FOR LOCATION MAPS,
SEE SHEET 2

CULVERT	LATITUDE	LONGITUDE
RIC-13-8.53	N 40° 39' 47"	W 82° 30' 56"
RIC-30-14.07 (RAMP)	N 40° 46' 41"	W 82° 28' 16"
RIC-30-14.10	N 40° 46' 45"	W 82° 28' 17"
RIC-30-14.33	N 40° 46' 43"	W 82° 27' 59"
RIC-30-15.28	N 40° 46' 42"	W 82° 26' 56"
RIC-30-17.62	N 40° 47' 5"	W 82° 24' 16"
RIC-42-13.89	N 40° 46' 43"	W 82° 28' 16"

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

RIC-CULVERTS-FY2016 (B)

MADISON TOWNSHIP
MIFFLIN TOWNSHIP
WASHINGTON TOWNSHIP
RICHLAND COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF CULVERT REHABILITATION THROUGH MEANS OF USING CURED-IN-PLACE PIPE LINERS AT THE FOLLOWING LOCATIONS: RIC-13-8.53, RIC-30-14.07, RIC-30-14.10, RIC-30-14.33, RIC-30-15.28, RIC-30-17.62, AND RIC-42-13.89.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:
N/A (MAINTENANCE PROJECT)

ESTIMATED CONTRACTOR EARTH DISTURBED AREA:
N/A (MAINTENANCE PROJECT)

NOTICE OF INTENT EARTH DISTURBED AREA:
N/A (MAINTENANCE PROJECT)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2013 SPECIFICATIONS

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

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

APPROVED _____
DATE 11/6/2015 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 11-10-15 DIRECTOR, DEPARTMENT OF TRANSPORTATION

DESIGN DESIGNATION

DESIGN FUNCTIONAL CLASSIFICATION:
U.S.R. 30 - OTHER FREEWAY OR EXPRESSWAY
U.S.R. 42 - URBAN PRINCIPAL ARTERIAL
S.R. 13 - RURAL PRINCIPAL ARTERIAL

NHS PROJECT
U.S.R. 30, U.S.R. 42, AND S.R. 13 - YES

DESIGN EXCEPTIONS

NONE REQUIRED

PLANS PREPARED BY:

ENGINEERS SEAL:

STATE OF OHIO
KARLA R. BOHMER
E-76834
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Karla R. Bohmer
DATE: 10/30/15

STANDARD CONSTRUCTION DRAWINGS

HW-2.1	7/17/15	MT-95.30	7/18/14			
		MT-97.10	7/18/14			
		MT-98.10	7/18/14			
DM-1.1	1/18/13	MT-98.11	7/18/14			
DM-4.3	7/19/13	MT-98.20	7/18/14			
DM-4.4	7/20/12	MT-98.22	7/18/14			
		MT-98.28	7/18/14			
		MT-105.10	7/19/13			
		TC-41.20	10/18/13			
		TC-42.20	10/18/13			
		TC-52.10	10/18/13			
		TC-52.20	7/18/14			

SUPPLEMENTAL SPECIFICATIONS

800	10/16/15
821	4/20/12
832	1/17/14

SPECIAL PROVISIONS

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

FEDERAL PROJECT NO. NON-FEDERAL
PID NO. 87695
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
RIC-CULVERTS-FY2016 (B)
1/13

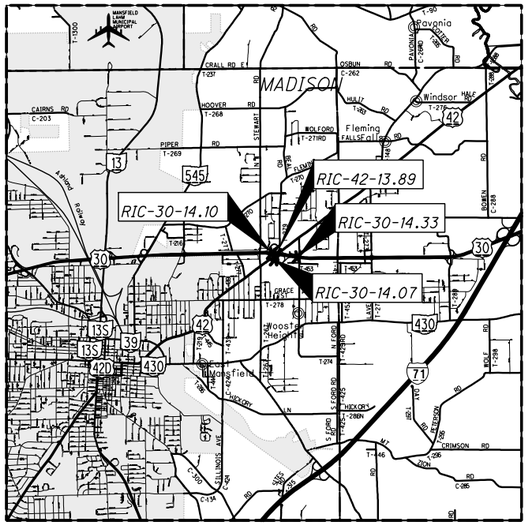
RIC - CULVERTS-FY2016 (B)
160072 PID - 87695
Dist 3 1/28/2016

Contract Proposal Available @ www.contracts.dot.state.oh.us/home

DESIGN FILE#:\projects\87695\Roadway\sheets\87695GT001.dgn MODELNAME: Des.
WORKSTATION:ksoley DATE: 10/30/2015

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

CULVERT LOCATION



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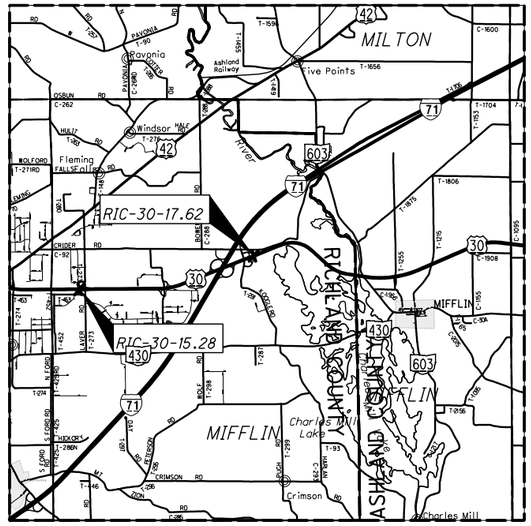

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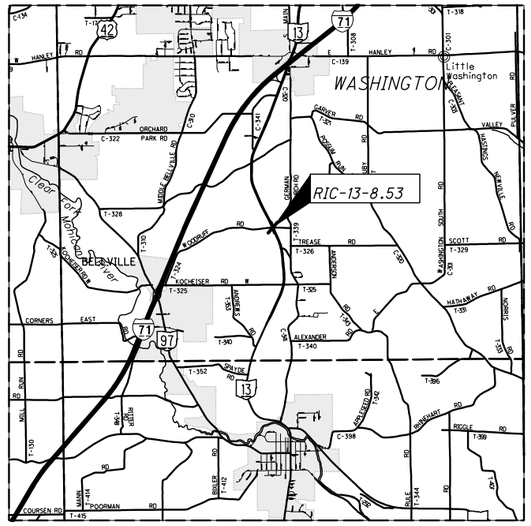

SCALE IN MILES
0 0.5 1 1.5 2

	LATITUDE	LONGITUDE
RIC-30-14.07 (RAMP)	N 40° 46′ 41″	W 82° 28′ 16″
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	LATITUDE	LONGITUDE
RIC-30-15.28	N 40° 46′ 42″	W 82° 26′ 56″
RIC-30-17.62	N 40° 47′ 5″	W 82° 24′ 16″

	LATITUDE	LONGITUDE
RIC-13-8.53	N 40° 39′ 47″	W 82° 30′ 56″

DESIGN FILE: ii:\projects\87695\Roadway\sheets\87695GT001.dgn MODEL NAME: Design
WORKSTATION: ii:\projects\87695\Roadway\sheets\87695GT001.dgn DATE: 10/30/2015

CALCULATED CAG
CHECKED KRB

LOCATION MAPS

RIC-CULVERTS-FY2016 (B)

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.

UTILITIES

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

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.

CITY OF MANSFIELD
30 NORTH DIAMOND STREET
MANSFIELD, OHIO 44902
WATER 419-755-9806

CENTURYLINK
175 ASHLAND ROAD
P.O. BOX 3555
MANSFIELD, OHIO 44907
419-755-7956 OFFICE

COLUMBIA GAS OF OHIO
1800 BROAD AVENUE
FINDLAY, OHIO 45840
419-427-3216 OFFICE

ODOT D03
MATT BLANKENSHIP
906 CLARK AVE.
ASHLAND, OHIO 44805
419-207-7045

OHIO EDISON COMPANY
TRAVIS BALLOG
1717 ASHLAND ROAD
MANSFIELD, OHIO 44905
419-521-6213

RICHLAND CO. SANITARY ENGINEER
STEVE RISSER
50 PARK AVENUE EAST
MANSFIELD, OHIO 44902
419-774-3548

COLUMBIA GAS TRANSMISSION
PO BOX 85
LAKEVILLE, OH 44638
JACK ROHRBAUGH
419-827-2620

TIME WARNER CABLE
RON FERDINAND
5520 WHIPPLE AVE. NW
NORTH CANTON, OHIO 44720
TEL: 330-494-9200 EXT.330-555-3003

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

EXISTING PLANS

EXISTING PLANS ARE AVAILABLE UPON REQUEST AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OH.

CULVERT:	PLAN NAME:	DATE:
RIC-30-14.10 RIC-42-13.89	RIC-30R-3.00	1956
RIC-30-14.07 RIC-30-14.33 RIC-30-15.28 RIC-30-17.62	RIC-30-5.79 & ASD-30-0.00	1956
RIC-30-17.62	RIC-30-9.28 & ASD-30-0.00	1964
RIC-30-14.33	RIC-30-(5.78)(6.32)	1970
RIC-30-15.28	RIC-30-15.24	1977

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE MAY BE OTHER WORK BEING PERFORMED BY SEPARATE CONTRACTS. RIC-13-4.60 (PID 79766) IS A RESURFACING PROJECT SCHEDULED TO BEGIN WORK IN THE 2016 CONSTRUCTION SEASON. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

CONSTRUCTION NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4305 OR EMAIL AT D03.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (419) 281-5925 OR EMAIL AT LOUIS.TUMBLIN@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

ITEM 201 - CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHINTHE 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.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. 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.

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

RIC-13-8.53: SPECIAL - PIPE CLEANOUT 196 FT
RIC-30-14.07: SPECIAL - PIPE CLEANOUT 130 FT
RIC-30-14.10: SPECIAL - PIPE CLEANOUT 227 FT
RIC-30-14.33: SPECIAL - PIPE CLEANOUT 196 FT
RIC-30-15.28: SPECIAL - PIPE CLEANOUT 209 FT
RIC-30-17.62: SPECIAL - PIPE CLEANOUT 193 FT
RIC-42-13.89: SPECIAL - PIPE CLEANOUT 146 FT

TOTAL = 1297 FT

ITEM 611 - CONDUIT MISC.: VIDEO LOG

PRIOR TO THE ACCEPTANCE OF THE PIPE CLEANOUT BY THE ENGINEER AND THE APPLICATION OF THE PIPE LINER, A VIDEO LOG OF THE DRAINAGE SYSTEM SHALL BE PERFORMED.

IF A BLOCKAGE IS ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY AND THE VIDEO LOG SHALL BE SUSPENDED UNTIL THE PIPE HAS BEEN THOROUGHLY CLEANED OUT.

IF A COLLAPSE OR FAILURE IN THE PIPE IS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY SUSPEND THE VIDEO LOG AND NOTIFY THE ENGINEER. PAYMENT FOR REPLACEMENT OF ANY SECTION OF THE TRUNK LINE SHALL BE APPROVED BY THE DISTRICT DESIGN ENGINEER. PAYMENT FOR REPLACEMENT OF ANY SECTION OF TRUNK LINE SHALL BE PROVIDED IN A SUPPLEMENTAL AGREEMENT AS PER CMS 109.05.

THE VIDEO LOG OF THE DRAINAGE SYSTEM LINE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 611 - CONDUIT MISC.: VIDEO LOG. THIS PRICE SHALL INCLUDE THE COST OF MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED THE COMPLETE THE ABOVE STATED WORK.

ITEM 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER

A CONTINUOUSLY THERMOSETTING FELT RESIN SYSTEM (JOINTLESS) SHALL BE USED 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 COMPLETE STRUCTURAL INTEGRITY INDEPENDENT OF THE LOAD BEARING CAPACITY OF THE EXISTING HOST PIPE.

INSTALLATION OF THE SEWER PIPE LINING SYSTEM SHALL BE PERFORMED BY AN EXPERIENCED, FULLY LICENSED CONTRACTOR AND APPROVED BY THE LINING PROCESS MANUFACTURER. THE CONTRACTOR SHALL HAVE A MINIMUM OF THREE (3) YEARS OF EXPERIENCE IN SUCH WORK AND SHALL HAVE SATISFACTORILY COMPLETED TEN (10) SIMILAR REGIONAL PROJECTS FOR AT LEAST THREE (3) DIFFERENT UTILITIES OR AGENCIES. THE PIPELINER MUST BE CAPABLE OF CONFORMING TO THE PIPELINE BENDS IN THE HOST PIPE WITHOUT SPLITTING, RUPTURING, NOR WRINKLING THE PIPELINER 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 PER THE MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL BE PER ASTM F 1216 (INVERSION) OR ASTM F 1743 (PULL-IN-PLACE), AND PER THE MANUFACTURER'S RECOMMENDATIONS. ALL REFERENCES TO ASTM STANDARDS REFER TO THE LATEST EDITION OF EACH STANDARD AVAILABLE AT THE TIME OF CONSTRUCTION.

PRIOR TO THE USE OF ANY MATERIALS, THE CONTRACTOR SHALL FURNISH, AT HIS OR HER EXPENSE, THE RESULTS OF TESTING THE PROPOSED MATERIALS BY AN INDEPENDENT LABORATORY IN CONFORMANCE WITH THESE SPECIFICATIONS. ALL SUBMITTED TEST DATA SHALL HAVE BEEN PERFORMED ON FIELD INSTALLED SAMPLES WITHIN THE LAST TWELVE (12) MONTHS. ANY MATERIAL NOT MEETING THE REQUIREMENTS OF THESE SPECIFICATIONS SHALL BE COMPLETELY REMOVED FROM THE PROJECT. MATERIALS ACCEPTABLE TO THE ENGINEER SHALL BE SUBSTITUTED FOR REJECTED ITEMS AT THE CONTRACTOR'S EXPENSE.

THE EXISTING HOST PIPE SHALL BE INSPECTED BY EXPERIENCED PERSONNEL TRAINED IN LOCATING BREAKS, OBSTACLES, AND SERVICE CONNECTIONS BY CLOSED-CIRCUIT TELEVISION OR MAN ENTRY BEFORE AND AFTER INSTALLATION OF THE PIPELINER. PRIOR TO INSTALLING THE PIPELINER, JOINT REPAIRS, OBSTRUCTION REMOVALS, AND HOLE REPAIRS MUST BE COMPLETED. THIS WORK, WHICH IS COMPLETED TO CORRECT EXISTING CONDITIONS, SHALL BE CONSIDERED INCIDENTAL TO THE PIPELINING WORK AND SHALL BE INCLUDED FOR PAYMENT AT THE UNIT BID PRICE PER EACH WORK LOCATION:

RIC-13-8.53: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")
RIC-30-14.07: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (42")
RIC-30-14.10: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")
RIC-30-14.33: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")
RIC-30-15.28: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (42")
RIC-30-17.62: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")
RIC-42-13.89: 611 - CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (42")

SEEDING AND MULCHING

APPLY SEEDING AND MULCHING AT EACH WORK LOCATION TO ALL AREAS DISTURBED BY THE PROJECT BETWEEN THE RIGHT-OF-WAY LINES.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659	SOIL ANALYSIS TEST	2	EACH
659	TOPSOIL	333	CY
659	SEEDING AND MULCHING	3000	SY
659	REPAIR SEEDING AND MULCHING	150	SY
659	INTER-SEEDING	150	SY
659	COMMERCIAL FERTILIZER	0.41	TON
659	LIME	0.62	ACRES
659	WATER	17	M GAL

CALCULATED CAG CHECKED KRB

GENERAL NOTES

RIC-CULVERTS-FY2016 (B)

3
13

DESIGN FILE:i:\projects\87695\Roadway\sheets\87695GN001.dgn MODELNAME: Design
WORKSTATION:salay DATE:11/20/2015

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER AND 837 PIPE LINER ITEMS.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 837.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ENVIRONMENTAL COMMITMENTS

THE 404/401 WATERWAY PERMITS FOR THIS PROJECT HAVE YET TO BE AUTHORIZED BY THE US ARMY CORPS OF ENGINEERS AND/OR THE OHIO ENVIRONMENTAL PROTECTION AGENCY. THE CONTRACTOR SHALL NOT PERFORM ANY WORK IN AND/OR PLACE ANY FILL IN JURISDICTIONAL STREAMS OR WETLANDS UNTIL THE FINAL 404/401 PERMITS ARE AUTHORIZED BY THE US ARMY CORPS OF ENGINEERS AND THE OHIO ENVIRONMENTAL PROTECTION AGENCY. THE COMPLETE/AUTHORIZED 404/401 PERMITS WILL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AS SOON AS THEY BECOME AVAILABLE.

CALCULATED CAG
CHECKED KRB

GENERAL NOTES

RIC-CULVERTS-
FY2016 (B)

DESIGN FILE:i:\projects\87695\Roadway\sheets\87695GN001.dgn MODELNAME:Design
WORKSTATION:salay DATE:11/2/2015

MAINTAINENCE OF TRAFFIC

ITEM 614 - MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

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

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE OF $50.00 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON FOUR LANE ROADWAYS BY USE OF THE EXISTING PAVEMENT AND STANDARD DRAWING MT-95.30, MT-98.11, MT-98.20, MT-98.22, OR MT-98.28, UNLESS OTHERWISE NOTED BELOW.

EXISTING SIGNS OR CONTRACTOR SUPPLIED SIGNS SHALL BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION.

ALL CONFLICTING SIGNS AND PAVEMENT MARKINGS, WHETHER INSIDE OR OUTSIDE THE WORK LIMITS, SHALL BE COVERED OR REMOVED. WHERE APPLICABLE, AND WHEN DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PLACE TEMPORARY SIGNS OR TEMPORARY PAVEMENT MARKING AT THESE LOCATIONS.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICING AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IMMEDIATELY.

THE CONTRACTOR SHALL ARRANGE HIS OPERATIONS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIME TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE APPROVED BY THE PROJECT ENGINEER.

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

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

WORKING HOURS RESTRICTION

U.S.R. 30 IS A RESTRICTED LANE CLOSURE ROUTE DUE TO HIGH TRAFFIC VOLUMES. DURING THE PROJECT DURATION, LANE CLOUSRES SHALL BE PERMITTED AS LISTED ON THE ODOT WEBSITE AT:

http://plcm.dot.state.oh.us

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS WILL BE DETERMINED BY THE ENGINEER PRIOR TO BEGINNING WORK ON THIS PROJECT. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

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

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 6 SIGN-MONTH

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

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS AS DIRECTED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

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

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. 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.

LEO'S 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 CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

STATE HIGHWAY PATROL
2255 SOUTH MAIN STREET
MANSFIELD, OH 44907
419-756-2222

LAW ENFORCEMENT OFFICERS 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 QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
120 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.

CALCULATED CAG
CHECKED KRB

MAINTENANCE OF TRAFFIC

RIC-CULVERTS-FY2016 (B)

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13

DESIGN FILE: i:\projects\87695\Roadway\sheets\87695GN001.dgn MODEL NAME: Design
WORKSTATION: ksalay DATE: 11/2/2015

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	3	5	7	8	9	10	11	12	13	01/NHS/CV							
																ROADWAY	
	LS									LS		201	11000	LS		CLEARING AND GRUBBING	
			1	2	1				2	6		202	20010	6	EACH	HEADWALL REMOVED	
			4	2	1					7		202	35200	7	FT	PIPE REMOVED, OVER 24"	
	1,297									1,297		SPECIAL	20270120	1,297	FT	PIPE CLEANOUT, 27" TO 48"	3
				1					3	4		203	20000	4	CY	EMBANKMENT	
																EROSION CONTROL	
			19	37						56		601	26000	56	CY	DUMPED ROCK FILL, TYPE B	
	2									2		659	00100	2	EACH	SOIL ANALYSIS TEST	
	333									333		659	00300	333	CY	TOPSOIL	
	3,000									3,000		659	10000	3,000	SY	SEEDING AND MULCHING	
	150									150		659	14000	150	SY	REPAIR SEEDING AND MULCHING	
	150									150		659	15000	150	SY	INTER-SEEDING	
	0.41									0.41		659	20000	0.41	TON	COMMERCIAL FERTILIZER	
	0.62									0.62		659	31000	0.62	ACRE	LIME	
	17									17		659	35000	17	MGAL	WATER	
										7,000		832	30000	7,000	EACH	EROSION CONTROL	
																DRAINAGE	
			1	2	1				2	6		602	20000	6	CY	CONCRETE MASONRY	
			196		227	196		193		812		611	97400	812	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")	3
				130			209		146	485		611	97400	485	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (42")	3
			196	130	227	196	209	193	146	1,297		611	97400	1,297	FT	CONDUIT, MISC.: VIDEO LOG	3
																STRUCTURE UNDER 20 FOOT SPAN	
			LS	LS	LS	LS	LS	LS	LS	LS		503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
																MAINTENANCE OF TRAFFIC	
		120								120		614	11110	120	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		6								6		614	18601	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	5
																INCIDENTALS	
										LS		614	11000	LS		MAINTAINING TRAFFIC	
										3		619	16000	3	MNTH	FIELD OFFICE, TYPE A	
										LS		624	10000	LS		MOBILIZATION	

CALCULATED CAG
CHECKED KRB

GENERAL SUMMARY

RIC-CULVERTS-FY2016 (B)

6
13

DESIGN FILE:i:\projects\87695\Roadway\sheets\87695GG001.dgn
WORKSTATION:ssolay
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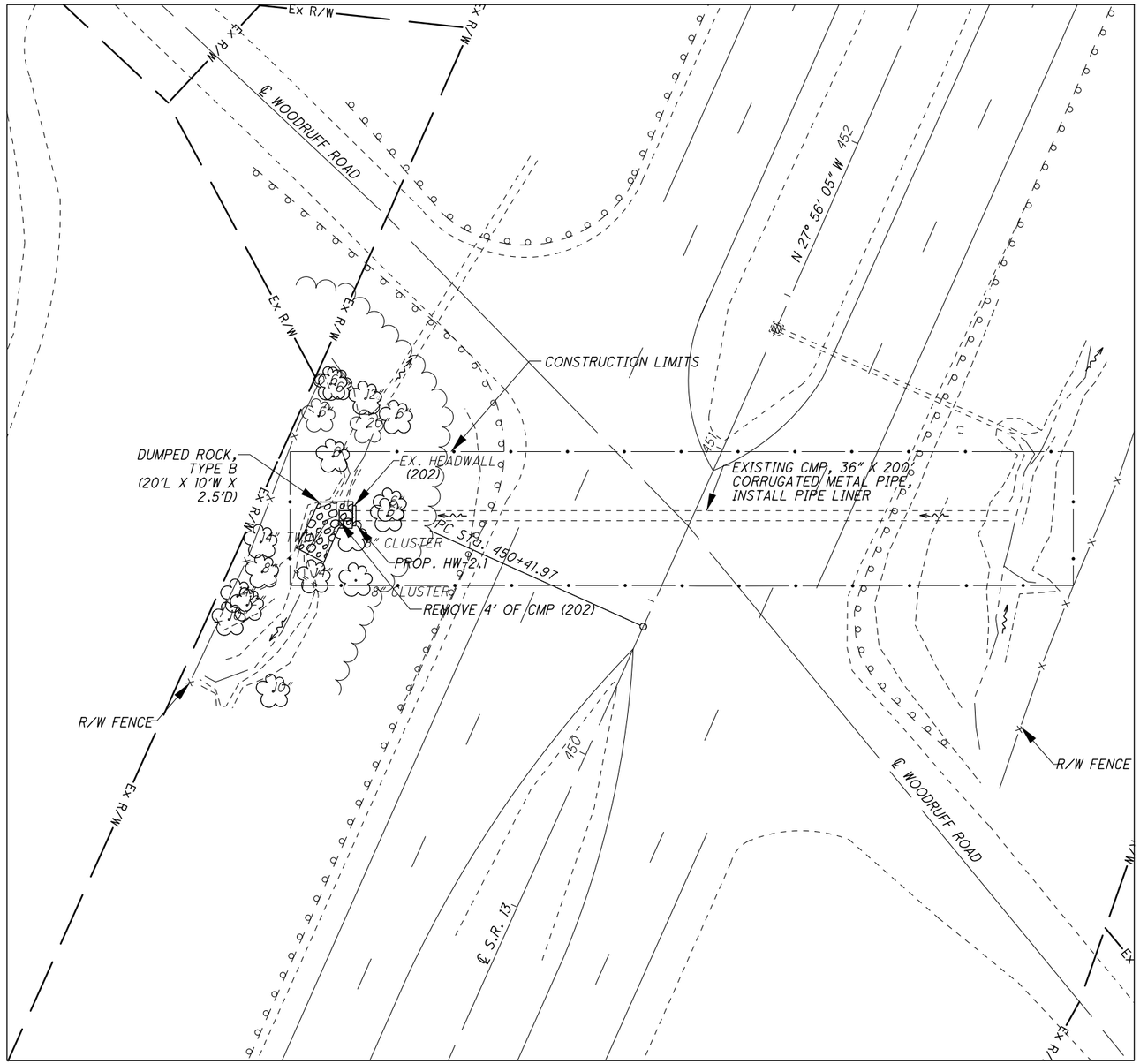
MODELNAME:Design



LEGEND

▨ - ITEM 601 DUMPED ROCK, TYPE B

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

REHABILITATE RIC-13-8.53 CULVERT BY PERFORMING THE FOLLOWING WORK:

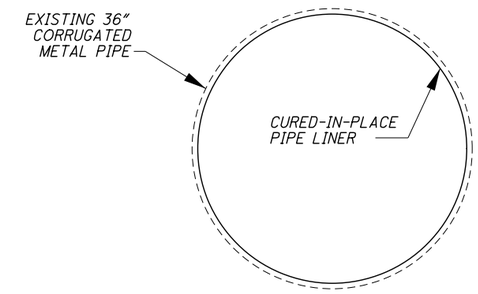
1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *REMOVE 4' OF PIPE AT OUTLET SHOWN IN PLANS.*
4) *REPLACE HEADWALL AT OUTLET ACCORDING TO HW-2.1.*
5) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
6) *INSTALL CURED-IN-PLACE PIPE LINER.*
7) *PLACE DUMPED ROCK, TYPE B IN AREAS DESIGNATED IN PLAN VIEW.*
8) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE

TYPE: CORRUGATED METAL PIPE
SIZE: 36" X 200'
SKEW: 24° R.F.
ALIGNMENT: TANGENT
COVER DEPTH: 15'-3" TO 16'-6" ±
DATE BUILT: 1957

HYDRAULIC DATA

DRAINAGE AREA = 41 ACRES
Q25 = 55 CFS



ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	EACH	HEADWALL REMOVED
202	4	FT	PIPE REMOVED, OVER 24"
SPECIAL	196	FT	PIPE CLEANOUT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
601	19	CY	DUMPED ROCK FILL, TYPE B
602	1	CY	CONCRETE MASONRY
611	196	FT	CONDUIT, MISC.: VIDEO LOG
611	196	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CAG
CHECKED KRB

RIC-13-8.53 CULVERT DETAILS
STA. 450+78

RIC-CULVERTS-FY2016 (B)

7
13

DESIGN FILE: i:\projects\87695\Roadway\sheets\87695DC001-RIC-13-8.53.dgn
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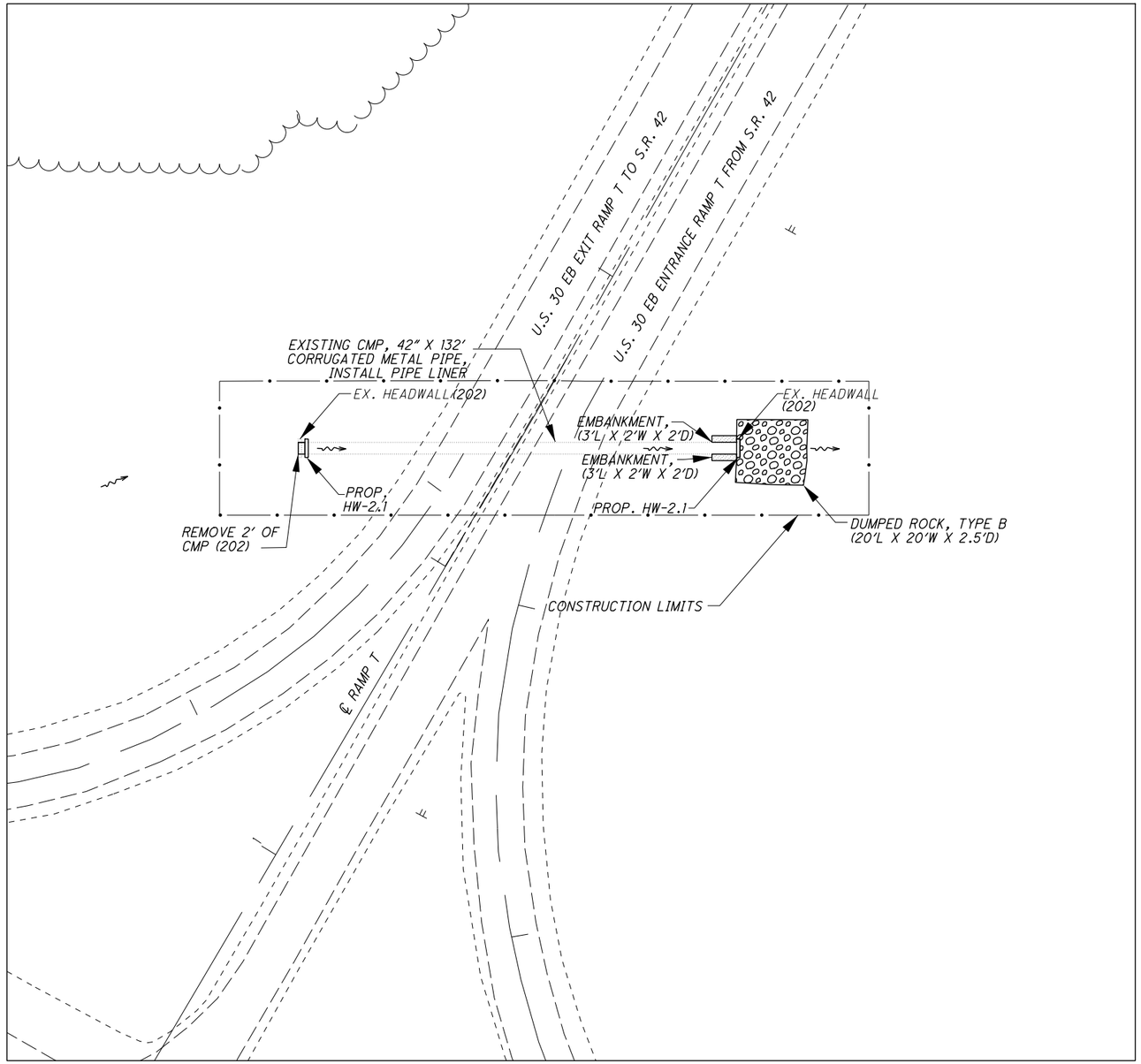
DATE: 11/2/2015
MODELNAME: Sheet



EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

REHABILITATE RIC-30-14.07 CULVERT BY PERFORMING THE FOLLOWING WORK:

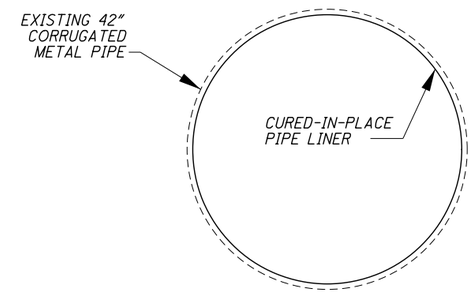
1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *REMOVE 2' OF PIPE AND HEADWALLS FROM LOCATIONS IN PLANS.*
4) *REPLACE HEADWALLS WITH NEW HEADWALLS ACCORDING TO HW-2.1*
5) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
6) *INSTALL CURED-IN-PLACE PIPE LINER.*
7) *PLACE DUMPED ROCK, TYPE B IN AREAS DESIGNATED IN PLAN VIEW.*
8) *PLACE EMBANKMENT AROUND ERODED AREAS NEAR THE OUTLET TO PROTECT NEW HEADWALL.*
9) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE
TYPE: CORRUGATED METAL PIPE
SIZE: 42" X 132'
SKEW: 33° R.F.
ALIGNMENT: TANGENT
COVER DEPTH: UNKNOWN
DATE BUILT: 1956

HYDRAULIC DATA

DRAINAGE AREA = 50 ACRES

Q25 = 60 CFS



LEGEND

- *ITEM 203 EMBANKMENT*
- *ITEM 601 DUMPED ROCK, TYPE B*

ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	*QUANTITY*	*UNIT*	*DESCRIPTION*
202	*2*	*EACH*	*HEADWALL REMOVED*
202	*2*	*FT*	*PIPE REMOVED, OVER 24"*
SPECIAL	*130*	*FT*	*PIPE CLEANOUT*
203	*1*	*CY*	*EMBANKMENT*
503	*LUMP*		*COFFERDAMS AND EXCAVATION BRACING*
601	*37*	*CY*	*DUMPED ROCK FILL, TYPE B*
602	*2*	*CY*	*CONCRETE MASONRY*
611	*130*	*FT*	*CONDUIT, MISC.: VIDEO LOG*
611	*130*	*FT*	*CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (42")*

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CAG
CHECKED KRB

RIC-30-14.07 RAMP T CULVERT DETAILS
STA. 2+50 RAMP T

RIC-CULVERTS-FY2016 (B)

8
13

DESIGN FILE: i:\projects\87695\Roadway\sheets\87695DC001-RIC-30-14.07.dgn
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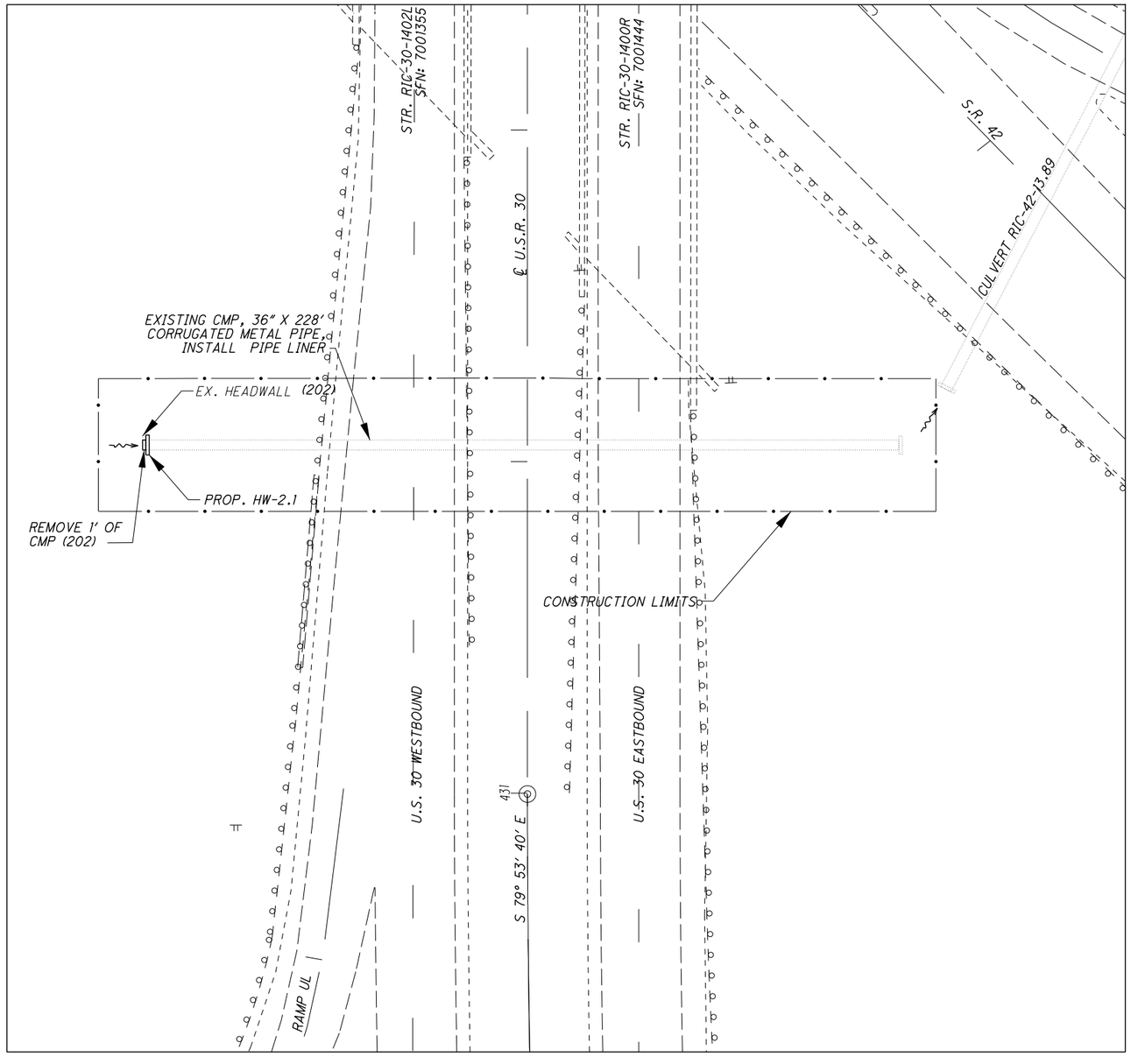
MODELNAME: Sheet



EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

REHABILITATE RIC-30-14.10 CULVERT BY PERFORMING THE FOLLOWING WORK:

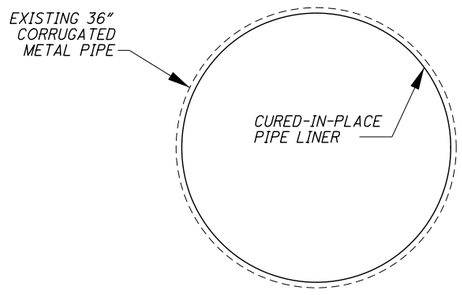
1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *REMOVE 1' OF PIPE AND HEADWALL AT THE INLET SHOWN IN PLANS.*
4) *REPLACE HEADWALL AT INLET ACCORDING TO HW-2.1 AND ENSURE WATER DRAINS INTO CULVERT.*
5) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
6) *INSTALL CURED-IN-PLACE PIPE LINER.*
7) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE

TYPE: CORRUGATED METAL PIPE
SIZE: 36" X 228'
SKEW: NO SKEW
ALIGNMENT: TANGENT
COVER DEPTH: UNKNOWN
DATE BUILT: 1956

HYDRAULIC DATA

DRAINAGE AREA = 34 ACRES
Q25 = 46 CFS



ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	EACH	HEADWALL REMOVED
202	1	FT	PIPE REMOVED, OVER 24"
SPECIAL	227	FT	PIPE CLEANOUT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
602	1	CY	CONCRETE MASONRY
611	227	FT	CONDUIT, MISC.: VIDEO LOG
611	227	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED CAG
CHECKED KRB

RIC-30-14.10 CULVERT DETAILS
STA. 432+05

RIC-CULVERTS-FY2016 (B)

9
13

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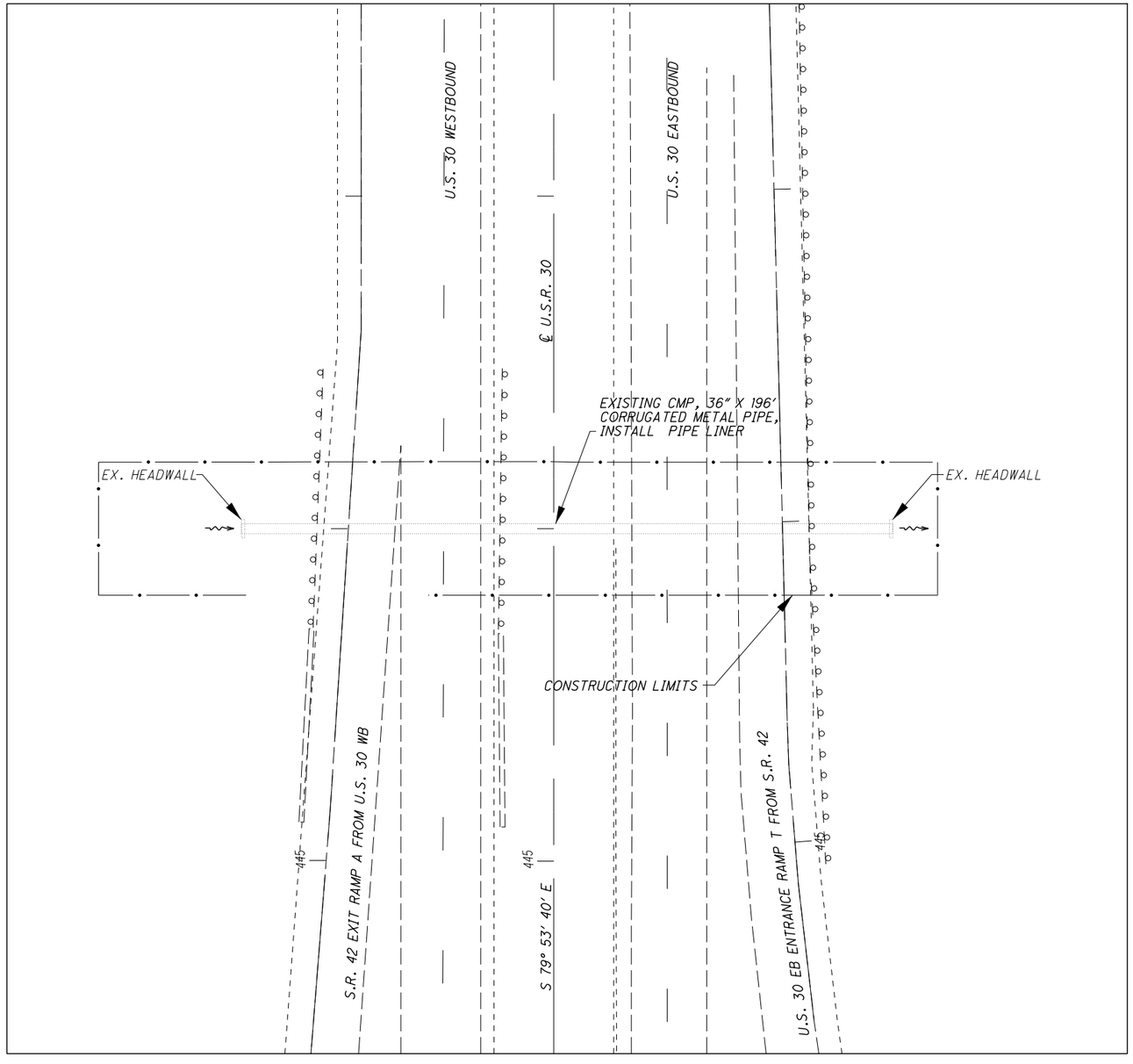


EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

REHABILITATE RIC-30-14.33 CULVERT BY PERFORMING THE FOLLOWING WORK:

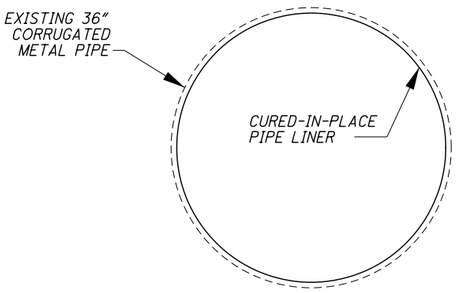
1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
4) *INSTALL CURED-IN-PLACE PIPE LINER.*
5) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE

TYPE: CORRUGATED METAL PIPE
SIZE: 36" X 196'
SKEW: NO SKEW
ALIGNMENT: TANGENT
COVER DEPTH: UNKNOWN
DATE BUILT: 1956 (EXTENSIONS IN 1970)

HYDRAULIC DATA

DRAINAGE AREA = 30 ACRES
Q25 = 40 CFS



ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	196	FT	PIPE CLEANOUT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
611	196	FT	CONDUIT, MISC.: VIDEO LOG
611	196	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

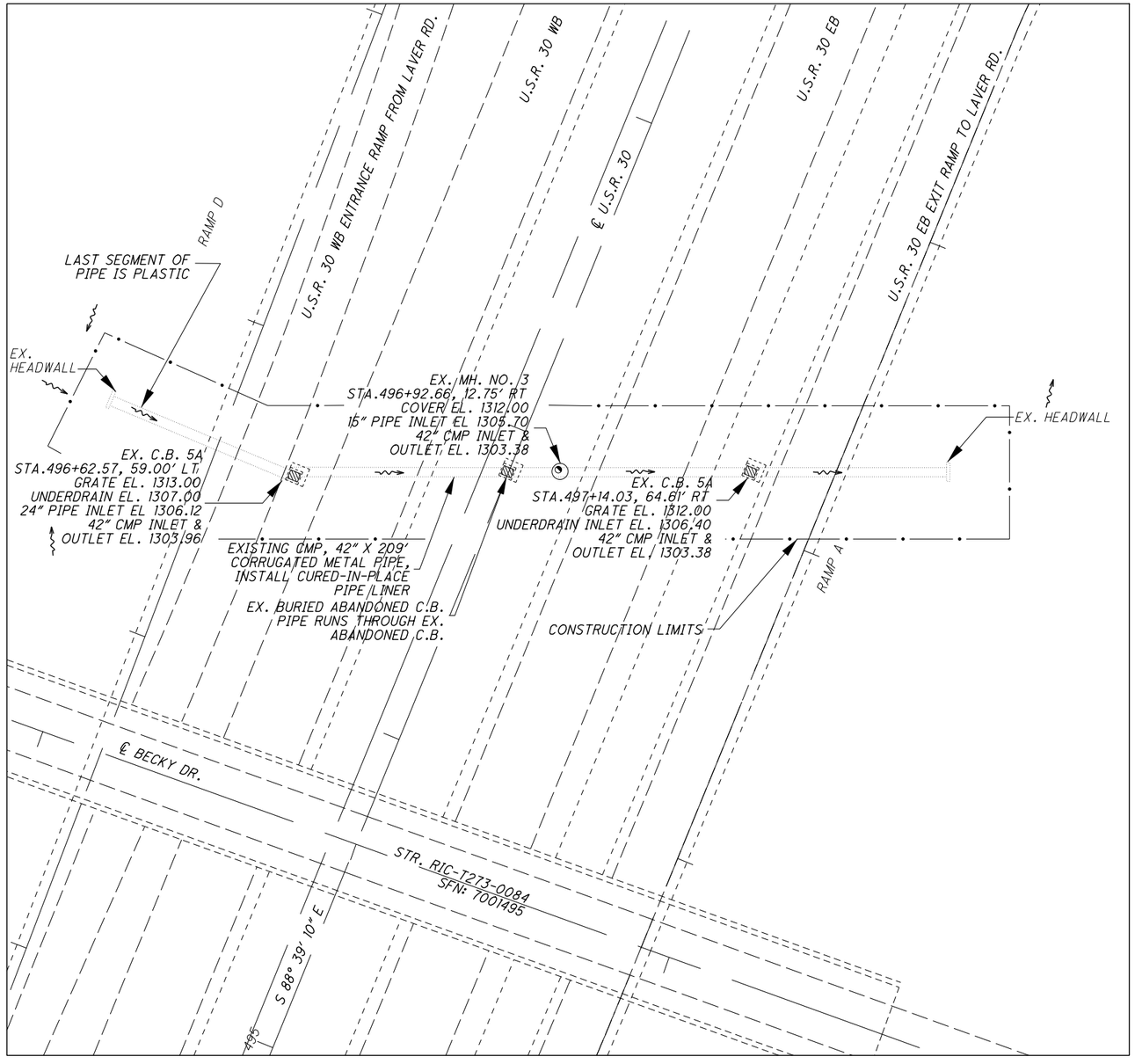
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED CAG
CHECKED KRB

RIC-30-14.33 CULVERT DETAILS
STA. 446+00

RIC-CULVERTS-FY2016 (B)

10
13

DESIGN FILE: i:\projects\87695\Roadway\sheets\87695DC001-RIC-30-14.07.dgn
WORKSTATION: kslay DATE: 11/2/2015 MODELNAME: Sheet



EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

REHABILITATE RIC-30-15.28 CULVERT BY PERFORMING THE FOLLOWING WORK:

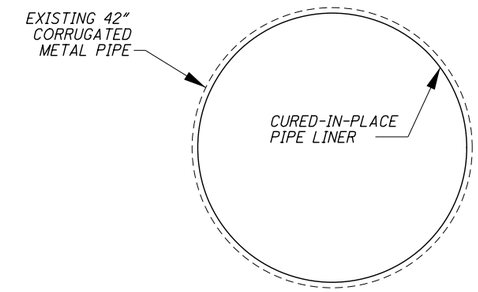
1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
4) *INSTALL CURED-IN-PLACE PIPE LINER.*
5) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE

TYPE: CORRUGATED METAL PIPE
SIZE: 42" X 209'
SKEW: 66° R.F.
ALIGNMENT: TANGENT
COVER DEPTH: UNKNOWN
DATE BUILT: 1956 (CMP), 1970 (EXTENSIONS)

HYDRAULIC DATA

DRAINAGE AREA = 60 ACRES
Q25 = 67 CFS



ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	209	FT	PIPE CLEANOUT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
611	209	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINE (42")
611	209	FT	CONDUIT, MISC.: VIDEO LOG

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

HORIZONTAL SCALE IN FEET
0 10 20 40

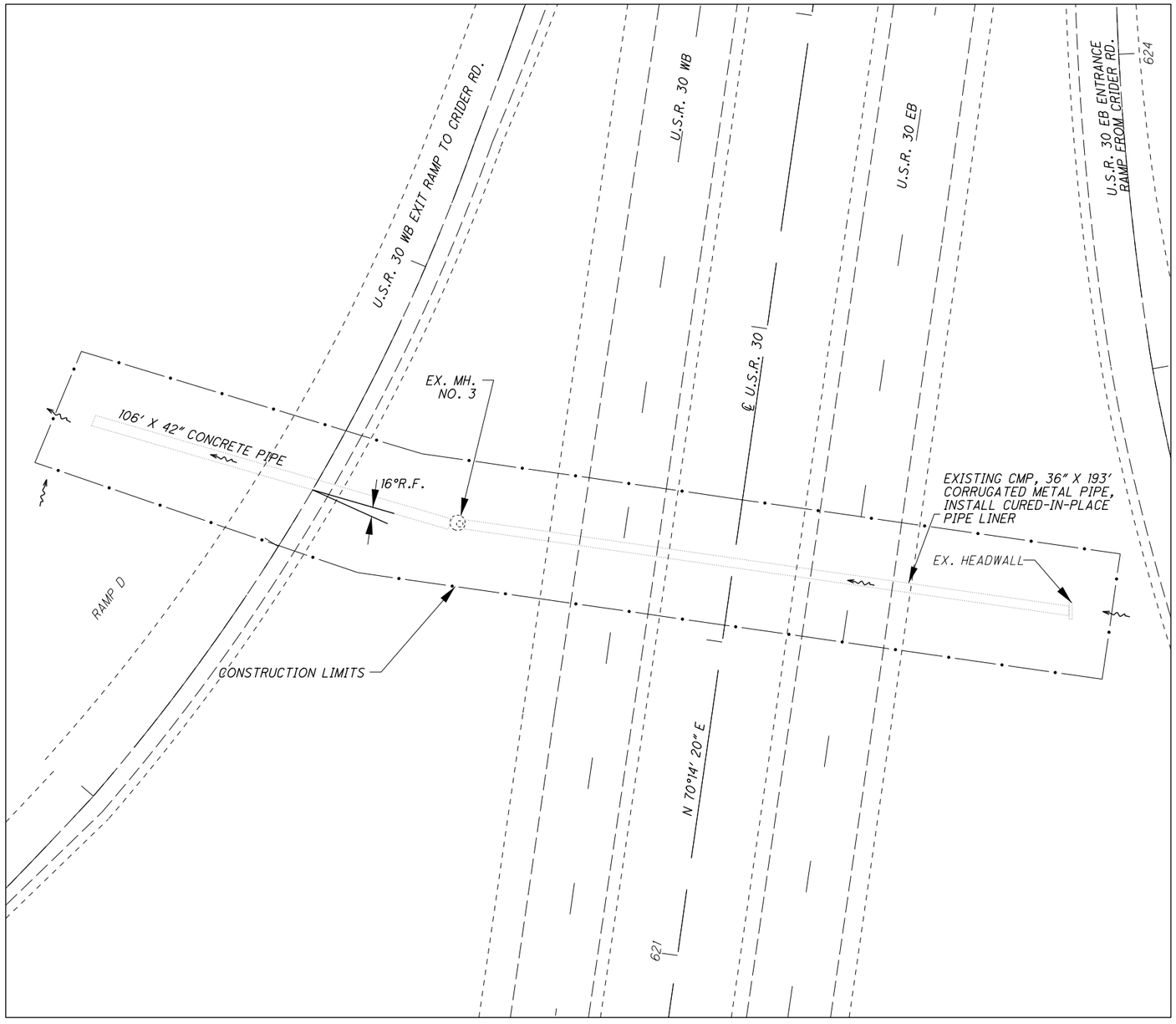
CALCULATED CAG
CHECKED KRB

RIC-30-15.28 CULVERT DETAILS
STA. 496+87.00

RIC-CULVERTS-FY2016 (B)

11
13

DESIGN FILE: i:\projects\87695\Roadway\sheets\87695DC001-RIC-30-15.28.dgn
WORKSTATION: kslay
DATE: 11/2/2015
MODELNAME: Sheet



EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

REHABILITATE RIC-30-17.62 CULVERT BY PERFORMING THE FOLLOWING WORK:

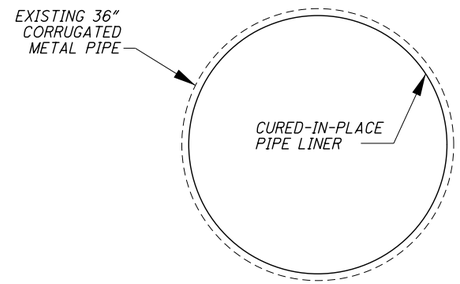
1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
4) *INSTALL CURED-IN-PLACE PIPE LINER.*
5) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE

TYPE: CORRUGATED METAL PIPE AND CONCRETE PIPE
SIZE: 36" X 193' CMP AND 42" X 106' CCP
SKEW: NO SKEW
ALIGNMENT: TANGENT
COVER DEPTH: UNKNOWN
DATE BUILT: 1956 (CMP) AND 1964 (CCP ADDITION)

HYDRAULIC DATA

DRAINAGE AREA = 13 ACRES
Q25 = 38 CFS



ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	193	FT	PIPE CLEANOUT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
611	193	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (36")
611	193	FT	CONDUIT, MISC.: VIDEO LOG

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

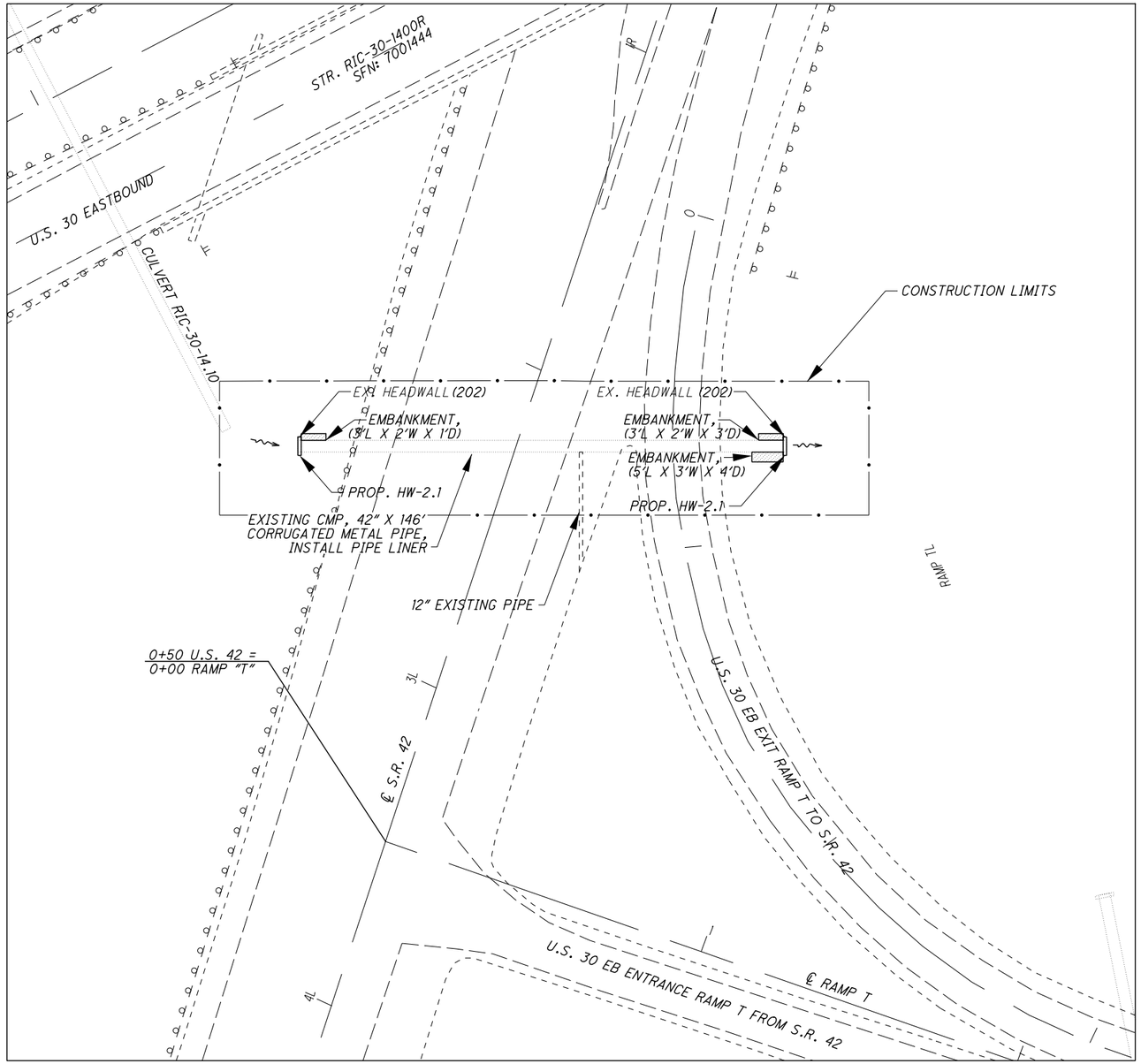
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED CAG
CHECKED KRB

RIC-30-17.62 CULVERT DETAILS
STA. 422+23.73

RIC-CULVERTS-FY2016 (B)

12
13

DESIGN FILE: ii:\projects\87695\Roadway\sheets\87695DC001-RIC-30-17.62.dgn
WORKSTATION: ksalay
DATE: 11/2/2015
MODELNAME: Sheet



EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS ON THESE PROPOSED PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, SUCH DETAILS AND DIMENSIONS ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02. BASE THE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

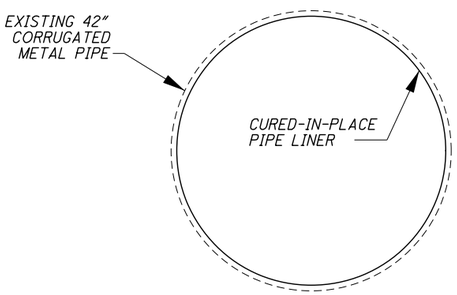
REHABILITATE RIC-42-13.89 CULVERT BY PERFORMING THE FOLLOWING WORK:

1) *MAINTAIN ONE LANE OF TWO-WAY TRAFFIC AT ALL TIMES USING SHOULDER/LANE CLOSURES AS NEEDED.*
2) *CLEAR AND GRUB AS NEEDED TO ACCESS THE WORK. DEWATER AND REMOVE SEDIMENT BUILDUP THROUGHOUT LENGTH OF CULVERT.*
3) *REMOVE AND REPLACE HEADWALLS FROM LOCATIONS IN PLANS ACCORDING TO HW-2.1.*
4) *FILL ANY HOLES AND VOIDS BEHIND METAL WITH HYDRAULIC CEMENT MEETING ASTM C1157 THROUGHOUT LENGTH OF CULVERT.*
5) *INSTALL CURED-IN-PLACE PIPE LINER.*
6) *PLACE EMBANKMENT AROUND ERODED AREAS NEAR THE OUTLET TO PROTECT NEW HEADWALL.*
7) *SEED AND MULCH ANY DISTURBED AREAS.*

EXISTING STRUCTURE
TYPE: CORRUGATED METAL PIPE
SIZE: 42" X 146'
SKEW: 20° R.F.
ALIGNMENT: TANGENT
COVER DEPTH: UNKNOWN
DATE BUILT: 1956

HYDRAULIC DATA

DRAINAGE AREA = 42 ACRES
Q25 = 53 CFS



ESTIMATED QUANTITIES CARRIED TO GENERAL SUMMARY			
ITEM	QUANTITY	UNIT	DESCRIPTION
202	2	EACH	HEADWALL REMOVED
203	3	CY	EMBANKMENT
SPECIAL	146		PIPE CLEANOUT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
602	2	CY	CONCRETE MASONRY
611	146	FT	CONDUIT, MISC.: VIDEO LOG
611	146	FT	CONDUIT, MISC.: CURED-IN-PLACE PIPE LINER (42")

NOTE: QUANTITY FOR ITEM SPECIAL - PIPE CLEANOUT, HAS BEEN CARRIED TO SHEET 3.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED CAG
CHECKED KRB

RIC-42-13.89 RAMP T CULVERT DETAILS
STA. 2+28

RIC-CULVERTS-FY2016 (B)

13
13

DESIGN FILE: i:\projects\87695\Roadway\sheets\87695DC001-RIC-30-14.07.dgn
WORKSTATION: sdlay
DATE: 11/2/2015
MODELNAME: Sheet