2

HYDRAULIC DESIGN DATA

OHWM	= 567.90
pH	= 6.3
ABRASION LEVEL: 3	
EXISTING STRUCTURE	
TYPE:	36" RCP
SKEW:	2°33'27"
ALIGNMENT:	TANGENT
LENGTH:	96 FT
DATE BUILT:	1969

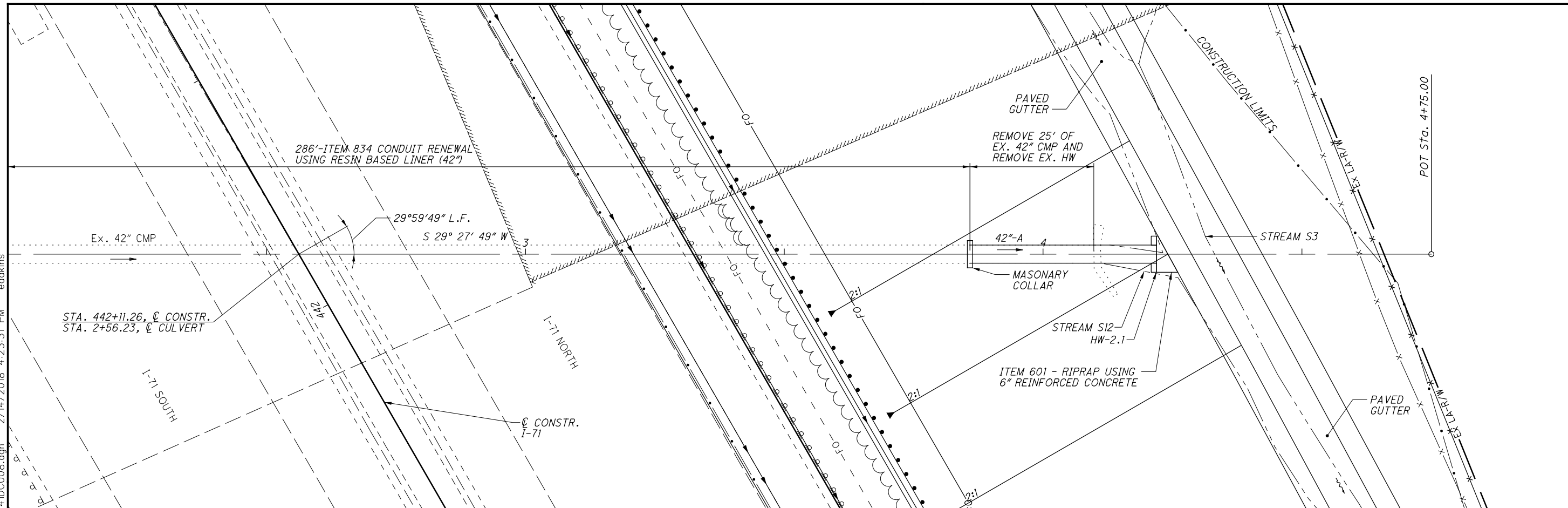


ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
6'x25'x18"/27 = 8.33 CU YD

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SCALE IN FEET



ESTIMATED QUANTITIES TO BE CARRIED TO THE CULVERT SUBSUMMARY

ITEM	DESCRIPTION	TOTAL	UNIT
202	HEADWALL REMOVED	1	EACH
202	PIPE REMOVED, OVER 24"	25	FT
601	RIPRAP	1.74	SY
602	CONCRETE MASONRY	0.92	CY
611	42" CONDUIT, TYPE A, AS PER PLAN	36	FT
611	FIELD PAVING OF EXISTING PIPE, 42" CMP	311	FT
611	CONDUIT MISC.: VIDEO LOG	286	FT
611	CONDUIT MISC.: CURED-IN-PLACE PIPE LINER (42")	286	FT

FILL BELOW OHWM STREAM S12

MATERIAL	LENGTH (FT)	SURFACE AREA (ACRE)	VOLUME (CY)
STEEL	36	0.0029	2
CONCRETE	3	0.0003	3
EARTH	10	0.0010	3

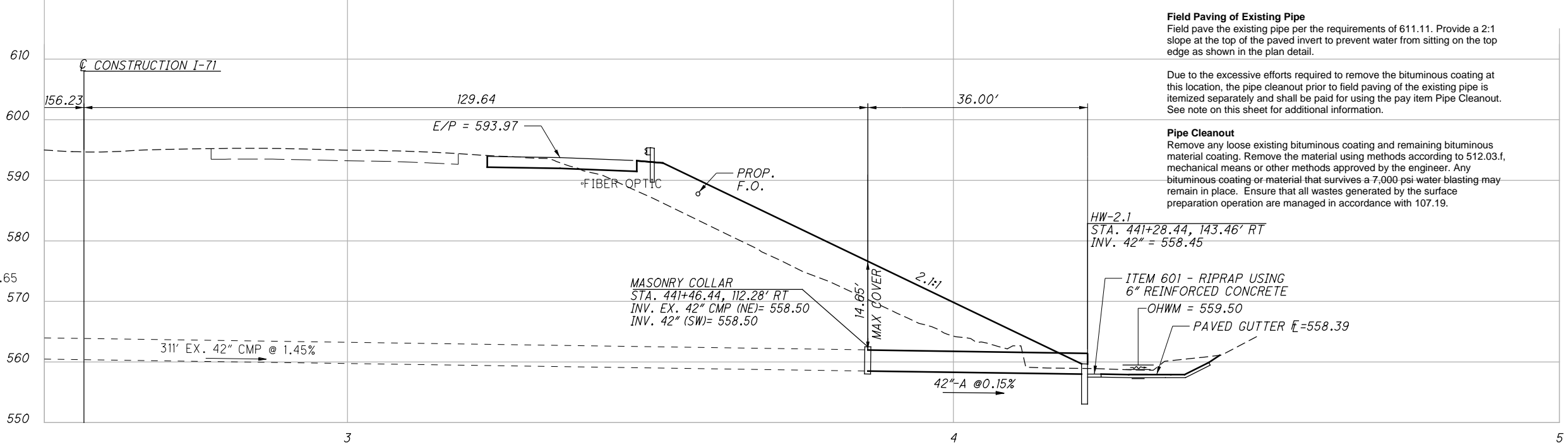
HYDRAULIC DESIGN DATA

OHWM = 559.50
DESIGN SERVICE LIFE = 75 YRS.
pH = 6.3
ABRASION LEVEL: 2

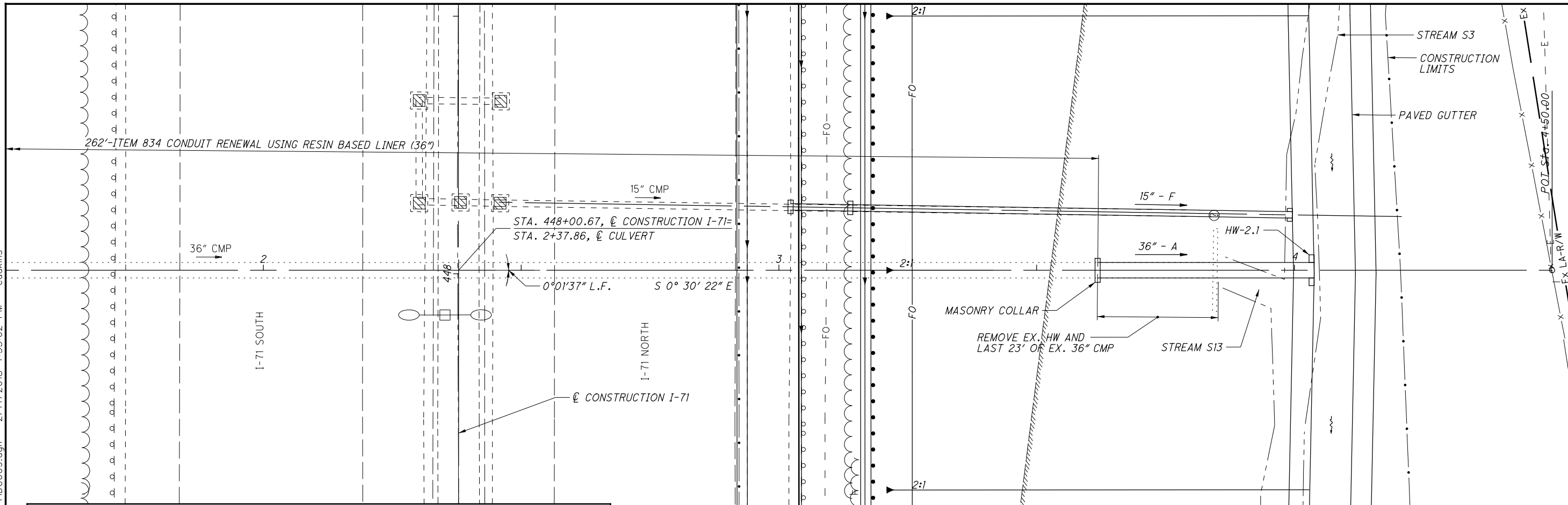
EXISTING STRUCTURE

TYPE: 42" CMP PIPE
SKEW: 29°59'49" L.F.
ALIGNMENT: TANGENT
LENGTH: 311 FT
DATE BUILT: 1969

42" CONDUIT, TYPE A, AS PER PLAN
THE FOLLOWING PIPE ALTERNATES ARE PERMITTED FOR THIS CULVERT EXTENSION:
42" CONDUIT, TYPE A, 707.01 (0.102) ALUMINIZED OR 707.02 (0.102) ALUMINIZED, 707.05 (0.168), 707.07 (0.168), 707.05 (0.051) ALUMINIZED, 707.07 (0.051) ALUMINIZED, 707.04 (1/2") (0.064), 707.04 (1") (0.064), 707.02 (0.063) W CFP, 707.03 (0.109) INVERT PLATES



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CALCULATED JMD CHECKED FES
CULVERT DETAIL
I-71 STA. 448+00.67

HAM-71-6.86

ESTIMATED QUANTITIES TO BE CARRIED TO THE CULVERT SUBSUMMARY

ITEM	DESCRIPTION	TOTAL	UNIT
202	HEADWALL REMOVED	1	EACH
202	PIPE REMOVED, OVER 24"	23	FT
602	CONCRETE MASONRY	0.76	CY
611	36" CONDUIT, TYPE A, AS PER PLAN	42	FT
611	FIELD PAVING OF EXISTING PIPE, 36" CMP	285	FT
611	CONDUIT MISC.: VIDEO LOG	262	FT
611	CONDUIT MISC.: CURED-IN-PLACE PIPE LINER (36")	262	FT

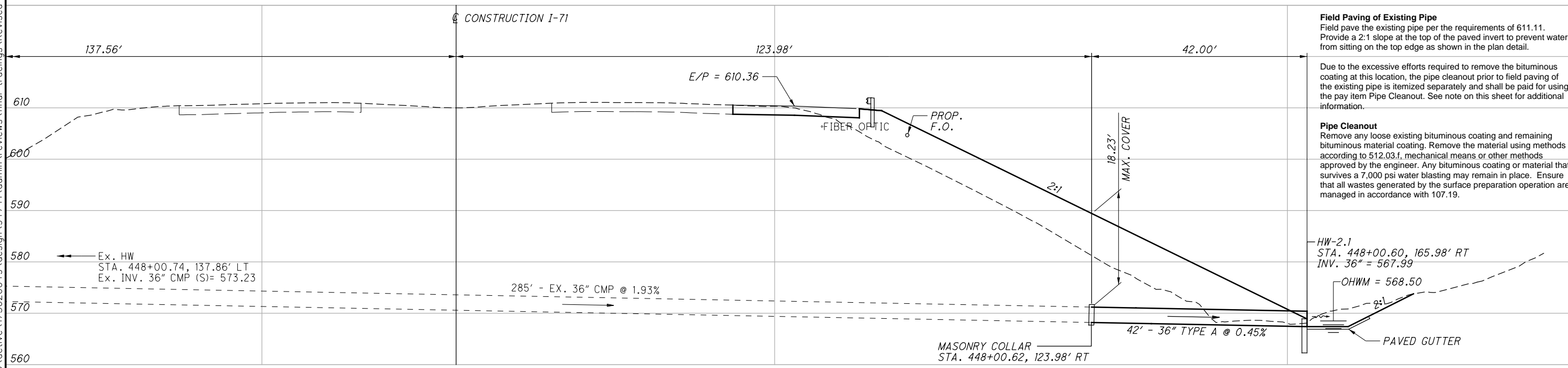
36" CONDUIT, TYPE A, AS PER PLAN
 THE FOLLOWING PIPE ALTERNATES ARE PERMITTED FOR THIS CULVERT EXTENSION:
 36" CONDUIT, TYPE A, 707.01 (0.081) ALUMINIZED OR 707.02 (0.081) ALUMINIZED, 707.05 (0.138), 707.07 (0.138), 707.05 (0.051) ALUMINIZED, 707.07 (0.051) ALUMINIZED, 707.04 (1/2") (0.064), 707.04 (1") (0.064), 707.02 (0.063) W CFP, 707.03 (0.109) INVERT PLATES

FILL BELOW OHWM FOR STREAM S13

MATERIAL	LENGTH (FT)	SURFACE AREA (ACRE)	VOLUME (CY)
STEEL	33	0.0026	2
EARTH	9	0.0020	2

HYDRAULIC DESIGN DATA

OHWM	= 568.50
DESIGN SERVICE LIFE	= 75 YRS.
pH	= 6.5
ABRASION LEVEL:	2
EXISTING STRUCTURE	
TYPE:	36" CMP
SKWE:	0°01'37" L.F.
ALIGNMENT:	TANGENT
LENGTH:	285 FT
DATE BUILT:	1969



Field Paving of Existing Pipe
 Field pave the existing pipe per the requirements of 611.11. Provide a 2:1 slope at the top of the paved invert to prevent water from sitting on the top edge as shown in the plan detail.

Due to the excessive efforts required to remove the bituminous coating at this location, the pipe cleanout prior to field paving of the existing pipe is itemized separately and shall be paid for using the pay item Pipe Cleanout. See note on this sheet for additional information.

Pipe Cleanout
 Remove any loose existing bituminous coating and remaining bituminous material coating. Remove the material using methods according to 512.03.f, mechanical means or other methods approved by the engineer. Any bituminous coating or material that survives a 7,000 psi water blasting may remain in place. Ensure that all wastes generated by the surface preparation operation are managed in accordance with 107.19.

HW-2.1
 STA. 448+00.60, 165.98' RT
 INV. 36" = 567.99

OHWM = 568.50

PAVED GUTTER

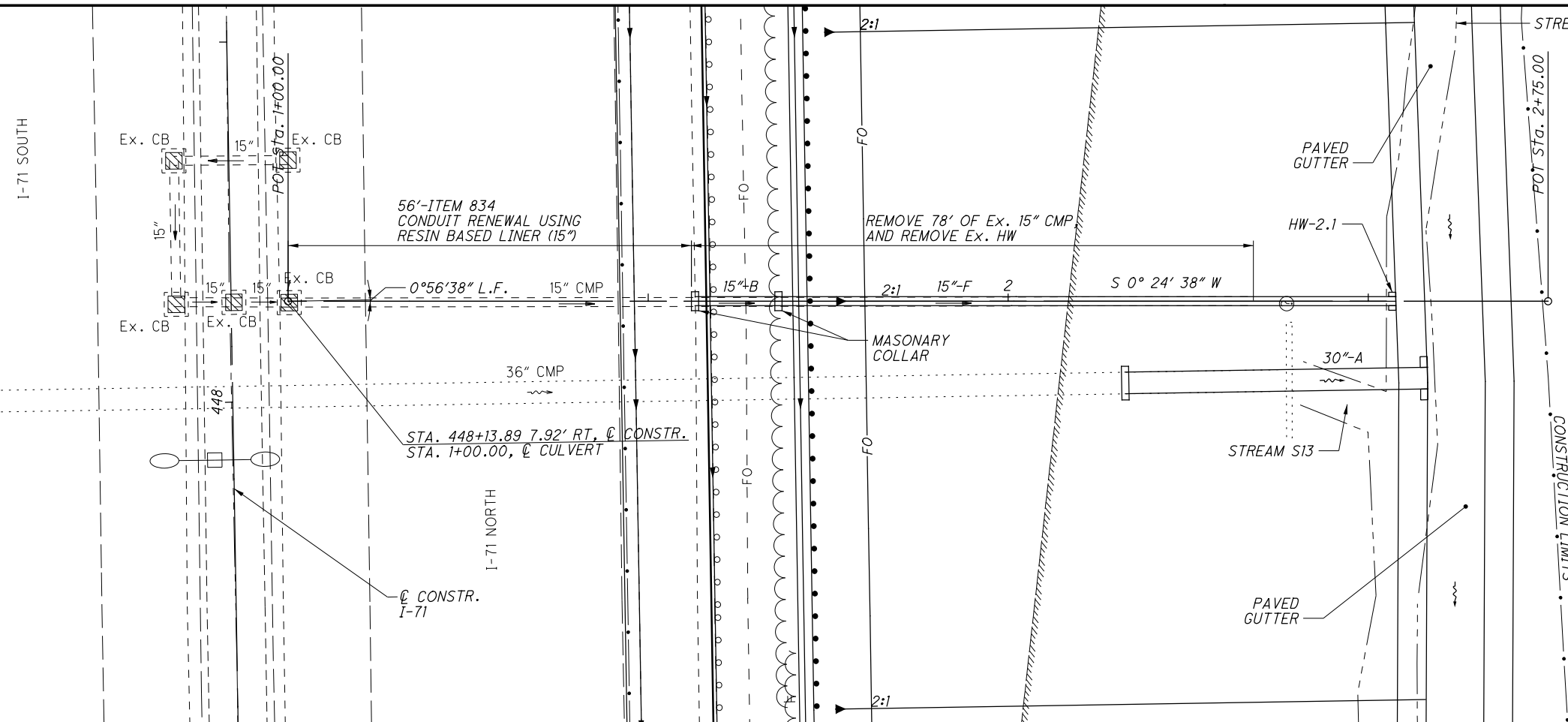
MASONRY COLLAR
 STA. 448+00.62, 123.98' RT

2

3

4

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ITEM 611 – conduit MISC.: Cured-in-place pipe liner, 15", 36", 42", Type C

INSTALL A CONTINUOUS (JOINT-LESS) CURED-IN-PLACE PIPELINER SYSTEM TO LINE THE INTERIOR OF THE HOST PIPE TO BE REHABILITATED. THE LINER PIPE MUST BE ABLE TO MOLD ITSELF OR FIT TIGHTLY TO THE SHAPE OF THE EXISTING PIPE. THE LINER MUST PROVIDE FOR COMPLETE STRUCTURAL INTEGRITY, INDEPENDENT OF THE LOAD BEARING CAPACITY OF THE EXISTING HOST PIPE. THE PIPELINER MUST BE CAPABLE OF CONFORMING TO THE PIPELINE BENDS IN THE HOST PIPE WITHOUT SPLITTING, RUPTURING, OR WRINKLING OF THE PIPE LINER MATERIAL. THE LINING MUST PROVIDE A FLOW CAPACITY EQUAL TO, OR GREATER THAN, THAT OF THE HOST PIPE PRIOR TO REHABILITATION. CURED-IN-PLACE PIPELINERS SHALL CONFORM TO ASTM D5813 AND BE DESIGNED ACCORDING TO ASTM F1216 AS A FULLY DETERIORATED GRAVITY PIPE. REFER TO SUPPLEMENTAL SPECIFICATION 833, SPECIFICALLY SECTION 833.04 ITEM 1, AND TABLES 833.01 AND 833.03 FOR THE DESIGN PARAMETERS.

INSTALLATION SHALL BE PER ASTM F 1216, ASTM F 1743, ASTM 2019 AND PER THE MANUFACTURER'S RECOMMENDATIONS.

INSPECT THE EXISTING HOST PIPE USING EXPERIENCED PERSONNEL TRAINED IN LOCATING BREAKS, OBSTACLES, AND SERVICE CONNECTIONS BY CLOSED-CIRCUIT TELEVISION OR MAN ENTRY BEFORE AND AFTER INSTALLATION OF THE PIPELINER. CLEAN, REMOVE DEBRIS, AND REPAIR CONDUIT WALLS AND JOINTS PRIOR TO INSTALLING THE PIPELINER. RESTORE ACTIVE SERVICE CONNECTIONS AFTER INSTALLATION OF THE PIPELINER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611, CONDUIT MISC.; CURED-IN-PLACE PIPE LINER.

ITEM 611 – conduit, misc.: video log

PERFORM A VIDEO LOG OF THE 30" DIAMETER DRAINAGE SYSTEM ON TWO OCCASIONS. PERFORM THE FIRST VIDEO LOG PRIOR TO ACCEPTANCE OF THE PIPE CLEANOUT BY THE ENGINEER AND THE APPLICATION OF THE PIPE LINER. PERFORM THE SECOND VIDEO LOG AFTER THE INSTALLATION OF THE CURED-IN-PLACE PIPE LINER IS COMPLETE.

IF A BLOCKAGE IS ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND THE



CALCULATED JAH
CHECKED FES

CULVERT DETAIL
I-71 STA. 448+13.89

HAM-71-6.86
159
253

ESTIMATED QUANTITIES TO BE CARRIED TO THE CULVERT SUBSUMMARY

ITEM	DESCRIPTION	TOTAL	UNIT
202	HEADWALL REMOVED	1	EACH
202	PIPE REMOVED, 24" AND UNDER	78	FT
602	CONCRETE MASONRY	0.27	CY
611	15" CONDUIT, TYPE B	12	FT
611	15" CONDUIT, TYPE F	113	FT
611	CONDUIT MISC.: VIDEO LOG	56	FT
611	CONDUIT MISC.: CURED-IN-PLACE PIPE LINER (15")	56	FT

FILL BELOW OHWM FOR STREAM S3

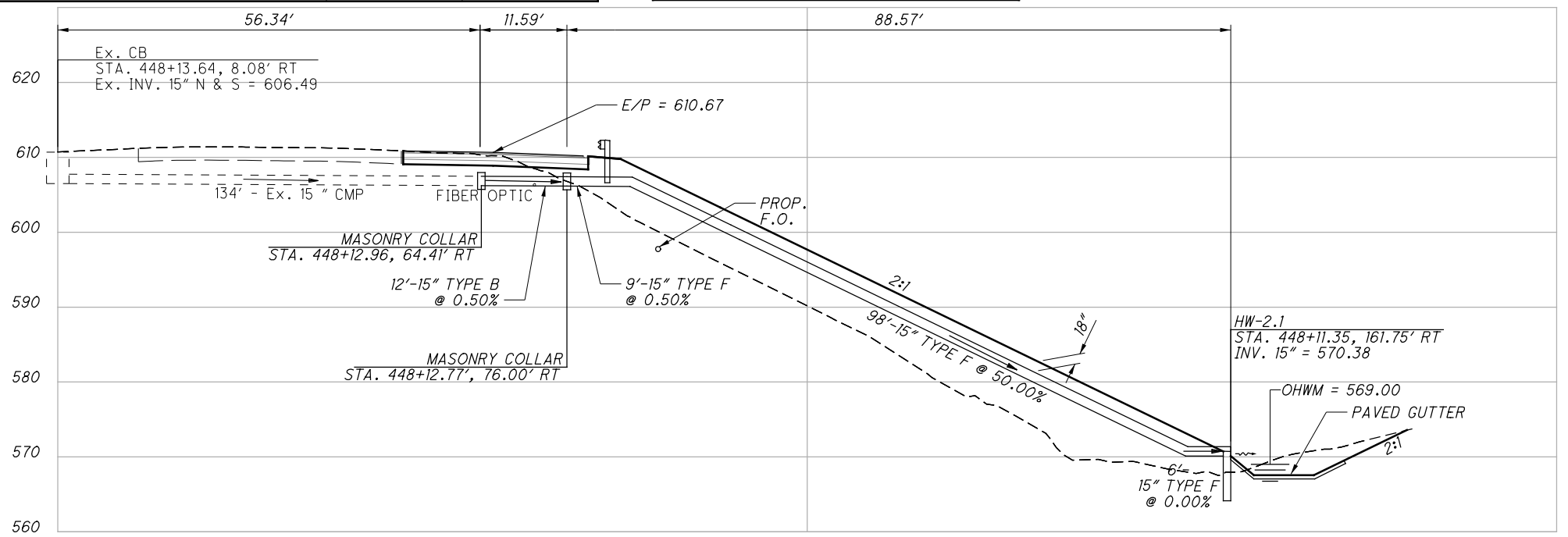
MATERIAL	LENGTH (FT)	SURFACE AREA (ACRE)	VOLUME (CY)
CONCRETE	1	0.0001	0.5
EARTH	3	0.0001	1

HYDRAULIC DESIGN DATA

OHWM = 569.00
pH = 6.3
ABRASION LEVEL: 4

EXISTING STRUCTURE

TYPE: 15" CMP PIPE
SKEW: 0°56'38" L.F.
ALIGNMENT: TANGENT
LENGTH: 134 FT
DATE BUILT: 1969



1

2

3

FILL BELOW OHWM

MATERIAL	LENGTH (FT)	SURFACE AREA (AC)	VOLUME (CY)
CONCRETE	54	0.0041	4
EARTH	34	0.0236	5

PROPOSED STRUCTURE

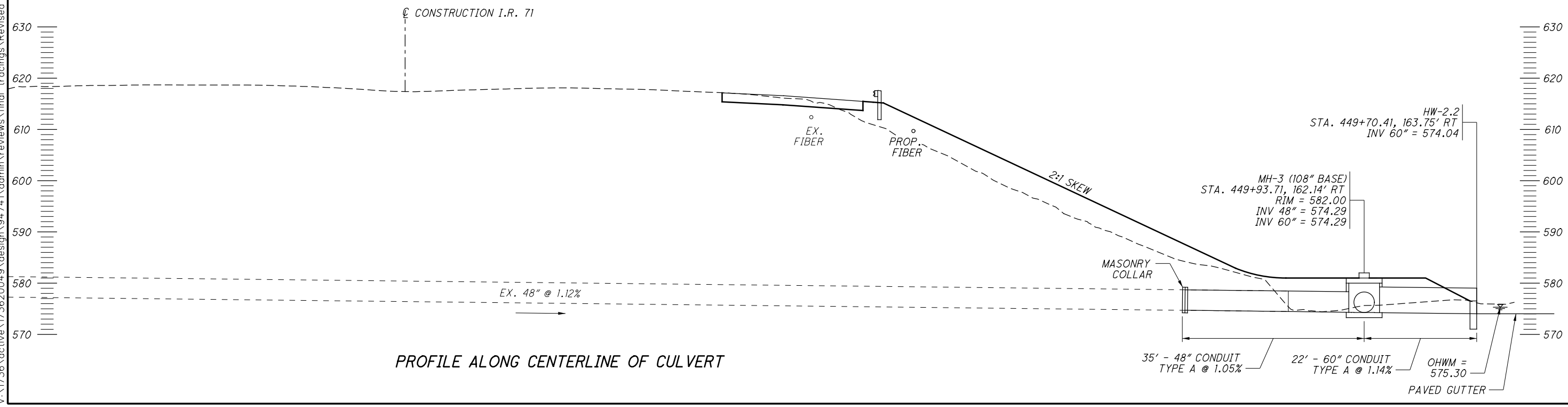
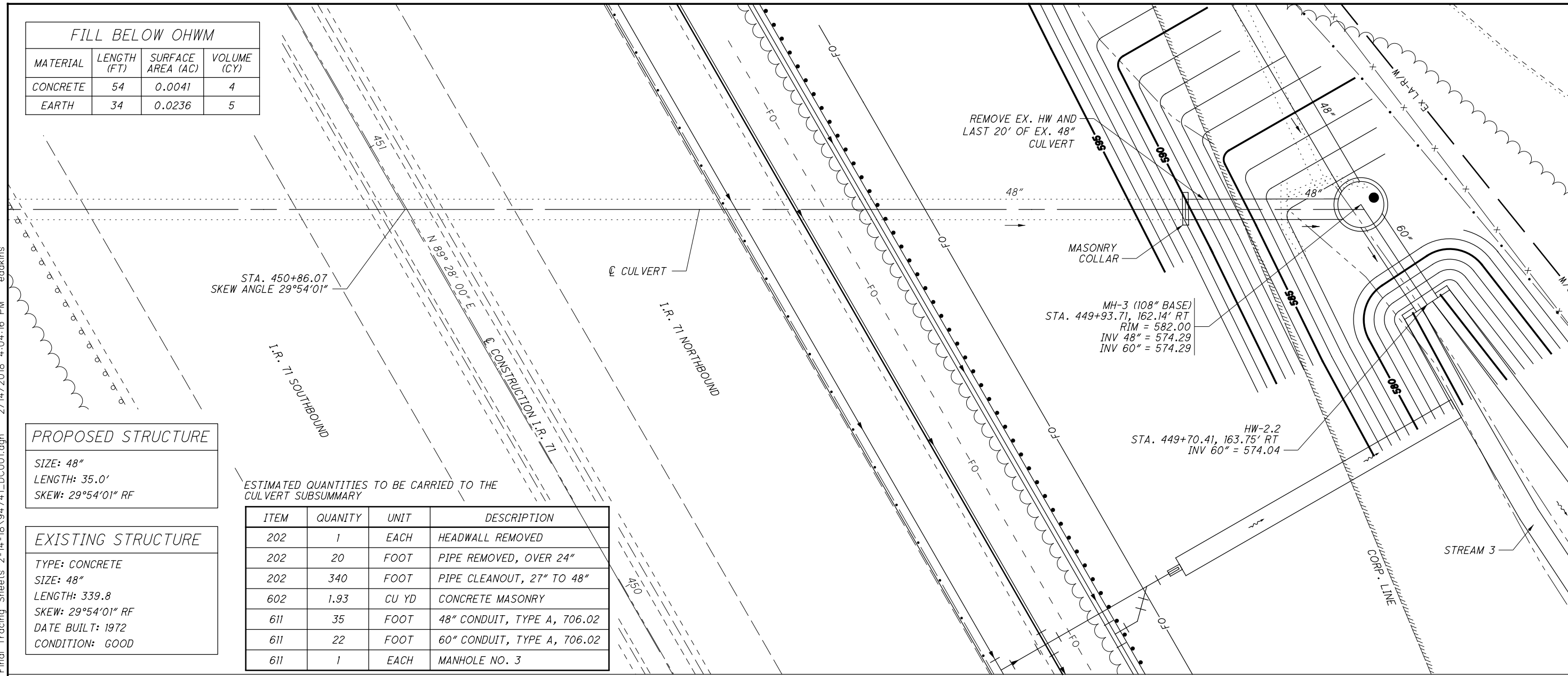
SIZE: 48"
LENGTH: 35.0'
SKEW: 29°54'01" RF

EXISTING STRUCTURE

TYPE: CONCRETE
SIZE: 48"
LENGTH: 339.8
SKEW: 29°54'01" RF
DATE BUILT: 1972
CONDITION: GOOD

ESTIMATED QUANTITIES TO BE CARRIED TO THE CULVERT SUBSUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	EACH	HEADWALL REMOVED
202	20	FOOT	PIPE REMOVED, OVER 24"
202	340	FOOT	PIPE CLEANOUT, 27" TO 48"
602	1.93	CU YD	CONCRETE MASONRY
611	35	FOOT	48" CONDUIT, TYPE A, 706.02
611	22	FOOT	60" CONDUIT, TYPE A, 706.02
611	1	EACH	MANHOLE NO. 3



PROFILE ALONG CENTERLINE OF CULVERT

CULVERT DETAIL SHEET
STA. 450+86.07

HAM-71-6.86

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CALCULATED
JAH
CHECKED
FES

0 5 10 20
HORIZONTAL
SCALE IN FEET

CULVERT DETAIL
I-71 STA. 458+51.00

HAM-71-6.86

161
253

ITEM 611 – conduit MISC.: Cured-in-place pipe liner, 15", 36", 42", Type C

INSTALL A CONTINUOUS (JOINT-LESS) CURED-IN-PLACE PIPELINER SYSTEM TO LINE THE INTERIOR OF THE HOST PIPE TO BE REHABILITATED. THE LINER PIPE MUST BE ABLE TO MOLD ITSELF OR FIT TIGHTLY TO THE SHAPE OF THE EXISTING PIPE. THE LINER MUST PROVIDE FOR COMPLETE STRUCTURAL INTEGRITY, INDEPENDENT OF THE LOAD BEARING CAPACITY OF THE EXISTING HOST PIPE. THE PIPELINER MUST BE CAPABLE OF CONFORMING TO THE PIPELINE BENDS IN THE HOST PIPE WITHOUT SPLITTING, RUPTURING, OR WRINKLING OF THE PIPE LINER MATERIAL. THE LINING MUST PROVIDE A FLOW CAPACITY EQUAL TO, OR GREATER THAN, THAT OF THE HOST PIPE PRIOR TO REHABILITATION. CURED-IN-PLACE PIPELINERS SHALL CONFORM TO ASTM D5813 AND BE DESIGNED ACCORDING TO ASTM F1216 AS A FULLY DETERIORATED GRAVITY PIPE. REFER TO SUPPLEMENTAL SPECIFICATION 833, SPECIFICALLY SECTION 833.04 ITEM 1. AND TABLES 833.01 AND 833.03 FOR THE DESIGN PARAMETERS.

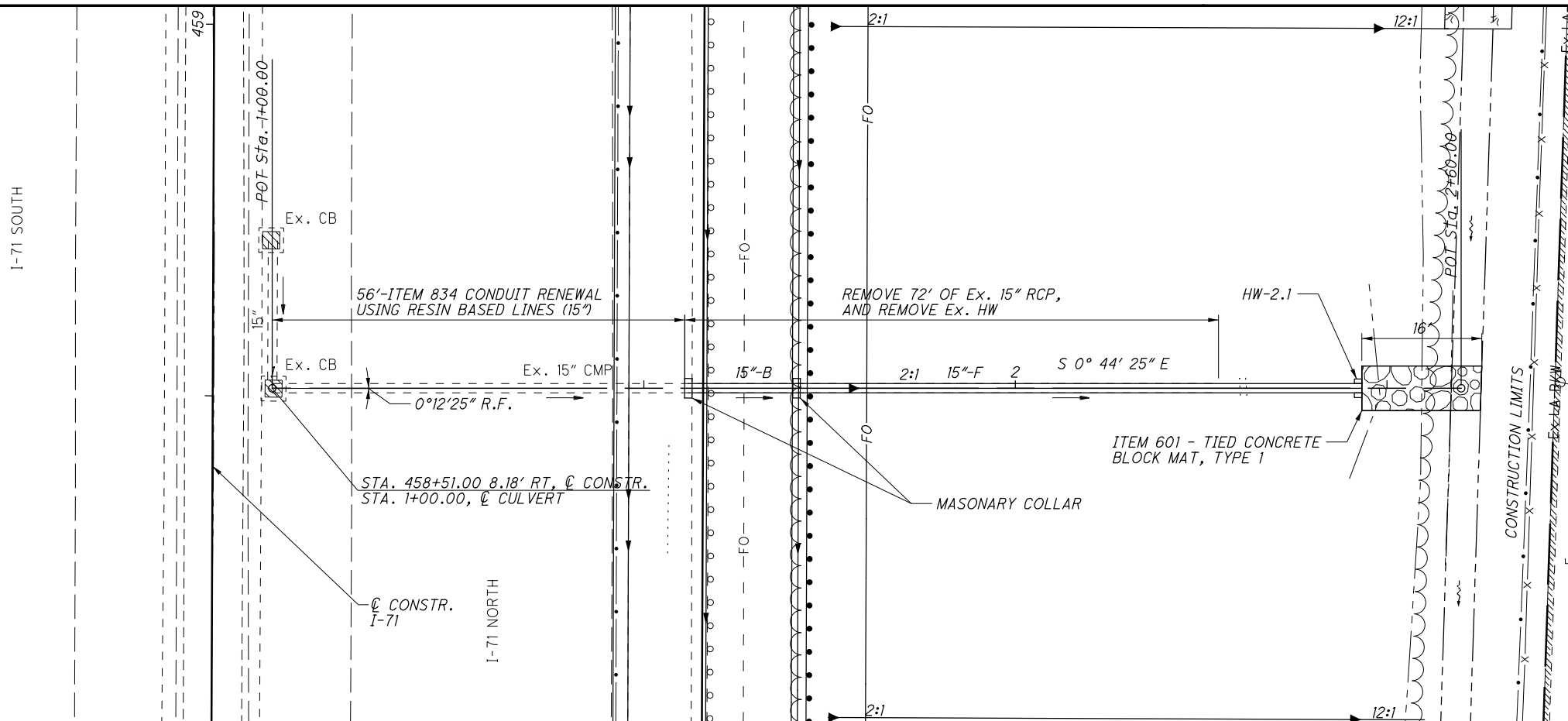
INSTALLATION SHALL BE PER ASTM F 1216, ASTM F 1743, ASTM 2019 AND PER THE MANUFACTURER'S RECOMMENDATIONS.

INSPECT THE EXISTING HOST PIPE USING EXPERIENCED PERSONNEL TRAINED IN LOCATING BREAKS, OBSTACLES, AND SERVICE CONNECTIONS BY CLOSED-CIRCUIT TELEVISION OR MAN ENTRY BEFORE AND AFTER INSTALLATION OF THE PIPELINER. CLEAN, REMOVE DEBRIS, AND REPAIR CONDUIT WALLS AND JOINTS PRIOR TO INSTALLING THE PIPELINER. RESTORE ACTIVE SERVICE CONNECTIONS AFTER INSTALLATION OF THE PIPELINER. PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611, CONDUIT MISC.: CURED-IN-PLACE PIPE LINER.

ITEM 611 – conduit, misc.: video log

PERFORM A VIDEO LOG OF THE 30" DIAMETER DRAINAGE SYSTEM ON TWO OCCASIONS. PERFORM THE FIRST VIDEO LOG PRIOR TO ACCEPTANCE OF THE PIPE CLEANOUT BY THE ENGINEER AND THE APPLICATION OF THE PIPE LINER. PERFORM THE SECOND VIDEO LOG AFTER THE INSTALLATION OF THE CURED-IN-PLACE PIPE LINER IS COMPLETE.

IF A BLOCKAGE IS ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND THE

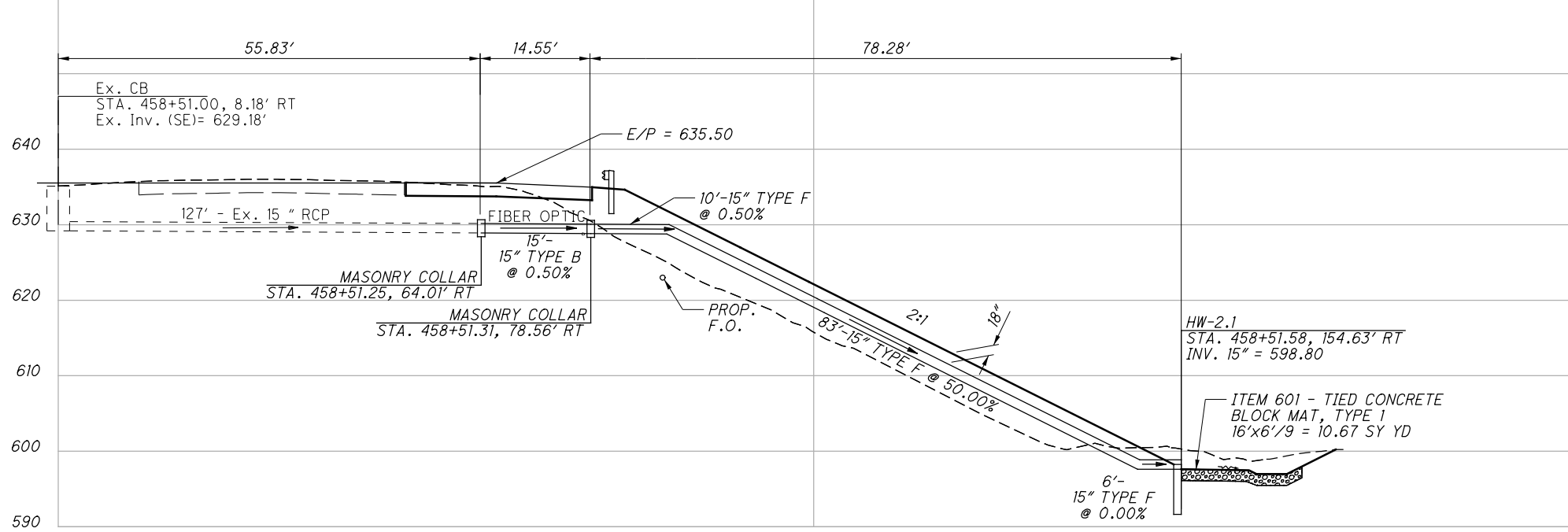


ESTIMATED QUANTITIES TO BE CARRIED TO THE CULVERT SUBSUMMARY

ITEM	DESCRIPTION	TOTAL	UNIT
202	HEADWALL REMOVED	1	EACH
202	PIPE REMOVED, 24" AND UNDER	72	FT
601	TIED CONCRETE BLOCK MAT, TYPE 1	11	SY
602	CONCRETE MASONRY	0.27	CY
611	15" CONDUIT, TYPE B	15	FT
611	15" CONDUIT, TYPE F	99	FT
611	CONDUIT MISC.: VIDEO LOG	56	FT
611	CONDUIT MISC.: CURED-IN-PLACE PIPE LINER (15")	56	FT

EXISTING STRUCTURE

TYPE:	15" RCP
SKEW:	0°12'25" R.F.
ALIGNMENT:	TANGENT
LENGTH:	127 FT
DATE BUILT:	1969



ITEM 606 - SPECIAL - NOISE BARRIER

CONCRETE POSTS SHALL BE USED. USE AN INTEGRAL POST CAP, NOT NON-INTEGRAL.

THE CONTRACTOR SHALL BE PAID FOR SQUARE FOOT OF NOISE BARRIER AS CALLED FOR IN PLANS. ANY ADDITIONAL SQUARE FEET SHALL BE AT THE CONTRACTOR'S EXPENSE EXCEPT WHEN THE EXISTING GROUND LINE ALONG THE WALL, AS FIELD MEASURED, IS LOWER THAN WHAT IS SHOWN IN THE PLANS BY AN AMOUNT REQUIRING AN ADDITIONAL EQUIVALENT ADDED TO THE PROPOSED MEDIAN THEORETICAL TOP OF WALL. THE SQUARE FOOT UNIT PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND THE USE OF ALL EQUIPMENT AND TOOLS REQUIRED TO CONSTRUCT THE NOISE BARRIER AS SHOWN IN THESE PLANS.

THE CALCULATED NOISE WALL AREA SHOWN IN THE PLANS IS BASED UPON A 1-FOOT INCREMENTAL PANEL HEIGHT. IF THE PANELS SUPPLIED HAVE GREATER MINIMUM INCREMENTS AND THEREFORE EXTEND ABOVE THE TOP OF WALL ELEVATION OR BELOW THE BOTTOM OF WALL ELEVATION, AS SHOWN IN THE PLANS, THE ADDITIONAL WALL AREA WILL NOT BE INCLUDED IN THE MEASURED AREA FOR PAYMENT.

PRIOR TO THE CREATION OF THE SHOP DRAWINGS, THE CONTRACTOR SHALL PERFORM A FIELD SURVEY. UTILITY LOCATIONS SHALL BE INCLUDED IN THIS SURVEY BUT SHALL BE PERFORMED BY THE OWNER OF THE UTILITY. THIS INFORMATION SHALL BE SHOWN ON THE SHOP DRAWINGS AND ALL FOUNDATIONS MOVED TO AVOID ANY UNDERGROUND FEATURES.

THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE DISTRICT AND APPROVED BY THE PROJECT ENGINEER PRIOR TO THE START OF CONSTRUCTION.

FORMLINER: PROVIDE A MINIMUM PATTERN RELIEF OF 1/2" FOR ALL AREAS OF THE FORMLINER. PATTERNS WITH A RELIEF OF LESS THAN 1/2" WILL NOT BE ACCEPTED.

COPING: PROVIDE A 12" WIDE INTEGRAL SMOOTH COPING FOR ALL NOISE BARRIER POSTS AND PANELS. A RUSTIFICATION GROOVE OF AT LEAST 1" DEEP SHALL BE UTILIZED AT THE BASE OF THE SMOOTH COPING.

FOR POSTS 21, 22 AND 23 THE COMBINATION OF PANEL HEIGHT AND POST SPACING EXCEEDS THE PERMISSIBLE RANGE IN THE NOISE WALL STANDARD DRAWINGS, NBS-1-09. AS SUCH, THE NOISE WALL POST SHALL BE DESIGNED BY THE FABRICATOR AND APPROVED BY ODOT. THE TOP OF SHAFT ELEVATION PROVIDED ASSUMES A POST DESIGNED UTILIZING A 23-FOOT TALL PANEL AND THE ASSOCIATIVE HARDWARE AT THE BASE OF THE WALL.

FOR POSTS 5, 9 AND 20 THE DEFLECTION ANGLE IS OUTSIDE THE RANGE IN THE NOISE WALL STANDARD DRAWINGS, NBS-1-09. AS SUCH, THE NOISE WALL POST SHALL BE DESIGNED BY THE FABRICATOR AND APPROVED BY ODOT.

ITEM 605 - UNDERDRAINS, MISC.: BARRIER DRAINAGE

THIS ITEM SHALL BE USED TO INSTALL DRAINAGE IN SLOPED AREAS AS DIRECTED BY THE ENGINEER. DETAILS ARE PROVIDED IN NBS-1-09 AND ON THE TYPICAL SLOPED SECTION ON THIS SHEET.

PAYMENT WILL INCLUDE THE COST TO CONSTRUCT THE TRENCH, BACKFILL WITH STONE, TYPE F UNDERDRAIN OUTLETS, TIED CONCRETE BLOCK MAT, PRECAST REINFORCED CONCRETE OUTLETS, AND OTHER MINOR RESTORATION WORK AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:
 ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 1.....3.6 SY
 ITEM 605 - UNDERDRAINS, MISC.: BARRIER DRAINAGE.....319 FT
 ITEM 611 - 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET.....18 FT
 ITEM 611 - PRECAST REINFORCED CONCRETE OUTLET.....2 EACH

THE FOLLOWING ESTIMATED QUANTITIES ARE FOR INFORMATION ONLY:
 45° ELBOW.....1 EACH
 90° ELBOW.....1 EACH

SEALING OF CONCRETE SURFACES

SEALING OF THE NOISE BARRIER PANELS SHALL BE AS PER SHEET 3/13 OF STANDARD DRAWING NBS-1-09. THE COLOR FOR THE SEALER SHALL MEET THE FOLLOWING FEDERAL STANDARD COLOR NUMBERS:

INTERSTATE 71 SIDE:
 WALL 1: 25630 (LIGHT GRAY)

RESIDENTS SIDE:
 WALL 1: 25630 (LIGHT GRAY)

THE COST OF SEALING THE ADDITIONAL SURFACE AREA OF THE AESTHETIC TREATMENT SHALL BE CONSIDERED INCIDENTAL TO THE NOISE BARRIERS.

AESTHETIC SURFACE TREATMENT

THIS ITEM OF WORK SHALL CONSIST OF PROVIDING AESTHETIC TREATMENT TO THE CONCRETE SURFACES OF THE NOISE BARRIER PANELS. IT SHALL INCLUDE, BUT NOT BE LIMITED TO FORM LINERS AND TEXTURED SURFACES. ALL NOISE BARRIER PANELS SHALL BE REFLECTIVE.

INTERSTATE 71 SIDE: NOISE BARRIER PANELS SHALL HAVE A SURFACE FINISH WITH A MINIMUM OF 1/2" AND A MAXIMUM OF 1/4" RELIEF, AS PER STANDARD DRAWING NBS-1-09.

RESIDENTS SIDE: NOISE BARRIER PANELS SHALL HAVE A SURFACE FINISH WITH A MINIMUM OF 1/2" AND A MAXIMUM OF 1/4" RELIEF, AS PER STANDARD DRAWING NBS-1-09.

INTERSTATE 71 SIDE:
 WALL 1: ASHLAR STONE

RESIDENTS SIDE:
 WALL 1: ASHLAR STONE

THE CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION FOR THE PROPOSED PATTERNED FORM LINERS TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL TO THE ENGINEER FOR ANY CUSTOM DESIGNED FORM LINERS.

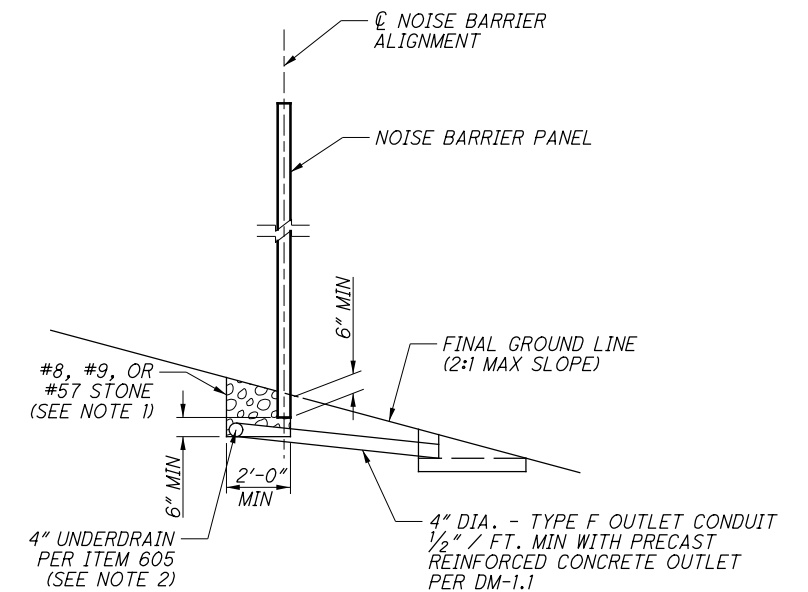
ALL PRODUCT INFORMATION AND SHOP DRAWINGS SHALL BE SUBMITTED PRIOR TO BEGINNING OF ANY WORK.

ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PRODUCE THE AESTHETIC TREATMENTS AS LISTED ABOVE SHALL BE CONSIDERED INCIDENTAL TO THE NOISE BARRIERS.

Vertical formliners must be used for concrete noise wall panels. Noise wall construction will adhere to NBS-1-09 dated 1/19/18.

6" Rustication groove on the post shall meet the top of the highest adjacent panel cap.

Use a concrete waterproofing admixture for all concrete posts. Pentron and BSAF Masterlife 300d are approved suppliers. The posts will not be sealed with a color.



TYPICAL SLOPED SECTION

SLOPED SECTION DRAINAGE NOTES:

1. CONSTRUCT A TRENCH WITH A MINIMUM LONGITUDINAL SLOPE OF 1.0% UNDER THE NOISE BARRIER PANELS AS SHOWN IN THE TYPICAL ELEVATION.
2. PROVIDE UNDERDRAIN SLOPE OF 1% MINIMUM OR AS SPECIFIED IN PROJECT PLANS. INSTALL IN ACCORDANCE WITH ITEM 605.

NOTE: SEE SHEET 4 FOR BARRIER ADJACENT TO PAVEMENT TYPICAL SECTION

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NOISE BARRIER GENERAL NOTES

HAM-71-6.86

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 253