

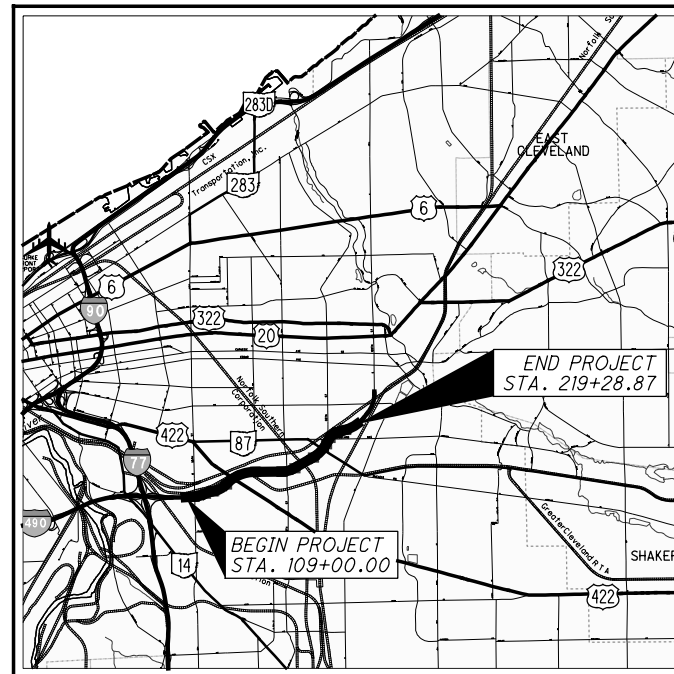
STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

CUY-IR490/ SR010-
2.09 / 19.28

CITY OF CLEVELAND

CUYAHOGA COUNTY



LOCATION MAP

LATITUDE: 41°29'08" LONGITUDE: 81°37'22"



PORTION TO BE IMPROVED.....	_____
INTERSTATE HIGHWAY.....	_____
FEDERAL ROUTES.....	_____
STATE ROUTES.....	_____
COUNTY & TOWNSHIP ROADS.....	_____
OTHER ROADS.....	_____

DESIGN DESIGNATION

CURRENT ADT (2017)	35,820
DESIGN YEAR ADT (2020)	48,230
DESIGN HOURLY VOLUME (2020)	3,580
DIRECTIONAL DISTRIBUTION	58%
TRUCKS (24 HOUR B&C)	6%
DESIGN SPEED	40 MPH
LEGAL SPEED	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

<h2 style="text-align: center;">UNDERGROUND UTILITIES</h2> <p style="text-align: center;">CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.</p>	
 <p>OHIO Utilities Protection SERVICE</p> <p>(Non-members must be called directly)</p>	<p><i>Call Before You Dig</i></p> <p>1-800-362-2764</p>
<p style="text-align: center;">OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE</p> <p style="text-align: center;">1-800-925-0988</p>	



ENGINEERS SEAL:

SIGNED: _____
DATE: _____

ENGINEERS SEAL:



PLAN PREPARED BY:

Michael Baker
INTERNATIONAL

1111 SUPERIOR AVENUE EAST, SUITE 2300
CLEVELAND, OHIO 44114

<i>ODOT STANDARD CONSTRUCTION DRAWINGS</i>			<i>CITY OF CLEVELAND STANDARD CONSTRUCTION DRAWINGS</i>	<i>ODOT SUPPLEMENTAL SPECIFICATIONS</i>	<i>SPECIAL PROVISIONS</i>
<i>AS-1-15</i>	<i>7-17-15</i>			<i>800</i>	<i>GCRTA STANDARDS</i>
<i>AS-2-15</i>	<i>7-17-15</i>				<i>SECTION 014500</i>
<i>EXJ-6-17</i>	<i>1-19-18</i>				<i>SECTION 015010</i>
<i>PSID-1-13</i>	<i>7-15-16</i>				<i>SECTION 015020</i>
<i>VPF-1-90</i>	<i>7-17-15</i>				
<i>HL-20.14</i>	<i>1-16-15</i>				
<i>HL-30.31</i>	<i>1-17-14</i>				
<i>HL-50.21</i>	<i>7-15-16</i>			<i>ODOT SUPPLEMENTS</i>	
<i>DM-1.1</i>	<i>1-15-16</i>			<i>1079</i>	
<i>BR-2-15</i>	<i>7-17-15</i>			<i>1083</i>	

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF 2.09 MILES OF A NEW TWO- TO THREE-LANE BOULEVARD FROM E. 55TH ST. TO E. 93RD ST. WORK INCLUDES PAVEMENT, RAILROAD, STRUCTURES, DRAINAGE, WATERWORK, LIGHTING, POWER DISTRIBUTION, TRAFFIC CONTROL, LANDSCAPING, AND ADJUSTMENT OF EXISTING UTILITIES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 87.2 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 87.2 ACRES
(AREA SERVICED BY COMBINED SEWER)

2016 SPECIFICATIONS

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

0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		


FEDERAL PROJECT NO.
E140 (249)

PID NO.
96833

CONSTRUCTION PROJECT NO. **17-3000**

RAILROAD INVOLVEMENT
**NORFOLK SOUTHERN
GCRTA**

**-IR490/ SR010-
2.09 / 19.28**

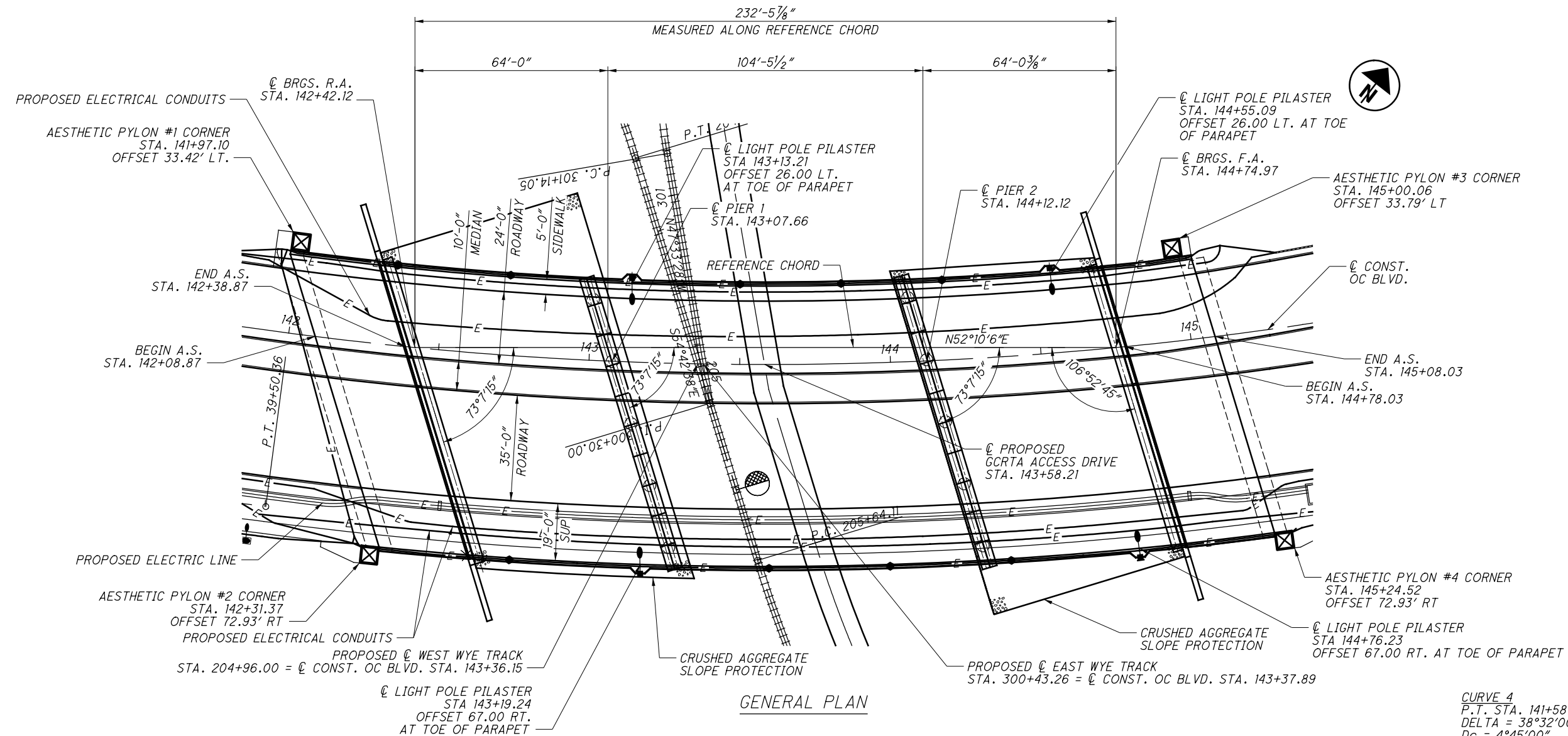


RECORD PLANS

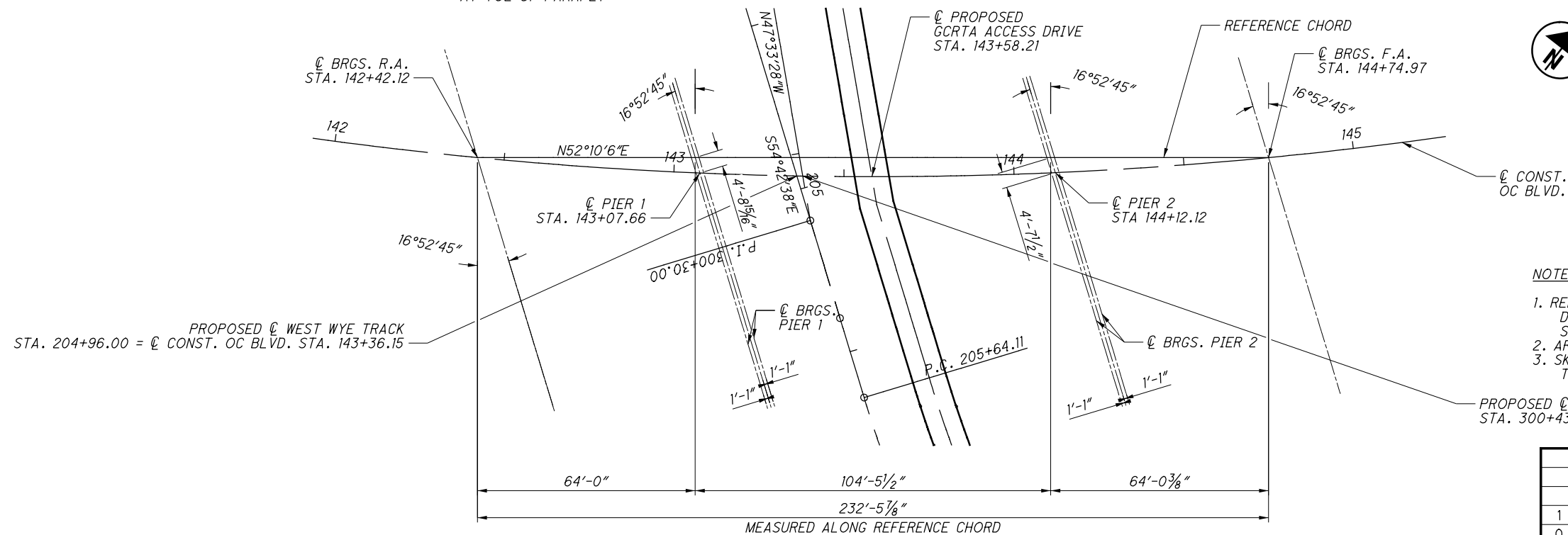
RECORD PLANS

RECORD PLANS





GENERAL PLAN



GEOMETRIC LAYOUT

CURVE 4
P.T. STA. 141+58.93
DELTA = 38°32'00"
Dc = 4°45'00"
R = 1206.23'
T = 421.63'
L = 811.23'
E = 71.56'

- NOTES:
1. REFERENCE CHORD IS A STRAIGHT LINE DISTANCE OF 232'-5 7/8" BETWEEN STA. 142+42.12 AND STA. 144+74.97.
 2. ARC LENGTH = 232'-10 3/8".
 3. SKEW ANGLES ARE MEASURED PERPENDICULAR TO THE REFERENCE CHORD.
- PROPOSED E EAST WYE TRACK
STA. 300+43.26 = E CONST. OC BLVD. STA. 143+37.89

NO.	DATE	DESCRIPTION
1	2021-09-03	DC058
0	2020-02-17	RFC

ISSUE RECORD

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
AS-1-15 REVISED 7-17-15
AS-2-15 REVISED 7-17-15
BR-2-15 REVISED 7-17-15
DM-1.1 REVISED 1-15-16
EXJ-6-17 REVISED 1-19-18
HL-20.14 REVISED 1-16-15
HL-30.31 REVISED 1-17-14
HL-50.21 REVISED 7-15-16
PSID-1-13 REVISED 7-15-16
VPF-1-90 REVISED 7-17-15

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
800 REVISED 7-15-16
1079 REVISED 01-16-15
1083 REVISED 4-15-16

DESIGN DATA:

CONCRETE CLASS QC2 WITH QC/QA -
COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 WITH QC/QA -
COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL -
ASTM A615 OR A996 MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL -
ASTM A709 GRADE 50

PILE CASING -
ASTM A252 GRADE 3 (45 KSI)
(PERFORM A DRIVEABILITY ANALYSIS TO
VERIFY THE WALL THICKNESS)

WELDED WIRE FABRIC - 70 KSI

CONCRETE FOR PRESTRESSED BEAMS:
SEMI-LIGHTWEIGHT - 130 PCF
COMPRESSIVE STRENGTH (FINAL) - 9.0 KSI
COMPRESSIVE STRENGTH (RELEASE) - 7.0 KSI

PRESTRESSING STRAND:
AREA - 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS", 7TH EDITION, ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, SEVENTH EDITION, INCLUDING THE 2015 INTERIM REVISIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007 (DATED 07-15-16).

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.
SIDEWALK LOADING OF 0.075 KIPS/SQ. FT.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE MANUAL, 2007.

COARSE AGGREGATE FOR CONCRETE:

ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1 PERCENT OR GREATER AS DEFINED BY THE AMERICAN SOCIETY OF TESTING MATERIALS (ASTM) C127.

CONSTRUCTION OVER GCRTA TRACKS:

GCRTA REQUIREMENTS:
CONTRACTOR WILL COMPLY WITH THE LATEST REVISION OF THE FOLLOWING GCRTA STANDARDS.

SECTION 014500 - SAFETY PROCEDURES
SECTION 015010 - MAINTENANCE OF RAIL TRAFFIC AND RESUMPTION OF REVENUE SERVICE
SECTION 015020 - STANDARD RAIL FLAGGING

REGULATED MATERIALS

REFER TO DEMOLITION PLANS IN BUILDABLE UNIT 14 - ROADWAY AND PAVEMENT, BEGIN PROJECT TO KINGSBURY RUN AND BUILDABLE UNIT 15 - ROADWAY AND PAVEMENT, KINGSBURY RUN TO END PROJECT FOR LOCATION AND IDENTIFICATION OF KNOWN REGULATED MATERIALS. HANDLING OF REGULATED MATERIALS SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS.

CONSTRUCTION CLEARANCE

MAINTAIN A CONSTRUCTION CLEARANCE OF 12 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 17.0 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 8.5 FEET FROM THE CENTER OF TRACKS, AT ALL TIMES.

PRE-CONSTRUCTION SURVEY, VIBRATION MONITORING AND VIDEO INSPECTION OF SEWERS

CONDUCT A PRE-CONSTRUCTION SURVEY ACCORDING TO THE SETTLEMENT AND VIBRATION MONITORING PLAN OF BUILDINGS, STRUCTURES, UTILITIES, AND CRITICAL LOCATIONS WITHIN THE LIMITS DETERMINED BY THE DBT VIBRATION SPECIALIST. PERFORM A PRE-CONSTRUCTION VIDEO INSPECTION ACCORDING TO CM&S 611 OF ALL SEWERS WITHIN THE INFLUENCE ZONES OF CONSTRUCTION. PERFORM SETTLEMENT AND VIBRATION MONITORING ACCORDING TO THE SETTLEMENT AND VIBRATION MONITORING PLAN DURING CONSTRUCTION. AFTER CONSTRUCTION IS SUBSTANTIALLY COMPLETE, PERFORM A SECOND VIDEO INSPECTION OF THE SEWERS. PROVIDE RECORDINGS OF THE VIDEOS TO THE DEPARTMENT AND MAINTAINING AGENCY FOR REVIEW.

ITEM 203 EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

PLACE AND COMPACT BACKFILL MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE BACKFILL BEHIND THE ABUTMENTS.

INTERMEDIATE DIAPHRAGMS:

DO NOT PLACE THE DECK CONCRETE UNTIL ALL INTERMEDIATE DIAPHRAGMS AND UTILITY SUPPORTS HAVE BEEN PROPERLY INSTALLED.

INSERTS AND HOLES:

ALL INSERTS AND HOLES REQUIRED IN CONCRETE BEAMS SHALL BE SHOWN IN FABRICATOR'S SHOP DRAWINGS. IF HOLES OR INSERTS ARE PLACED IN THE WEB THEN ADDITIONAL CRACK CONTROL REINFORCING SHALL BE SHOWN IN THE SHOP DRAWINGS. INSERTS OR HOLES ARE NOT PERMITTED IN THE BOTTOM FLANGE ALONG THE ENTIRE LENGTH OF THE BEAM.

PILE DRIVING AND ABUTMENT INSTALLATION CONSTRAINTS:

DO NOT DRIVE PIER PILES OR CONSTRUCT ABUTMENT FOOTINGS UNTIL AFTER THE WAITING PERIOD FOR THE REINFORCED EMBANKMENT IS COMPLETE. BEFORE CONSTUCTING ABUTMENT FOOTINGS, HAVE THE GEOTECHNICAL ENGINEER OR THEIR AUTHORIZED REPRESENTATIVE INSPECT THE FOUNDATION SOIL TO VERIFY THAT THE SOIL CONDITIONS ARE THE SAME AS ANTICIPATED DURING DESIGN. SHORING SYSTEMS FOR PIER PILES SHALL NOT CONFLICT WITH EMBANKMENT REINFORCEMENT. REFER TO BU-17A PLANS FOR DETAILS ON THE STAGED CONSTRUCTION AND REINFORCING DETAILS FOR THE EMBANKMENT. PIER SHORING SYSTEMS WILL REQUIRE COORDINATION WITH CATENARY POLES AND DOWN GUYS. REFER TO BU-17B PLANS FOR CATENARY DETAILS.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS:
303 KIPS PER PILE FOR THE PIER PILES

PIER PILES:
90 - 16" DIA. PILES 65 FEET LONG, ORDER LENGTH 1 DYNAMIC LOAD TESTING ITEM

FOUNDATION BEARING RESISTANCE

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 3.5 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 4.9 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.0 KIPS PER SQUARE FOOT.

DECK PLACEMENT DESIGN ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE, THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 3.05 KIPS FOR A TOTAL MACHINE LOAD OF 24.4 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL IS 65".

ITEM 511 QC/QA CONCRETE, AS PER PLAN:

BRIDGE PARAPETS AND PYLONS SHALL UTILIZE A RUBBED FINISH PER CMS 511.15B.

ITEM 625 - STRUCTURE GROUNDING SYSTEM

STRUCTURE SHALL BE GROUNDED PER HL-50.21.

UTILITY BLOCKOUT BACKWALL PENETRATIONS

FORMED UTILITY BLOCKOUT ABUTMENT BACKWALL PENETRATIONS SHALL US 1" WAX FILLER, FILL COAT #6 AVAILABLE FROM THE TRENTON CORPORATION, 7700 JACKSON ROAD, ANN ARBOR, MI 48103. PHONE NUMBER (734)424-3600 OR APPROVED EQUAL. THE MATERIAL AND INSTALLATION SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

SEE TABLE BELOW FOR SEALING TYPE ON EXPOSED CONCRETE SURFACES.

SEALING TYPE AND LIMITS	
-BRIDGE PARAPET - TOP - EPOXY-URETHANE (FEDERAL STANDARD 595C #27769)	
-BRIDGE PARAPET - TOP - EPOXY-URETHANE (FEDERAL STANDARD 595C #27769)	
-BRIDGE PARAPET - OUTSIDE - TEXTCOTE	
-APPROACH PARAPET - VARIES	
-FACIA GIRDERS - TEXTCOTE	
-PYLONS - TOP - EPOXY-URETHANE (FEDERAL STANDARD 595C #27769)	
-ABUTMENTS - TOP - EPOXY-URETHANE (FEDERAL STANDARD 595C #27769)	
-PIERS & CAPS - MEDIA BLASTED ONLY - NO SEALER	
-NO ANTI-GRAFFITI COATING ON OUTSIDE OF PARAPETS BEYOND 10 FT FROM ABUTMENT.	

CONDUIT SUPPORTS

CONSTRUCT CONDUIT SUPPORTS AT THE LOCATIONS SHOWN IN THE PLANS. FURNISH AND INSTALL A STEEL EXPANSION JOINT. INSTALL CONDUIT AND STEEL EXPANSION JOINT PER THE MANUFACTURER'S SPECIFICATIONS.

BUILDABLE UNIT REFERENCE

THE PROJECT IS BROKEN INTO BUILDABLE UNITS, PORTIONS OF THE PROJECT DEFINED BY GEOGRAPHIC AREAS OR TYPES OF WORK TO BE PERFORMED. THE FOLLOWING IS A LIST OF BUILDABLE UNITS ASSOCIATED WITH THIS PLAN SET:

BU-14	ROADWAY & PAVEMENT - BEGIN PROJECT TO KINGSBURY RUN
BU-15	ROADWAY & PAVEMENT - KINGSBURY RUN TO END PROJECT
BU-17A	GCRTA WYE TRACK, OUTFALL #2
BU-17B	GCRTA CATENARY
BU-11	CPP DUCT BANK
BU-27	LIGHTING

1	2024-09-10	RECORD DRAWINGS
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

GENERAL NOTES (1 OF 3)

CUY-10-1949

OH-10 OVER KINGSBURY RUN RAVINE

CUY-IR490/SR010-2.09/19.28

PID No. 96833

3 / 49

5
51

DESIGN AGENCY
Michael Baker

INTERNATIONAL
1111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

RECORD PLANS

RECORD PLANS

ITEM 518 STRUCTURE DRAINAGE, MISC.: PREFABRICATED GEOCOMPOSITE DRAIN

THIS WORK CONSISTS OF FURNISHING AND PLACING PREFABRICATED GEOCOMPOSITE DRAIN (PGD) AGAINST THE CONCRETE SURFACE OF AN ABUTMENT OR RETAINING WALL.

FURNISH PGD CONSISTING OF A DRAINAGE CORE WITH A GEOTEXTILE FABRIC BONDED TO AT LEAST ONE SIDE. USE CORE MATERIAL THAT CONSISTS OF A STABLE, POLYMER PLASTIC MATERIAL WITH A CUSPATED OR GEONET STRUCTURE. THE CORE MATERIAL SHALL HAVE SUFFICIENT FLEXIBILITY TO WITHSTAND BENDING AND HANDLING DURING INSTALLATION WITHOUT DAMAGE. FURNISH GEOTEXTILE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS FORMED INTO A WOVEN OR NON WOVEN FABRIC. FURNISH PGD CONFORMING TO THE FOLLOWING REQUIREMENTS. FURNISH MANUFACTURER'S CERTIFIED TEST DATA.

PROPERTY	TEST METHOD	VALUE
CORE THICKNESS	ASTM D 5199	0.4 TO 1.0 INCH
COMPRESSIVE STRENGTH	ASTM D 1621	13,650 PSF MIN.
FLOW RATE	ASTM D 4716	9 TO 25 GPM/FT
FABRIC APPARENT OPENING SIZE	ASTM D 4751	0.3 MM MAX.
FLOW RATE	ASTM D 4491	40 GPM/SQ.FT. MIN.
GRAB TENSILE STRENGTH	ASTM D 4632	90 LBS MIN.
CBR PUNCTURE	ASTM D 6241	65 LBS MIN.

PLACE PGD ON THE CONCRETE SURFACE WITH THE GEOTEXTILE FABRIC SIDE FACING OUT. SECURE THE PGD TO THE CONCRETE SURFACE USING CONSTRUCTION ADHESIVE OR CONCRETE NAILS WITH WASHERS AT LEAST 1-INCH DIAMETER IN SIZE. SECURE THE PGD ALONG THE EDGES AND AT A MAXIMUM SPACING OF 4 FEET.

SPLICE ABUTTING SECTIONS TOGETHER BY OVERLAPPING THE GEOTEXTILE FLAP (IF PROVIDED) ON ONE SECTION WITH THE ADJACENT SECTION OF PGD. OVERLAP THE GEOTEXTILE IN A SHINGLED OVERLAP SO THAT THE UPPER GEOTEXTILE IS ON TOP OF THE LOWER GEOTEXTILE. IF A GEOTEXTILE FLAP IS NOT PROVIDED, COVER THE SEAM WITH A 12-INCH WIDE STRIP OF GEOTEXTILE FABRIC CENTERED OVER THE SEAM AND SECURED IN PLACE USING 3-INCH WIDE WATERPROOF PLASTIC TAPE.

SEAL ALL EXPOSED EDGES OF THE CORE MATERIAL TO PREVENT SOIL INTRUSION. SEAL EXPOSED EDGES BY FOLDING THE GEOTEXTILE FLAPS OVER AND AROUND THE PGD OR, IF A FLAP IS NOT PROVIDED, COVERING THE EXPOSED EDGE WITH A 12-INCH WIDE STRIP OF GEOTEXTILE FABRIC, TAPING THE STRIP TO THE PGD GEOTEXTILE 8 INCHES FROM THE EXPOSED EDGE, AND FOLDING THE REMAINING 4 INCHES OVER AND AROUND THE PGD. SECURE LOOSE EDGES OF THE GEOTEXTILE FABRIC WITH 3-INCH WIDE WATERPROOF PLASTIC TAPE.

REPAIR ANY DAMAGE TO THE GEOTEXTILE FABRIC BY COVERING WITH A PATCH WHICH OVERLAPS THE DAMAGED AREA AND EXTENDS AT LEAST 6 INCHES BEYOND THE EDGE OF THE DAMAGED AREA. TAPE THE EDGES OF THE PATCH IN PLACE USING 3-INCH WIDE WATERPROOF PLASTIC TAPE. IF THE CORE OF THE PGD IS DAMAGED, REPLACE IT WITH A NEW SECTION OF PGD AND SPLICE IT AS DESCRIBED ABOVE.

WHERE SHOWN ON THE PLANS, PLACE THE BOTTOM OF THE PGD ADJACENT TO A PERFORATED DRAINAGE COLLECTION PIPE AND POROUS BACKFILL AND COVER WITH GEOTEXTILE FABRIC. ENSURE A CONTINUOUS DRAINAGE PATH FROM THE PGD CORE TO THE PIPE. WHERE A WALL HAS WEEPHOLES FOR DRAINAGE, ENSURE WATER CAN DRAIN FROM THE PGD TO THE WEEPHOLE. IF NECESSARY, CUT A HOLE IN THE CORE TO ALLOW DRAINAGE OR USE A WEEPHOLE FITTING FROM THE PGD MANUFACTURER. DO NOT CUT GEOTEXTILE.

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN:

APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

THE ANTI-GRAFFITI COATING SHALL ALSO MEET THE FOLLOWING REQUIREMENTS:

THE MATERIAL SHALL BE A SINGLE COMPONENT, RTV (ROOM TEMPERATURE VULCANIZED), NEUTRAL MOISTURE CURE, PERMANENT (NON-SACRIFICIAL), TYPE III (WATER CLEANABLE) POLYSILOXANE (SILICONE) ANTI-GRAFFITI COATING (FREE OF ANY WAXES, EPOXIES, OR POLYURETHANE COMPONENTS).

THE COATING SHALL BE A ONE COAT SYSTEM (NO PRIMER) CAPABLE OF BEING SPRAY APPLIED TO A DRY FILM THICKNESS OF 15 MILS (375 MICRONS) WITHOUT RUNS OF SAGS (MULTIPLE COAT APPLICATION ACCEPTABLE FOR BRUSH/ROLLER USAGE AND PRIMER USAGE ACCEPTABLE FOR SPECIALTY SUBSTRATES SUCH AS GALVANIZED METAL).

THE COATING SHALL EMIT LESS THAN 300 G/L (2.5 POUNDS PER GALLON) OF VOLATILE ORGANIZE COMPOUNDS (EPA METHOD 24).

THE COATING SHALL MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:

- CLEANABILITY LEVEL 1 (GRAFFITI COMPLETELY REMOVED WITH COLD WATER POWER WASH) AS PER ASTM D7089 WITH LOW PRESSURE (1200 PSI) COLD WATER WASH AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDANCE WITH ASTM D4587.
- GRAFFITI REISTANCE LESS THEN 7.5 AS PER ASTM D6578 AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDACE WITH ASTM 4578.
- NO SIGNS OF GRAFFITI STAINING AND MUST BE INTACT AND EXHIBIT NO SIGNS OF STREAKING, CRACKING, PINHOLING, DISCOLORING, OR OTHER VISIBLE COATING DEGRADATION UPON CASUAL OBSERVATION WHEN TESTED IN ACCORDANCE WITH TXDOT TEX 890-B, TYPE III METHOD.
- BREATHABILITY OF 10 PERMS (+/- 3) PER ASTM D1653 USING "WET CUP METHOD".
- ELONGATION AT BREAK GREATER THAN 100% AS PER ASTM D412 (USING DIE "D").
- ADHESION RATING OF "B"-DIFFICULT TO REMOVE AS PER ASTM D6677 (ADHESION BY KNIFE).

ITEM 607 - VANDAL PROTECTION FENCE, AS PER PLAN

THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO FABRICATE, GALVANIZE, CLEAN, APPLY A TWO- COAT SHOP PAINT SYSTEM (EPOXY/URETHANE), AND INSTALL THE RAILING. ALL FENCE AND RAILING MATERIALS SHALL BE GALVANIZED AND PAINTED PER THIS NOTE.

A. FABRICATION OF THE RAILING SHALL BE IN ACCORDANCE WITH C&MS 513, UF LEVEL. IN ACCORDANCE WITH C&MS 514, EXCEPT AS NOTED BELOW.

B. THE ARCHITECTURAL FENCING SHALL SATISFY THE DESIGN REQUIREMENTS AS SPECIFIED IN STANDARD BRIDGE DRAWING VPF-1-90, "VANDAL PROTECTION FENCE".

C. THE FENCING SHALL BE CONSTRUCTED USING WELDED WIRE FABRIC WITH 10.5 GAGE CORE WIRE, AFTER WELDING.

D. STEEL PLATES AND SHAPES SHALL BE ASTM A709 GRADE 36 OR 50. ALL OTHER MATERIALS SHALL BE IN ACCORDANCE WITH C&MS 707.10 OR 711.09.

E. THE GALVANIZED COATING SYSTEM MAY BE APPLIED BY A GALVANIZER NOT PRE -QUALIFIED AS A FABRICATION SHOP UNDER SUPPLEMENT 1078, BUT THE PRE -QUALIFIED FABRICATOR OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE QUALITY OF THE APPLIED GALVANIZED COATING SYSTEM AND ANY REPAIRS, RE -FABRICATION AND ADDITIONAL ASSEMBLIES REQUIRED TO ASSURE THE FABRICATED STEEL MEETS THE PLAN REQUIREMENTS.

F. THE TWO SHOP COATS SHALL BE APPLIED IN A STRUCTURAL STEEL FABRICATION SHOP HAVING PERMANENT BUILDINGS PER 513.04 AND PREQUALIFIED AT THE UF LEVEL. THE PAINT QUALITY CONTROL SPECIALIST (QCS) SHALL BE QUALIFIED AS SPECIFIED IN 514.04.

G. PRIOR TO GALVANIZING, ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES SHALL HAVE A 1/16-INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE.

H. GALVANIZE THE FABRICATED RAILING AND HARDWARE ACCORDING TO C&MS 711.02, EXCEPT THAT FABRICATED RAILING ELEMENTS SHALL NOT BE POST TREATED WITH WATER QUENCHING OR CHROMATE CONVERSION COATED.

I. AFTER GALVANIZATION, REMOVE ZINC HIGH SPOTS SUCH AS METAL DRIP LINE AND OTHERS THAT WOULD DETRACT FROM THE PAINT APPEARANCE BY SSPC SP2 OR SP3. TAKE CARE THAT THE BASE GALVANIZED COATING IS NOT REMOVED. CHECK REPAIRED AREAS FOR REQUIRED COATING THICKNESS.

J. REPAIR GALVANIZED COATINGS DAMAGED IN THE SHOP ACCORDING TO ASTM A780 METHOD A3. REPAIR GALVANIZED COATINGS DAMAGED IN THE FIELD ACCORDING TO ASTM A780 METHOD A1.

K. AFTER REMOVING HIGH SPOTS, CLEAN THE GALVANIZED COATING ACCORDING TO SSPC SP-I. THE CLEANING SOLUTION SHALL BE AN ALKALINE SOLUTION WITH A PH RANGING FROM A MINIMUM OF 11 TO A MAXIMUM OF 12. THIS SOLUTION CAN BE APPLIED BY IMMERSION, SPRAY OR SOFT NYLON BRUSH. FOLLOW CLEANING WITH A HOT WATER OR HOT PRESSURE WASHER RINSE. SEPARATE INDIVIDUAL PIECES AND POSITION TO FACILITATE DRAINAGE AND DRYING. THE PIECES SHALL BE COMPLETELY DRY BEFORE PROCEEDING.

L. AFTER CLEANING, ABRASIVE BLAST THE PIECES ACCORDING TO SSPC-SP7 BRUSH- OFF BLAST CLEANING. THE BLASTING OPERATION SHALL ROUGHEN THE GALVANIZED SURFACE TO AN ANGULAR SURFACE PROFILE OF 0.75 TO 1.00 MILS. SELECT THE BLASTING EQUIPMENT, TECHNIQUE AND ABRASIVE MATERIAL TO PROVIDE FOR THE SPECIFIED SURFACE PROFILE WITHOUT REMOVAL OF EXCESSIVE ZINC LAYERS. THE FINAL ZINC MILLAGE SHALL NOT BE LESS THAN 4.0 MILS. REMOVE ALL ABRASIVE RESIDUE WITH CLEAN COMPRESSED AIR OR OTHER METHODS ACCEPTABLE TO THE DEPARTMENT.

M. AFTER OBTAINING SURFACE PROFILE, SHOP APPLY A TWO COAT PAINT SYSTEM CONSISTING OF EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT MEETING THE REQUIREMENTS OF C&MS 708.02. THE FINISH COAT SHALL MATCH FEDERAL COLOR STANDARD FS 595C-17038 BLACK. APPLY THE EPOXY COATING WITHIN 24 HOURS OF THE BRUSH- OFF BLASTING.

N. PRIOR TO FABRICATION OF THE RAILING SYSTEM, FABRICATE A SAMPLE RAILING PANEL OF A LENGTH AGREEABLE TO THE PROJECT ENGINEER WHICH INCLUDES TWO POSTS, ALL HARDWARE, INCIDENTALS AND COATINGS. THE PROJECT ENGINEER WILL USE THIS SAMPLE PANEL TO JUDGE ACCEPTANCE OF THE FABRICATION, COATINGS AND QUALITY CONTROL PROGRAM. AFTER THE REVIEW OF THIS SAMPLE, THE DEPARTMENT AND THE CONTRACTOR MAY AGREE UPON ANY FABRICATION, COATING, QUALITY CONTROL OR INSTALLATION CHANGES AS A MODIFICATION TO THESE NOTES. THE FABRICATION CAN PROCEED ANY TIME AFTER THE ACCEPTANCE OF THIS SAMPLE PANEL. THE SAMPLE PANEL MAY BE INCORPORATED INTO THE FINISHED WORK AT THE DISCRETION OF THE ENGINEER.

O. REPAIR DAMAGE TO THE PAINT SYSTEM CAUSED DURING STORAGE, TRANSPORTATION, OR ERECTION ACCORDING TO C&MS 514.22. EXERCISE EXTREME CARE WHILE HANDLING THE STEEL DURING ERECTION, AND DURING SUBSEQUENT CONSTRUCTION OF THE RAILING AND FENCE. INSULATE THE STEEL FROM THE BINDING CHAINS BY SOFTENERS AND PAD ALL HOOKS AND SLINGS THAT ARE USED TO HOIST/ERECT THE MEMBERS.

P. ALL FENCE ANCHORS SHALL BE CAST INTO THE PARAPET. A WASHER AND NUT SHALL BE TACK WELDED TO THE BOTTOM OF THE THREADED ROD TO AVOID THE ANCHORS PULLING LOOSE WHEN THE TEMPLATES FOR THE BASEPLATES ARE STRIPPED. FENCE ANCHORAGE SHALL BE STAINLESS STEEL PER C&MS 730.10.

Q. RESTRAINT CABLES SHALL BE INSTALLED TO TIE THE FENCE POSTS, FENCE PANELS, ORNAMENTAL LIGHTS, AND THE WELDED WIRE FABRIC PANELS, SUCH THAT, IF A POST BREAKS OFF IN A VEHICLE IMPACT, THE POST ON THE OPPOSITE ENDS OF THE FAILED ONE WILL SUPPORT THE SUSPENDED PANELS AND POST.

ITEM 515 - DRAPED STRAND PRESTRESSED CONCRETE BRIDGE T-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60'), AS PER PLAN. 66.23'

ITEM 515 - DRAPED STRAND PRESTRESSED CONCRETE BRIDGE T-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60'), AS PER PLAN. 65.80'

ITEM 515 - DRAPED STRAND PRESTRESSED CONCRETE BRIDGE T-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60'), AS PER PLAN. 103.61'

ITEM 515 - DRAPED STRAND PRESTRESSED CONCRETE BRIDGE T-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60'), AS PER PLAN. 63.35'

1.0 GENERAL
ALL REQUIREMENTS OF SECTION 515 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS APPLY TO THIS SPECIFICATION EXCEPT AS NOTED HEREIN.

2.0 PERFORMANCE
EXCEPT AS MODIFIED OR EXCEEDED BY THESE SPECIFICATIONS, ALL CAST-IN-PLACE STRUCTURAL LIGHTWEIGHT CONCRETE WORK SHALL CONFORM TO ACI 301.

3.0 MATERIALS
3.1AGGREGATE: EXPANDED SHALE, CLAY, OR SLATE (ESCS) LIGHTWEIGHT AGGREGATE PRODUCED BY THE ROTARY KILN METHOD SHALL MEET ASTM C 330. ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127.

4.0 CONCRETE PROPERTIES
4.1 STRENGTH: MATERIALS SHALL BE PROPORTIONED TO PRODUCE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 9,000 PSI AT 28 DAYS.
4.2 DENSITY: MATERIALS SHALL BE PROPORTIONED TO PRODUCE CONCRETE WITH A CALCULATED EQUILIBRIUM DENSITY OF 123.5 PCF (+/- 3 PCF AS DETERMINED BY ASTM C 567-00, SECTION 9.2.
4.3 MIXTURE PROPORTIONS: THE CONTRACTOR SHALL FURNISH THE MIXTURE PROPORTIONS THAT WILL MEET THE STRENGTH AND FRESH AND EQUILIBRIUM DENSITY REQUIREMENTS OF THE CONCRETE SPECIFIED. THE MIXTURE PROPORTION SHALL BE PREPARED IN ACCORDANCE WITH ACI 318, AND SUBJECT TO THE APPROVAL OF THE ENGINEER.
4.4 BATCHING AND MIXING: THE CONCRETE SHALL BE BATCHED AND MIXED IN ACCORDANCE WITH THE APPLICABLE SECTION OF ACI 301 AND ASTM C 94.

5.0 FIELD CONTROL
5.1 FRESH DENSITY: THE CONCRETE SHALL HAVE A MAXIMUM FRESH DENSITY OF 135 PCF.
5.2 PUMPING: IF CONCRETE IS TO BE PUMPED, FOLLOW THE RECOMMENDATIONS OF ESCI INFORMATION SHEET 4770.1, PUMPING STRUCTURAL LIGHTWEIGHT CONCRETE - THE TEAM APPROACH AND ACI 304.2R.
5.3 CONCRETE SPECIMENS: COMPRESSIVE STRENGTH SPECIMENS SHALL BE MADE IN ACCORDANCE WITH ASTM C 31 AND TESTED IN ACCORDANCE WITH ASTM C 39. DENSITY, SLUMP, AND AIR CONTENT OF FRESH CONCRETE SHALL BE DETERMINED FROM EACH BATCH OF CONCRETE SAMPLED FOR COMPRESSIVE STRENGTH TESTS. FRESH DENSITY, SLUMP, AND AIR CONTENT SHALL BE DETERMINED BY ASTM C 138, C 143, AND C 173 RESPECTIVELY. EQUILIBRIUM DENSITY SHALL BE DETERMINED BY ASTM C 567.

1	2024-09-10	RECORD DRAWINGS
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GENERAL NOTES (2 OF 3)

CUY-IR490/SR010-2.09/19.28

PID No. 96833

4 / 49

6
51

CUY-10-1949

OH-10 OVER KINGSBURY RUN RAVINE

DESIGNED
CDL

DRAWN
CDL

CHECKED
MKB

REVIEWED
LPC

DATE
2-12-20

STRUCTURE FILE NUMBER
1801515

DESIGN AGENCY
Michael Baker

INTERNATIONAL
1111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

RECORD PLANS

RECORD PLANS

APPLICABLE ODOT CMS SPECIFICATIONS

THE FOLLOWING WORK ITEMS SHALL BE CONSTRUCTED PER THE CMS ITEMS LISTED IN THE TABLE BELOW.

ITEM NO.	ITEM DESCRIPTION
203	EMBANKMENT, AS PER PLAN
503	COFFERDAMS AND EXCAVATION BRACING
503	UNCLASSIFIED EXCAVATION, AS PER PLAN
505	PILE DRIVING EQUIPMENT MOBILIZATION
507	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED
507	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN
509	EPOXY COATED REINFORCING STEEL
511	CLASS QC1 CONCRETE WITH QC/QA, FOOTING, AS PER PLAN
511	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN
511	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTING
511	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK
511	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN
511	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK
511	CLASS QC2 CONCRETE, MISC.: PYLONS WITH QC/QA, AS PER PLAN
512	SEALING OF CONCRETE SURFACES (NON-EPOXY)
512	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	SEALING OF CONCRETE SURFACES, AS PER PLAN
515	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60"), AS PER PLAN , 66.23'
515	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60"), AS PER PLAN , 65.80'
515	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60"), AS PER PLAN , 103.61'
515	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (60"), AS PER PLAN , 63.35'
516	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL
516	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)
518	6" PERFORATED PIPE, INCLUDING SPECIALS
518	6" NON-PERFORATED PIPE, INCLUDING SPECIALS
518	STRUCTURE DRAINAGE, MISC.: PREFABRICATED GEOCOMPOSITE DRAIN
518	POROUS BACKFILL WITH GEOTEXTILE FABRIC
523	DYNAMIC LOAD TESTING
526	REINFORCED CONCRETE APPROACH SLABS (T=17")
526	TYPE C INSTALLATION
530	SPECIAL - SUPERSTRUCTURE: UTILITY SUPPORTS
601	CRUSHED AGGREGATE SLOPE PROTECTION
607	VANDAL PROTECTION FENCE, AS PER PLAN
625	CONDUIT, MISC.: 5" ELECTRICAL CONDUITS
625	CONDUIT, MISC.: 2" CONDUIT IN PARAPET
625	CONDUIT, MISC.: 1" CONDUIT IN PARAPET
625	STRUCTURE GROUNDING SYSTEM
625	JUNCTION BOX

ITEM 511. CLASS QC1 CONCRETE WITH QC/QA. FOOTING. AS PER PLAN & ITEM 511. CLASS QC1 CONCRETE WITH QC/QA. ABUTMENT INCLUDING FOOTING. AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING, AS PER PLAN AND ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, FOOTING,AS PER PLAN, INSTALL A REFERENCE MONUMENT AT EACH END OF EACH SPREAD FOOTING AT THE ABUTMENTS AND COLUMN 1 & 5 PILE FOOTINGS AT THE PIERS. THE REFERENCE MONUMENT SHALL CONSIST OF A #8, OR LARGER, EPOXY COATED REBAR EMBEDDED AT LEAST 6" INTO THE FOOTING AND EXTENDED VERTICALLY 4 TO 6 INCHES ABOVE THE TOP OF THE FOOTING. INSTALL A SIX INCH DIAMETER, SCHEDULE 40, PLASTIC PIPE AROUND THE REFERENCE MONUMENT. CENTER THE PIPE ON THE REFERENCE MONUMENT AND PLACE THE PIPE VERTICAL WITH ITS TOP AT THE FINISHED GRADE. THE PIPE SHALL HAVE A REMOVABLE, SCHEDULE 40, PLASTIC CAP. PERMANENTLY ATTACH THE BOTTOM OF THE PIPE TO THE TOP OF THE FOOTING.

ESTABLISH A BENCHMARK TO DETERMINE THE ELEVATIONS OF THE REFERENCE MONUMENTS AT VARIOUS MONITORING PERIODS THROUGHOUT THE LENGTH OF THE CONSTRUCTION PROJECT. THE BENCHMARK SHALL BE THE SAME THROUGHOUT THE PROJECT AND SHALL BE INDEPENDENT OF ALL STRUCTURES.


RECORD THE ELEVATION OF EACH REFERENCE MONUMENT AT EACH MONITORING PERIOD SHOWN IN THE TABLES BELOW.

THE ORIGINAL COMPLETED TABLES WILL BECOME PART OF THE DISTRICTS PROJECT PLAN RECORDS.

PROJECT NUMBER: 96833	MAXIMUM FACTORED BEARING PRESSURE: 4.9 KSF		
BRIDGE NUMBER: CUY-10-1949	STRUCTURE FILE NUMBER: 1801515		
BENCHMARK LOCATION:			
FOOTING LOCATION: REAR ABUTMENT			
MONITORING PERIOD	LEFT MONUMENT	RIGHT MONUMENT	
AFTER FOOTING CONCRETE IS PLACED	655.76	655.84	
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS	655.71	655.77	
BEFORE DECK PLACEMENT	655.71	655.73	
AFTER DECK PLACEMENT	655.69	655.71	
PROJECT COMPLETION	655.62	655.59	

PROJECT NUMBER: 96833	MAXIMUM FACTORED BEARING PRESSURE: 4.9 KSF		
BRIDGE NUMBER: CUY-10-1949	STRUCTURE FILE NUMBER: 1801515		
BENCHMARK LOCATION:			
FOOTING LOCATION: FORWARD ABUTMENT			
MONITORING PERIOD	LEFT MONUMENT	RIGHT MONUMENT	
AFTER FOOTING CONCRETE IS PLACED	654.88	654.88	
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS	654.74	654.77	
BEFORE DECK PLACEMENT	654.74	654.77	
AFTER DECK PLACEMENT	654.73	654.76	
PROJECT COMPLETION	654.59	654.65	

PROJECT NUMBER: 96833		MAXIMUM FACTORED BEARING PRESSURE: N/A	
BRIDGE NUMBER: CUY-10-1949		STRUCTURE FILE NUMBER: 1801515	
BENCHMARK LOCATION:			
FOOTING LOCATION: PIER 1		COLUMN 1 PILE CAP MONUMENT	COLUMN 5 PILE CAP MONUMENT
MONITORING PERIOD			
AFTER FOOTING CONCRETE IS PLACED		625.06	625.11
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS		625.06	625.11
BEFORE DECK PLACEMENT		625.06	625.10
AFTER DECK PLACEMENT		625.05	625.09
PROJECT COMPLETION		624.99	625.02

PROJECT NUMBER: 96833	MAXIMUM FACTORED BEARING PRESSURE: N/A		
BRIDGE NUMBER: CUY-10-1949	STRUCTURE FILE NUMBER: 1801515		
BENCHMARK LOCATION:			
FOOTING LOCATION: PIER 2		COLUMN 1 PILE CAP MONUMENT	COLUMN 5 PILE CAP MONUMENT
MONITORING PERIOD			
AFTER FOOTING CONCRETE IS PLACED		625.25	625.16
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS		625.25	625.16
BEFORE DECK PLACEMENT		625.24	625.15
AFTER DECK PLACEMENT		625.23	625.14
PROJECT COMPLETION		625.19	625.09

ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
B - BASELINE
B.F. - BACK FACE
BM - BENCHMARK
BOT. OR BTM. - BOTTOM
BRG. - BEARING
BUND. - BUNDLED
CL - CENTERLINE
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONSTR. - CONSTRUCTION
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E - EAST
EB - EASTBOUND
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EOP - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F/F - FACE TO FACE
F.F. - FRONT FACE
FT. - FOOT OR FEET
FWD. - FORWARD
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
HW - HIGH WATER
IN. - INCH
JT. - JOINT
L.F. - LEFT FORWARD
LT. - LEFT
MAX. - MAXIMUM
MIN. - MINIMUM

MISC. - MISCELLANEOUS
MSE - MECHANICALLY STABILIZED EARTH
N - NORTH
NB - NORTHBOUND
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RCP - ROCK CHANNEL PROTECTION
REQD. - REQUIRED
R.F. - RIGHT FORWARD
R.R. - RAILROAD
RT. - RIGHT
R/W - RIGHT OF WAY
S - SOUTH
SB - SOUTHBOUND
SER. - SERIES
SHLDR - SHOULDER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
SUP - SHARED USE PATH
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY
W - WEST
WB - WESTBOUND
WWR - WELDED WIRE REINFORCEMENT

SECTION / DETAIL / VIEW CALLOUTS



1	2024-09-10	RECORD DRAWINGS
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

DESIGN AGENCY
Michael Baker
INTERNATIONAL
111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

REVIEWED
LPC
DATE
2-12-20

DRAWN
CDL
CHECKED
MKB

STRUCTURE FILE NUMBER
1801515

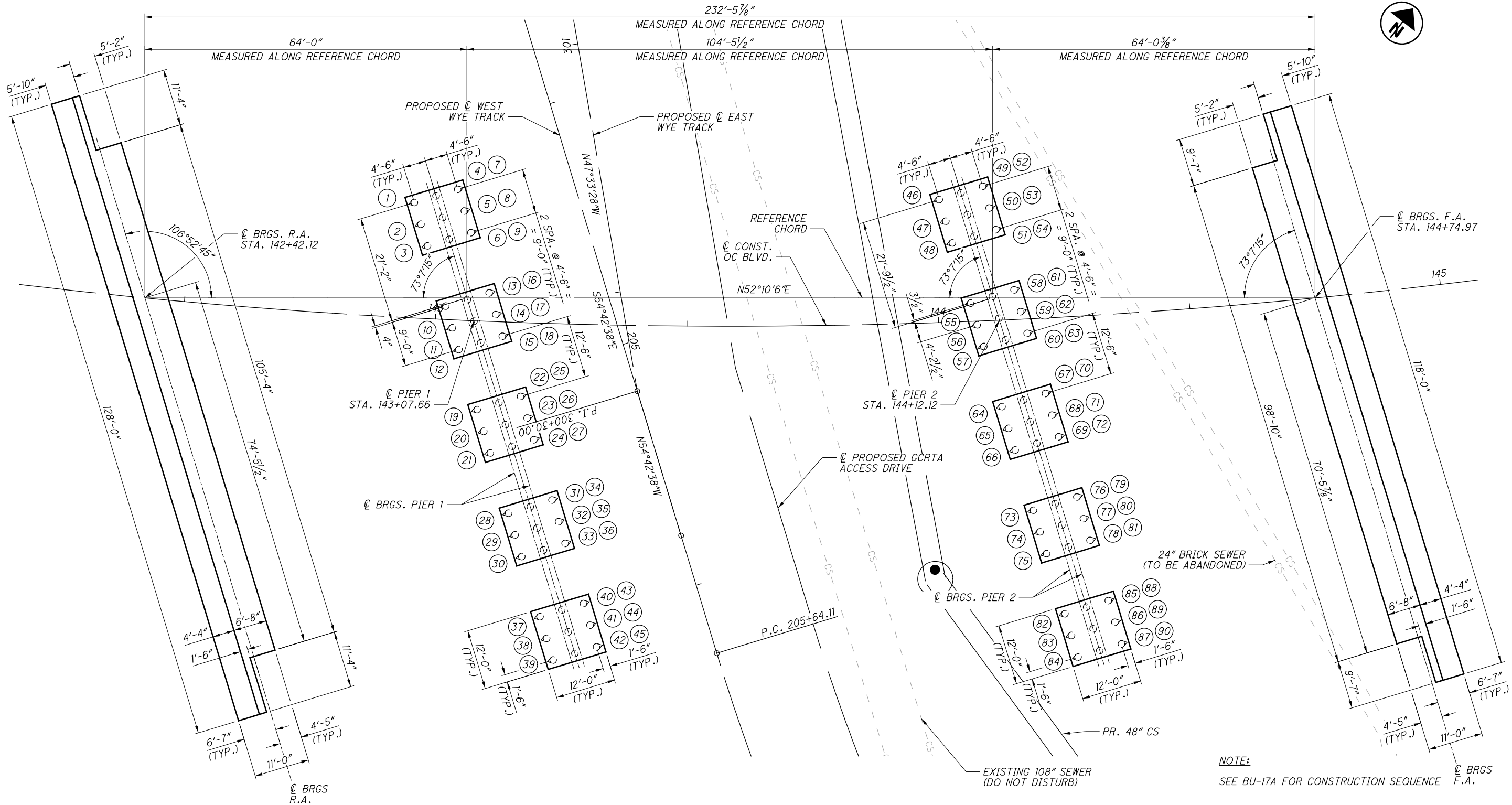
GENERAL NOTES (3 OF 3)
CUY-10-1949
OH-10 OVER KINGSBURY RUN RAVINE

CUY-1R490/SR010-2.09/19.28
PID No. 96833

5 / 49

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RECORD PLANS



PILE LAYOUT

SHORT PILE EMBEDMENTS	
PILE NUMBER	EMBEDMENT LENGTH
11	59.7
16	59.0
20	59.9
28	59.8
32	59.8
35	59.8
38	59.7
43	59.8
44	59.5

PILE SCHEDULE			
SUBSTRUCTURE UNIT	PILE DIAMETER	ESTIMATED LENGTH	CUTOFF ELEVATION
PIER 1	16"	60'	EL. 621.5
PIER 2	16"	60'	EL. 621.5

NOTE:
SEE BU-17A FOR CONSTRUCTION SEQUENCE

- LEGEND
- # INDICATES PROPOSED PILE NUMBER
 - INDICATES PROPOSED VERTICAL PILE
 - ◑ INDICATES PROPOSED BATTERED PILE 1:4

NO.	DATE	DESCRIPTION
1	2024-09-10	RECORD DRAWINGS
0	2020-02-17	RFC
ISSUE RECORD		

FOUNDATION PLAN

CUY-10-1949
OH-10 OVER KINGSBURY RUN RAVINE

DESIGNED
JCC

CHECKED
MKB

DRAWN
AJW

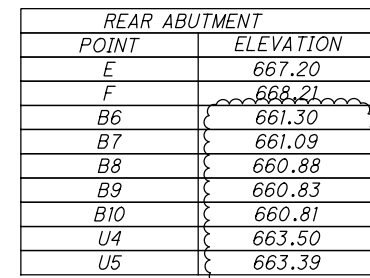
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LPC

DATE
2-12-20

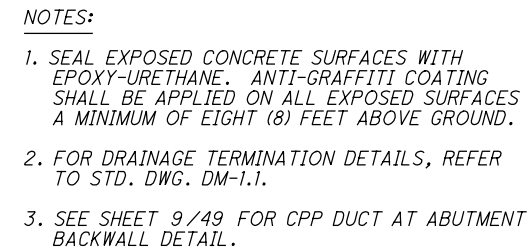
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DESIGN AGENCY
Michael Baker

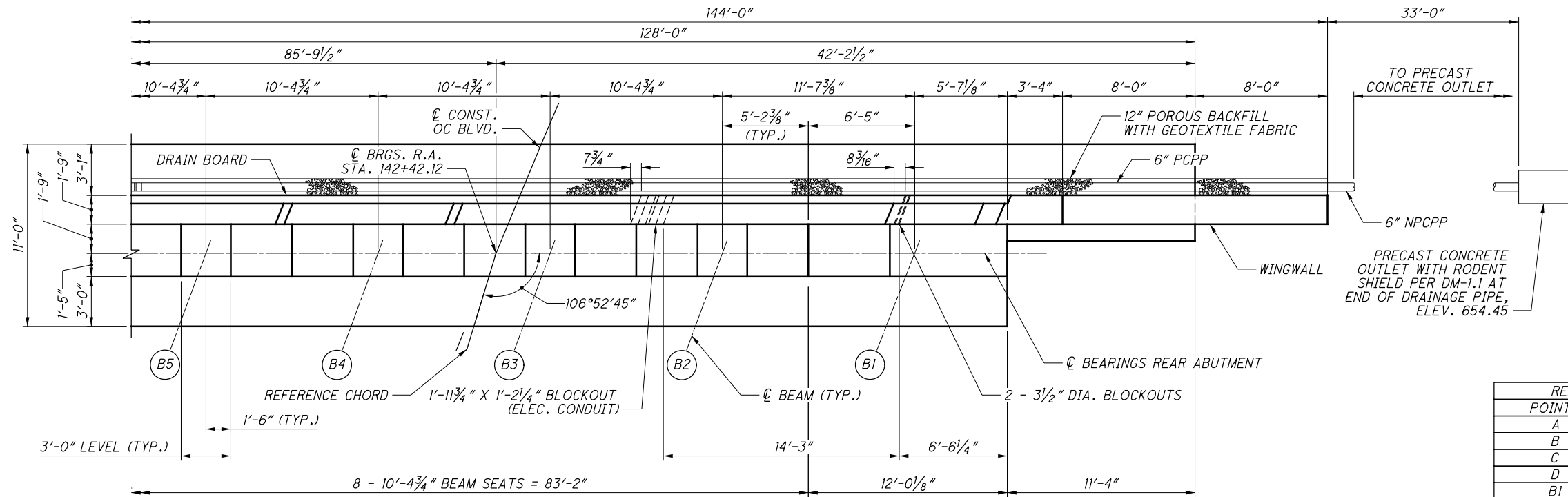
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1111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114



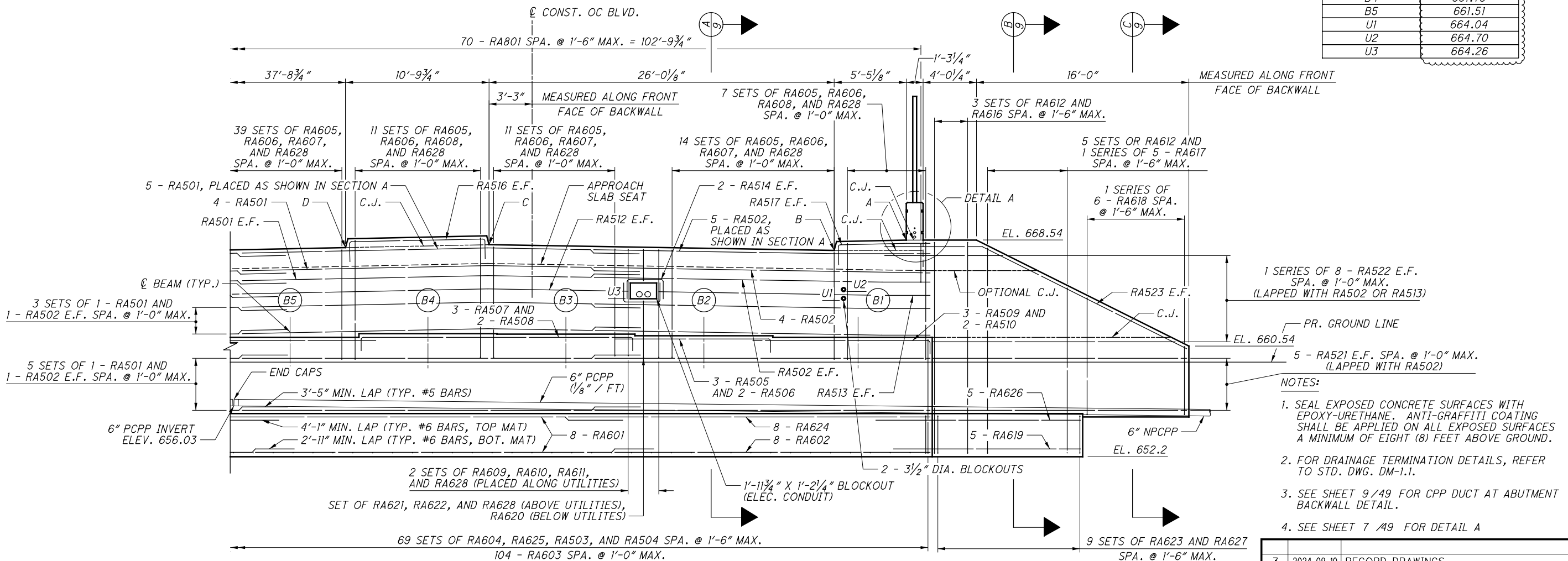
DETAIL A
(SOUTH SIDE SHOWN, NORTH
SIDE OPPOSITE HAND)



3	2024-09-10	RECORD DRAWINGS
2	2021-07-01	DC057
1	2021-03-17	DRFI 109
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		



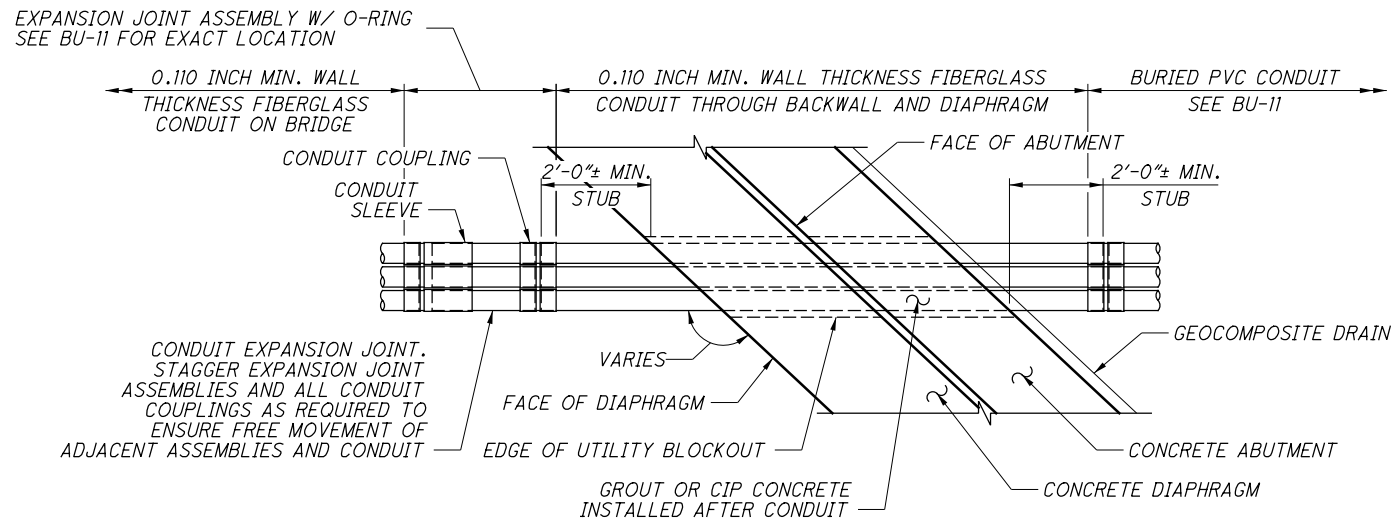
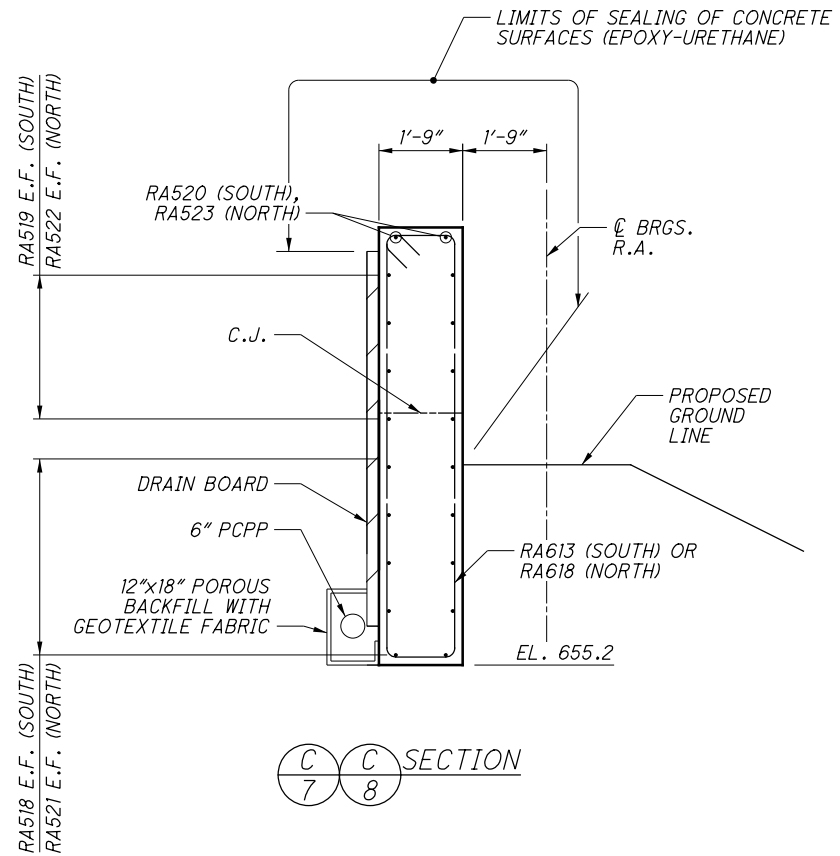
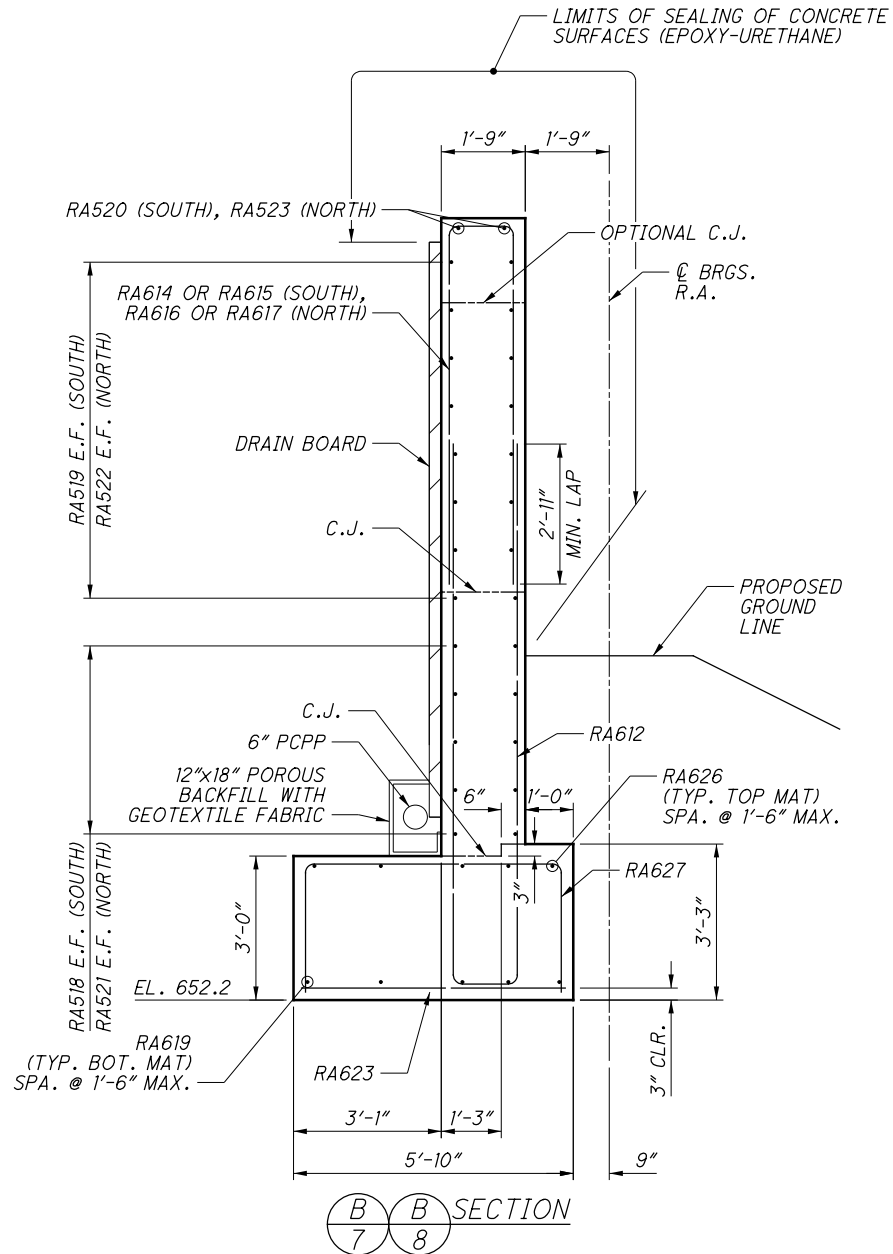
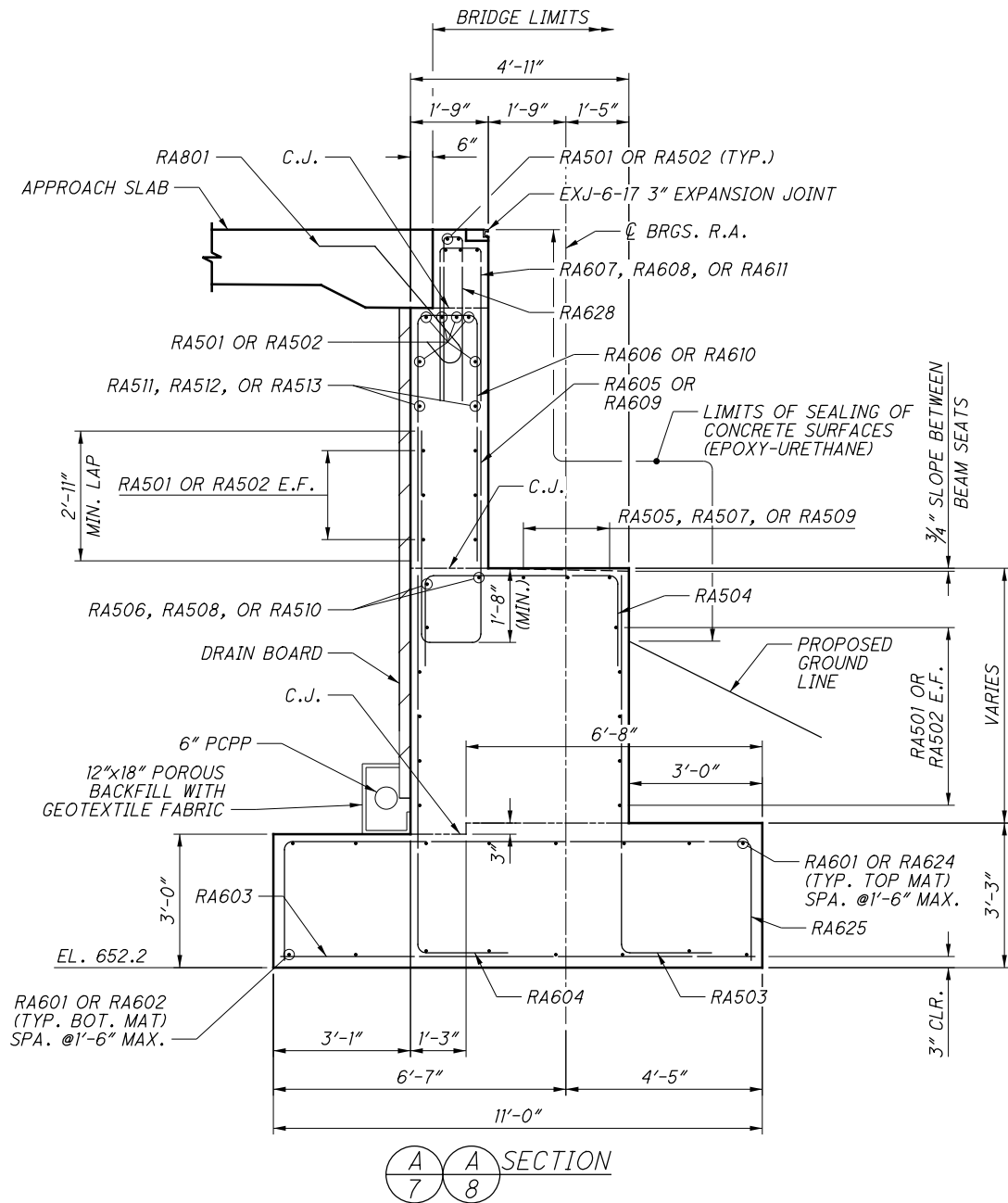
REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION

- NOTES:
1. SEAL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE. ANTI-GRAFFITI COATING SHALL BE APPLIED ON ALL EXPOSED SURFACES A MINIMUM OF EIGHT (8) FEET ABOVE GROUND.
 2. FOR DRAINAGE TERMINATION DETAILS, REFER TO STD. DWG. DM-1.1.
 3. SEE SHEET 9/49 FOR CPP DUCT AT ABUTMENT BACKWALL DETAIL.
 4. SEE SHEET 7/49 FOR DETAIL A

NO.	DATE	DESCRIPTION
3	2024-09-10	RECORD DRAWINGS
2	2021-07-01	DC057
1	2021-03-17	DRF1 109
0	2020-02-17	RFC
ISSUE RECORD		



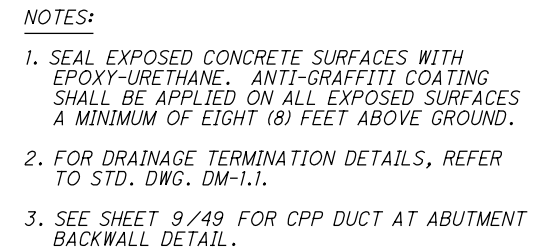
CPP DUCT AT ABUTMENT BACKWALL
TYP. FOR BOTH ABUTMENTS

- NOTES:
1. SEAL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE. ANTI-GRAFFITI COATING SHALL BE APPLIED ON ALL EXPOSED SURFACES A MINIMUM OF EIGHT (8) FEET ABOVE GROUND.
 2. SEE SHEET 31/49 FOR JOINT OPENING TABLE.
 3. PROVIDE 2\"/>

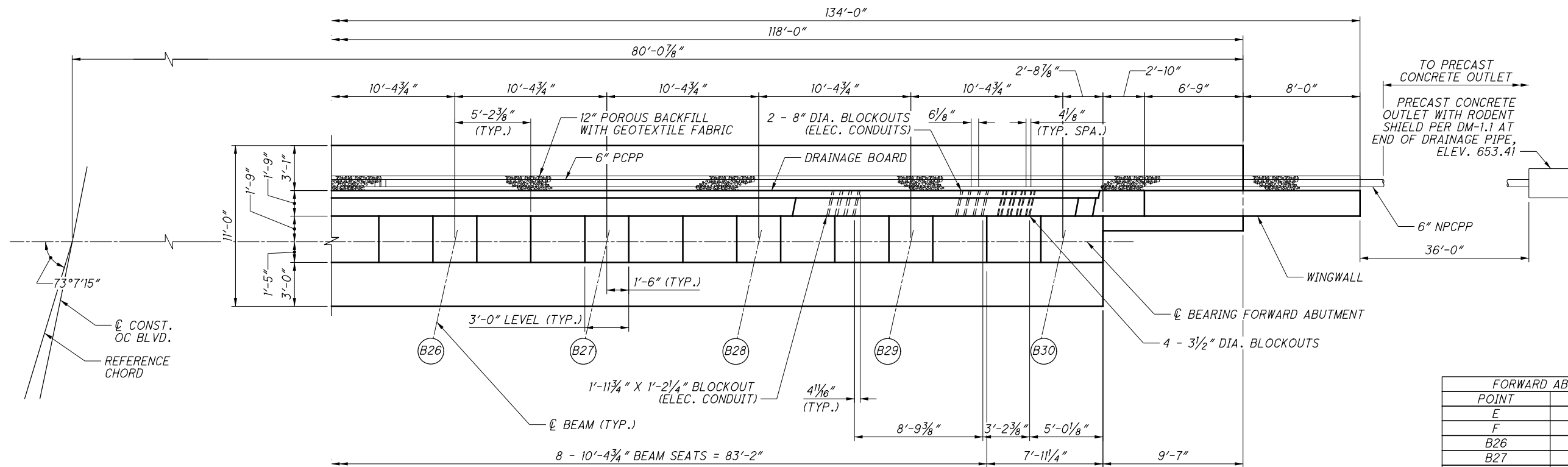
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ISSUE RECORD		



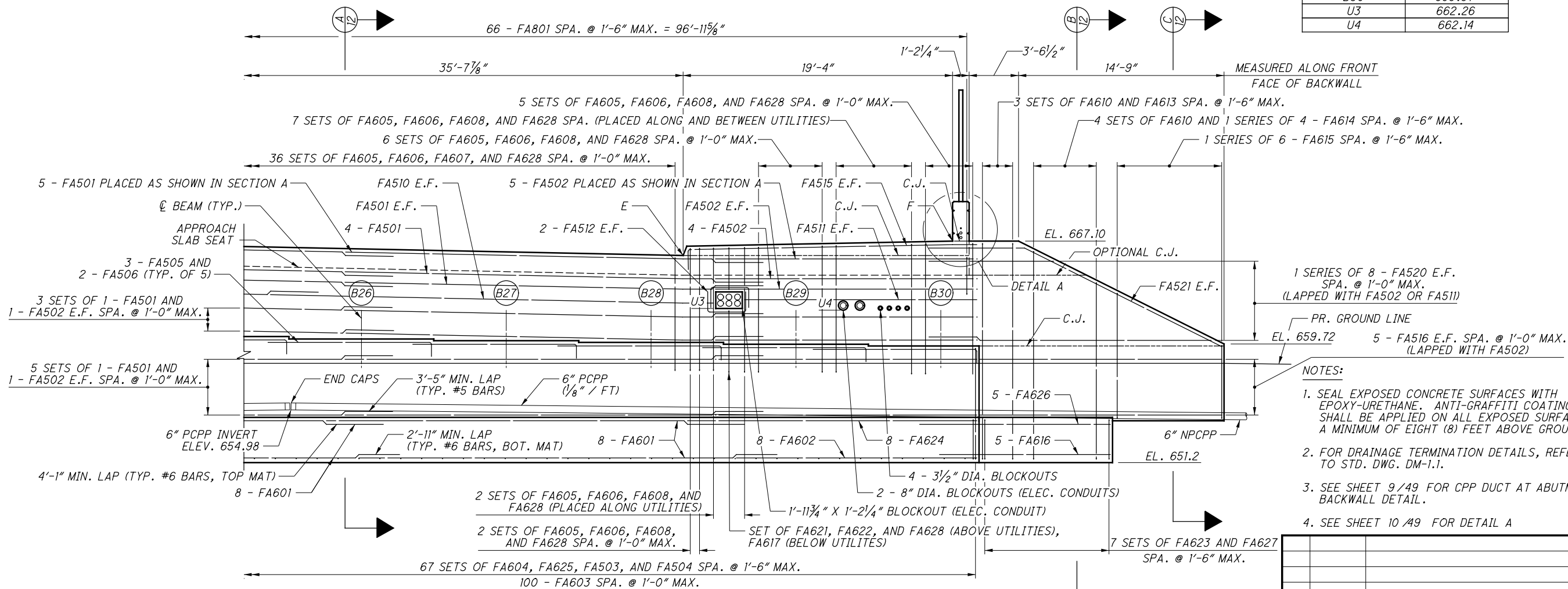
FORWARD ABUTMENT	
POINT	ELEVATION
A	667.33
B	666.56
C	667.01
D	666.80
B21	660.06
B22	660.26
B23	660.45
B24	660.56
B25	660.34
U1	662.89
U2	663.01



			CUY
0	2020-02-17	RFC	10 / 45
NO.	DATE	DESCRIPTION	<div> <div>12</div> <div>51</div> </div>
ISSUE RECORD			



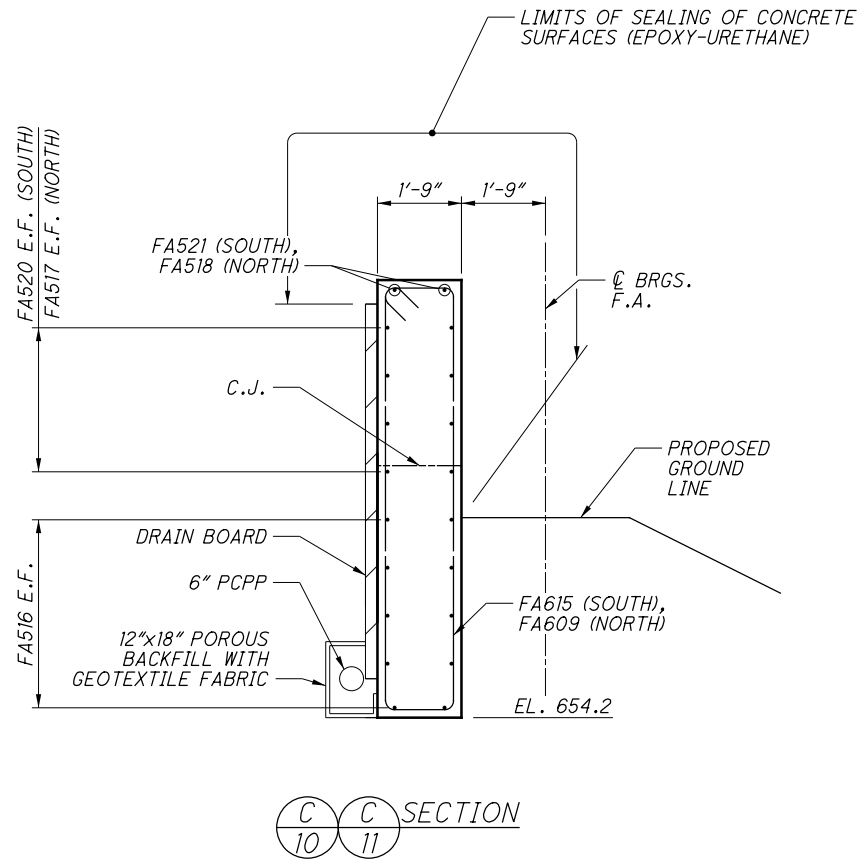
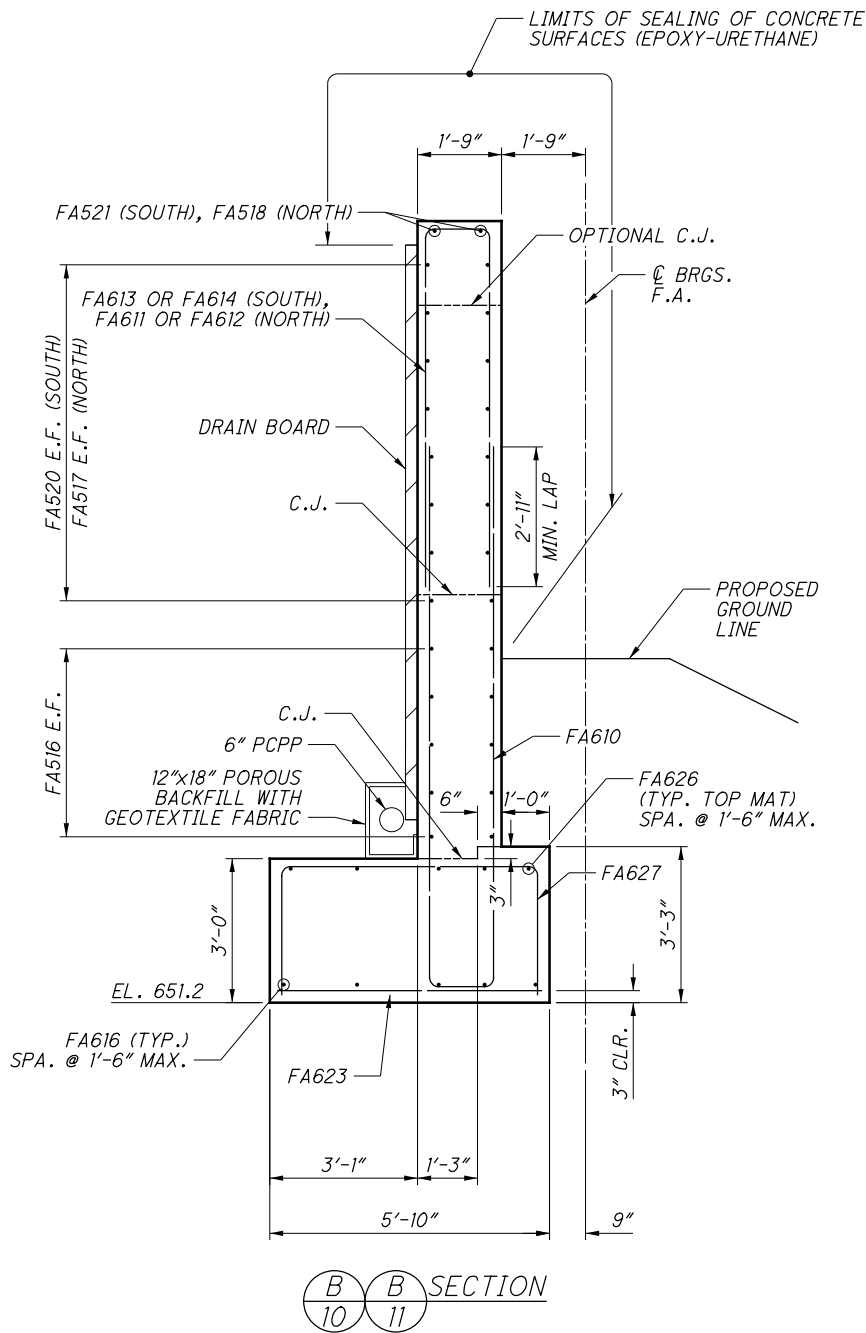
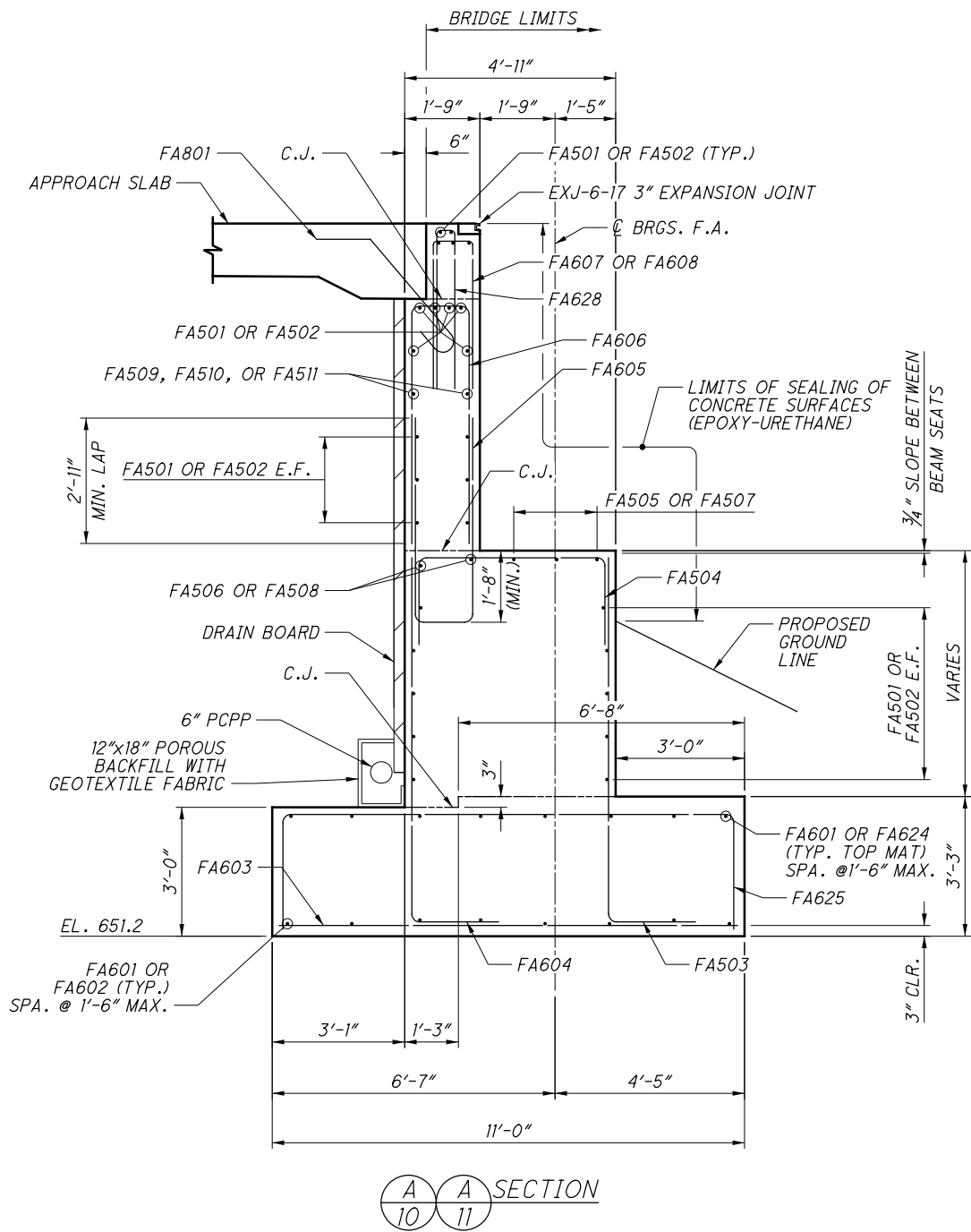
FORWARD ABUTMENT PLAN



FORWARD ABUTMENT ELEVATION

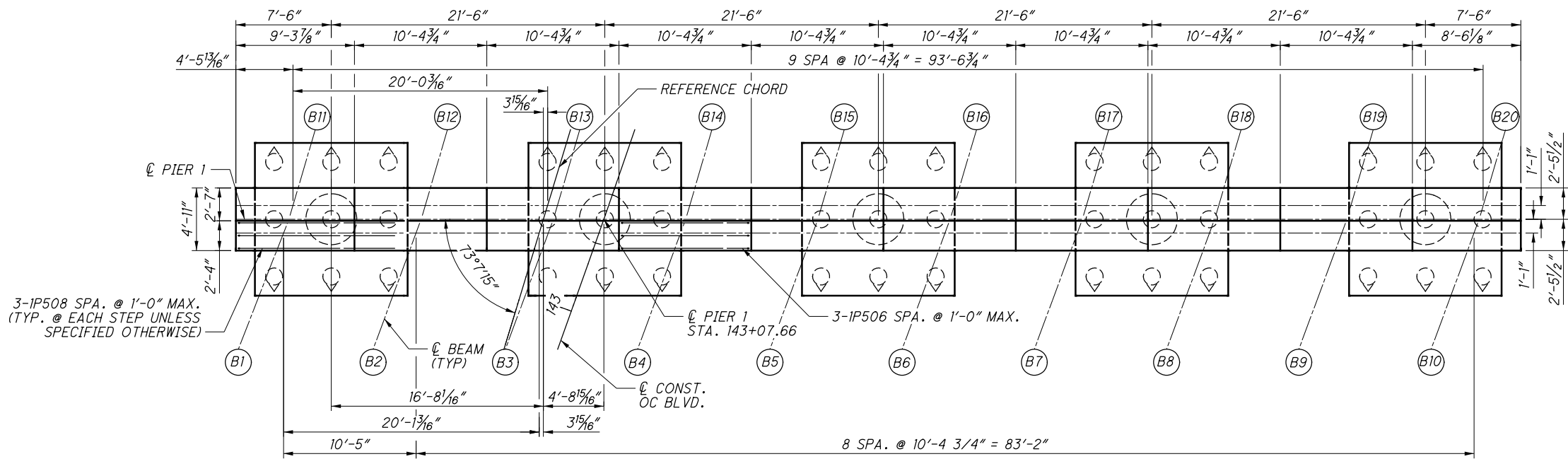
- NOTES:
1. SEAL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE. ANTI-GRAFFITI COATING SHALL BE APPLIED ON ALL EXPOSED SURFACES A MINIMUM OF EIGHT (8) FEET ABOVE GROUND.
 2. FOR DRAINAGE TERMINATION DETAILS, REFER TO STD. DWG. DM-1.1.
 3. SEE SHEET 9/49 FOR CPP DUCT AT ABUTMENT BACKWALL DETAIL.
 4. SEE SHEET 10/49 FOR DETAIL A

NO.	DATE	DESCRIPTION
0	2020-02-17	RFC
ISSUE RECORD		

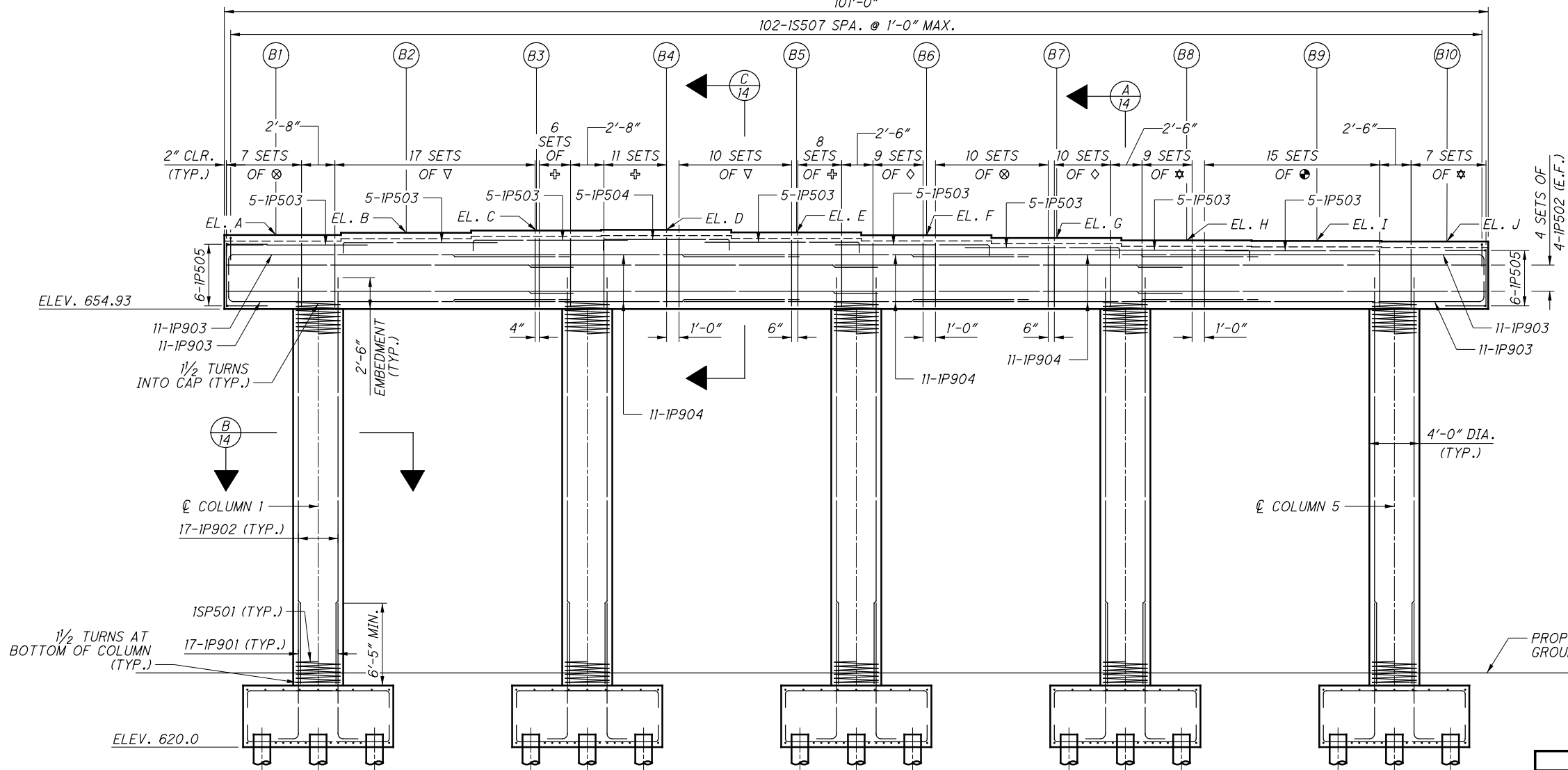


- NOTES:
1. SEAL EXPOSED CONCRETE SURFACES WITH EPOXY-URETHANE. ANTI-GRAFFITI COATING SHALL BE APPLIED ON ALL EXPOSED SURFACES A MINIMUM OF EIGHT (8) FEET ABOVE GROUND.
 2. SEE SHEET 31/49 FOR JOINT OPENING TABLE.
 3. PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS UNLESS NOTED OTHERWISE.

NO.	DATE	DESCRIPTION
0	2020-02-17	RFC
ISSUE RECORD		



PLAN



ELEVATION

LEGEND:

- ⊗ = 4-IP601 SPA. @ 1'-0" MAX.
- ▽ = 2-IP601 AND 2-IP603 SPA. @ 1'-0" MAX.
- ⊕ = 2-IP601 AND 2-IP603 SPA. @ 6" MAX.
- ◇ = 4-IP601 SPA. @ 6" MAX.
- ☆ = 2-IP601 AND 2-IP602 SPA. @ 6" MAX.
- ⊙ = 2-IP601 AND 2-IP602 SPA. @ 1'-0" MAX.

(B11) THROUGH (B20) C'S NOT SHOWN FOR CLARITY

MIN. SPLICE LENGTHS

#5 HORIZ.	3'-5"
#5 VERT.	2'-5"
#6 VERT.	2'-11"
#9 HORIZ.	9'-2"
#9 VERT.	6'-5"

POINT	PIER 1 ELEVATION	
	SPAN 1	SPAN 2
A	660.95	660.72
B	661.14	660.79
C	661.31	661.05
D	661.37	661.14
E	661.16	660.92
F	660.94	660.70
G	660.73	660.49
H	660.52	660.18
I	660.48	660.21
J	660.46	660.21

NOTES:

- 1. NO SEALER ON EXPOSED CONCRETE SURFACES. MEDIA BLASTED ONLY.

NO.	DATE	DESCRIPTION
3	2024-09-10	RECORD DRAWINGS
2	2021-07-01	DC057
1	2021-03-17	DRF1 109
0	2020-02-17	RFC
ISSUE RECORD		

13	49
15	51

PIER 1 PLAN AND ELEVATION

CUY-10-1949
OH-10 OVER KINGSBURY RUN RAVINE

CUY-IR490/SR010-2.09/19.28

PID No. 96833

DESIGNED JCC
CHECKED MKB

DRAWN JCC
REVISED

REVIEWED LPC
STRUCTURE FILE NUMBER 1801515

DATE 2-12-20

DESIGN AGENCY

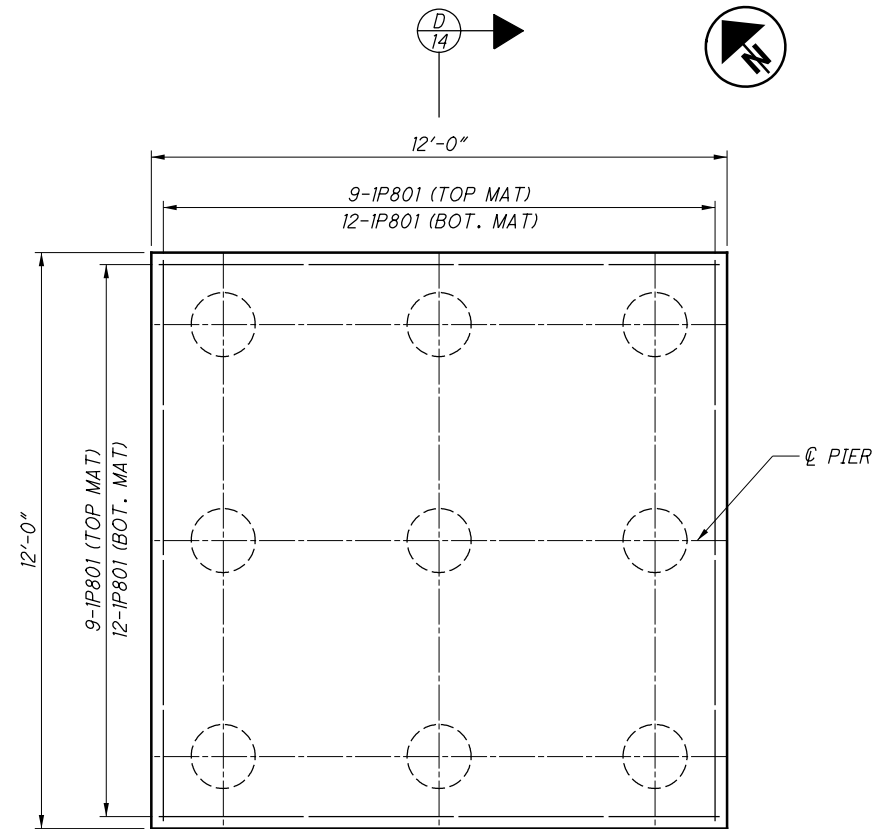
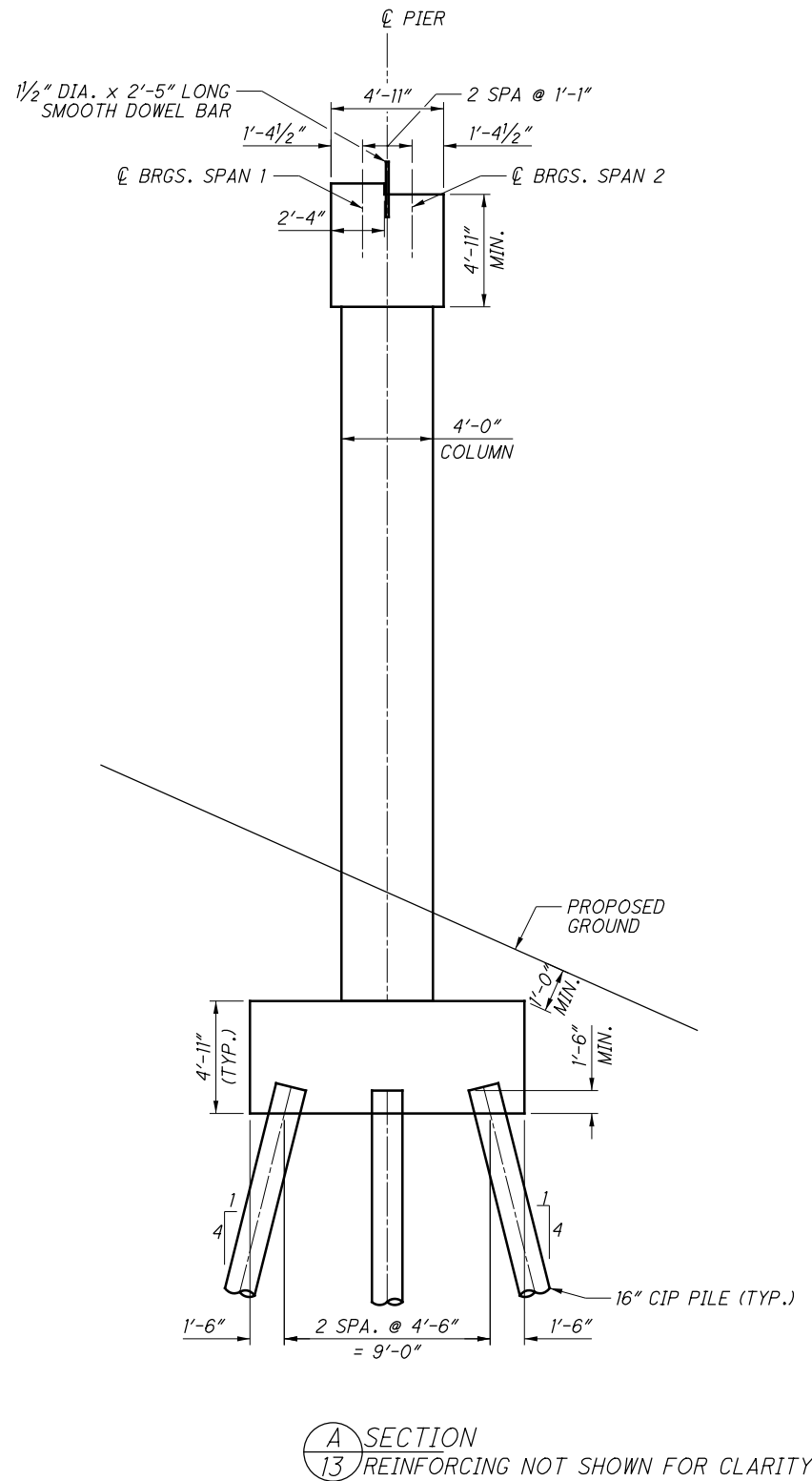
Michael Baker INTERNATIONAL

1111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

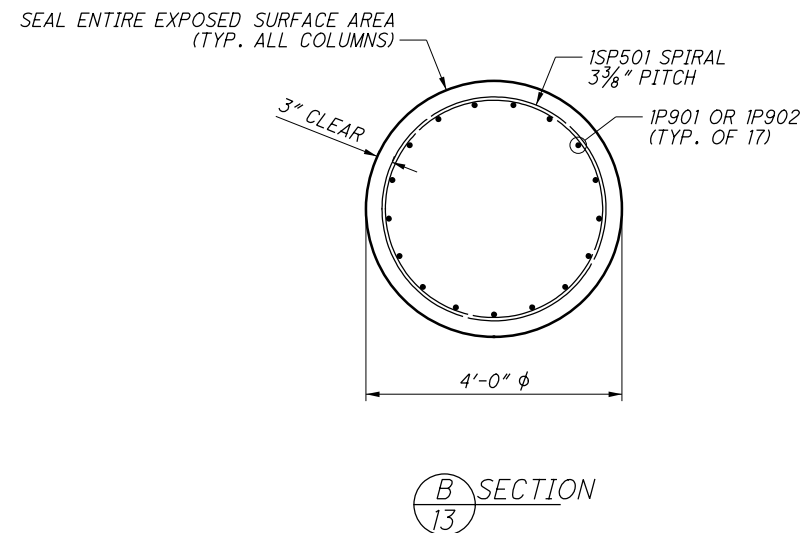
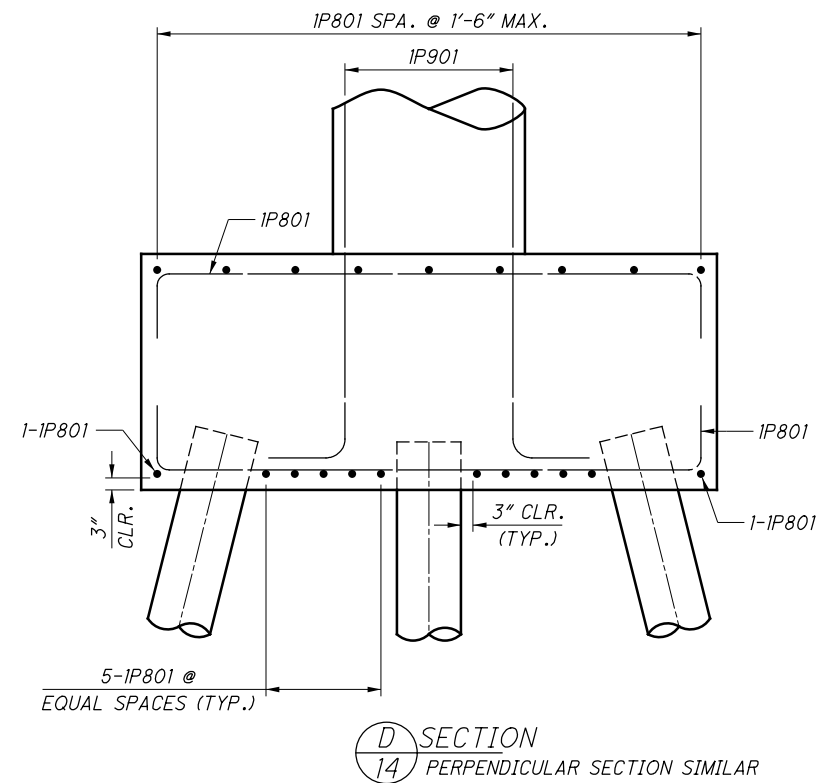
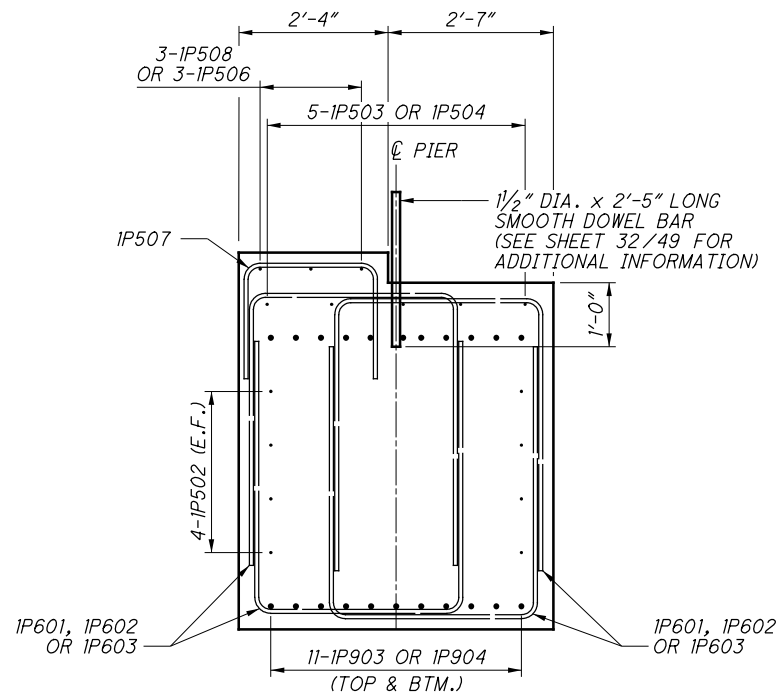
RECORD PLANS

RECORD PLANS

RECORD PLANS



FOOTING PLAN



NOTES:

1. NO SEALER ON EXPOSED CONCRETE SURFACES. MEDIA BLASTED ONLY.

MIN. SPLICE LENGTHS

#5 HORZ.	3'-5"
#5 VERT.	2'-5"
#6 VERT.	2'-11"
#9 HORZ.	9'-2"
#9 VERT.	6'-5"

NO.	DATE	DESCRIPTION
2	2024-09-10	RECORD DRAWINGS
1	2021-03-17	DRFI 109
0	2020-02-17	RFC
ISSUE RECORD		

PIER 1 SECTIONS

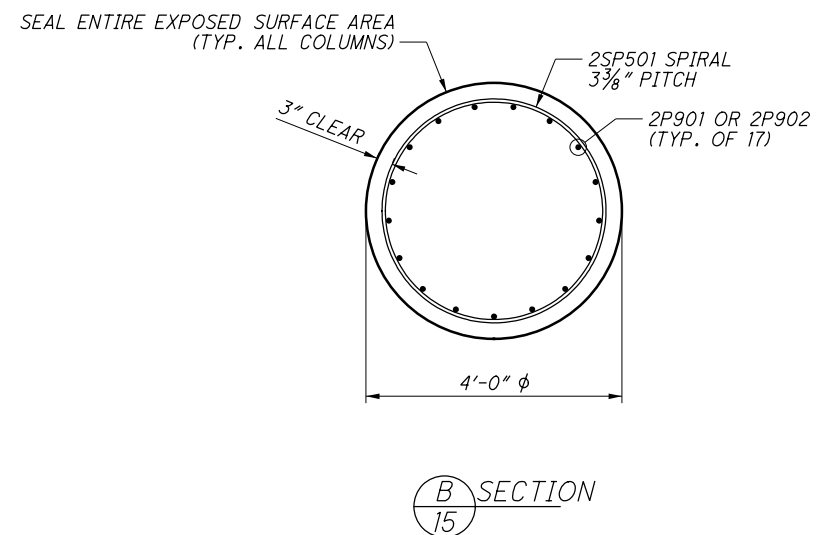
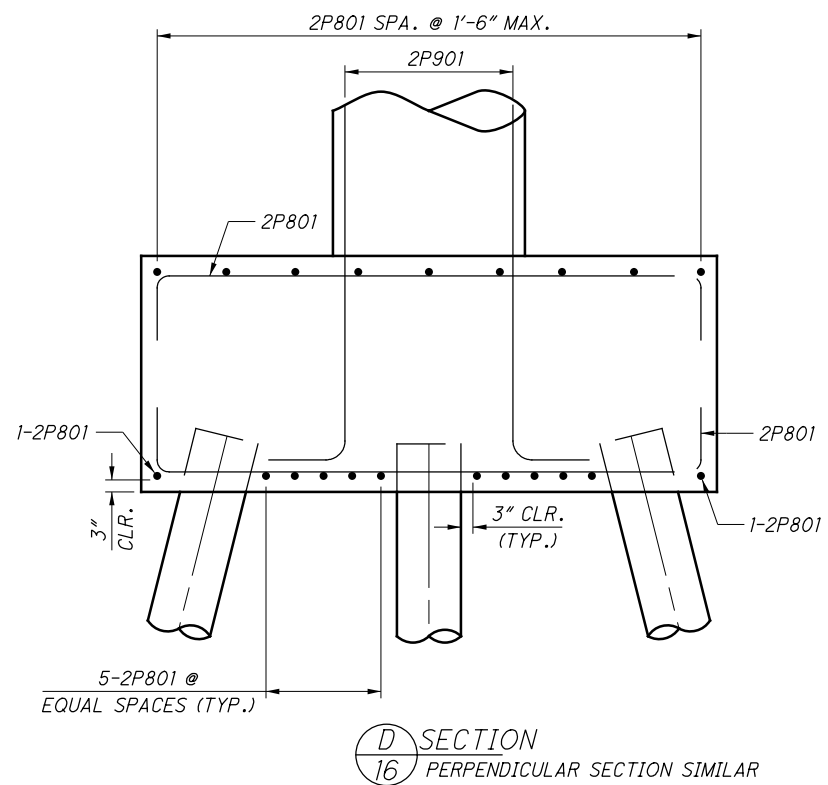
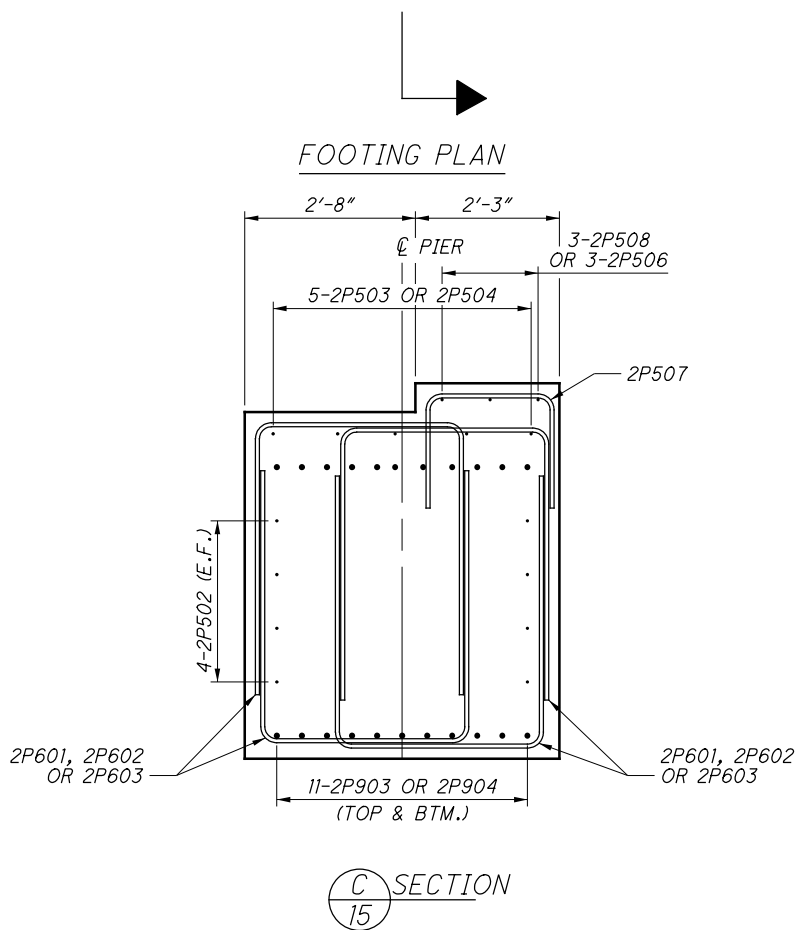
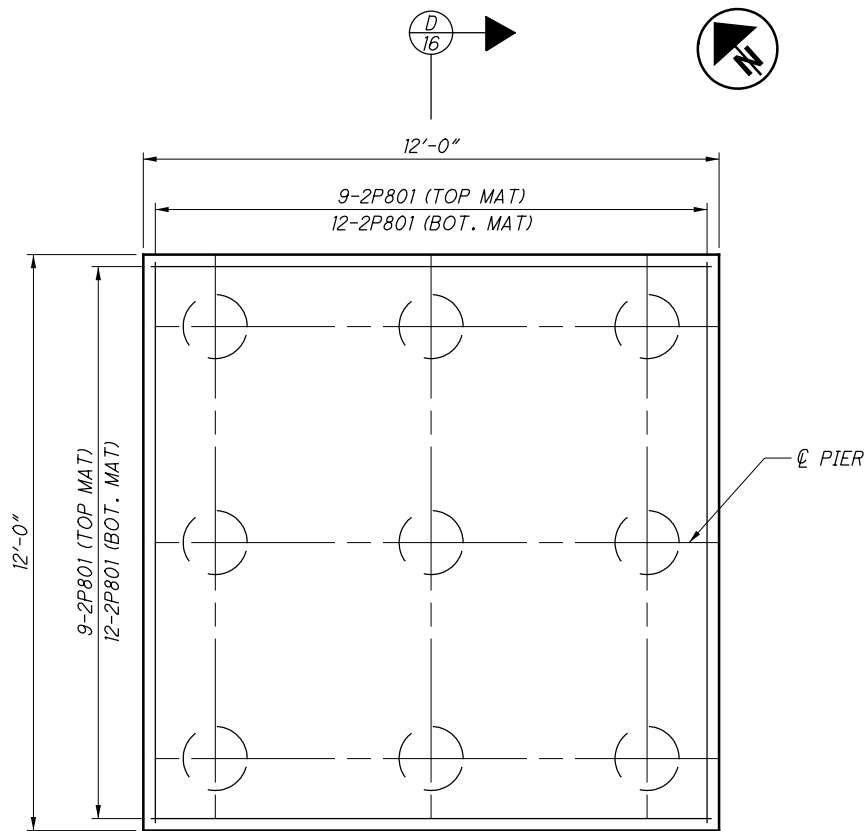
CUY-10-1949
OH-10 OVER KINGSBURY RUN RAVINECUY-IR490/SR010-
2.09/19.28
PID No. 96833

14 / 49

16
51DESIGN AGENCY
Michael BakerINTERNATIONAL
1111 SUPERIOR AVE E., SUITE 2300, CLEVELAND, OH 44114REVIEWED
LPC
DATE
2-12-20
STRUCTURE FILE NUMBER
1801515DRAWN
JCC
CHECKED
MKB
REVISED

RECORD PLANS

RECORD PLANS

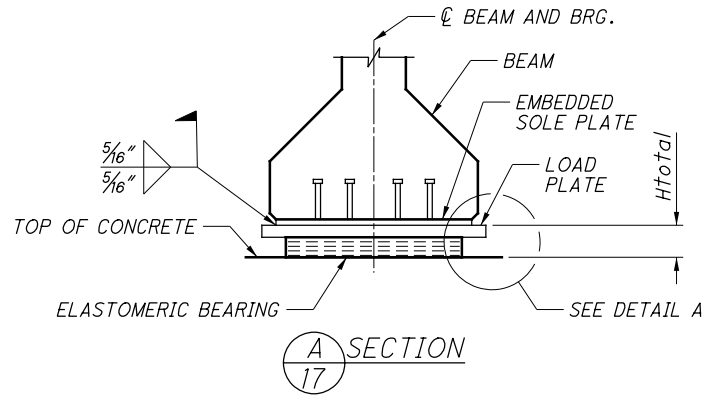
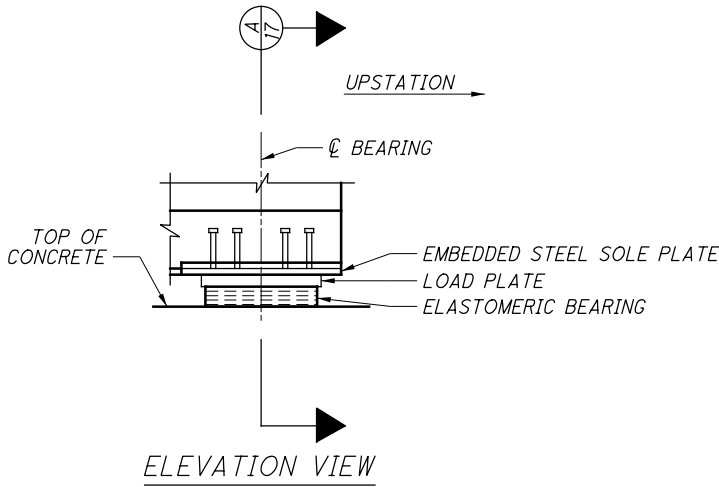
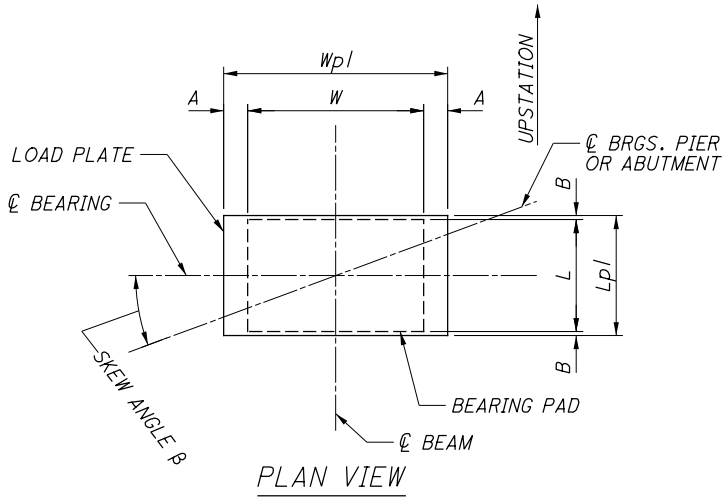


NOTES:

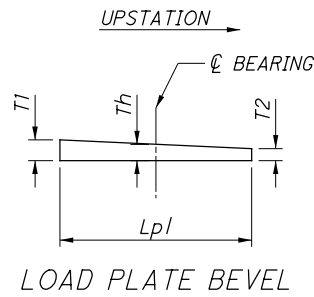
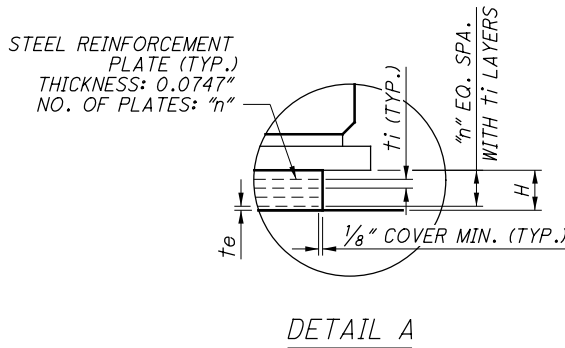
1. NO SEALER ON EXPOSED CONCRETE SURFACES.
MEDIA BLASTED ONLY.

#5 HORZ.	3'-5"
#5 VERT.	2'-5"
#6 VERT.	2'-11"
#9 HORZ.	9'-2"
#9 VERT.	6'-5"

2	2024-09-10	RECORD DRAWINGS
1	2021-03-17	DRFI 109
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		



LOAD PLATE DIMENSIONS					
BEARING LOCATION	T ₁	T ₂	T _h	W _{PL}	L _{PL}
REAR ABUTMENT	1 9/16"	1 7/16"	1 1/2"	2'-4"	1'-1"
PIER 1, SPAN 1	1 19/32"	1 13/32"	1 1/2"	2'-4"	1'-1"
PIER 1, SPAN 2	1 13/32"	1 19/32"	1 1/2"	2'-4"	1'-3"
PIER 2, SPAN 2	1 19/32"	1 13/32"	1 1/2"	2'-4"	1'-3"
PIER 2, SPAN 3	1 19/32"	1 13/32"	1 1/2"	2'-4"	1'-1"
FORWARD ABUTMENT	1 19/32"	1 13/32"	1 1/2"	2'-4"	1'-1"



BEARING DESIGN LOADS (KIPS)						
	R.A.	P1, SPAN 1	P1, SPAN 2	P2, SPAN 2	P2, SPAN 3	F.A.
DEAD LOAD	104	104	168	168	102	102
LIVE LOAD	91	91	102	102	82	82
TOTAL DESIGN LOAD	195	195	270	270	184	184

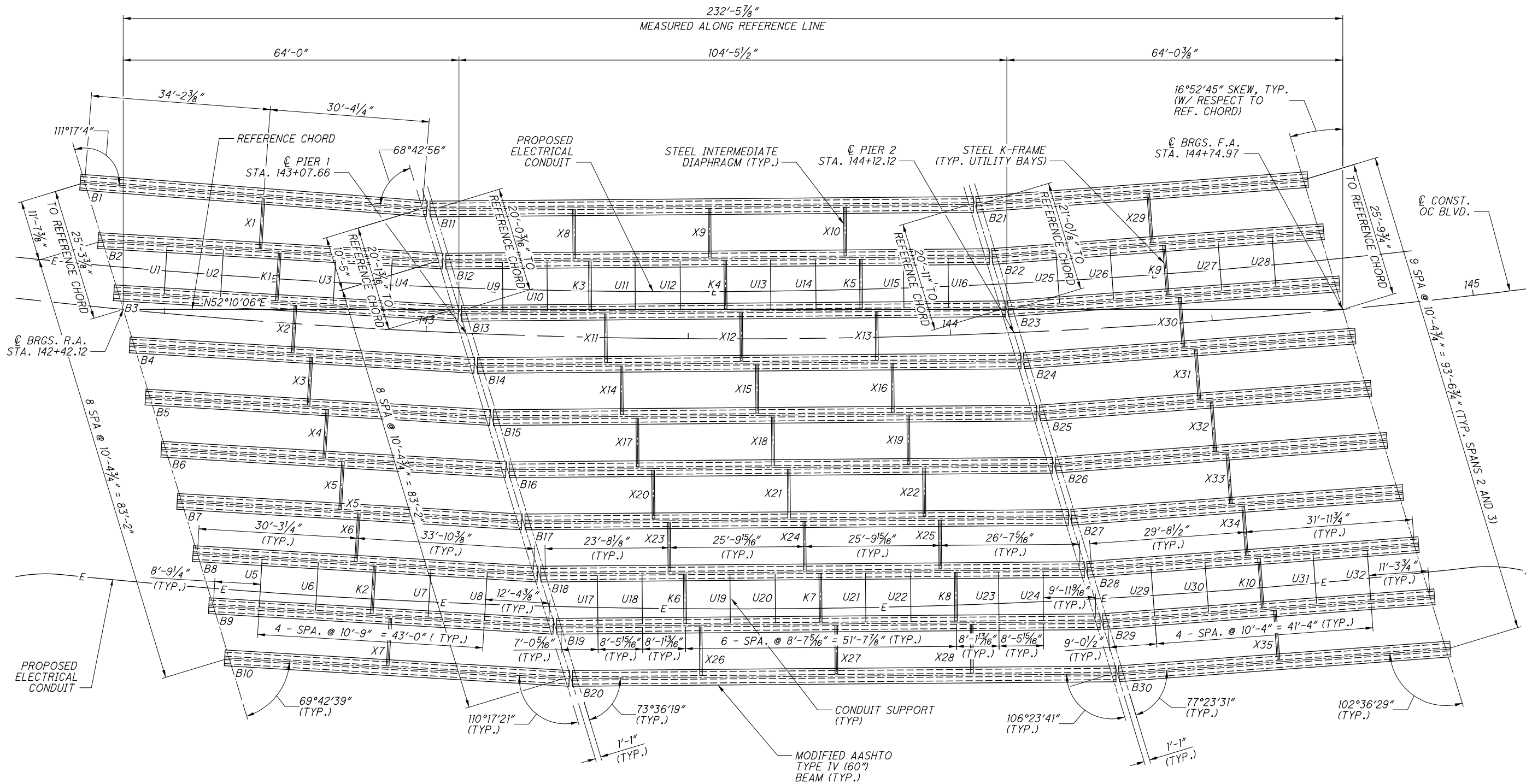
BEARING DATA										
BEARING	BEARING LOCATION	W	L	A	B	t ₀	t _i	n	H	H _{total}
ERA	REAR ABUTMENT	1'-6"	1'-0"	5"	0.5"	1/4"	1/2"	4	2.55"	4.05"
FP1, SPAN 1	PIER 1	1'-6"	1'-0"	5"	0.5"	1/4"	1/2"	5	3.12"	4.62"
FP1, SPAN 2	PIER 1	1'-8"	1'-2"	4"	0.5"	1/4"	1/2"	5	3.12"	4.62"
EP2, SPAN 2	PIER 2	1'-8"	1'-2"	4"	0.5"	1/4"	1/2"	4	2.55"	4.05"
EP2, SPAN 3	PIER 2	1'-6"	1'-0"	5"	0.5"	1/4"	1/2"	4	2.55"	4.05"
EFA	FORWARD ABUTMENT	1'-6"	1'-0"	5"	0.5"	1/4"	1/2"	4	2.55"	4.05"

SKEW ANGLE β											
	REAR ABUTMENT		PIER 1 (SPAN 1)		PIER 1 (SPAN 2)		PIER 2 (SPAN 2)		PIER 2 (SPAN 3)		FORWARD ABUTMENT
BRG. 1	23.33 LT	21°17'04"	23.37 LT	21°17'04"	23.40 LT	16°23'41"	24.77 LT	16°23'41"	24.78 LT	12°36'29"	25.30 LT 12°36'29"
BRG. 2	12.63 LT	20°17'21"	13.56 LT	20°17'21"	13.60 LT	16°23'41"	14.71 LT	16°23'41"	14.71 LT	12°36'29"	15.11 LT 12°36'29"
BRG. 3	3.03 LT	20°17'21"	3.76 LT	20°17'21"	3.80 LT	16°23'41"	4.65 LT	16°23'41"	4.64 LT	12°36'29"	4.92 LT 12°36'29"
BRG. 4	6.59 RT	20°17'21"	6.05 RT	20°17'21"	6.02 RT	16°23'41"	5.42 RT	16°23'41"	5.43 RT	12°36'29"	5.27 RT 12°36'29"
BRG. 5	16.21 RT	20°17'21"	15.87 RT	20°17'21"	15.85 RT	16°23'41"	15.50 RT	16°23'41"	15.51 RT	12°36'29"	15.47 RT 12°36'29"
BRG. 6	25.85 RT	20°17'21"	25.70 RT	20°17'21"	25.68 RT	16°23'41"	25.58 RT	16°23'41"	25.60 RT	12°36'29"	25.66 RT 12°36'29"
BRG. 7	35.50 RT	20°17'21"	35.54 RT	20°17'21"	35.53 RT	16°23'41"	35.66 RT	16°23'41"	35.69 RT	12°36'29"	35.87 RT 12°36'29"
BRG. 8	45.17 RT	20°17'21"	45.39 RT	20°17'21"	45.38 RT	16°23'41"	45.75 RT	16°23'41"	45.78 RT	12°36'29"	46.07 RT 12°36'29"
BRG. 9	54.84 RT	20°17'21"	55.24 RT	20°17'21"	55.24 RT	16°23'41"	55.85 RT	16°23'41"	55.88 RT	12°36'29"	56.28 RT 12°36'29"
BRG. 10	64.53 RT	20°17'21"	65.11 RT	20°17'21"	65.11 RT	16°23'41"	65.95 RT	16°23'41"	65.99 RT	12°36'29"	66.49 RT 12°36'29"

NOTES:

- THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONG-TERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
- THE STEEL LOAD PLATE SHALL BE ASTM A709 GRADE 50 STEEL AND SHALL BE GALVANIZED IN ACCORDANCE WITH C&MS 711.02.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. CONTROL WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- EACH BEARING ASSEMBLY SHALL BE SHOP MARKED WITH THE FOLLOWING INFORMATION: TOP, FORWARD STATION DIRECTION, LOCATION (REAR ABUTMENT, PIER 1, PIER 2 OR FORWARD ABUTMENT) AND BEAM NUMBER. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.
- FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS PER ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE.

ELASTOMERIC BEARING DETAILS			RECORD PLANS	
CUY-IR490/SR010-2.08/19.28			OH-10 OVER KINGSBURY RUN RAVINE	
PID No. 96833			RECORD PLANS	
17/49			19	
51			51	
NO.	DATE	DESCRIPTION	ISSUE RECORD	
1	2024-09-10	RECORD DRAWINGS		
0	2020-02-17	RFC		

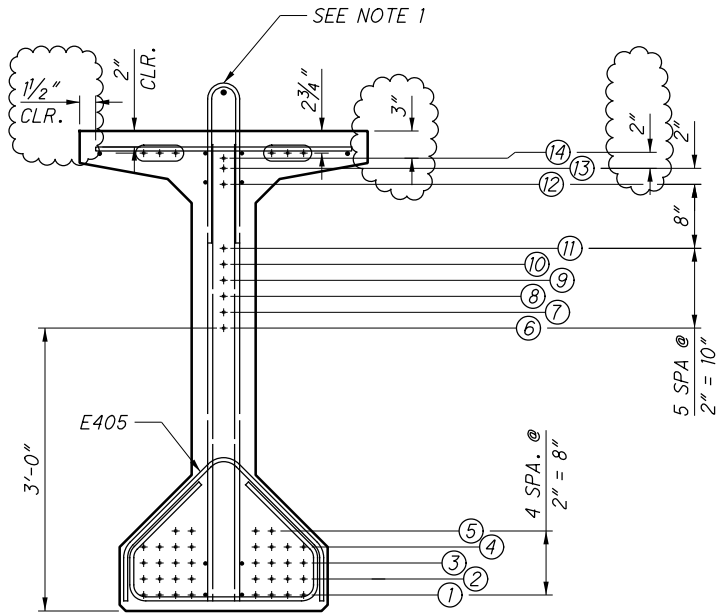


FRAMING PLAN

NOTES:

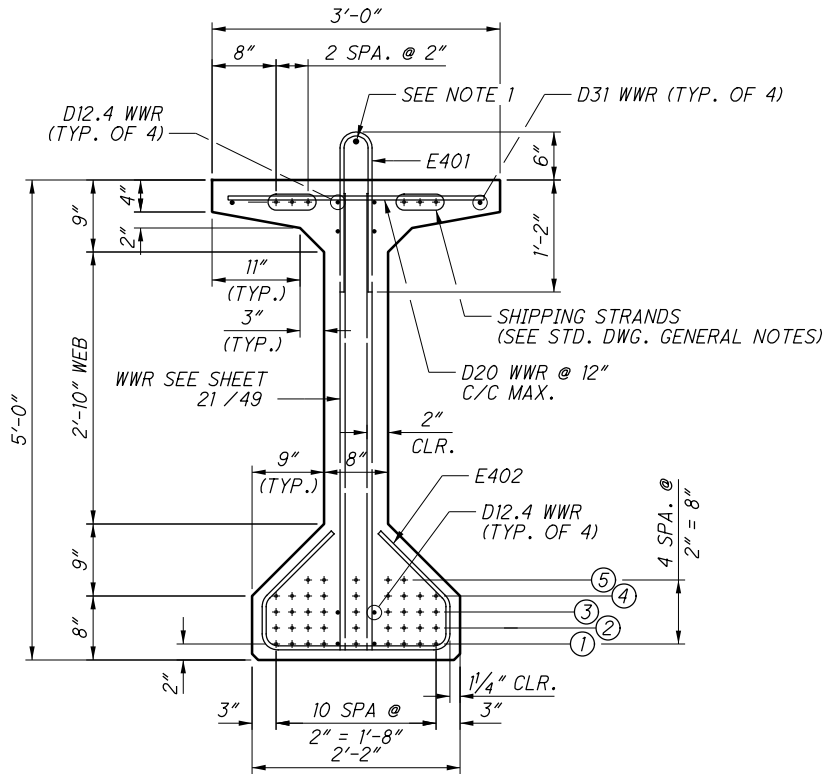
1. PIER AND ABUTMENT CONCRETE DIAPHRAGMS NOT SHOWN.
2. SEE ODOT STD DWG. PSID 1-13 FOR ADDITIONAL DETAILS.

NO.	DATE	DESCRIPTION
0	2020-02-17	RFC
ISSUE RECORD		



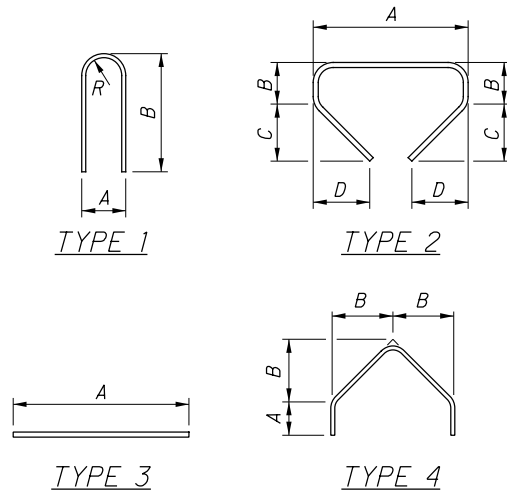
MODIFIED AASHTO TYPE 4 (60') - END SECTION

SPAN 2 SHOWN, SEE TABLE FOR SPANS 1 & 3



MODIFIED AASHTO TYPE 4 (60') - MIDDLE SECTION

SPAN 2 SHOWN, SEE TABLE FOR SPANS 1 & 3



MARK	TYPE	DIMENSIONS				
		A	B	C	D	R
MODIFIED AASHTO TYPE 4 (60")						
E401	1	4"	1'-8"			2 1/4"
E402	2	1'-11 1/2"	6 1/4"	8"		
E405	4	6 1/4"	11 3/4"			

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES THE BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE AND THE REMAINING DIGITS ITS SEQUENCE NUMBER. ALL STEEL SHALL BE BLACK UNLESS OTHERWISE SHOW.

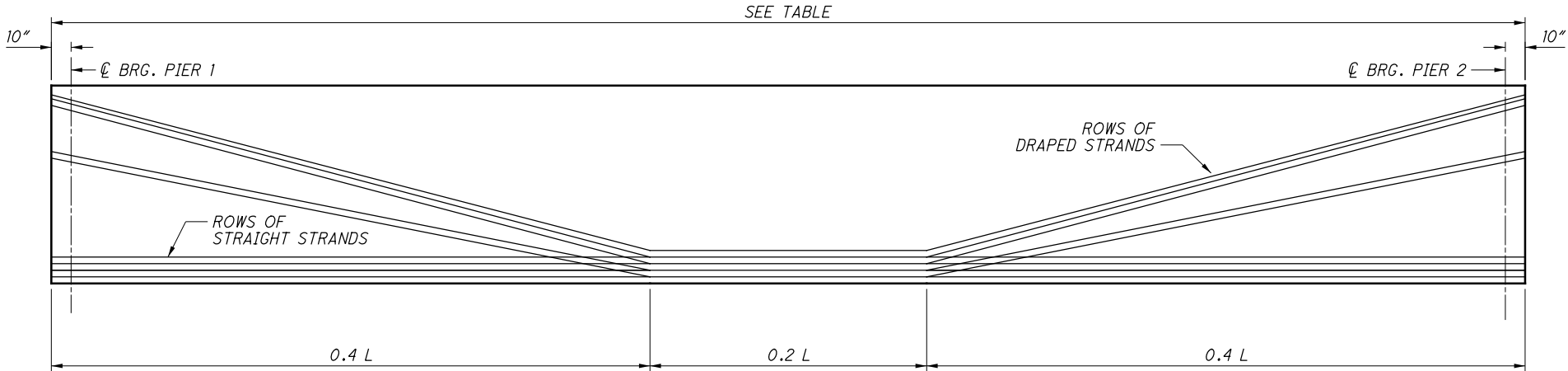
BEAM PRESTRESSING STRANDS, MATERIALS, AND REINFORCEMENT																										
SPAN	LENGTH (FT)	BEAM MARK	NUMBER OF STRANDS PER ROW																TOTAL STRANDS	UNIT WEIGHT (LB/FT3)	CONCRETE STRENGTHS (KSI)		BEAM WEIGHTS (lbs)			
			END SECTION														MID -SPAN SECTION					f'ci		f'c		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	1	2			3				4	5
1	66.23	B1	8	6	0	0	0	0	0	0	1	1	1	0	0	0	9	7	1	0	0	17	135	7.0	9.0	55,191
1	65.80	B2-B10	8	6	0	0	0	0	0	0	1	1	1	0	0	0	9	7	1	0	0	17	135	7.0	9.0	54,828
2	103.61	B11-B20	8	8	8	8	4	1	1	0	0	0	0	1	1	1	9	9	9	9	5	41	135	7.0	9.0	88,295
3	63.35	B21-B30	8	6	0	0	0	0	0	1	1	1	0	0	0	0	9	7	1	0	0	17	135	7.0	9.0	52,834

LEGEND:

WWR = WELDED WIRE REINFORCEMENT

NOTES:

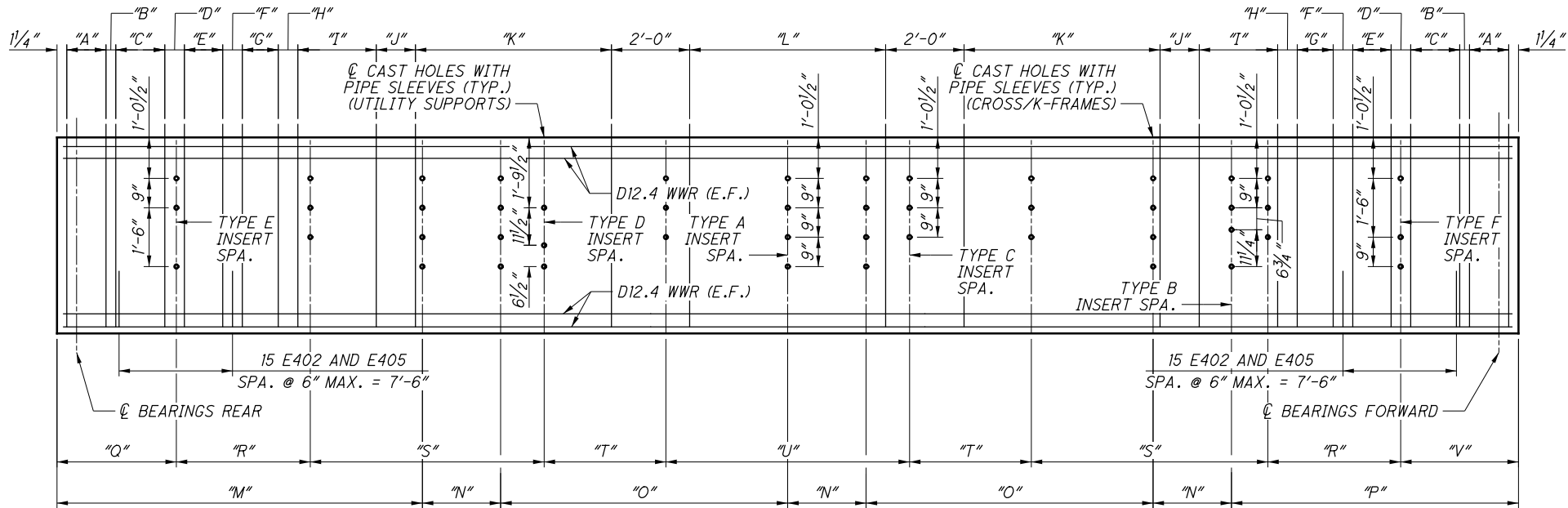
- ONE LONGITUDINAL BAR FROM THE BOTTOM MAT OF DECK REINFORCING SHALL BE PLACED UNDER EACH 401 BAR. THIS BAR IS INCLUDED IN PAYMENT WITH THE DECK REINFORCING STEEL AND SHALL BE EPOXY COATED.
- SEE STANDARD DRAWING PSID-I-13 FOR ADDITIONAL INFORMATION
- DEBONDING NOT NECESSARY
- LOCATE BOLT HOLES IN THE I-BEAM WEBS TO AVOID PRESTRESSING STRANDS. THE MINIMUM CLEAR DISTANCE SHALL BE 1/2".
- TROWL EXTERIOR 9" OF TOP FLANGE SMOOTH. APPLY TWO COATS OF C&MS 705.07, TYPE 1 OR ID MEMBRANE CURING COMPOUND WITH A ROLLER TO ACT AS A BOND BREAKER.



MODIFIED AASHTO TYPE 4 (60') ELEVATION

SPAN 2 SHOWN, OTHERS SIMILAR

NO.	DATE	DESCRIPTION
1	2024-09-10	RECORD DRAWINGS
0	2020-02-17	RFC
ISSUE RECORD		



MODIFIED AASHTO TYPE 4 (60") ELEVATION
SPAN 2 SHOWN, OTHERS SIMILAR

TABLE OF BEAM DIMENSIONS													
SPAN	BEAM MARK	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	DIMENSION "D"	DIMENSION "E"	DIMENSION "F"	DIMENSION "G"	DIMENSION "H"	DIMENSION "I"	DIMENSION "J"	DIMENSION "K"	DIMENSION "L"
1	B1	6-D31 WWR, 3-E401, 6-E402, AND 6-E405 SPA. @ 3" = 1'-3"	4" SPA.	7-D20 WWR AND E401 SPA. @ 4" = 2'-0"	1'-0" SPA.	5-D20 WWR AND E401 SPA. @ 1'-0" = 4'-0"	1'-0" SPA.	18-D20 WWR, E401, AND E402 SPA. @ 1'-0" = 17'-0"	NOT USED	NOT USED	NOT USED	NOT USED	6-D20 WWR, E401, AND E402 SPA. @ 2'-0" MAX. = 8'-10
1	B2-10	6-D31 WWR, 3-E401, 6-E402, AND 6-E405 SPA. @ 3" = 1'-3"	4" SPA.	7-D20 WWR AND E401 SPA. @ 4" = 2'-0"	1'-0" SPA.	5-D20 WWR AND E401 SPA. @ 1'-0" = 4'-0"	1'-0" SPA.	18-D20 WWR, E401, AND E402 SPA. @ 1'-0" = 17'-0"	NOT USED	NOT USED	NOT USED	NOT USED	6-D20 WWR, E401, AND E402 SPA. @ 2'-0" MAX. = 8'-5
2	B11-B20	6-D31 WWR, 3-E401, 6-E402, AND 6-E405 SPA. @ 3" = 1'-3"	3" SPA.	11-D20 WWR AND E401 SPA. @ 3" = 2'-6"	6" SPA.	9-D20 WWR AND E401 SPA. @ 6" = 4'-0"	6" SPA.	3-D20 WWR, E401, AND E402 SPA. @ 6" = 1'-0"	9" SPA.	14-D20 WWR, E401, AND E402 SPA. @ 9" = 9'-9"	1'-0" SPA.	24-D20 WWR, E401, AND E402 SPA. @ 1'-0" = 23'-0"	7-D20 WWR, E401, AND E402 SPA. @ 2'-0" MAX. = 10'-4
3	B21-B30	6-D31 WWR, 3-E401, 6-E402, AND 6-E405 SPA. @ 3" = 1'-3"	4" SPA.	7-D20 WWR AND E401 SPA. @ 4" = 2'-0"	1'-0" SPA.	5-D20 WWR AND E401 SPA. @ 1'-0" = 4'-0"	1'-0" SPA.	14-D20 WWR, E401, AND E402 SPA. @ 1'-0" = 13'-0"	NOT USED	NOT USED	NOT USED	NOT USED	8-D20 WWR, E401, AND E402 SPA. @ 2'-0" MAX. = 13'-11

TABLE OF CROSS FRAME / K-FRAME CAST HOLE LOCATION DIMENSIONS					
SPAN	BEAM MARK	DIMENSION "M"	DIMENSION "N"	DIMENSION "O"	DIMENSION "P"
1	B1	35'-0 3/8"	NOT USED	NOT USED	31'-2 3/8"
1	B2	31'-0"	3'-8 1/2"	NOT USED	31'-1 1/8"
1	B3-B9	31'-1 3/16"	3'-7 1/4"	NOT USED	31'-1 3/16"
1	B10	31'-1 3/16"	NOT USED	NOT USED	34'-8 7/16"
2	B11	27'-5 5/16"	NOT USED	25'-9 15/16"	24'-6 1/8"
2	B12-B19	24'-6 1/8"	2'-11 3/16"	22'-10 3/4"	24'-6 1/8"
2	B20	24'-6 1/8"	NOT USED	25'-9 15/16"	27'-5 5/16"
3	B21	32'-9 11/16"	NOT USED	NOT USED	30'-6 7/16"
3	B22-B29	30'-6 7/16"	2'-3 1/4"	NOT USED	30'-6 7/16"
3	B30	30'-6 7/16"	NOT USED	NOT USED	32'-9 11/16"

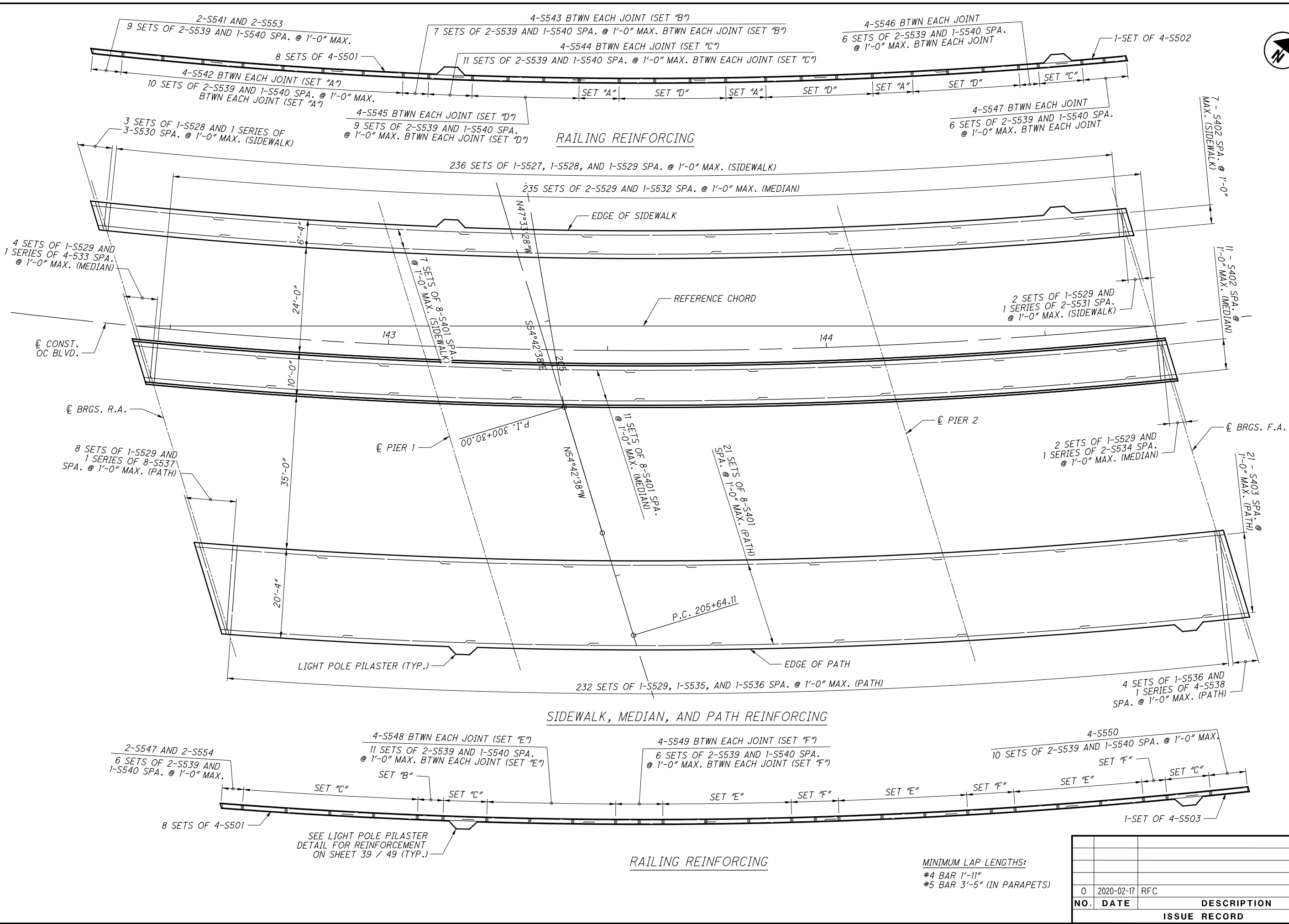
TABLE OF REINFORCEMENT PER BEAM				
SPAN	BEAM MARK	E401	E402	E405
1	B1	72	84	42
1	B2-B10	72	84	42
2	B11-B20	135	131	42
3	B21-B30	66	78	42

LEGEND:
WWR = WELDED WIRE REINFORCEMENT

- NOTES:
- SEE STANDARD DRAWING PSID-1-13 FOR ADDITIONAL INFORMATION
 - BEAMS SHALL BE SHOP MARKED WITH THE FOLLOWING INFORMATION AT EACH END: BEAM NUMBER AND CORRESPONDING SUBSTRUCTURE UNIT.
 - ONLY THE F401 BAR SHALL BE EPOXY COATED, GRADE 60.
 - FOR BEAM SECTIONS, SEE SHEET 20 / 49
 - FOR FRAMING PLAN, SEE SHEET 19 / 49
 - FOR LOCATION OF EMBEDDED STEEL PLATE END WELDED STUDS, SEE SHEET 17 / 49

TABLE OF UTILITY SUPPORT CAST HOLE LOCATION DIMENSIONS							
SPAN	BEAM MARK	DIMENSION "Q"	DIMENSION "R"	DIMENSION "S"	DIMENSION "T"	DIMENSION "U"	DIMENSION "V"
1	B2	13'-2 7/16"	10'-9"	NOT USED	NOT USED	21'-6"	9'-7 3/16"
1	B3	9'-7 3/16"	10'-9"	NOT USED	NOT USED	21'-6"	13'-2 7/16"
1	B8	13'-2 7/16"	10'-9"	NOT USED	NOT USED	21'-6"	9'-7 3/16"
1	B9	9'-7 3/16"	10'-9"	NOT USED	NOT USED	21'-6"	13'-2 7/16"
2	B12	10'-9 9/16"	8'-5 15/16"	16'-9 1/8"	8'-7 5/16"	17'-2 5/8"	7'-10 5/16"
2	B13	7'-10 5/16"	8'-5 15/16"	16'-9 1/8"	8'-7 5/16"	17'-2 5/8"	10'-9 9/16"
2	B18	10'-9 9/16"	8'-5 15/16"	16'-9 1/8"	8'-7 5/16"	17'-2 5/8"	7'-10 5/16"
2	B19	7'-10 5/16"	8'-5 15/16"	16'-9 1/8"	8'-7 5/16"	17'-2 5/8"	10'-9 9/16"
3	B22	12'-1 11/16"	10'-4"	NOT USED	NOT USED	20'-8"	9'-10 7/16"
3	B23	9'-10 7/16"	10'-4"	NOT USED	NOT USED	20'-8"	12'-1 11/16"
3	B28	12'-1 11/16"	10'-4"	NOT USED	NOT USED	20'-8"	9'-10 7/16"
3	B29	9'-10 7/16"	10'-4"	NOT USED	NOT USED	20'-8"	12'-1 11/16"

0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		



MINIMUM LAP LENGTHS:
#4 BAR 1'-11"
#5 BAR 3'-5" (IN PARAPETS)

ISSUE RECORD		
NO.	DATE	DESCRIPTION
0	2020-02-17	RFC

DESIGN AGENCY
Michael Baker
INTERNATIONAL
1111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

DATE
2-12-20
REVIEWED
LPC
STRUCTURE FILE NUMBER
1801515

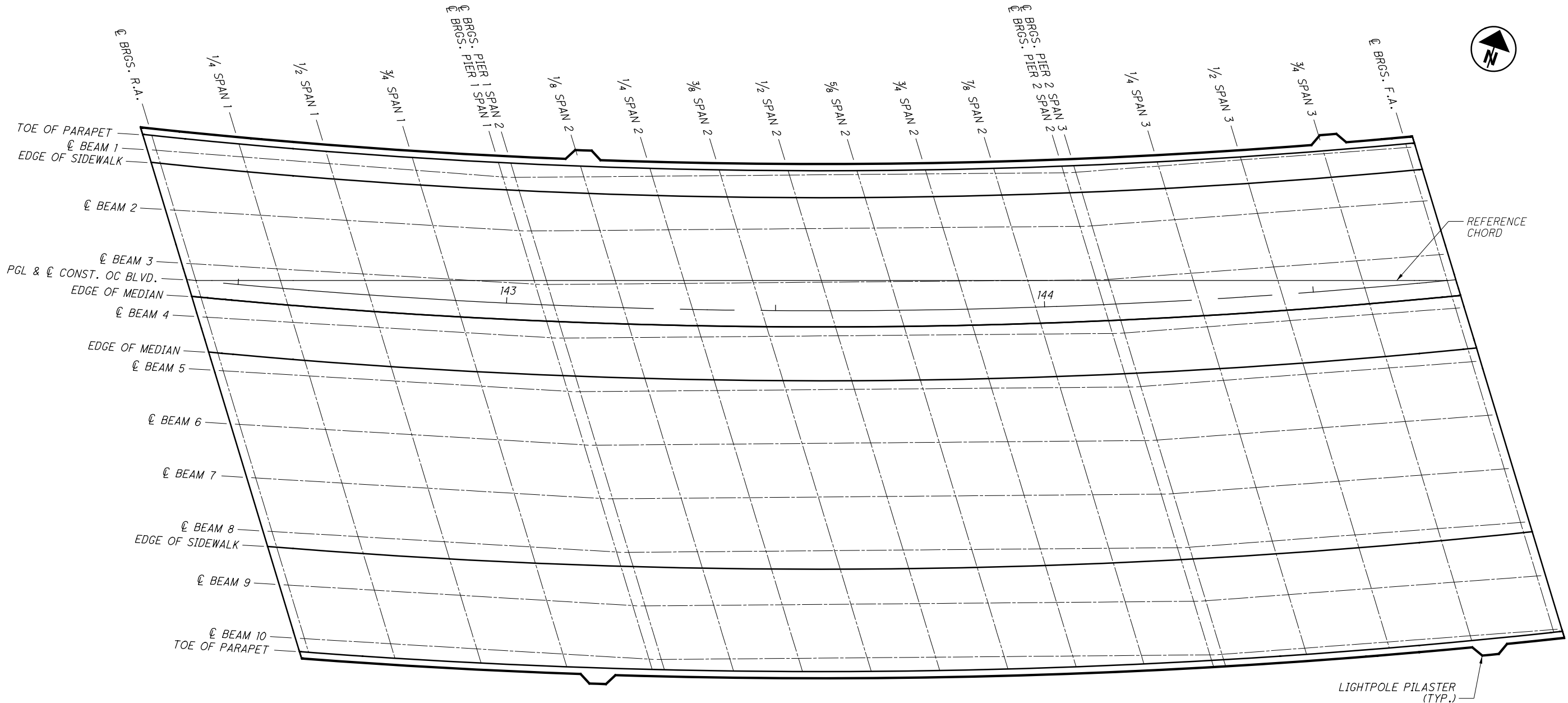
DRAWN
SSW
CHECKED
MKB
DESIGNED
SSW

DECK PLAN (2 OF 2)
CUY-010-1949
OH-10 OVER KINGSBURY RUN RAVINE

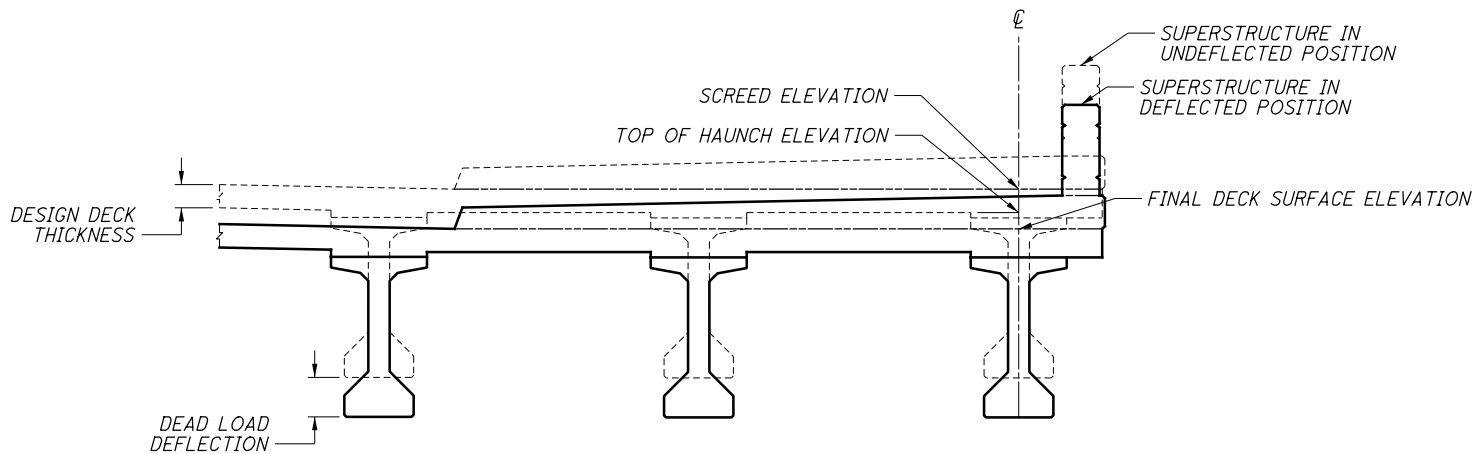
CUY-IR490/SR010-2.08/19.28
PID No. 96833

23 / 49
25
51

RECORD PLANS
RECORD PLANS



DECK ELEVATION SCHEMATIC



DECK ELEVATION SCHEMATIC SECTION

- NOTES:
1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
 2. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/ GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
 3. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.

0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

ELEVATION LINE	SPAN 1					SPAN 2				
	℄ BRGS. R.A.	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	℄ BRGS. PIER 1 SPAN 1	℄ BRGS. PIER 1 SPAN 2	1/8 SPAN 2	1/4 SPAN 2	3/8 SPAN 2	1/2 SPAN 2
TOE OF PARAPET	142+31.14 26.00' LT. 667.76	142+47.78 26.00' LT. 667.68	142+64.33 26.00' LT. 667.51	142+80.79 26.00' LT. 667.43	142+97.17 26.00' LT. 667.35	142+99.52 26.00' LT. 667.29	143+12.76 26.00' LT. 667.22	143+25.96 26.00' LT. 667.29	143+39.10 26.00' LT. 667.22	143+52.20 26.00' LT. 667.16
BEAM 1	142+32.29 23.33' LT. 667.76	142+48.75 23.67' LT. 667.67	142+65.21 23.79' LT. 667.59	142+81.68 23.69' LT. 667.51	142+98.13 23.37' LT. 667.43	143+00.47 23.40' LT. 667.41	143+13.45 24.05' LT. 667.35	143+26.44 24.57' LT. 667.28	143+39.45 24.94' LT. 667.22	143+52.46 25.18' LT. 667.15
EDGE OF SIDEWALK	142+33.29 21.00' LT. 667.75	142+49.85 21.00' LT. 667.67	142+66.32 21.00' LT. 667.59	142+82.70 21.00' LT. 667.51	142+99.00 21.00' LT. 667.43	143+01.34 21.00' LT. 667.41	143+14.52 21.00' LT. 667.35	143+27.65 21.00' LT. 667.28	143+40.73 21.00' LT. 667.22	143+53.77 21.00' LT. 667.15
BEAM 2	142+36.85 12.63' LT. 667.90	142+53.05 13.18' LT. 667.81	142+69.26 13.52' LT. 667.72	142+85.48 13.65' LT. 667.64	143+01.69 13.56' LT. 667.56	143+04.00 13.60' LT. 667.55	143+16.88 14.22' LT. 667.47	143+29.77 14.70' LT. 667.40	143+42.66 15.04' LT. 667.33	143+55.57 15.25' LT. 667.26
BEAM 3	142+40.87 3.03' LT. 668.08	142+56.94 3.53' LT. 667.98	142+73.02 3.82' LT. 667.90	142+89.10 3.89' LT. 667.82	143+05.19 3.76' LT. 667.74	143+07.48 3.80' LT. 667.73	143+20.25 4.37' LT. 667.65	143+33.03 4.82' LT. 667.58	143+45.83 5.13' LT. 667.51	143+58.62 5.30' LT. 667.44
PGL & ℄ OF OC	142+42.12 0.00' RT. 668.13	142+58.34 0.00' RT. 668.05	142+74.48 0.00' RT. 667.97	142+90.53 0.00' RT. 667.89	143+06.51 0.00' RT. 667.81	143+08.81 0.00' RT. 667.80	143+21.73 0.00' RT. 667.73	143+34.61 0.00' RT. 667.67	143+47.44 0.00' RT. 667.60	143+60.23 0.00' RT. 667.54
EDGE OF MEDIAN	142+43.35 3.00' RT. 668.18	142+59.53 3.00' RT. 668.10	142+75.62 3.00' RT. 668.02	142+91.63 3.00' RT. 667.94	143+07.56 3.00' RT. 667.86	143+09.85 3.00' RT. 667.85	143+22.74 3.00' RT. 667.79	143+35.58 3.00' RT. 667.72	143+48.38 3.00' RT. 667.66	143+61.13 3.00' RT. 667.59
BEAM 4	142+44.82 6.59' RT. 668.11	142+60.76 6.14' RT. 668.03	142+76.72 5.90' RT. 667.96	142+92.67 5.87' RT. 667.88	143+08.63 6.05' RT. 667.80	143+10.90 6.02' RT. 667.79	143+23.57 5.48' RT. 667.73	143+36.25 5.07' RT. 667.68	143+48.94 4.79' RT. 667.62	143+61.63 4.65' RT. 667.56
EDGE OF MEDIAN	142+47.42 13.00' RT. 667.96	142+63.44 13.00' RT. 667.88	142+79.38 13.00' RT. 667.80	142+95.24 13.00' RT. 667.72	143+11.03 13.00' RT. 667.64	143+13.29 13.00' RT. 667.63	143+26.06 13.00' RT. 667.57	143+38.79 13.00' RT. 667.51	143+51.47 13.00' RT. 667.44	143+64.11 13.00' RT. 667.38
BEAM 5	142+48.71 16.21' RT. 667.89	142+64.53 15.81' RT. 667.82	142+80.35 15.62' RT. 667.75	142+96.18 15.64' RT. 667.67	143+12.01 15.87' RT. 667.58	143+14.26 15.85' RT. 667.57	143+26.83 15.34' RT. 667.52	143+39.41 14.96' RT. 667.46	143+52.00 14.72' RT. 667.41	143+64.59 14.61' RT. 667.34
BEAM 6	142+52.54 25.85' RT. 667.68	142+68.23 25.50' RT. 667.61	142+83.94 25.36' RT. 667.53	142+99.64 25.43' RT. 667.45	143+15.34 25.70' RT. 667.37	143+17.57 25.68' RT. 667.36	143+30.04 25.21' RT. 667.31	143+42.52 24.86' RT. 667.25	143+55.01 24.65' RT. 667.19	143+67.50 24.57' RT. 667.13
BEAM 7	142+56.31 35.50' RT. 667.47	142+71.88 35.20' RT. 667.40	142+87.46 35.11' RT. 667.32	143+03.04 35.22' RT. 667.24	143+18.62 35.54' RT. 667.16	143+20.83 35.53' RT. 667.15	143+33.21 35.09' RT. 667.09	143+45.59 34.78' RT. 667.04	143+57.97 34.60' RT. 666.98	143+70.36 34.55' RT. 666.92
BEAM 8	142+60.02 45.17' RT. 667.26	142+75.47 44.91' RT. 667.18	142+90.93 44.87' RT. 667.11	143+06.39 45.02' RT. 667.03	143+21.84 45.39' RT. 666.94	143+24.04 45.38' RT. 666.93	143+36.32 44.97' RT. 666.88	143+48.60 44.69' RT. 666.82	143+60.89 44.55' RT. 666.76	143+73.17 44.53' RT. 666.70
EDGE OF SIDEWALK	142+61.09 48.00' RT. 667.19	142+76.60 48.00' RT. 667.12	142+92.03 48.00' RT. 667.04	143+07.39 48.00' RT. 666.96	143+22.69 48.00' RT. 666.89	143+24.88 48.00' RT. 666.88	143+37.26 48.00' RT. 666.81	143+49.59 48.00' RT. 666.75	143+61.89 48.00' RT. 666.69	143+74.14 48.00' RT. 666.63
BEAM 9	142+63.67 54.84' RT. 667.18	142+79.01 54.63' RT. 667.10	142+94.35 54.63' RT. 667.02	143+09.68 54.84' RT. 666.95	143+25.01 55.24' RT. 666.87	143+27.20 55.24' RT. 666.86	143+39.38 54.87' RT. 666.80	143+51.56 54.62' RT. 666.74	143+63.76 54.50' RT. 666.68	143+75.95 54.52' RT. 666.62
BEAM 10	142+67.27 64.53' RT. 667.16	142+82.49 64.37' RT. 667.08	142+97.71 64.41' RT. 667.01	143+12.93 64.66' RT. 666.93	143+28.14 65.11' RT. 666.86	143+30.31 65.11' RT. 666.85	143+42.39 64.77' RT. 666.78	143+54.48 64.55' RT. 666.72	143+66.58 64.47' RT. 666.66	143+78.68 64.51' RT. 666.60
TOE OF PARAPET	142+68.18 67.00' RT. 667.16	142+83.42 67.00' RT. 667.08	142+98.59 67.00' RT. 667.00	143+13.69 67.00' RT. 666.93	143+28.73 67.00' RT. 666.85	143+30.89 67.00' RT. 666.84	143+43.06 67.00' RT. 666.78	143+55.20 67.00' RT. 666.72	143+67.29 67.00' RT. 666.66	143+79.35 67.00' RT. 666.60

ELEVATION LINE	SPAN 2				SPAN 3				
	5/8 SPAN 2	3/4 SPAN 2	7/8 SPAN 2	℄ BRGS. PIER 2 SPAN 2	℄ BRGS. PIER 2 SPAN 3	1/4 SPAN 3	1/2 SPAN 3	3/4 SPAN 3	℄ BRGS. F.A.
TOE OF PARAPET	143+65.26 26.00' LT. 667.09	143+78.27 26.00' LT. 667.03	143+91.24 26.00' LT. 666.96	144+04.18 26.00' LT. 666.90	144+06.47 26.00' LT. 666.88	144+22.33 26.00' LT. 666.80	144+38.15 26.00' LT. 666.73	144+53.91 26.00' LT. 666.65	144+69.64 26.00' LT. 666.57
BEAM 1	143+65.47 25.29' LT. 667.09	143+78.49 25.25' LT. 667.02	143+91.50 25.08' LT. 666.96	144+04.51 24.77' LT. 666.89	144+06.79 24.78' LT. 666.88	144+22.53 25.21' LT. 666.80	144+38.28 25.44' LT. 666.73	144+54.03 25.47' LT. 666.65	144+69.78 25.30' LT. 666.57
EDGE OF SIDEWALK	143+66.77 21.00' LT. 667.09	143+79.72 21.00' LT. 667.02	143+92.64 21.00' LT. 666.96	144+05.51 21.00' LT. 666.89	144+07.79 21.00' LT. 666.88	144+23.59 21.00' LT. 666.80	144+39.33 21.00' LT. 666.72	144+55.03 21.00' LT. 666.64	144+70.68 21.00' LT. 666.57
BEAM 2	143+68.47 15.32' LT. 667.19	143+81.38 15.25' LT. 667.13	143+94.28 15.05' LT. 667.07	144+07.18 14.71' LT. 667.01	144+09.44 14.71' LT. 667.00	144+25.05 15.11' LT. 666.91	144+40.67 15.31' LT. 666.83	144+56.28 15.31' LT. 666.75	144+71.90 15.11' LT. 666.68
BEAM 3	143+71.42 5.34' LT. 667.38	143+84.22 5.25' LT. 667.31	143+97.01 5.02' LT. 667.25	144+09.80 4.65' LT. 667.20	144+12.05 4.64' LT. 667.19	144+27.53 5.01' LT. 667.10	144+43.01 5.18' LT. 667.02	144+58.50 5.15' LT. 666.94	144+73.98 4.92' LT. 666.87
PGL & ℄ OF OC	143+72.98 0.00' RT. 667.48	143+85.69 0.00' RT. 667.41	143+98.36 0.00' RT. 667.35	144+11.00 0.00' RT. 667.29	144+13.24 0.00' RT. 667.27	144+28.74 0.00' RT. 667.20	144+44.19 0.00' RT. 667.12	144+59.60 0.00' RT. 667.04	144+74.97 0.00' RT. 666.97
EDGE OF MEDIAN	143+73.85 3.00' RT. 667.53	143+86.52 3.00' RT. 667.47	143+99.16 3.00' RT. 667.40	144+11.77 3.00' RT. 667.34	144+14.00 3.00' RT. 667.33	144+29.46 3.00' RT. 667.25	144+44.87 3.00' RT. 667.18	144+60.24 3.00' RT. 667.10	144+75.57 3.00' RT. 667.02
BEAM 4	143+74.32 4.64' RT. 667.50	143+87.01 4.77' RT. 667.43	143+99.70 5.03' RT. 667.36	144+12.38 5.42' RT. 667.29	144+14.61 5.43' RT. 667.28	144+29.96 5.10' RT. 667.21	144+45.32 4.96' RT. 667.14	144+60.67 5.02' RT. 667.06	144+76.03 5.27' RT. 666.98
EDGE OF MEDIAN	143+76.71 13.00' RT. 667.32	143+89.28 13.00' RT. 667.25	144+01.80 13.00' RT. 667.19	144+14.30 13.00' RT. 667.13	144+16.51 13.00' RT. 667.12	144+31.84 13.00' RT. 667.04	144+47.12 13.00' RT. 666.96	144+62.36 13.00' RT. 666.89	144+77.55 13.00' RT. 666.81
BEAM 5	143+77.18 14.63' RT. 667.28	143+89.76 14.79' RT. 667.22	144+02.35 15.07' RT. 667.15	144+14.92 15.50' RT. 667.08	144+17.13 15.51' RT. 667.06	144+32.36 15.21' RT. 666.99	144+47.58 15.10' RT. 666.92	144+62.81 15.18' RT. 666.84	144+78.04 15.47' RT. 666.76
BEAM 6	143+79.98 24.63' RT. 667.07	143+92.47 24.81' RT. 667.00	144+04.95 25.13' RT. 666.93	144+17.42 25.58' RT. 666.86	144+19.61 25.60' RT. 666.85	144+34.71 25.32' RT. 666.78	144+49.81 25.24' RT. 666.71	144+64.92 25.36' RT. 666.63	144+80.01 25.66' RT. 666.55
BEAM 7	143+82.74 34.63' RT. 666.85	143+95.13 34.84' RT. 666.79	144+07.51 35.19' RT. 666.72	144+19.88 35.66' RT. 666.65	144+22.05 35.69' RT. 666.64	144+37.03 35.44' RT. 666.57	144+52.01 35.39' RT. 666.49	144+66.99 35.54' RT. 666.41	144+81.96 35.87' RT. 666.33
BEAM 8	143+85.46 44.64' RT. 666.64	143+97.75 44.88' RT. 666.57	144+10.02 45.25' RT. 666.50	144+22.29 45.75' RT. 666.43	144+24.45 45.78' RT. 666.42	144+39.31 45.57' RT. 666.35	144+54.17 45.55' RT. 666.28	144+69.02 45.72' RT. 666.20	144+83.87 46.07' RT. 666.12
EDGE OF SIDEWALK	143+86.36 48.00' RT. 666.57	143+98.55 48.00' RT. 666.51	144+10.70 48.00' RT. 666.45	144+22.83 48.00' RT. 666.39	144+24.97 48.00' RT. 666.38	144+39.85 48.00' RT. 666.30	144+54.68 48.00' RT. 666.23	144+69.47 48.00' RT. 666.15	144+84.23 48.00' RT. 666.08
BEAM 9	143+88.14 54.66' RT. 666.56	144+00.32 54.93' RT. 666.50	144+12.50 55.32' RT. 666.43	144+24.67 55.85' RT. 666.37	144+26.81 55.88' RT. 666.36	144+41.55 55.70' RT. 666.29	144+56.29 55.71' RT. 666.22	144+71.03 55.90' RT. 666.14	144+85.76 56.28' RT. 666.07
BEAM 10	143+90.77 64.68' RT. 666.54	144+02.86 64.97' RT. 666.48	144+14.94 65.40' RT. 666.42	144+27.01 65.95' RT. 666.36	144+29.14 65.99' RT. 666.35	144+43.76 65.83' RT. 666.28	144+58.38 65.87' RT. 666.20	144+73.00 66.09' RT. 666.13	144+87.61 66.49' RT. 666.06
TOE OF PARAPET	143+91.37 67.00' RT. 666.54	144+03.36 67.00' RT. 666.48	144+15.32 67.00' RT. 666.42	144+27.25 67.00' RT. 666.36	144+29.37 67.00' RT. 666.35	144+44.01 67.00' RT. 666.28	144+58.61 67.00' RT. 666.20	144+73.17 67.00' RT. 666.13	144+87.70 67.00' RT. 666.06

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/ GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.

0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

DESIGN AGENCY
Michael Baker
INTERNATIONAL
1111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

DATE
2-12-20
LPC
STRUCTURE FILE NUMBER
1801515

DRAWN
JCC
CHECKED
MKB

DESIGNED
JCC

REVIEWED
LPC

FINAL DECK SURFACE ELEVATION TABLE
CUY-010-1949
OH-10 OVER KINGSBURY RUN RAVINE

CUY-IR490/SR010-2.09/19.28
PID No. 96833

25/49
27
51

RECORD PLANS
RECORD PLANS

ELEVATION LINE	SPAN 1					SPAN 2				
	℄ BRGS. R.A.	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	℄ BRGS. PIER 1 SPAN 1	℄ BRGS. PIER 1 SPAN 2	1/8 SPAN 2	1/4 SPAN 2	3/8 SPAN 2	1/2 SPAN 2
TOE OF PARAPET	142+31.14 26.00' LT. 667.76	142+47.78 26.00' LT. 667.70	142+64.33 26.00' LT. 667.62	142+80.79 26.00' LT. 667.53	142+97.17 26.00' LT. 667.43	142+99.52 26.00' LT. 667.42	143+12.76 26.00' LT. 667.42	143+25.96 26.00' LT. 667.41	143+39.10 26.00' LT. 667.38	143+52.20 26.00' LT. 667.33
BEAM 1	142+32.29 23.33' LT. 667.76	142+48.75 23.67' LT. 667.69	142+65.21 23.79' LT. 667.62	142+81.68 23.69' LT. 667.53	142+98.13 23.37' LT. 667.43	143+00.47 23.40' LT. 667.41	143+13.45 24.05' LT. 667.41	143+26.44 24.57' LT. 667.40	143+39.45 24.94' LT. 667.38	143+52.46 25.18' LT. 667.33
EDGE OF SIDEWALK	142+33.29 21.00' LT. 667.75	142+49.85 21.00' LT. 667.69	142+66.32 21.00' LT. 667.62	142+82.70 21.00' LT. 667.53	142+99.00 21.00' LT. 667.43	143+01.34 21.00' LT. 667.41	143+14.52 21.00' LT. 667.41	143+27.65 21.00' LT. 667.41	143+40.73 21.00' LT. 667.38	143+53.77 21.00' LT. 667.33
BEAM 2	142+36.85 12.63' LT. 667.90	142+53.05 13.18' LT. 667.83	142+69.26 13.52' LT. 667.75	142+85.48 13.65' LT. 667.66	143+01.69 13.56' LT. 667.56	143+04.00 13.60' LT. 667.55	143+16.88 14.22' LT. 667.54	143+29.77 14.70' LT. 667.53	143+42.66 15.04' LT. 667.50	143+55.57 15.25' LT. 667.45
BEAM 3	142+40.87 3.03' LT. 668.08	142+56.94 3.53' LT. 668.01	142+73.02 3.82' LT. 667.93	142+89.10 3.89' LT. 667.84	143+05.19 3.76' LT. 667.74	143+07.48 3.80' LT. 667.73	143+20.25 4.37' LT. 667.72	143+33.03 4.82' LT. 667.71	143+45.83 5.13' LT. 667.69	143+58.62 5.30' LT. 667.64
PGL & ℄ OF OC	142+42.12 0.00' RT. 668.13	142+58.34 0.00' RT. 668.07	142+74.48 0.00' RT. 668.00	142+90.53 0.00' RT. 667.91	143+06.51 0.00' RT. 667.81	143+08.81 0.00' RT. 667.80	143+21.73 0.00' RT. 667.80	143+34.61 0.00' RT. 667.80	143+47.44 0.00' RT. 667.78	143+60.23 0.00' RT. 667.73
EDGE OF MEDIAN	142+43.35 3.00' RT. 668.18	142+59.53 3.00' RT. 668.12	142+75.62 3.00' RT. 668.05	142+91.63 3.00' RT. 667.96	143+07.56 3.00' RT. 667.86	143+09.85 3.00' RT. 667.85	143+22.74 3.00' RT. 667.86	143+35.58 3.00' RT. 667.86	143+48.38 3.00' RT. 667.84	143+61.13 3.00' RT. 667.79
BEAM 4	142+44.82 6.59' RT. 668.11	142+60.76 6.14' RT. 668.05	142+76.72 5.90' RT. 667.99	142+92.67 5.87' RT. 667.90	143+08.63 6.05' RT. 667.80	143+10.90 6.02' RT. 667.79	143+23.57 5.48' RT. 667.81	143+36.25 5.07' RT. 667.81	143+48.94 4.79' RT. 667.80	143+61.63 4.65' RT. 667.75
EDGE OF MEDIAN	142+47.42 13.00' RT. 667.96	142+63.44 13.00' RT. 667.90	142+79.38 13.00' RT. 667.83	142+95.24 13.00' RT. 667.74	143+11.03 13.00' RT. 667.64	143+13.29 13.00' RT. 667.63	143+26.06 13.00' RT. 667.64	143+38.79 13.00' RT. 667.64	143+51.47 13.00' RT. 667.62	143+64.11 13.00' RT. 667.57
BEAM 5	142+48.71 16.21' RT. 667.89	142+64.53 15.81' RT. 667.84	142+80.35 15.62' RT. 667.77	142+96.18 15.64' RT. 667.69	143+12.01 15.87' RT. 667.58	143+14.26 15.85' RT. 667.57	143+26.83 15.34' RT. 667.59	143+39.41 14.96' RT. 667.60	143+52.00 14.72' RT. 667.58	143+64.59 14.61' RT. 667.53
BEAM 6	142+52.54 25.85' RT. 667.68	142+68.23 25.50' RT. 667.63	142+83.94 25.36' RT. 667.56	142+99.64 25.43' RT. 667.47	143+15.34 25.70' RT. 667.37	143+17.57 25.68' RT. 667.36	143+30.04 25.21' RT. 667.38	143+42.52 24.86' RT. 667.38	143+55.01 24.65' RT. 667.37	143+67.50 24.57' RT. 667.32
BEAM 7	142+56.31 35.50' RT. 667.47	142+71.88 35.20' RT. 667.42	142+87.46 35.11' RT. 667.35	143+03.04 35.22' RT. 667.26	143+18.62 35.54' RT. 667.16	143+20.83 35.53' RT. 667.15	143+33.21 35.09' RT. 667.16	143+45.59 34.78' RT. 667.17	143+57.97 34.60' RT. 667.15	143+70.36 34.55' RT. 667.11
BEAM 8	142+60.02 45.17' RT. 667.26	142+75.47 44.91' RT. 667.20	142+90.93 44.87' RT. 667.14	143+06.39 45.02' RT. 667.05	143+21.84 45.39' RT. 666.94	143+24.04 45.38' RT. 666.93	143+36.32 44.97' RT. 666.95	143+48.60 44.69' RT. 666.96	143+60.89 44.55' RT. 666.95	143+73.17 44.53' RT. 666.90
EDGE OF SIDEWALK	142+61.09 48.00' RT. 667.19	142+76.60 48.00' RT. 667.14	142+92.03 48.00' RT. 667.07	143+07.39 48.00' RT. 666.98	143+22.69 48.00' RT. 666.89	143+24.88 48.00' RT. 666.89	143+37.26 48.00' RT. 666.89	143+49.59 48.00' RT. 666.89	143+61.89 48.00' RT. 666.87	143+74.14 48.00' RT. 666.83
BEAM 9	142+63.67 54.84' RT. 667.18	142+79.01 54.63' RT. 667.12	142+94.35 54.63' RT. 667.05	143+09.68 54.84' RT. 666.97	143+25.01 55.24' RT. 666.87	143+27.20 55.24' RT. 666.86	143+39.38 54.87' RT. 666.87	143+51.56 54.62' RT. 666.87	143+63.76 54.50' RT. 666.86	143+75.95 54.52' RT. 666.81
BEAM 10	142+67.27 64.53' RT. 667.16	142+82.49 64.37' RT. 667.10	142+97.71 64.41' RT. 667.03	143+12.93 64.66' RT. 666.95	143+28.14 65.11' RT. 666.85	143+30.31 65.11' RT. 666.85	143+42.39 64.77' RT. 666.84	143+54.48 64.55' RT. 666.84	143+66.58 64.47' RT. 666.82	143+78.68 64.51' RT. 666.77
TOE OF PARAPET	142+68.18 67.00' RT. 667.16	142+83.42 67.00' RT. 667.10	142+98.59 67.00' RT. 667.03	143+13.69 67.00' RT. 666.95	143+28.73 67.00' RT. 666.85	143+30.89 67.00' RT. 666.84	143+43.06 67.00' RT. 666.84	143+55.20 67.00' RT. 666.84	143+67.29 67.00' RT. 666.81	143+79.35 67.00' RT. 666.77

ELEVATION LINE	SPAN 2				SPAN 3			
	5/8 SPAN 2	3/4 SPAN 2	7/8 SPAN 2	℄ BRGS. PIER 2 SPAN 2	℄ BRGS. PIER 2 SPAN 3	1/4 SPAN 3	1/2 SPAN 3	3/4 SPAN 3
TOE OF PARAPET	143+65.26 26.00' LT. 667.25	143+78.27 26.00' LT. 667.14	143+91.24 26.00' LT. 667.02	144+04.18 26.00' LT. 666.90	144+06.47 26.00' LT. 666.88	144+22.33 26.00' LT. 666.82	144+38.15 26.00' LT. 666.75	144+53.91 26.00' LT. 666.66
BEAM 1	143+65.47 25.29' LT. 667.25	143+78.49 25.25' LT. 667.14	143+91.50 25.08' LT. 667.02	144+04.51 24.77' LT. 666.89	144+06.79 24.78' LT. 666.88	144+22.53 25.21' LT. 666.82	144+38.28 25.44' LT. 666.75	144+54.03 25.47' LT. 666.66
EDGE OF SIDEWALK	143+66.77 21.00' LT. 667.25	143+79.72 21.00' LT. 667.15	143+92.64 21.00' LT. 667.02	144+05.51 21.00' LT. 666.89	144+07.79 21.00' LT. 666.88	144+23.59 21.00' LT. 666.82	144+39.33 21.00' LT. 666.75	144+55.03 21.00' LT. 666.66
BEAM 2	143+68.47 15.32' LT. 667.37	143+81.38 15.25' LT. 667.26	143+94.28 15.05' LT. 667.14	144+07.18 14.71' LT. 667.01	144+09.44 14.71' LT. 667.00	144+25.05 15.11' LT. 666.93	144+40.67 15.31' LT. 666.86	144+56.28 15.31' LT. 666.77
BEAM 3	143+71.42 5.34' LT. 667.56	143+84.22 5.25' LT. 667.45	143+97.01 5.02' LT. 667.33	144+09.80 4.65' LT. 667.20	144+12.05 4.64' LT. 667.19	144+27.53 5.01' LT. 667.12	144+43.01 5.18' LT. 667.05	144+58.50 5.15' LT. 666.96
PGL & ℄ OF OC	143+72.98 0.00' RT. 667.65	143+85.69 0.00' RT. 667.55	143+98.36 0.00' RT. 667.42	144+11.00 0.00' RT. 667.29	144+13.24 0.00' RT. 667.27	144+28.74 0.00' RT. 667.21	144+44.19 0.00' RT. 667.14	144+59.60 0.00' RT. 667.06
EDGE OF MEDIAN	143+73.85 3.00' RT. 667.71	143+86.52 3.00' RT. 667.60	143+99.16 3.00' RT. 667.48	144+11.77 3.00' RT. 667.34	144+14.00 3.00' RT. 667.33	144+29.46 3.00' RT. 667.27	144+44.87 3.00' RT. 667.20	144+60.24 3.00' RT. 667.12
BEAM 4	143+74.32 4.64' RT. 667.67	143+87.01 4.77' RT. 667.57	143+99.70 5.03' RT. 667.43	144+12.38 5.42' RT. 667.29	144+14.61 5.43' RT. 667.28	144+29.96 5.10' RT. 667.23	144+45.32 4.96' RT. 667.16	144+60.67 5.02' RT. 667.08
EDGE OF MEDIAN	143+76.71 13.00' RT. 667.49	143+89.28 13.00' RT. 667.39	144+01.80 13.00' RT. 667.26	144+14.30 13.00' RT. 667.13	144+16.51 13.00' RT. 667.12	144+31.84 13.00' RT. 667.06	144+47.12 13.00' RT. 666.99	144+62.36 13.00' RT. 666.91
BEAM 5	143+77.18 14.63' RT. 667.46	143+89.76 14.79' RT. 667.35	144+02.35 15.07' RT. 667.22	144+14.92 15.50' RT. 667.08	144+17.13 15.51' RT. 667.06	144+32.36 15.21' RT. 667.01	144+47.58 15.10' RT. 666.95	144+62.81 15.18' RT. 666.86
BEAM 6	143+79.98 24.63' RT. 667.24	143+92.47 24.81' RT. 667.13	144+04.95 25.13' RT. 667.00	144+17.42 25.58' RT. 666.86	144+19.61 25.60' RT. 666.85	144+34.71 25.32' RT. 666.80	144+49.81 25.24' RT. 666.73	144+64.92 25.36' RT. 666.65
BEAM 7	143+82.74 34.63' RT. 667.03	143+95.13 34.84' RT. 666.92	144+07.51 35.19' RT. 666.79	144+19.88 35.66' RT. 666.65	144+22.05 35.69' RT. 666.64	144+37.03 35.44' RT. 666.58	144+52.01 35.39' RT. 666.52	144+66.99 35.54' RT. 666.43
BEAM 8	143+85.46 44.64' RT. 666.82	143+97.75 44.88' RT. 666.71	144+10.02 45.25' RT. 666.58	144+22.29 45.75' RT. 666.43	144+24.45 45.78' RT. 666.42	144+39.31 45.57' RT. 666.37	144+54.17 45.55' RT. 666.30	144+69.02 45.72' RT. 666.22
EDGE OF SIDEWALK	143+86.36 48.00' RT. 666.75	143+98.55 48.00' RT. 666.64	144+10.70 48.00' RT. 666.52	144+22.83 48.00' RT. 666.39	144+24.97 48.00' RT. 666.38	144+39.85 48.00' RT. 666.32	144+54.68 48.00' RT. 666.25	144+69.47 48.00' RT. 666.17
BEAM 9	143+88.14 54.66' RT. 666.73	144+00.32 54.93' RT. 666.63	144+12.50 55.32' RT. 666.51	144+24.67 55.85' RT. 666.37	144+26.81 55.88' RT. 666.36	144+41.55 55.70' RT. 666.31	144+56.29 55.71' RT. 666.24	144+71.03 55.90' RT. 666.16
BEAM 10	143+90.77 64.68' RT. 666.70	144+02.86 64.97' RT. 666.60	144+14.94 65.40' RT. 666.48	144+27.01 65.95' RT. 666.36	144+29.14 65.99' RT. 666.35	144+43.76 65.83' RT. 666.29	144+58.38 65.87' RT. 666.22	144+73.00 66.09' RT. 666.15
TOE OF PARAPET	143+91.37 67.00' RT. 666.69	144+03.36 67.00' RT. 666.60	144+15.32 67.00' RT. 666.48	144+27.25 67.00' RT. 666.36	144+29.37 67.00' RT. 666.35	144+44.01 67.00' RT. 666.29	144+58.61 67.00' RT. 666.22	144+73.17 67.00' RT. 666.14

NOTES:

- SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/ GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
- FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.

0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

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DECK SCREED ELEVATION TABLE

CUY-010-1949
OH-10 OVER KINGSBURY RUN RAVINE

CUY-IR490/SR010-2.09/19.28
PID No. 96833

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RECORD PLANS

RECORD PLANS

RECORD PLANS

DESIGN AGENCY
Michael Baker
INTERNATIONAL
1111 SUPERIOR AVE E., SUITE 2300, CLEVELAND, OH 44114

DATE
2-12-20
REVIEWED
LPC
STRUCTURE FILE NUMBER
1801515

DRAWN
JCC
CHECKED
MKB
REVISED

ELEVATION LINE	SPAN 1						SPAN 2													
	℄ BRGS. R.A.	1/4 SPAN 1	1/2 SPAN 1	3/4 SPAN 1	℄ BRGS. PIER 1 SPAN 1	℄ BRGS. PIER 1 SPAN 2	1/8 SPAN 2	1/4 SPAN 2	3/8 SPAN 2	1/2 SPAN 2										
BEAM 1	142+32.29	23.33' LT.	142+48.75	23.67' LT.	142+65.21	23.79' LT.	142+81.68	23.69' LT.	142+98.13	23.37' LT.	143+00.47	23.40' LT.	143+13.45	24.05' LT.	143+26.44	24.57' LT.	143+39.45	24.94' LT.	143+52.46	25.18' LT.
	666.98	666.91	666.84	666.75	666.65	666.64	666.62	666.60	666.57	666.51										
BEAM 2	142+36.85	12.63' LT.	142+53.05	13.18' LT.	142+69.26	13.52' LT.	142+85.48	13.65' LT.	143+01.69	13.56' LT.	143+04.00	13.60' LT.	143+16.88	14.22' LT.	143+29.77	14.70' LT.	143+42.66	15.04' LT.	143+55.57	15.25' LT.
	667.17	667.10	667.02	666.93	666.83	666.82	666.81	666.80	666.77	666.72										
BEAM 3	142+40.87	3.03' LT.	142+56.94	3.53' LT.	142+73.02	3.82' LT.	142+89.10	3.89' LT.	143+05.19	3.76' LT.	143+07.48	3.80' LT.	143+20.25	4.37' LT.	143+33.03	4.82' LT.	143+45.83	5.13' LT.	143+58.62	5.30' LT.
	667.35	667.28	667.20	667.11	667.01	667.00	666.99	666.99	666.96	666.91										
BEAM 4	142+44.82	6.59' RT.	142+60.76	6.14' RT.	142+76.72	5.90' RT.	142+92.67	5.87' RT.	143+08.63	6.05' RT.	143+10.90	6.02' RT.	143+23.57	5.48' RT.	143+36.25	5.07' RT.	143+48.94	4.79' RT.	143+61.63	4.65' RT.
	667.38	667.33	667.26	667.17	667.07	667.06	667.08	667.08	667.07	667.02										
BEAM 5	142+48.71	16.21' RT.	142+64.53	15.81' RT.	142+80.35	15.62' RT.	142+96.18	15.64' RT.	143+12.01	15.87' RT.	143+14.26	15.85' RT.	143+26.83	15.34' RT.	143+39.41	14.96' RT.	143+52.00	14.72' RT.	143+64.59	14.61' RT.
	667.16	667.11	667.05	666.96	666.85	666.84	666.86	666.87	666.85	666.81										
BEAM 6	142+52.54	25.85' RT.	142+68.23	25.50' RT.	142+83.94	25.36' RT.	142+99.64	25.43' RT.	143+15.34	25.70' RT.	143+17.57	25.68' RT.	143+30.04	25.21' RT.	143+42.52	24.86' RT.	143+55.01	24.65' RT.	143+67.50	24.57' RT.
	666.95	666.90	666.83	666.74	666.64	666.63	666.65	666.65	666.64	666.59										
BEAM 7	142+56.31	35.50' RT.	142+71.88	35.20' RT.	142+87.46	35.11' RT.	143+03.04	35.22' RT.	143+18.62	35.54' RT.	143+20.83	35.53' RT.	143+33.21	35.09' RT.	143+45.59	34.78' RT.	143+57.97	34.60' RT.	143+70.36	34.55' RT.
	666.74	666.69	666.62	666.53	666.43	666.42	666.43	666.44	666.42	666.38										
BEAM 8	142+60.02	45.17' RT.	142+75.47	44.91' RT.	142+90.93	44.87' RT.	143+06.39	45.02' RT.	143+21.84	45.39' RT.	143+24.04	45.38' RT.	143+36.32	44.97' RT.	143+48.60	44.69' RT.	143+60.89	44.55' RT.	143+73.17	44.53' RT.
	666.53	666.48	666.41	666.32	666.21	666.20	666.22	666.23	666.22	666.17										
BEAM 9	142+63.67	54.84' RT.	142+79.01	54.63' RT.	142+94.35	54.63' RT.	143+09.68	54.84' RT.	143+25.01	55.24' RT.	143+27.20	55.24' RT.	143+39.38	54.87' RT.	143+51.56	54.62' RT.	143+63.76	54.50' RT.	143+75.95	54.52' RT.
	666.45	666.39	666.33	666.24	666.14	666.13	666.14	666.15	666.13	666.08										
BEAM 10	142+67.27	64.53' RT.	142+82.49	64.37' RT.	142+97.71	64.41' RT.	143+12.93	64.66' RT.	143+28.14	65.11' RT.	143+30.31	65.11' RT.	143+42.39	64.77' RT.	143+54.48	64.55' RT.	143+66.58	64.47' RT.	143+78.68	64.51' RT.
	666.43	666.37	666.31	666.22	666.13	666.12	666.12	666.11	666.09	666.04										

ELEVATION LINE	SPAN 2								SPAN 3									
	5/8 SPAN 2		3/4 SPAN 2		7/8 SPAN 2		℄ BRGS. PIER 2 SPAN 2		℄ BRGS. PIER 2 SPAN 3		1/4 SPAN 3		1/2 SPAN 3		3/4 SPAN 3		℄ BRGS. F.A.	
BEAM 1	143+65.47	25.29' LT.	143+78.49	25.25' LT.	143+91.50	25.08' LT.	144+04.51	24.77' LT.	144+06.79	24.78' LT.	144+22.53	25.21' LT.	144+38.28	25.44' LT.	144+54.03	25.47' LT.	144+69.78	25.30' LT.
	666.43		666.33		666.21		666.09		666.08		666.01		665.93		665.84		665.75	
BEAM 2	143+68.47	15.32' LT.	143+81.38	15.25' LT.	143+94.28	15.05' LT.	144+07.18	14.71' LT.	144+09.44	14.71' LT.	144+25.05	15.11' LT.	144+40.67	15.31' LT.	144+56.28	15.31' LT.	144+71.90	15.11' LT.
	666.64		666.53		666.41		666.28		666.27		666.20		666.13		666.04		665.95	
BEAM 3	143+71.42	5.34' LT.	143+84.22	5.25' LT.	143+97.01	5.02' LT.	144+09.80	4.65' LT.	144+12.05	4.64' LT.	144+27.53	5.01' LT.	144+43.01	5.18' LT.	144+58.50	5.15' LT.	144+73.98	4.92' LT.
	666.83		666.72		666.60		666.47		666.46		666.39		666.32		666.23		666.14	
BEAM 4	143+74.32	4.64' RT.	143+87.01	4.77' RT.	143+99.70	5.03' RT.	144+12.38	5.42' RT.	144+14.61	5.43' RT.	144+29.96	5.10' RT.	144+45.32	4.96' RT.	144+60.67	5.02' RT.	144+76.03	5.27' RT.
	666.94		666.84		666.71		666.56		666.55		666.50		666.43		666.35		666.25	
BEAM 5	143+77.18	14.63' RT.	143+89.76	14.79' RT.	144+02.35	15.07' RT.	144+14.92	15.50' RT.	144+17.13	15.51' RT.	144+32.36	15.21' RT.	144+47.58	15.10' RT.	144+62.81	15.18' RT.	144+78.04	15.47' RT.
	666.73		666.62		666.49		666.35		666.33		666.28		666.22		666.13		666.03	
BEAM 6	143+79.98	24.63' RT.	143+92.47	24.81' RT.	144+04.95	25.13' RT.	144+17.42	25.58' RT.	144+19.61	25.60' RT.	144+34.71	25.32' RT.	144+49.81	25.24' RT.	144+64.92	25.36' RT.	144+80.01	25.66' RT.
	666.51		666.40		666.27		666.13		666.12		666.07		666.00		665.92		665.82	
BEAM 7	143+82.74	34.63' RT.	143+95.13	34.84' RT.	144+07.51	35.19' RT.	144+19.88	35.66' RT.	144+22.05	35.69' RT.	144+37.03	35.44' RT.	144+52.01	35.39' RT.	144+66.99	35.54' RT.	144+81.96	35.87' RT.
	666.30		666.19		666.06		665.92		665.91		665.85		665.79		665.70		665.60	
BEAM 8	143+85.46	44.64' RT.	143+97.75	44.88' RT.	144+10.02	45.25' RT.	144+22.29	45.75' RT.	144+24.45	45.78' RT.	144+39.31	45.57' RT.	144+54.17	45.55' RT.	144+69.02	45.72' RT.	144+83.87	46.07' RT.
	666.09		665.98		665.85		665.70		665.69		665.64		665.58		665.49		665.39	
BEAM 9	143+88.14	54.66' RT.	144+00.32	54.93' RT.	144+12.50	55.32' RT.	144+24.67	55.85' RT.	144+26.81	55.88' RT.	144+41.55	55.70' RT.	144+56.29	55.71' RT.	144+71.03	55.90' RT.	144+85.76	56.28' RT.
	666.01		665.90		665.78		665.64		665.63		665.58		665.51		665.43		665.34	
BEAM 10	143+90.77	64.68' RT.	144+02.86	64.97' RT.	144+14.94	65.40' RT.	144+27.01	65.95' RT.	144+29.14	65.99' RT.	144+43.76	65.83' RT.	144+58.38	65.87' RT.	144+73.00	66.09' RT.	144+87.61	66.49' RT.
	665.97		665.87		665.75		665.63		665.62		665.56		665.50		665.42		665.33	

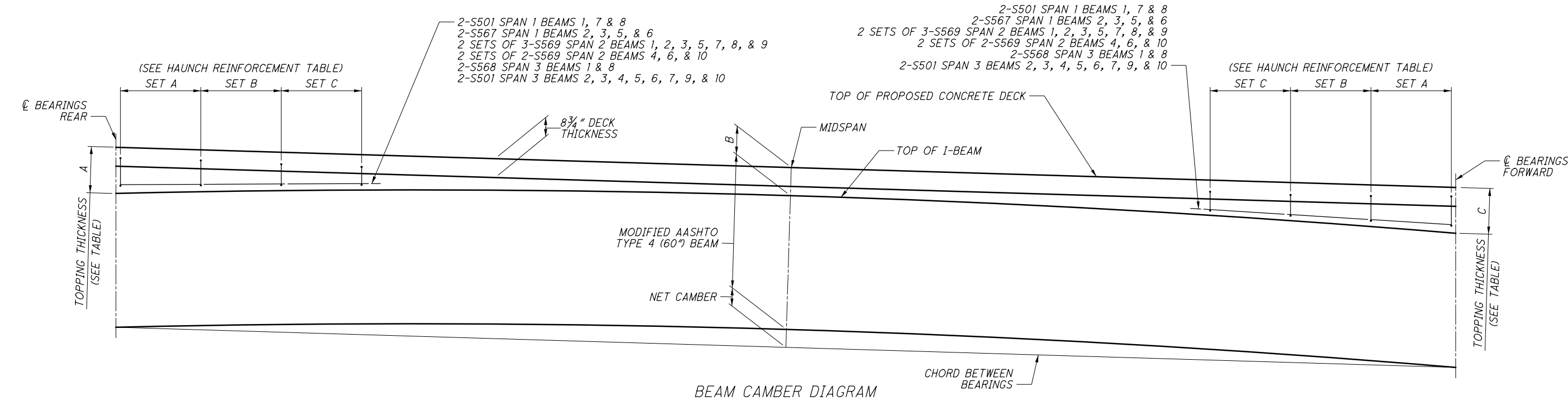
- NOTES:
1.

SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2.

TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/ GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3.

FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.

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NO.	DATE	DESCRIPTION
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BEAM CAMBER DIAGRAM

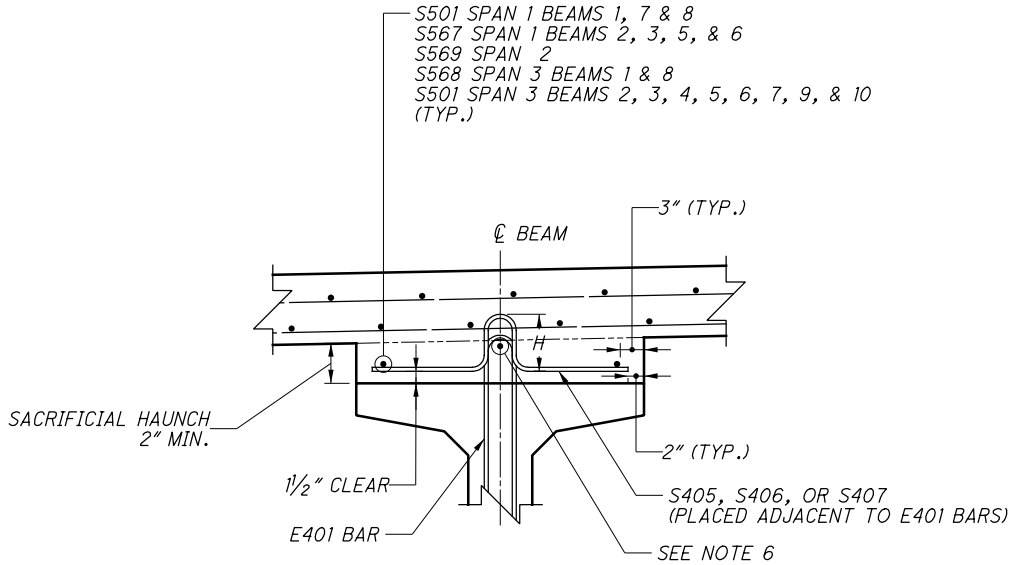
ELEVATION LINE		BEAM CAMBER AT MIDSPAN		
		SPAN 1	SPAN 2	SPAN 3
BEAM 1	CAMBER AT TIME OF RELEASE DUE TO PRESTRESSING	1 1/2"	7 5/8"	1 3/8"
	DEFLECTION DUE TO SELF WEIGHT	0 3/8"	2 7/16"	0 5/16"
	CAMBER AT TIME OF RELEASE (NET)	1 1/8"	5 1/4"	1 1/16"
	CAMBER AT TIME OF ERECTION (D)	1 1/8"	5 1/4"	1 1/16"
	LONG TERM CAMBER (D _L)	2 1/4"	10 5/8"	2 1/8"
BEAMS 2 THROUGH 10	CAMBER AT TIME OF RELEASE DUE TO PRESTRESSING	1 1/2"	7 5/8"	1 3/8"
	DEFLECTION DUE TO SELF WEIGHT	0 3/8"	2 7/16"	0 5/16"
	CAMBER AT TIME OF RELEASE (NET)	1 1/8"	5 1/4"	1 1/16"
	CAMBER AT TIME OF ERECTION (D)	1 1/8"	5 1/4"	1 1/16"
	LONG TERM CAMBER (D _L)	2 1/4"	10 5/8"	2 1/8"

DEFLECTION DUE TO REMAINING DEADLOAD (AT MIDSPAN)			
BEAM #	SPAN 1	SPAN 2	SPAN 3
BEAM 1	0 3/8"	2 1/16"	0 1/4"
BEAM 2	0 3/8"	2 3/8"	0 5/16"
BEAM 3	0 3/8"	2 3/8"	0 5/16"
BEAM 4	0 3/8"	2 3/8"	0 5/16"
BEAM 5	0 3/8"	2 5/16"	0 5/16"
BEAM 6	0 3/8"	2 5/16"	0 5/16"
BEAM 7	0 3/8"	2 5/16"	0 5/16"
BEAM 8	0 3/8"	2 7/16"	0 5/16"
BEAM 9	0 3/8"	2 3/8"	0 5/16"
BEAM 10	0 5/16"	2 1/16"	0 1/4"

(INCLUDES CONCRETE DECK, CROSSFRAMES, DIAPHRAGMS, BARRIERS, UTILITIES, ETC.)

TOPPING THICKNESSES (SURVEYED AFTER BEAM ERECTION)									
BEAM NO.	SPAN 1			SPAN 2			SPAN 3		
	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION A	DIMENSION B	DIMENSION C
1	13"	12"	13.125"	15.75"	12.125"	16"	13.875"	12"	14"
2	12.5"	10.875"	12.5"	16.5"	12.5"	16.5"	12.875"	10.75"	12.875"
3	12.5"	11.125"	12.5"	15.5"	11.75"	15.5"	12.875"	11.75"	12.875"
4	12.5"	11.25"	12.5"	15.125"	10.875"	15.125"	12.875"	11.125"	12.875"
5	12.5"	11"	12.5"	15.25"	12.375"	15.25"	12.875"	11.125"	12.875"
6	12.5"	11.25"	12.5"	15.25"	10.875"	15.25"	12.875"	10.75"	12.875"
7	12.5"	11"	12.5"	15.25"	12.375"	15.25"	12.875"	10.75"	12.875"
8	12.5"	11"	12.5"	16.375"	10.875"	16.375"	12.875"	11.5"	12.875"
9	12.125"	11.25"	12.125"	15.125"	10.75"	15.125"	12.625"	10.75"	12.625"
10	12.125"	11"	12.125"	15"	10.75"	15"	12.625"	11"	12.625"

HAUNCH REINFORCEMENT					
BEAM NO.	SPAN 1	SPAN 2			SPAN 3
	SET A	SET A	SET B	SET C	SET A
1	NOT USED	39-S406	NOT USED	NOT USED	11-S407
2	NOT USED	34-S405	25-S406	NOT USED	11-S407
3	NOT USED	34-S406	11-S407	NOT USED	NOT USED
4	NOT USED	37-S406	NOT USED	NOT USED	11-S407
5	NOT USED	34-S406	20-S407	NOT USED	11-S407
6	NOT USED	34-S406	20-S407	NOT USED	11-S407
7	NOT USED	34-S406	20-S407	NOT USED	11-S407
8	NOT USED	34-S405	25-S407	NOT USED	NOT USED
9	NOT USED	34-S406	11-S407	NOT USED	NOT USED
10	NOT USED	34-S406	NOT USED	NOT USED	NOT USED

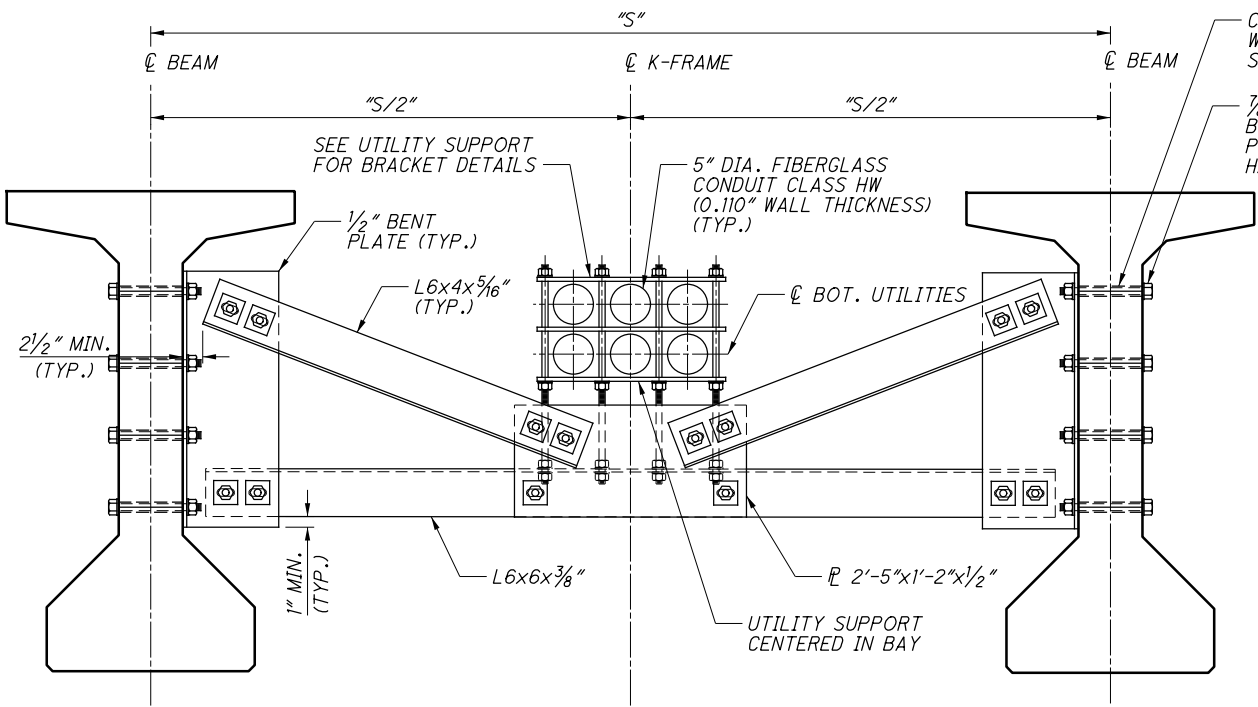


HAUNCH REINFORCEMENT

NOTES:

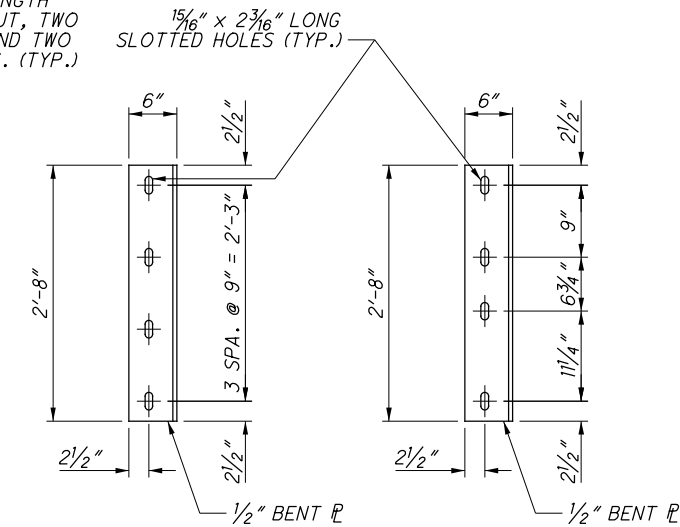
- ESTIMATED CAMBER AT DAY 0 (D0) IS TABULATED ABOVE.
- ESTIMATED CAMBER AT DAY 180 (D180) IS TABULATED ABOVE.
- DEFLECTION DUE TO REMAINING DEAD LOAD IS TABULATED ABOVE.
- THE BEAM SEAT ELEVATIONS ASSUME ESTIMATED CAMBER D180 WITH A SACRIFICIAL HAUNCH THICKNESS OF 2-INCHES MINIMUM AT MIDSPAN.
- SEE BEAM DETAILS FOR E401 BAR SPACINGS IN BEAMS
- ONE LONGITUDINAL BAR FROM THE BOTTOM MAT OF DECK REINFORCING SHALL BE PLACED UNDER EACH 401 BAR. THIS BAR IS INCLUDED IN PAYMENT WITH THE DECK REINFORCING STEEL AND SHALL BE EPOXY COATED.

NO.	DATE	DESCRIPTION
3	2024-09-10	RECORD DRAWINGS
2	2021-07-01	DC057
1	2021-03-17	DRF1 109
0	2020-02-17	RFC
ISSUE RECORD		



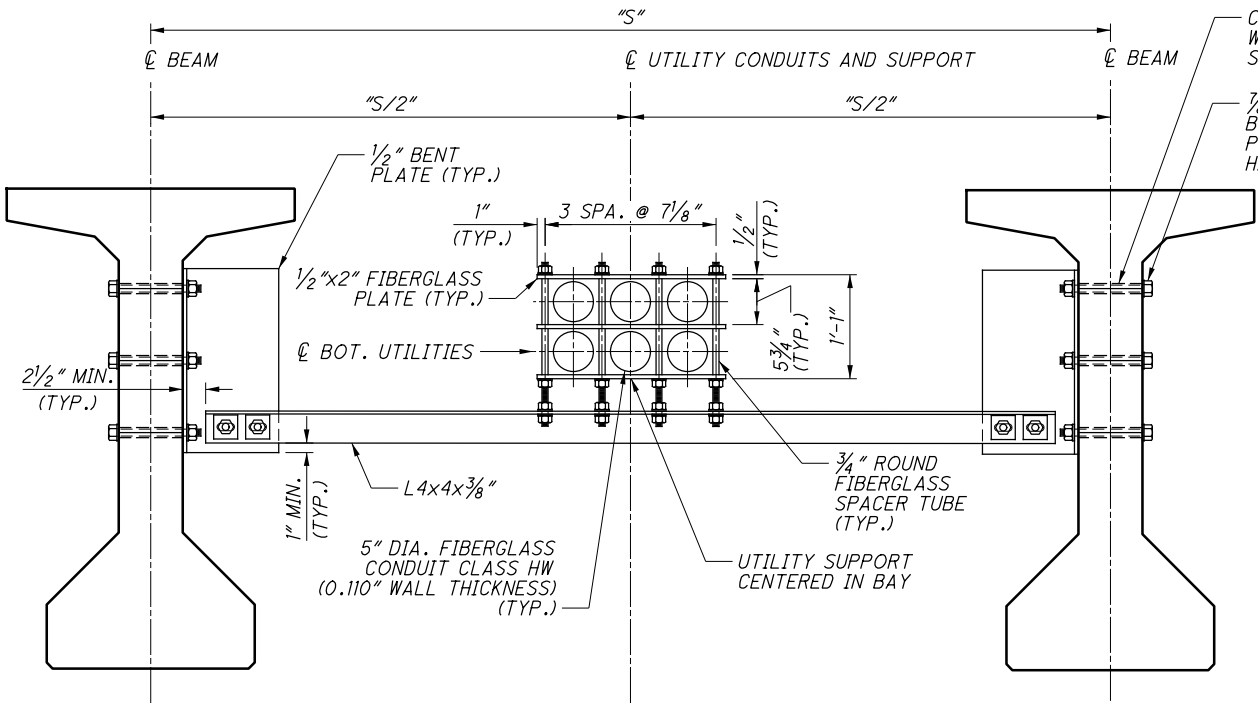
INTERMEDIATE K-FRAME

(6 CONDUIT BAY SHOWN, 2 CONDUIT BAY SIMILAR)
"S" = BEAM SPACING AS SHOWN IN THE FRAMING PLAN



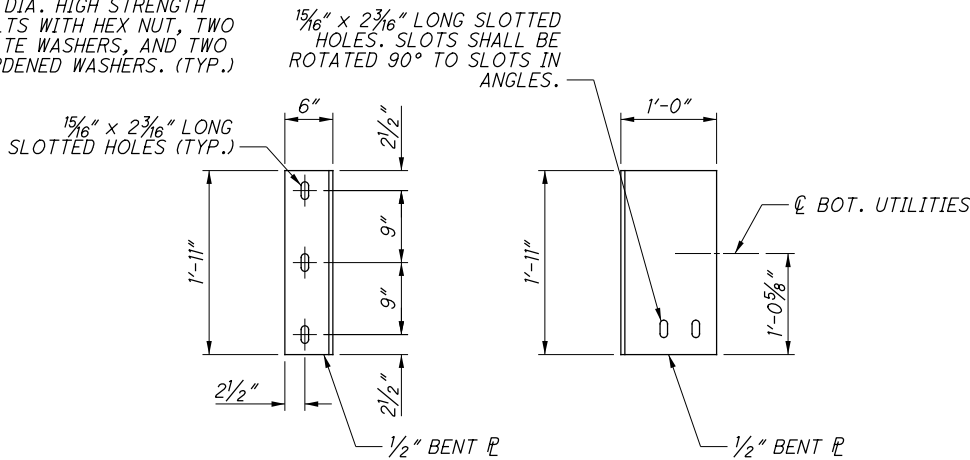
TYPE A, BEAM FACE TYPE B, BEAM FACE TYPE A & TYPE B, DIAPHRAGM FACE

(LEFT CONNECTION PLATE SHOWN, RIGHT IS OPPOSITE HAND)



UTILITY SUPPORT

(6 CONDUIT BAY SHOWN, 2 CONDUIT BAY SIMILAR)
"S" = BEAM SPACING AS SHOWN IN THE FRAMING PLAN



TYPE C, BEAM FACE TYPE C, DIAPHRAGM FACE

(LEFT CONNECTION PLATE SHOWN, RIGHT IS OPPOSITE HAND)

NOTES:

1. SEE STANDARD DRAWING PSID-I-13 FOR ADDITIONAL INFORMATION
2. FOR ADDITIONAL K-FRAME AND UTILITY SUPPORT DETAILS, SEE SHEET 30 / 49
3. FOR FRAMING PLAN, SEE SHEET 19 / 49
4. FOR BEAM ELEVATION, SEE SHEET 21 / 49
5. ALL STRUCTURAL STEEL, INCLUDING BOLTS, NUTS AND WASHERS, SHALL MEET THE FABRICATION AND ERECTION REQUIREMENTS SPECIFIED IN 513. THE DEPARTMENT WILL CONSIDER THESE COSTS TO BE INCIDENTAL TO ITEM 515, INTERMEDIATE DIAPHRAGMS.
6. SEE BEAM ELEVATION AND TABLES FOR CAST HOLE LOCATIONS.
7. SEE K-FRAME AND UTILITY SUPPORT DETAILS (2 OF 2) FOR QUANTITY AND VERTICAL LOCATIONS OF CAST HOLES.
8. ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 36 OR 50, GALVANIZED ACCORDING TO 711.02.
9. ALL BOLTS ARE 7/8" DIA. ASTM A325, TYPE 1. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO 711.02.

			CU 29 / 49 <div><div>31</div><div>51</div></div>
0	2020-02-17	RFC	
NO.	DATE	DESCRIPTION	
ISSUE RECORD			

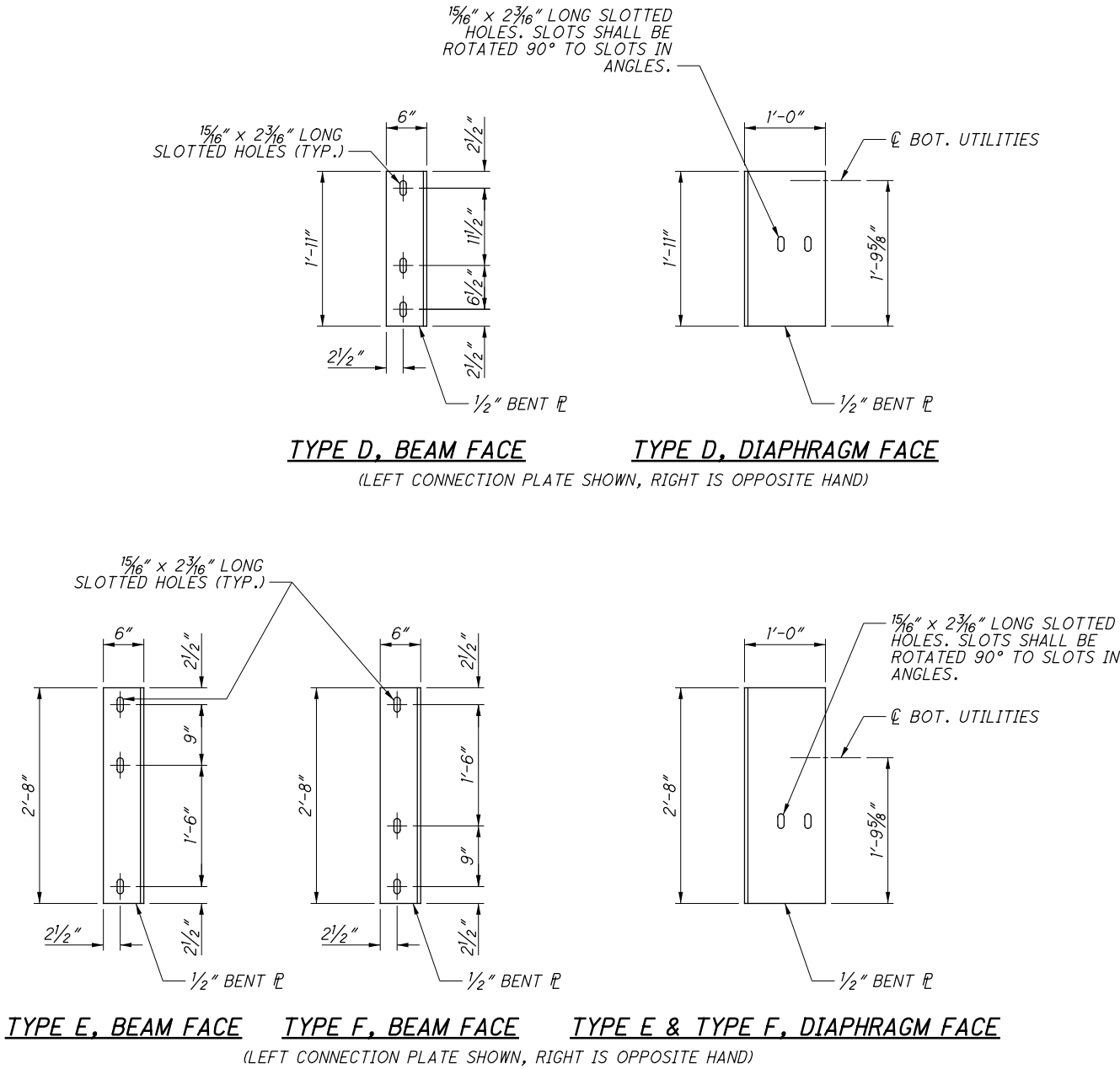


TABLE OF CROSS FRAME CONNECTION PLATES			
SPAN	X-FRAME MARK	LEFT	RIGHT
1	X1	TYPE A	TYPE A
1	X2	TYPE A	TYPE A
1	X3	TYPE A	TYPE A
1	X4	TYPE A	TYPE A
1	X5	TYPE A	TYPE A
1	X6	TYPE A	TYPE A
1	X7	TYPE A	TYPE A
2	X8	TYPE A	TYPE B
2	X9	TYPE A	TYPE A
2	X10	TYPE B	TYPE A
2	X11	TYPE A	TYPE B
2	X12	TYPE A	TYPE A
2	X13	TYPE B	TYPE A
2	X14	TYPE A	TYPE B
2	X15	TYPE A	TYPE A
2	X16	TYPE B	TYPE A
2	X17	TYPE A	TYPE B
2	X18	TYPE A	TYPE A
2	X19	TYPE B	TYPE A
2	X20	TYPE A	TYPE B
2	X21	TYPE A	TYPE A
2	X22	TYPE B	TYPE A
2	X23	TYPE A	TYPE B
2	X24	TYPE A	TYPE A
2	X25	TYPE B	TYPE A
2	X26	TYPE A	TYPE B
2	X27	TYPE A	TYPE A
2	X28	TYPE B	TYPE A
3	X29	TYPE A	TYPE A
3	X30	TYPE A	TYPE A
3	X31	TYPE A	TYPE A
3	X32	TYPE A	TYPE A
3	X33	TYPE A	TYPE A
3	X34	TYPE A	TYPE A
3	X35	TYPE A	TYPE A

TABLE OF UTILITY SUPPORT CONNECTION PLATES			
SPAN	UTILITY SUP. MARK	LEFT	RIGHT
1	U1	TYPE C	TYPE E
1	U2	TYPE C	TYPE C
1	U3	TYPE C	TYPE C
1	U4	TYPE E	TYPE C
1	U5	TYPE C	TYPE E
1	U6	TYPE C	TYPE C
1	U7	TYPE C	TYPE C
1	U8	TYPE E	TYPE C
2	U9	TYPE E	TYPE D
2	U10	TYPE C	TYPE F
2	U11	TYPE C	TYPE C
2	U12	TYPE C	TYPE C
2	U13	TYPE C	TYPE C
2	U14	TYPE C	TYPE C
2	U15	TYPE F	TYPE C
2	U16	TYPE D	TYPE E
2	U17	TYPE E	TYPE D
2	U18	TYPE C	TYPE F
2	U19	TYPE C	TYPE C
2	U20	TYPE C	TYPE C
2	U21	TYPE C	TYPE C
2	U22	TYPE C	TYPE C
2	U23	TYPE F	TYPE C
2	U24	TYPE D	TYPE E
3	U25	TYPE C	TYPE E
3	U26	TYPE C	TYPE C
3	U27	TYPE C	TYPE C
3	U28	TYPE E	TYPE C
3	U29	TYPE C	TYPE E
3	U30	TYPE C	TYPE C
3	U31	TYPE C	TYPE C
3	U32	TYPE E	TYPE C

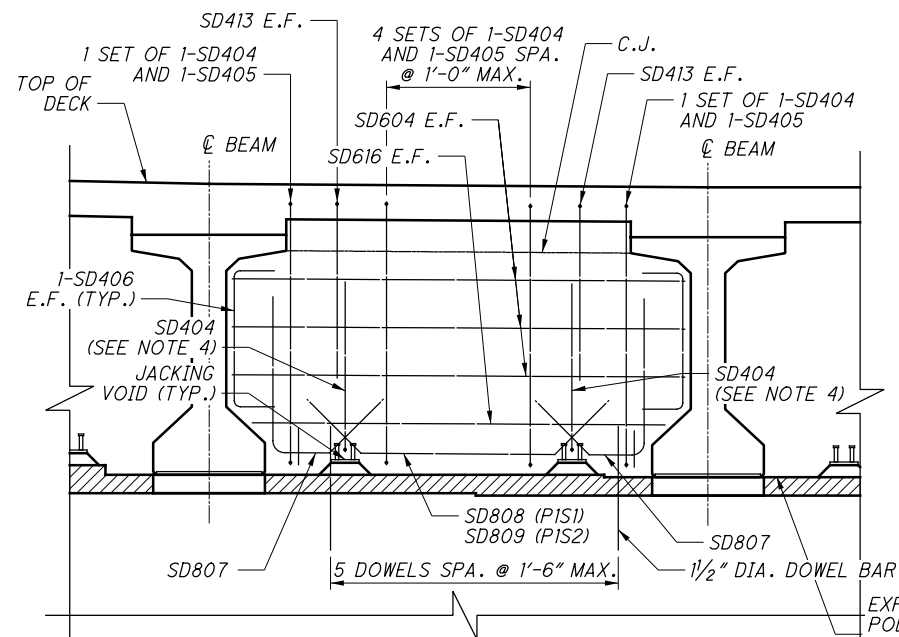
(LEFT AND RIGHT DETERMINED BY LOOKING UPSTATION)

TABLE OF K-FRAME CONNECTION PLATES			
SPAN	K-FRAME MARK	LEFT	RIGHT
1	K1	TYPE A	TYPE A
1	K2	TYPE A	TYPE A
2	K3	TYPE A	TYPE B
2	K4	TYPE A	TYPE A
2	K5	TYPE B	TYPE A
2	K6	TYPE A	TYPE B
2	K7	TYPE A	TYPE A
2	K8	TYPE B	TYPE A
3	K9	TYPE A	TYPE A
3	K10	TYPE A	TYPE A

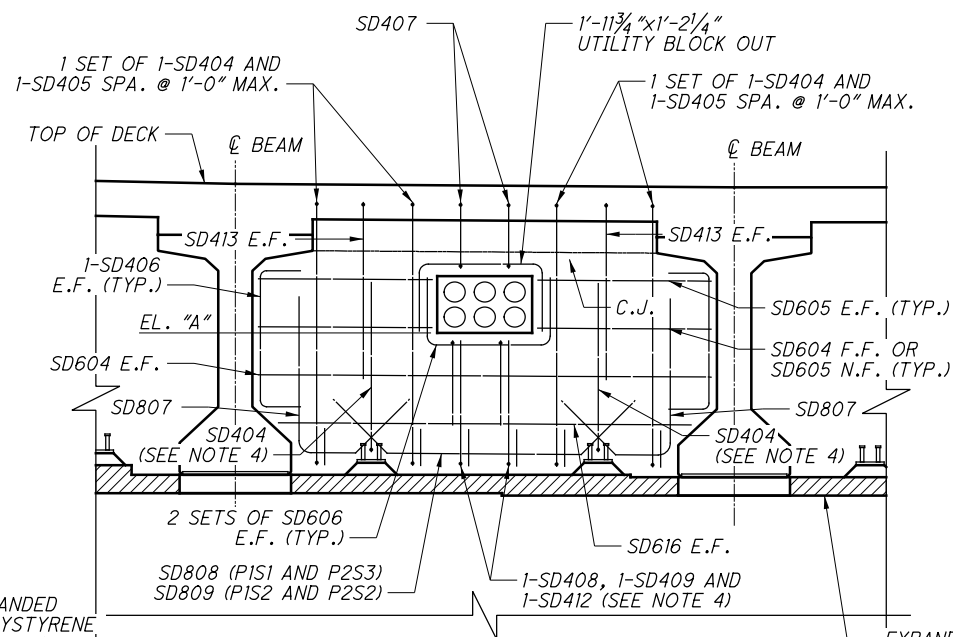
(LEFT AND RIGHT DETERMINED BY LOOKING UPSTATION)

- NOTES:
- SEE STANDARD DRAWING PSID-1-13 FOR ADDITIONAL INFORMATION
 - FOR ADDITIONAL K-FRAME AND UTILITY SUPPORT DETAILS, SEE SHEET 29 / 49
 - FOR FRAMING PLAN, SEE SHEET 19 / 49
 - FOR BEAM ELEVATION, SEE SHEET 21 / 49
 - ALL STRUCTURAL STEEL, INCLUDING BOLTS, NUTS AND WASHERS, SHALL MEET THE FABRICATION AND ERECTION REQUIREMENTS SPECIFIED IN 513. THE DEPARTMENT WILL CONSIDER THESE COSTS TO BE INCIDENTAL TO ITEM 515, INTERMEDIATE DIAPHRAGMS.
 - ALL STRUCTURAL STEEL SHALL BE ASTM A709, GRADE 36 OR 50, GALVANIZED ACCORDING TO 711.02.
 - ALL BOLTS ARE 7/8" DIA. ASTM A325, TYPE 1. ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED ACCORDING TO 711.02.

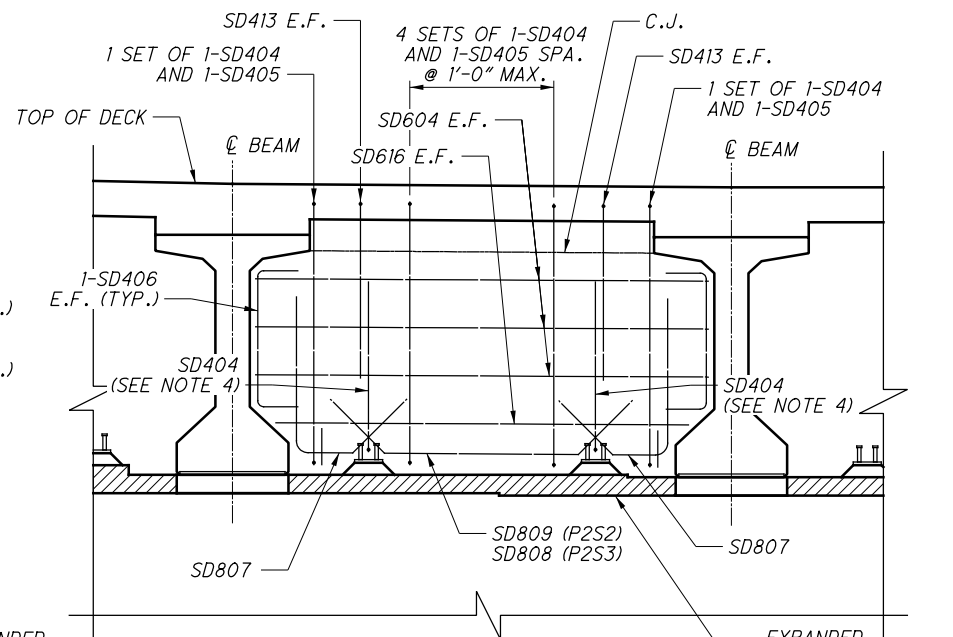
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		



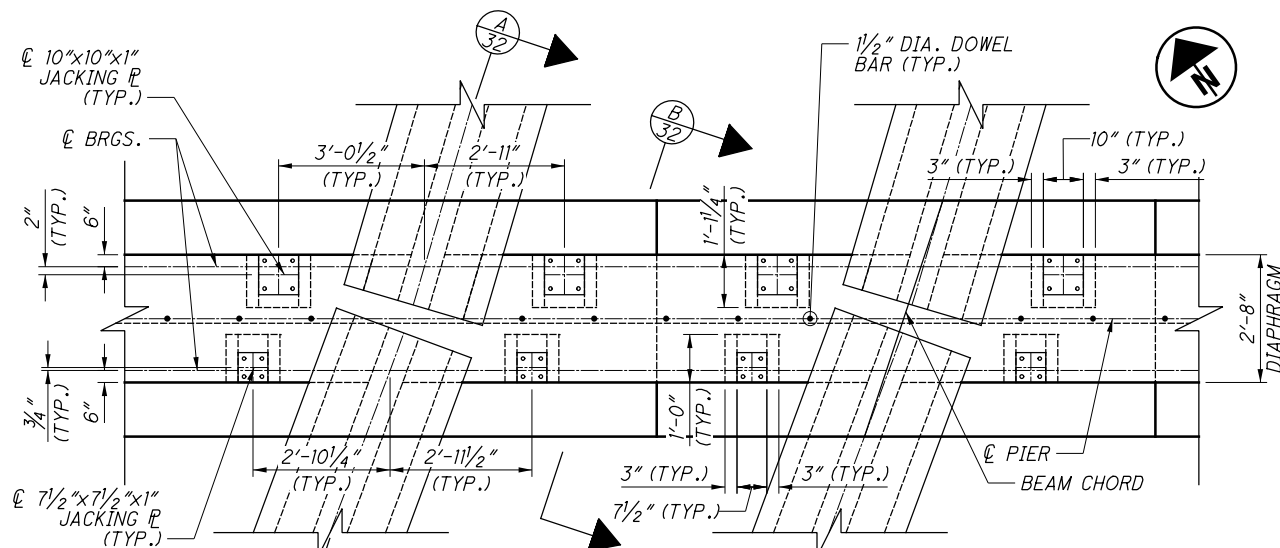
PIER 1 DIAPHRAGM DETAIL



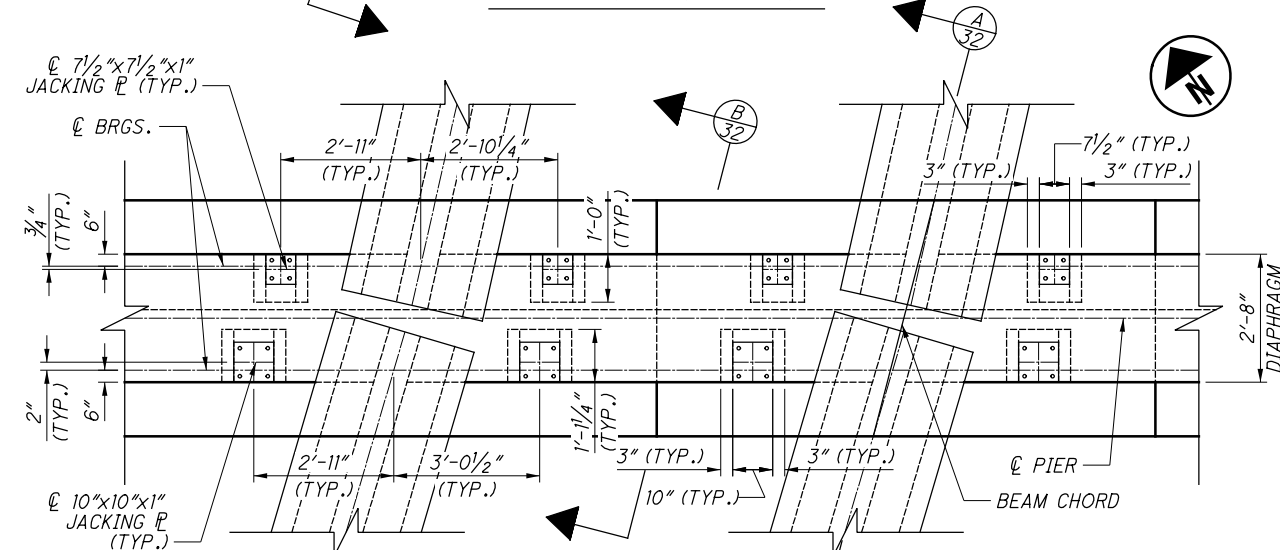
TYPICAL PIER UTILITY DIAPHRAGM DETAIL



PIER 2 DIAPHRAGM DETAIL

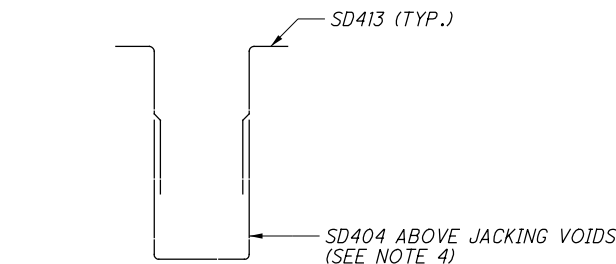


PIER 1 DIAPHRAGM PLAN

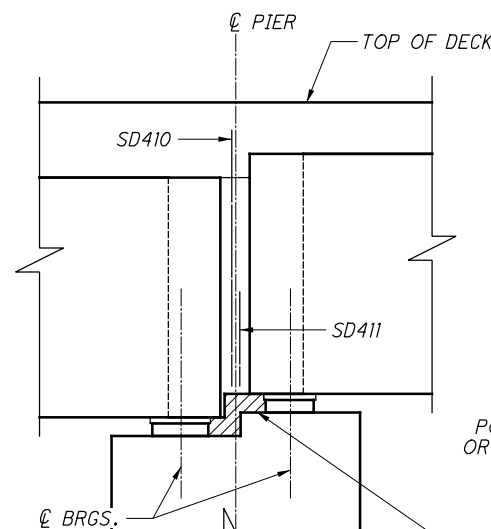


PIER 2 DIAPHRAGM PLAN

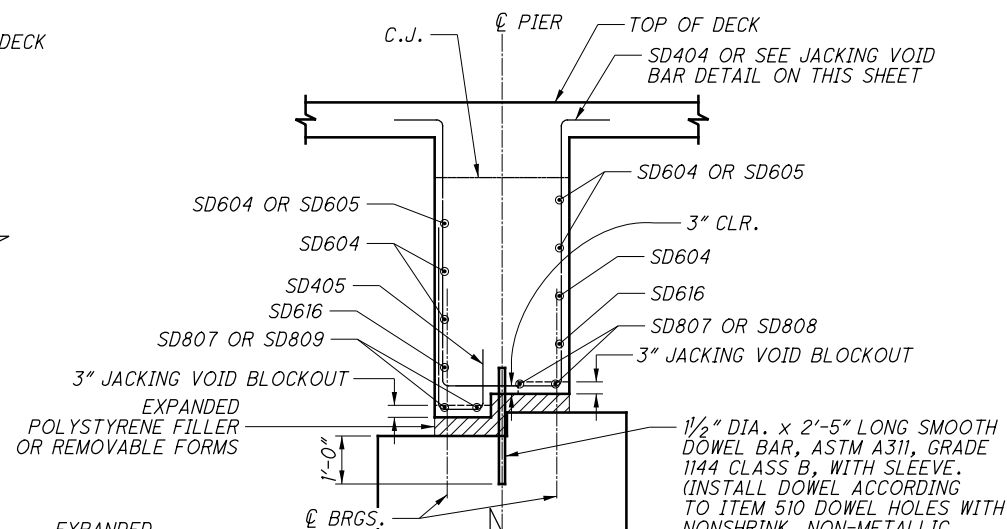
UTILITY BLOCK OUT ELEVATIONS	
LOCATION	ELEVATION "A"
P1, BAY 2	664.40
P1, BAY 8	663.68
P2, BAY 2	663.87
P2, BAY 8	663.19



JACKING VOID BAR DETAIL



SECTION 32 (ALONG BEAM CHORD)



SECTION 32 (ALONG BEAM CHORD)

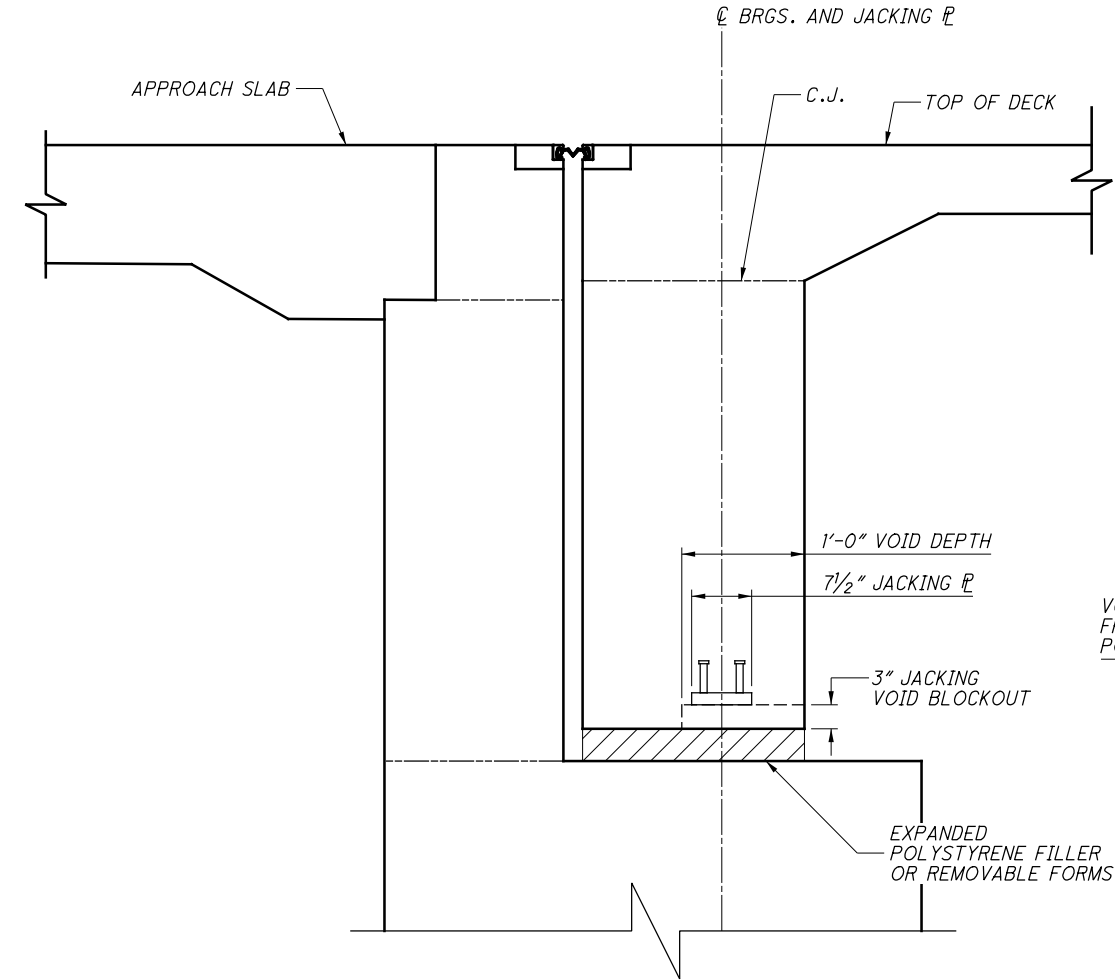
NOTES:

- SEE STANDARD DRAWING PSID-1-13 FOR ADDITIONAL INFORMATION
- FOR DECK PLAN, SEE SHEET
- #4 LAP SPLICE = 1'-11" MIN. U.N.O.
- FIELD CUT BARS AS NECESSARY TO FIT BELOW UTILITY BLOCKOUT AND/OR ABOVE JACKING VOID. COAT FIELD CUT ENDS OF BARS PER CMS 509.09.

LEGEND:

PIS1 = DIAPHRAGM AT PIER 1, SPAN 1
PIS2 = DIAPHRAGM AT PIER 1, SPAN 2
P2S2 = DIAPHRAGM AT PIER 2, SPAN 2
P2S3 = DIAPHRAGM AT PIER 2, SPAN 3

ISSUE RECORD		
NO.	DATE	DESCRIPTION
2	2021-07-01	DC057
1	2021-03-17	DRF1 109
0	2020-02-17	RFC



ABUTMENT JACKING VOID ELEVATION

NOTES:

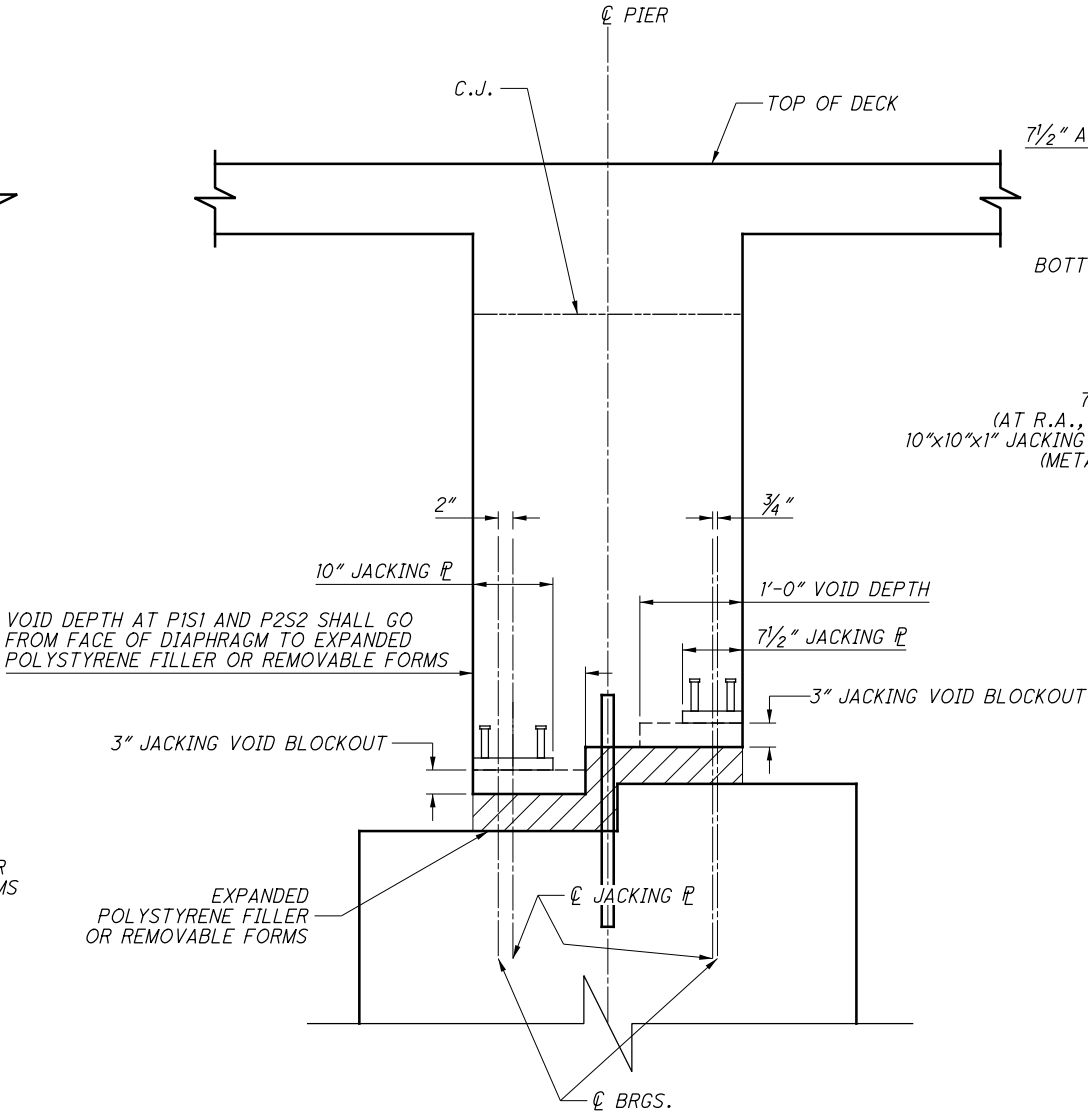
ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT FOR JACKING AND TEMPORARY SUPPORT OF THE EXISTING SUPERSTRUCTURE TO INSTALL BEARING SHIM PLATES, AS NECESSARY, AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH THESE SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING TEMPORARY SUPPORTS NECESSARY TO PERFORM THE WORK. FIVE (5) SETS OF JACKING PLANS, WHICH INCLUDE THE INFORMATION DESCRIBED IN THIS ITEM, SHALL BE SUBMITTED TO THE DEPARTMENT FOR APPROVAL AT LEAST FOURTEEN (14) CALENDAR DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF OHIO. THE CONTRACTOR MAY NOT PROCEED WITH JACKING PROCEDURES UNTIL APPROVAL IS OBTAINED FROM THE ENGINEER.

JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING AND BE IN ACCORDANCE WITH CMS 501.

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSIS OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE PROVIDED JACKING POINTS. JACKING VOIDS HAVE BEEN PROVIDED IN END DIAPHRAGMS BETWEEN ADJACENT BEAMS AS DETAILED IN THE PLANS. ESTIMATED DEAD LOADS ARE PROVIDED BELOW.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3-WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC.; IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS SHALL BE CONNECTED TOGETHER. ALL JACKS SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND TEMPORARY SUPPORTS AS NEEDED. DESIGN CALCULATIONS FOR TEMPORARY SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF TEMPORARY SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP-BY-STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING WILL NOT BE PERMITTED.



PIER JACKING VOID ELEVATION

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, CONTINUED

RAISE END OF BEAMS BY JACKING UNTIL THERE IS NO CONTACT BETWEEN THE BRIDGE SEAT AND THE BEARINGS. THE MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ADJACENT BEAMS SHALL NOT EXCEED 1/4". THE MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ADJACENT SUBSTRUCTURE UNITS SHALL NOT EXCEED 1".

BEAMS IN ADJACENT SPANS AT PIERS SHALL BE JACKED CONCURRENTLY.

JACKING SHALL BE PERFORMED DURING PERIODS OF COMPLETE ROAD CLOSURE (NO LIVE LOAD).

FOR LIFTS GREATER THAN 1", JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.

THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 50% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.

JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.

JACKS ALONE SHALL NOT BE USED TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE ENGINEER SHALL BE USED.

SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.

IF, DURING THE JACKING OPERATIONS, DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, THE JACKING OPERATION SHALL IMMEDIATELY CEASE, AND APPROVED SUPPORTS SHALL BE INSTALLED. THE CONTRACTOR SHALL THEN ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. THE APPROVED REPAIRS SHALL BE COMPLETED AT NO ADDITIONAL COST TO THE DEPARTMENT.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, CONTINUED

EACH JACK USED SHALL HAVE AN OPERATIONAL, IN-LINE GAUGE TO MONITOR HYDRAULIC LINE PRESSURE.

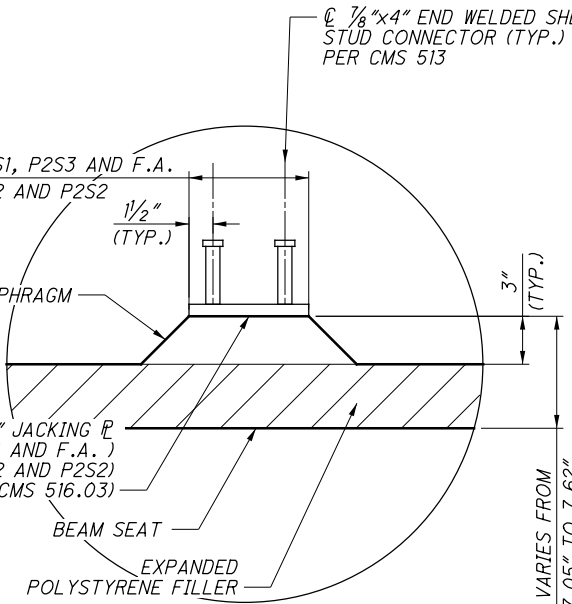
THE ON-SITE FOREMAN IN-CHARGE SHALL BE RESPONSIBLE FOR CALCULATING LINE PRESSURES TO ENSURE CALCULATED FORCES ARE NOT EXCEEDED.

SPARE EQUIPMENT SHALL BE AVAILABLE ON SITE FOR REQUIRED STRUCTURE RAISING TO PROCEED IN THE EVENT OF A BREAKDOWN. A LIST OF SPARE EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER.

ALL STRUCTURAL STEEL FOR SHIM PLATES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ODOT CMS 513. THE STRUCTURAL STEEL SHALL BE METALLIZED PER CMS 516.03. AFTER COMPLETION OF SHIM PLACEMENT, REMOVE ALL TEMPORARY SUPPORTS.

ESTIMATED DEAD LOADS PER JACK ARE PROVIDED BELOW. THESE LOADS ASSUME ALL JACKING POCKETS ARE USED AND INCLUDE THE SELF WEIGHT OF THE BEAMS, DIAPHRAGMS, DECK SLAB, SIDEWALK AND MISCELLANEOUS SUPERSTRUCTURE ELEMENTS. NO LIVE LOADS ARE INCLUDED. LOADS ARE NOT FACTORED.

REAR ABUTMENT, SPAN 1	60 KIPS
PIER 1, SPAN 1	60 KIPS
PIER 1, SPAN 2	95 KIPS
PIER 2, SPAN 2	95 KIPS
PIER 2, SPAN 3	60 KIPS
FORWARD ABUTMENT, SPAN 3	60 KIPS



JACKING VOID DETAIL

LEGEND:

PIS1 = DIAPHRAGM AT PIER 1, SPAN 1
PIS2 = DIAPHRAGM AT PIER 1, SPAN 2
P2S2 = DIAPHRAGM AT PIER 2, SPAN 2
P2S3 = DIAPHRAGM AT PIER 2, SPAN 3

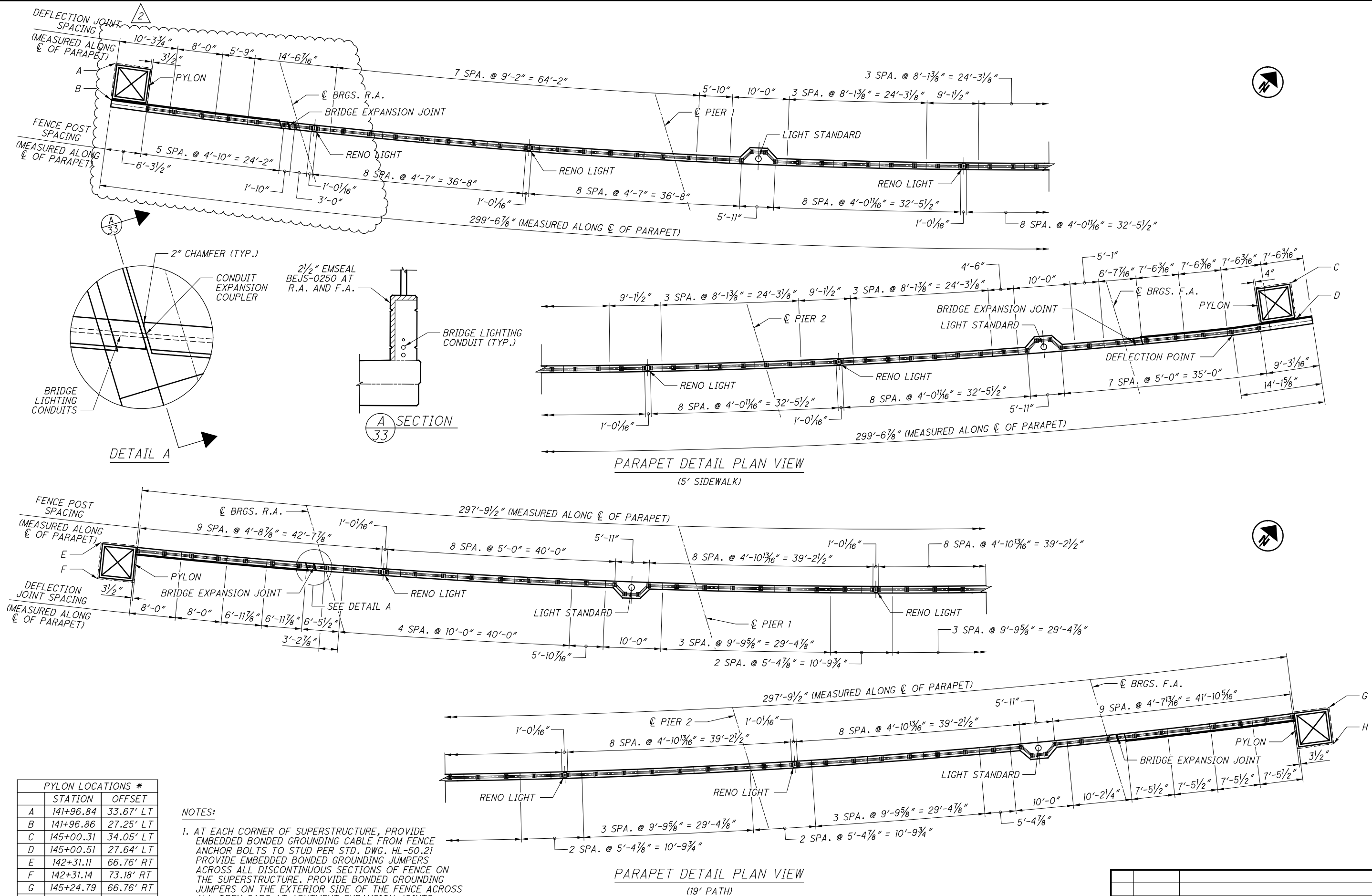
0	2021-07-01	DC057
NO.	DATE	DESCRIPTION
ISSUE RECORD		

PYLON LOCATIONS *		
	STATION	OFFSET
A	141+96.84	33.67' LT
B	141+96.86	27.25' LT
C	145+00.31	34.05' LT
D	145+00.51	27.64' LT
E	142+31.11	66.76' RT
F	142+31.14	73.18' RT
G	145+24.79	66.76' RT
H	145+24.76	73.18' RT

* - PYLON LOCATION STATIONS ARE MEASURED TO CORNER OF FOUNDATION

NOTES:

- AT EACH CORNER OF SUPERSTRUCTURE, PROVIDE EMBEDDED BONDED GROUNDING CABLE FROM FENCE ANCHOR BOLTS TO STUD PER STD. DWG. HL-50.21 PROVIDE EMBEDDED BONDED GROUNDING JUMPERS ACROSS ALL DISCONTINUOUS SECTIONS OF FENCE ON THE SUPERSTRUCTURE. PROVIDE BONDED GROUNDING JUMPERS ON THE EXTERIOR SIDE OF THE FENCE ACROSS ALL OPEN GAPS AT ABUTMENT EXPANSION JOINTS
- DEAD END CONNECTIONS SHALL BE PLACED AT LEAST EVERY OTHER FENCE POST ON NORTH (5' SIDEWALK) PARAPET ONLY.



NO.	DATE	DESCRIPTION
2	2024-09-10	RECORD DRAWINGS
1	2021-09-03	DC058
0	2020-02-17	RFC
ISSUE RECORD		

PARAPET DETAILS (1 OF 7)

CUY-010-1949

OH-10 OVER KINGSBURY RUN Ravine

CUY-IR490/SR010-2.09/19.28

PID No. 96833

33/49

35/51

RECORD PLANS

RECORD PLANS

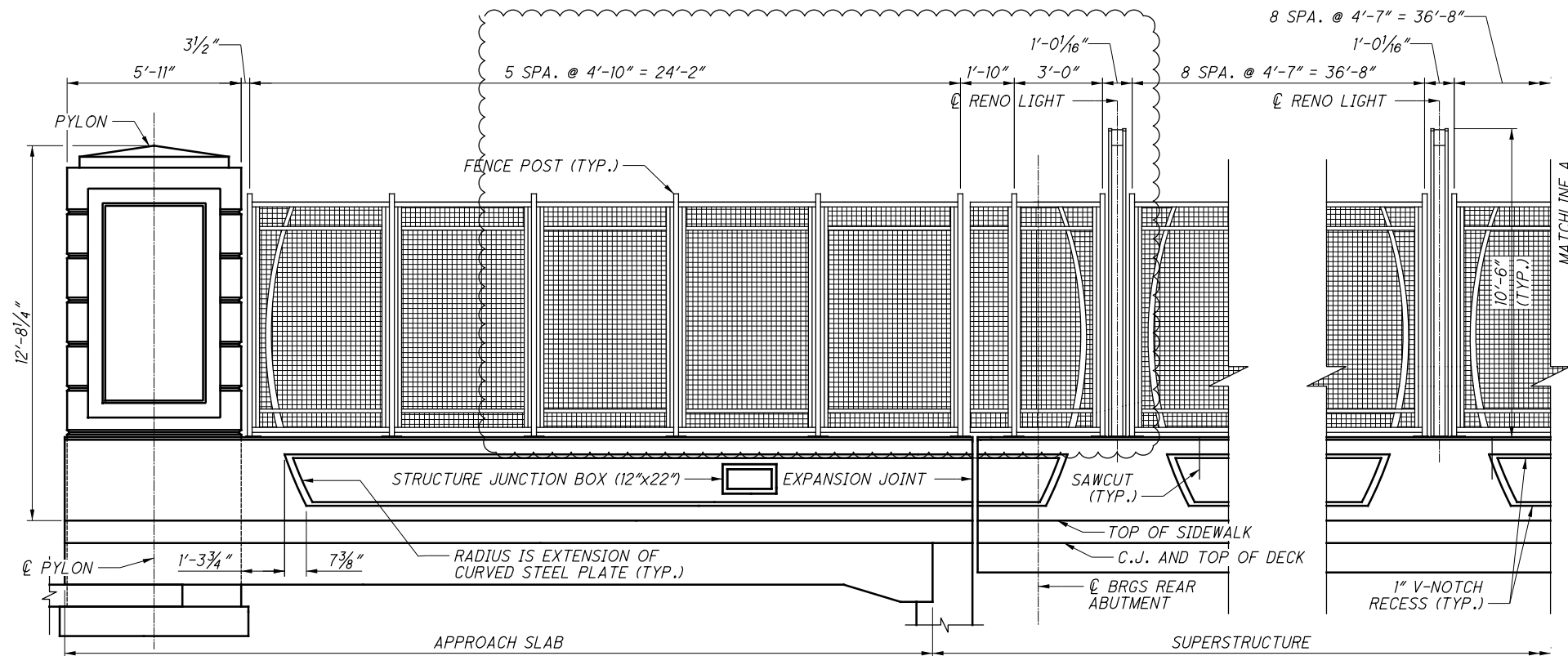
RECORD PLANS

DESIGN AGENCY
Michael Baker INTERNATIONAL
111 SUPERIOR AVE E, SUITE 2300, CLEVELAND, OH 44114

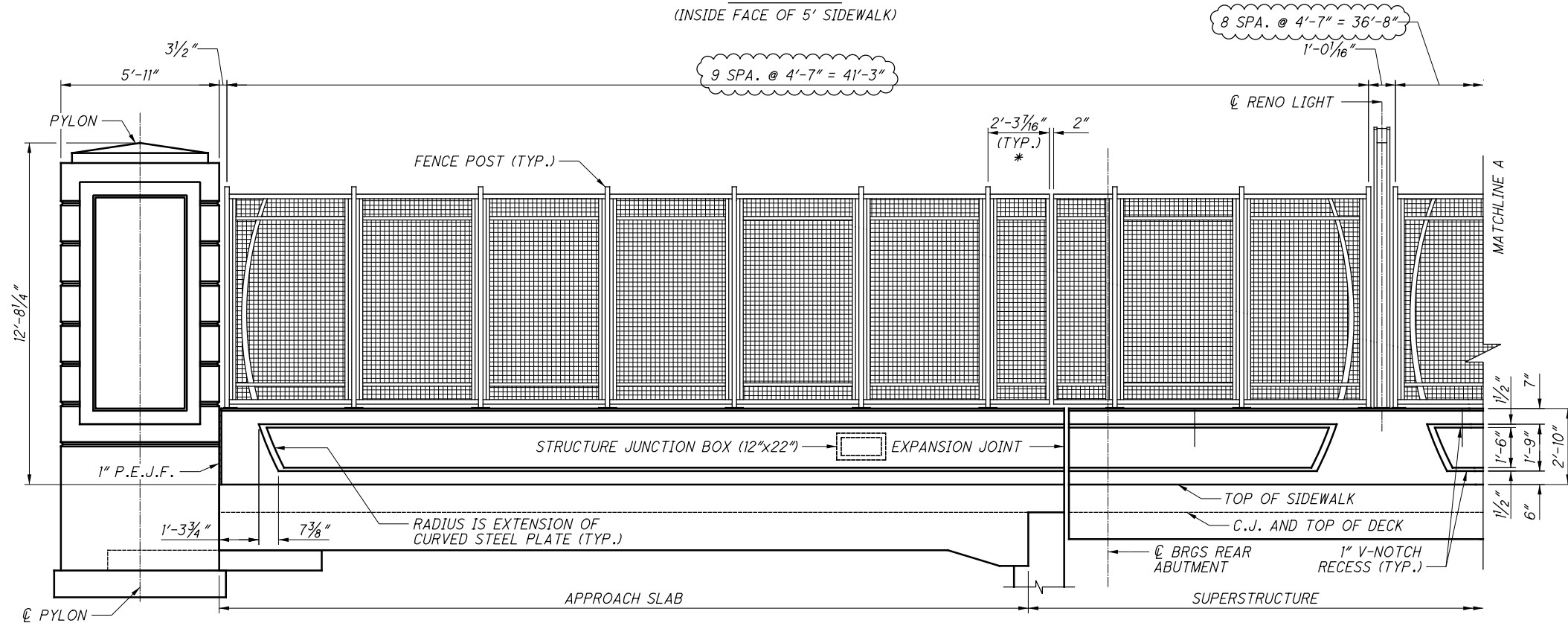
DATE
2-12-20
LPC
STRUCTURE FILE NUMBER
1801515

DRAWN
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MKB

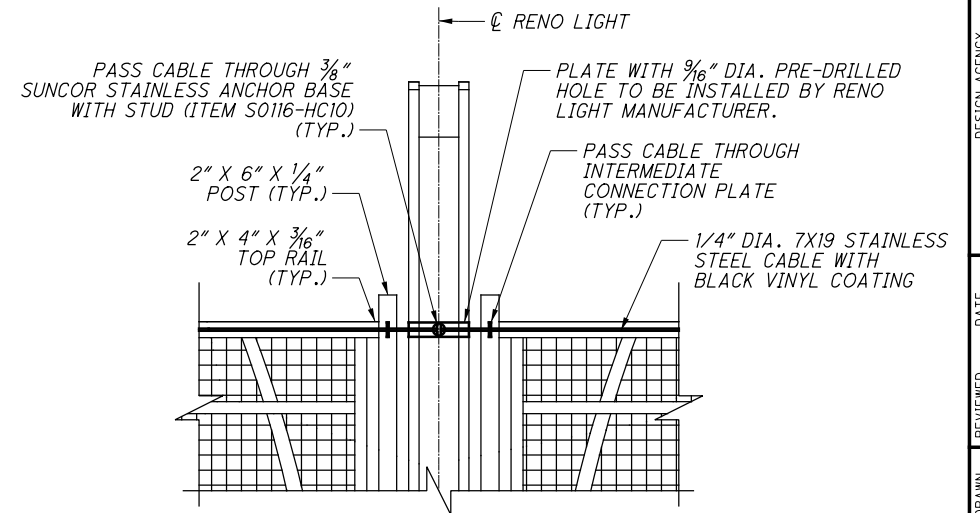
REVIEWED
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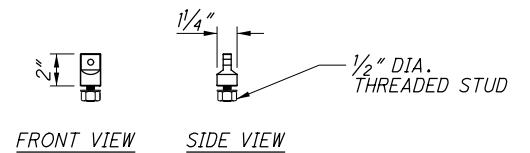
ELEVATION
(INSIDE FACE OF 5' SIDEWALK)



ELEVATION
(OUTSIDE FACE OF 19' PATH)



CABLE SYSTEM CONNECTION AT INTERMEDIATE RENO LIGHTS
(TOP SHOWN, BOTTOM SIMILAR)



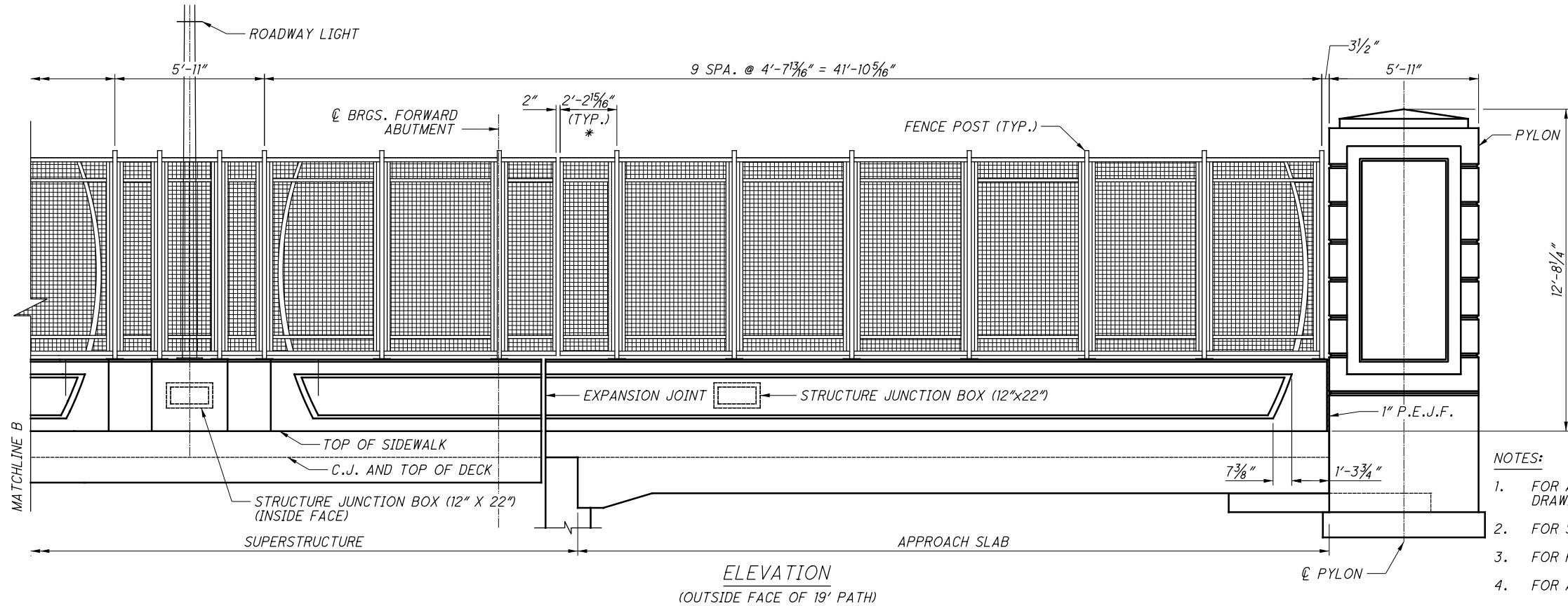
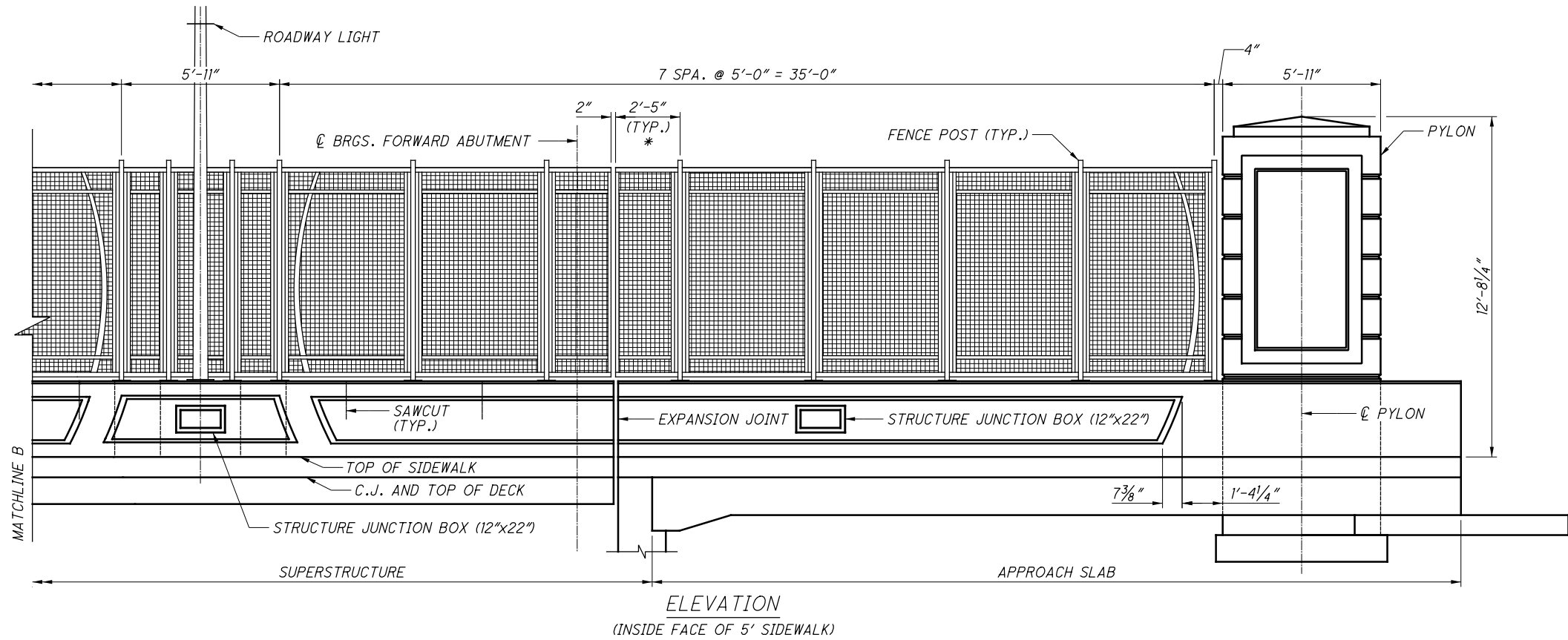
ANCHOR BASE WITH STUD DIAGRAM
(3/8" NOMINAL SIZE (SUNCOR STAINLESS ITEM S0116-HC10))

- LEGEND
- * - PORTION OF RAILING IS TO BE CANTILEVERED OVER EXPANSION JOINT

- NOTES:
- FOR ADDITIONAL RAILING SAWCUT DETAILS, SEE ODOT STANDARD DRAWING BR-2-15
 - FOR SAWCUT SPACING, SEE PLAN SHEET (33 / 49)
 - FOR REINFORCING SCHEDULE, SEE SHEET (45 / 49)
 - FOR ADDITIONAL DETAILS NOT LABELED, SEE PLAN SHEET (33 / 49)
 - FOR ADDITIONAL PILASTER DETAILS NOW SHOWN, SEE ODOT STANDARD DRAWING HL-20.14
 - ALL 8 PANEL FENCE SPANS GET THE INTERMEDIATE FENCE ARCH ELEMENTS INSTALLED AS SHOWN IN SHEET 35/49

NO.	DATE	DESCRIPTION	ISSUE RECORD
2	2024-09-10	RECORD DRAWINGS	
1	2021-09-03	DC058	
0	2020-02-17	RFC	

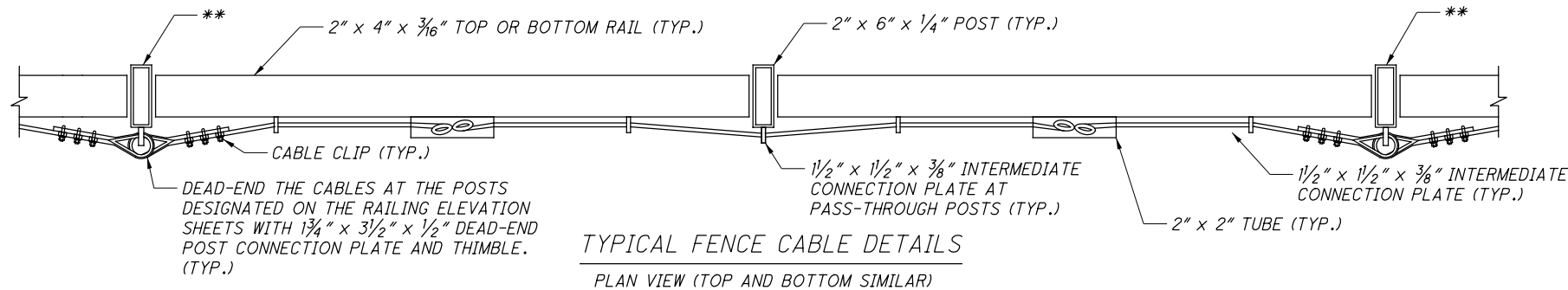
36	51
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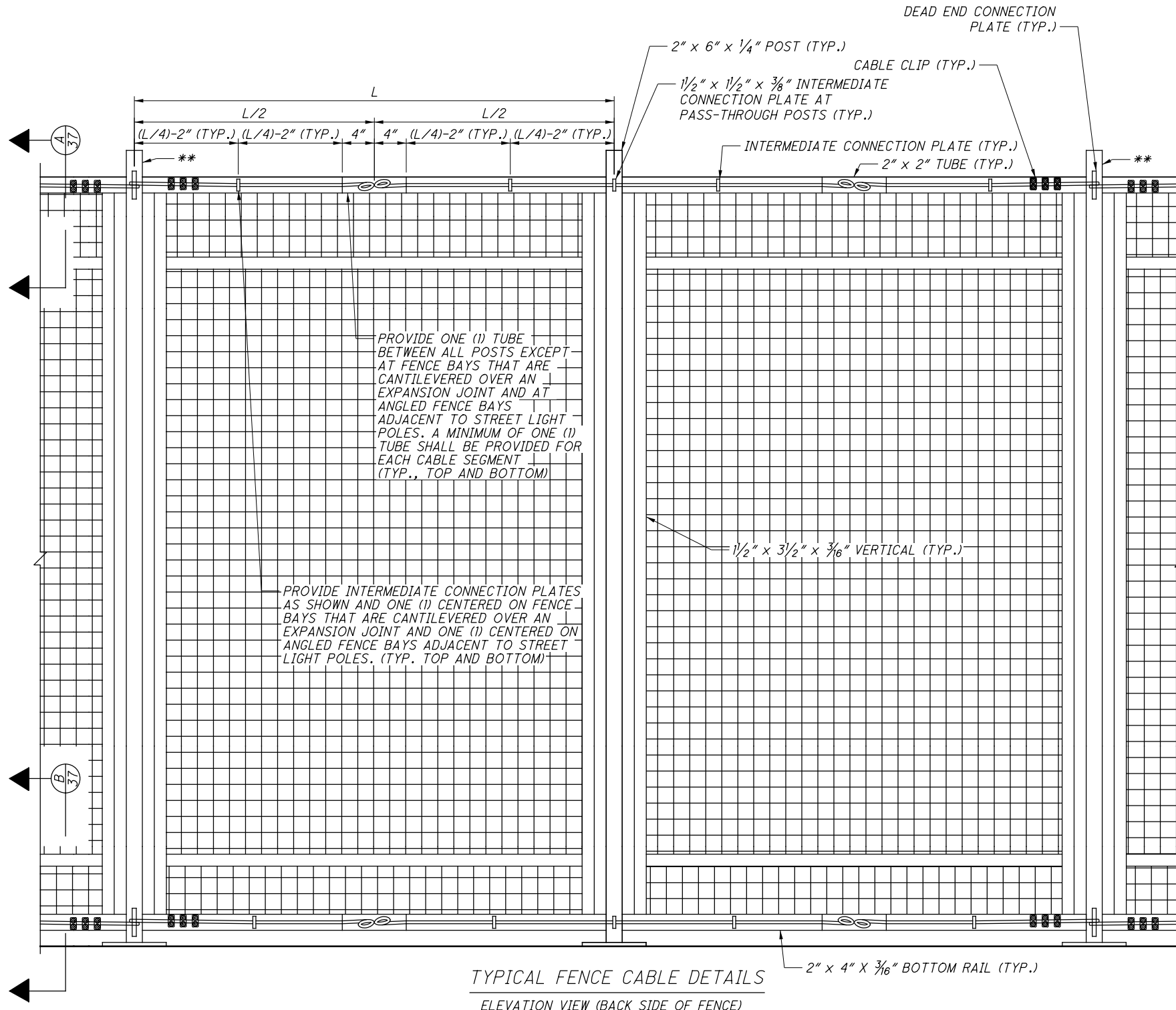
LEGEND
* - PORTION OF RAILING IS TO BE CANTILEVERED OVER EXPANSION JOINT

- NOTES:
1. FOR ADDITIONAL RAILING SAWCUT DETAILS, SEE ODOT STANDARD DRAWING BR-2-15
 2. FOR SAWCUT SPACING, SEE PLAN SHEET (33 / 49)
 3. FOR REINFORCING SCHEDULE, SEE SHEET (45 / 49)
 4. FOR ADDITIONAL DETAILS NOT LABELED, SEE PLAN SHEET (33 / 49)
 5. FOR ADDITIONAL PILASTER DETAILS NOW SHOWN, SEE ODOT STANDARD DRAWING HL-20.14

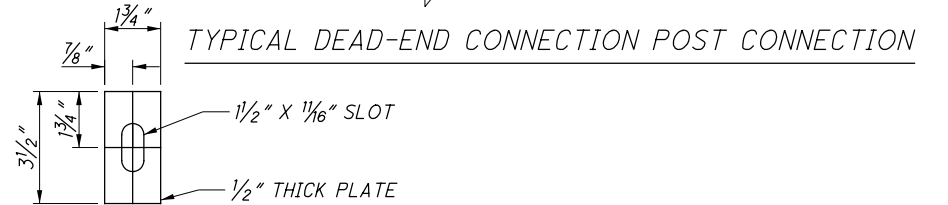
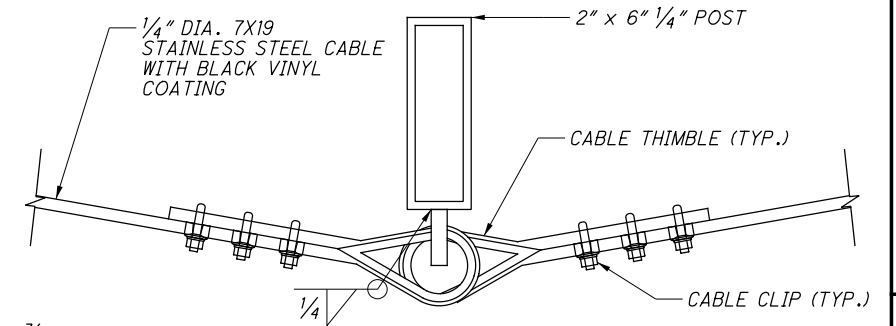
NO.	DATE	DESCRIPTION
1	2021-09-03	DC058
0	2020-02-17	RFC
ISSUE RECORD		



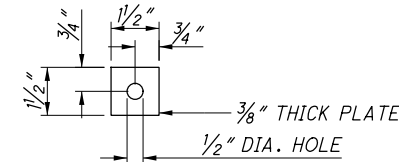
TYPICAL FENCE CABLE DETAILS
PLAN VIEW (TOP AND BOTTOM SIMILAR)



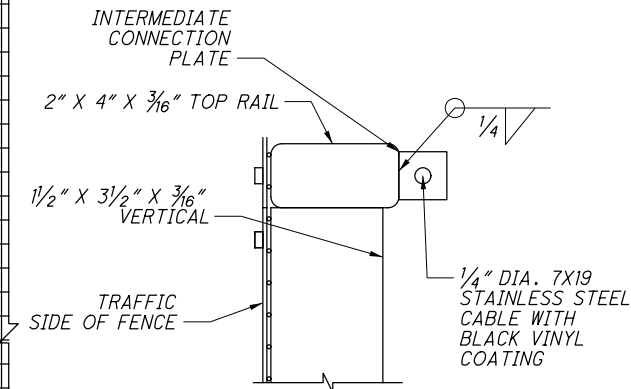
TYPICAL FENCE CABLE DETAILS
ELEVATION VIEW (BACK SIDE OF FENCE)



DEAD-END CONNECTION POST CONNECTION
PROVIDE 1/8" CHAMFER ON PROJECTING CORNERS OF PLATE

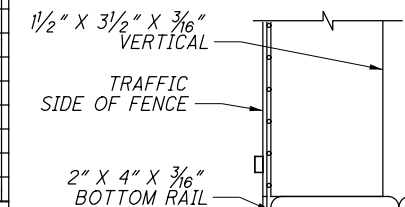


INTERMEDIATE CONNECTION PLATE DETAIL
PROVIDE 1/8" CHAMFER ON PROJECTING CORNERS OF PLATE



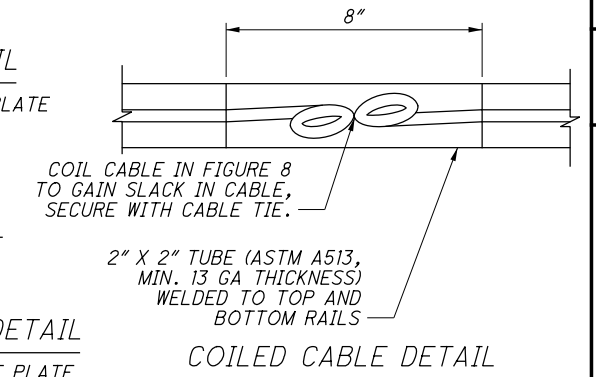
A SECTION
37

2" x 2" TUBE WELDED TO BOTTOM RAIL



B SECTION
37

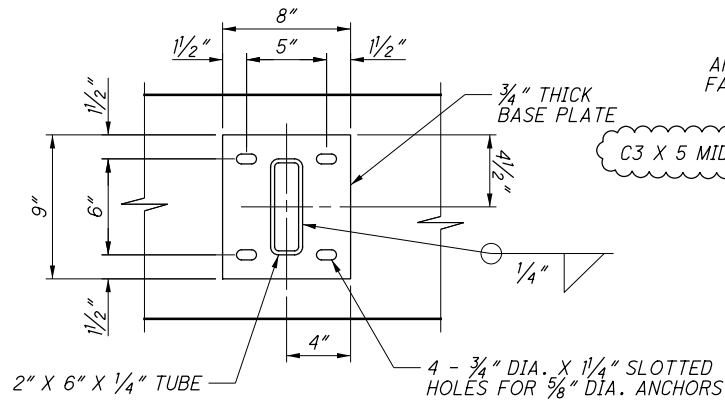
LEGEND:
** - POST REQUIRING DEAD END CABLE CONNECTION



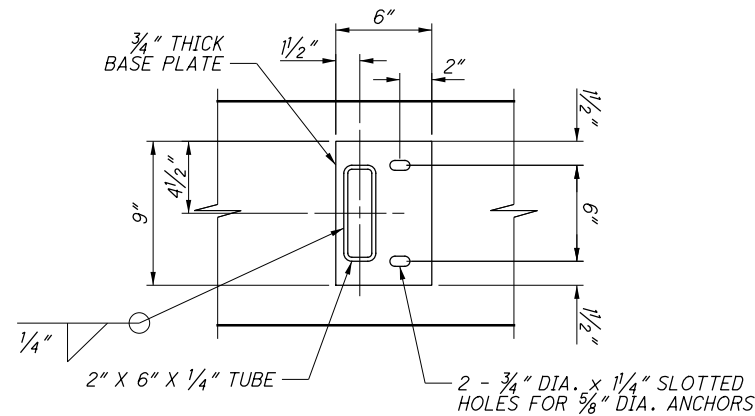
COILED CABLE DETAIL

- NOTES:
1. PROVIDE 1/4" DIA. 7x19 304 STAINLESS STEEL AIRCRAFT CABLE WITH BLACK VINYL COATING TO 5/16" FINAL THICKNESS (PART #2S9250 AS MANUFACTURED BY FEHR BROS. INDUSTRIES INC.). INSTALL THE CABLE TO BE SNUG TIGHT WITHOUT SAG AND HAVING A TIGHT FIT OF CABLE COIL WITHIN THE 2" x 2" TUBING.
 2. PROVIDE AND INSTALL 1/4" 304 STAINLESS STEEL CABLE CLIPS AND 5/16" 304 STAINLESS STEEL STANDARD DUTY CABLE THIMBLES (PART #SWRC250 AND PART #STH312SD, RESPECTIVELY, AS MANUFACTURED BY FEHR BROS. INDUSTRIES INC.) PER THE MANUFACTURER'S INSTRUCTIONS. REMOVE THE CABLE'S VINYL COATING AT CABLE CLIP LOCATIONS. FIELD PAINT ALL UNCOATED HARDWARE AND EXPOSED CABLE BLACK TO MATCH FENCE.
 3. FOR WIRE CONNECTION DETAILS AT RENO LIGHTS, SEE SHEET 34/49.
 4. DEAD END CONNECTIONS SHALL BE PLACED AT LEAST EVERY OTHER FENCE POST

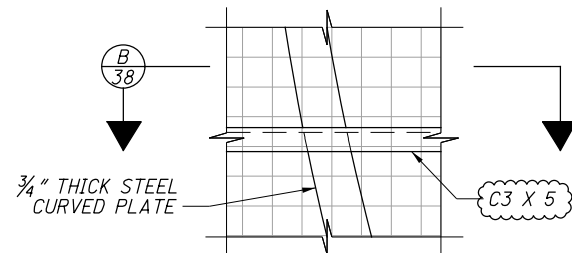
NO.	DATE	DESCRIPTION
0	2020-02-17	RFC
ISSUE RECORD		



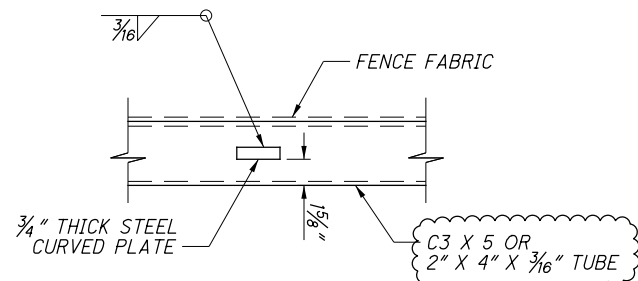
TYPICAL MID-POST BASE PLATE DETAIL



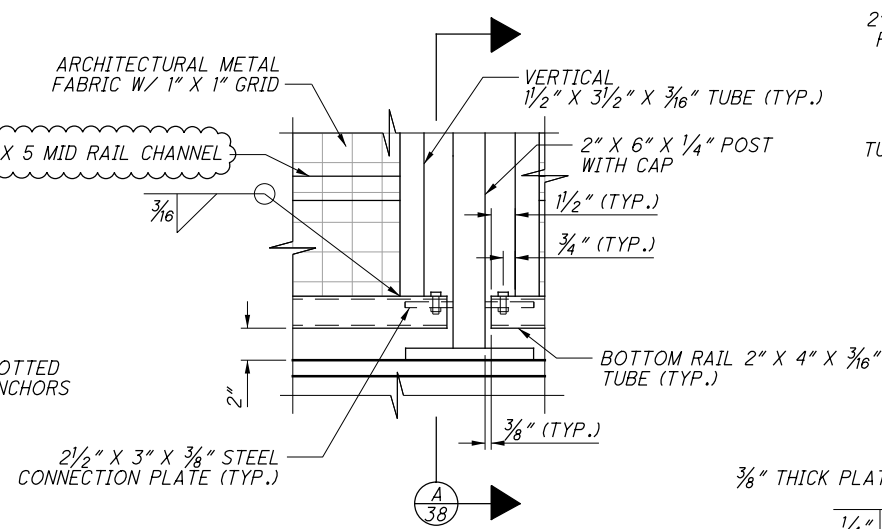
TYPICAL END POST BASE PLATE DETAIL



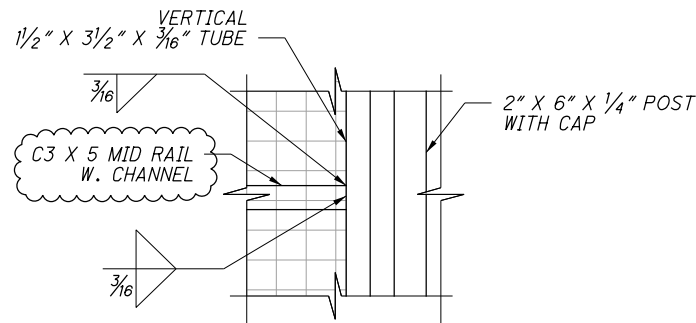
DETAIL 3 (39/49)



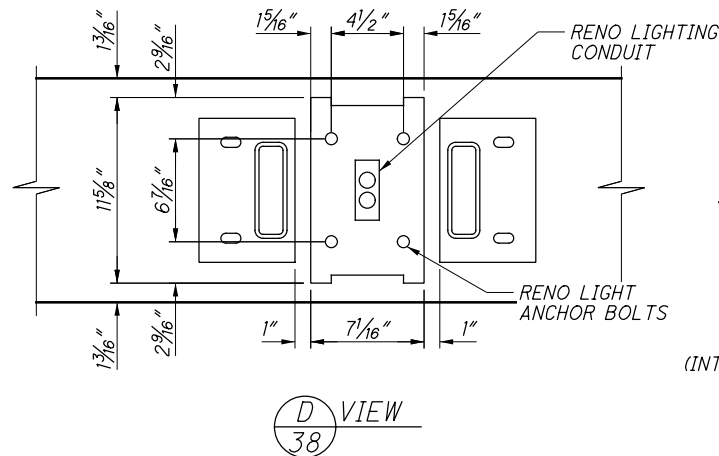
SECTION B



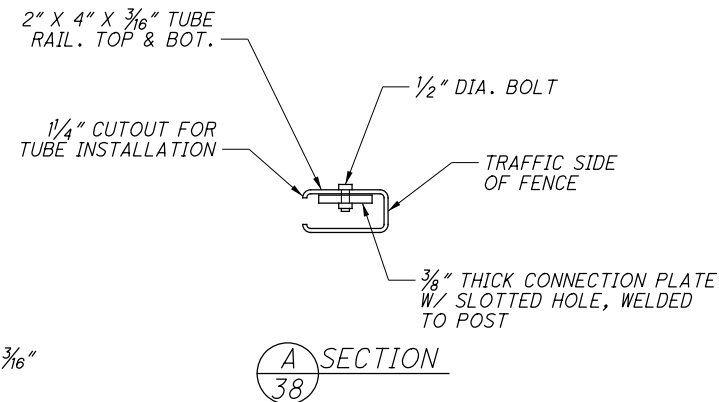
DETAIL 1 (39/49)
(FENCE FABRIC FASTENERS NOT SHOWN)



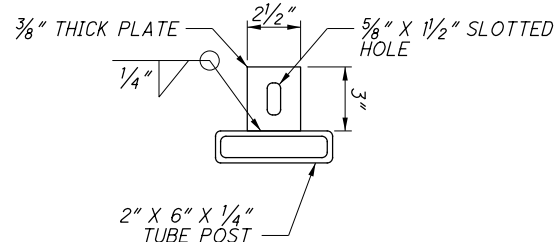
DETAIL 2 (39/49)
(FENCE FABRIC FASTENERS NOT SHOWN)



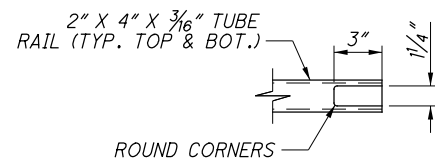
VIEW D



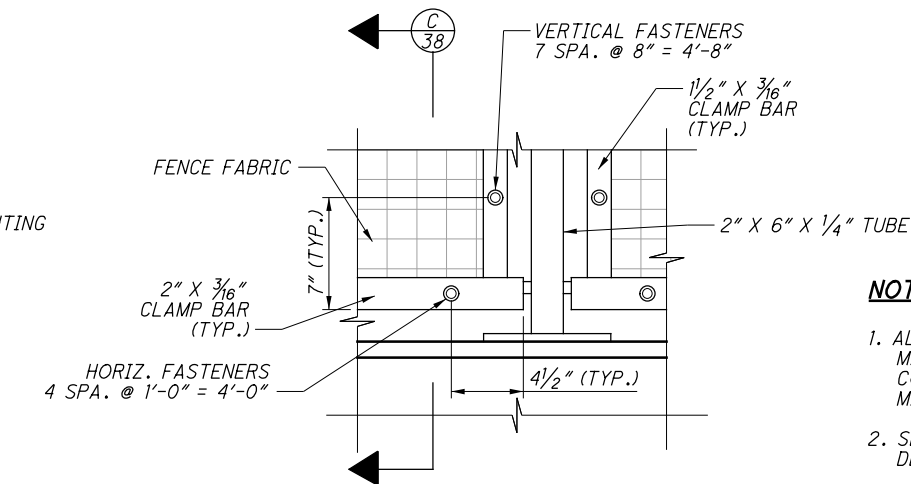
SECTION A



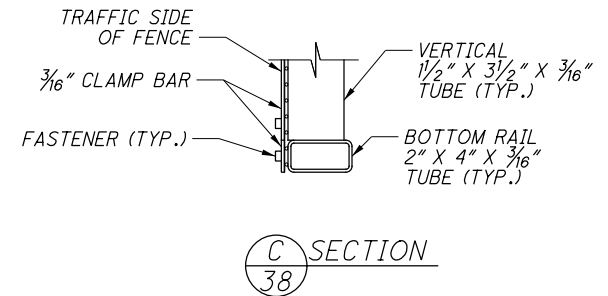
CONNECTION PLATE DETAILS
(PLAN VIEW)



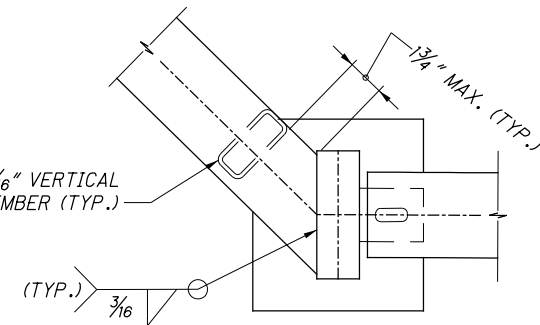
TYPICAL TUBE CUTOUT DETAIL



FENCE FABRIC CONNECTION ELEVATION DETAIL
(INTERIOR/TRAFFIC SIDE SHOWN, SPACING FOR STD PANEL SHOWN, OTHERS SIMILAR)



SECTION C



PILASTER AREA POST/RAIL DETAIL

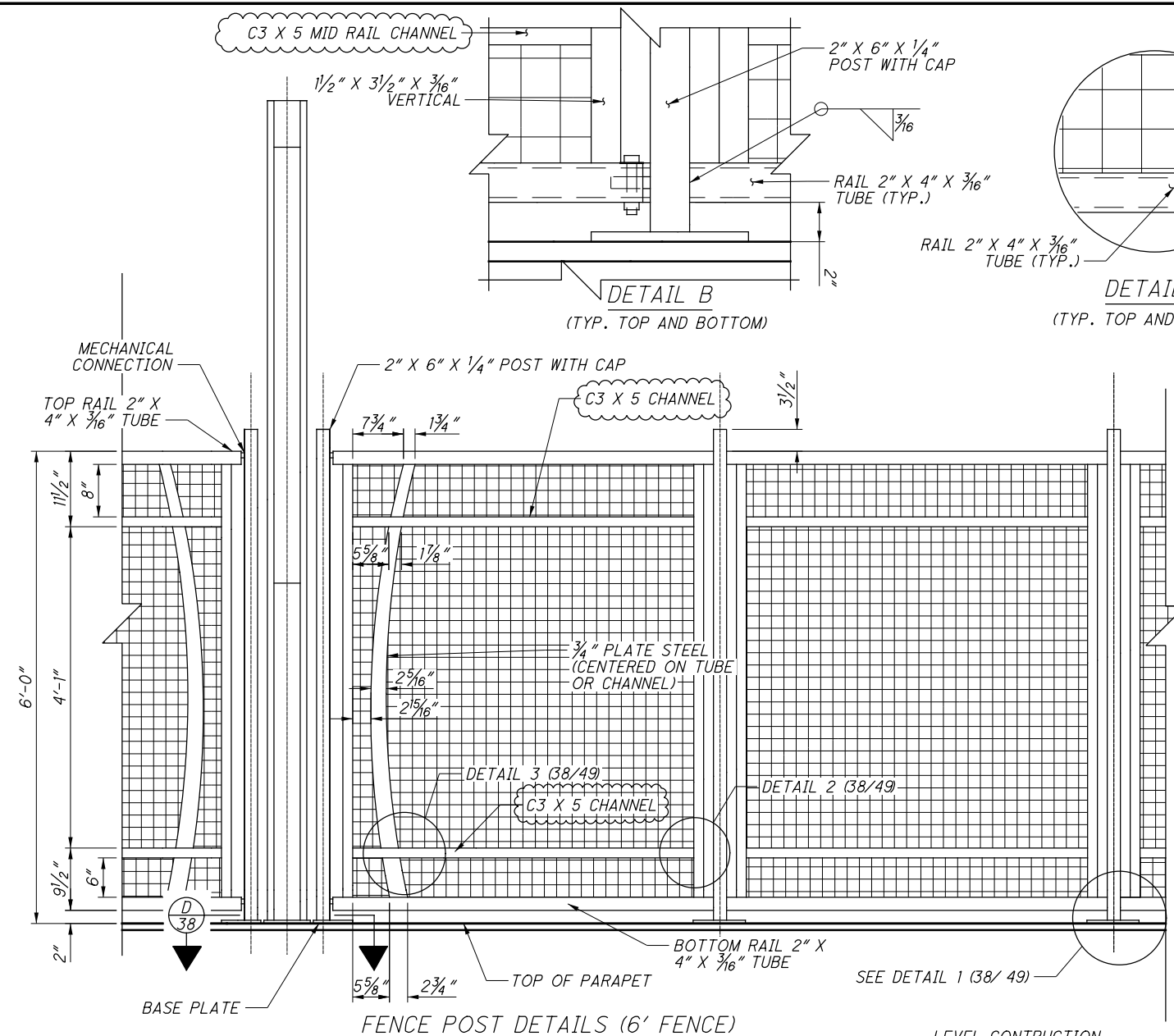
NOTES:

1. ALL POSTS SHALL BE INSTALLED PLUMB. PROVIDE SHIMS MADE FROM MULTI-POLYMER PLASTIC WITH MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI. ENDS OF POSTS MAY BE CUT ON BIAS TO PROVIDE PLUMB INSTALLATION.
2. SEE STD. DWG. VPF-1-90 FOR ADDITIONAL NOTES AND DETAILS RELATED TO BASE PLATE SHIMS AND CAULKING.
3. FOR CURVED STEEL PLATE DETAILS, SEE SHEET 39/49.
4. PROVIDE GROUNDING OF RENO LIGHT ANCHOR BOLTS PER STD. DWG. HL-50.21.
5. SPACING OF HORIZONTAL FASTENERS VARIES FOR CANTILEVERED SECTIONS OF FENCE.

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4051



FENCE POST DETAILS (6' FENCE)

(PLACE FABRIC ON INSIDE, PEDESTRIAN SIDE OF FENCE)
(FENCE FABRIC FASTENERS NOT SHOWN)2-S557 (PILASTER A)
2-S570 (PILASTER B) OR
2-S560 (PILASTER C&D) (TYP.)3-S557 (PILASTER A)
3-S570 (PILASTER B) OR
3-S560 (PILASTER C&D) (TYP.)

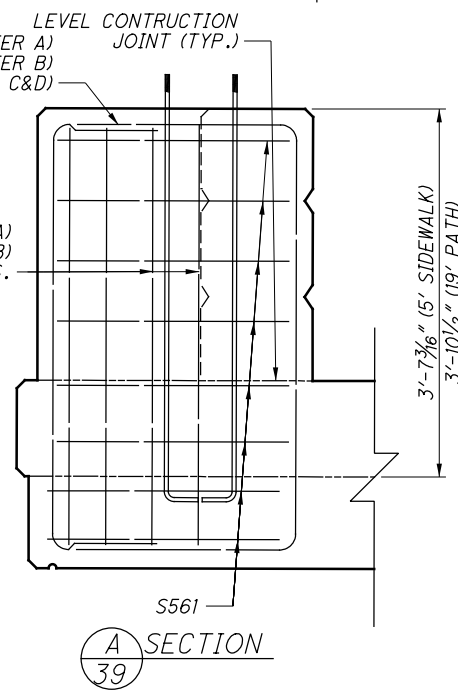
8-S561 @ 1'-0" MAX.

ANCHOR BOLT (TYP.)

S556 (PILASTER A)
S572 (PILASTER B)
S559 (PILASTER C&D) (TYP.)S555 (PILASTER A)
S571 (PILASTER B)
S558 (PILASTER C&D) (TYP.)

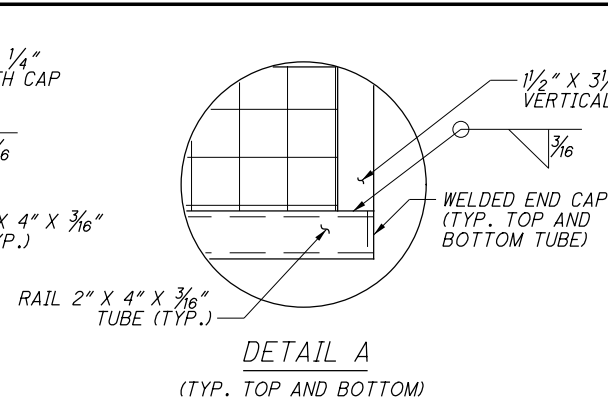
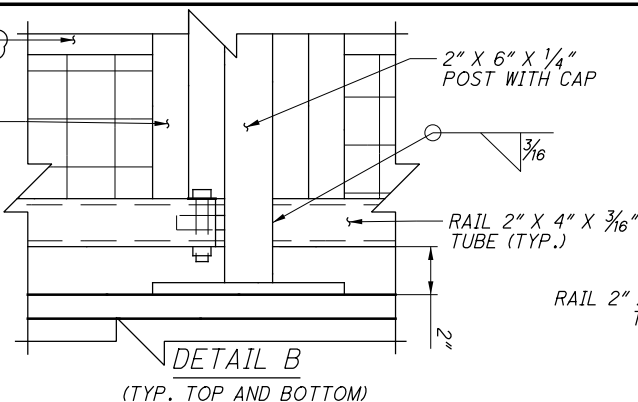
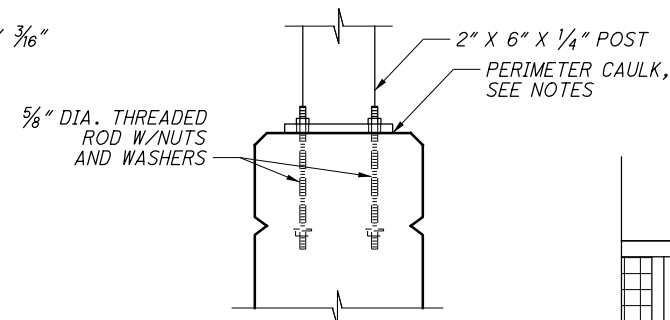
LIGHT POLE PILASTER

TYPICAL LIGHT POLE PILASTER REINFORCEMENT

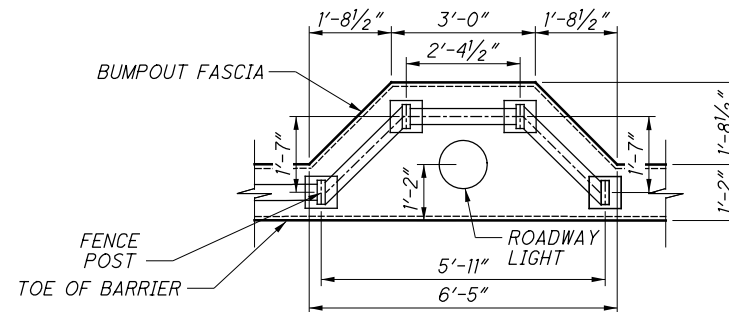
(PARAPET AND SIDEWALK / PATH REINFORCEMENT
NOT SHOWN FOR CLARITY)SECTION
A
39

NOTES:

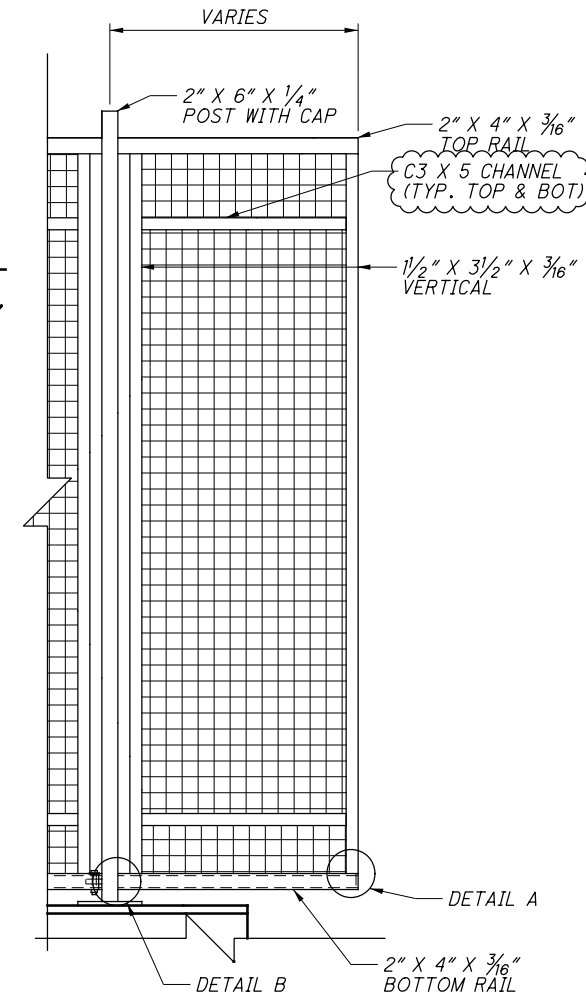
- FOR ADDITIONAL RAILING SAWCUT DETAILS, SEE ODOT STANDARD DRAWING BR-2-15
- FOR SAWCUT SPACING, SEE PLAN SHEET (33/49)
- FOR REINFORCING SCHEDULE, SEE SHEET (48/49)
- FOR ADDITIONAL DETAILS NOT LABELED, SEE PLAN SHEET (33/49)
- FOR ADDITIONAL PILASTER DETAILS NOW SHOWN, SEE ODOT STANDARD DRAWING HL-20.14

DETAIL A
(TYP. TOP AND BOTTOM)DETAIL B
(TYP. TOP AND BOTTOM)

TYPICAL ANCHOR BOLT DETAILS

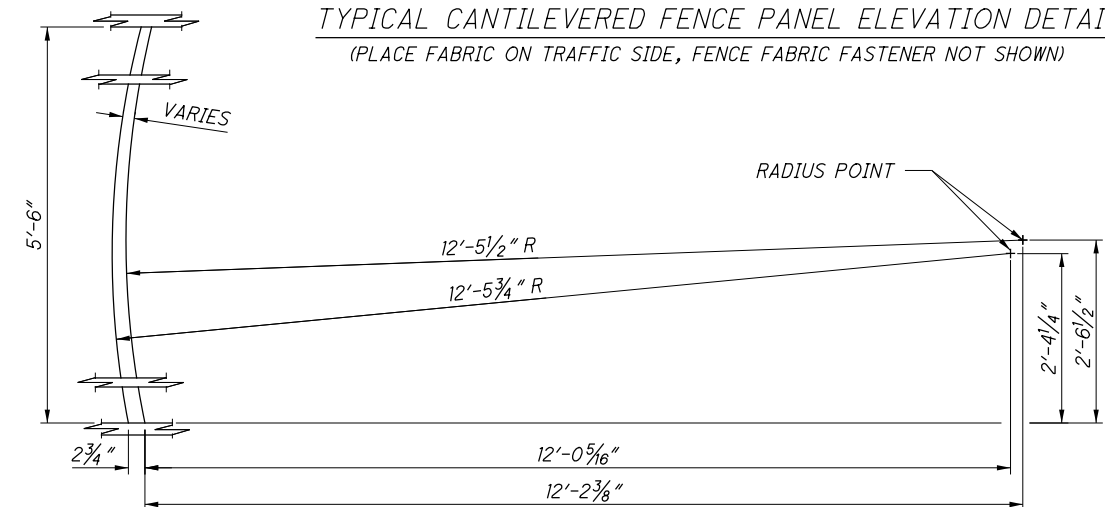
THREADED ROD SHALL BE ASTM A320 B8
CLASS 2 HARDENED STAINLESS STEEL (AISI 304),
Fy=100 KSI, WITH ASTM A194 GRADE 8
NUTS AND SS304 WASHERS

TYPICAL LIGHT POLE PILASTER



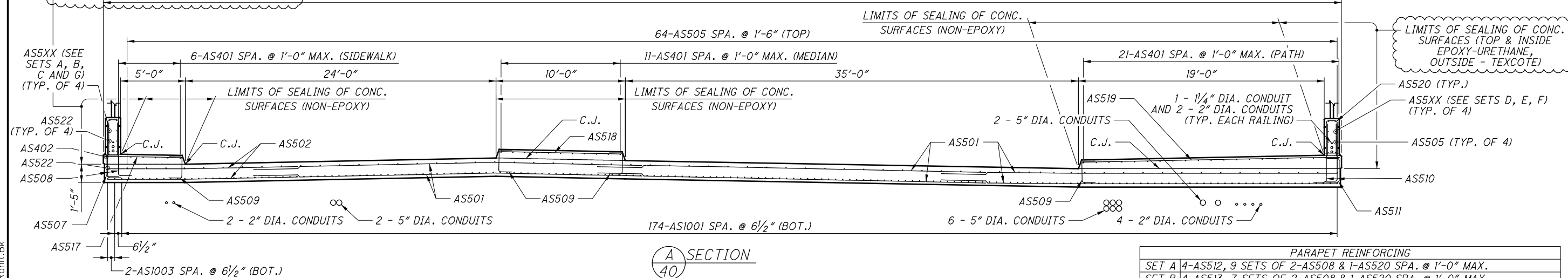
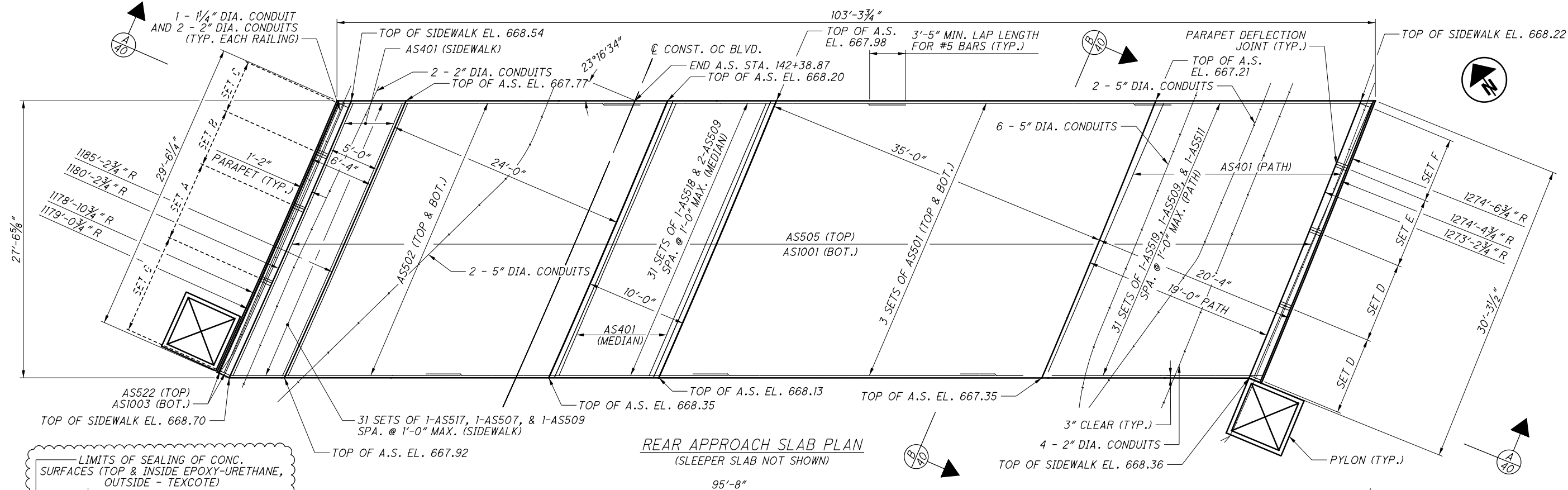
TYPICAL CANTILEVERED FENCE PANEL ELEVATION DETAIL

(PLACE FABRIC ON TRAFFIC SIDE, FENCE FABRIC FASTENER NOT SHOWN)



TYPICAL CURVED STEEL PLATE DETAIL

NO.	DATE	DESCRIPTION
2	2024-09-10	RECORD DRAWINGS
1	2021-07-21	DRFI 130
0	2020-02-17	RFC
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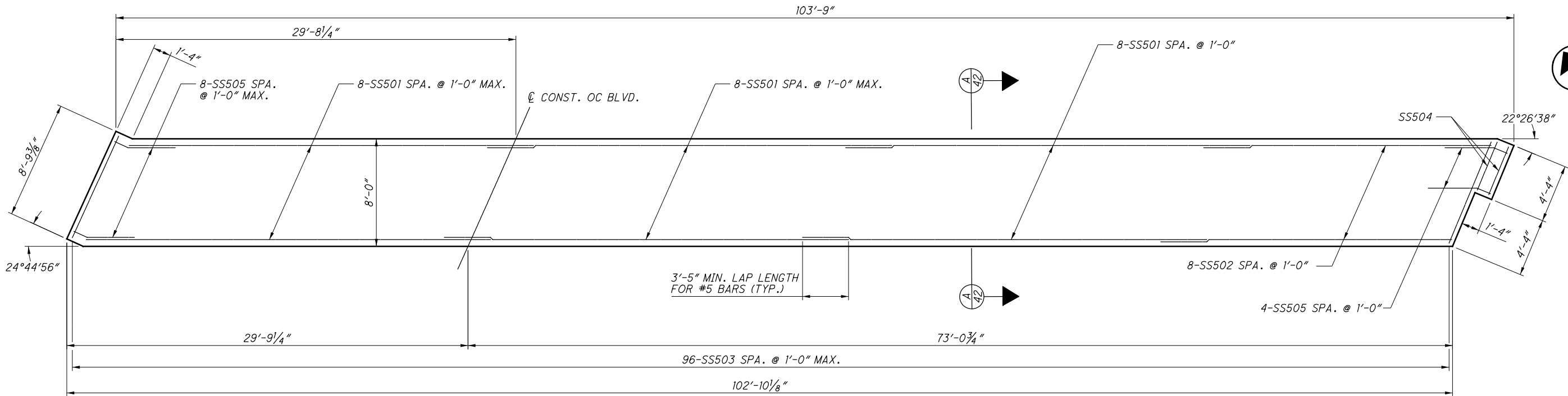


PARAPET REINFORCING	
SET A	4-AS512, 9 SETS OF 2-AS508 & 1-AS520 SPA. @ 1'-0" MAX.
SET B	4-AS513, 7 SETS OF 2-AS508 & 1-AS520 SPA. @ 1'-0" MAX.
SET C	2-AS513 & 2-AS514, 7 SETS OF 2-AS508 & 1-AS520 SPA. @ 1'-0" MAX.
SET D	4-AS512, 9 SETS OF 2-AS510 & 1-AS520 SPA. @ 1'-0" MAX.
SET E	4-AS515, 8 SETS OF 2-AS510 & 1-AS520 SPA. @ 1'-0" MAX.
SET F	2-AS515 & 2-AS516, 8 SETS OF 2-AS510 & 1-AS520 SPA. @ 1'-0" MAX.
SET G	4-AS523, 11 SETS OF 2-AS508 & 1-AS520 SPA. @ 1'-0" MAX.

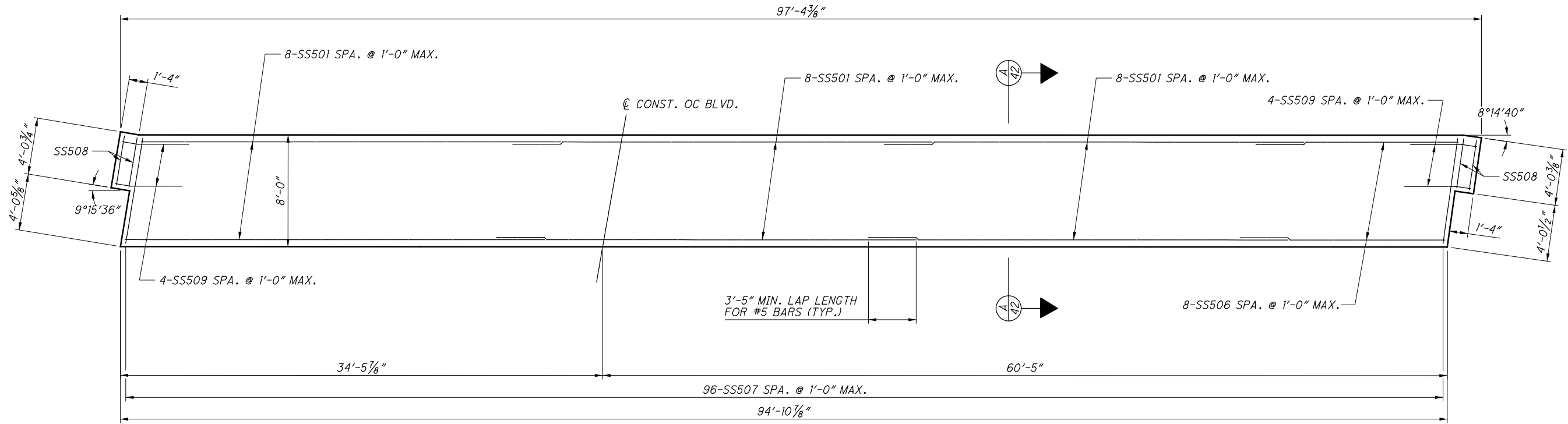
NOTES:

- APPROACH SLAB AND SLEEPER SLAB LONGITUDINAL BARS SHALL BE PLACED PARALLEL TO THE ROADWAY CENTERLINE. TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ABUTMENT.
- SEE ODOT STANDARD DRAWING AS-2-15 FOR ADDITIONAL INFORMATION AND DETAILS.
- PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS UNLESS NOTED OTHERWISE.

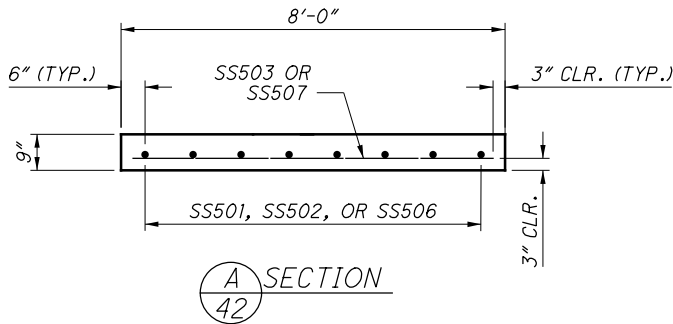
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REAR SLEEPER SLAB PLAN (TYPE A INSTALLATION)
(APPROACH SLAB NOT SHOWN)



FORWARD SLEEPER SLAB PLAN (TYPE A INSTALLATION)
(APPROACH SLAB NOT SHOWN)



NOTES:

1. APPROACH SLAB AND SLEEPER SLAB LONGITUDINAL BARS SHALL BE PLACED PARALLEL TO THE ROADWAY CENTERLINE. TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ABUTMENT.
2. SEE ODOT STANDARD DRAWING AS-2-15 FOR ADDITIONAL INFORMATION AND DETAILS.
3. PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS UNLESS NOTED OTHERWISE.

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ELEVATION TABLE

PYLON NUMBER	ELEV. A	ELEV. B	ELEV. C
PYLON 1	664.5	670.18	668.68
PYLON 3	662.5	668.69	667.19



1. FOR LOCATION OF PYLONS, SEE SHEET 33 / 49 .
2. SEAL ALL EXPOSED SURFACES OF PYLONS PER ITEM 512
SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.
3. ALL CONCRETE SHALL BE CLASS QC2, MISC., WITH QC/QA, AS PER PLAN.
4. FOR REINFORCING DETAILS SEE SHEET 48 / 49.
5. PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS UNLESS
NOTED OTHERWISE.
6. #4 BAR LAP = 1'-11" MIN.
7. ANTI-GRAFFITI COATING SHALL BE APPLIED ON ALL EXPOSED SURFACES.
8. SEE BU-27 PLANS FOR DETAILS REGARDING RECESSED LIGHTING AND
UPLIGHTING OF PYLONS.

DESCRIPTION	
ISSUE	RECORD



ELEVATION TABLE

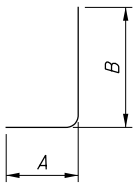
PYLON NUMBER	ELEV. A	ELEV. B	ELEV. C
PYLON 2	664.5	669.86	668.36
PYLON 4	662.5	668.39	666.89



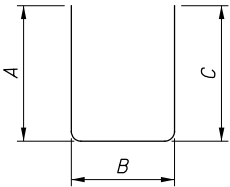
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

REAR ABUTMENT											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
RA501	81	30'-0"	2534	STR.							
RA502	27	25'-3"	711	STR.							
RA503	71	9'-2"	679	1	8'-1 1/8"	1'-2 3/8"					
RA504	71	11'-0"	815	2	3'-4"	4'-7"	3'-4"				
RA505	21	12'-8"	277	1	11'-7 1/8"	1'-2 3/8"					
RA506	14	11'-7"	169	STR.							
RA507	3	22'-7"	71	2	1'-2 3/8"	20'-5 1/2"	1'-2 3/8"				
RA508	2	20'-5"	43	STR.							
RA510	2	13'-3"	28	STR.							
RA511	2	20'-6"	43	STR.							
RA512	4	31'-9"	132	STR.							
RA513	2	20'-6"	43	STR.							
RA514	8	4'-9"	40	2	1'-4"	2'-3 3/4"	1'-4"				
RA515	2	24'-8"	51	1	22'-10 3/4"	1'-10 3/8"					
RA516	2	13'-8"	29	2	1'-10 3/8"	10'-1 3/4"	1'-10 3/8"				
RA517	2	8'-1"	17	1	6'-4 3/8"	1'-10 3/8"					
RA518	10	22'-9"	237	STR.							
	2	5'-1"									
RA519	SER. OF TO		228	STR.							2'-5
	8	22'-3"									
RA520	2	24'-1"	50	19	3'-5"	7'-8 1/2"	19'-2"				
RA521	10	23'-5"	244	STR.							
	2	8'-5"									
RA522	SER. OF TO		257	STR.							2'-0"
	8	22'-5"									
RA523	2	24'-5"	51	19	6'-9"	7'-10"	15'-10"				
RA524	8	5'-1"	42	1	1'-2 3/8"	4'-0 3/8"					
RA525	4	5'-9"	24	2	2'-8"	0'-8"	2'-8"				
RA526	16	1'-0"	17	STR.							
RA601	48	30'-0"	2163	STR.							
RA602	8	23'-9"	285	STR.							
RA603	107	10'-8"	1714	STR.							
RA604	71	9'-4"	995	1	8'-1 1/8"	1'-4 3/4"					
RA605	96	10'-9"	1550	2	4'-10 1/8"	1'-5"	4'-10 1/8"				
RA606	96	10'-6"	1514	2	4'-8 1/2"	1'-5"	4'-8 1/2"				
RA607	64	6'-7"	633	2	3'-0"	0'-11"	3'-0"				
RA608	30	8'-8"	391	2	4'-0 1/2"	0'-11"	4'-0 1/2"				
RA609	11	10'-11"	180	2	4'-10 1/8"	1'-6 3/8"	4'-10 1/8"				
RA610	11	10'-7"	175	2	4'-8 1/2"	1'-6 3/8"	4'-8 1/2"				
RA611	11	8'-9"	145	2	4'-0 1/2"	1'-0"	4'-0 1/2"				
RA612	15	25'-1"	565	2	12'-0"	1'-5"	12'-0"				
	1	12'-0"			4'-10"						
RA613	SER. OF TO		136	3	TO	1'-5"					7 3/8"
	6	18'-2"			7'-10 7/8"						
RA614	2	15'-8"	47	2	7'-3 1/4"	1'-5"	7'-3 1/4"				
	1	7'-4"			3'-1 3/8"		3'-1 3/8"				
RA615	SER. OF TO		116	2	TO	1'-5"	TO				4 7/8"
	7	14'-8"			6'-9 3/8"		6'-9 3/8"				
RA616	3	15'-3"	69	2	7'-1 1/8"	1'-5"	7'-1 1/8"				
	1	8'-5"			3'-7 7/8"		3'-7 7/8"				
RA617	SER. OF TO		86	2	TO	1'-5"	TO				6"
	5	14'-5"			6'-7 7/8"		6'-7 7/8"				
	1	12'-6"			5'-0 7/8"						
RA618	SER. OF TO		146	3	TO	1'-5"					9"
	6	20'-0"			8'-9 7/8"						
RA619	10	14'-2"	213	STR.							
RA620	2	11'-1"	33	3	1'-6 3/8"	4'-2 7/8"					
RA621	2	1'-9"	5	1	0'-6"	1'-5"					
RA622	2	3'-9"	11	1	1'-6 3/8"	2'-4 3/8"					
RA623	18	5'-6"	149	STR.							
RA624	8	27'-3"	327	STR.							
RA625	71	15'-6"	1653	2	2'-7"	10'-8"	2'-7"				
RA626	10	15'-5"	232	STR.							
RA627	18	10'-4"	279	2	2'-7"	5'-6"	2'-7"				
RA628	107	8'-2"	1312	2	4'-0 1/2"	0'-5"	4'-0 1/2"				
RA801	70	5'-6"	1028	18	3'-2 3/4"	1'-0"	1'-0"				
		TOTAL:	23029	LBS.							

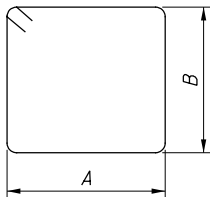
FORWARD ABUTMENT											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
FA501	81	30'-0"	2534	STR.							
FA502	27	18'-9"	528	STR.							
FA503	67	9'-1"	635	1	7'-11 7/8"	1'-2 3/8"					
FA504	67	10'-11"	763	2	3'-3 5/8"	4'-7"	3'-3 5/8"				
FA505	27	12'-8"	357	1	11'-7 1/8"	1'-2 3/8"					
FA506	18	11'-7"	218	STR.							
FA507	3	12'-3"	38	2	1'-2 3/8"	10'-0 3/4"	1'-2 3/8"				
FA508	2	10'-1"	21	STR.							
FA509	2	17'-7"	37	STR.							
FA510	4	31'-9"	133	STR.							
FA511	2	16'-8"	35	STR.							
FA512	8	4'-9"	40	2	1'-4"	2'-3 3/4"	1'-4"				
FA513	2	8'-9"	18	1	7'-0 1/4"	1'-10 3/8"					
FA514	2	13'-0"	27	2	1'-10 3/8"	9'-6 3/8"	1'-10 3/8"				
FA515	2	22'-6"	47	1	20'-8 7/8"	1'-10 3/8"					
FA516	20	21'-0"	438	STR.							
	2	6'-3"									
FA517	SER. OF TO		221	STR.							2'-0"
	8	20'-3"									
FA518	2	22'-7"	47	19	5'-0"	15'-10"	7'-8 1/2"				
FA519	NOT USED										
FA520	SER. OF TO		234	STR.							2'-0"
FA521	2	22'-7"	47	19	6'-3"	14'-7"	7'-4 1/2"				
FA522	8	5'-1"	42	1	1'-2 3/8"	4'-0 3/8"					
FA523	4	5'-9"	24	2	2'-8"	0'-8"	2'-8"				
FA524	16	1'-0"	17	STR.							
FA601	48	30'-0"	2163	STR.							
FA602	8	17'-3"	207	STR.							
FA603	100	10'-8"	1602	STR.							
FA604	67	9'-3"	931	1	7'-11 7/8"	1'-4 3/4"					
FA605	100	10'-9"	1615	2	4'-10 1/4"	1'-5"	4'-10 1/4"				
FA606	99	10'-5"	1549	2	4'-8"	1'-5"	4'-8"				
FA607	60	6'-7"	593	2	3'-0"	0'-11"	3'-0"				
FA608	39	8'-8"	508	2	4'-0 1/2"	0'-11"	4'-0 1/2"				
	1	12'-8"			5'-1 3/4"						
FA609	SER. OF TO		146	3	TO	1'-5"					8 5/8"
	6	19'-10"			8'-9 1/8"						
FA610	13	24'-8"	482	2	11'-9 3/8"	1'-5"	11'-9 3/8"				
	1	8'-8"			3'-9 1/2"		3'-9 1/2"				
FA611	SER. OF TO		87	2	TO	1'-5"	TO				5 3/4"
	5	14'-5"			6'-8 1/4"		6'-8 1/4"				
FA612	2	15'-3"	46	2	7'-1 1/4"	1'-5"	7'-1 1/4"				
FA613	3	15'-7"	70	2	7'-3 1/8"	1'-5"	7'-3 1/8"				
	1	10'-0"			4'-5 3/8"		4'-5 3/8"				
FA614	SER. OF TO		74	2	TO	1'-5"	TO				6"
	4	14'-6"			6'-8 3/8"		6'-8 3/8"				
	1	12'-10"			5'-3"						
FA615	SER. OF TO		149	3	TO	1'-5"					9"
	6	20'-4"			9'-0"						
FA616	10	12'-6"	188	STR.							
FA617	2	10'-6"	32	3	1'-5"	4'-1"					
FA618	1	1'-9"	3	1	0'-6"	1'-5"					
FA619	1	3'-6"	5	1	1'-5"	2'-2 3/4"					
FA620	NOT USED										
FA621	1	2'-6"	4	1	0'-6"	2'-1 3/4"					
FA622	1	4'-3"	6	1	1'-5"	3'-0"					
FA623	14	5'-6"	116	STR.							
FA624	8	20'-9"	249	STR.							
FA625	67	15'-6"	1560	2	2'-7"	10'-8"	2'-7"				
FA626	10	13'-8"	205	STR.							
FA627	14	10'-4"	217	2	2'-7"	5'-6"	2'-7"				
FA628	101	8'-2"	1239	2	4'-0 1/2"	0'-5"	4'-0 1/2"				
FA801	66	5'-6"	969	18	3'-2 3/4"	1'-0"	1'-0"				
		TOTAL:	21516	LBS.							



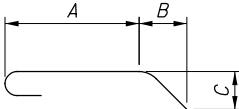
TYPE-1



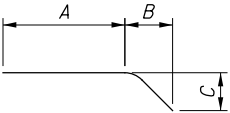
TYPE-2



TYPE-3



TYPE-18



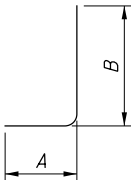
TYPE-19

NOTES:

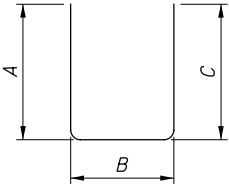
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- TYPE "STR" INDICATES STRAIGHT BAR.
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- USE STANDAND HOOKS FOR ENDS OF BARS NOT SPECIFICALLY DIMENSIONED IN DETAILS.

NO.	DATE	DESCRIPTION
1	2020-06-10	DC041
0	2020-02-17	RFC
ISSUE RECORD		

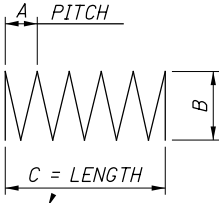
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	PIER						SER INC.
					DIMENSIONS						
					A	B	C	D	E	R	
ISP501	5	1208'-11"	6304	27	0'-3 3/8"	3'-6"	30'-6 1/4"				
IP501	NOT USED										
IP502	32	27'-9"	926	STR							
IP503	40	13'-11"	581	1	12'-4"	1'-8"					
IP504	5	13'-1"	68	2	1'-8"	10'-0"	1'-8"				
IP505	12	11'-1"	139	2	3'-5"	4'-5 1/2"	3'-5"				
IP506	3	13'-9"	43	2	2'-0"	10'-0"	2'-0"				
IP507	102	5'-7"	594	2	1'-11"	2'-0"	1'-11"				
IP508	27	14'-1"	397	1	12'-4"	1'-10"					
IP601	310	11'-7"	5393	2	4'-3"	3'-5"	4'-3"				
IP602	62	10'-9"	1001	2	3'-10"	3'-5"	3'-10"				
IP603	104	12'-3"	1914	2	4'-7"	3'-5"	4'-7"				
IP801	190	13'-9"	6975	2	1'-4"	11'-6"	1'-4"				
IP901	85	13'-5"	3877	1	12'-1"	1'-7"					
IP902	85	32'-8"	9441	STR							
IP903	44	28'-5"	4251	1	27'-1"	1'-7"					
IP904	66	27'-10"	6246	STR							
2SP501	5	1192'-1"	6217	27	0'-3 3/8"	3'-6"	30'-1"				
2P501	NOT USED										
2P502	32	27'-9"	926	STR							
2P503	40	13'-11"	581	1	12'-4"	1'-8"					
2P504	5	13'-1"	68	2	1'-8"	10'-0"	1'-8"				
2P505	12	11'-1"	139	2	3'-5"	4'-5 1/2"	3'-5"				
2P506	3	13'-9"	43	2	2'-0"	10'-0"	2'-0"				
2P507	102	5'-6"	585	2	1'-11"	1'-11"	1'-11"				
2P508	27	14'-1"	397	1	12'-4"	1'-10"					
2P601	310	11'-7"	5393	2	4'-3"	3'-5"	4'-3"				
2P602	62	10'-9"	1001	2	3'-10"	3'-5"	3'-10"				
2P603	104	12'-3"	1914	2	4'-7"	3'-5"	4'-7"				
2P801	230	13'-9"	8444	2	1'-4"	11'-6"	1'-4"				
2P901	85	13'-5"	3877	1	12'-1"	1'-7"					
2P902	85	32'-2"	9296	STR							
2P903	44	28'-5"	4251	1	27'-1"	1'-7"					
2P904	66	27'-10"	6246	STR							
		TOTAL:	97528	LBS.							



TYPE-1



TYPE-2



TYPE-27

NOTES:

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7. USE STANDAND HOOKS FOR ENDS OF BARS NOT SPECIFICALLY DIMENSIONED IN DETAILS.

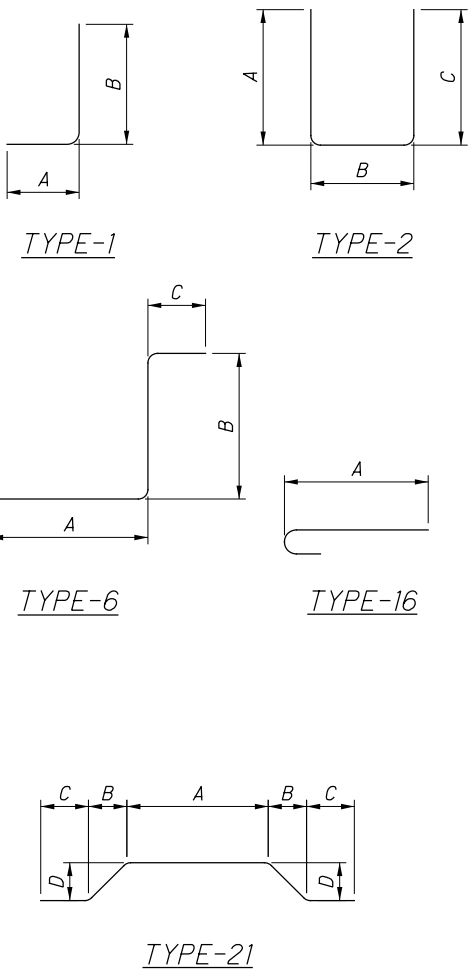
1	2021-03-17	DRFI 109
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	SUPERSTRUCTURE DIMENSIONS						SER INC.
					A	B	C	D	E	R	
S401	1120	30'-0"	22445	STR.							
S402	69	11'-8"	539	STR.							
S403	71	10'-9"	512	STR.							
S404	982	9'-8"	6341	16	9'-2"						
S405	1356	3'-9"	3397	6	0'-4"	0'-8"	1'-2 1/2"				
S406	416	3'-11"	1088	6	0'-4"	0'-9"	1'-2 1/2"				
S407	416	4'-1"	1135	6	0'-4"	0'-10"	1'-2 1/2"				
S408	257	3'-1"	529	STR.							
S409	216	2'-1"	301	STR.							
S501	958	30'-0"	29976	STR.							
S502	58	21'-8"	1312	STR.							
S503	55	20'-9"	1193	STR.							
S504	1412	33'-10"	49827	STR.							
S505	468	40'-0"	19525	STR.							
S506	942	31'-3"	30703	16	30'-8"						
S507	SER. OF	TO	67	STR.							6"
	8	9'-10"									
	1	9'-2"									
S508	SER. OF	TO	483	STR.							1'-1 9/16"
	22	32'-11"									
	1	3'-6"									
S509	SER. OF	TO	498	STR.							1'-2 1/4"
	26	33'-3"									
	1	3'-10"									
S510	SER. OF	TO	457	STR.							1'-3 1/16"
	24	32'-8"									
S511	2	22'-2"	46	STR.							
	1	3'-9"									
S512	SER. OF	TO	241	STR.							2'-4"
	13	31'-9"									
	1	5'-0"									
S513	SER. OF	TO	232	STR.							2'-5
	12	32'-0"									
	1	20'-5"									
S514	SER. OF	TO	168	STR.							2'-6 5/8"
	6	33'-2"									
	1	6'-2"									
S515	SER. OF	TO	89	STR.							2'-0"
	7	18'-2"									
S516	2	19'-4"	40	STR.							
	1	6'-11"			6'-4"						
S517	SER. OF	TO	72	16	TO						6"
	8	10'-5"			9'-10"						
	1	9'-9"			9'-2"						
S518	SER. OF	TO	428	16	TO						1'-1 9/16"
	20	31'-3"			30'-8"						
	1	4'-4"									
S519	SER. OF	TO	717	STR.	TO						1'-2 1/4"
	31	40'-0"									
	1	4'-5"									
S520	SER. OF	TO	372	STR.	TO						1'-3 1/8"
	21	29'-7"									
S521	2	16'-7"	35	16	16'-0						
	1	5'-5"									
S522	SER. OF	TO	195	STR.	TO						2'-3
	11	28'-7"									
	1	5'-8"									
S523	SER. OF	TO	356	STR.	TO						2'-5
	15	39'-10"									
	1	21'-0"			20'-5"						
S524	SER. OF	TO	136	16	TO						2'-6 1/2"
	5	31'-2"			30'-7"						
	1	6'-9"			6'-2"						
S525	SER. OF	TO	93	16	TO						2'-0"
	7	18'-9"			18'-2"						
S526	2	13'-9"	29	16	13'-1						
S527	236	5'-10"	1436	STR.							
S528	239	2'-11"	727	2	1'-0"	1'-2 3/8"	1'-0"				
S529	954	2'-10"	2819	2	1'-0"	1'-1 1/4"	1'-0"				
	1	5'-0"									
S530	SER. OF	TO	18	STR.							8"
	3	6'-4"									

MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	SUPERSTRUCTURE DIMENSIONS						SER INC.
					A	B	C	D	E	R	
S531	SER. OF	TO	10	STR.							2'-0"
	2	5'-11"									
S532	235	9'-4"	2288	STR.							
	1	7'-1"									
S533	SER. OF	TO	36	STR.							1'-0"
	4	10'-1"									
	1	7'-6"									
S534	SER. OF	TO	18	STR.							2'-0"
	2	9'-6"									
S535	232	19'-10"	4799	STR.							
S536	236	3'-3"	800	2	1'-0"	1'-5 3/4"	1'-0"				
	1	7'-3"									
S537	SER. OF	TO	119	STR.							2'-0"
	8	21'-3"									
	1	8'-2"									
S538	SER. OF	TO	59	STR.							4'-0"
	4	20'-2"									
S539	1054	4'-11"	5405	1	1'-0"	4'-0					
S540	527	5'-9"	3161	2	2'-8"	0'-8"	2'-8"				
S541	2	6'-8"	14	STR.							
S542	40	8'-10"	369	STR.							
S543	8	5'-6"	46	STR.							
S544	32	9'-8"	323	STR.							
S545	48	7'-9"	390	STR.							
S546	4	4'-2"	17	STR.							
S547	10	4'-9"	50	STR.							
S548	48	9'-6"	474	STR.							
S549	28	5'-1"	148	STR.							
S550	4	8'-4"	35	STR.							
S551	NOT	USED									
S552	NOT	USED									
S553	2	7'-1"	15	STR.							
S554	2	4'-5"	9	STR.							
S555	6	6'-6"	41	2	1'-0"	4'-9"	1'-0"				
S556	6	9'-6"	59	2	2'-6"	4'-9"	2'-6"				
S557	8	4'-9"	40	STR.							
S558	12	6'-3"	78	2	1'-0"	4'-6"	1'-0"				
S559	12	9'-3"	116	2	2'-6"	4'-6"	2'-6"				
S560	16	4'-6"	75	STR.							
S561	32	10'-9"	359	21	2'-10"	2'-6"	0'-6"	2'-6"			
S562	5	4'-8"	24	2	1'-11 5/8"	1'-0"	1'-11 5/8"				
S563	5	5'-3"	27	2	2'-2 3/8"	1'-1 1/8"	2'-2 3/8"				
S564	4	4'-9"	20	2	2'-0"	1'-0"	2'-0"				
S565	4	4'-10"	20	2	2'-0"	1'-1 1/8"	2'-0"				
S566	800	29'-0"	24198	STR.							
S567	16	10'-6"	175	STR.							
S568	8	33'-3"	277	STR.							
S569	108	20'-9"	2337	STR.							
S570	8	4'-4"	36	STR.							
S571	6	6'-1"	38	2	1'-0"	4'-4"	1'-0"				
S572	6	9'-1"	57	2	2'-6"	4'-4"	2'-6"				
		TOTAL:	225139	LBS.							

NOTES:

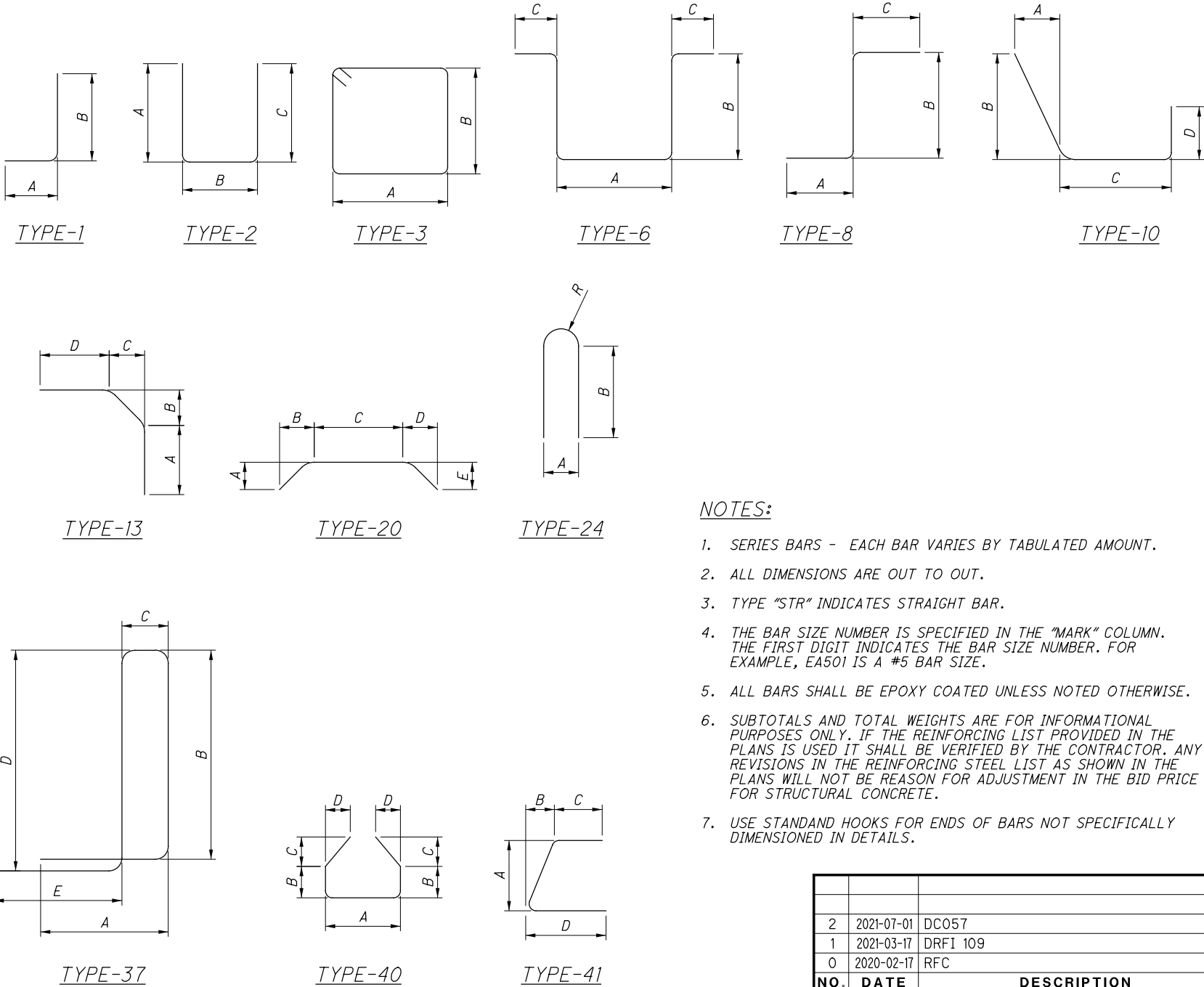
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4	2021-07-21	DRF1 130
3	2021-07-01	DC057
2	2021-03-17	DRF1 109
1	2020-06-10	DC041
0	2020-02-17	RFC
NO.	DATE	DESCRIPTION
ISSUE RECORD		

DIAPHRAGMS											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
SD401	292	8'-7"	1674	2	3'-4 1/2"	1'-11 3/4"	3'-4 1/2"				
SD402	8	8'-1"	43	3	1'-11 3/4"	1'-10"					
SD403	8	6'-9"	36	3	1'-11 3/4"	1'-1 5/8"					
SD404	136	14'-9"	1340	6	2'-5 1/2"	5'-6"	0'-10"				
SD405	136	5'-5"	492	2	3'-4 7/8"	0'-10"	1'-3 7/8"				
SD406	80	4'-4"	232	2	0'-10"	2'-10"	0'-10"				
SD407	8	6'-11"	37	6	2'-5 1/2"	1'-7"	0'-10"				
SD408	8	10'-1"	54	3	2'-5 1/2"	2'-4"					
SD409	8	4'-4"	23	2	2'-4"	0'-10"	1'-3 7/8"				
SD410	20	11'-0"	147	24	0'-4"	5'-3 3/4"				0'-2 1/4"	
SD411	20	4'-8"	62	40	1'-11 1/2"	0'-6 1/4"	0'-8"	0'-8"			
SD412	8	6'-4"	34	2	2'-0"	2'-5 1/2"	2'-0"				
SD413	72	4'-5"	212	1	0'-10"	3'-8"					
SD601	36	30'-0"	1622	STR.							
SD602	6	25'-2"	227	STR.							
SD603	6	19'-5"	175	STR.							
SD604	156	9'-5"	2202	STR.							
SD605	40	3'-6"	213	STR.							
SD606	32	4'-9"	228	2	1'-4 1/2"	2'-3 3/4"	1'-4 1/2"				
SD607	4	10'-7"	63	STR.							
SD608	4	9'-2"	55	41	1'-10"	0'-8 3/8"	4'-1"	3'-5"			
SD609	4	9'-5"	57	41	1'-10"	0'-9 3/8"	3'-8"	4'-1"			
SD610	4	6'-10"	41	41	1'-10"	0'-4"	1'-2 5/8"	4'-1"			
SD611	4	7'-0"	42	41	1'-10"	0'-4 1/2"	4'-1"	1'-5"			
SD612	1	8'-4"	12	41	1'-10"	0'-8 3/8"	4'-1"	2'-7"			
SD613	1	8'-7"	13	41	1'-10"	0'-9 3/8"	2'-10"	4'-1"			
SD614	1	6'-0"	9	41	1'-10"	0'-4"	0'-5"	4'-1"			
SD615	1	9'-8"	15	41	1'-10"	0'-4 1/2"	4'-1"	0'-7 1/2"			
SD616	36	8'-8"	467	STR.							
SD617	68	7'-10"	800	1	1'-10"	6'-1 7/8"					
SD618	4	8'-5"	51	1	1'-10"	6'-9 1/8"					
SD619	4	7'-5"	45	2	1'-10"	4'-1"	1'-10"				
SD620	4	6'-2"	37	2	1'-10"	2'-10"	1'-10"				
SD621	4	3'-9"	23	2	1'-10"	0'-5"	1'-10"				
SD622	4	7'-5"	45	2	1'-10"	4'-1"	1'-10"				
	36	4'-1"					0'-11 3/8"				
SD623	SER. OF 2	TO 4'-4"	457	10	0'-10"	0'-10"	TO 1'-2"	1'-10"			2 5/8"
SD624	34	5'-10"	298	20	0'-10"	0'-10"	3'-6 1/4"	0'-10"	0'-10"		
SD625	2	7'-0"	21	20	0'-10"	0'-10"	4'-8 3/4"	0'-10"	0'-10"		
SD801	68	10'-2"	1846	13	2'-10"	0'-9"	0'-9"	6'-4"			
SD802	8	10'-9"	230	13	2'-10"	0'-9"	0'-9"	6'-11 1/4"			
SD803	4	7'-11"	85	13	2'-10"	0'-9"	0'-9"	4'-1"			
SD804	4	6'-8"	71	13	2'-10"	0'-9"	0'-9"	2'-10"			
SD805	4	4'-3"	45	13	2'-10"	0'-9"	0'-9"	0'-5"			
SD806	4	7'-11"	85	13	2'-10"	0'-9"	0'-9"	4'-1"			
	72	5'-11"					1'-0 3/8"				
SD807	SER. OF 2	TO 6'-1"	2313	10	1'-1 1/2"	1'-1 1/2"	TO 1'-2"	3'-0"			1 5/8"
SD808	36	6'-7"	633	20	1'-1 1/2"	1'-1 1/2"	3'-5 1/2"	1'-1 1/2"	1'-1 1/2"		
SD809	36	6'-2"	593	20	1'-1 1/2"	1'-1 1/2"	3'-1 1/4"	1'-1 1/2"	1'-1 1/2"		
		TOTAL:	17505	LBS.							

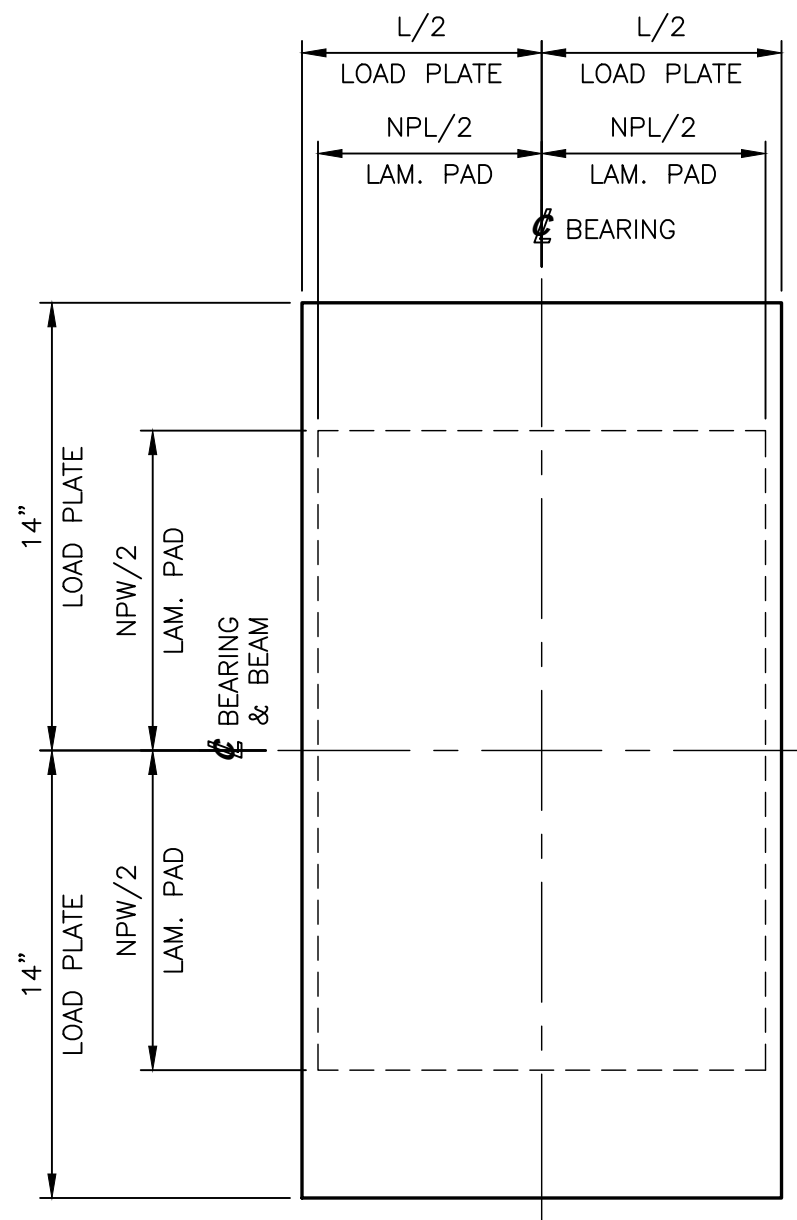
PYLONS											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
R401	56	5'-11"	221	STR.							
R402	192	3'-5"	438	1	0'-8"	2'-10"					
R403	80	6'-10"	364	STR.							
R404	16	6'-1"	65	STR.							
R405	160	10'-3"	1096	STR.							
R406	448	5'-7"	1671	STR.							
R407	88	6'-5"	377	1	0'-11 1/2"	5'-7"					
R408	44	4'-9"	140	37	0'-9 1/2"	0'-10 1/2"	0'-10 1/2"	0'-6"	2'-0"		
R409	32	3'-4"	71	8	0'-10	0'-8"	2'-0"				
R410	48	4'-9"	152	STR.							
R411	16	1'-5"	15	1	0'-10"	0'-8"					
R412	40	6'-3"	168	STR.							
R413	40	7'-1"	190	STR.							
R414	8	5'-6"	30	STR.							
R415	8	6'-4"	34	STR.							
		TOTAL:	5032	LBS.							



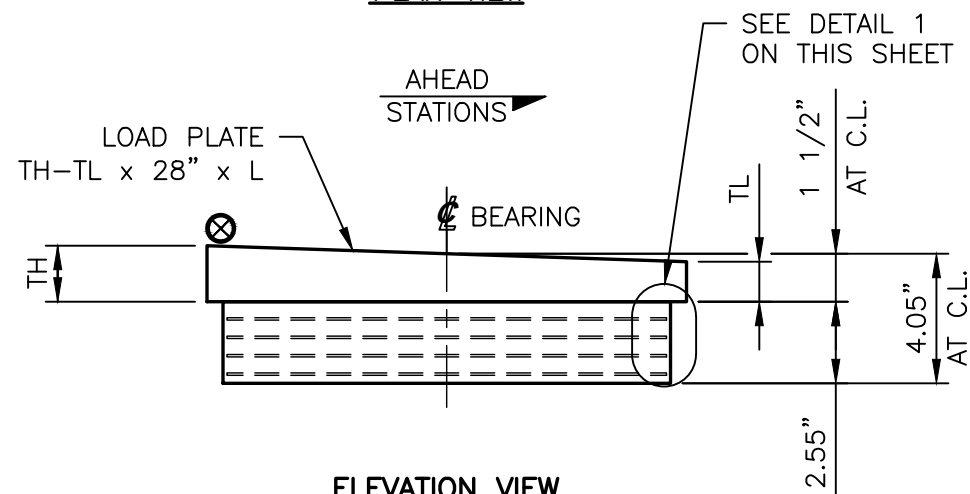
NO.	DATE	DESCRIPTION
2	2021-07-01	DC057
1	2021-03-17	DRF1 109
0	2020-02-17	RFC
ISSUE RECORD		

GENERAL NOTES

<div><div><div>GENERAL NOTES:</div><div><div>1. BEARINGS SHALL BE IN ACCORDANCE WITH THE OHIO DEPARTMENT OF TRANSPORTATION 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS, & SUPPLEMENTAL SPECIFICATIONS 800 DATED 07/15/16.</div><div>2. SHOP TO MARK LOCATION, AHEAD STATION, HIGH SIDE ⊗, & BEARING MARK NUMBER. MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED.</div><div>3. ALL STEEL PLATES SHALL BE SMOOTH AND STRAIGHT.</div><div>4. ALL DIMENSIONS ARE IN INCHES.</div><div>5. SHIP THE SAMPLE BEARING TO AN INDEPENDENT TESTING LABORATORY FOR TESTING PER OH DOT STANDARD SPECIFICATIONS SECTION 711.23.</div><div>6. DYNAMIC RUBBER REPRESENTATIVE:<div>KATHI MILLS 903-677-2871 1501 ROCKY RIDGE RD. ATHENS, TX 75751</div></div></div></div></div>	<div><div>MATERIAL NOTES:</div><div><div>1. STEEL PLATES:<div>ASTM A709 GRADE 50 (GALVANIZED)</div></div><div>2. ELASTOMER:<div>50 DUROMETER GRADE 3 NEOPRENE</div></div><div>3. STEEL LAMINATES:<div>ASTM A709 GRADE 36, ASTM A1011, SS GR. 36, 40, OR EQUAL</div></div></div></div>	<div><div>CONTRACTOR NOTES:</div><div><div>1. WHEN WELDING TOP LOAD PLATE TO EMBEDDED SOLE PLATE, USE TEMPERATURE INDICATING WAX PEN, OR OTHER SUITABLE MEANS, TO ENSURE THE TEMPERATURE OF THE ELASTOMER DOES NOT EXCEED 250°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.</div></div></div>																						
	<div><div>FINISH NOTES:</div><div><div>1. ALL EXPOSED STEEL SURFACES SHALL BE BLAST CLEANED TO SSPC-SP6 (COMMERCIAL BLAST CLEANING) PRIOR TO GALVANIZING.</div><div>2. ALL EXPOSED STEEL SURFACES SHALL BE PER ASTM A123.</div></div></div>	<div><div><div><div>STATE OF OHIO DEPARTMENT OF TRANSPORTATION BRIDGE NO.: CUY-010-1949 OH-10 OVER KINGSBURY RUN RAVINE CITY OF CLEVELAND</div><table><tr><td>STATE</td><td>COUNTY</td><td>PID NO.</td></tr><tr><td>OH</td><td>CUYAHOGA</td><td>96833</td></tr></table><div>FEDERAL PROJ. NO.: E140(249)</div><div><div>DYNAMIC RUBBER LAM. ELASTOMERIC BEARING ASSY.'S</div><div><div><div><div>Cosmee</div><div>1501 ROCKY RIDGE ROAD P.O. BOX 2159 ATHENS, TEXAS 75751</div></div><table><tr><td>SCALE: NONE</td><td>DRAWN BY: MH</td><td>CHECKED BY: MCM</td></tr><tr><td></td><td>DATE: 01/04/21</td><td>DATE: 01/20/21</td></tr></table></div></div><div><div><div><div>△</div><div>.</div></div><table><tr><td>REV.</td><td>DESCRIPTION</td><td>BY</td><td>DATE</td><td>CK'D</td><td>DATE</td></tr></table></div><div><table><tr><td>SHEET GN1 OF 1</td><td>JOB NO.: 16446</td></tr><tr><td>CUSTOMER: KOKOSING CONSTRUCTION</td><td>DRAWING NUMBER 16446-GN1</td><td>REV. O</td></tr></table></div></div></div></div></div></div>	STATE	COUNTY	PID NO.	OH	CUYAHOGA	96833	SCALE: NONE	DRAWN BY: MH	CHECKED BY: MCM		DATE: 01/04/21	DATE: 01/20/21	REV.	DESCRIPTION	BY	DATE	CK'D	DATE	SHEET GN1 OF 1	JOB NO.: 16446	CUSTOMER: KOKOSING CONSTRUCTION	DRAWING NUMBER 16446-GN1
STATE	COUNTY	PID NO.																						
OH	CUYAHOGA	96833																						
SCALE: NONE	DRAWN BY: MH	CHECKED BY: MCM																						
	DATE: 01/04/21	DATE: 01/20/21																						
REV.	DESCRIPTION	BY	DATE	CK'D	DATE																			
SHEET GN1 OF 1	JOB NO.: 16446																							
CUSTOMER: KOKOSING CONSTRUCTION	DRAWING NUMBER 16446-GN1	REV. O																						



PLAN VIEW



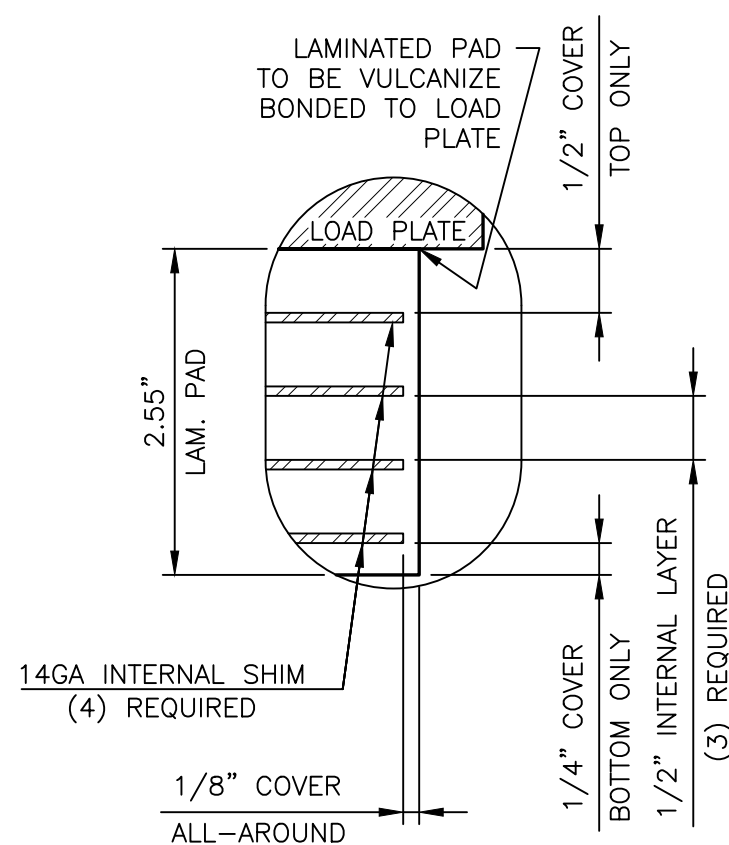
ELEVATION VIEW

EXPANSION LAMINATED ELASTOMERIC
BEARING ASSEMBLY (REF. NO.: 019)

REFER TO LAMINATED ELASTOMERIC BEARING TABLE #1
ON THIS SHEET FOR MARK NO.'S, QTY.'S, LOCATIONS,
DESIGN LOADS & DIMENSIONS

LAMINATED ELASTOMERIC BEARING TABLE #1

MARK NO.	TYPE	QTY.	LOCATION			DESIGN LOADS			LOAD PLATE			LAM. PAD	
			ABUT./PIER	SPAN(S)	BEAM(S)	DL (KIPS)	LL (KIPS)	TOTAL LOAD (KIPS)	L (in.)	TH (in.)	TL (in.)	NPW (in.)	NPL (in.)
EBA1	ERA	10	R. ABUT.	1	B1-B10	104	91	195	13	1 9/16	1 7/16	18	12
EBA2	EP2	10	PIER 2	2	B11-B20	168	102	270	15	1 19/32	1 13/32	20	14
EBA3	EP2	10	PIER 2	3	B21-B30	102	82	184	13	1 19/32	1 13/32	18	12
EBA4	EFA	10	F. ABUT.	3	B21-B30	102	82	184	13	1 19/32	1 13/32	18	12



DETAIL 1

2.55" x NPW x NPL LAMINATED PAD
50 DUROMETER GRADE 3 NEOPRENE
VULCANIZE BONDED TO LOAD PLATE
(40) REQUIRED

SEE NOTES ON SHEET GN1 OF 1

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BRIDGE NO.: CUY-010-1949
OH-10 OVER
KINGSBURY RUN RAVINE
CITY OF CLEVELAND

STATE	COUNTY	PID NO.
OH	CUYAHOGA	96833

FEDERAL PROJ. NO.: E140(249)

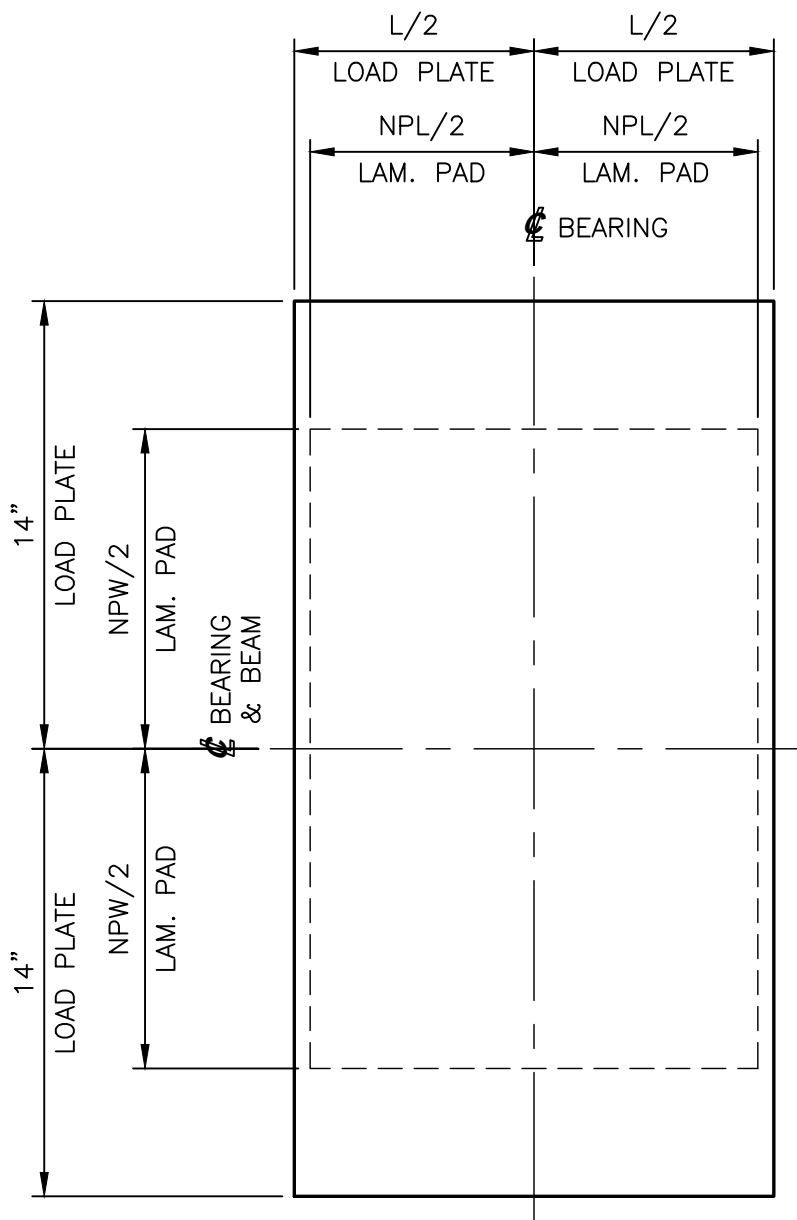
DYNAMIC RUBBER
LAM. ELASTOMERIC BEARING ASSY.'S

Cosmee 1501 ROCKY RIDGE ROAD
P.O. BOX 2159
ATHENS, TEXAS 75751

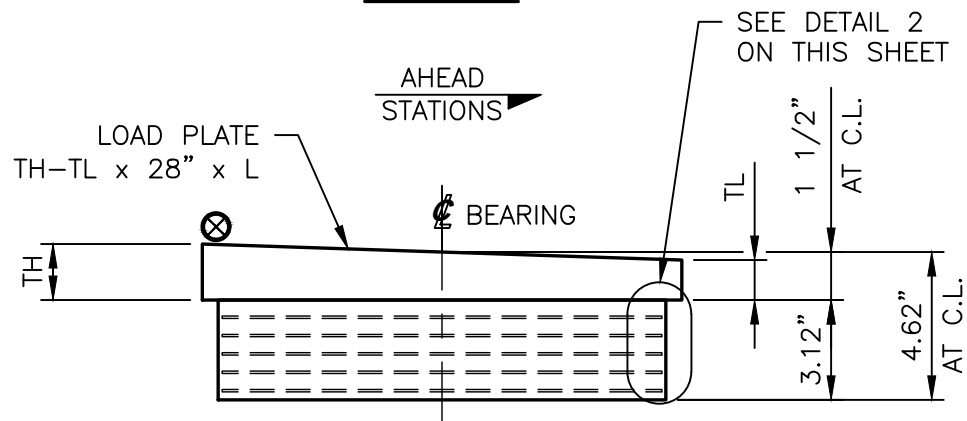
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SHEET 1 OF 2	JOB NO.: 16446
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REV.	DESCRIPTION	BY	DATE	CK'D	DATE	CUSTOMER: KOKOSING CONSTRUCTION	DRAWING NUMBER 16446-D1	REV. 0
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PLAN VIEW



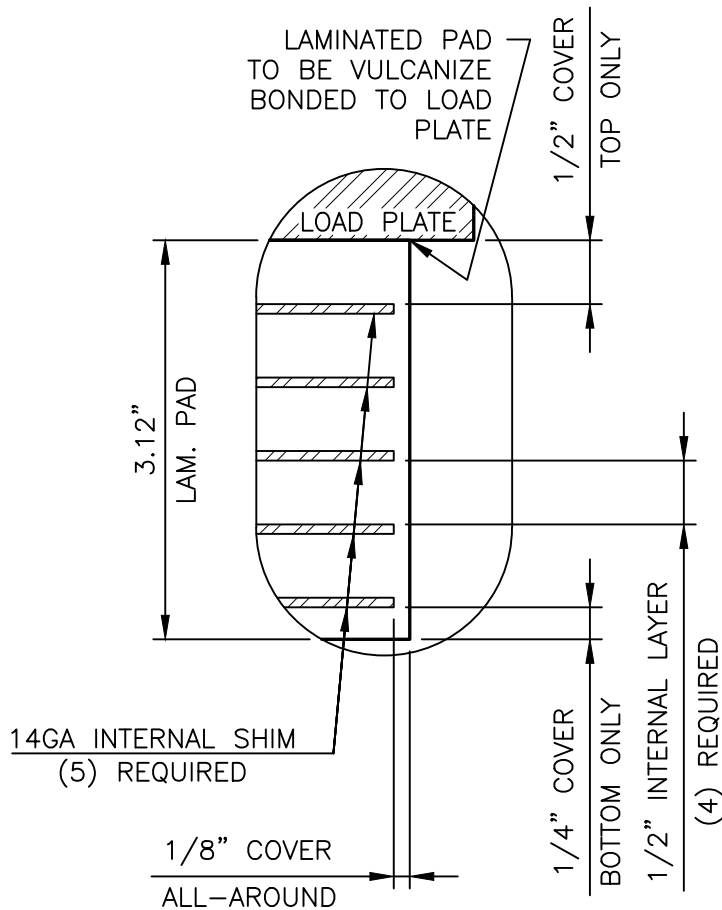
ELEVATION VIEW

FIXED LAMINATED ELASTOMERIC BEARING ASSEMBLY (REF. NO.: 019)

REFER TO LAMINATED ELASTOMERIC BEARING TABLE #2 ON THIS SHEET FOR MARK NO.'S, QTY.'S, LOCATIONS, DESIGN LOADS & DIMENSIONS

LAMINATED ELASTOMERIC BEARING TABLE #2

MARK NO.	TYPE	QTY.	LOCATION			DESIGN LOADS			LOAD PLATE			LAM. PAD	
			ABUT./PIER	SPAN(S)	BEAM(S)	DL (KIPS)	LL (KIPS)	TOTAL LOAD (KIPS)	L (in.)	TH (in.)	TL (in.)	NPW (in.)	NPL (in.)
FBA1	FP1	10	PIER 1	1	B1-B10	104	91	195	13	1 19/32	1 13/32	18	12
FBA2	FP1	10	PIER 1	2	B11-B20	168	102	270	15	1 19/32	1 13/32	20	14
TEST1	NA	1	NA	NA	NA	168	102	270	NA	NA	NA	20	14



DETAIL 2

3.12" x NPW x NPL LAMINATED PAD
50 DUROMETER GRADE 3 NEOPRENE
VULCANIZE BONDED TO LOAD PLATE
(20) REQUIRED

TEST 1

3.12" x NPW x NPL LAMINATED PAD
50 DUROMETER GRADE 3 NEOPRENE
PAD ONLY FOR TESTING
(1) REQUIRED

SEE NOTES ON SHEET GN1 OF 1

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BRIDGE NO.: CUY-010-1949
OH-10 OVER
KINGSBURY RUN RAVINE
CITY OF CLEVELAND

STATE	COUNTY	PID NO.
OH	CUYAHOGA	96833

FEDERAL PROJ. NO.: E140(249)

DYNAMIC RUBBER
LAM. ELASTOMERIC BEARING ASSY.'S

Cosmee 1501 ROCKY RIDGE ROAD
P.O. BOX 2159
ATHENS, TEXAS 75751

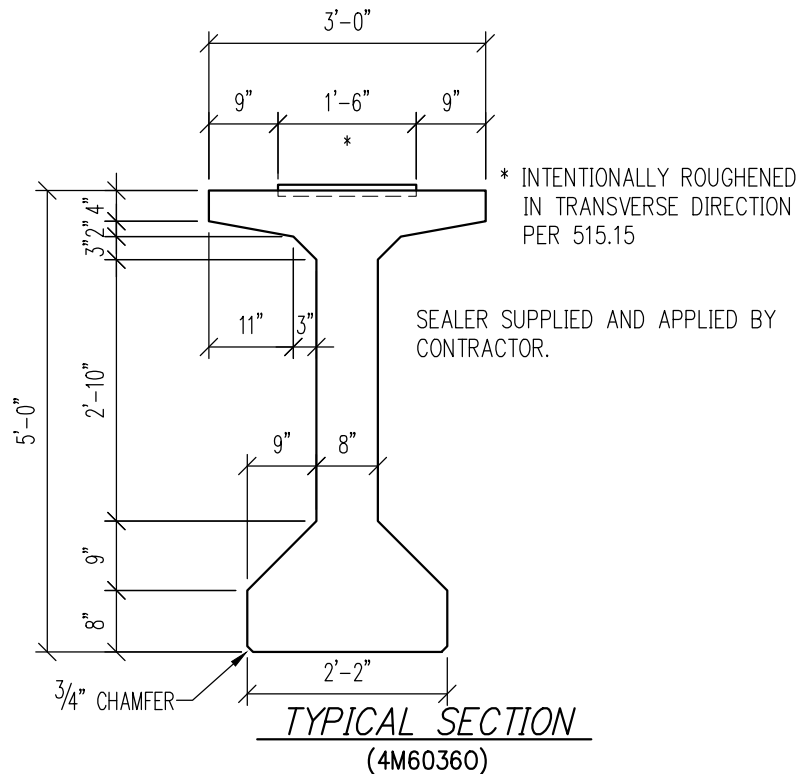
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	DATE: 01/04/21	DATE: 01/20/21

SHEET 2 OF 2 **JOB NO.: 16446**

REV.	DESCRIPTION	BY	DATE	CK'D	DATE	CUSTOMER: KOKOSING CONSTRUCTION	DRAWING NUMBER 16446-D2	REV. 0
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10/14/2020





8. LIFTLOOPS ARE TO BE REMOVED AFTER ERECTION (NOT BY PS).
9. BEAM SHIPPING LENGTHS & WEIGHTS (FOR INTERNAL USE ONLY):
 - MK 501: 66'-2 $\frac{3}{4}$ " 28 TONS.
 - MK 502-506: 65'-9 $\frac{5}{8}$ " 28 TONS.
 - MK 507-511: 103'-7 $\frac{5}{16}$ " 44 TONS.
 - MK 512-516: 63'-4 $\frac{3}{16}$ " 27 TONS.

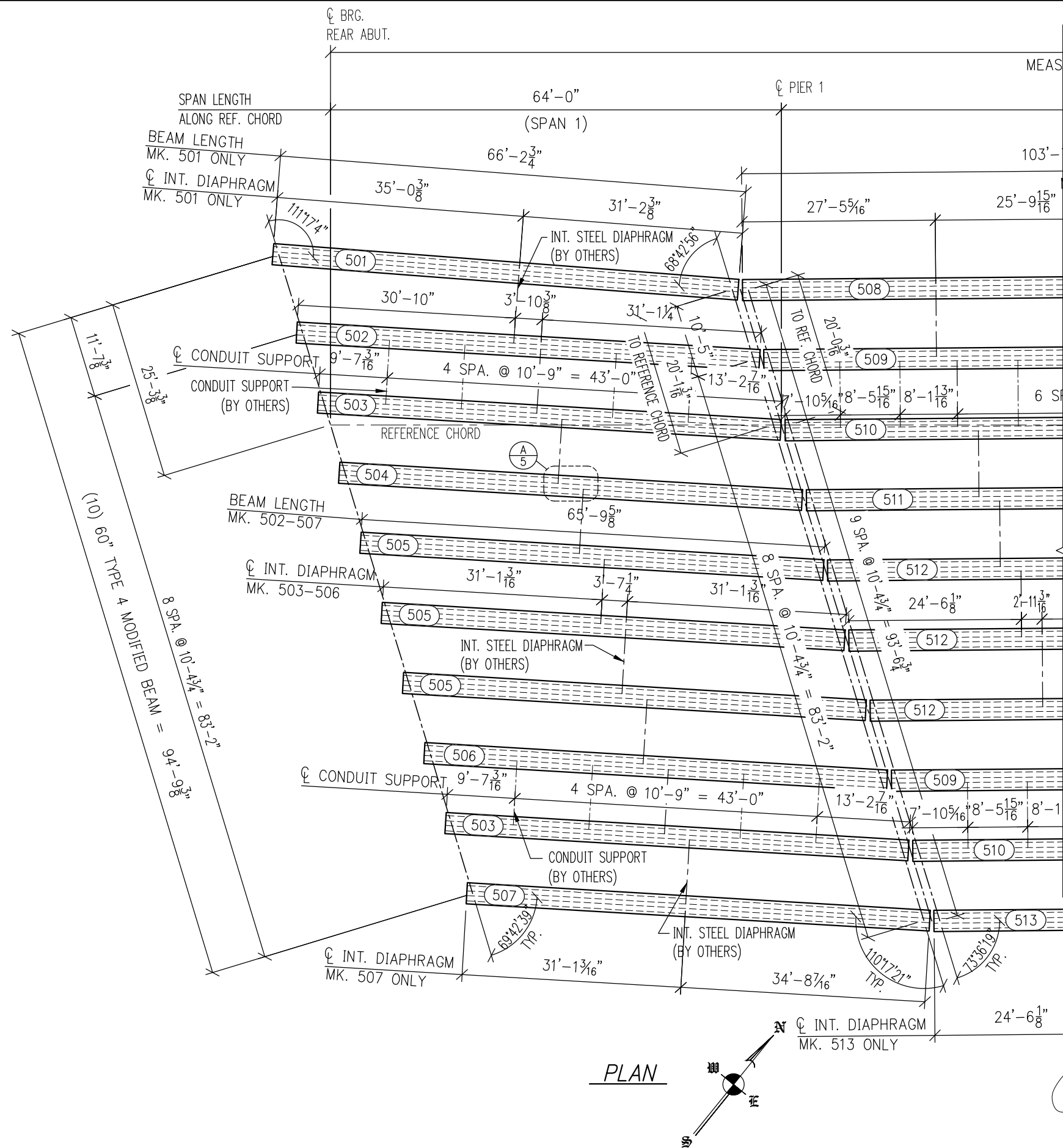


ALL LIFTING DEVICES PROVIDED BY PRESTRESS SERVICES ARE MEANT TO BE USED SIMULTANEOUSLY AND EQUALLY, 90 DEGREES TO THE BEAM AS RECOMMENDED BY PCI GUIDELINES WITH THE USE OF A SPREADER BEAM OR TWO CRANES. ANY ADDITIONAL LIFTING DEVICES THAT ARE REQUESTED THAT DEVIATE FROM THIS STANDARD FOR ERECTING PURPOSES IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS ADVISED TO HAVE AN ENGINEER REVIEW ANY DEVIATION FROM THIS STANDARD WITH CONSIDERATION GIVE TO BEAM STRESSES, STRENGTH, AND STABILITY. PRESTRESS SERVICES WILL NOT BE LIABLE FOR ANY VARIATIONS TO THE STANDARD PROCEDURE.

FABRICATION TOLERANCES FOR BEAMS	
BEAM DIMENSIONS	
DESCRIPTION	TOLERANCE
LENGTH OF BEAM	$\pm 1/8"$ PER 10 FT, MAX $\pm 1"$
DEPTH OF BEAM	$+1/2"$, $-1/4"$
DEPTH OF FLANGE INCLUDING FILLETS	$\pm 1/4"$
FLANGE WIDTH	$+3/8"$, $-1/4"$
FLANGE THICKNESS EXCLUDING FILLETS	$\pm 1/4"$
WIDTH WEB	$+3/8"$, $-1/4"$
DEVIATION FROM TRUE VERTICAL	$1/8"$ PER FT.
DEVIATION FROM SKEW ANGLE	$\pm 1/2"$
BEAM ACCESSORY	
POSITION OF LIFTING DEVICES	$\pm 6"$
POSITIONS OF ANCHOR DOWELS AND TIE RODS, INSERTS	$\pm 1/2"$
BEAM STRAND	
STRAND TENDON POSITION	$\pm 1/4"$
STRAND CG POSITION	$\pm 1/4"$
BEAMS SWEEP AND CAMBER	
HORIZONTAL SWEEP	$\pm 1/8"$ PER 10 FT, MAX. $\pm 1"$
DEVIATION FROM DESIGN CAMBER	+ SACRIFICIAL HAUNCH
REINFORCING STEEL	
CLEAR COVER	$-0"$, $+1/4"$
SPLICE LENGTHS	$-1 1/2"$
STIRRUP SPACING IN ANCHORAGE ZONE	$\pm 1/4"$
STIRRUP SPACING OUTSIDE ANCHORAGE ZONE	$\pm 1"$
STIRRUP EXTENSION ABOVE TOP FLANGE	$-0"$, $+1"$

STATE PROJECT

COVER SHEET			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
		PRESTRESS SERVICES INDUSTRIES LLC	
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS   			
CODE: 4M60360		SHEET: 1 OF 34	JOB NO: D19262



PLAN

SUBMITTED

10/19/2020 8:41:12 AM

ERECTION LAYOUT (SPAN 1)

CUYAHOGA COUNTY, OHIO
OH-10 OVER KINGSBURY RUN RAVINE
BRIDGE No. CUY-10-1949 STR. FILE: 1801515
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000

CONTRACTOR: KOKOSING CONSTRUCTION



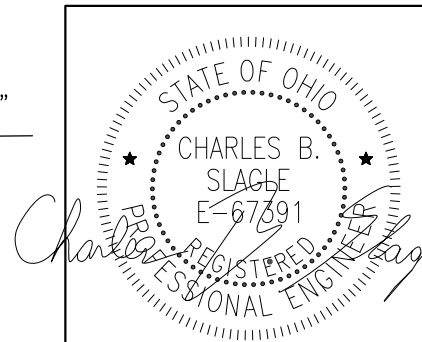
PRESTRESS
SERVICES INDUSTRIES LLC

Production: Decatur, IN (260) 724-7117 Drafting: Lexington, KY (859) 299-0461

DATE: 7/7/20 DRAWN BY: Shawn Hubbell CHECKED: Tony May


REVISIONS		

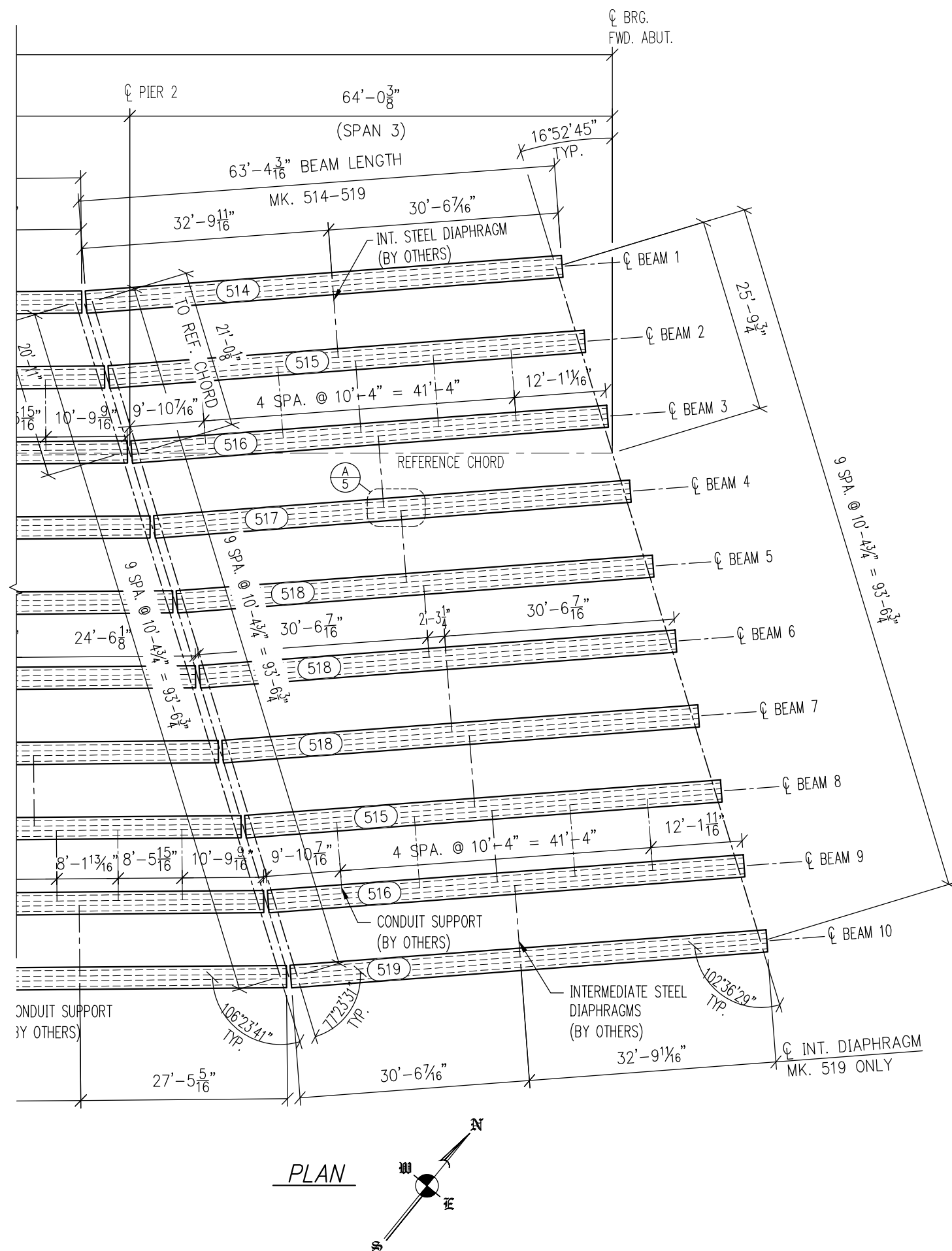
CODE: 4M60360 SHEET: 2 OF 34 JOB NO: D19262









10/19/2020 8:41:16 AM

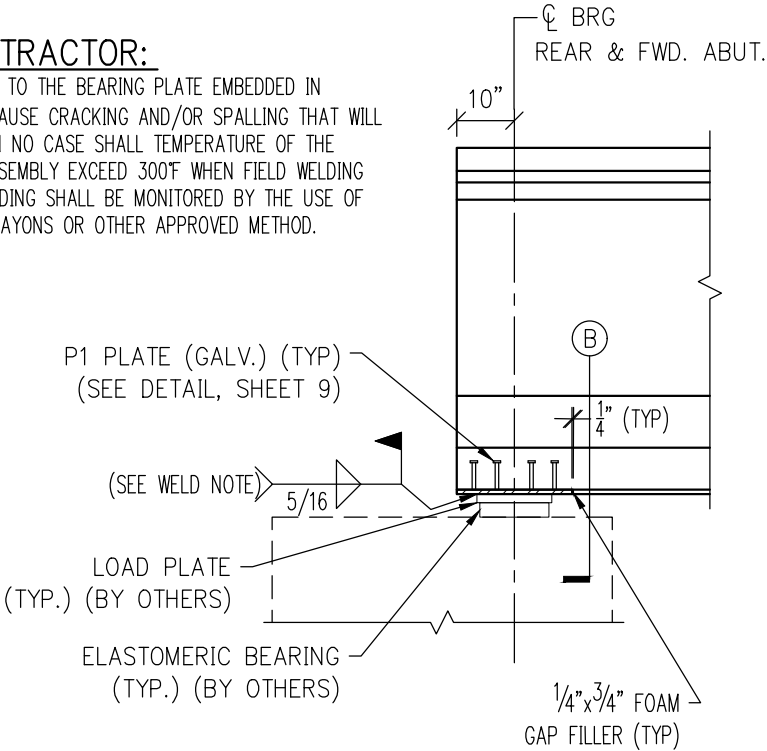
ERECTION LAYOUT (SPAN 2)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
 PRESTRESS SERVICES INDUSTRIES LLC			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony Ma	
REVISIONS <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
CODE: 4M60360		SHEET: 3 OF 34	JOB NO: D1926



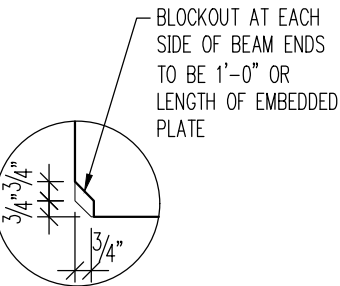
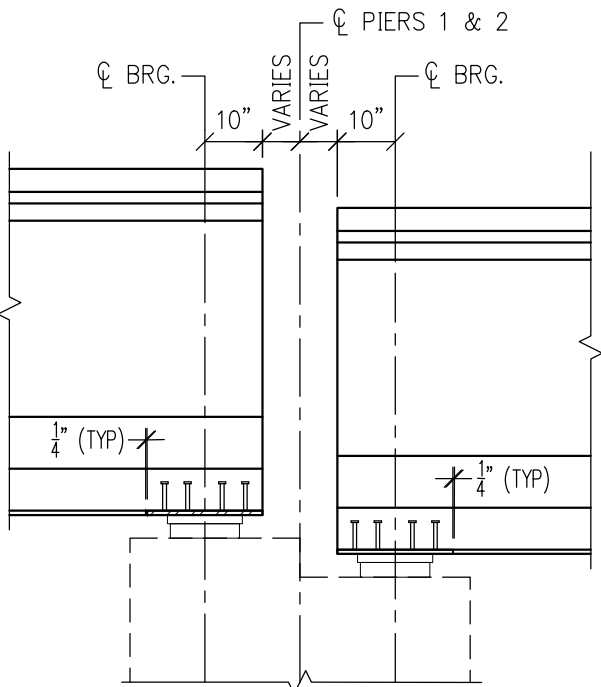
SUBMITTED
10/19/2020 8:41:19 AM

ERECTION LAYOUT (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
		PRESTRESS SERVICES INDUSTRIES LLC	
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20		DRAWN BY: Shawn Hubbell	
CHECKED: Tony Ma			
REVISIONS			
			
			
CODE: 4M60360		SHEET: 4 OF 34	
JOB NO: D1926			

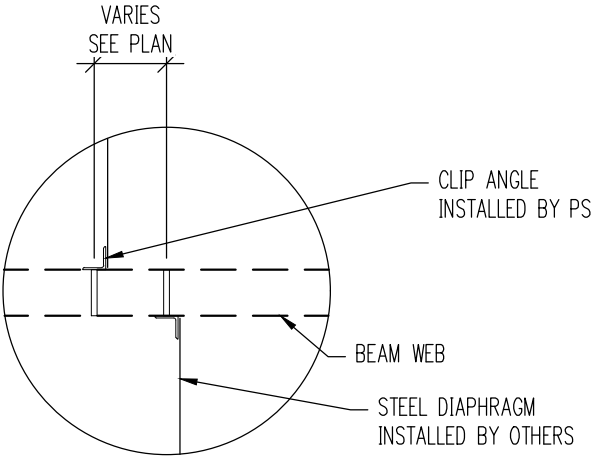
NOTE FOR CONTRACTOR:
USE CAUTION WHEN WELDING TO THE BEARING PLATE EMBEDDED IN BEAMS. OVERHEATING CAN CAUSE CRACKING AND/OR SPALLING THAT WILL REQUIRE COSTLY REPAIRS. IN NO CASE SHALL TEMPERATURE OF THE LOAD PLATE OR BEARING ASSEMBLY EXCEED 300°F WHEN FIELD WELDING TO THE BEARING PLATE. WELDING SHALL BE MONITORED BY THE USE OF TEMPERATURE INDICATING CRAYONS OR OTHER APPROVED METHOD.



ELEVATION

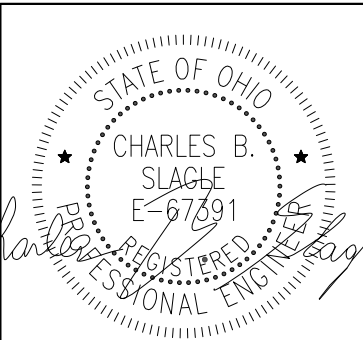


SECTION B
(TYP ALL BEAMS)

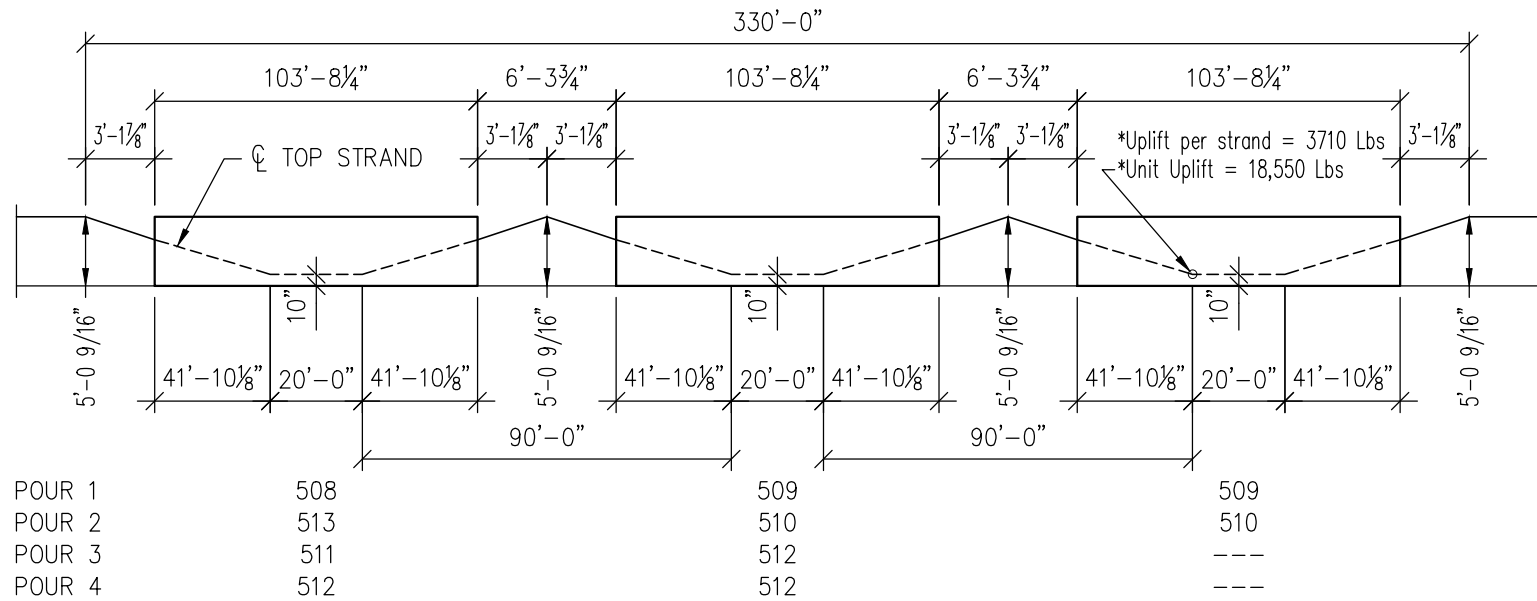


DETAIL A
(SHOWING ANGLE PLACEMENT)

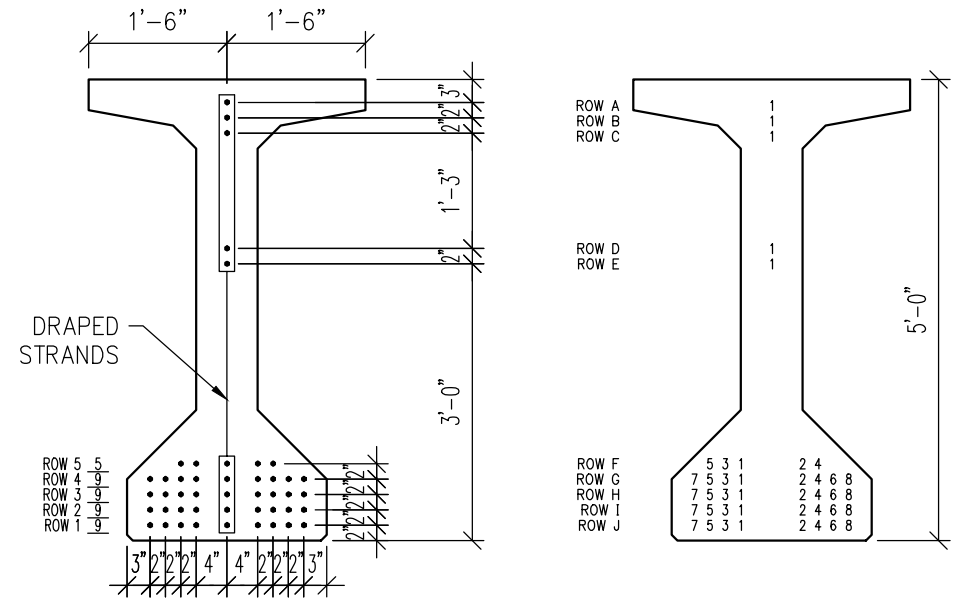
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10/19/2020 8:41:25 AM



ERECTION DETAILS		
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000		
CONTRACTOR: KOKOSING CONSTRUCTION		
Production: Decatur, IN (260) 724-7117	Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May
REVISIONS		
CODE: 4M60360	SHEET: 5 OF 34	JOB NO: D19262



350' BED LAYOUT (4M60360)
* FOR INTERNAL USE ONLY



41 - 0.6"Ø 270K LOW RELAX ($A_s=0.217"$)
PREPULL AT 5,000 LBS., FINAL PULL AT 43,943 LBS.

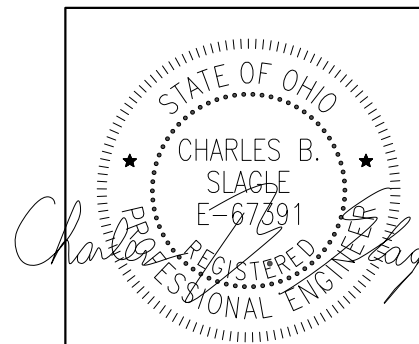
POURS 1 THRU 4
(SPAN 2)

STRAND PATTERN & DETENSIONING DETAIL

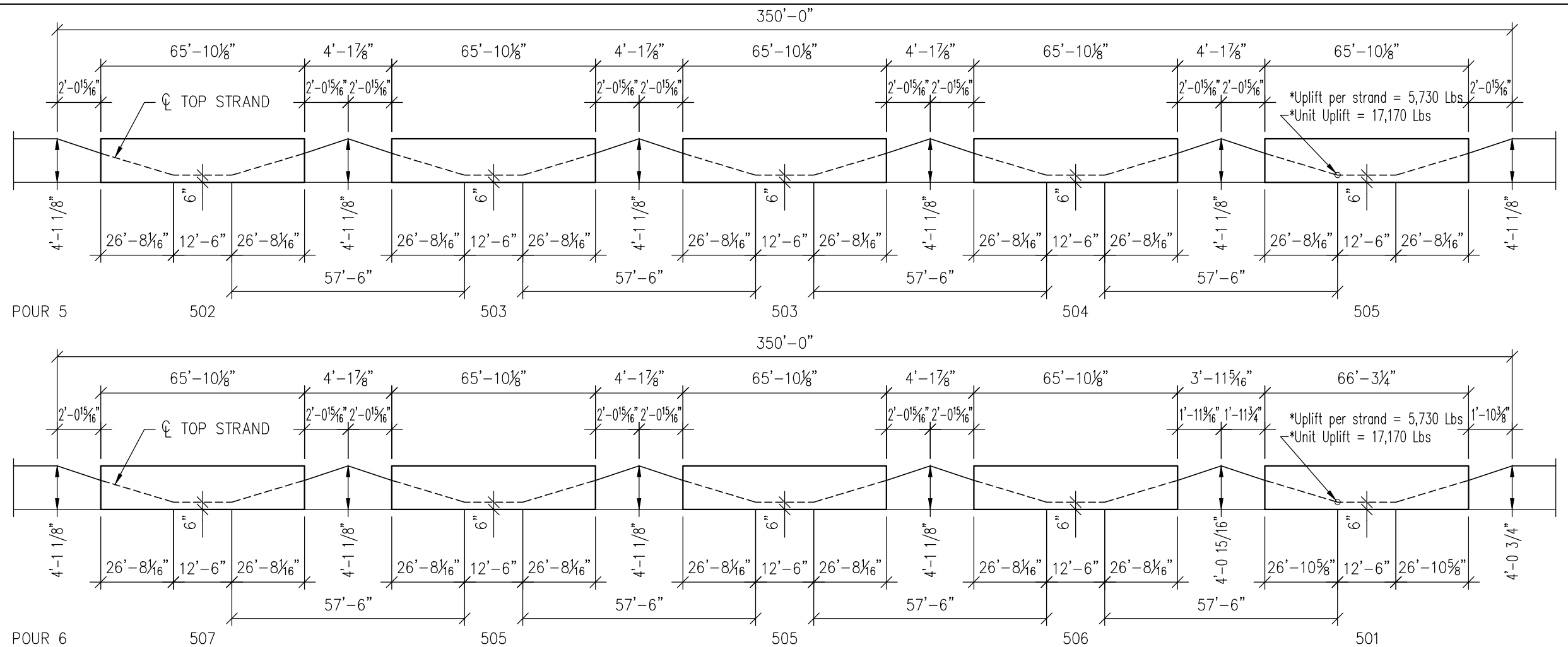
BED LAYOUT NOTES (SPAN 2)

- ALL DIMENSIONS ARE CASTING DIMENSIONS AND ARE MEASURED ALONG THE SOFFIT AT THE CENTERLINE OF THE BEAM.
- DRAPED STRANDS ARE STRESSED IN THE DRAPED POSITION.
- ALL HOLDDOWNS ARE DAYTON/RICHMOND H-40. MAXIMUM SAFE WORKING LOADS: 8,000 Lbs. PER STRAND AND 40,000 LBS. PER UNIT.
- SEE DETENSIONING DETAIL(S) FOR DETENSIONING PROCEDURE SEQUENCE.
- STRAND DETENSIONING STARTS WITH ROW A THEN B AND SO ON. DETENSION TOTAL ROW IN SEQUENCE BEFORE MOVING TO THE NEXT ROW. AFTER DETENSIONING DRAPED STRANDS, RELEASE HOLDDOWNS THEN DETENSION PARALLEL STRANDS.
- THERE ARE NO EXTENDED STRANDS.

SUBMITTED
10/19/2020 8:41:28 AM

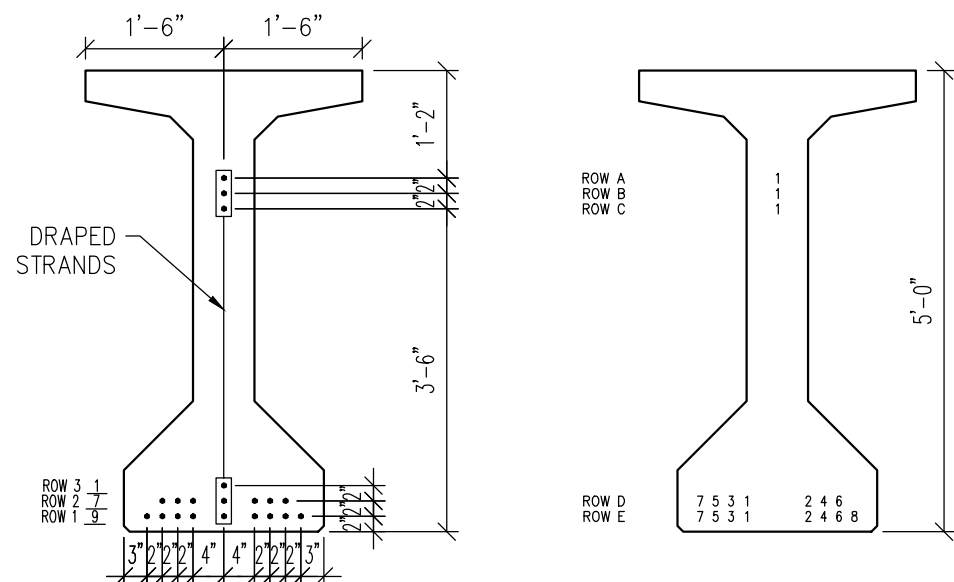


CASTING BED LAYOUT (SPAN 2)		
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000		
CONTRACTOR: KOKOSING CONSTRUCTION		
Production: Decatur, IN (260) 724-7117	Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May
REVISIONS		
CODE: 4M60360	SHEET: 6 OF 34	JOB NO: D19262



350' BED LAYOUT (4M60360)

* FOR INTERNAL USE ONLY



17 - 0.6"Ø 270K LOW RELAX ($A_s=0.217"$)
PREPULL AT 5,000 LBS., FINAL PULL AT 43,943 LBS.

POURS 5 & 6

(SPAN 1)

STRAND PATTERN & DETENSIONING DETAIL

BED LAYOUT NOTES (SPAN 1)

1. ALL DIMENSIONS ARE CASTING DIMENSIONS AND ARE MEASURED ALONG THE SOFFIT AT THE CENTERLINE OF THE BEAM.
2. DRAPED STRANDS ARE STRESSED IN THE DRAPED POSITION.
3. ALL HOLDDOWNS ARE DAYTON/RICHMOND H-40. MAXIMUM SAFE WORKING LOADS: 8,000 Lbs. PER STRAND AND 40,000 LBS. PER UNIT.
4. SEE DETENSIONING DETAIL(S) FOR DETENSIONING PROCEDURE SEQUENCE.
5. STRAND DETENSIONING STARTS WITH ROW A THEN B AND SO ON. DETENSION TOTAL ROW IN SEQUENCE BEFORE MOVING TO THE NEXT ROW. AFTER DETENSIONING DRAPED STRANDS, RELEASE HOLDDOWNS THEN DETENSION PARALLEL STRANDS.
6. THERE ARE NO EXTENDED STRANDS.

SUBMITTED
10/19/2020 8:41:31 AM

CASTING BED LAYOUT (SPAN 1)

CUYAHOGA COUNTY, OHIO
OH-10 OVER KINGSBURY RUN RAVINE
BRIDGE No. CUY-10-1949 STR. FILE: 1801515
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000

CONTRACTOR: KOKOSING CONSTRUCTION



PRESTRESS
SERVICES INDUSTRIES LLC

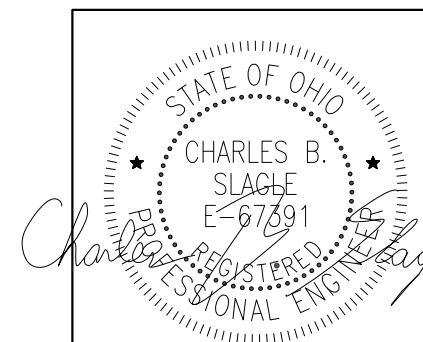
Production: Decatur, IN (260) 724-7117	Drafting: Lexington, KY (859) 299-0461
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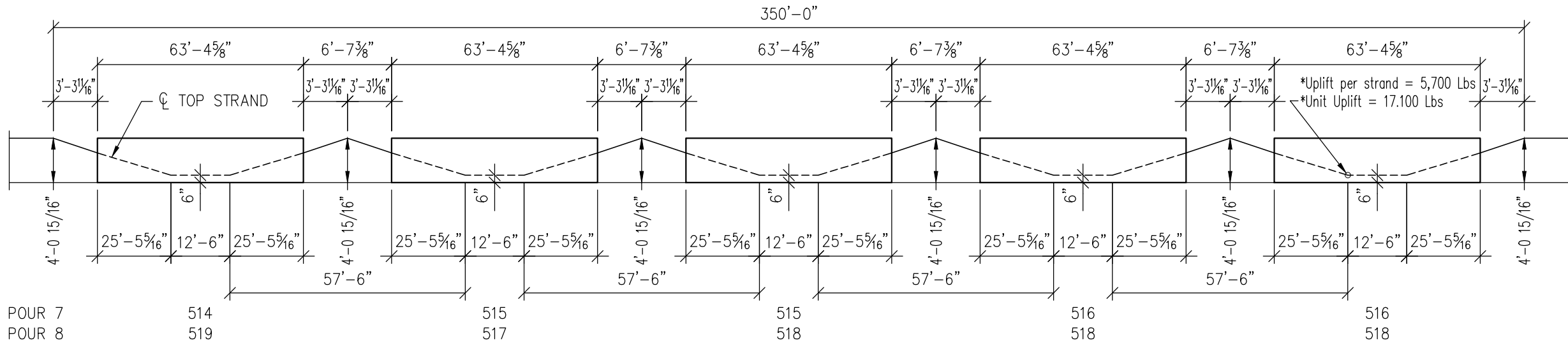
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May
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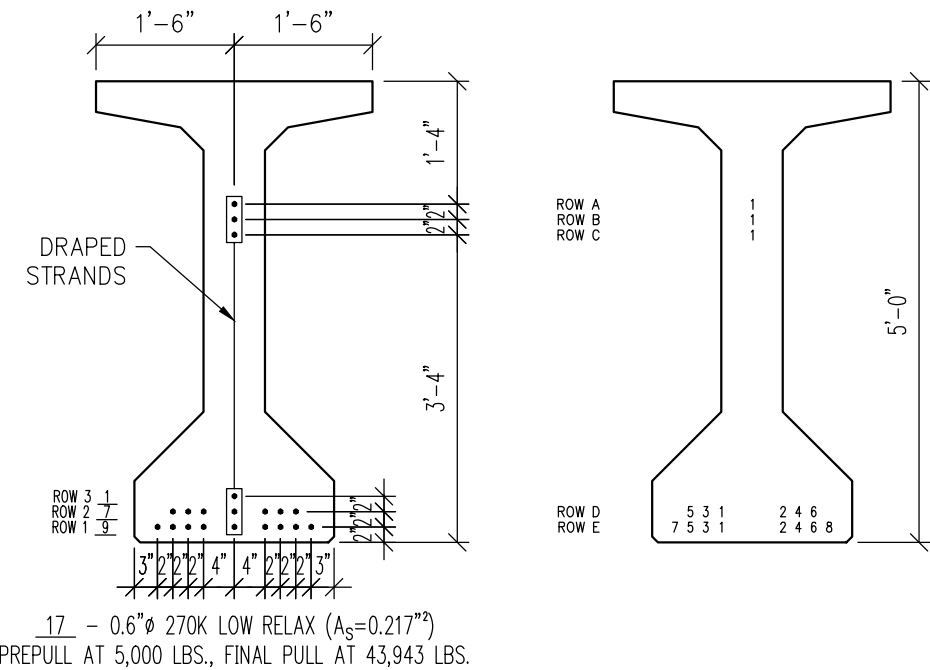
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CODE: 4M60360	SHEET: 7 OF 34	JOB NO: D19262
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350' BED LAYOUT (4M60360)
* FOR INTERNAL USE ONLY

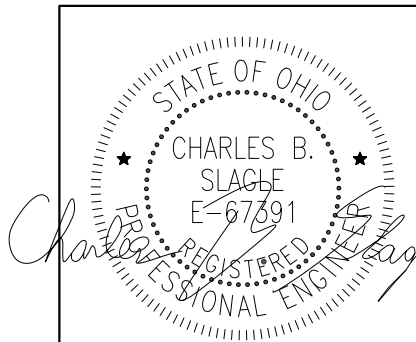


17 - 0.6"Ø 270K LOW RELAX (A_S=0.217")
PREPULL AT 5,000 LBS., FINAL PULL AT 43,943 LBS.


POURS 7 & 8
(SPAN 3)
STRAND PATTERN & DETENSIONING DETAIL

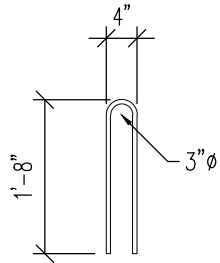
BED LAYOUT NOTES (SPAN 3)

1. ALL DIMENSIONS ARE CASTING DIMENSIONS AND ARE MEASURED ALONG THE SOFFIT AT THE CENTERLINE OF THE BEAM.
2. DRAPED STRANDS ARE STRESSED IN THE DRAPED POSITION.
3. ALL HOLDDOWNS ARE DAYTON/RICHMOND H-40. MAXIMUM SAFE WORKING LOADS: 8,000 Lbs. PER STRAND AND 40,000 LBS. PER UNIT.
4. SEE DETENSIONING DETAIL(S) FOR DETENSIONING PROCEDURE SEQUENCE.
5. STRAND DETENSIONING STARTS WITH ROW A THEN B AND SO ON. DETENSION TOTAL ROW IN SEQUENCE BEFORE MOVING TO THE NEXT ROW. AFTER DETENSIONING DRAPED STRANDS, RELEASE HOLDDOWNS THEN DETENSION PARALLEL STRANDS.
6. THERE ARE NO EXTENDED STRANDS.

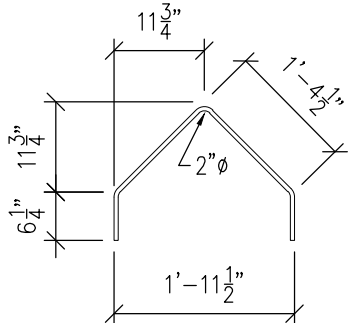


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10/19/2020 8:41:34 AM

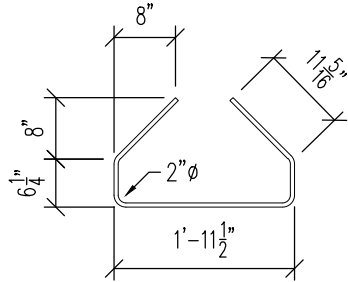
CASTING BED LAYOUT (SPAN 3)		
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000		
CONTRACTOR: KOKOSING CONSTRUCTION		
		
Production: Decatur, IN (260) 724-7117	Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May
REVISIONS		
CODE: 4M60360	SHEET: 8 OF 34	JOB NO: D19262



#401(E)x3'-7"
(2,961 REQ'D)



#405x3'-9"
(1,260 REQ'D)



#402x4'-9"
(2,940 REQ'D)

#3xFULL LENGTH (FOR FABRICATION)

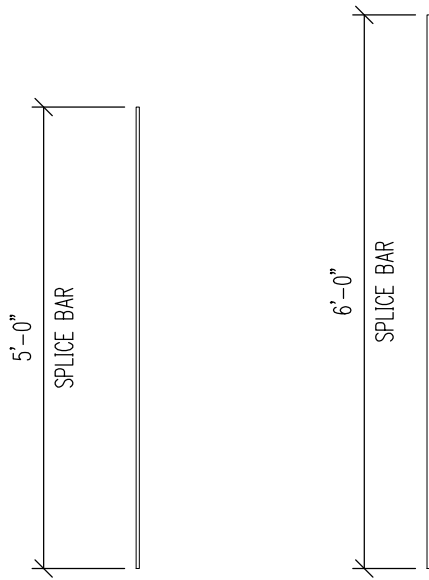
- 4 - #3x65'-10"
- 36 - #3x65'-5"
- 40 - #3x103'-3"
- 40 - #3x63'-0"

#3x5'-0" (AROUND SHIPPING HOLES)

- 240 - #3x5'-0"

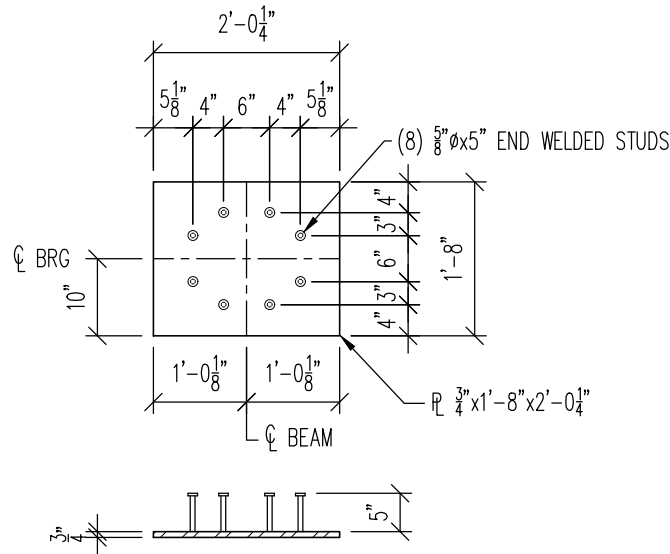
NOTE:

- 1) ALL REBAR IS ASTM A615 GRADE 60.
- 2) SEE PIECE DRAWINGS FOR INDIVIDUAL QUANTITIES PER BEAM.
- 3) WORK THIS SHEET WITH ALL BEAMS.
- 4) REBAR EXTENDING INTO DECK SHALL BE EPOXY COATED (E).
- 5) DIMENSIONS GIVEN ARE FROM OUT TO OUT OF BAR.
- 6) ALL WELDED WIRE REINFORCEMENT (WWR) MIN. YIELD TO BE 70 KSI.

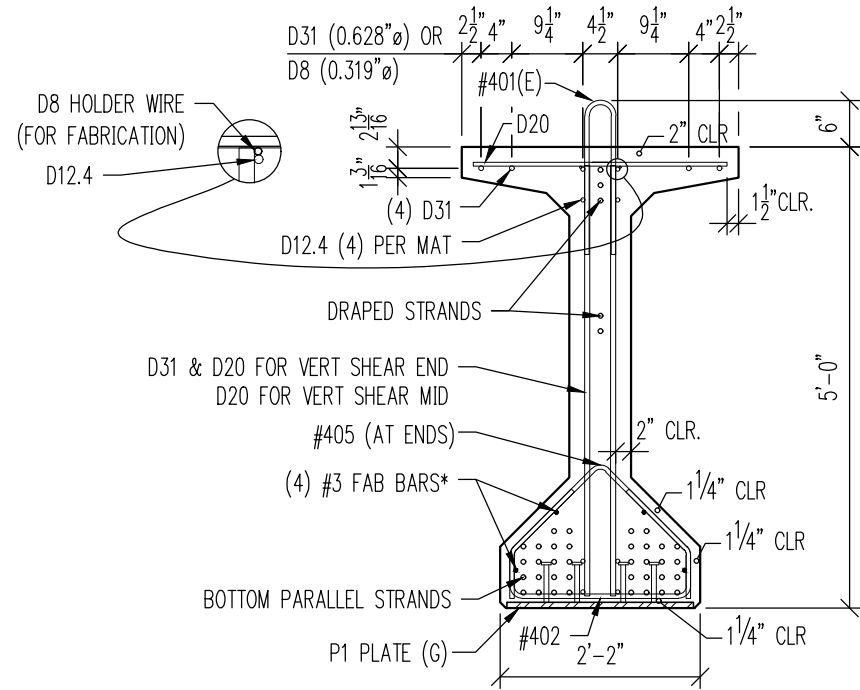


#4x5'-0"
(320 REQ'D)
(2'-0" MIN LAP)

#5x6'-0"
(160 REQ'D)
(2'-6" MIN LAP)



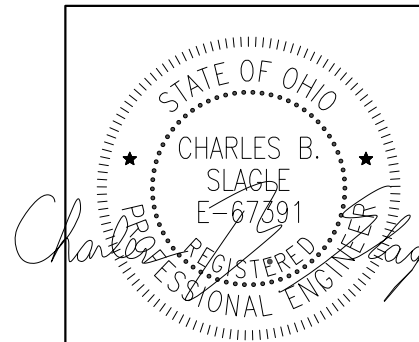
P1 PLATE (GALV)
(ASTM A709 GRADE 50)
(60 REQ'D)



REINFORCEMENT DETAIL

* REINFORCEMENT CAGES ARE TO BE MANUFACTURED IN SECTIONS TO OPTIMIZE PRODUCTION EFFICIENCY. ALL REINFORCEMENT DESIGNATED FULL LENGTH WILL BE MANUFACTURED PER THE SECTION LENGTHS AND SPLICED TOGETHER IN THE FORM AFTER SECTIONS HAVE BEEN SET, PER PCI GUIDELINES.

SUBMITTED
10/19/2020 8:41:37 AM



BAR BENDING DETAILS		
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000		
CONTRACTOR: KOKOSING CONSTRUCTION		
Production: Decatur, IN (260) 724-7117	Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May
REVISIONS		
CODE: 4M60360	SHEET: 9 OF 34	JOB NO: D19262

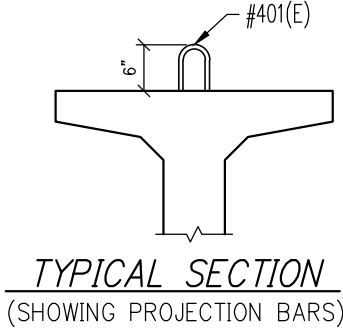
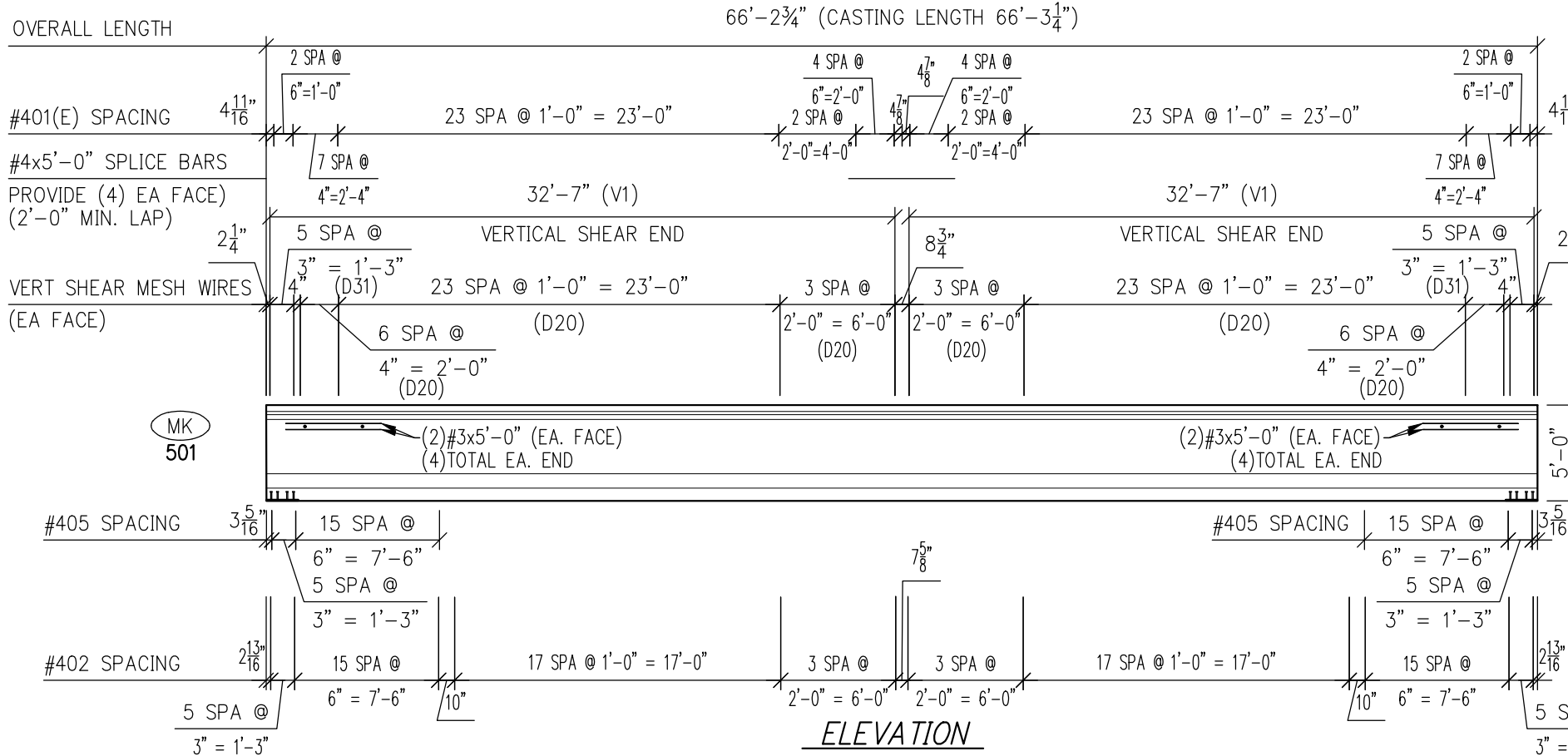
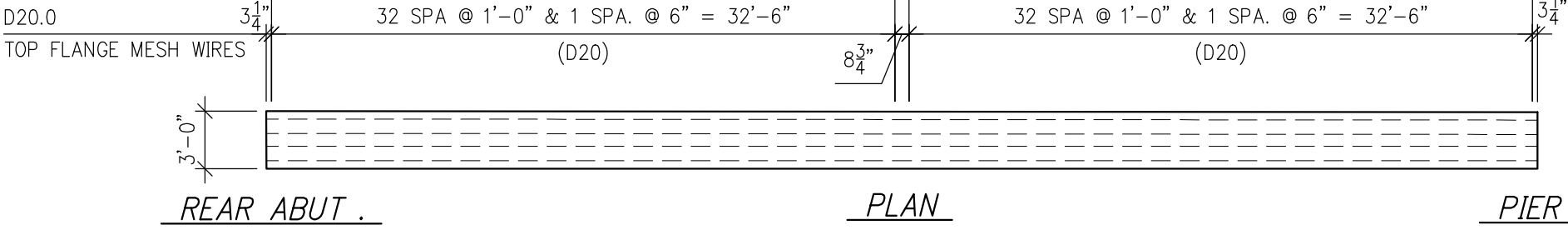
JMAY

D19262 < 10 REINFORCING-SPAN 1 >

2:19 PM

10/14/2020

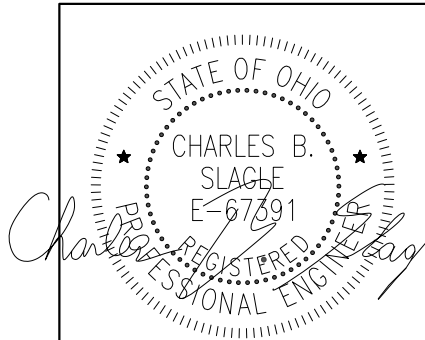
(4) #5x6'-0" SPLICE BARS
(TYP, FLANGE MESH)
(2'-6" MIN LAP)



BILL OF MATERIALS		
QTY	ITEM	FINISH
REBAR		
79	#401(E)x3'-7"	(E)
84	#402x4'-9"	(B)
42	#405x3'-9"	(B)
8	#4x5'-0"	(B)
4	#5x6'-0"	(B)
8	#3x5'-0"	(B)
4	#3x65'-10"	(B)
#3 (FABRICATION)		
WELDED WIRE FABRIC		
2	T1 TOP FLANGE END	(B)
4	V1 VERTICAL SHEAR END	(B)
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

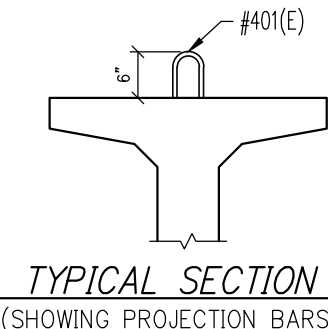
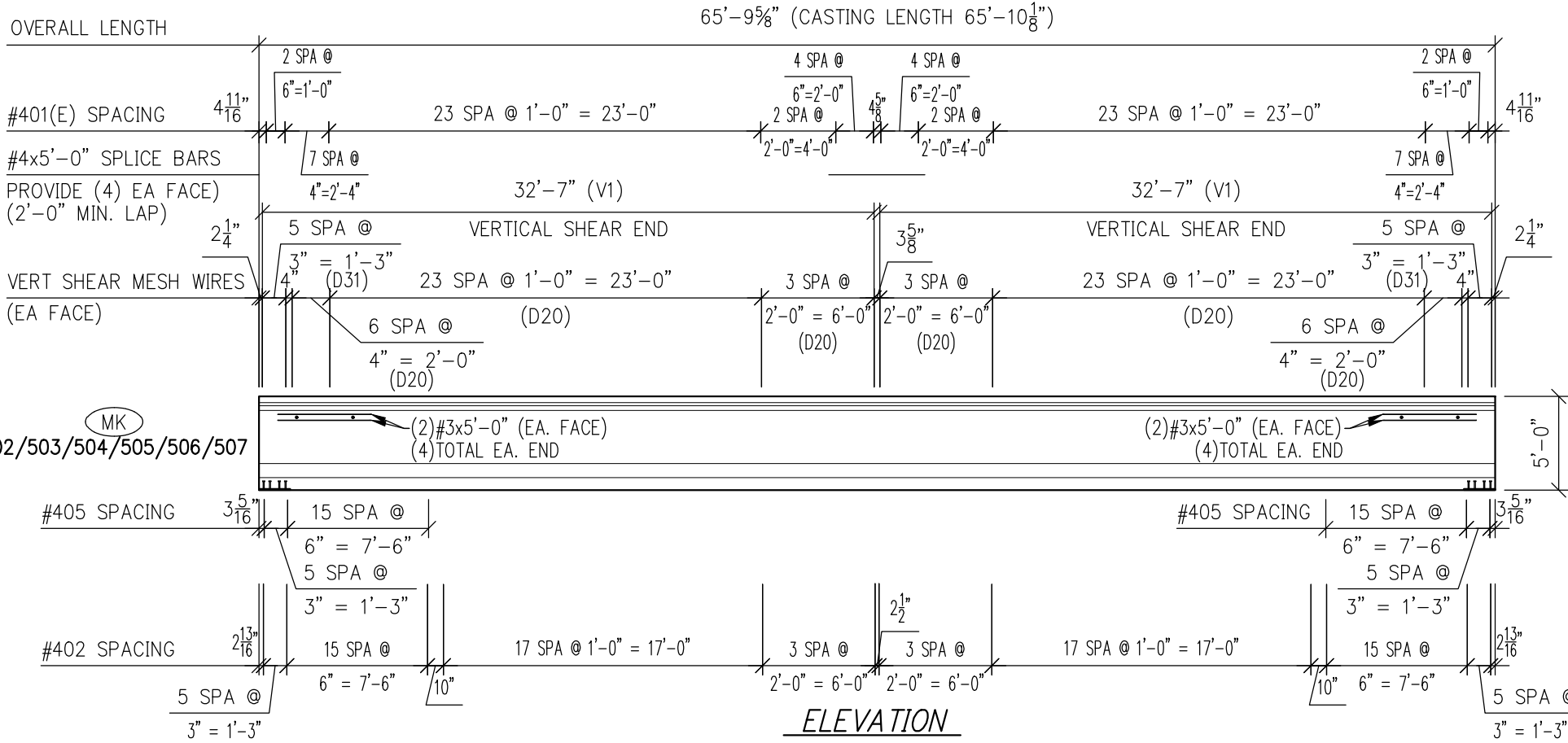
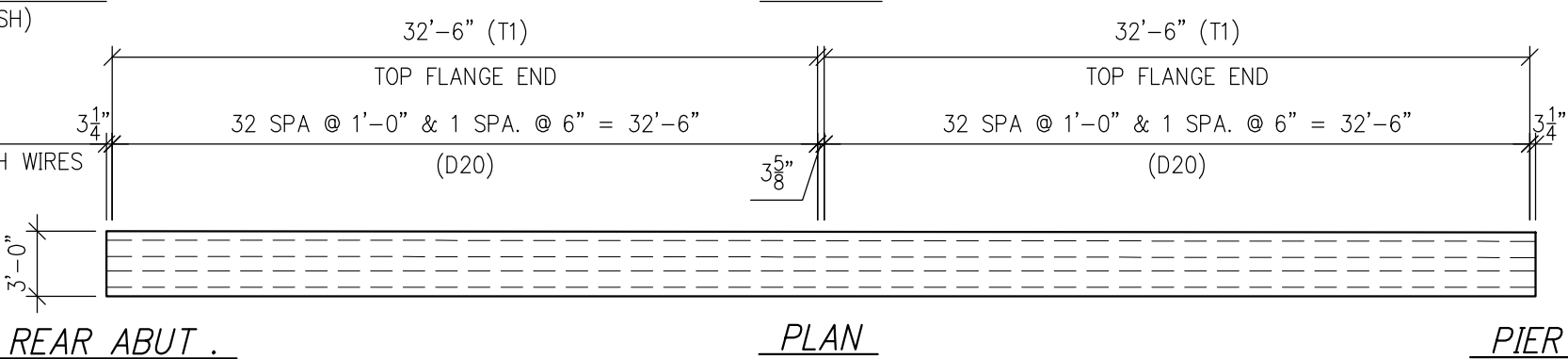
SUBMITTED
10/19/2020 8:41:40 AM

QTY:	1	MARK:	501
REINFORCEMENT (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION:			
CODE: 4M60360	SHEET: 10 OF 34	JOB NO: D19262	




(4) #5x6'-0" SPLICE BARS
(TYP, FLANGE MESH)
(2'-6" MIN LAP)

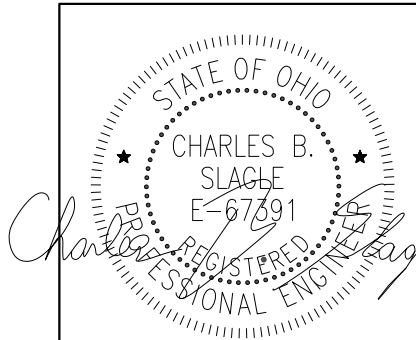
D20.0
TOP FLANGE MESH WIRES



BILL OF MATERIALS		
QTY	ITEM	FINISH
REBAR		
78	#401(E)x3'-7"	(E)
84	#402x4'-9"	(B)
42	#405x3'-9"	(B)
8	#4x5'-0"	(B)
4	#5x6'-0"	(B)
8	#3x5'-0"	(B)
4	#3x65'-5"	(B)
#3 (FABRICATION)		
WELDED WIRE FABRIC		
2	T1 TOP FLANGE END	(B)
4	V1 VERTICAL SHEAR END	(B)
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:41:43 AM

QTY: 1/2/1/3/1/1		MARK: 502/503/504/505/506/507	
REINFORCEMENT (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
		PRESTRESS SERVICES INDUSTRIES LLC	
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20		DRAWN BY: Shawn Hubbell	
CHECKED: Tony May			
CODE: 4M60360		SHEET: 11 OF 34	
		JOB NO: D19262	

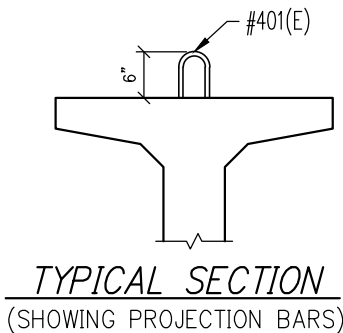
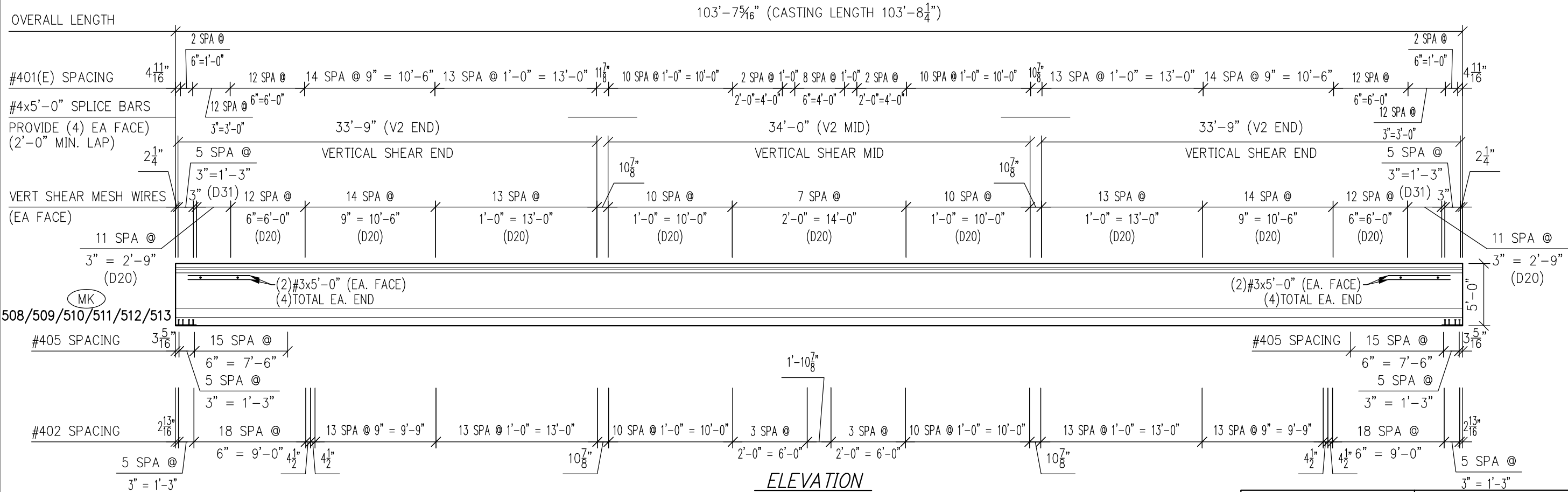
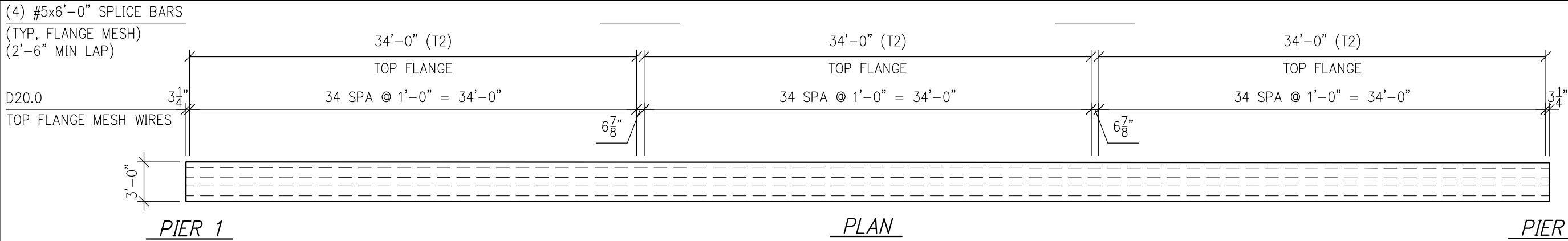


JMAY

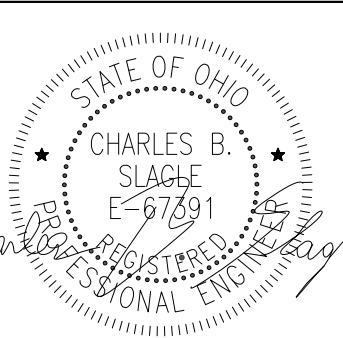
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2:19 PM

10/14/2020



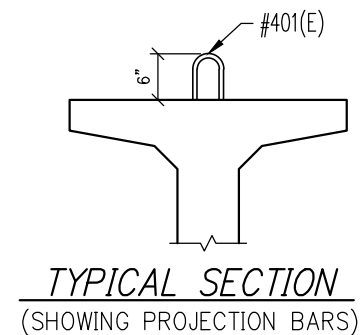
BILL OF MATERIALS		
QTY	ITEM	FINISH
REBAR		
143	#401(E)x3'-7"	(E)
132	#402x4'-9"	(B)
42	#405x3'-9"	(B)
16	#4x5'-0"	(B)
8	#5x6'-0"	(B)
8	#3x5'-0"	(B)
4	#3x103'-3"	(B)
#3 (FABRICATION)		
WELDED WIRE FABRIC		
3	T2 TOP FLANGE MESH	(B)
4	V2 VERTICAL SHEAR END	(B)
2	V2 VERTICAL SHEAR MID	(B)
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		



QTY: 1/2/2/1/3/1		MARK: 508/509/510/511/512/513										
REINFORCEMENT (SPAN 2)												
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000												
CONTRACTOR: KOKOSING CONSTRUCTION												
<div><div>PRESTRESS</div><div>SERVICES INDUSTRIES LLC</div></div>												
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461										
DATE: 7/7/20		DRAWN BY: Shawn Hubbell										
CHECKED: Tony May												
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CODE: 4M60360		SHEET: 12 OF 34										
		JOB NO: D19262										


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10/19/2020 8:41:48 AM

10/14/2020




BILL OF MATERIALS		
QTY	ITEM	FINISH
REBAR		
75	#401(E)x3'-7"	(E)
78	#402x4'-9"	(B)
42	#405x3'-9"	(B)
8	#4x5'-0"	(B)
4	#5x6'-0"	(B)
8	#3x5'-0"	(B)
4	#3x6.3'-0"	(B)
	#3 (FABRICATION)	
WELDED WIRE FABRIC		
2	T3 TOP FLANGE END	(B)
	V3 VERTICAL SHEAR END	(B)
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

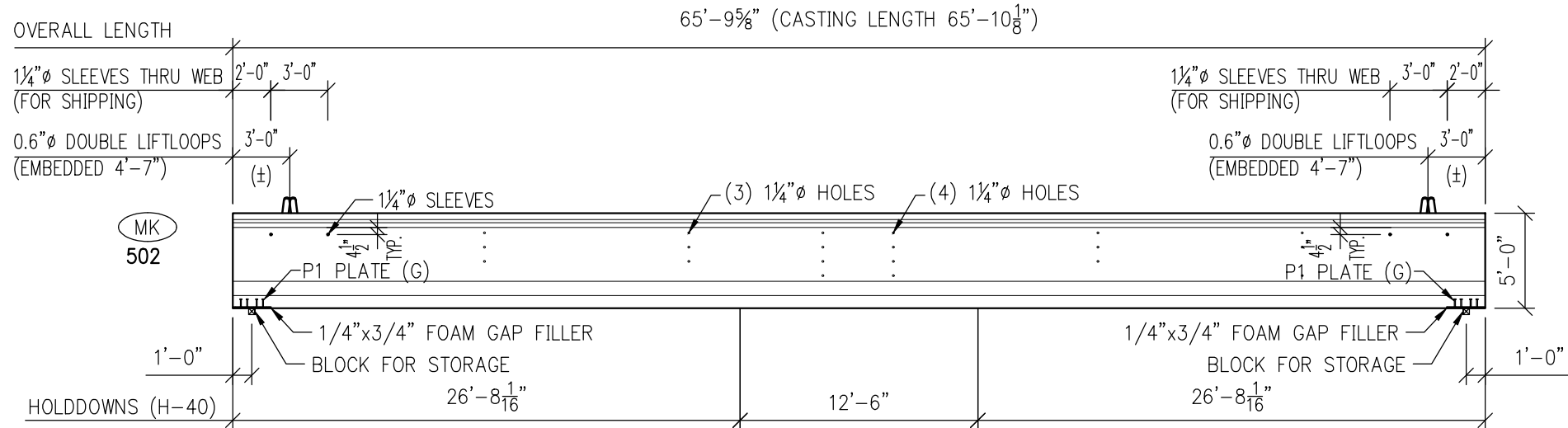
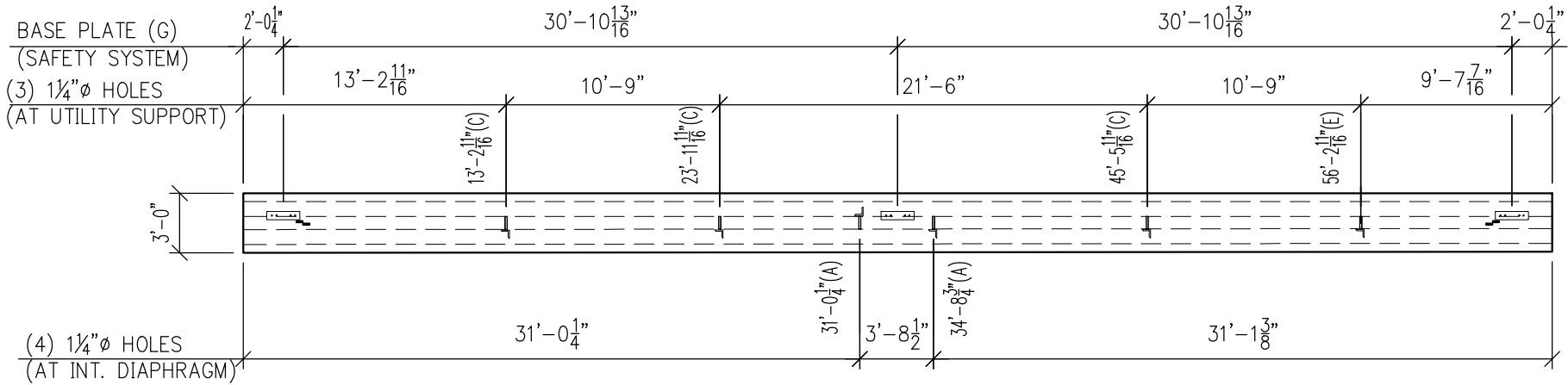
SUBMITTED
10/19/2020 8:41:52 AM

QTY: 1/2/2/1/3/1		MARK: 514/515/516/517/518/519	
REINFORCEMENT (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
<div><div><div>PRESTRESS</div><div>SERVICES INDUSTRIES LLC</div></div></div>			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20		DRAWN BY: Shawn Hubbell	
		CHECKED: Tony May	
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CODE: 4M60360		SHEET: 13 OF 34	
		JOB NO: D19262	

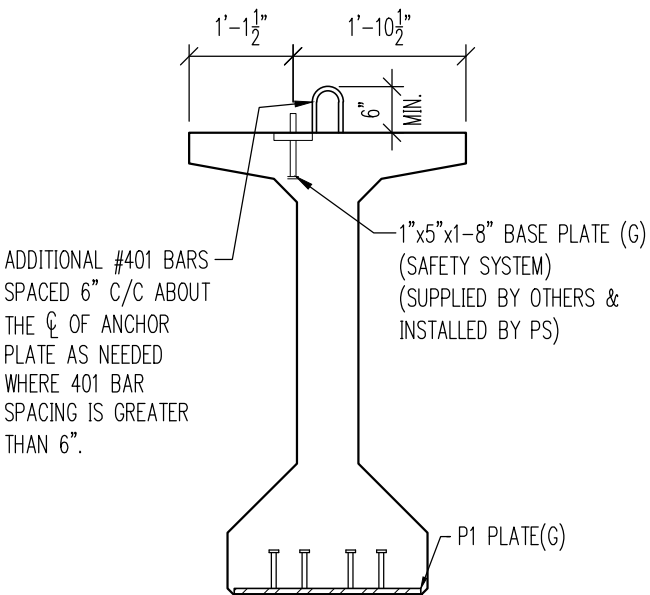
HARDWARE		
4	0.6" ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
8	1 1/4" ø HOLES	
17	TYPE 4-APR HANGERS	(G)
3	BASE PLATE	(G)
STRAND		
17	0.6" ø 270K LR ($A_s=0.217^2$)	(B)
CONCRETE		
CUBIC TOTAL:		14.70 CY
WEIGHT:		<u>59,400 LBS.</u>
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:41:55 AM

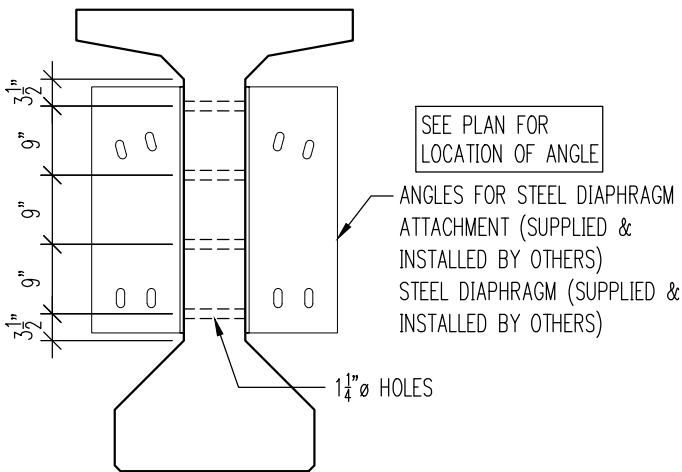
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HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
 PRESTRESS SERVICES INDUSTRIES LLC			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell		CHECKED: Tony May
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CODE: 4M60360		SHEET: 14 OF 34	JOB NO: D19262



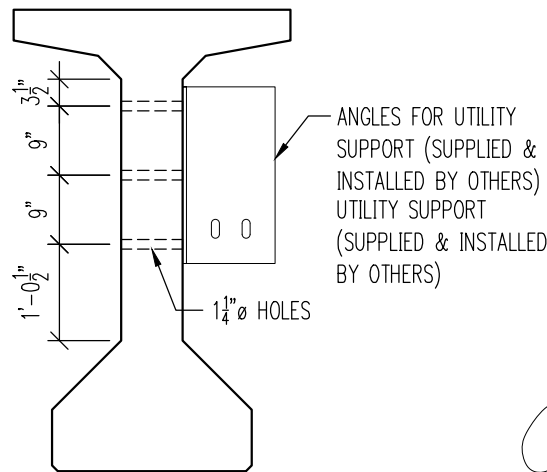
NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



TYPICAL SECTION
(AT ABUT. & PIER)



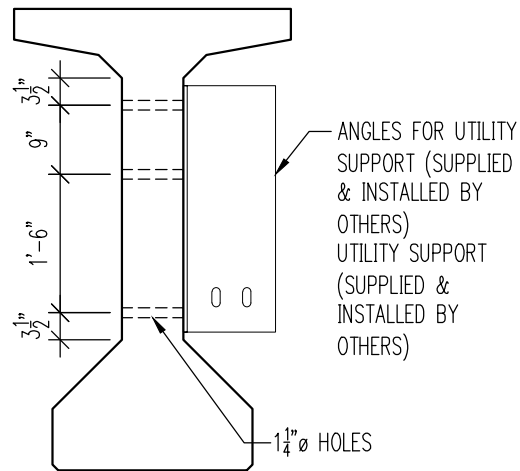
TYPICAL SECTION
(AT INT. DIAPHRAGM A)



TYPICAL SECTION
(AT UTILITY SUPPORT C)

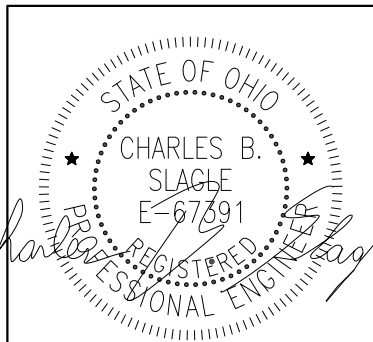
HARDWARE		
4	0.6" Ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
24	1 1/4" Ø HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" Ø 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL:		14.60 CY
WEIGHT:		59,000 LBS.
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

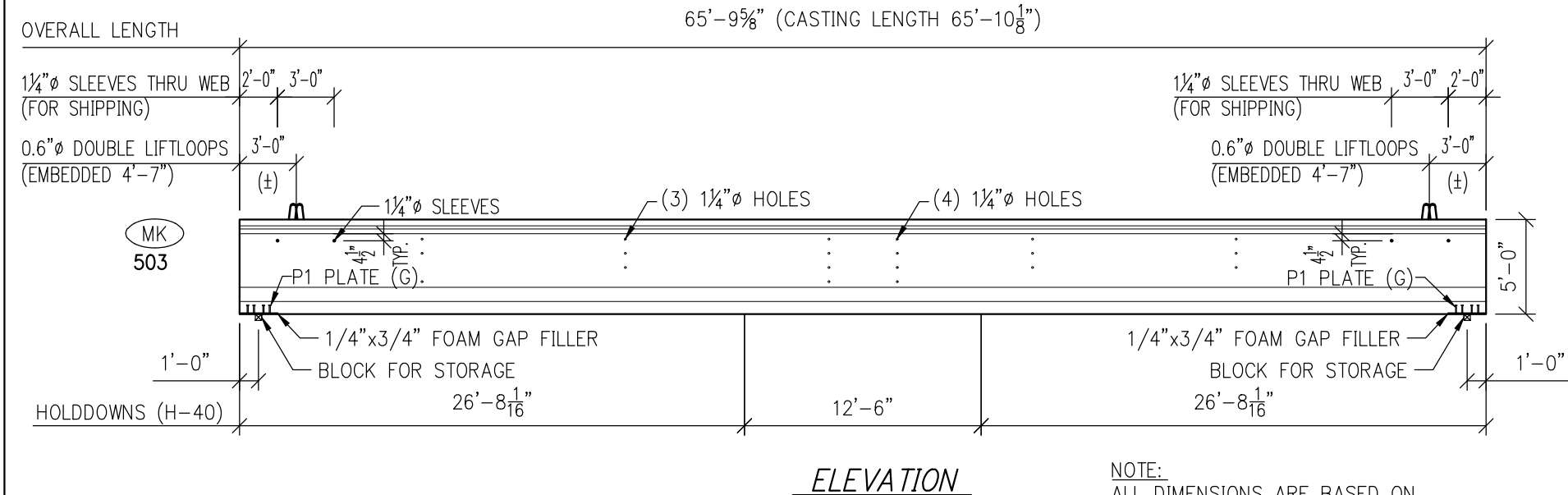
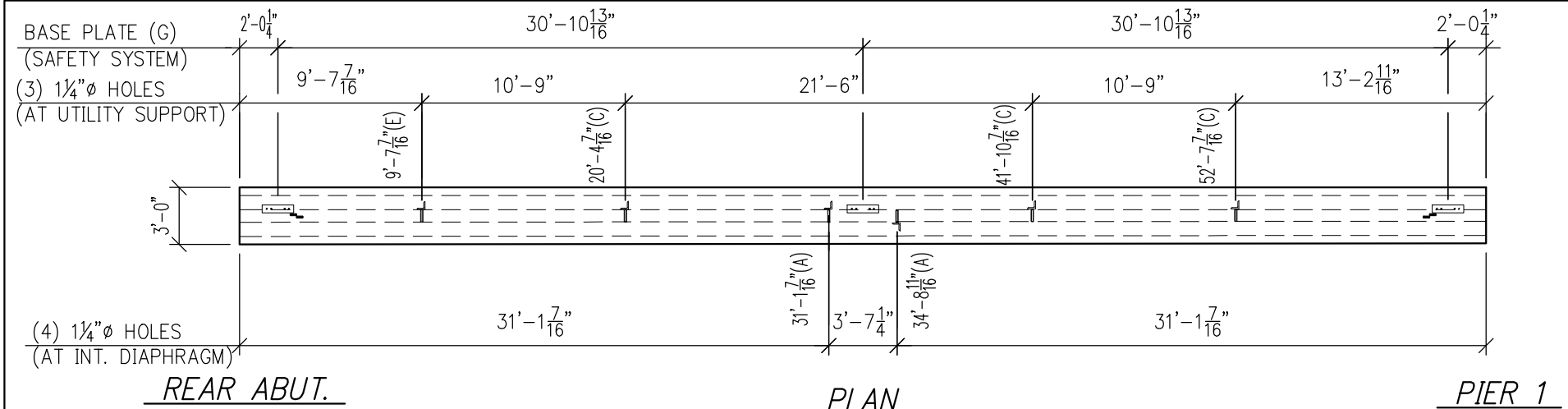
SUBMITTED
10/19/2020 8:42:01 AM



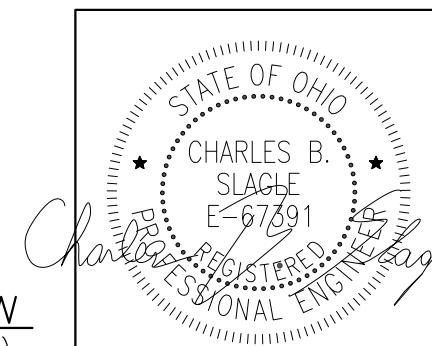
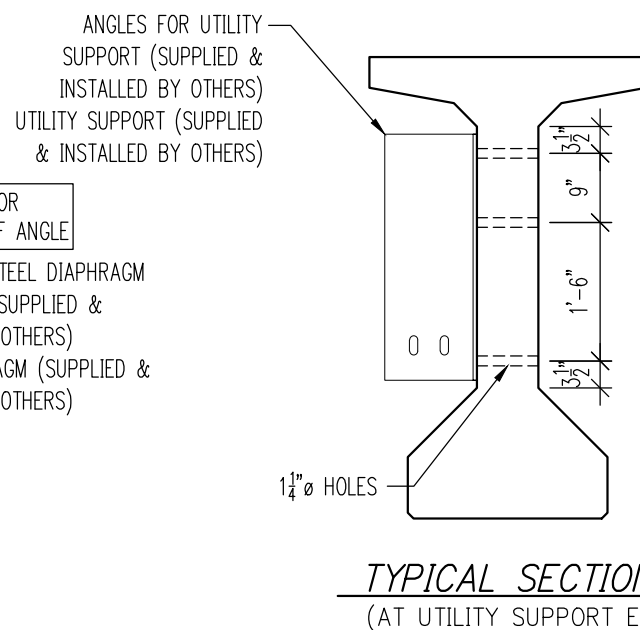
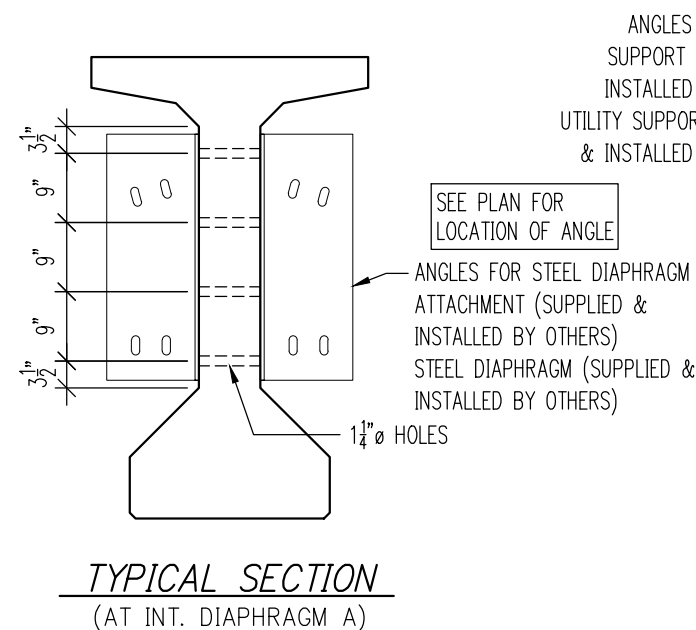
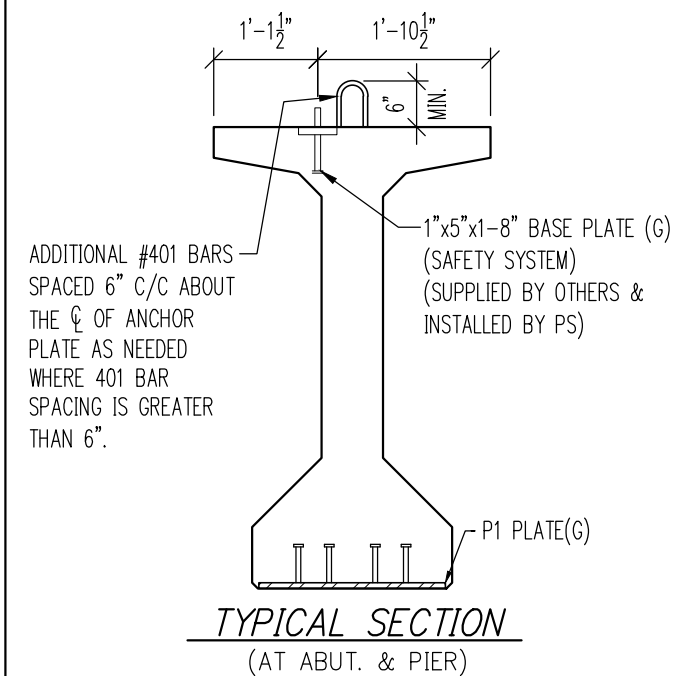
TYPICAL SECTION
(AT UTILITY SUPPORT E)

QTY:	1	MARK:	502
HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 15 OF 34	JOB NO: D19262	



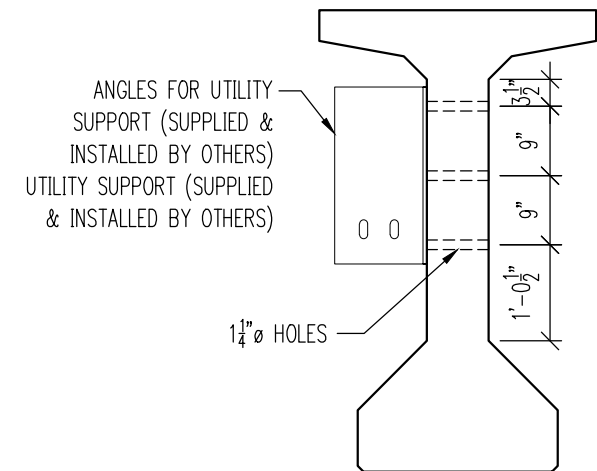


NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



HARDWARE		
4	0.6" Ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2*/S3	
24	1 1/4" Ø HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" Ø 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.60 CY		
WEIGHT: 59,000 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

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


TYPICAL SECTION
(AT UTILITY SUPPORT C)

QTY:	2	MARK:	503
HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION			
CODE: 4M60360	SHEET: 16 OF 34	JOB NO: D19262	

HARDWARE		
4	0.6" \varnothing DOUBLE LIFTLOOBS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
12	1 1/4" \varnothing HOLES	
34	1-PR SCREED INSERT	(G)
3	BASE PLATE	(G)
STRAND		
17	0.6" \varnothing 270K LR ($A_s=0.217"$)	(B)
CONCRETE		
CUBIC TOTAL:		<u>14.60 CY</u>
WEIGHT:		<u>59,000 LBS.</u>
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

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10/19/2020 8:42:10 AM

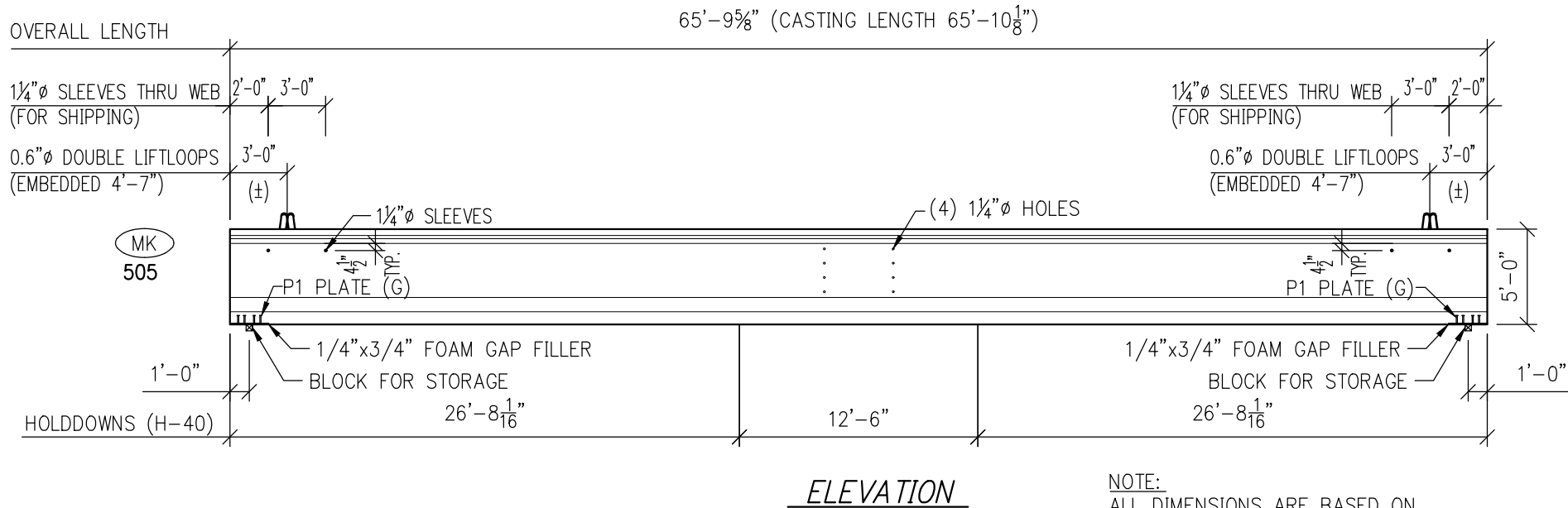
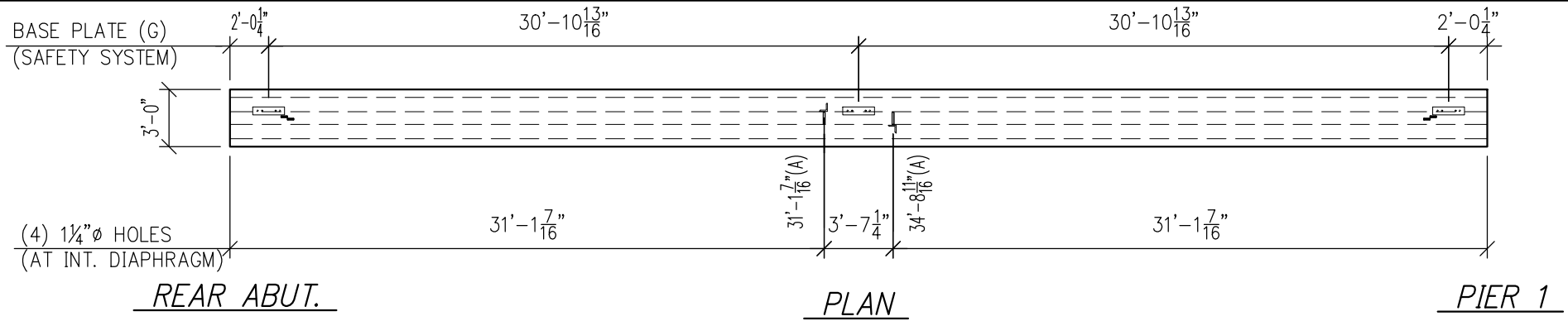
QTY:	1	MARK:	504
HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
<div></div> <div>PRESTRESS</div> <div>SERVICES INDUSTRIES LLC</div>			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20		DRAWN BY: Shawn Hubbell	
		CHECKED: Tony May	
REVISIONS			
			
			
			
CODE: 4M60360		SHEET: 17 OF 34	
		JOB NO: D19262	

JMAY

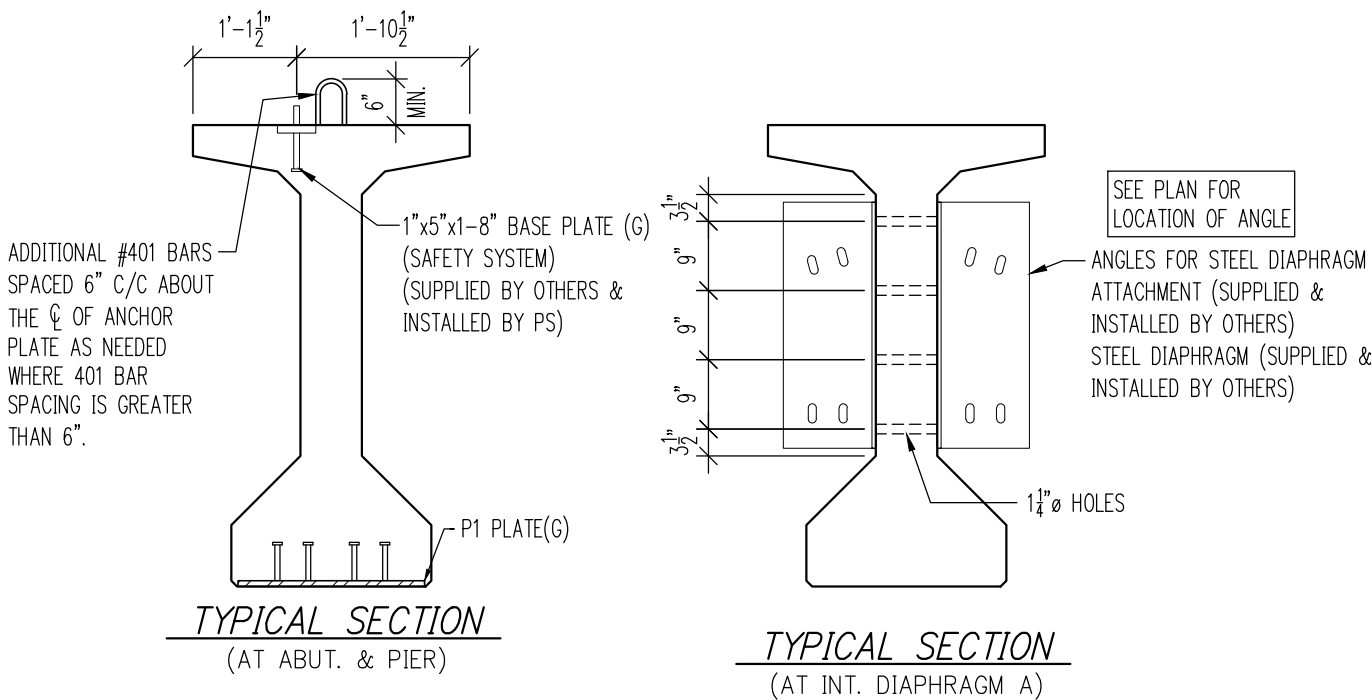
D19262 < 18 505 >

2:19 PM

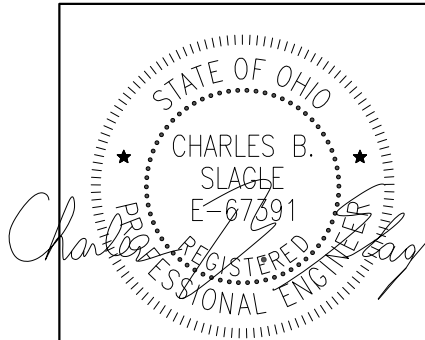
10/14/2020








NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.

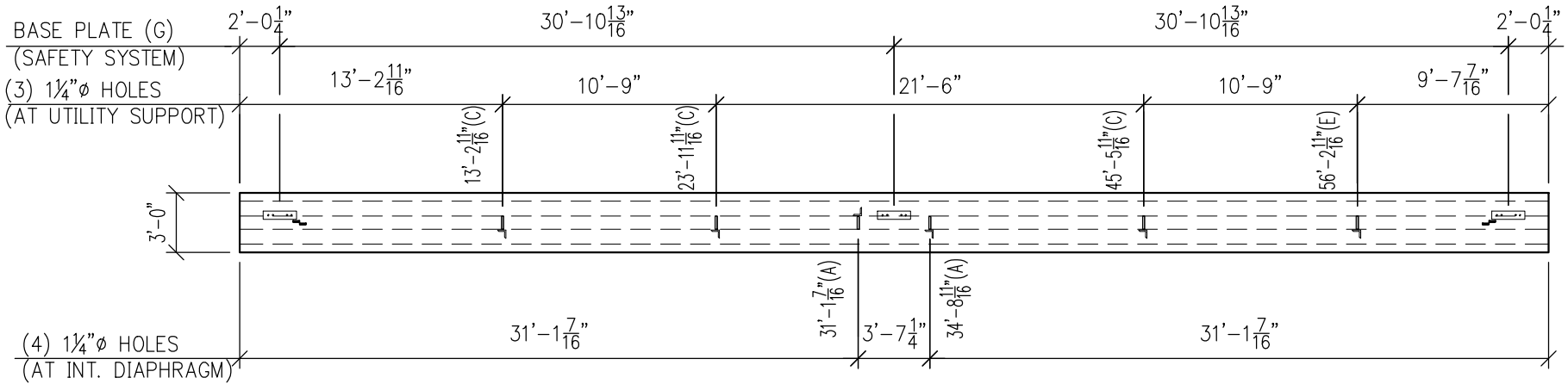


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10/19/2020 8:42:13 AM



QTY:	3	MARK:	505
HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
<div><div>PRESTRESS SERVICES INDUSTRIES LLC</div></div>			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20		DRAWN BY: Shawn Hubbell	
		CHECKED: Tony May	
REVISIONS			
			
			
			
CODE: 4M60360		SHEET: 18 OF 34	
		JOB NO: D19262	

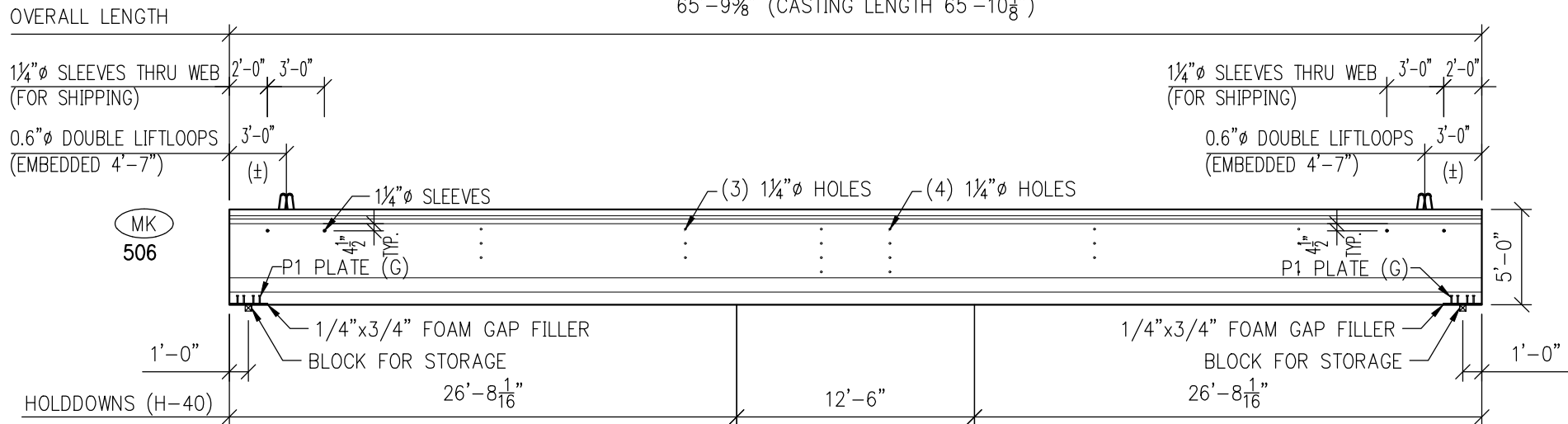
HARDWARE		
4	0.6" \varnothing DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
12	1 1/4" \varnothing HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" \varnothing 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.60 CY		
WEIGHT: 59,000 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		



REAR ABUT.

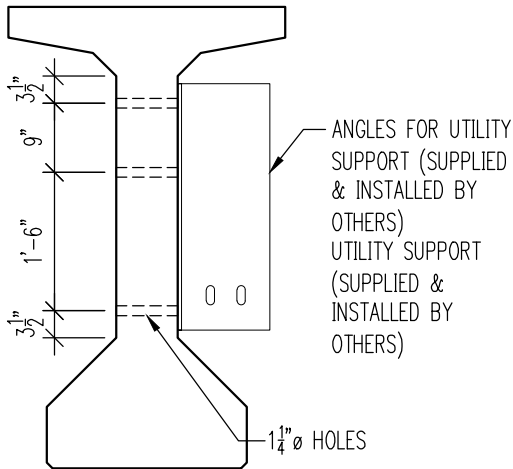
PLAN

PIER 1

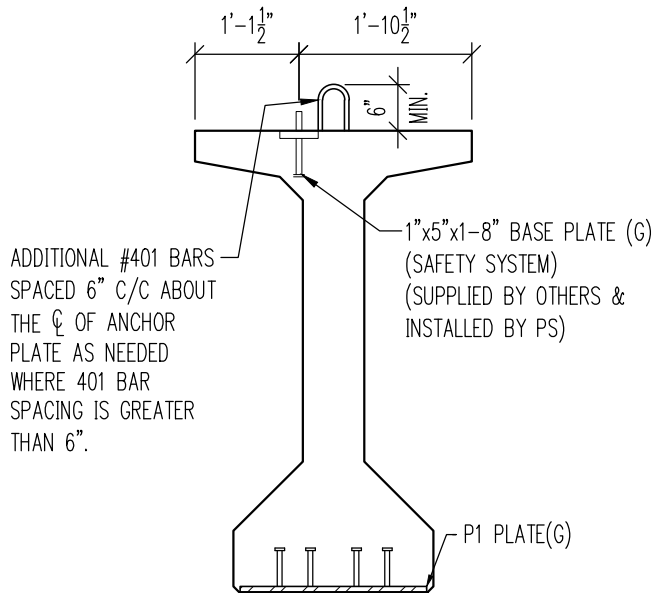


ELEVATION

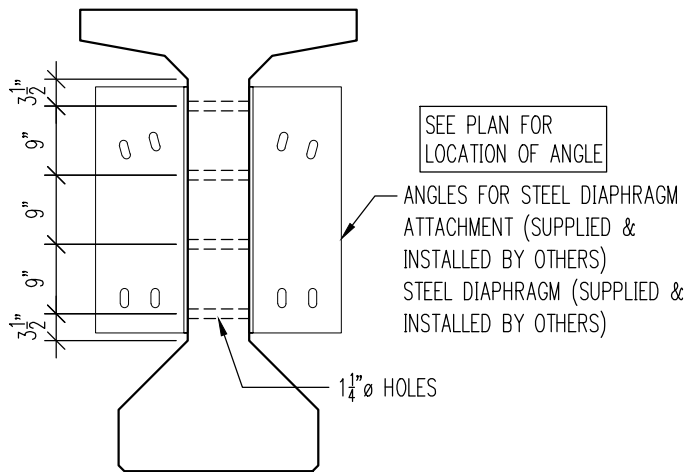
NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



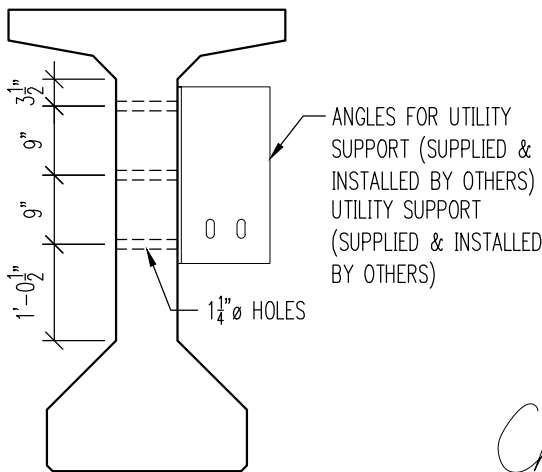
TYPICAL SECTION
(AT UTILITY SUPPORT E)



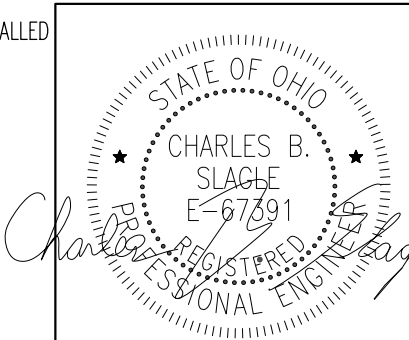
TYPICAL SECTION
(AT ABUT. & PIER)



TYPICAL SECTION
(AT INT. DIAPHRAGM A)







TYPICAL SECTION
(AT UTILITY SUPPORT C)



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HARDWARE		
4	0.6" Ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
24	1 1/4" Ø HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" Ø 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL:		14.60 CY
WEIGHT:		59,000 LBS.
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

QTY:	1	MARK:	506
HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 19 OF 34	JOB NO: D19262	

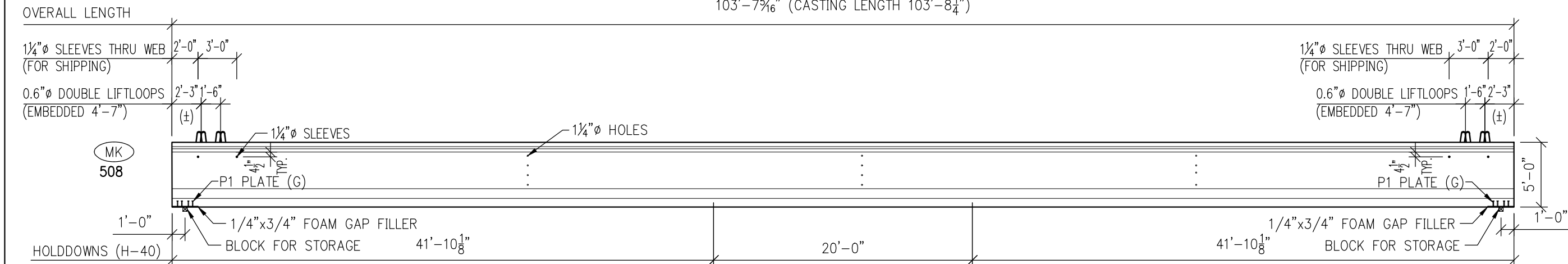
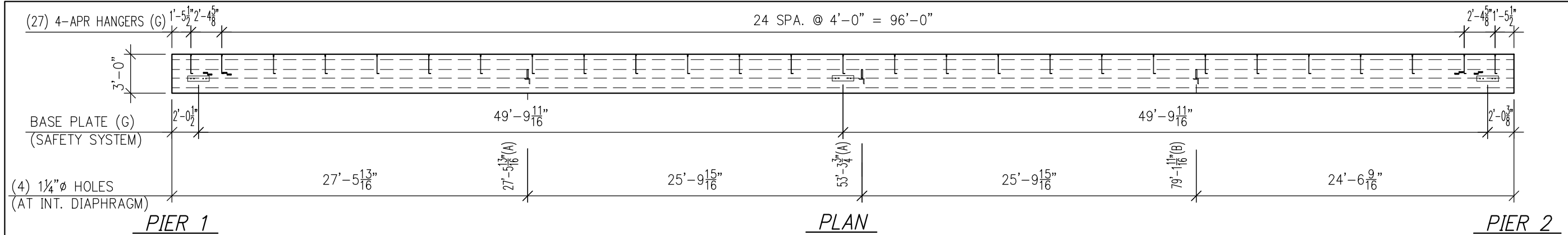
QTY:	1	MARK:	507
HARDWARE DETAILS (SPAN 1)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
 PRESTRESS SERVICES INDUSTRIES LLC			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE:	7/7/20	DRAWN BY:	Shawn Hubbell
CHECKED:	Tony May		
REVISIONS 1 2 3			
			
			
CODE: 4M60360		SHEET: 20 OF 34	JOB NO: D19262

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D19262 < 21 508 >

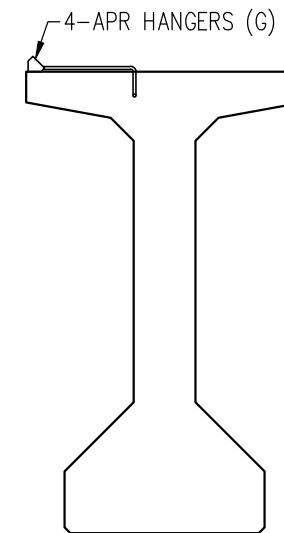
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10/14/2020



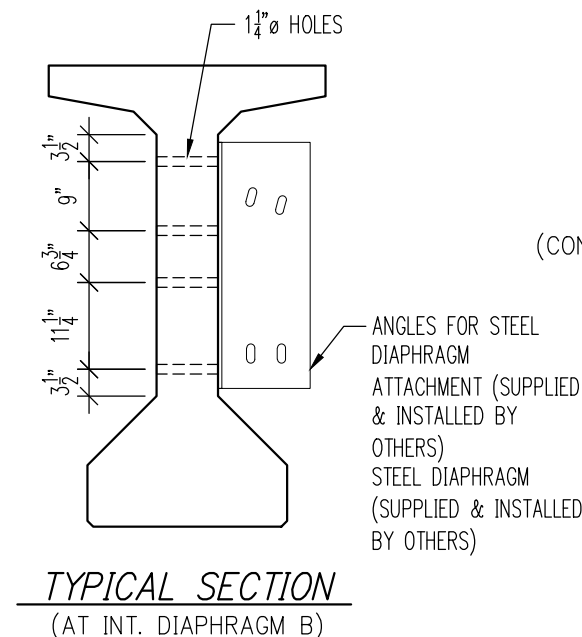
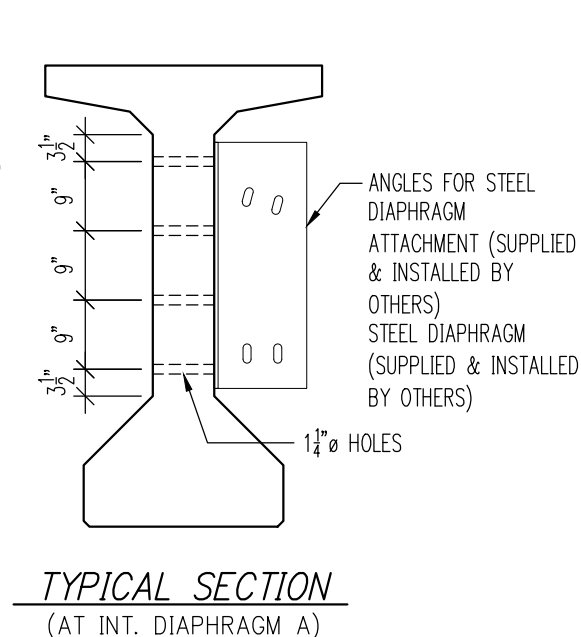
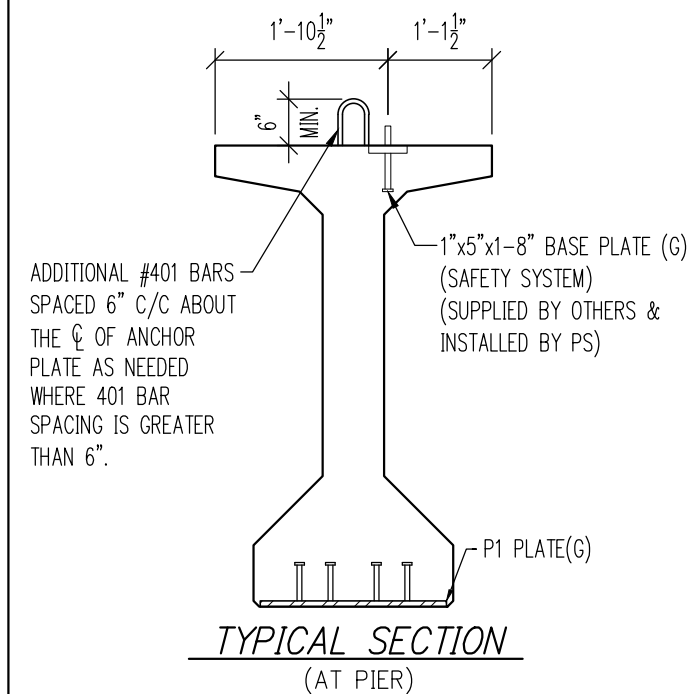
NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.

ELEVATION

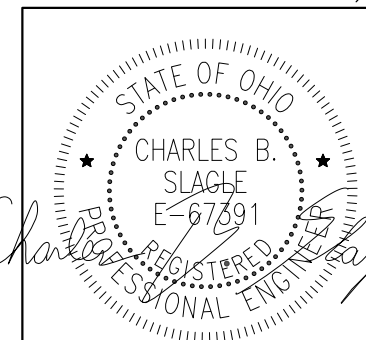



HARDWARE		
8	0.6" Ø DOUBLE LIFTLOOPS (B)	
2	P1 PLATE (G)	
2	H-40 HOLDDOWNS B2"/S5	
16	1 1/4" Ø HOLES	
27	TYPE 4-APR HANGERS (G)	
3	BASE PLATE (G)	
STRAND		
41	0.6" Ø 270K LR (As=0.217") (B)	
CONCRETE		
CUBIC TOTAL:		23.00 CY
WEIGHT:		93,000 LBS.
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

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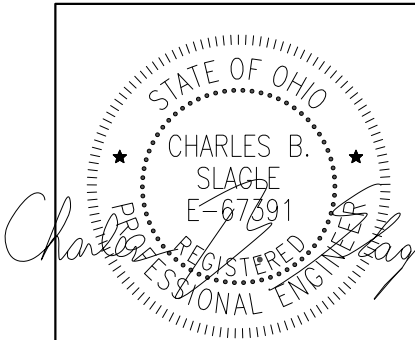
TYPICAL SECTION
(CONTRACTOR REQUESTED HARDWARE)




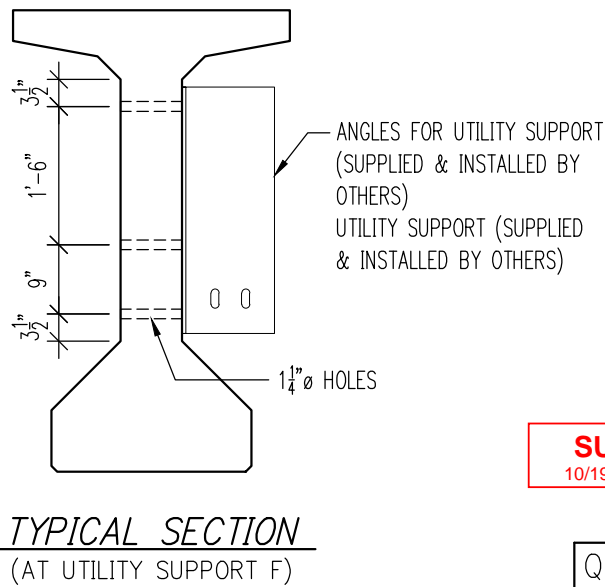
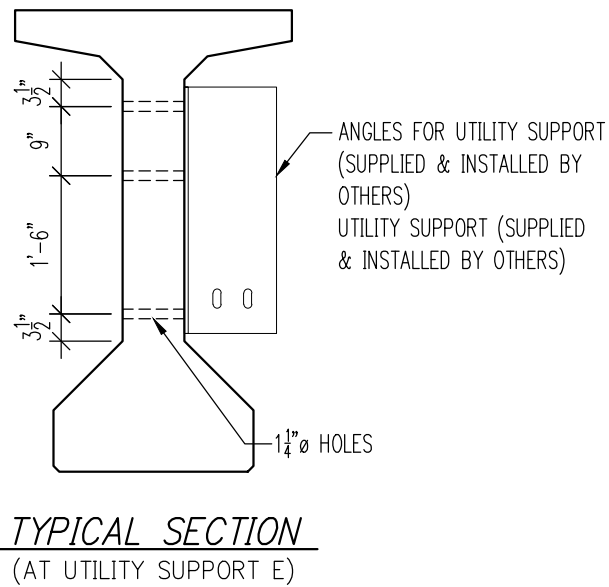
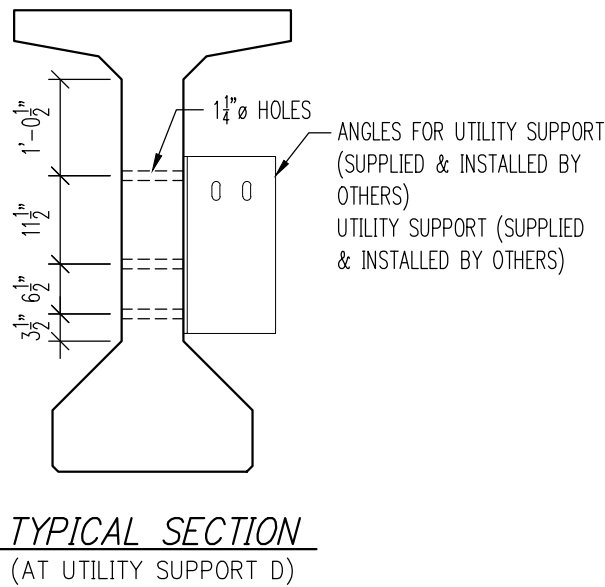
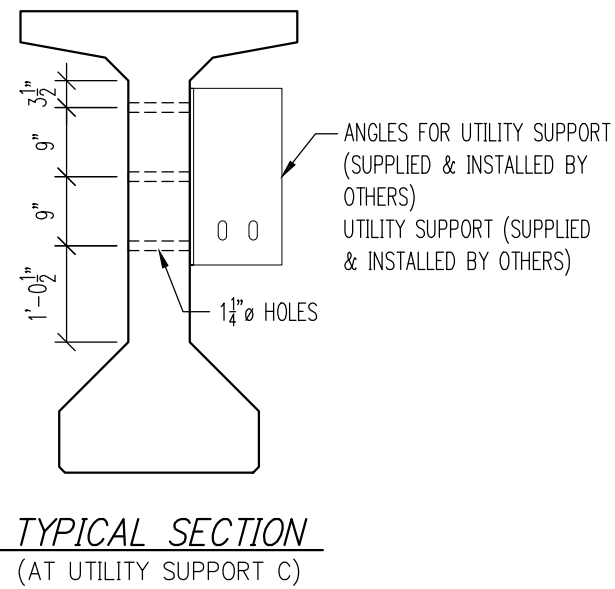
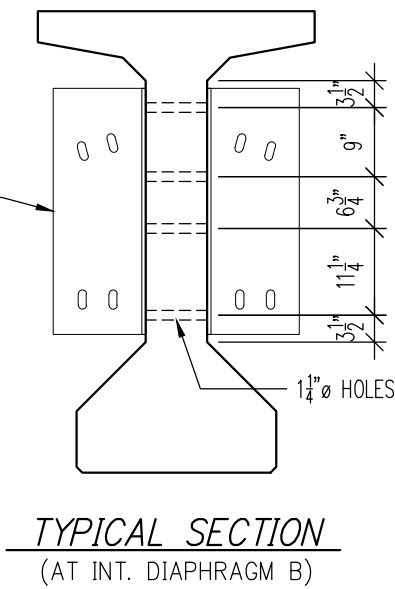
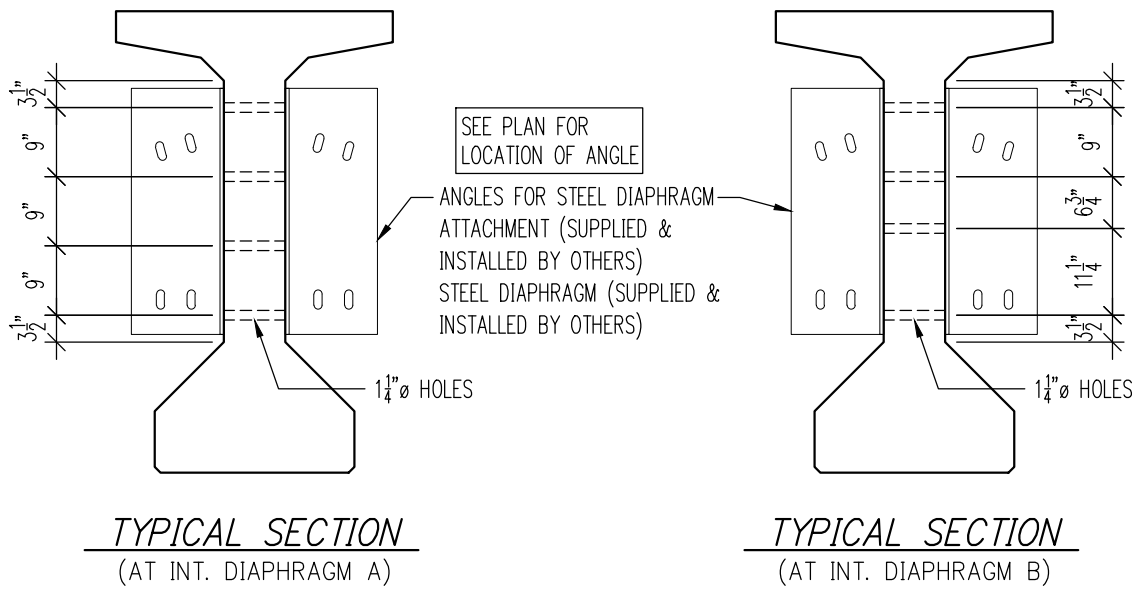
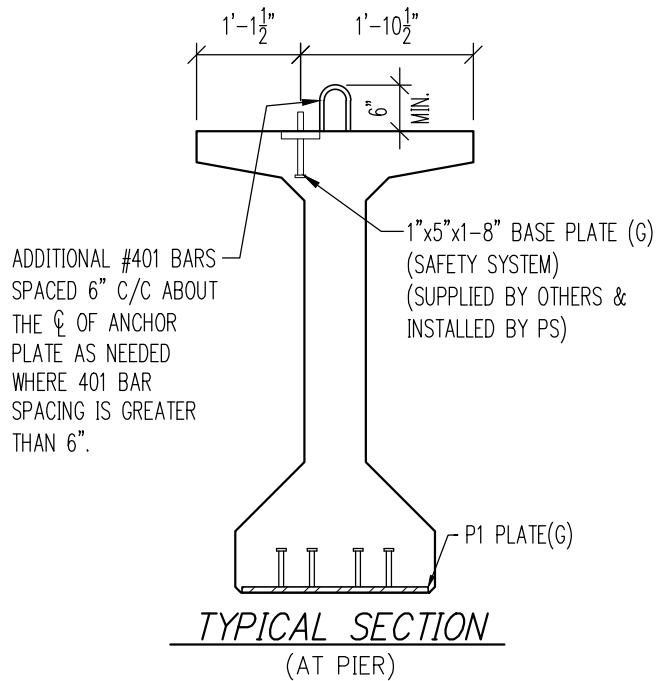
QTY:	1	MARK:	508
HARDWARE DETAILS (SPAN 2)			
CUYAHOGA COUNTY, OHIO			
OH-10 OVER KINGSBURY RUN RAVINE			
BRIDGE No. CUY-10-1949 STR. FILE: 1801515			
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION			
CODE: 4M60360	SHEET: 21 OF 34	JOB NO: D19262	



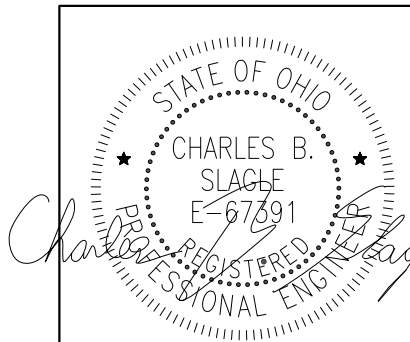
HARDWARE		
8	0.6" ϕ DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S5	
52	1 1/4" ϕ HOLES	
3	BASE PLATE	(G)
STRAND		
41	0.6" ϕ 270K LR ($A_s=0.217"$)	(B)
CONCRETE		
CUBIC TOTAL:		23.00 CY
WEIGHT:		93,000 LBS.
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		



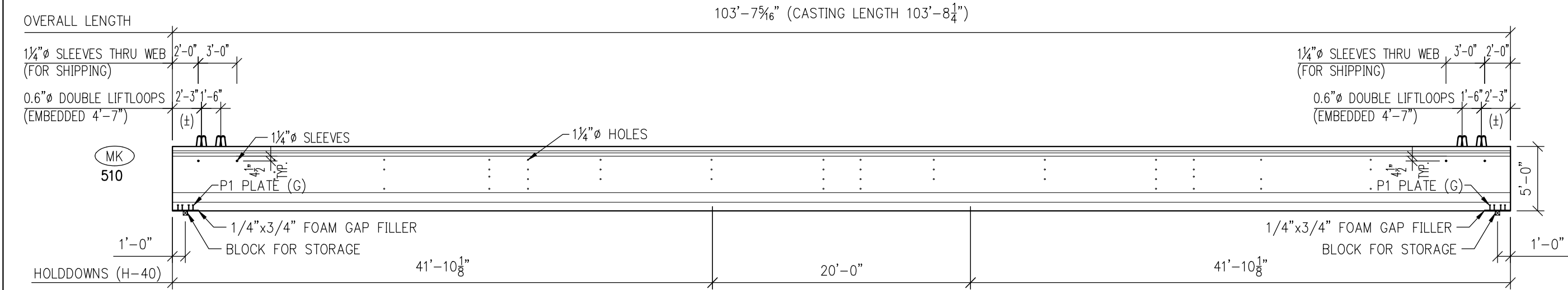
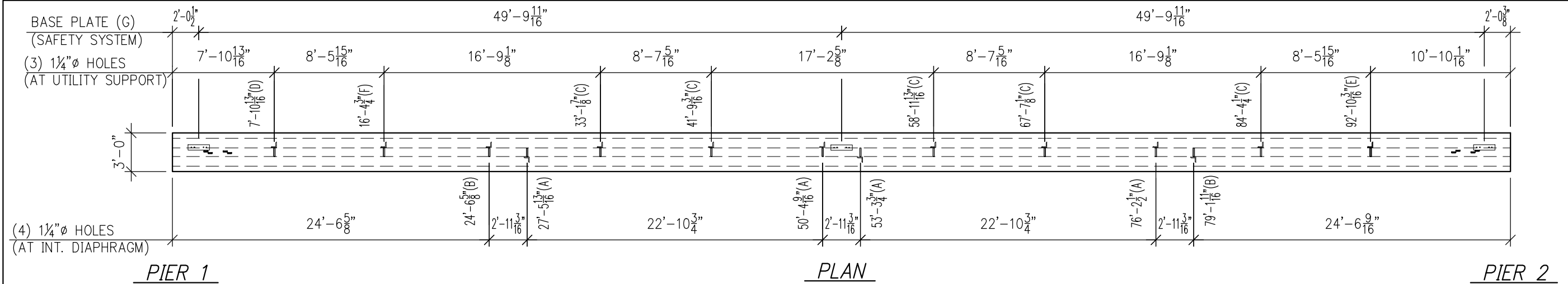
QTY:	2	MARK:	509
HARDWARE DETAILS (SPAN 2)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000 CONTRACTOR: KOKOSING CONSTRUCTION			
			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell		CHECKED: Tony May
REVISIONS			
REVISIONS			
REVISIONS			
REVISIONS			
CODE: 4M60360	SHEET: 28 OF 34	JOB NO: D19262	



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QTY:	2	MARK:	509
HARDWARE SECTIONS (SPAN 2)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 23 OF 34	JOB NO: D19262	



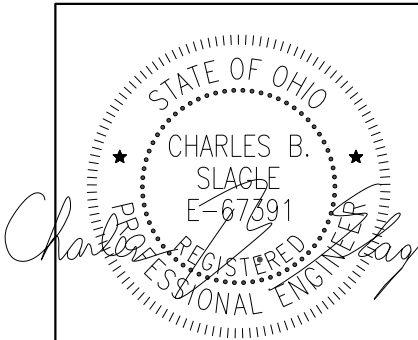
NOTE:
SEE SHEET 25 FOR
ALL SECTIONS.

ELEVATION

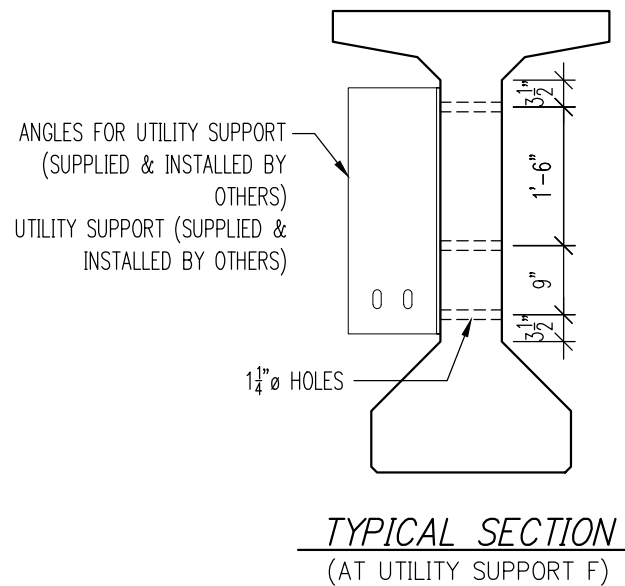
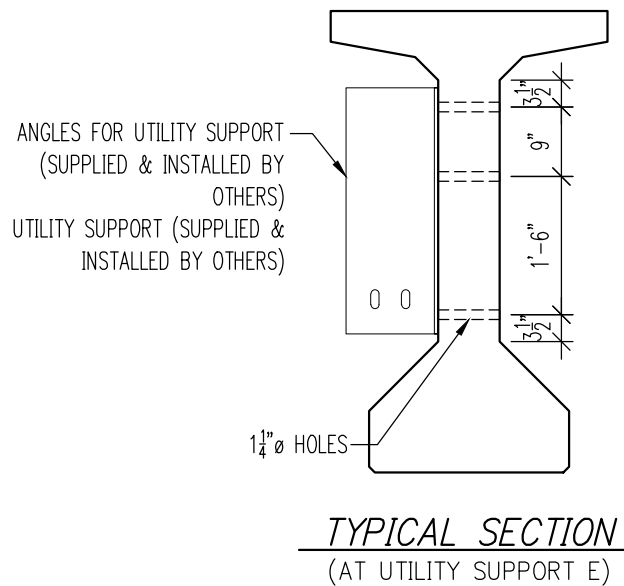
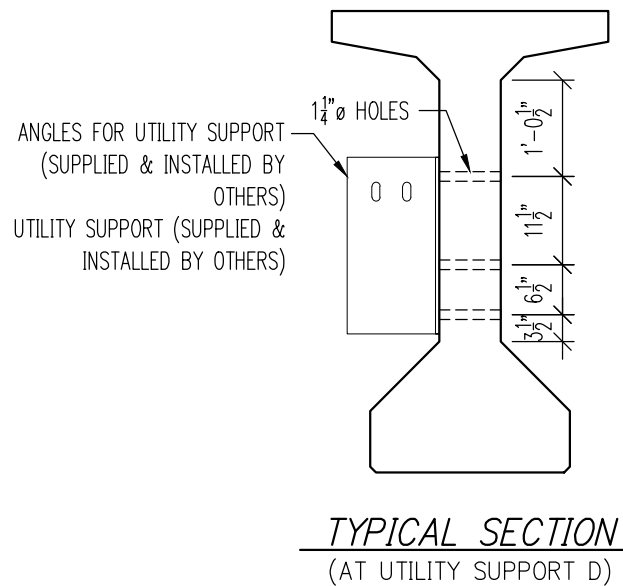
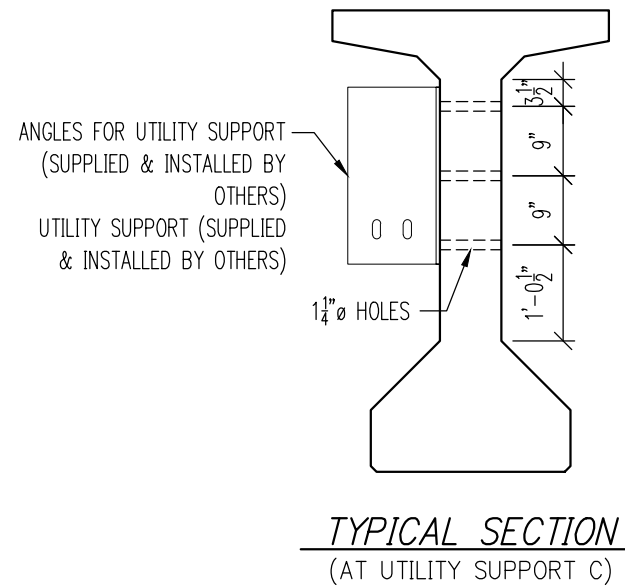
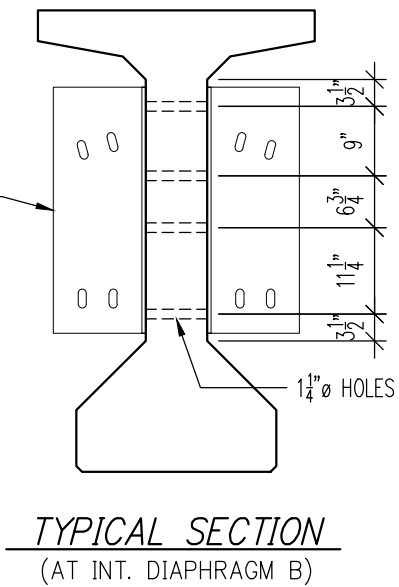
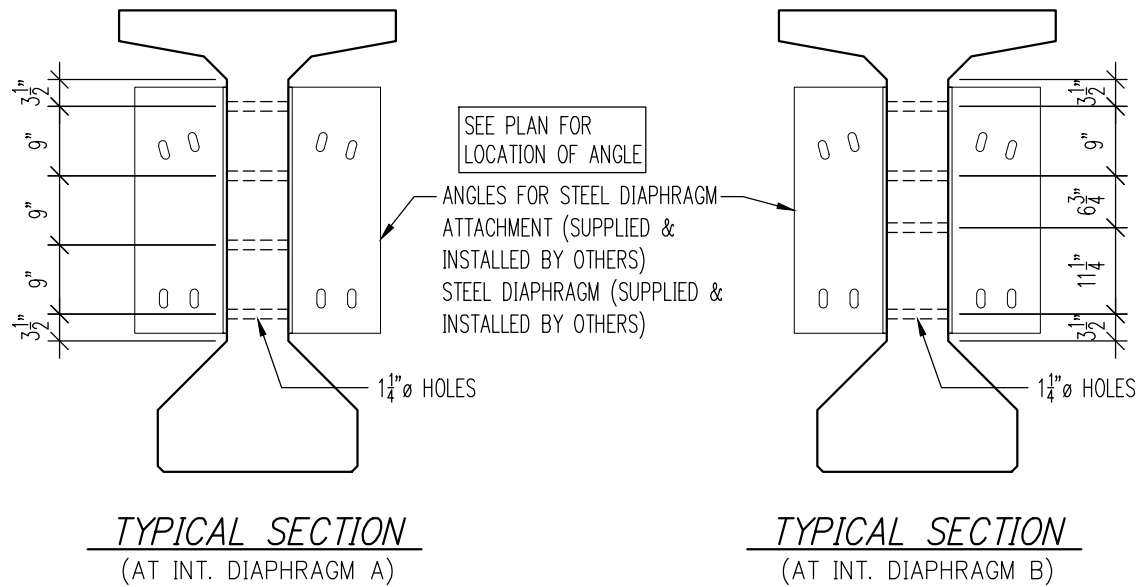
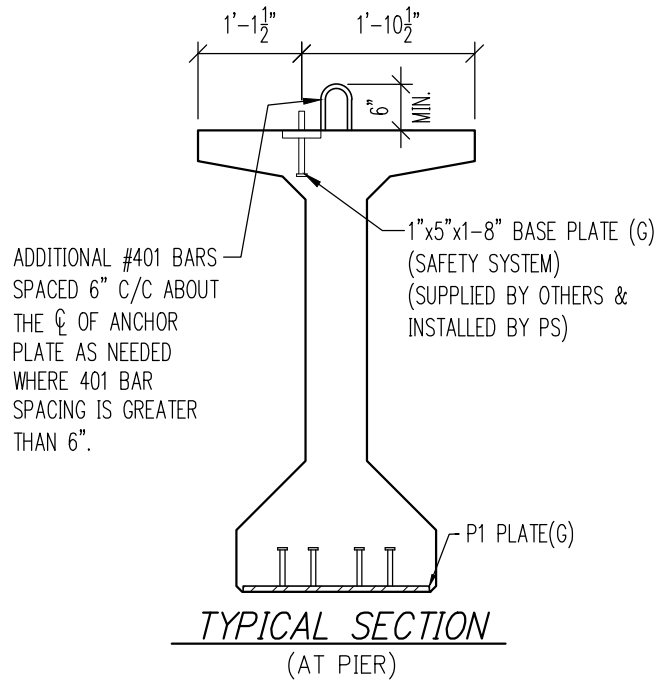
NOTE:
ALL DIMENSIONS ARE BASED
ON CASTING LENGTH.

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10/19/2020 8:42:33 AM

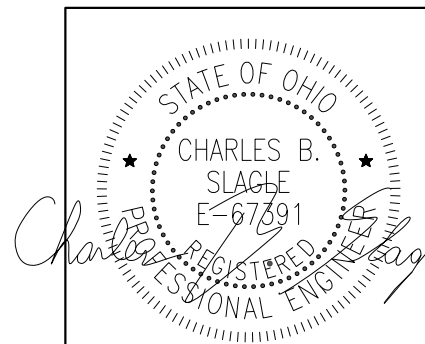
HARDWARE	
8	0.6" Ø DOUBLE LIFTLOOPS (B)
2	P1 PLATE (G)
2	H-40 HOLDDOWNS B2"/S5
52	1 1/4" Ø HOLES
3	BASE PLATE (G)
STRAND	
41	0.6" Ø 270K LR (As=0.217") (B)
CONCRETE	
CUBIC TOTAL: 23.00 CY	
WEIGHT: 93,000 LBS.	
MATERIAL FINISHES	
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED	



QTY:	2	MARK:	510
HARDWARE DETAILS (SPAN 2)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 24 OF 34	JOB NO: D19262	



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10/19/2020 8:42:38 AM



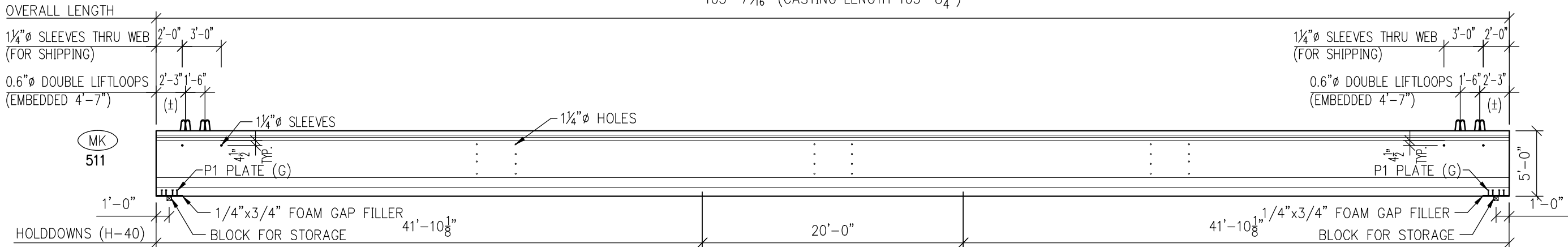
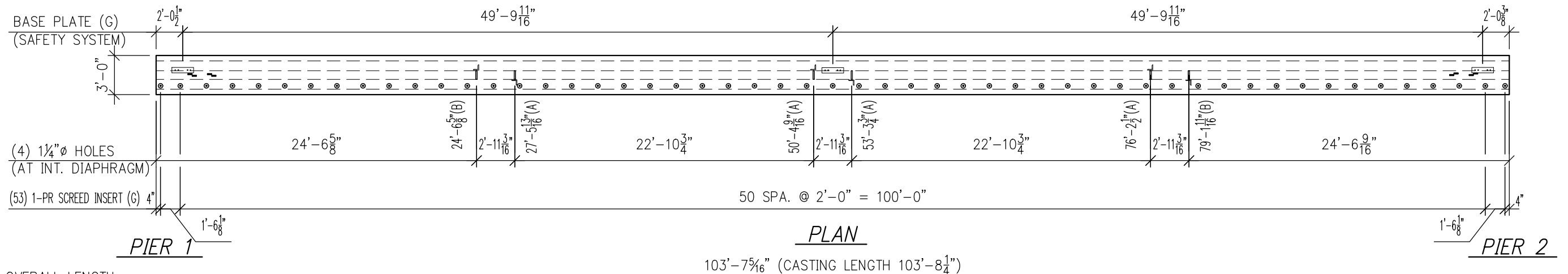
QTY:	2	MARK:	510
HARDWARE SECTIONS (SPAN 2)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 25 OF 34	JOB NO: D19262	

JMAY

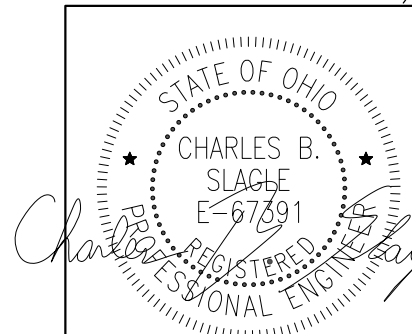
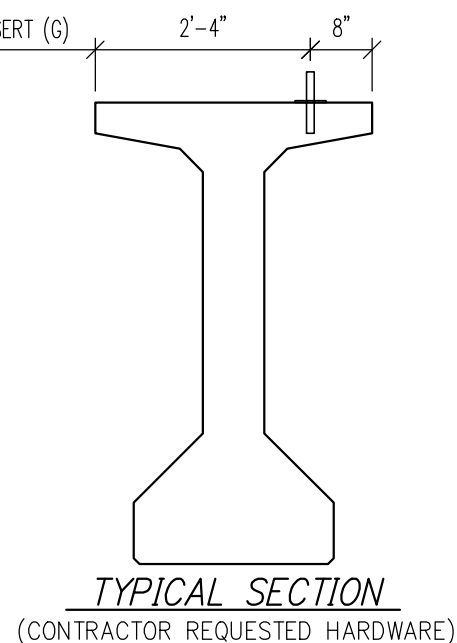
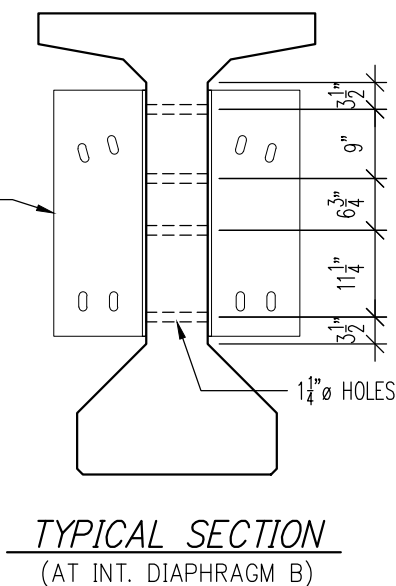
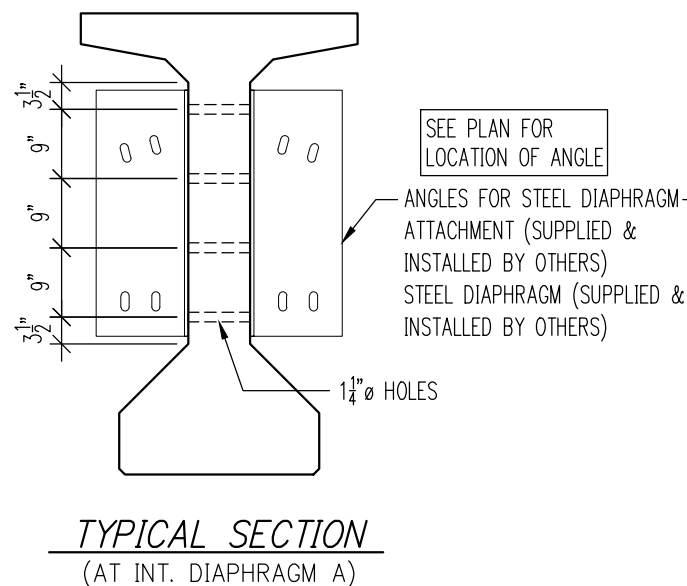
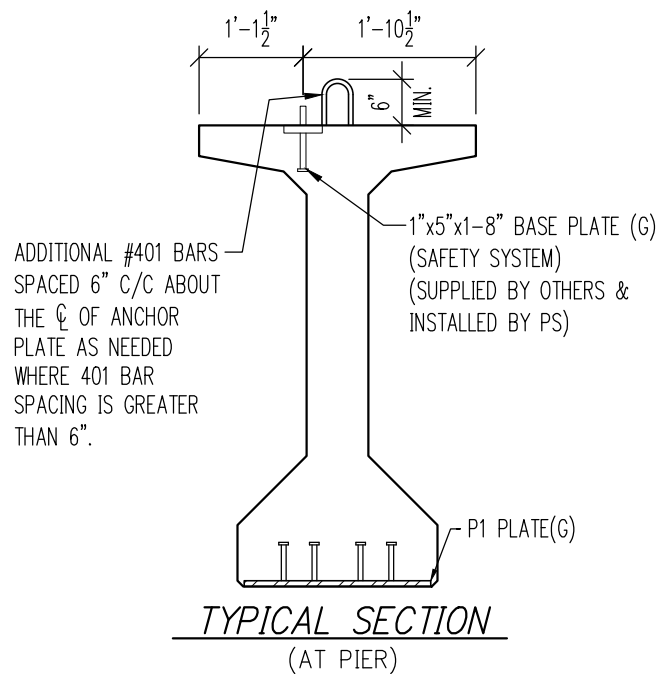
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2:19 PM

10/14/2020



NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



SUBMITTED
10/19/2020 8:42:44 AM

HARDWARE		
8	0.6" ϕ DOUBLE LIFTLOOPS (B)	
2	P1 PLATE (G)	
2	H-40 HOLDDOWNS B2"/S5	
28	1 1/4" ϕ HOLES	
53	1-PR SCREED INSERT (G)	
3	BASE PLATE (G)	
STRAND		
41	0.6" ϕ 270K LR (As=0.217") (B)	

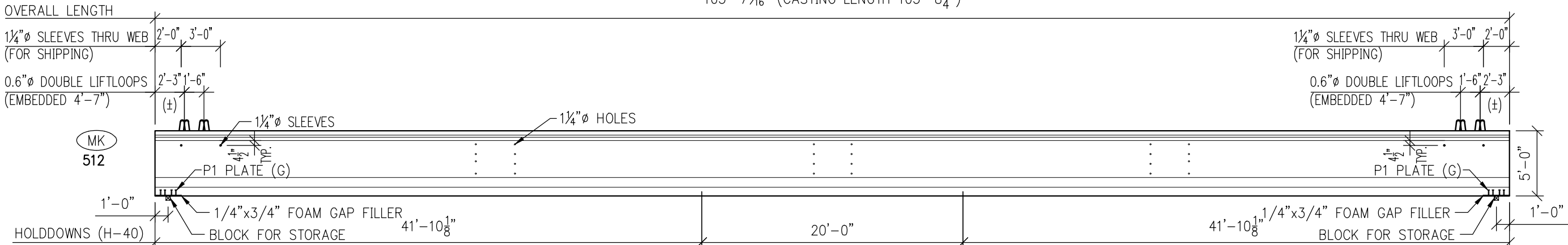
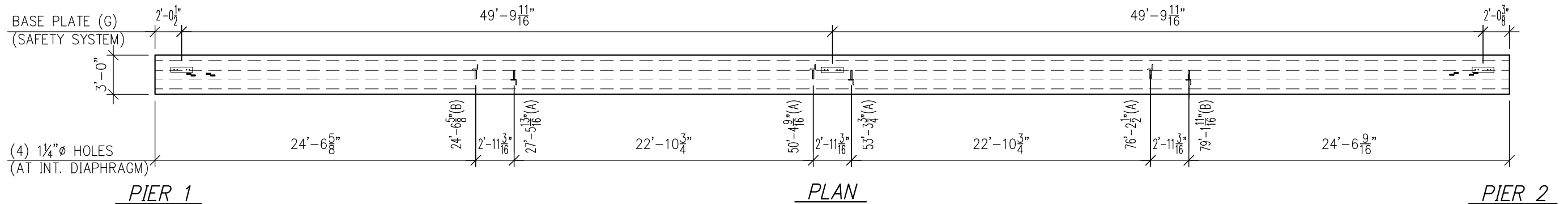
QTY:	1	MARK:	511
HARDWARE DETAILS (SPAN 2)			
CUYAHOGA COUNTY, OHIO			
OH-10 OVER KINGSBURY RUN RAVINE			
BRIDGE No. CUY-10-1949 STR. FILE: 1801515			
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION			
CODE: 4M60360	SHEET: 26 OF 34	JOB NO: D19262	

JMAY

D19262 < 27 512 >

2:19 PM

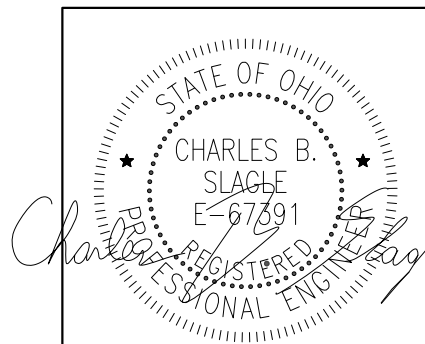
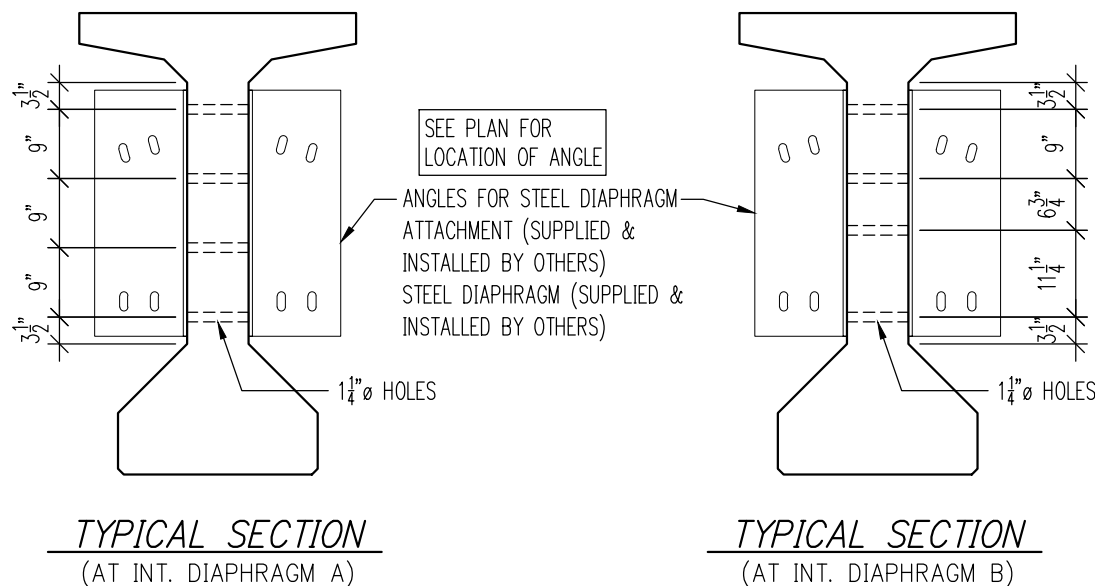
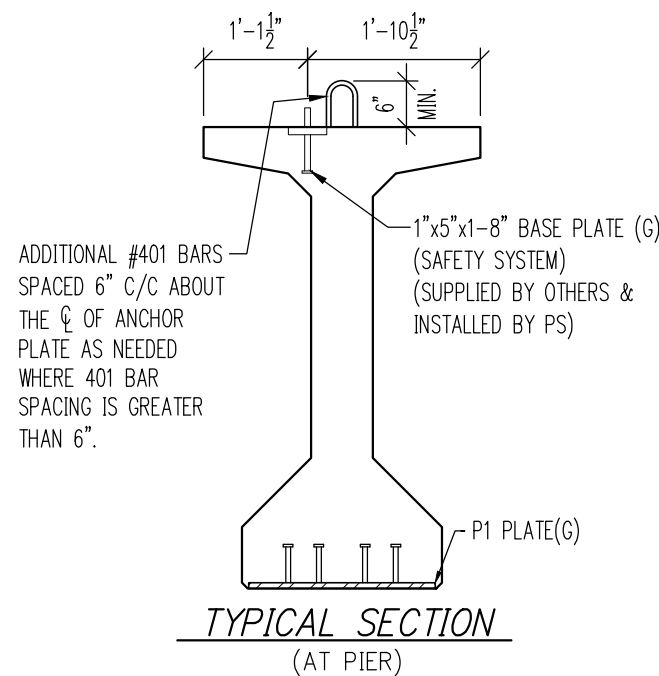
10/14/2020



NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.

ELEVATION

SUBMITTED
10/19/2020 8:42:48 AM



HARDWARE		
8	0.6" DOUBLE LIFTLOOPS (B)	
2	P1 PLATE (G)	
2	H-40 HOLDDOWNS B2"/S5	
28	1 1/4" HOLES	
3	BASE PLATE (G)	
STRAND		
41	0.6" 270K LR (As=0.217") (B)	

CONCRETE	
CUBIC TOTAL:	23.00 CY
WEIGHT:	93,000 LBS.
MATERIAL FINISHES	
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED	

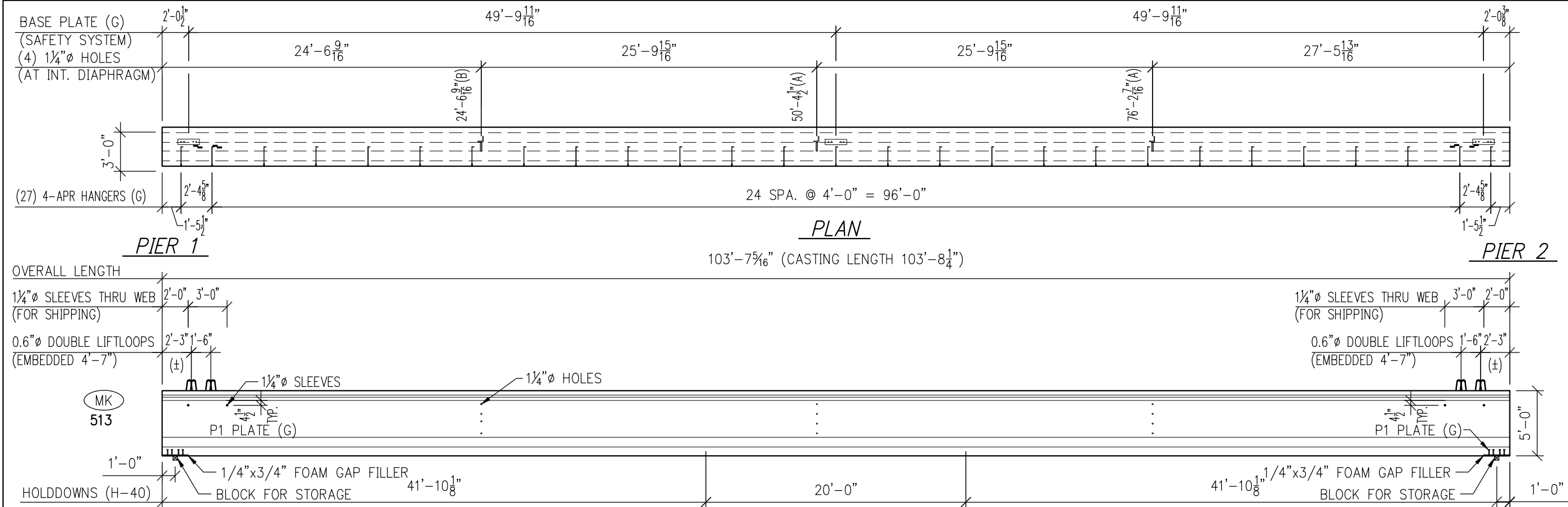
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HARDWARE DETAILS (SPAN 2)			
CUYAHOGA COUNTY, OHIO			
OH-10 OVER KINGSBURY RUN RAVINE			
BRIDGE No. CUY-10-1949 STR. FILE: 1801515			
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION:			
CODE: 4M60360	SHEET: 27 OF 34	JOB NO: D19262	

JMAY

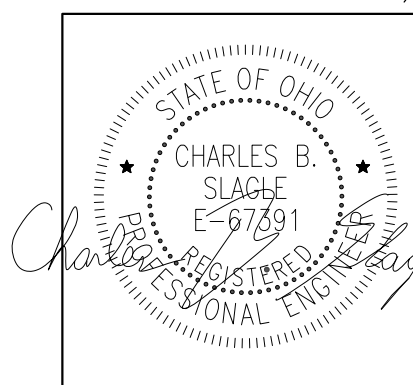
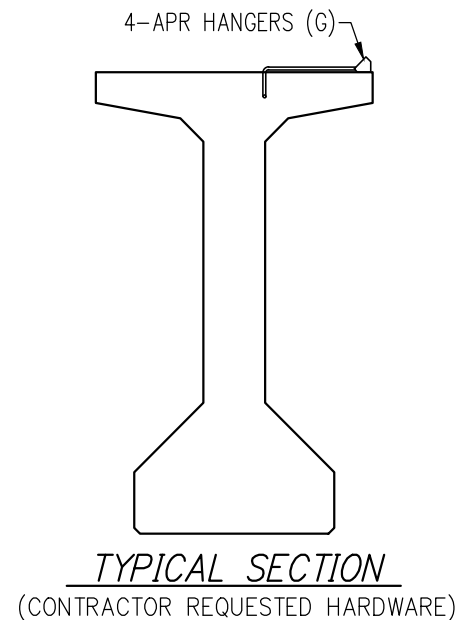
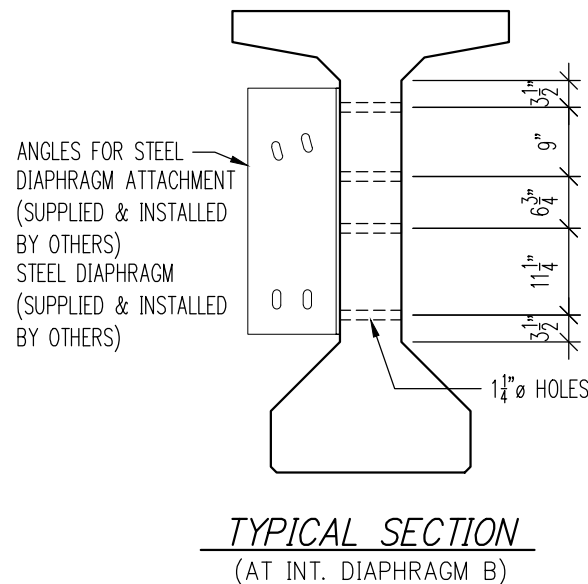
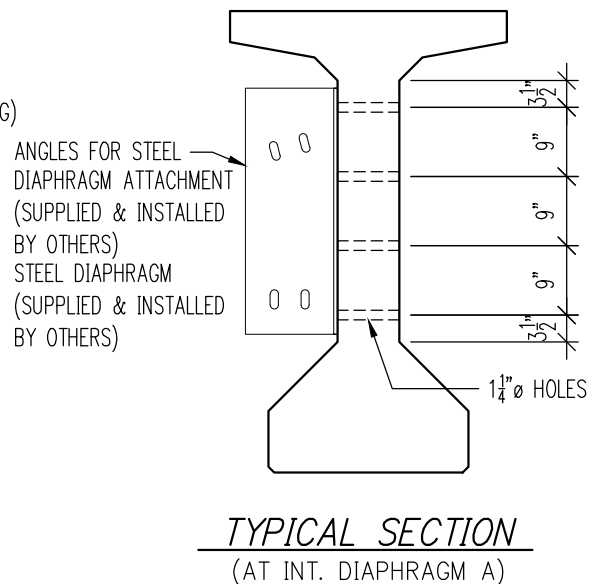
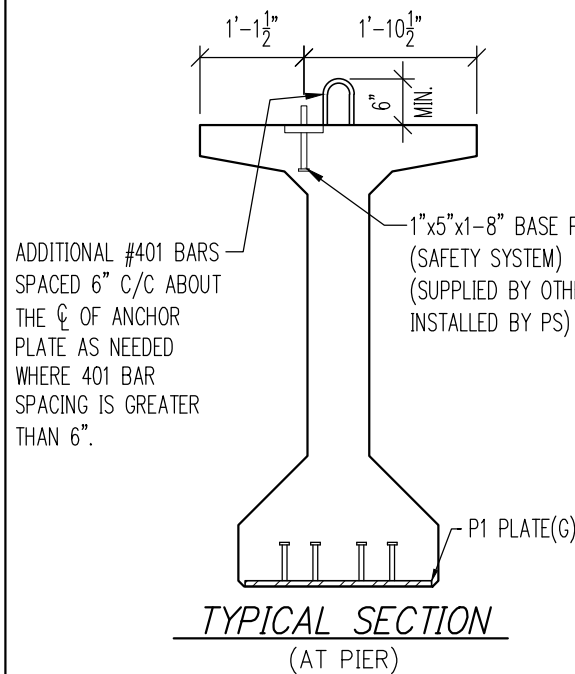
D19262 < 28 513 >

2:19 PM

10/14/2020



NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



SUBMITTED
10/19/2020 8:42:51 AM

HARDWARE	
8	0.6" ϕ DOUBLE LIFTLOOPS (B)
2	P1 PLATE (G)
2	H-40 HOLDDOWNS B2"/S5
CONCRETE	
16	1 1/4" ϕ HOLES
CUBIC TOTAL:	23.00 CY
WEIGHT:	93,000 LBS.
MATERIAL FINISHES	
STRAND	
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED	41 0.6" ϕ 270K LR (As=0.217") (B)

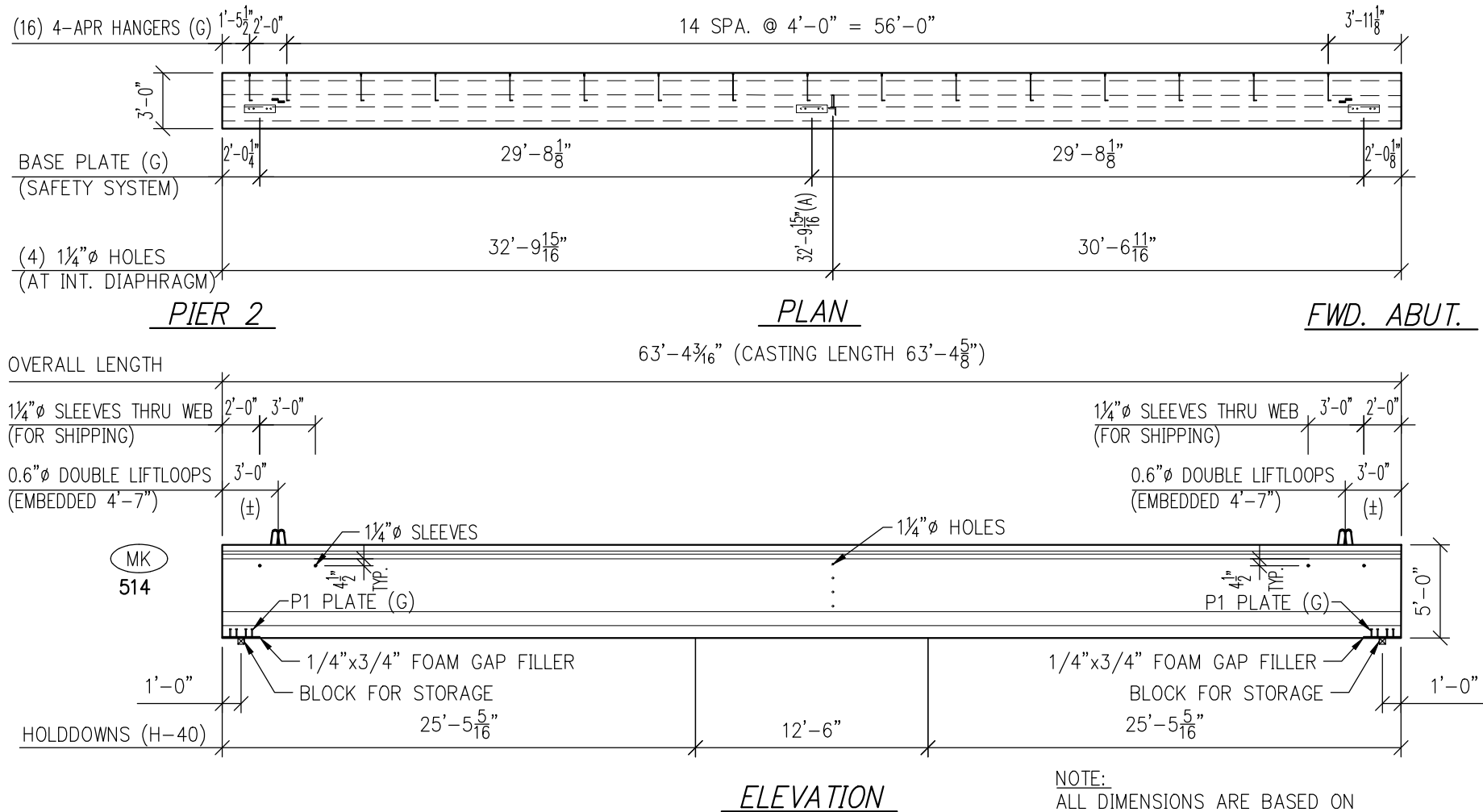
QTY:	1	MARK:	513
HARDWARE DETAILS (SPAN 2)			
CUYAHOGA COUNTY, OHIO			
OH-10 OVER KINGSBURY RUN RAVINE			
BRIDGE No. CUY-10-1949 STR. FILE: 1801515			
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION:			
CODE: 4M60360	SHEET: 28 OF 34	JOB NO: D19262	

JMAY

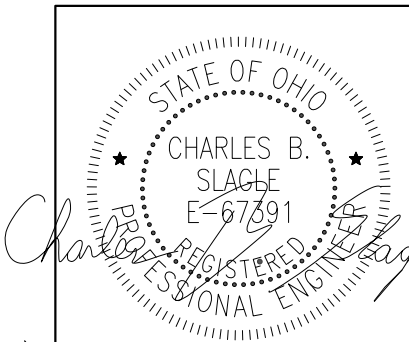
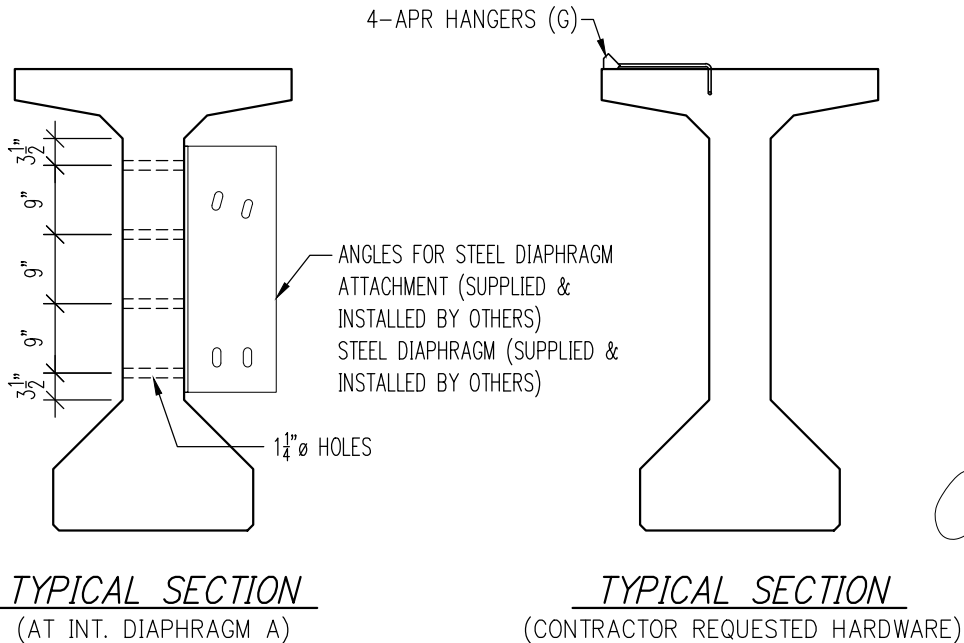
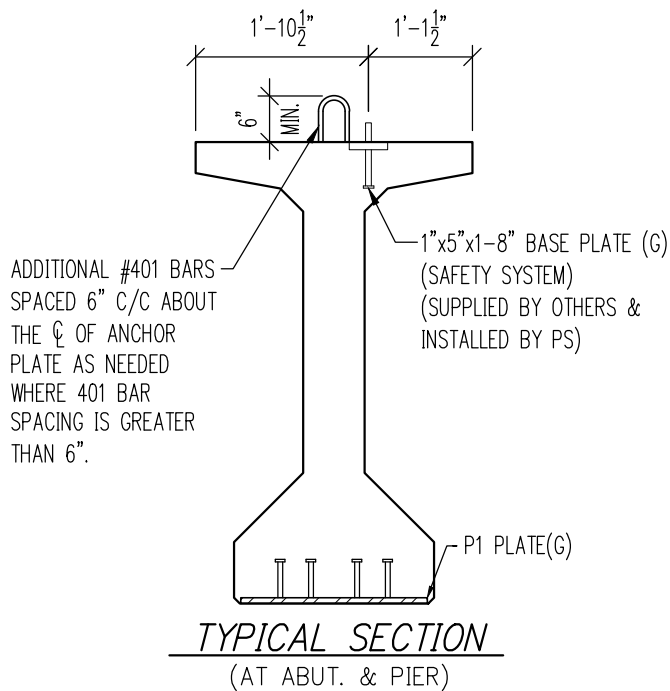
D19262 < 29 514 >

2:19 PM

10/14/2020



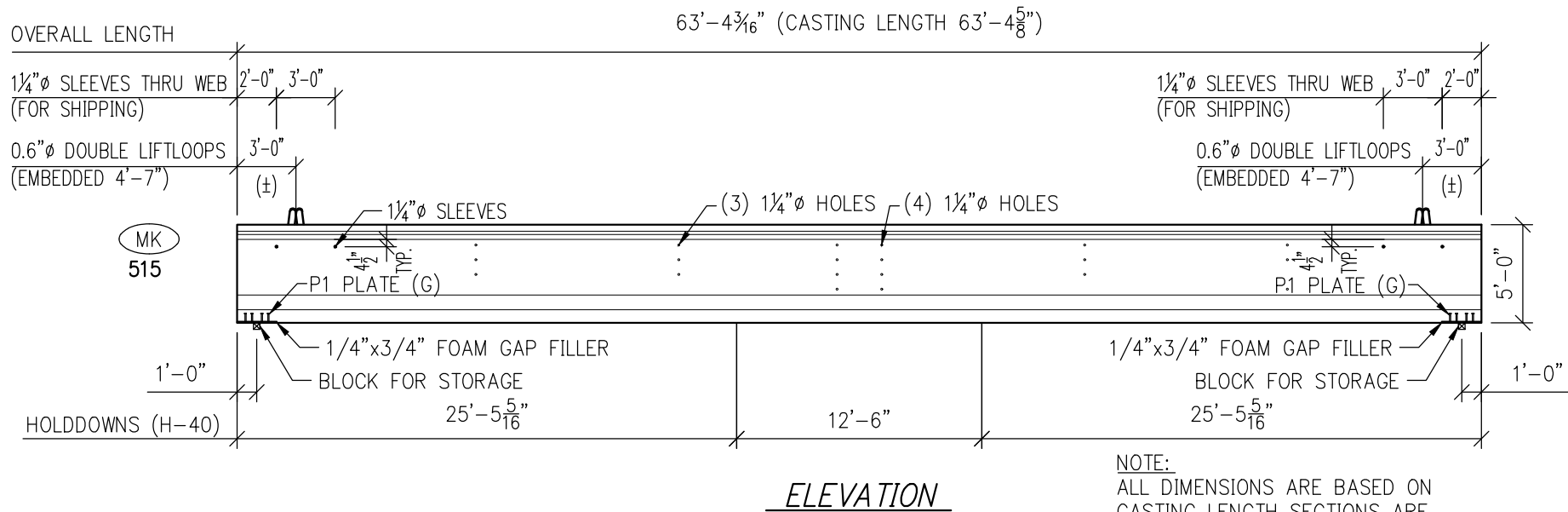
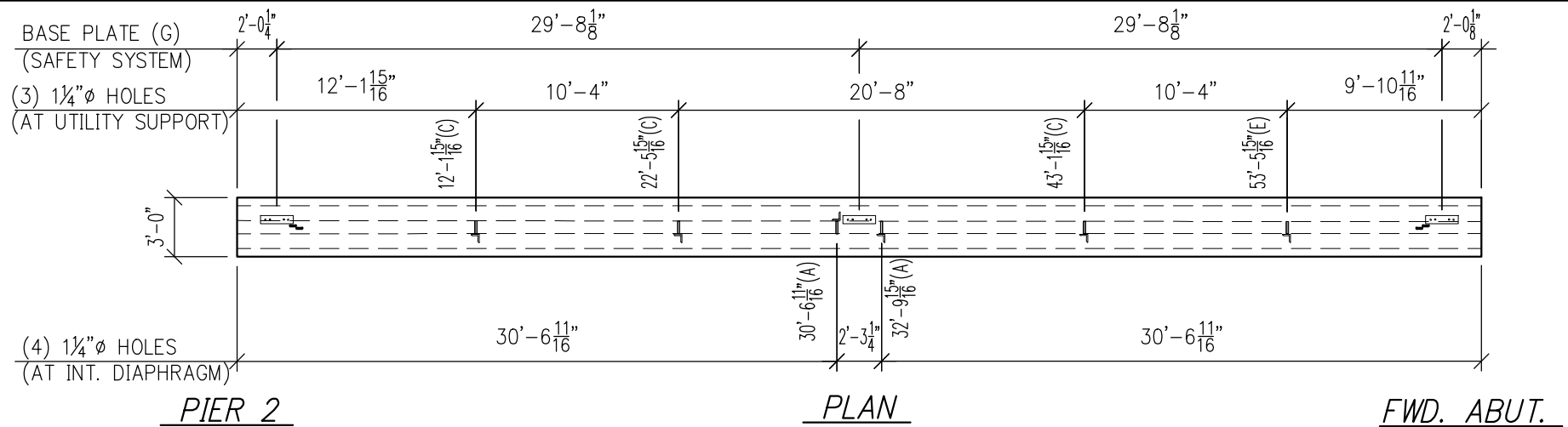
NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



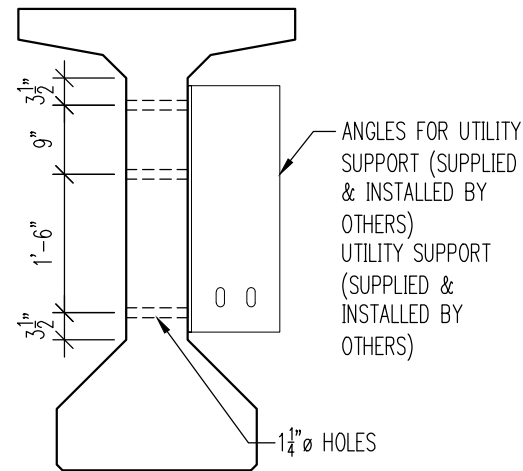
HARDWARE		
4	0.6" Ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
8	1 1/4" Ø HOLES	
16	TYPE 4-APR HANGERS	(G)
3	BASE PLATE	(G)
STRAND		
17	0.6" Ø 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.10 CY		
WEIGHT: 56,800 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

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10/19/2020 8:42:53 AM

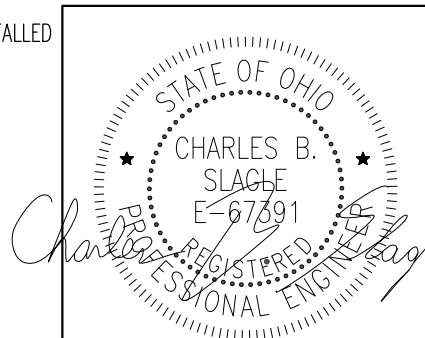
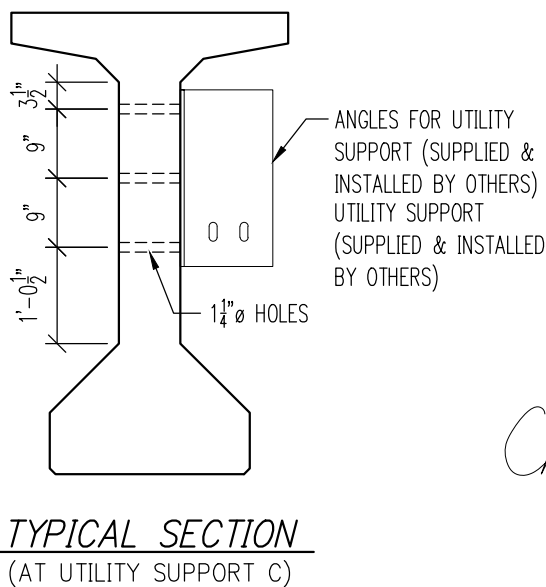
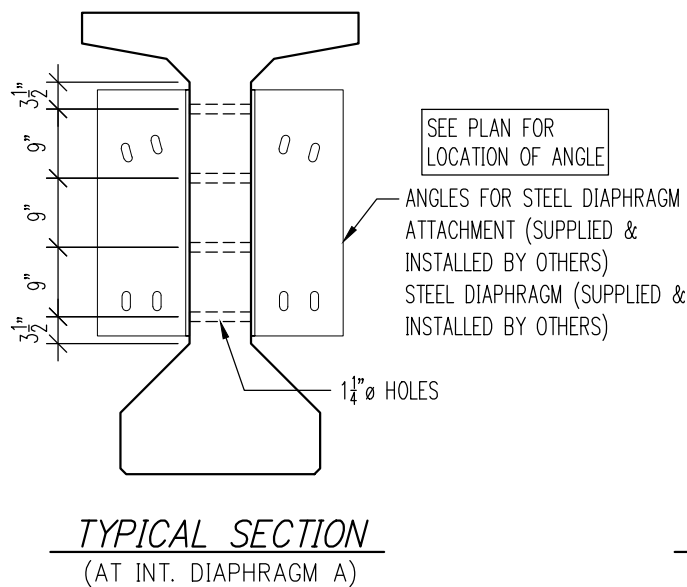
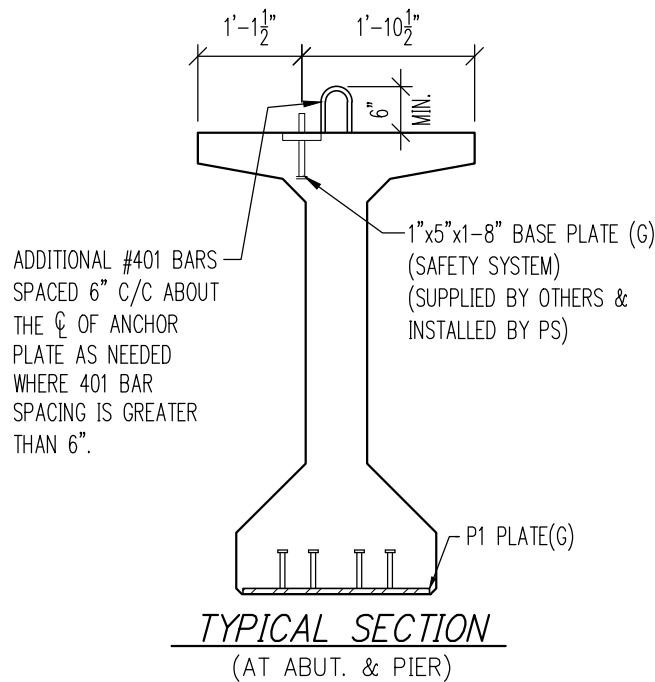
QTY:	1	MARK:	514
HARDWARE DETAILS (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION:			
CODE: 4M60360	SHEET: 29 OF 34	JOB NO: D19262	



NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



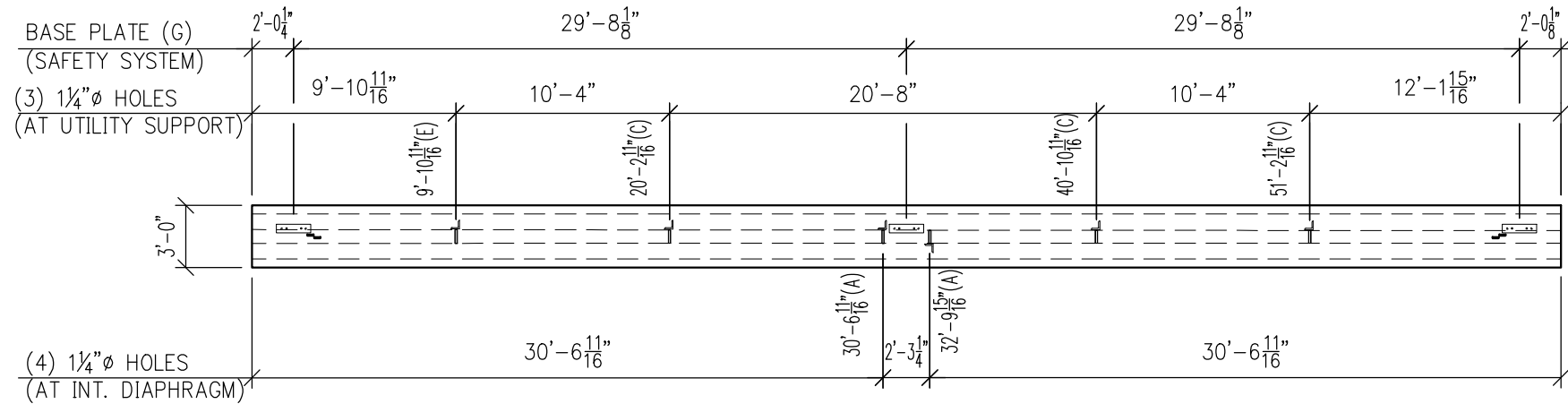
TYPICAL SECTION
(AT UTILITY SUPPORT E)



HARDWARE		
4	0.6" Ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
24	1 1/4" Ø HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" Ø 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.10 CY		
WEIGHT: 56,800 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:42:57 AM

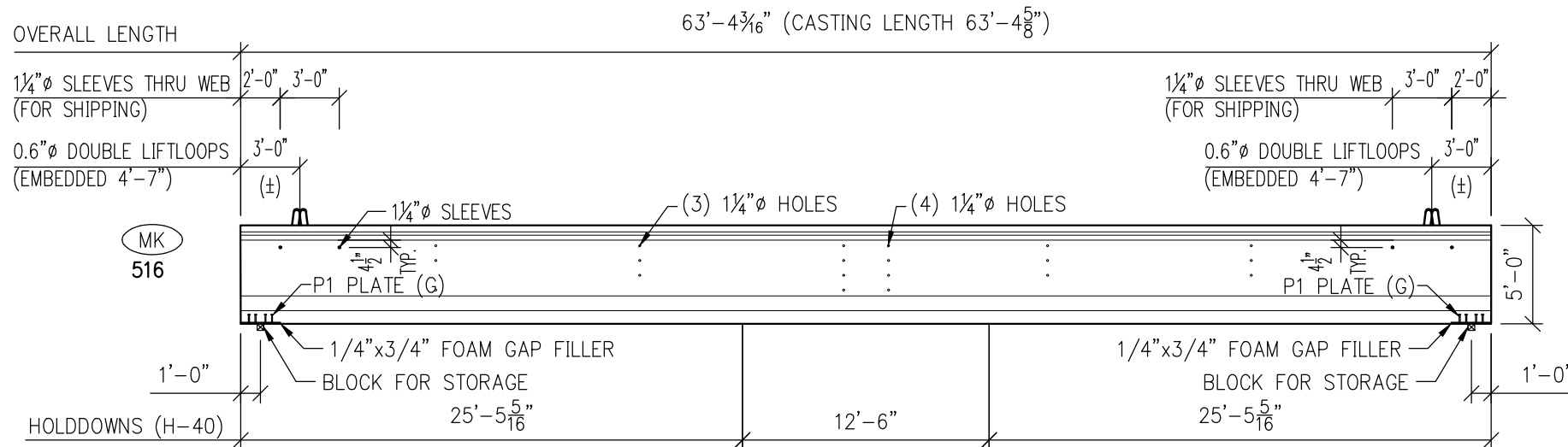
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HARDWARE DETAILS (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 30 OF 34	JOB NO: D19262	



PIER 2

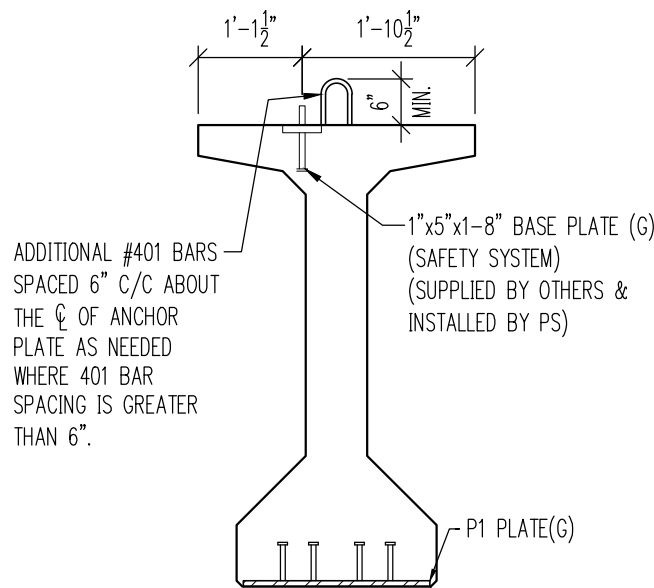
PLAN

FWD. ABUT.

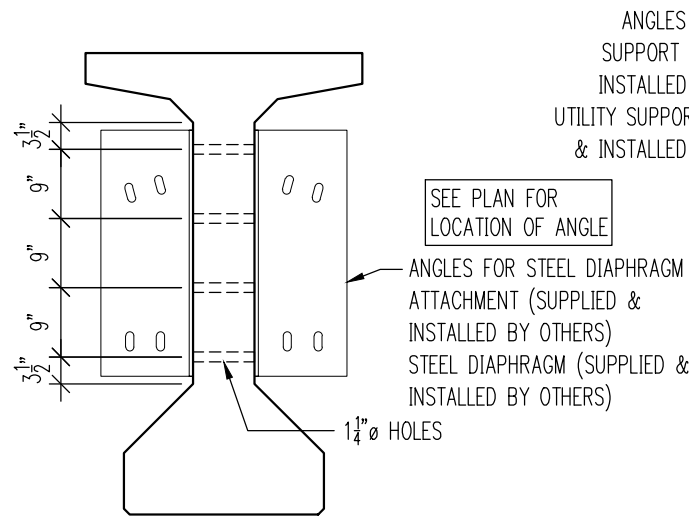


ELEVATION

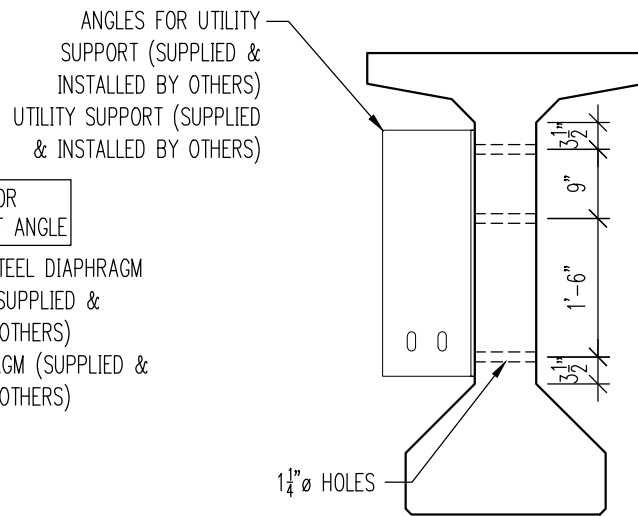
NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



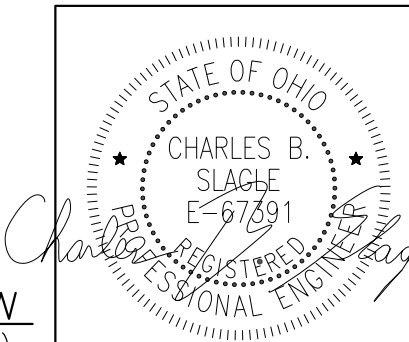
TYPICAL SECTION
(AT ABUT. & PIER)



TYPICAL SECTION
(AT INT. DIAPHRAGM A)

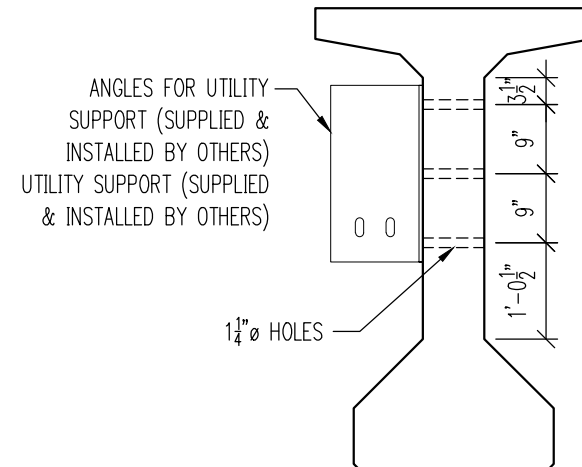


TYPICAL SECTION
(AT UTILITY SUPPORT E)




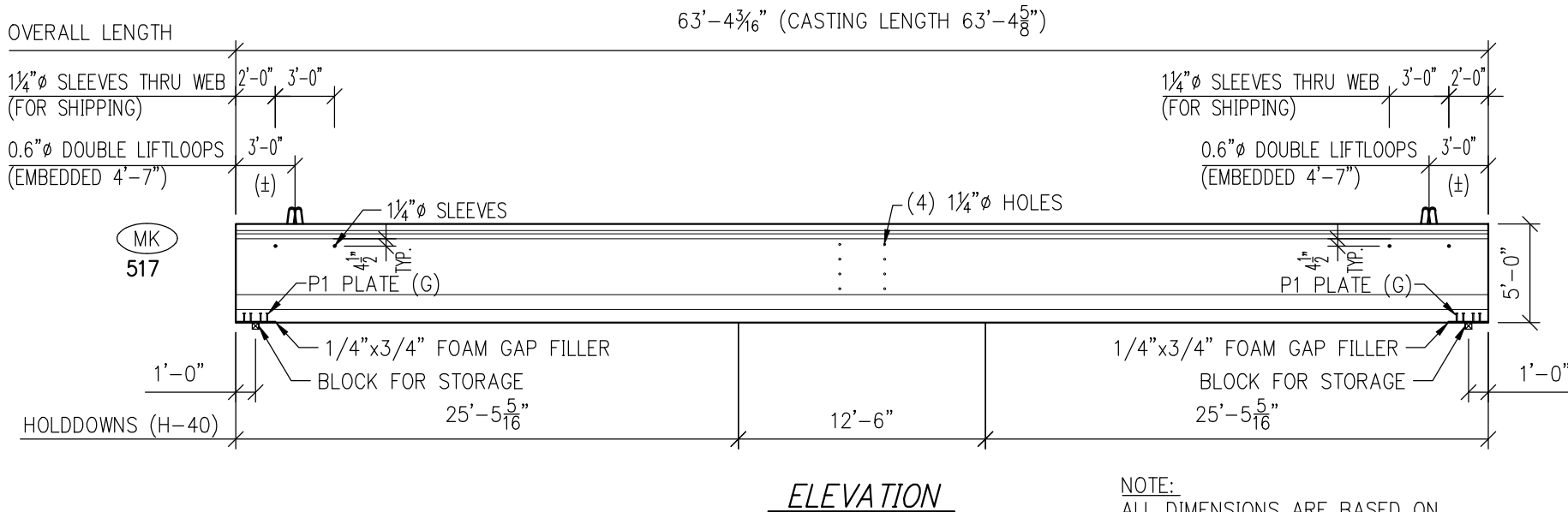
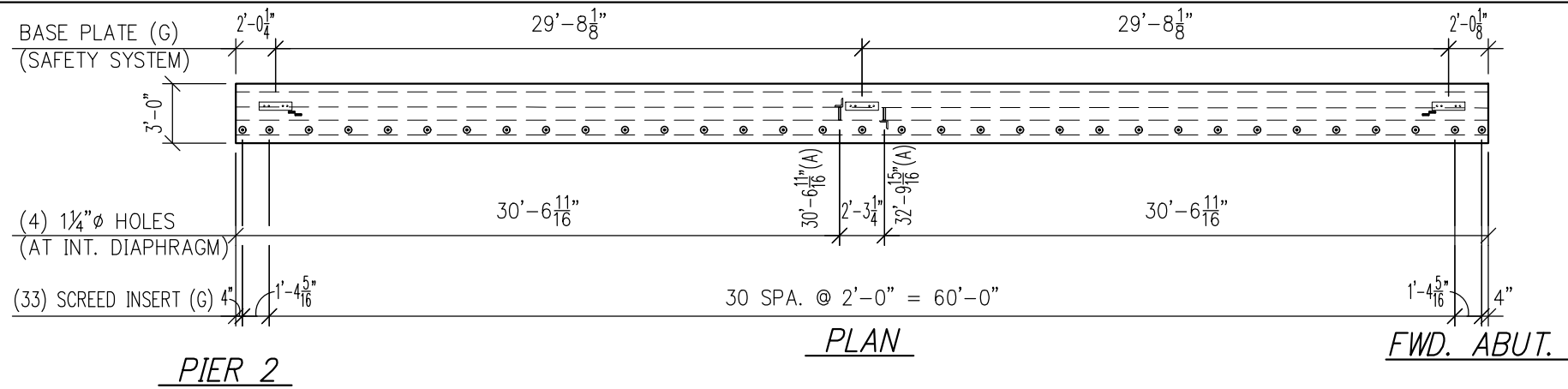
HARDWARE		
4	0.6" DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2*/S3	
24	1 1/4" HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.10 CY		
WEIGHT: 56,800 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:43:00 AM

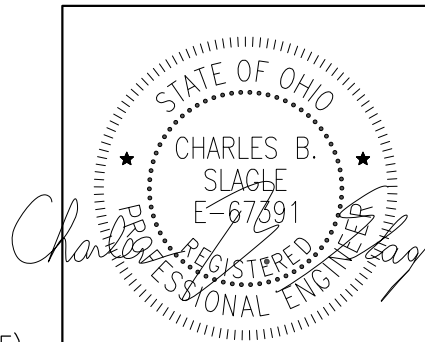
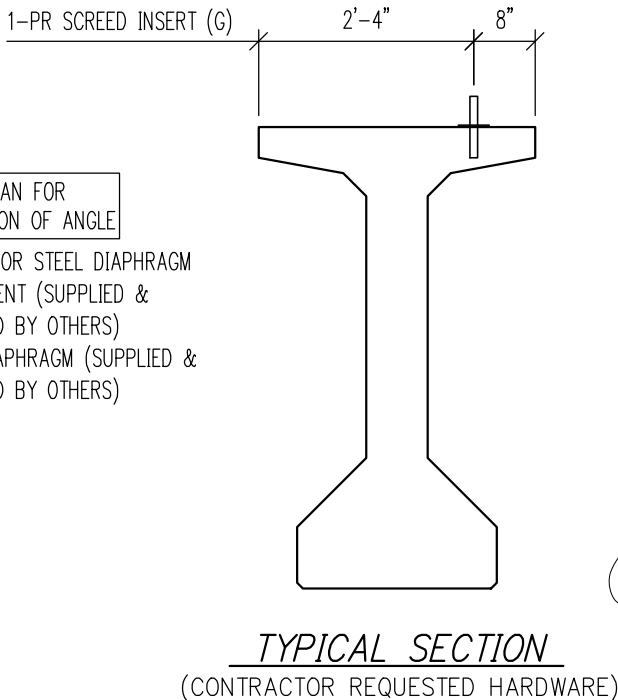
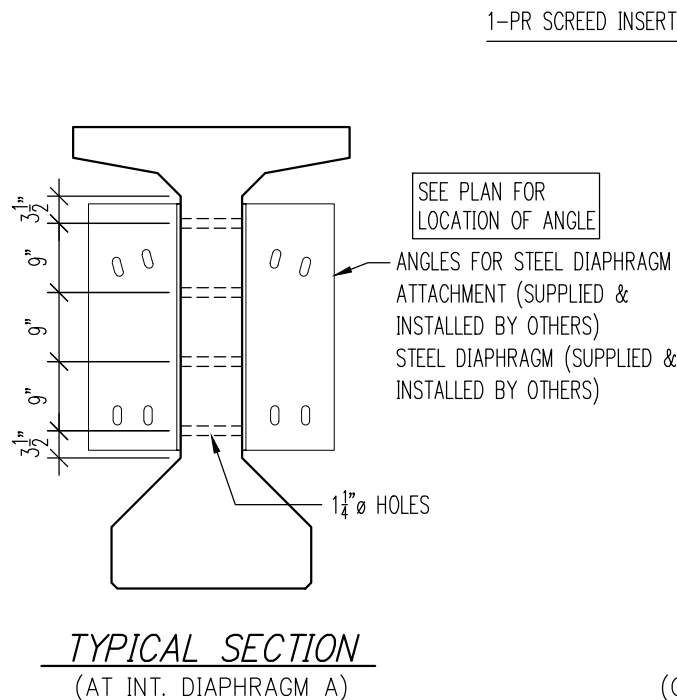
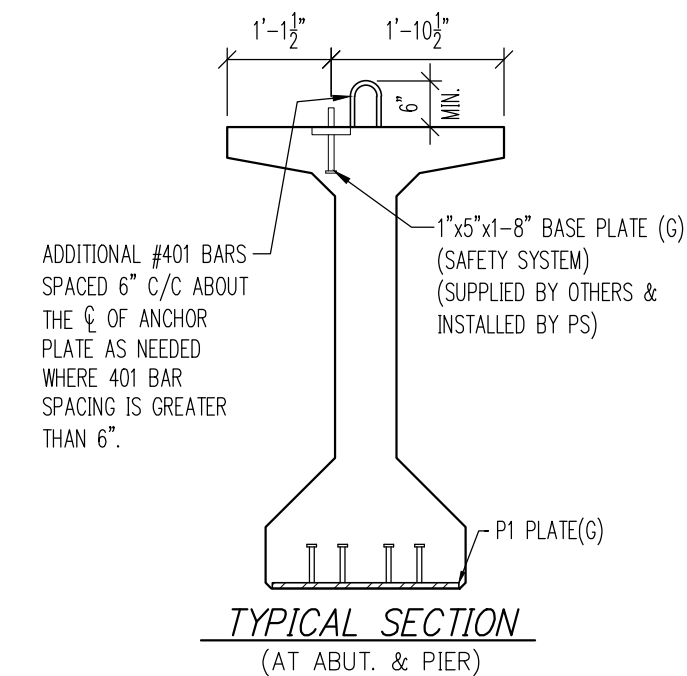


TYPICAL SECTION
(AT UTILITY SUPPORT C)

QTY:	2	MARK:	516
HARDWARE DETAILS (SPAN 3)			
CUYAHOGA COUNTY, OHIO			
OH-10 OVER KINGSBURY RUN RAVINE			
BRIDGE No. CUY-10-1949 STR. FILE: 1801515			
TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION:			
CODE: 4M60360	SHEET: 31 OF 34	JOB NO: D19262	








NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



HARDWARE		
4	0.6" ϕ DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
12	1 1/4" ϕ HOLES	
33	1-PR SCREED INSERT	(G)
3	BASE PLATE	(G)
STRAND		
17	0.6" ϕ 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.10 CY		
WEIGHT: 56,800 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:43:02 AM

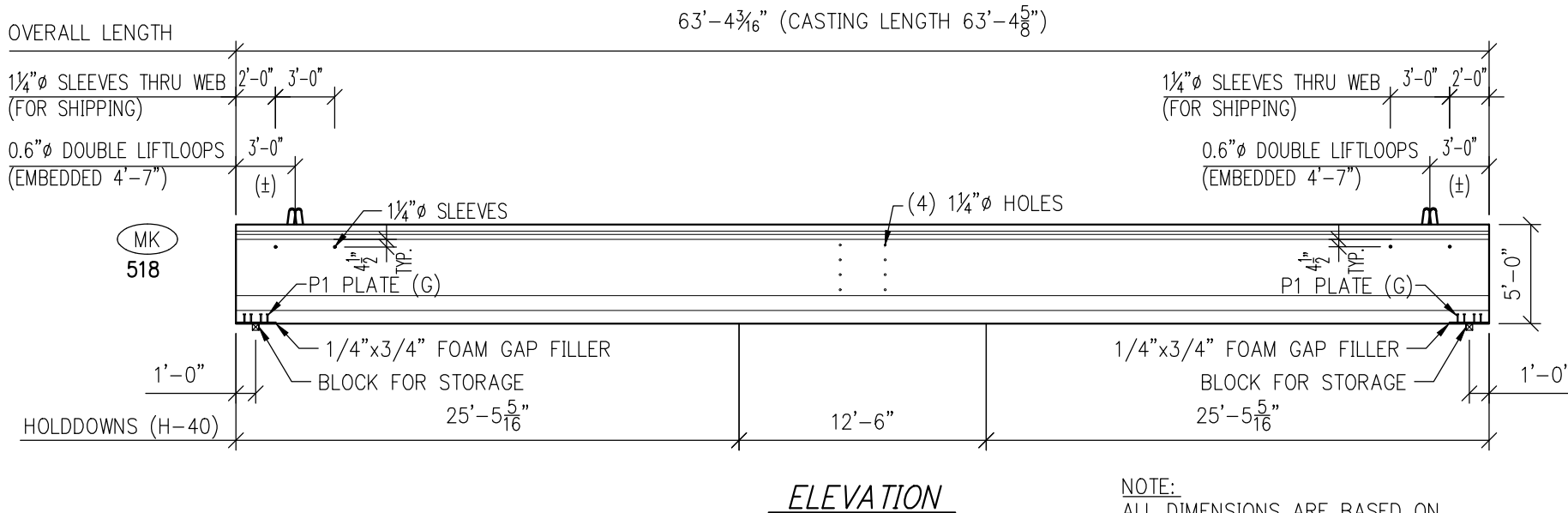
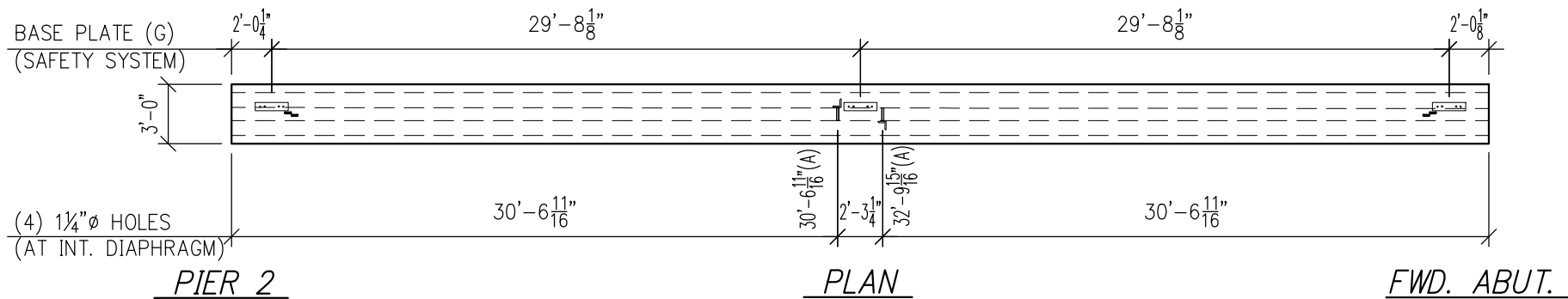
QTY:	1	MARK:	517
HARDWARE DETAILS (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
<div><div>PRESTRESS SERVICES INDUSTRIES LLC</div></div>			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20		DRAWN BY: Shawn Hubbell	
CHECKED: Tony May			
REVISIONS			
			
			
			
CODE: 4M60360		SHEET: 32 OF 34	
JOB NO: D19262			

JMAY

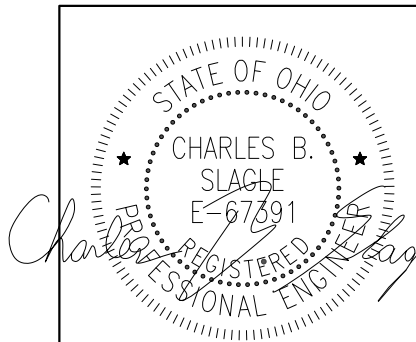
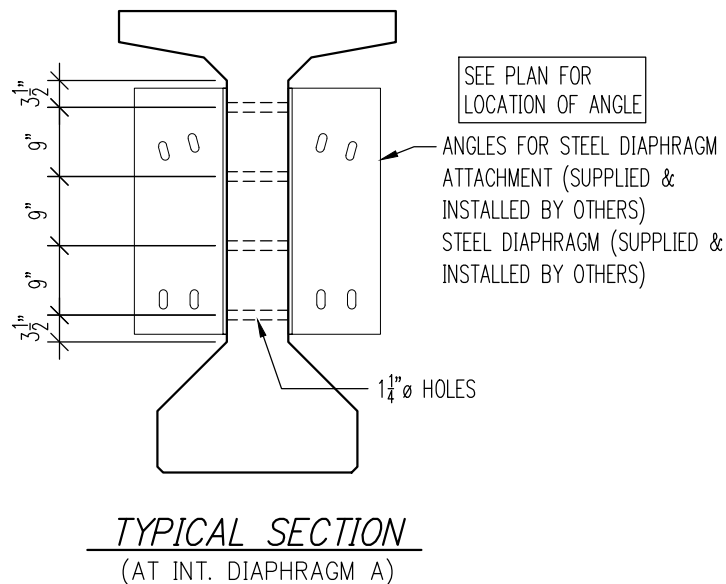
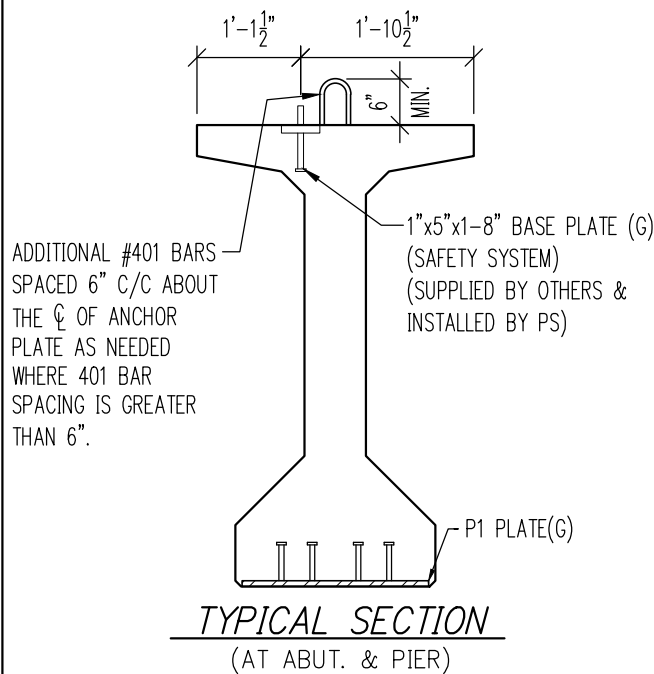
D19262 < 33 518 >

2:19 PM

10/14/2020




NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



HARDWARE		
4	0.6" Ø DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
12	1 1/4" Ø HOLES	
3	BASE PLATE	(G)
STRAND		
17	0.6" Ø 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.10 CY		
WEIGHT: 56,800 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:43:05 AM

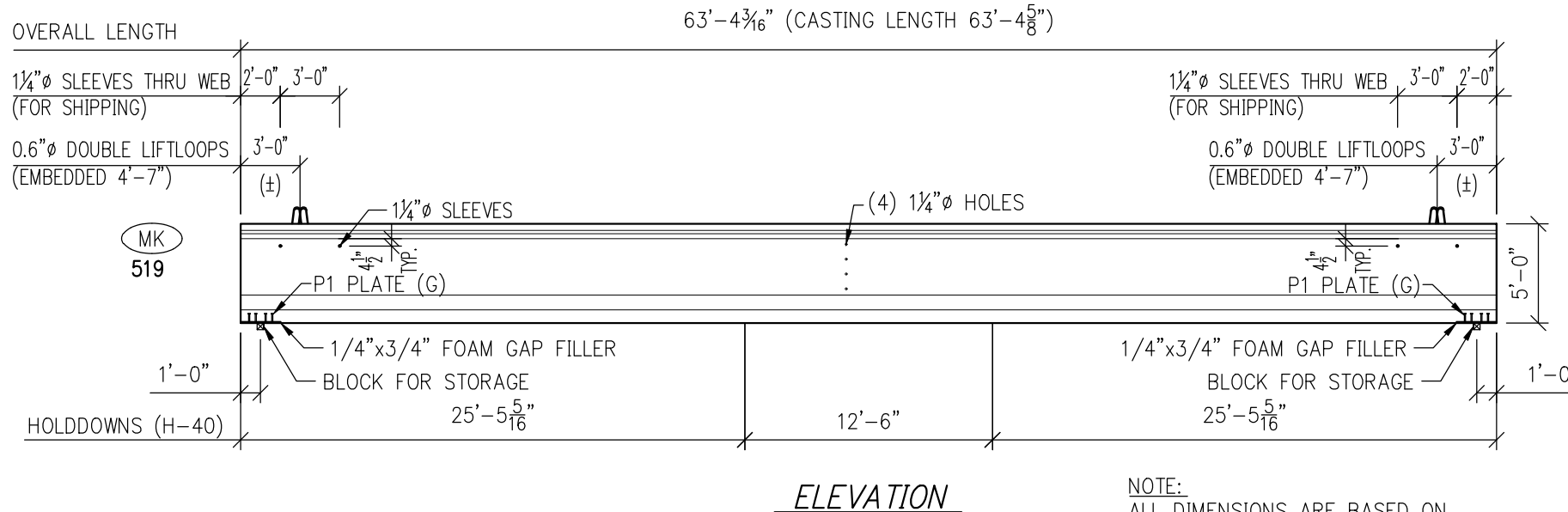
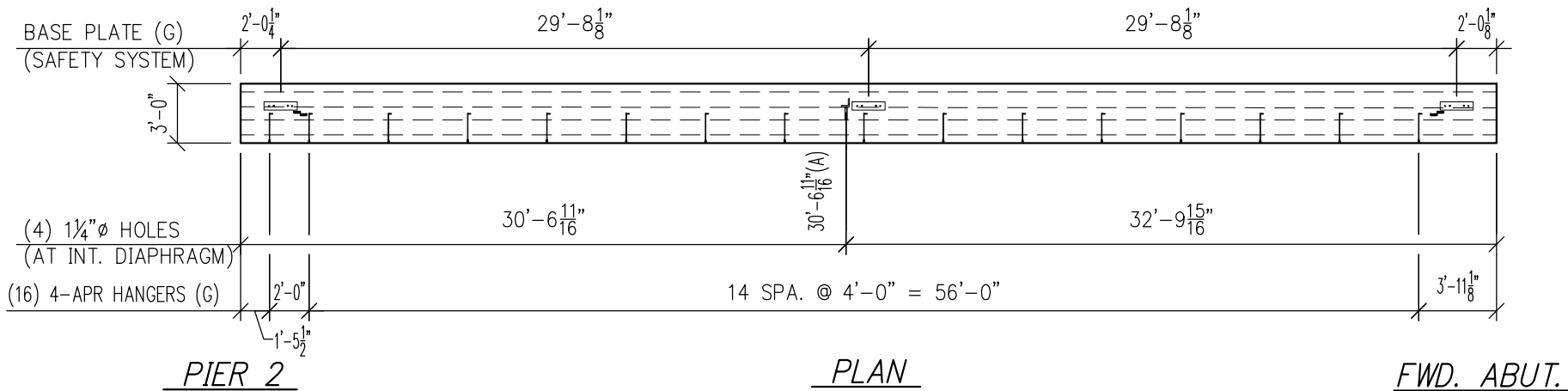
QTY:	3	MARK:	518
HARDWARE DETAILS (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISION:			
CODE: 4M60360	SHEET: 33 OF 34	JOB NO: D19262	

JMAY

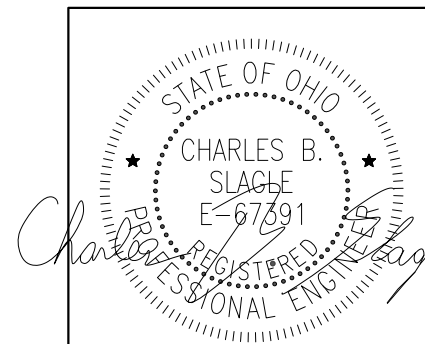
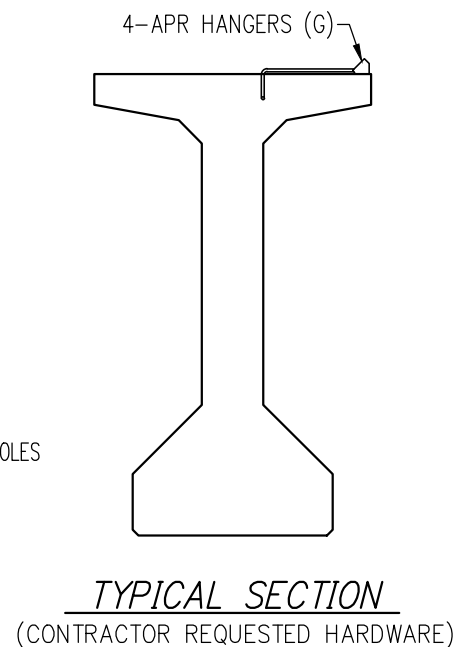
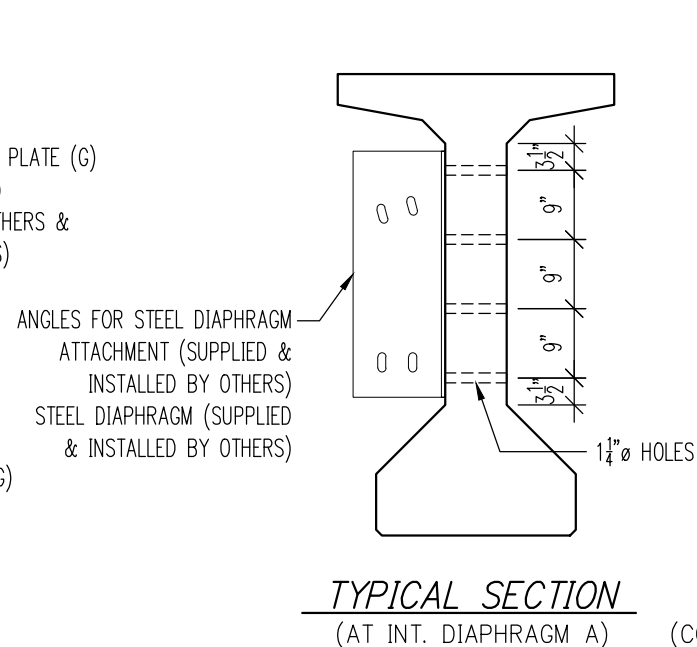
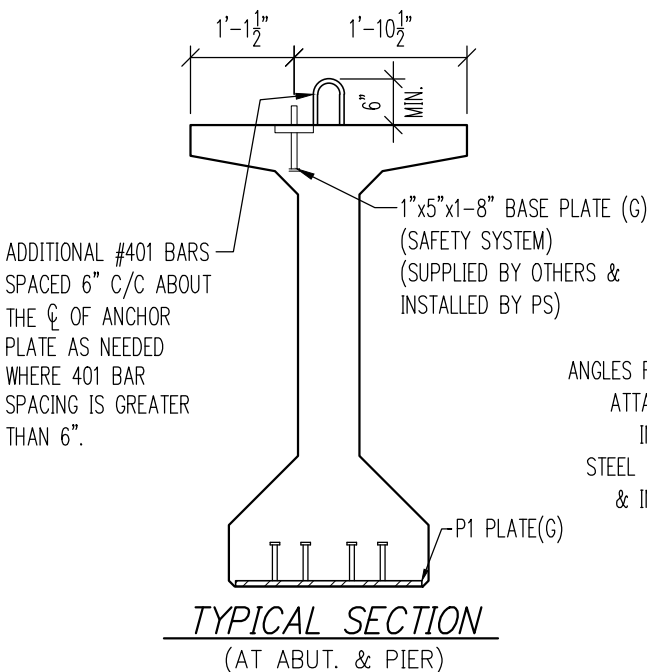
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10/14/2020



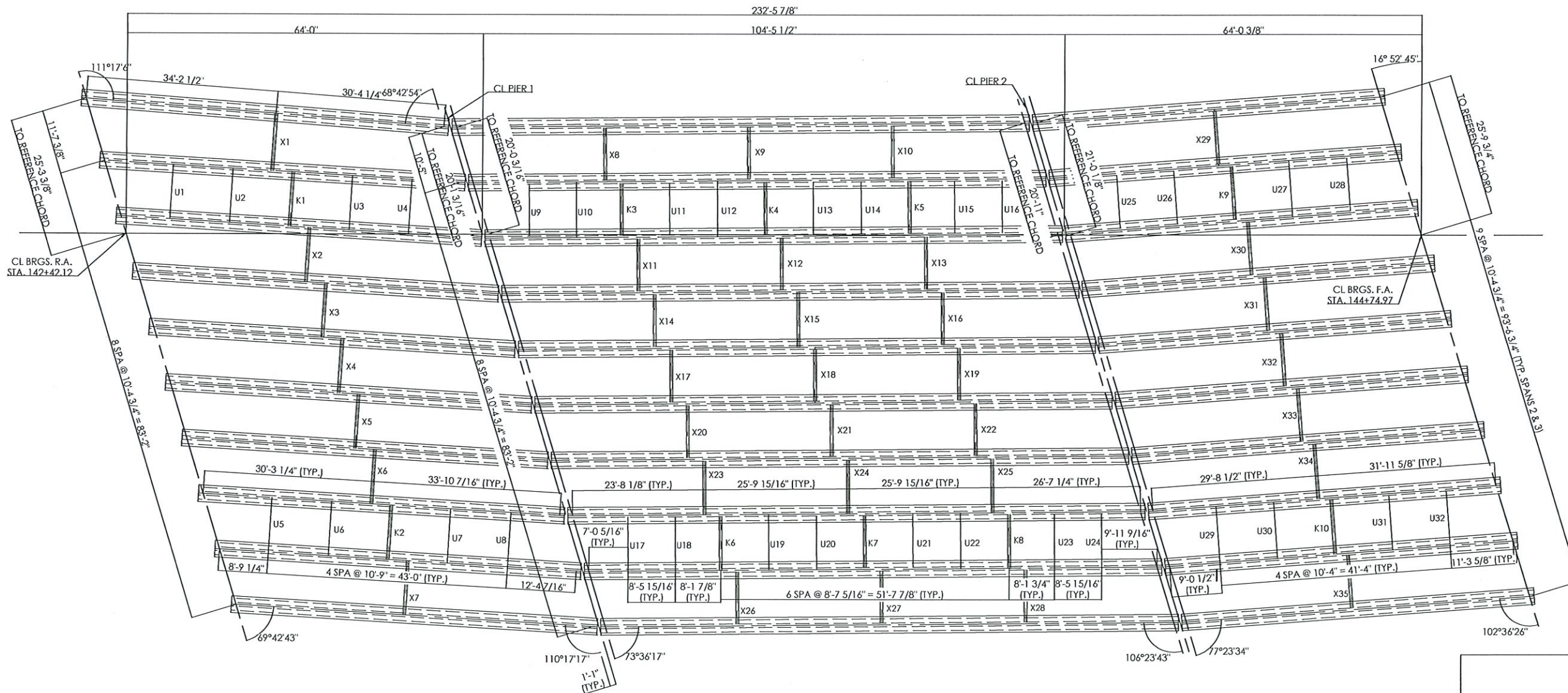
NOTE:
ALL DIMENSIONS ARE BASED ON
CASTING LENGTH SECTIONS ARE
VIEWED FROM MARKED END.



HARDWARE		
4	0.6" ϕ DOUBLE LIFTLOOPS	(B)
2	P1 PLATE	(G)
2	H-40 HOLDDOWNS B2"/S3	
8	1 1/4" ϕ HOLES	
16	TYPE 4-APR HANGERS	(G)
3	BASE PLATE	(G)
STRAND		
17	0.6" ϕ 270K LR (As=0.217")	(B)
CONCRETE		
CUBIC TOTAL: 14.10 CY		
WEIGHT: 56,800 LBS.		
MATERIAL FINISHES		
(B) BLACK, (E) EPOXY, (G) GALVANIZED & (P) PRIMED		

SUBMITTED
10/19/2020 8:43:07 AM

QTY:	1	MARK:	519
HARDWARE DETAILS (SPAN 3)			
CUYAHOGA COUNTY, OHIO OH-10 OVER KINGSBURY RUN RAVINE BRIDGE No. CUY-10-1949 STR. FILE: 1801515 TYPE 4 (60") MODIFIED BEAM PID: 96833 ODOT: 173000			
CONTRACTOR: KOKOSING CONSTRUCTION			
Production: Decatur, IN (260) 724-7117		Drafting: Lexington, KY (859) 299-0461	
DATE: 7/7/20	DRAWN BY: Shawn Hubbell	CHECKED: Tony May	
REVISIONS			
CODE: 4M60360	SHEET: 34 OF 34	JOB NO: D19262	



FRAMING PLAN



DAVID F. TRAINI
E-48751

STEEL DIAPHRAGMS

CUSTOMER: KOKOSING

CUYAHOGA CO, OHIO

CONTRACT ID: 173000-96833

FEDERAL PROJECT NO: E140 (249)

BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE

SHOP RELEASED DATE

DWG NO. 003

JOB NO. 19-106

01 OF 19

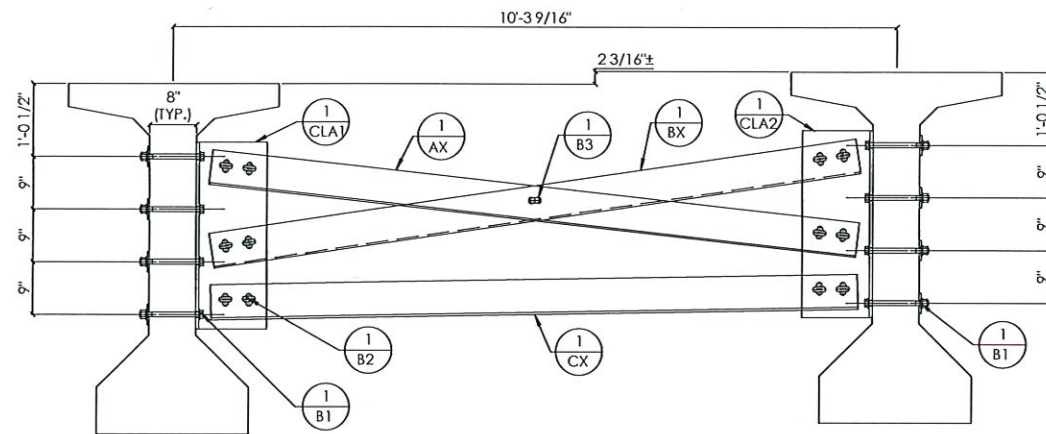


DR: KDP	DWG START DATE: 04/28/20
	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: 11/11/20

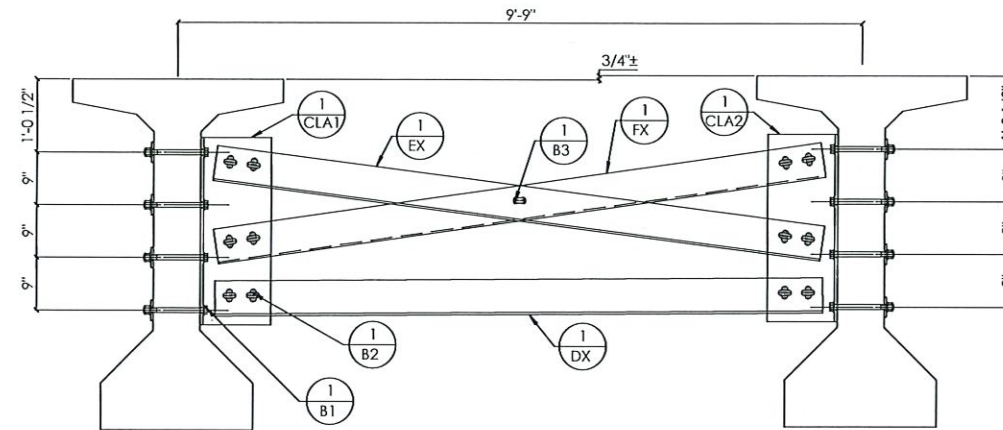
FINISH NOTES:
- FINISH COAT: HDG per ASTM A123

SHOP NOTES:
- SPECIFICATION: ODOT - CURRENT STANDARDS AND SPECIFICATIONS
- ALL HOLES SHALL BE 15/16" DIAMETER UNO
- ALL BOLTS SHALL BE A325 GALV UNO

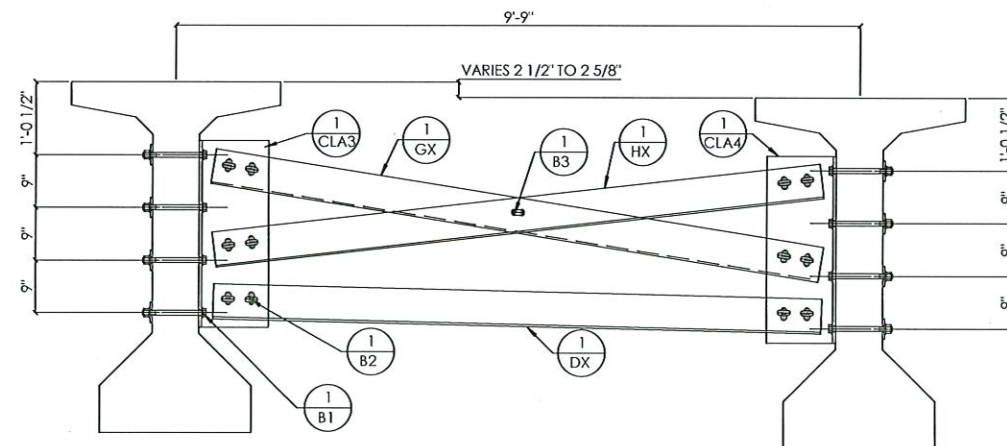
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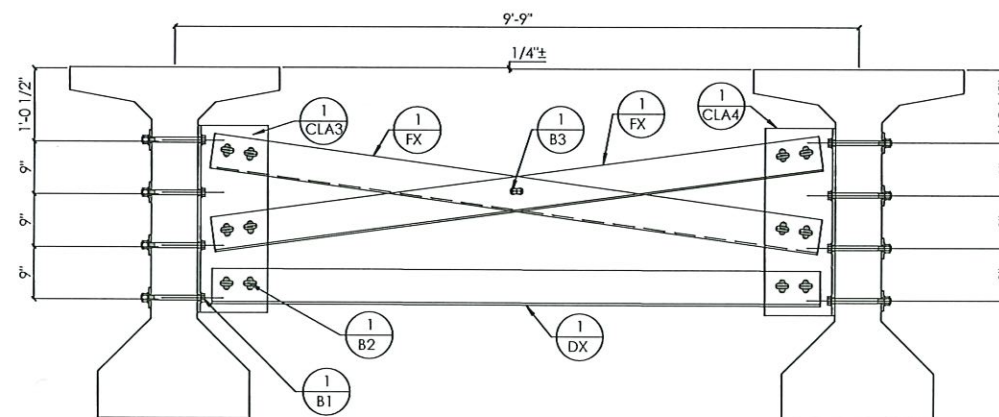
MARK X1



MARK X2



MARK X3 - X6



MARK X7

SPAN 1



Dal 7.2 1-6-21

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAUT RD, FRANKFORT, KY 40601
(P) 800-775-2201 (F) 502-495-2201

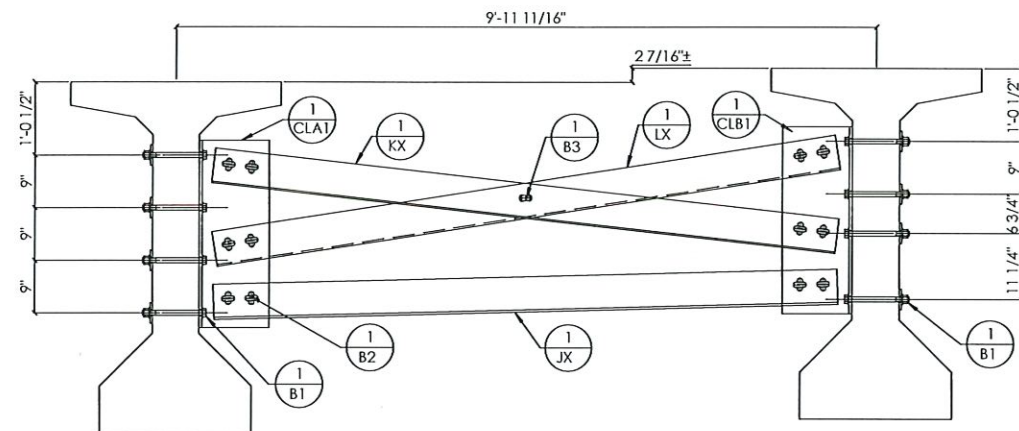
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BOTTOMS
Est. 1967
ENGINEERING & SERVICE INC

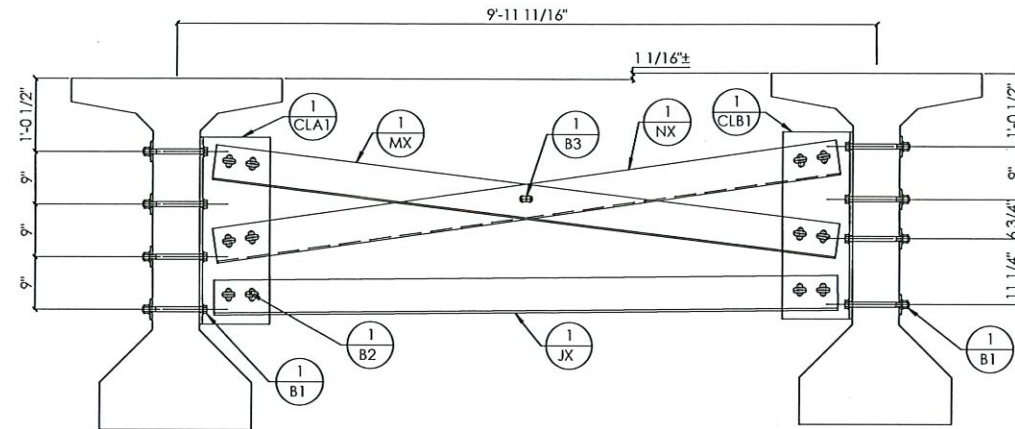
DR: KDP	DWG START DATE: 04/28/20
	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: 1/1/21

STEEL DIAPHRAGMS				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	02 OF 19	

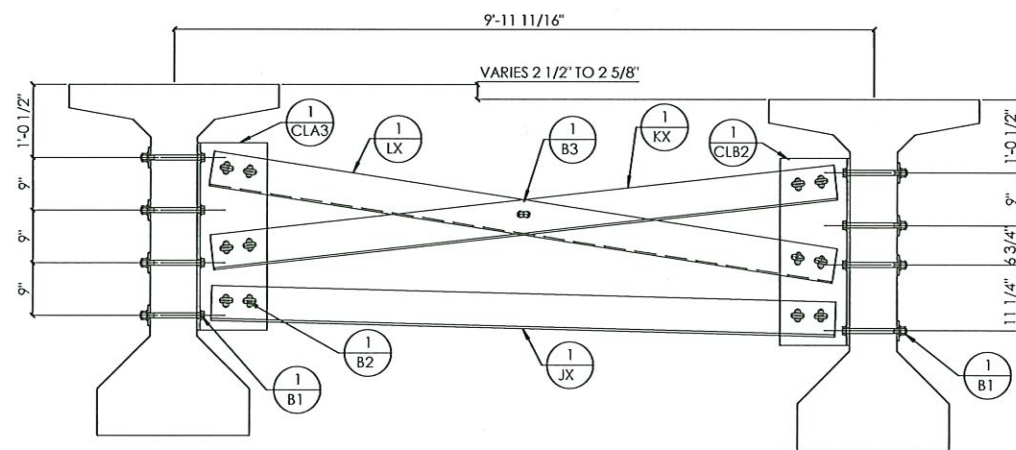
PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAULT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-695-2201



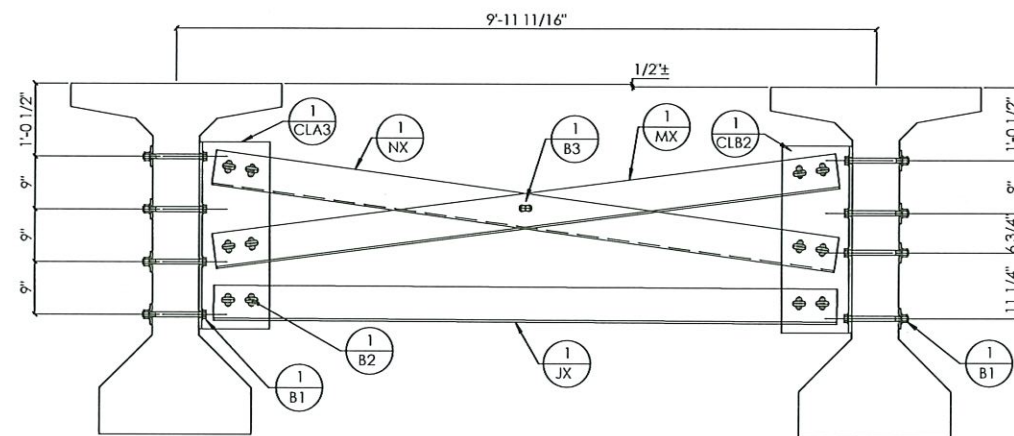
MARK X8



MARK X11



MARK X14, X17,
& X20, X23



MARK X26

SPAN 2

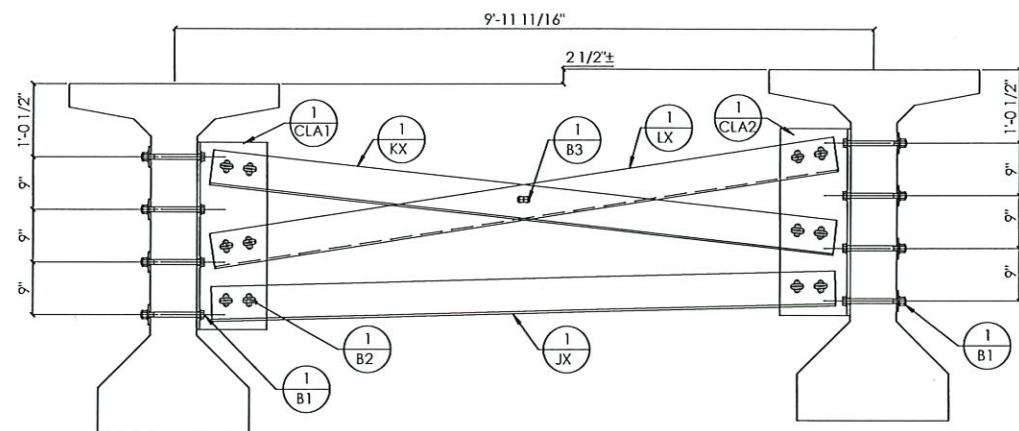


Del 12: 1-6-21

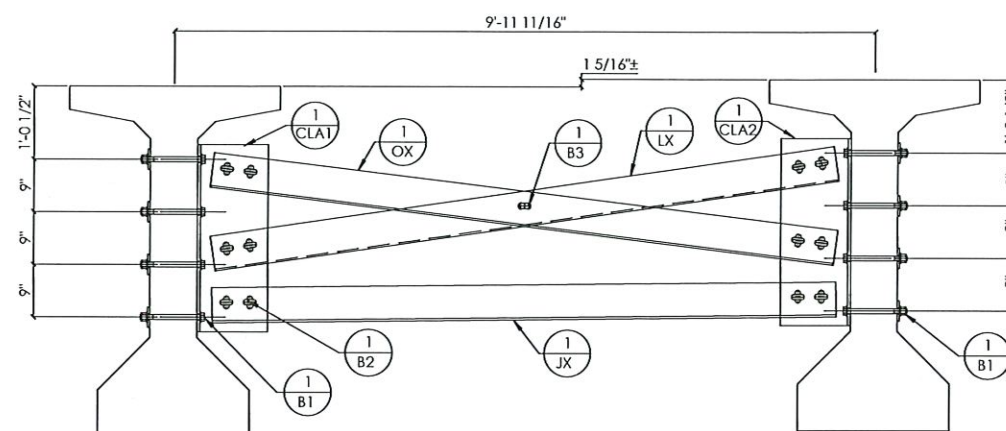
REV.	BY	DATE	CHK.	DESCRIPTION
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BOTTOMS Est. 1967 ENGINEERING & SERVICE INC	
DR: KDP	DWG START DATE: 04/28/20
	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: _/_/_

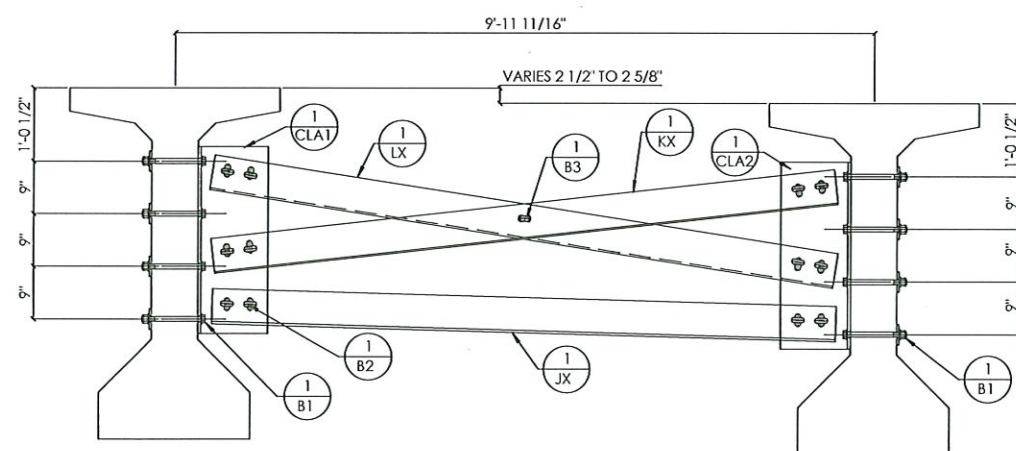
STEEL DIAPHRAGMS			
CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	03 OF 19



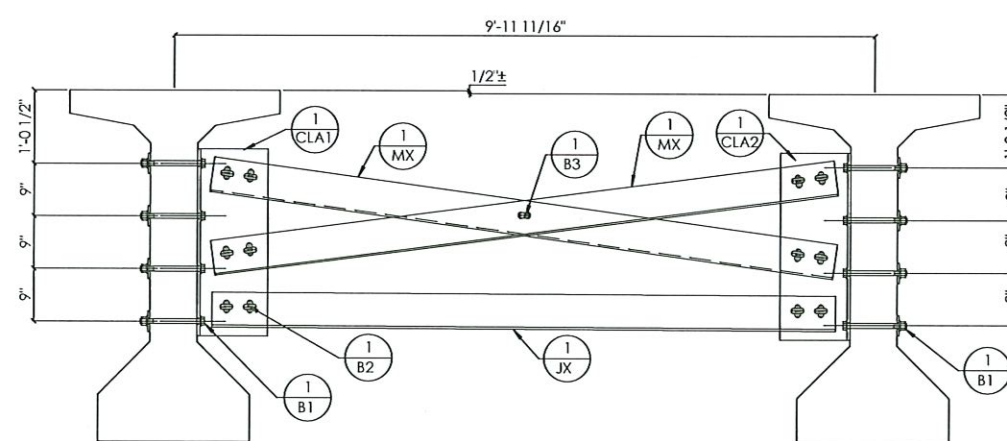
MARK X9



MARK X12



MARK X15, X18,
X21 & X24



MARK X27

SPAN 2

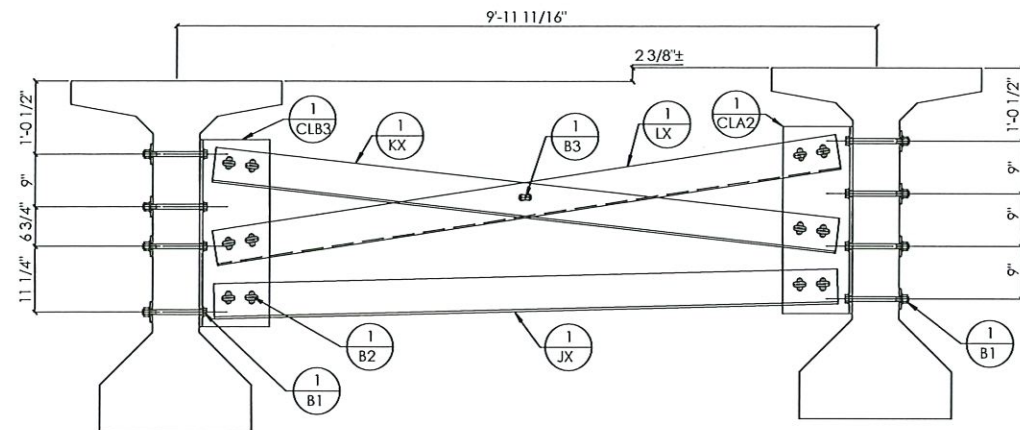


Del 7.2.1-6-21

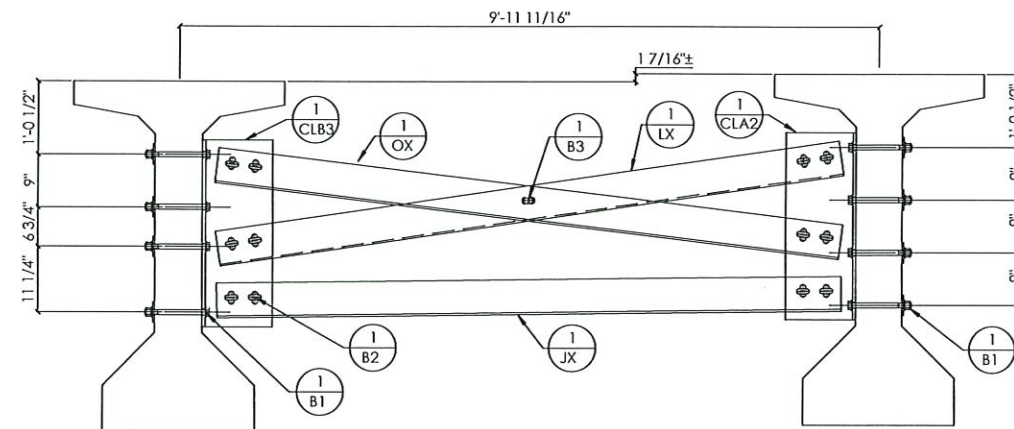
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		DWG LAST EDIT:	05/27/20
DR: KDP		DWG CHECK DATE:	05/27/20
CHK: DCT		APPROVAL DATE:	__/__/__

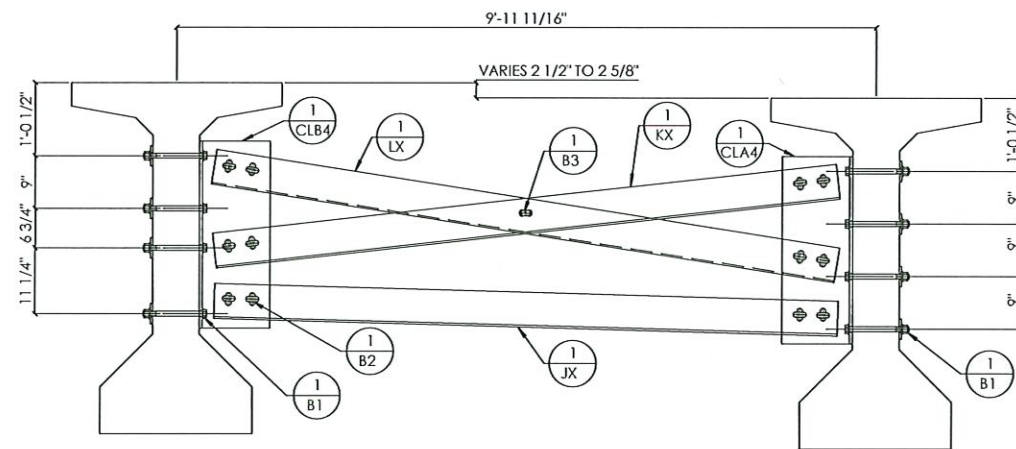
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CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	04 OF 19



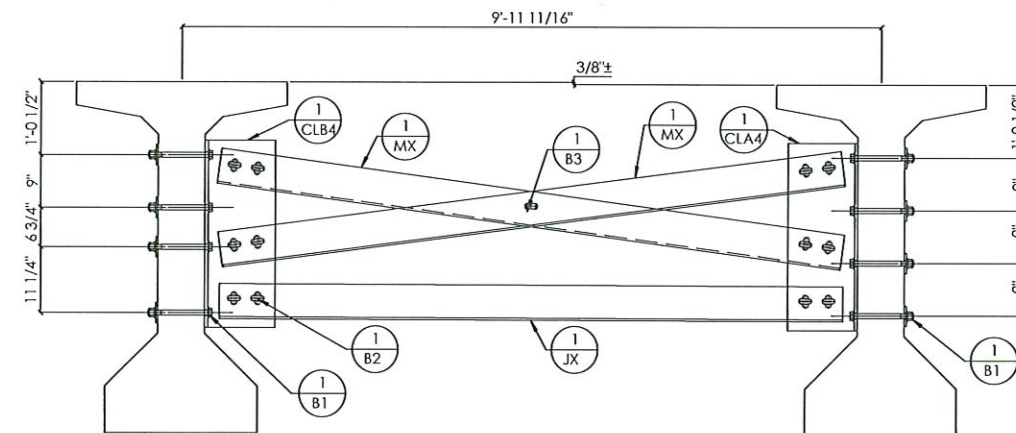
MARK X10



MARK X13



MARK X16, X19,
X22 & X25



MARK X28

SPAN 2

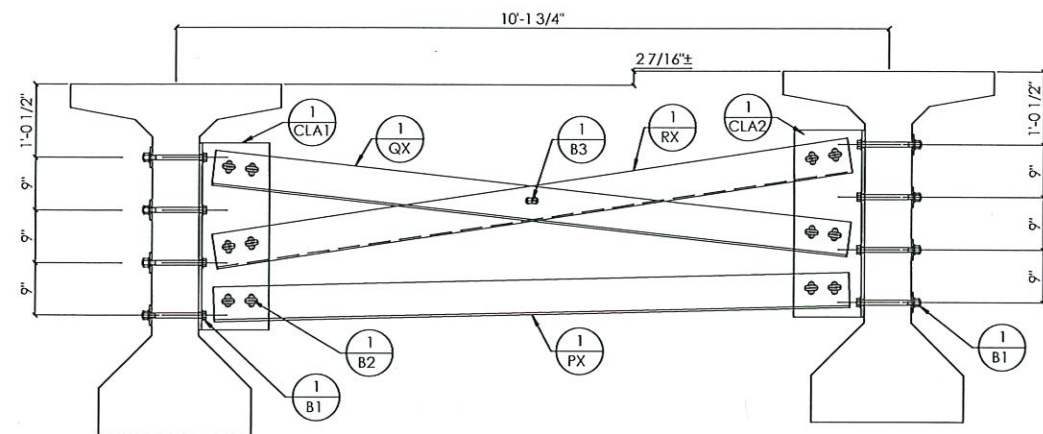


Del J. Z. H-21

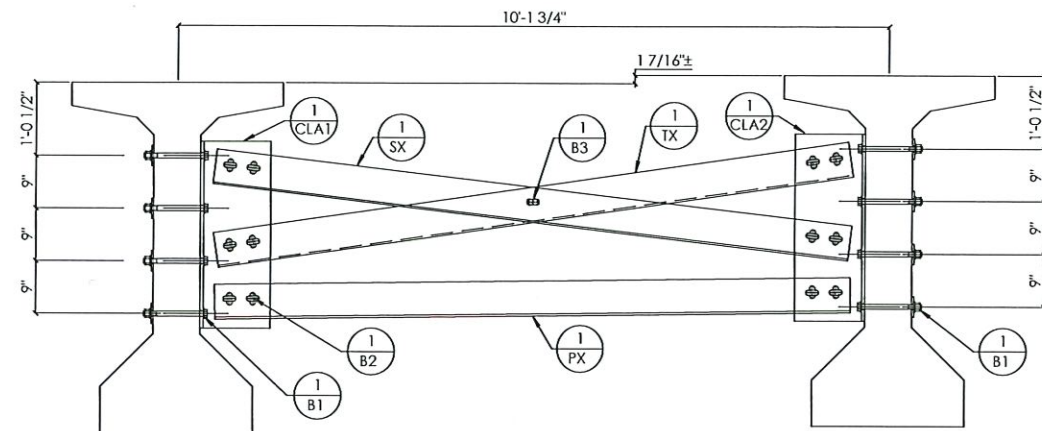
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		CHK: DCT	DWG LAST EDIT: 05/27/20
			DWG CHECK DATE: 05/27/20
			APPROVAL DATE: _/_/_

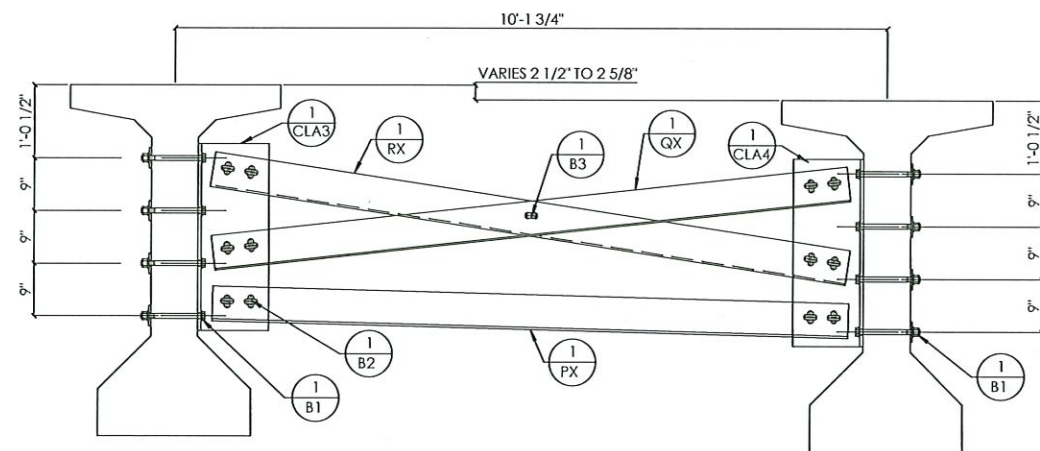
STEEL DIAPHRAGMS			
CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	05 OF 19



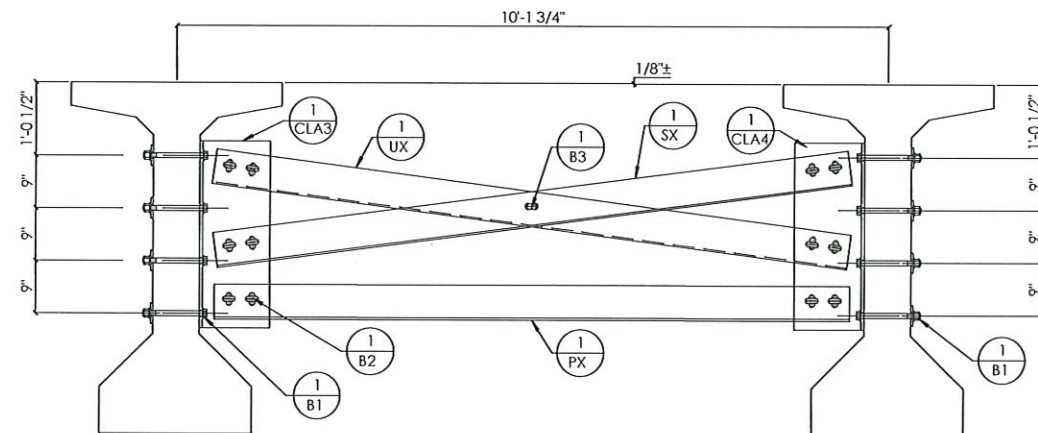
MARK X29



MARK X30



MARK X31, X32,
X33 & X34



MARK X35

SPAN 3



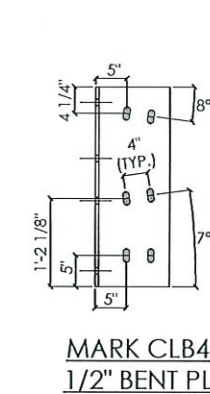
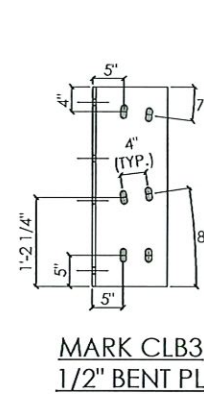
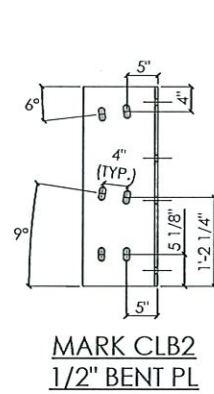
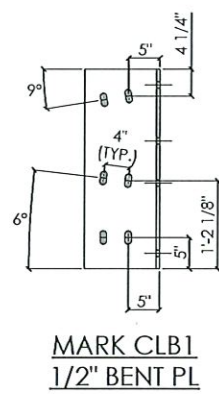
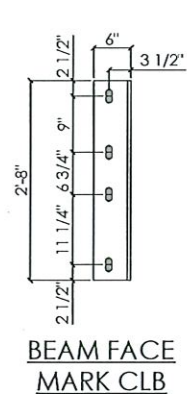
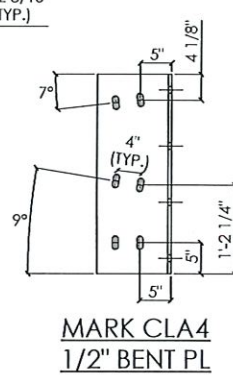
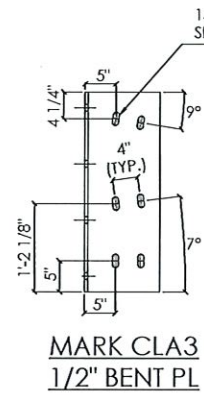
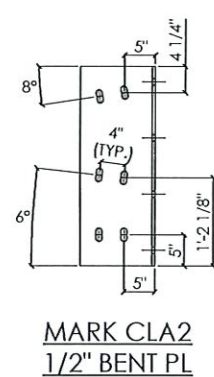
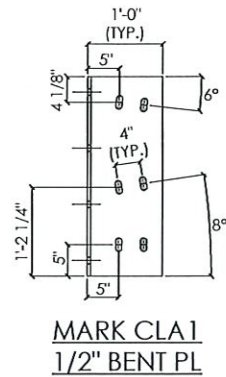
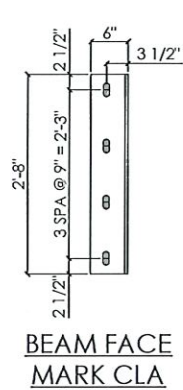
Del 7.2: 1-6-21

REV.	BY	DATE	CHK.	DESCRIPTION
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	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: _/_/_

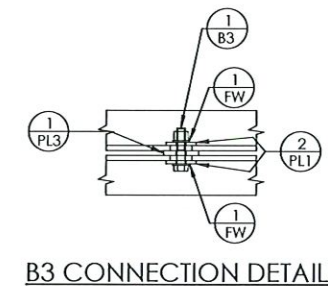
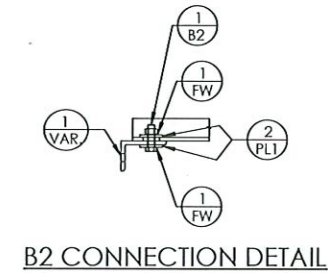
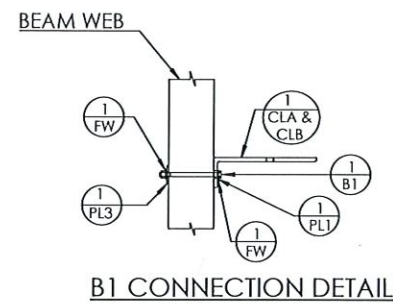
STEEL DIAPHRAGMS				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	06 OF 19	

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAULT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-695-2201



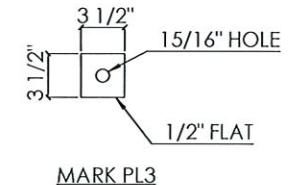
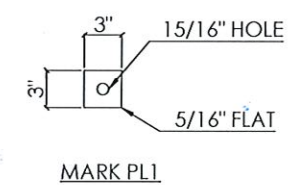
CONNECTION PLATE DETAILS

(NOTE: ALL SLOTS ARE 15/16" x 2 3/16")



BILL OF MATERIALS

NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS
1	13	CLA1	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
2	13	CLA2	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
3	15	CLA3	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
4	15	CLA4	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
5	2	CLB1	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
6	5	CLB2	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
7	2	CLB3	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
8	5	CLB4	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
9	1190	PL1	FLAT	5/16" x3"	3"	A709 GR36	HDG
10	315	PL3	FLAT	1/2" x3 1/2"	3 1/2"	A709 GR36	HDG
11	280	B1	BOLT & NUT	7/8"	11"	A325/ A563	GALV
12	420	B2	BOLT & NUT	7/8"	3"	A325/ A563	GALV
13	35	B3	BOLT & NUT	7/8"	3 1/4"	A325/ A563	GALV
14	1470	FW	WASHER	7/8"		F436	GALV
15							
16							
17							
18							
19							
20							
21							
22							
23							



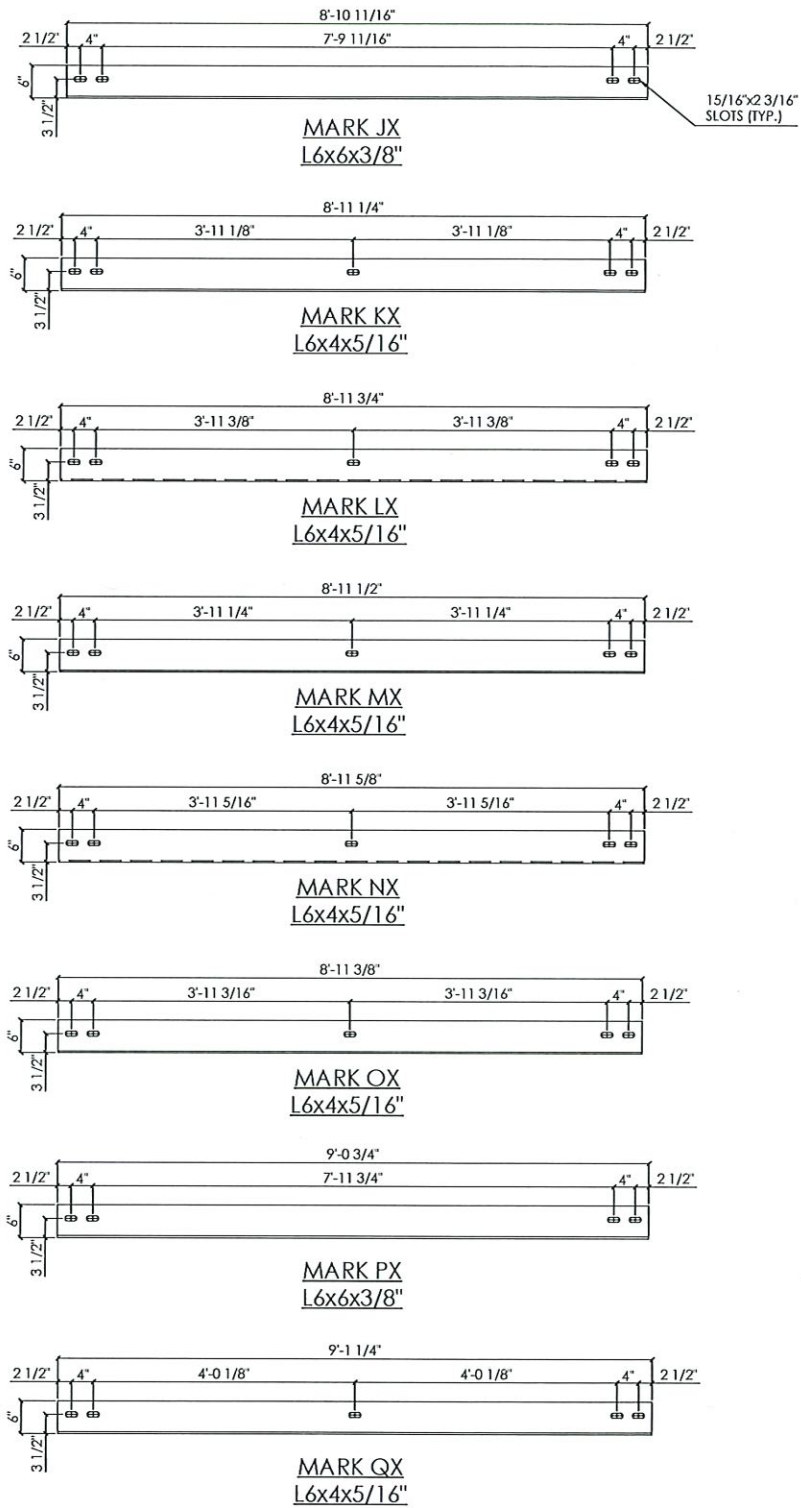
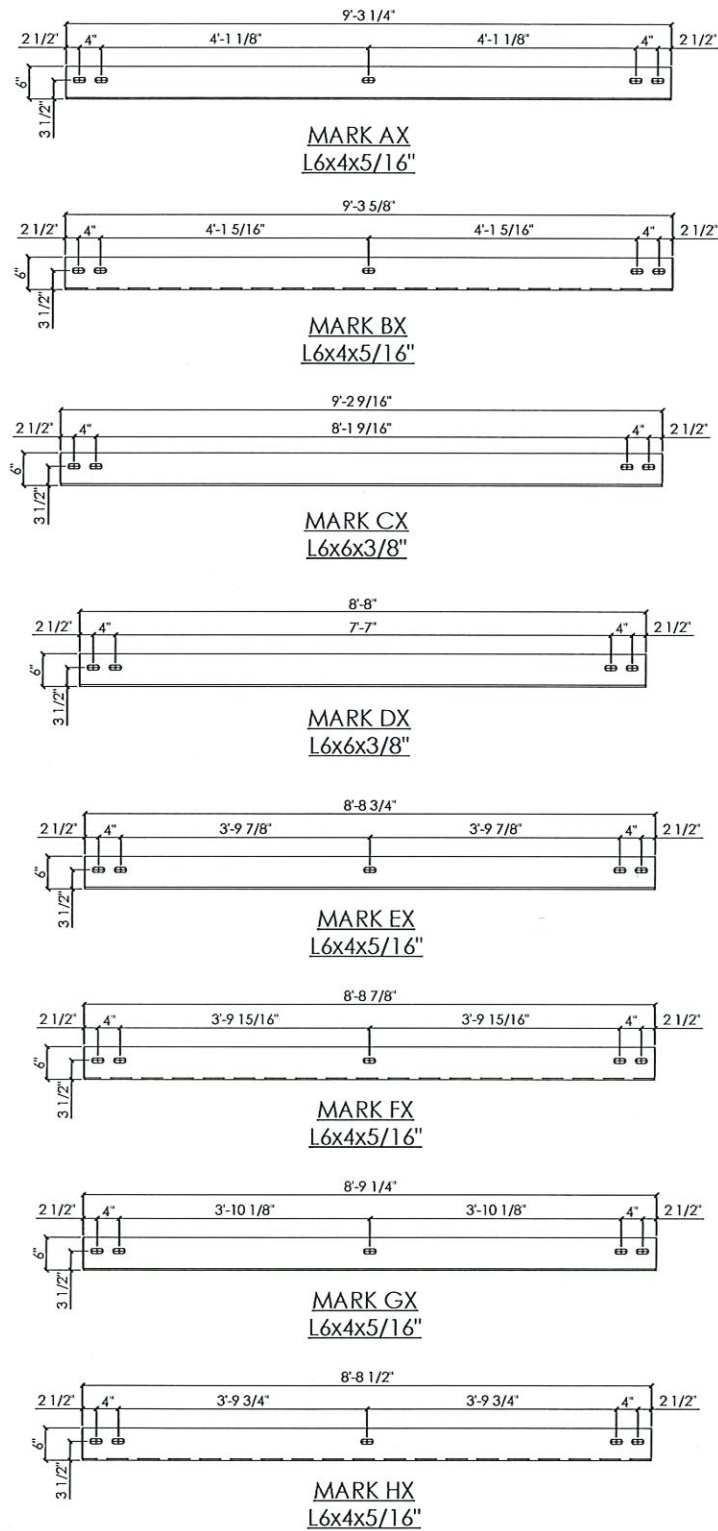
Del 7.2 1-6-21



DR: KDP	DWG START DATE: 04/28/20	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20	APPROVAL DATE: 1/1/21

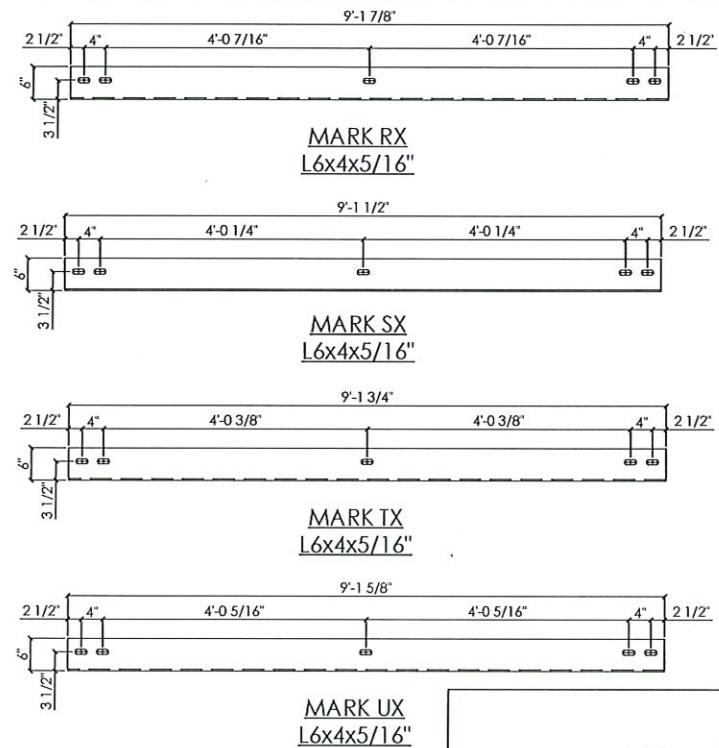
CONNECTION PLATES				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	07 OF 19	

REV.	BY	DATE	CHK.	DESCRIPTION
1	-	-	-	-



ANGLE DETAILS
(NOTE: ALL SLOTS ARE 15/16" x 2 3/16")

BILL OF MATERIALS							
NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS
1	1	AX	ANGLE	L6x4x5/16"	9'-3 1/4"	A36	HDG
2	1	BX	ANGLE	L6x4x5/16"	9'-3 5/8"	A36	HDG
3	1	CX	ANGLE	L6x6x3/8"	9'-2 9/16"	A36	HDG
4	6	DX	ANGLE	L6x6x3/8"	8'-8"	A36	HDG
5	1	EX	ANGLE	L6x4x5/16"	8'-8 3/4"	A36	HDG
6	3	FX	ANGLE	L6x4x5/16"	8'-8 7/8"	A36	HDG
7	4	GX	ANGLE	L6x4x5/16"	8'-9 1/4"	A36	HDG
8	4	HX	ANGLE	L6x4x5/16"	8'-8 1/2"	A36	HDG
9	21	JX	ANGLE	L6x6x3/8"	8'-10 11/16"	A36	HDG
10	15	KX	ANGLE	L6x4x5/16"	8'-11 1/4"	A36	HDG
11	17	LX	ANGLE	L6x4x5/16"	8'-11 3/4"	A36	HDG
12	6	MX	ANGLE	L6x4x5/16"	8'-11 1/2"	A36	HDG
13	2	NX	ANGLE	L6x4x5/16"	8'-11 5/8"	A36	HDG
14	2	OX	ANGLE	L6x4x5/16"	8'-11 3/8"	A36	HDG
15	7	PX	ANGLE	L6x6x3/8"	9'-0 3/4"	A36	HDG
16	5	QX	ANGLE	L6x4x5/16"	9'-1 1/4"	A36	HDG
17	5	RX	ANGLE	L6x4x5/16"	9'-1 7/8"	A36	HDG
18	2	SX	ANGLE	L6x4x5/16"	9'-1 1/2"	A36	HDG
19	1	TX	ANGLE	L6x4x5/16"	9'-1 3/4"	A36	HDG
20	1	UX	ANGLE	L6x4x5/16"	9'-1 5/8"	A36	HDG

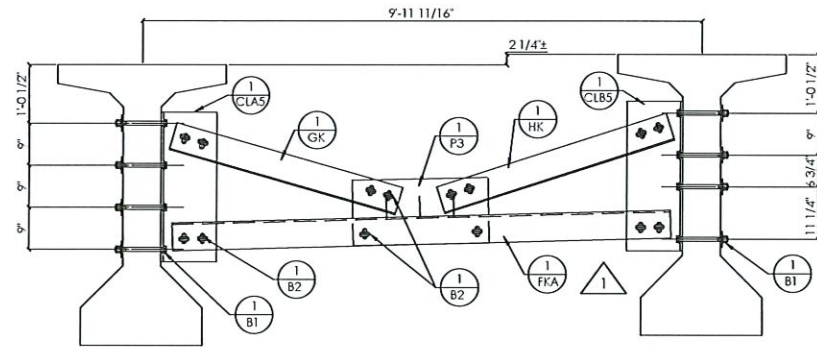


David F. Traini 1-6-21

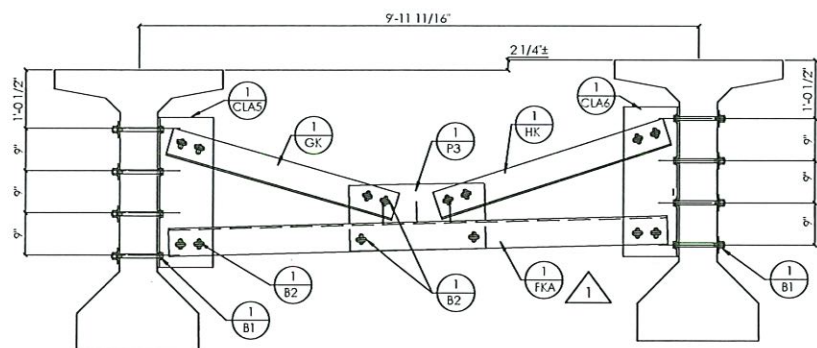
BOTTOMS				ANGLE DETAILS			
ENGINEERING & SERVICE INC				CUSTOMER: KOKOSING			
DR: KDP				CUYAHOGA CO, OHIO			
DWG START DATE: 04/28/20				CONTRACT ID: 173000-96833			
DWG LAST EDIT: 05/27/20				FEDERAL PROJECT NO: E140 (249)			
DWG CHECK DATE: 05/27/20				BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
APPROVAL DATE: 1/1/21				SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	08 OF 19

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAULT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-495-2201

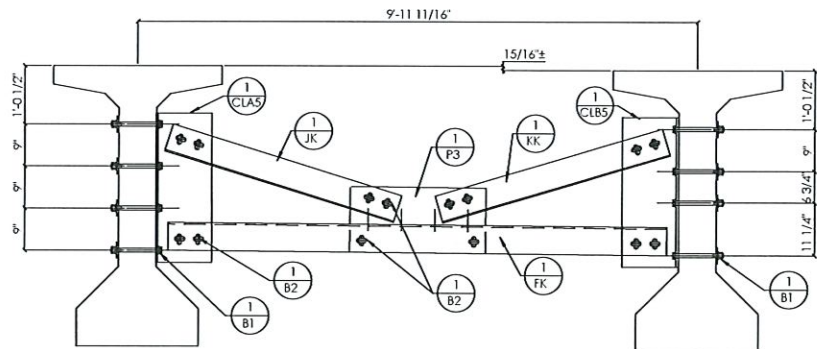
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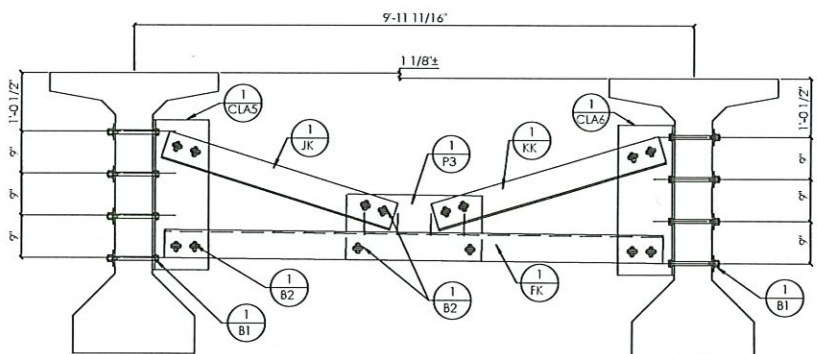
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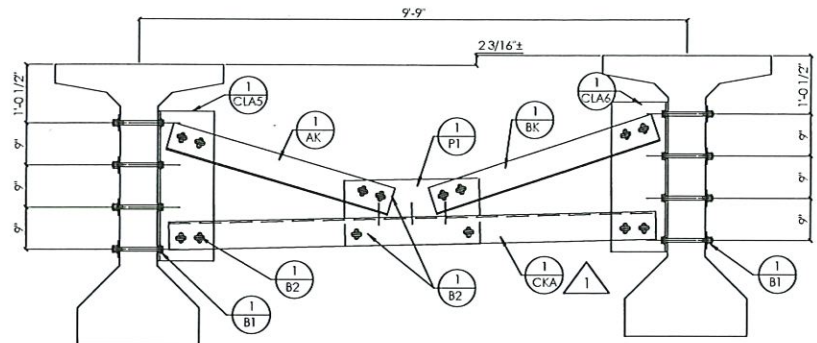
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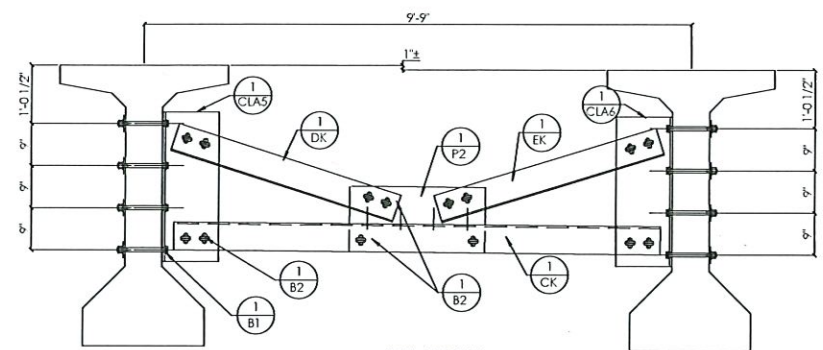
MARK K6



MARK K7



MARK K1



MARK K2

SPAN 1

SPAN 2

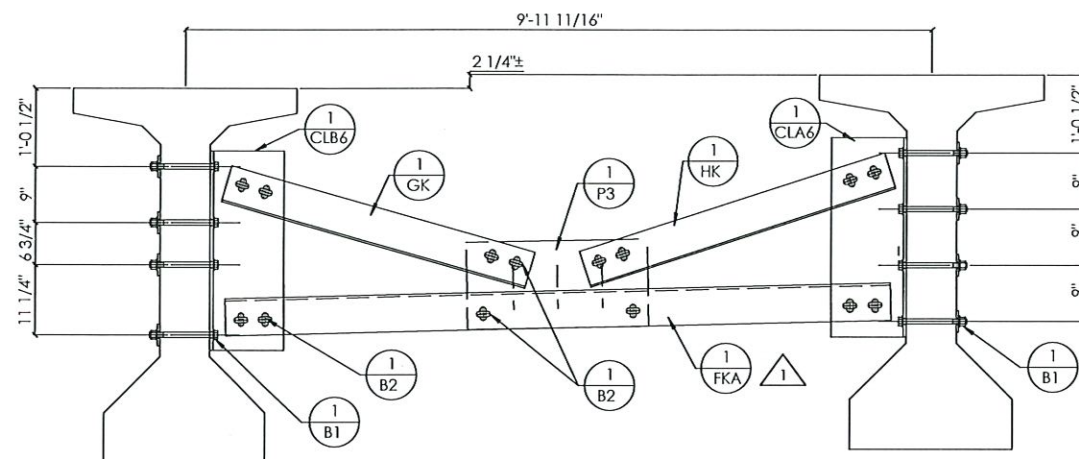


David F. Traini 1-6-21

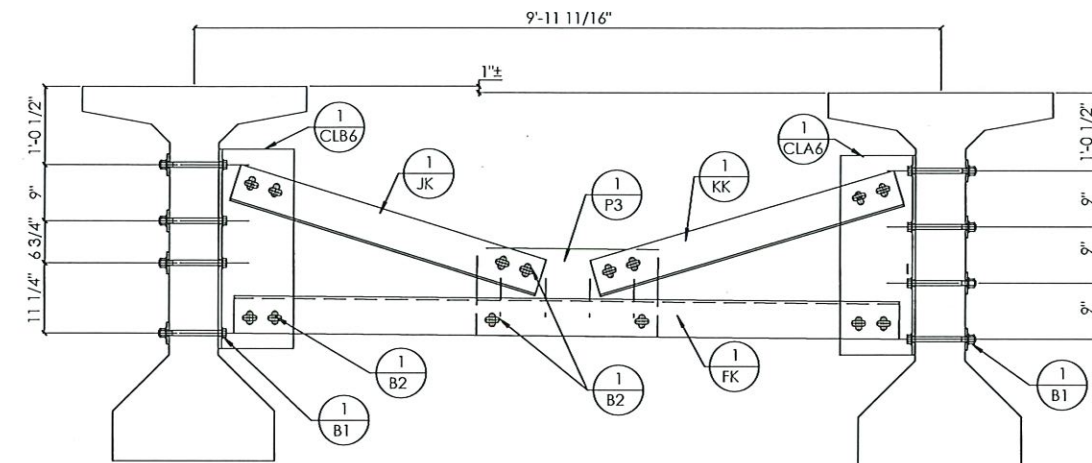


DR: KDP	DWG START DATE: 04/28/20	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20	APPROVAL DATE: 1/1/21

STEEL DIAPHRAGMS				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	09 OF 19	

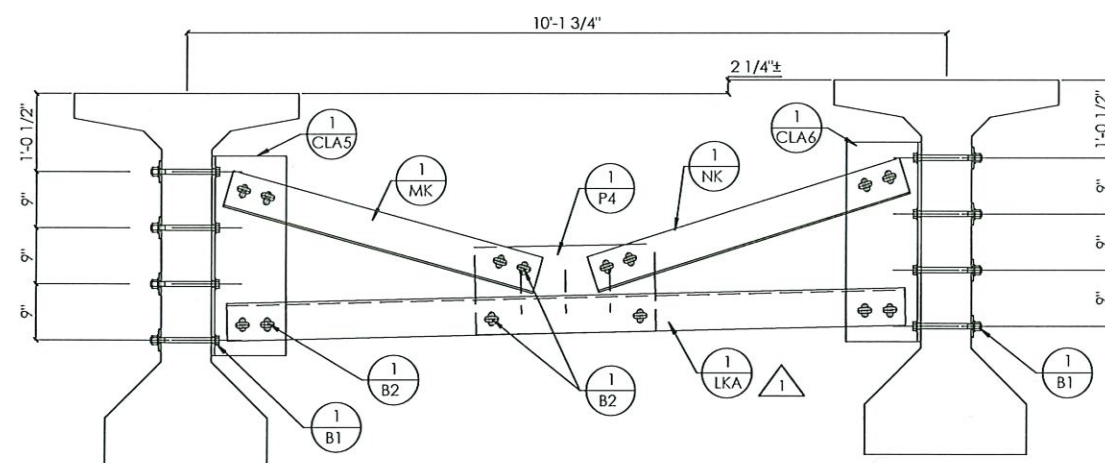


MARK K5

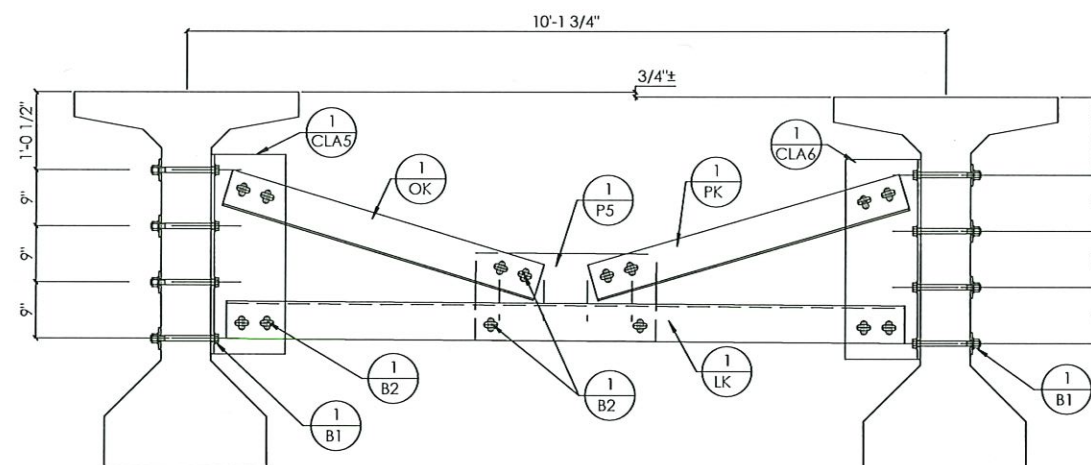


MARK K8

SPAN 2



MARK K9



MARK K10

SPAN 3

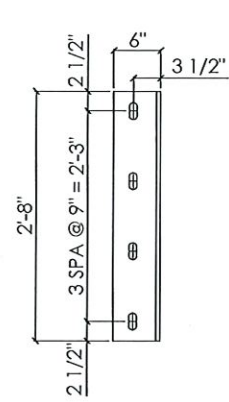


David F. Traini 1-6-21

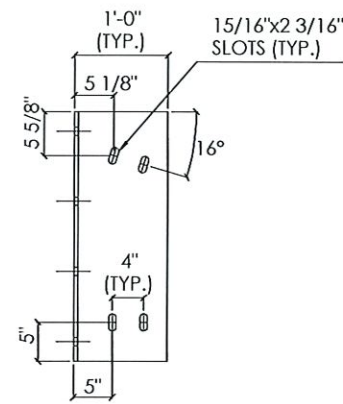
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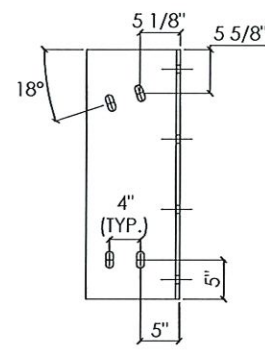
STEEL DIAPHRAGMS					
CUSTOMER: KOKOSING					
CUYAHOGA CO, OHIO					
CONTRACT ID: 173000-96833					
FEDERAL PROJECT NO: E140 (249)					
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE					
SHOP RELEASED DATE		DWG NO. 003		JOB NO. 19-106	
				10 OF 19	



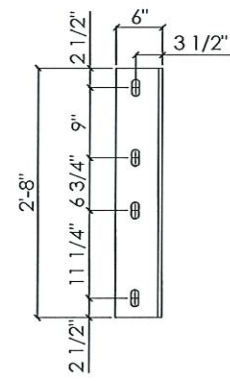
BEAM FACE
MARK CLA



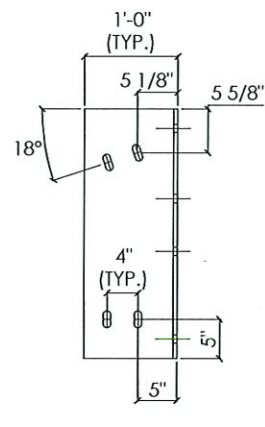
MARK CLA5
1/2" BENT PL



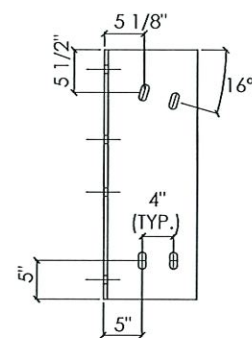
MARK CLA6
1/2" BENT PL



BEAM FACE
MARK CLB



MARK CLB5
1/2" BENT PL

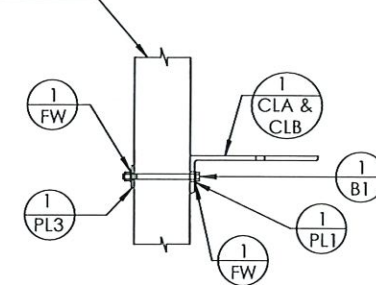


MARK CLB6
1/2" BENT PL

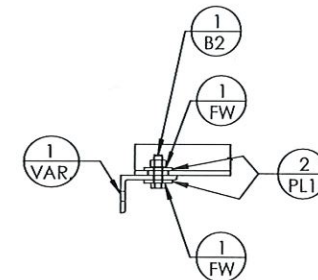
CONNECTION PLATE DETAILS

(NOTE: ALL SLOTS ARE 15/16" x 2 3/16")

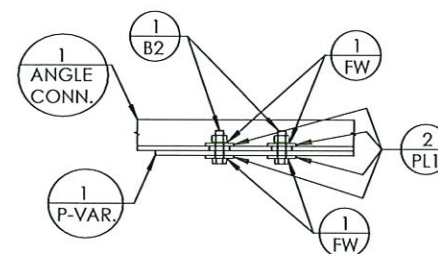
EXTERIOR BEAM



B1 CONNECTION DETAIL

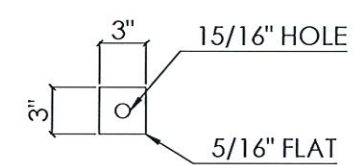


B2 CONNECTION DETAIL
AT CLIP ANGLE

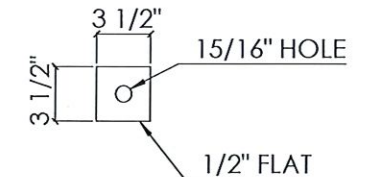


B2 CONNECTION DETAIL
AT CONN. ANGLES

BILL OF MATERIALS							
NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS
1	8	CLA5	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
2	8	CLA6	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
3	2	CLB5	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
4	2	CLB6	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG
5	360	PL1	FLAT	5/16" x 3"	3"	A709 GR36	HDG
6	80	PL3	FLAT	1/2" x 3 1/2"	3 1/2"	A709 GR36	HDG
7	80	B1	BOLT & NUT	7/8"	11"	A325/ A563	GALV
8	140	B2	BOLT & NUT	7/8"	3"	A325/ A563	GALV
9	440	FW	WASHER	7/8"		F436	GALV
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							



MARK PL1



MARK PL3

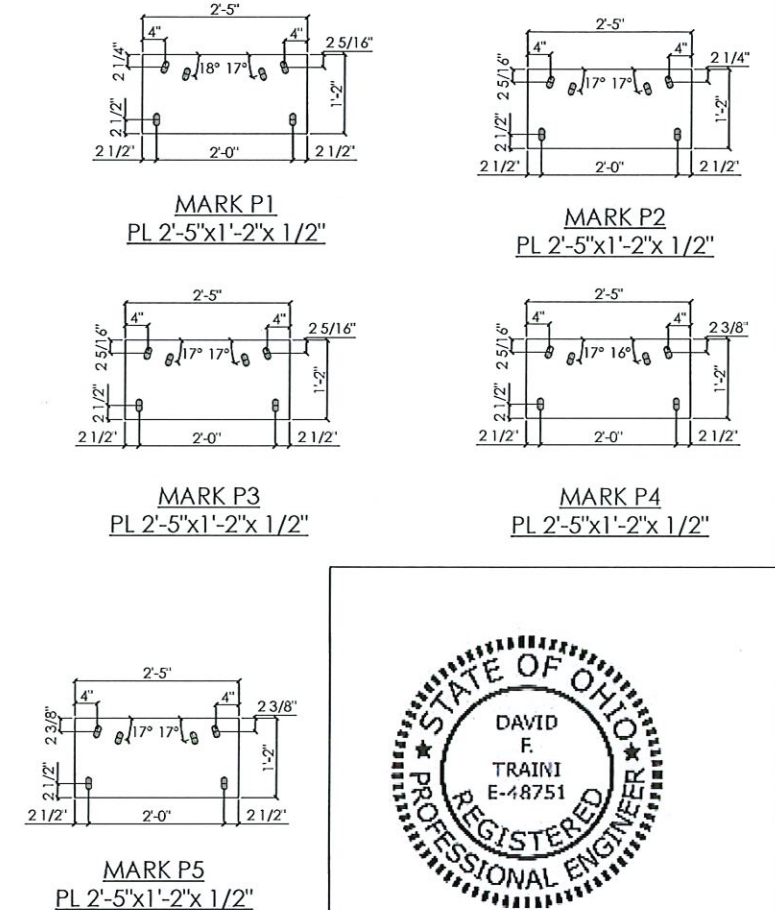
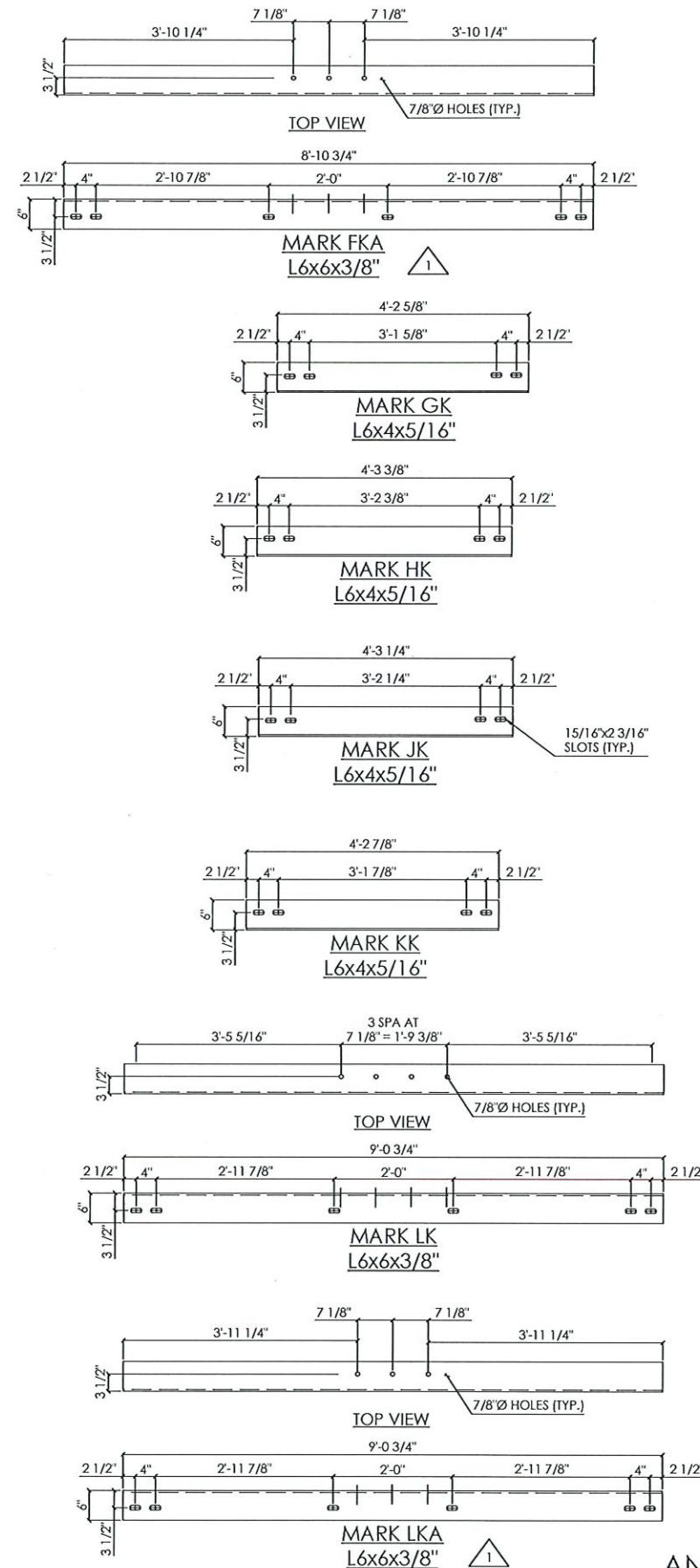


Dal 2. 2. 16-21

BOTTOMS ENGINEERING & SERVICE INC.	
DR: KDP	DWG START DATE: 04/28/20
	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: 1/1/21

CONNECTION PLATES			
CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	11 OF 19

REV.	BY	DATE	CHK.	DESCRIPTION
1		1/1/21		



BILL OF MATERIALS							
NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS
1	1	AK	ANGLE	L6x4x5/16"	4'-1 3/8"	A36	HDG
2	1	BK	ANGLE	L6x4x5/16"	4'-2 1/8"	A36	HDG
3	1	CK	ANGLE	L6x6x3/8"	8'-8"	A36	HDG
4	1	CKA	ANGLE	L6x6x3/8"	8'-8"	A36	HDG
5	1	DK	ANGLE	L6x4x5/16"	4'-1 7/8"	A36	HDG
6	1	EK	ANGLE	L6x4x5/16"	4'-1 1/2"	A36	HDG
7	3	FK	ANGLE	L6x6x3/8"	8'-10 3/4"	A36	HDG
8	3	FKA	ANGLE	L6x6x3/8"	8'-10 3/4"	A36	HDG
9	3	GK	ANGLE	L6x4x5/16"	4'-2 5/8"	A36	HDG
10	3	HK	ANGLE	L6x4x5/16"	4'-3 3/8"	A36	HDG
11	3	JK	ANGLE	L6x4x5/16"	4'-3 1/4"	A36	HDG
12	3	KK	ANGLE	L6x4x5/16"	4'-2 7/8"	A36	HDG
13	1	LK	ANGLE	L6x6x3/8"	9'-0 3/4"	A36	HDG
14	1	LKA	ANGLE	L6x6x3/8"	9'-0 3/4"	A36	HDG
15	1	MK	ANGLE	L6x4x5/16"	4'-3 5/8"	A36	HDG
16	1	NK	ANGLE	L6x4x5/16"	4'-4 1/2"	A36	HDG
17	1	OK	ANGLE	L6x4x5/16"	4'-4 1/4"	A36	HDG
18	1	PK	ANGLE	L6x4x5/16"	4'-3 7/8"	A36	HDG
19	1	P1	FLAT	1/2"x1'-2"	2'-5"	A36	HDG
20	1	P2	FLAT	1/2"x1'-2"	2'-5"	A36	HDG
21	6	P3	FLAT	1/2"x1'-2"	2'-5"	A36	HDG
22	1	P4	FLAT	1/2"x1'-2"	2'-5"	A36	HDG
23	1	P5	FLAT	1/2"x1'-2"	2'-5"	A36	HDG

ANGLE & PLATE DETAILS
(NOTE: ALL SLOTS ARE 15/16" x2 3/16")



DR: KDP	DWG START DATE:	04/28/20
	DWG LAST EDIT:	05/27/20
CHK: DCT	DWG CHECK DATE:	05/27/20
	APPROVAL DATE:	—/—/—

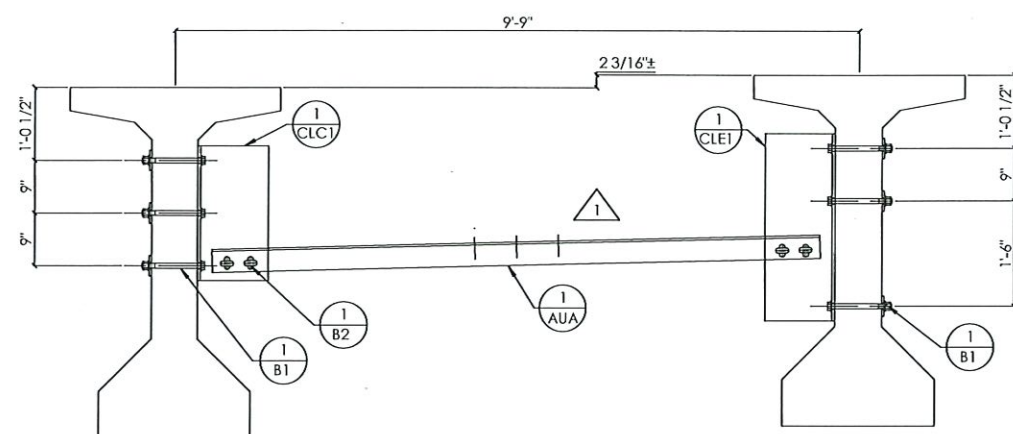
ANGLE & PLATE DETAILS

CUSTOMER: KOKOSING
CUYAHOGA CO, OHIO
CONTRACT ID: 173000-96833
FEDERAL PROJECT NO: E140 (249)
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE

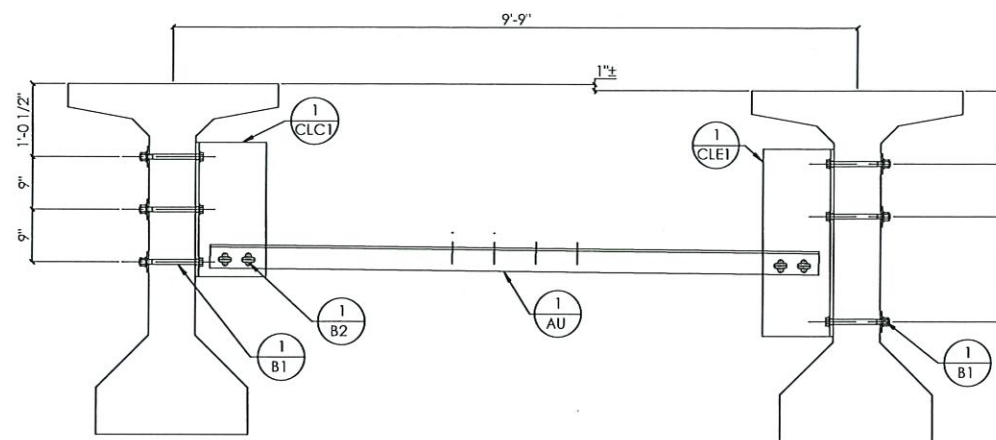
SHOP RELEASED DATE <u> </u> / <u> </u> / <u> </u>	DWG NO. 003	JOB NO. 19-106	12 OF 19
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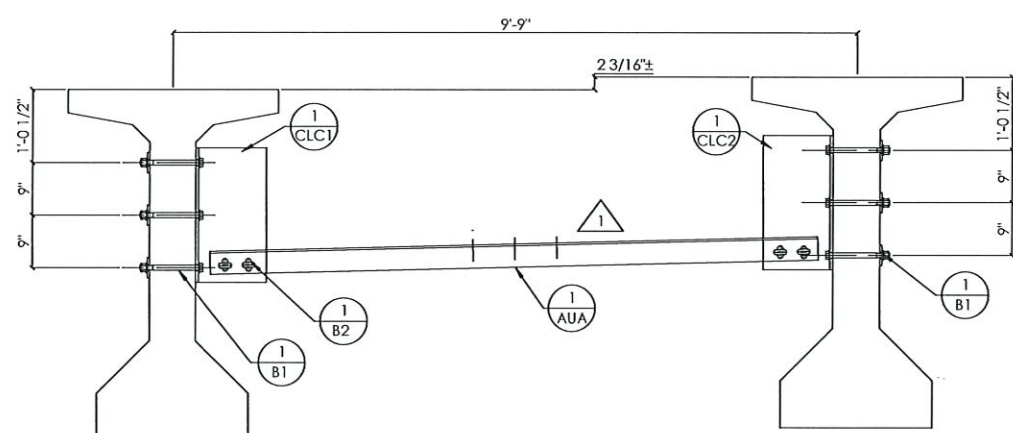
Paul F. Z... 1-6-21



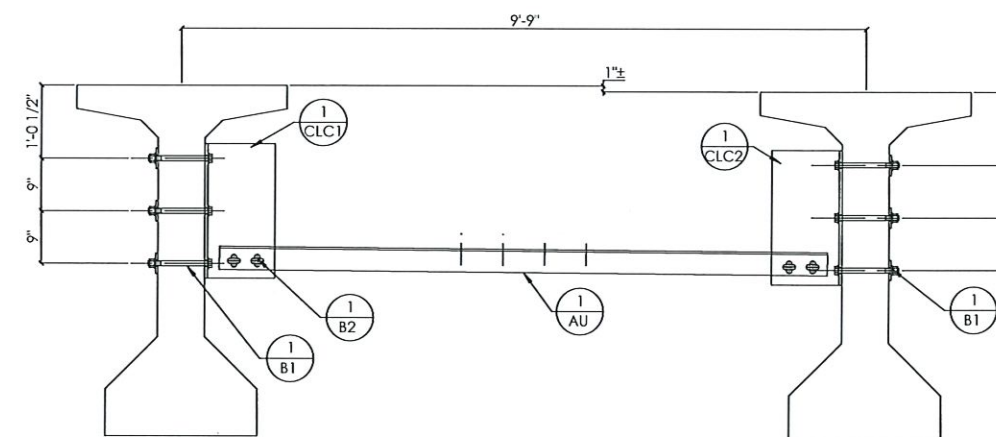
MARK U1



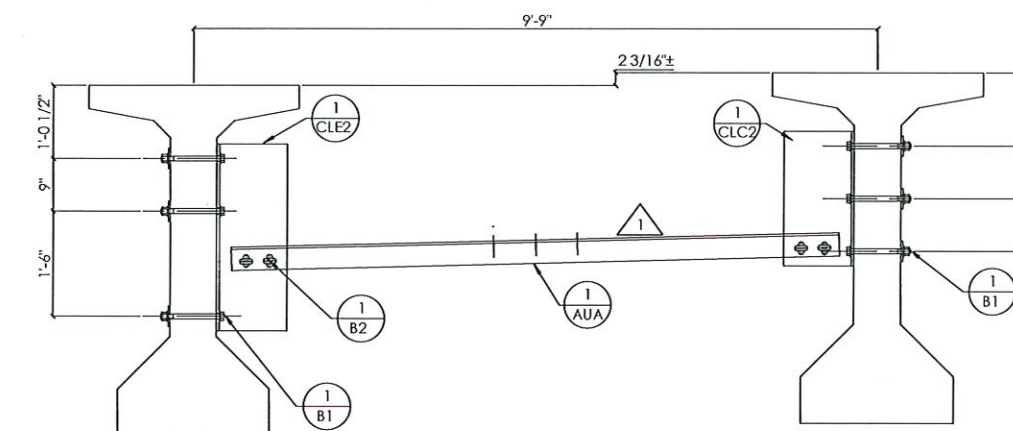
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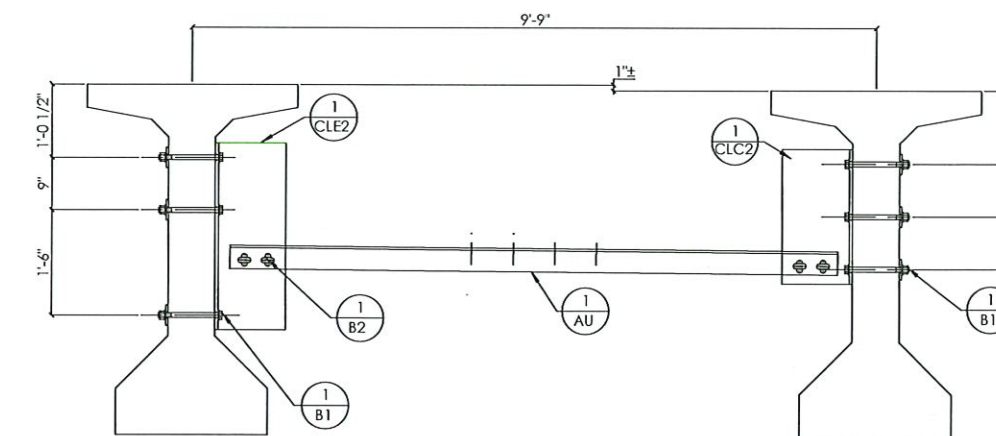
MARK U2 & U3



MARK U6 & U7



MARK U4



MARK U8

SPAN 1



Dal 7.2. 1-6-21

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAULT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-495-2201

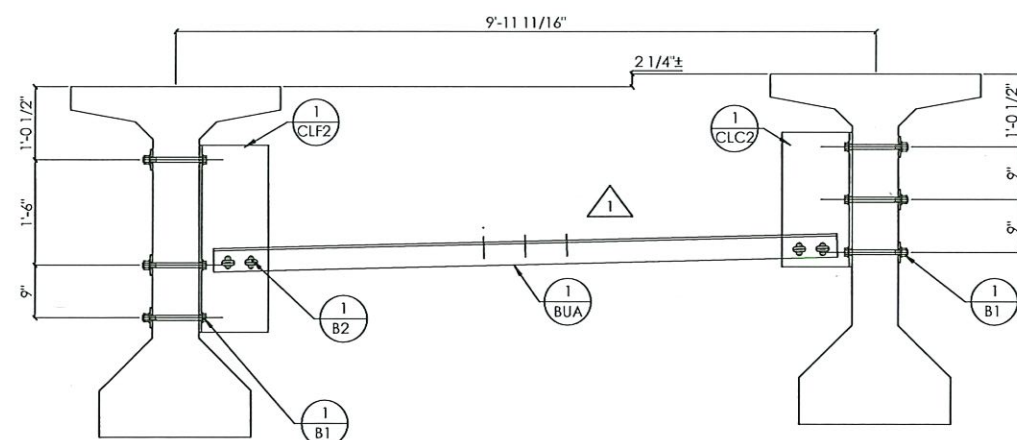
REV.	BY	DATE	CHK.	DESCRIPTION
1	DCT	1/1/2021	TAP	HANGER HOLE LAYOUT

		DR: KDP	DWG START DATE: 04/28/20
		CHK: DCT	DWG LAST EDIT: 05/27/20
			DWG CHECK DATE: 05/27/20
			APPROVAL DATE: 1/1/21

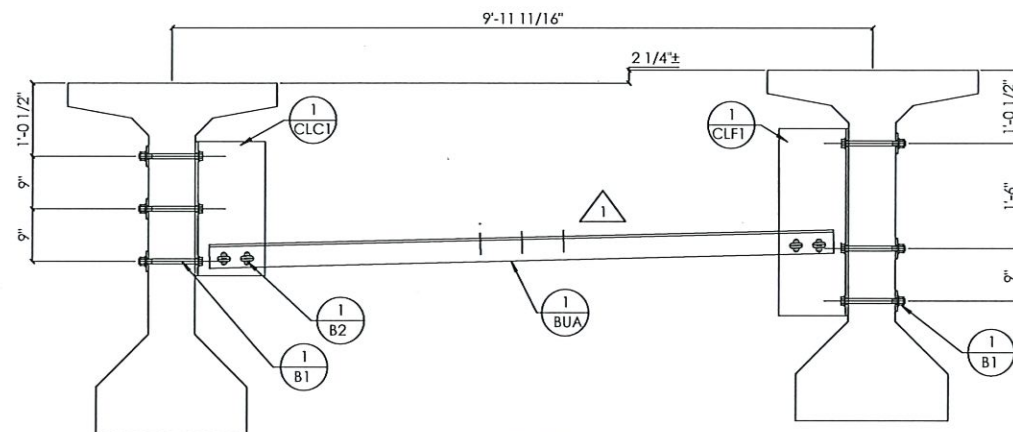
STEEL DIAPHRAGMS			
CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE	DWG NO.	JOB NO.	13 OF 19
1/1/21	003	19-106	

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAULT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-695-2201

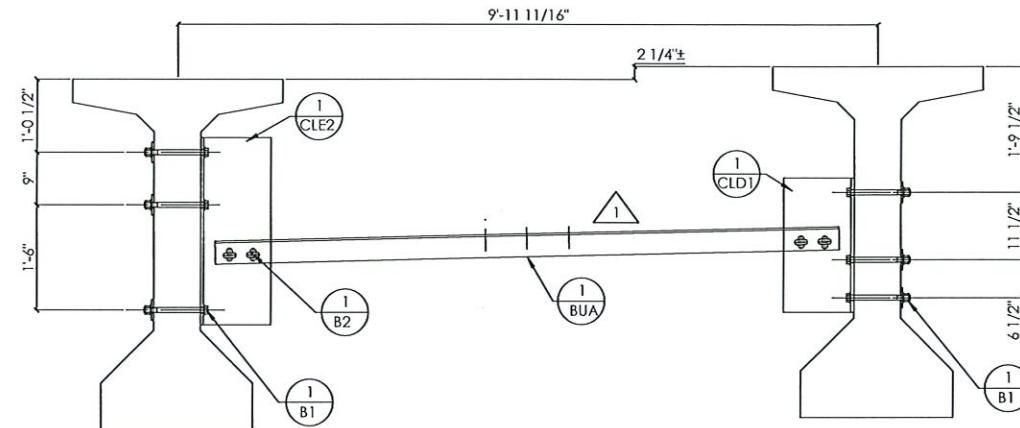
REV.	BY	DATE	CHK.	DESCRIPTION
1	DCT	1/1/2021	TAP	HANGER HOLE LAYOUT



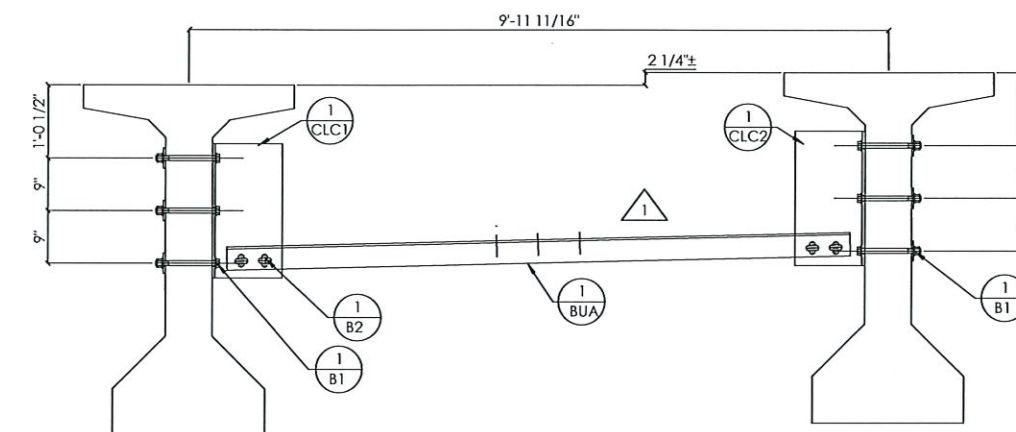
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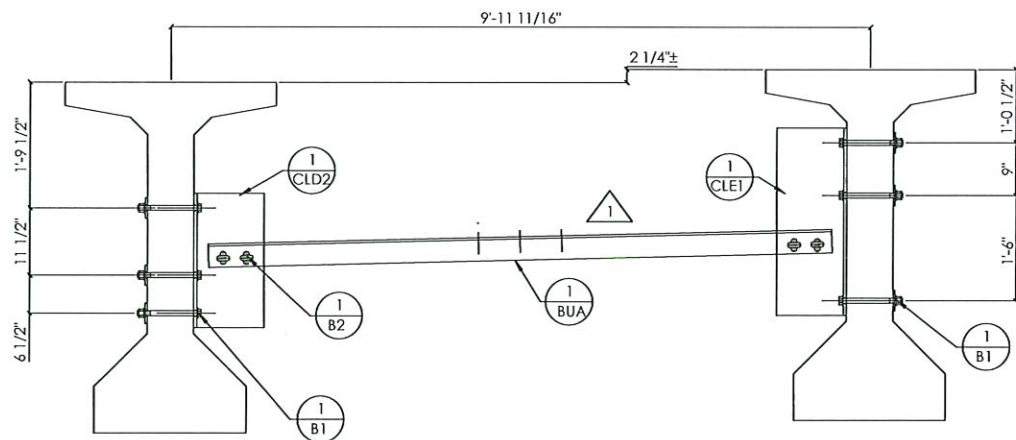
MARK U10



MARK U9



MARK U11, U12,
U13 & U14



MARK U16

SPAN 2



DR: KDP	DWG START DATE: 04/28/20
	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: _/_/_

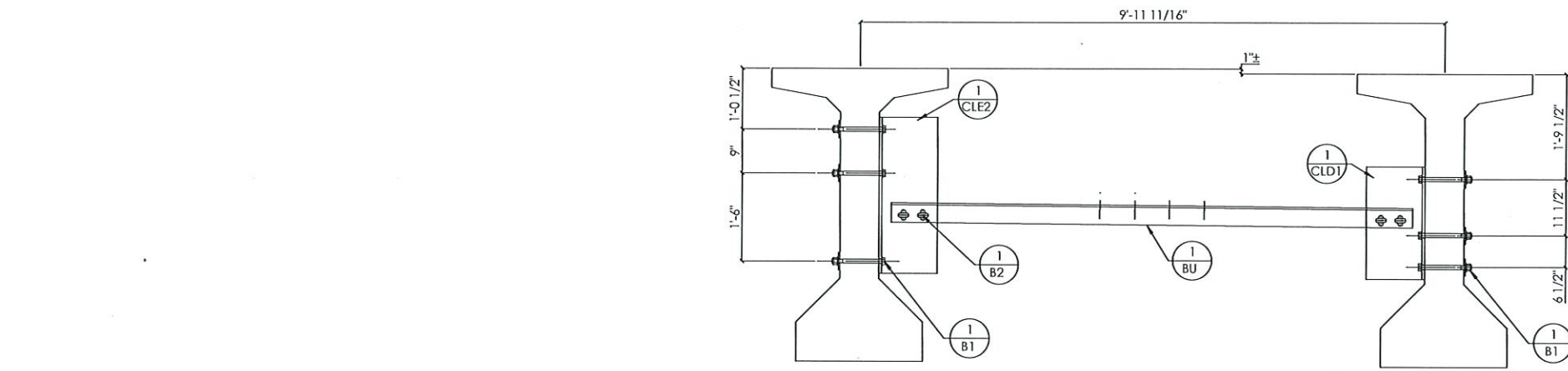
STEEL DIAPHRAGMS				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE: _/_/_	DWG NO. 003	JOB NO. 19-106	14 OF 19	



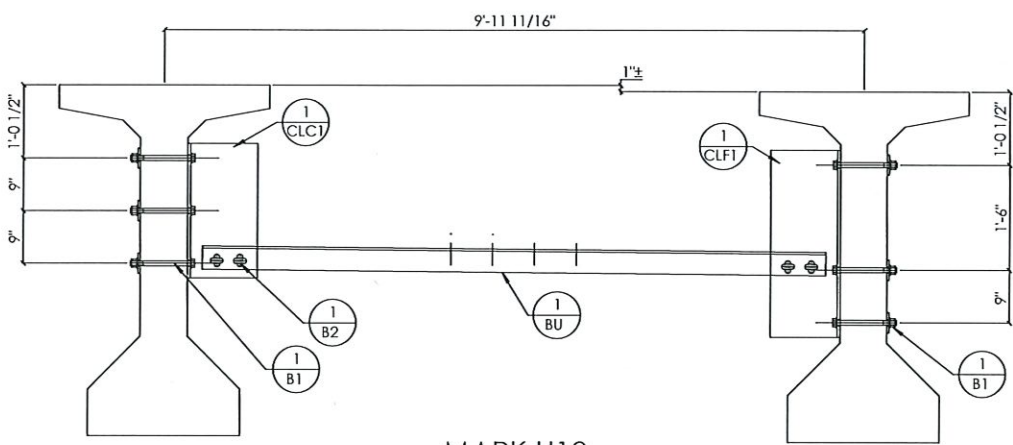
Del 7.2. 1-6-21

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAUT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-495-2201

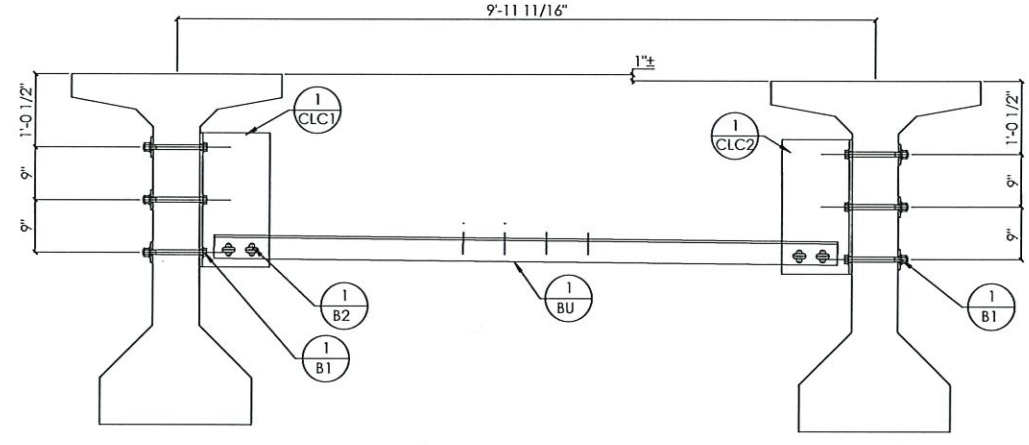
REV.	BY	DATE	CHK.	DESCRIPTION
1	-	-	-	-



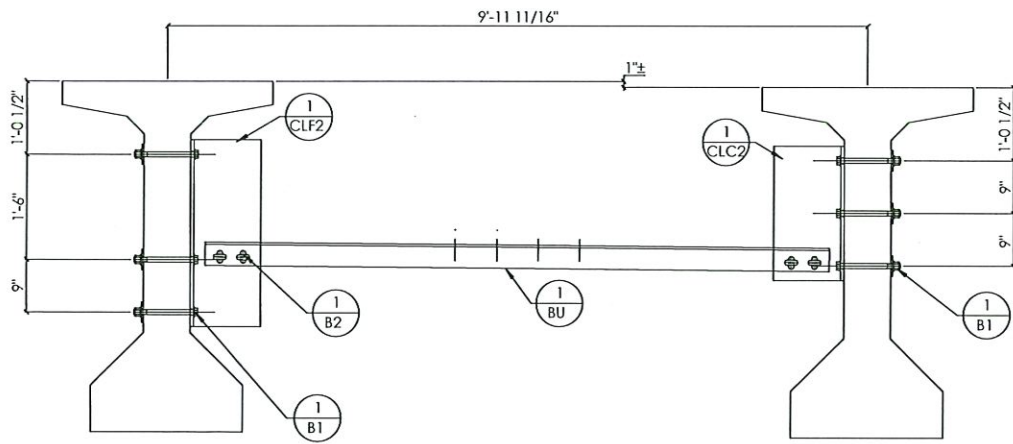
MARK U17



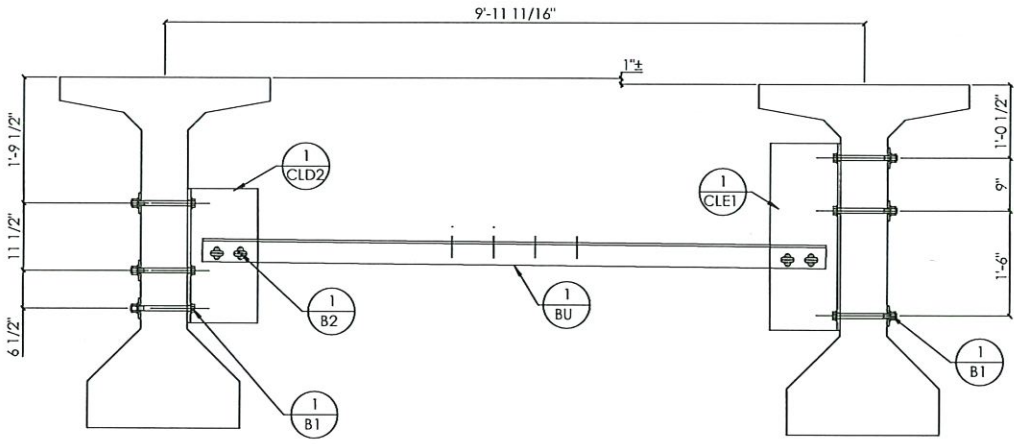
MARK U18



MARK U19, U20,
U21 & U22



MARK U23



MARK U24

SPAN 2

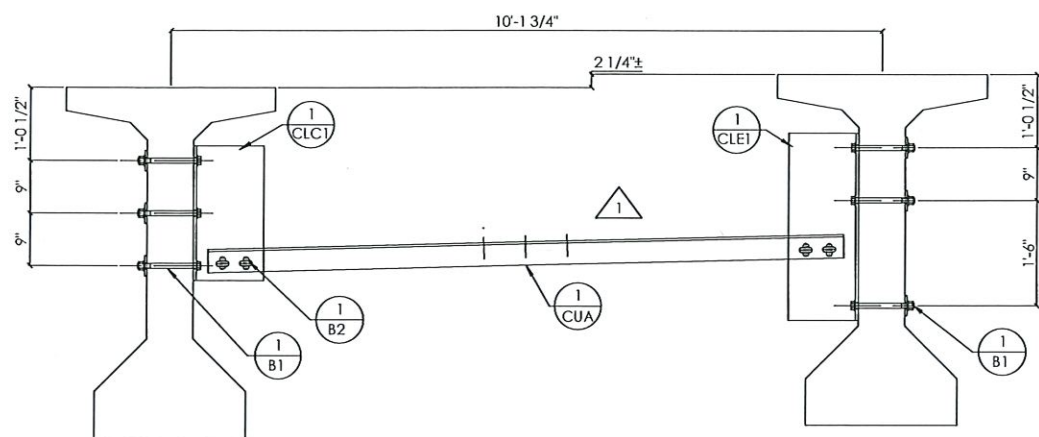
BOTTOMS
ENGINEERING & SERVICE INC

DR: KDP	DWG START DATE: 04/28/20	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20	
APPROVAL DATE: _/_/_		

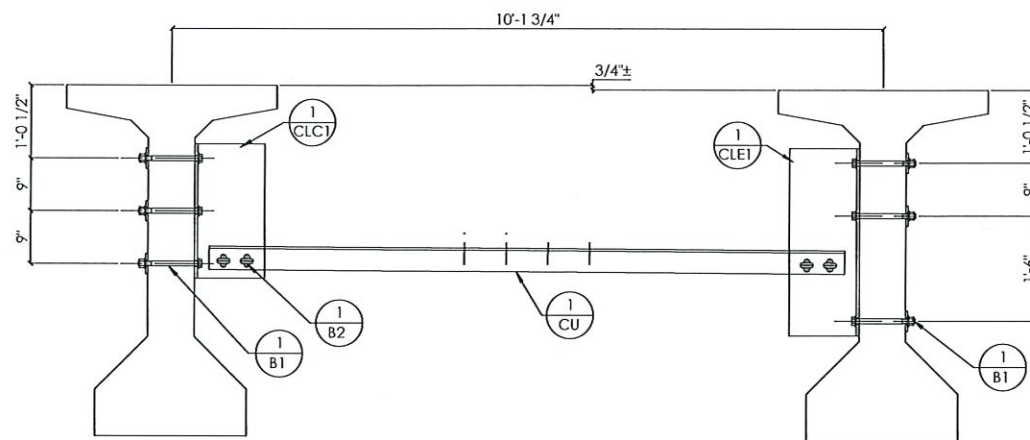
STEEL DIAPHRAGMS				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	15 OF 19	



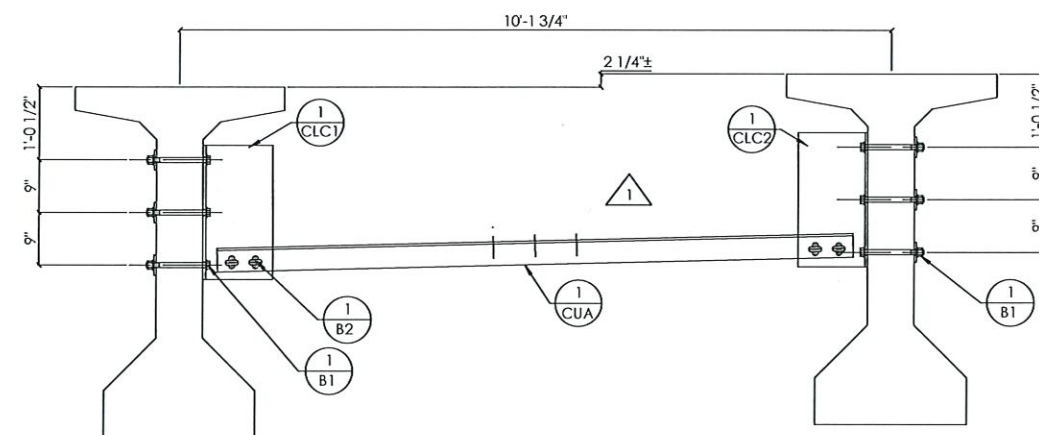
Det 7.2 16-21



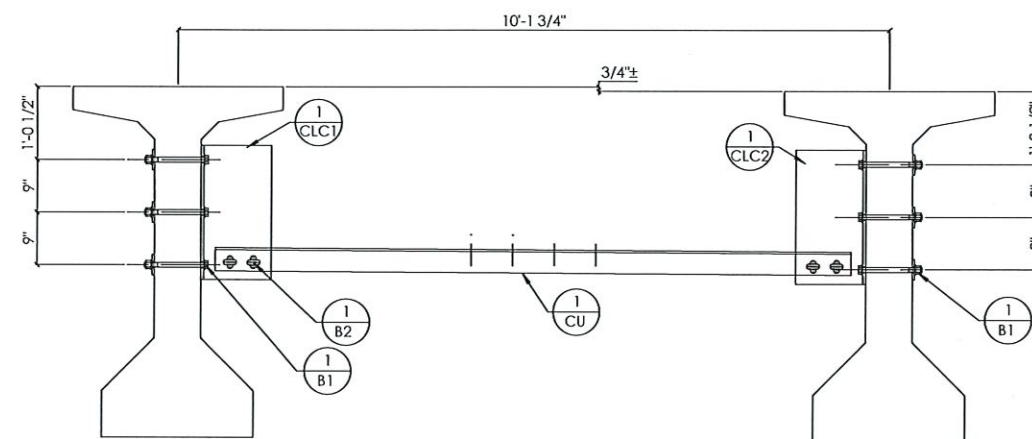
MARK U25



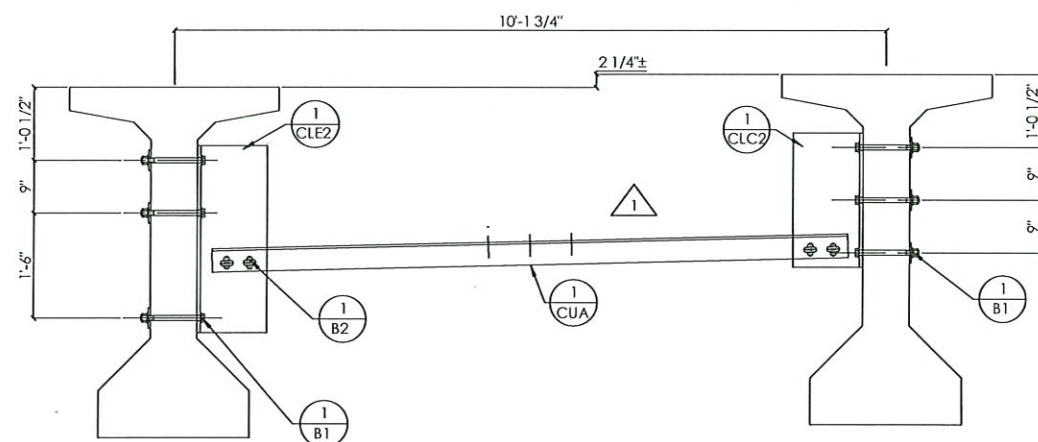
MARK U29



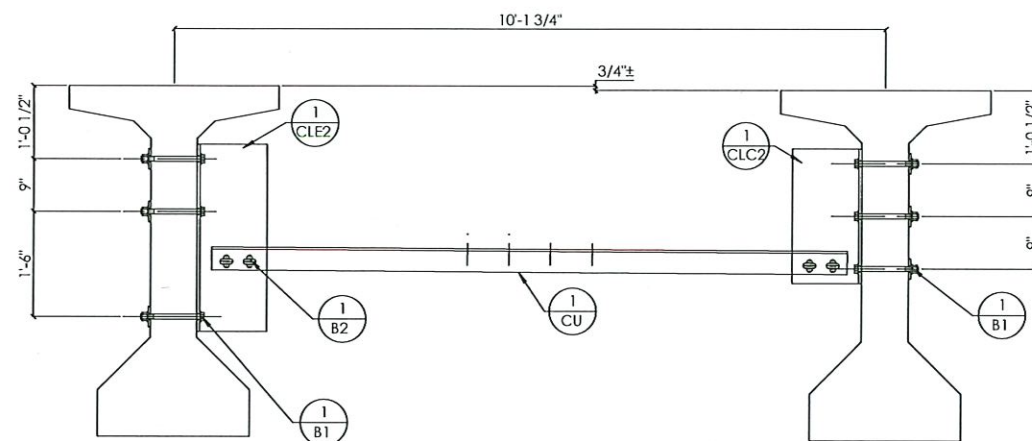
MARK U26 & U27



MARK U30 & U31



MARK U28



MARK U32



Del. 7.2. 1-6-21

SPAN 3

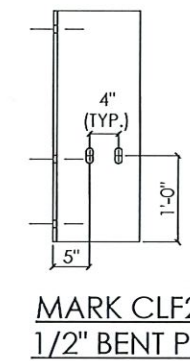
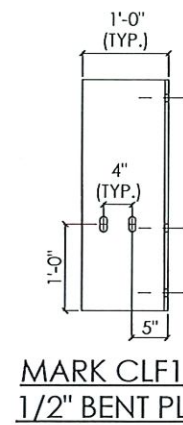
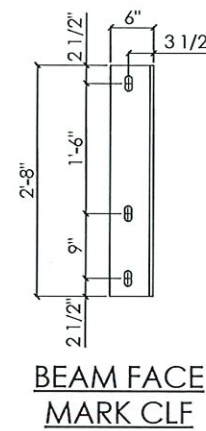
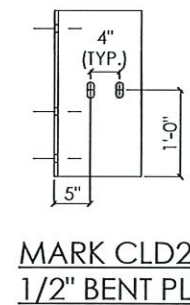
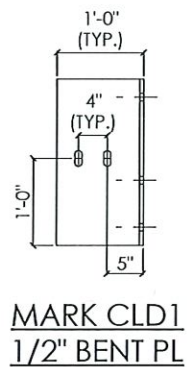
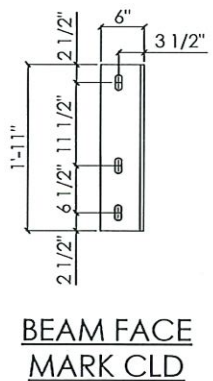
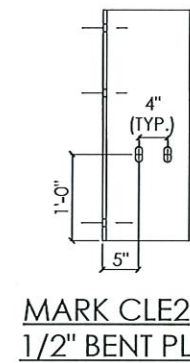
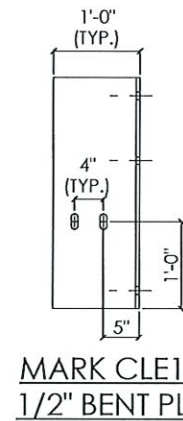
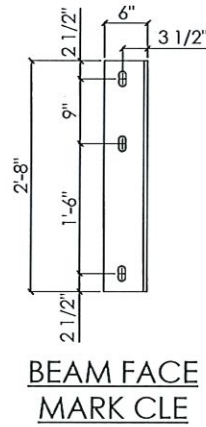
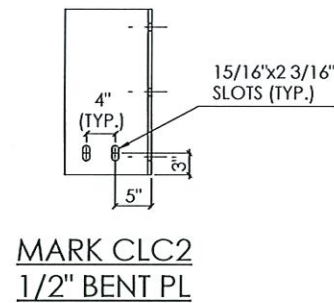
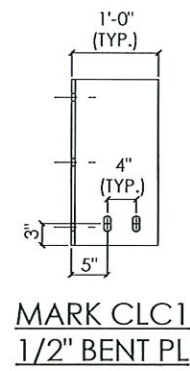
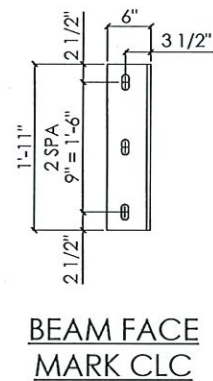
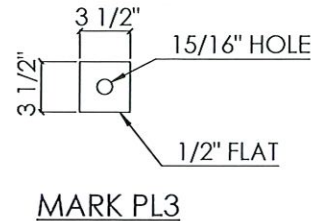
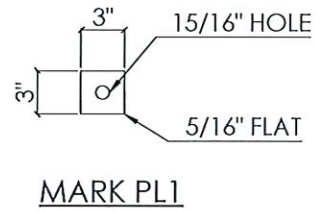
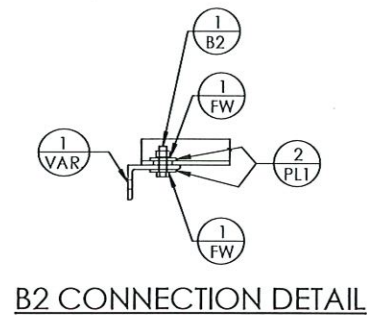
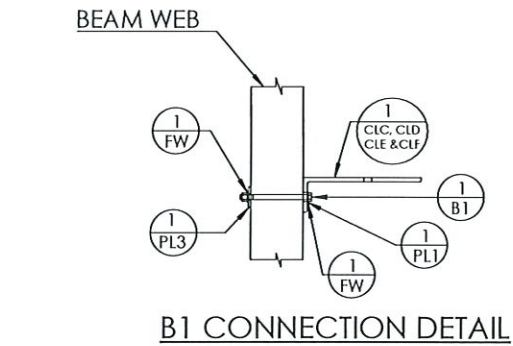
REV.	BY	DATE	CHK.	DESCRIPTION
1	DCI	1/1/2021	TAP	HANGER HOLE LAYOUT

		DR: KDP	DWG START DATE: 04/28/20
		CHK: DCT	DWG LAST EDIT: 05/27/20
			DWG CHECK DATE: 05/27/20
			APPROVAL DATE: _/_/_

STEEL DIAPHRAGMS			
CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE: _/_/_	DWG NO. 003	JOB NO. 19-106	16 OF 19

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAUT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-695-2201

REV.	BY	DATE	CHK.	DESCRIPTION
1		11/11		



CONNECTION PLATE DETAILS

(NOTE: ALL SLOTS ARE 15/16" x 2 3/16")

BILL OF MATERIALS								
NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS	
1	22	CLC1	FLAT	1/2"x 6"x 12"	1'-11"	A709 GR36	HDG	
2	22	CLC2	FLAT	1/2"x 6"x 12"	1'-11"	A709 GR36	HDG	
3	2	CLD1	FLAT	1/2"x 6"x 12"	1'-11"	A709 GR36	HDG	
4	2	CLD2	FLAT	1/2"x 6"x 12"	1'-11"	A709 GR36	HDG	
5	6	CLE1	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG	
6	6	CLE2	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG	
7	2	CLF1	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG	
8	2	CLF2	FLAT	1/2"x 6"x 12"	2'-8"	A709 GR36	HDG	
9	448	PL1	FLAT	5/16" x 3"	3"	A709 GR36	HDG	
10	192	PL3	FLAT	1/2" x 3 1/2"	3 1/2"	A709 GR36	HDG	
11	192	B1	BOLT & NUT	7/8"	11"	A325/ A563	GALV	
12	128	B2	BOLT & NUT	7/8"	3"	A325/ A563	GALV	
13	640	FW	WASHER	7/8"		F436	GALV	
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								



Dcl 7.2 1-6-21

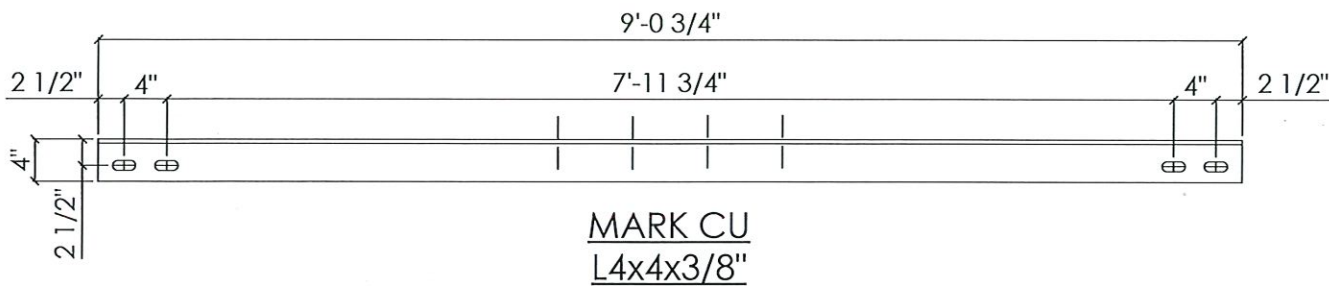
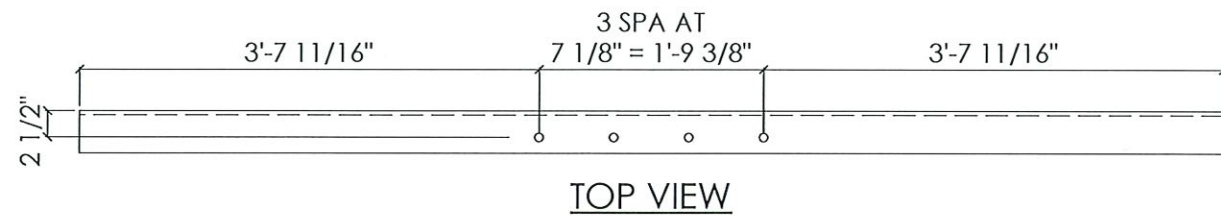
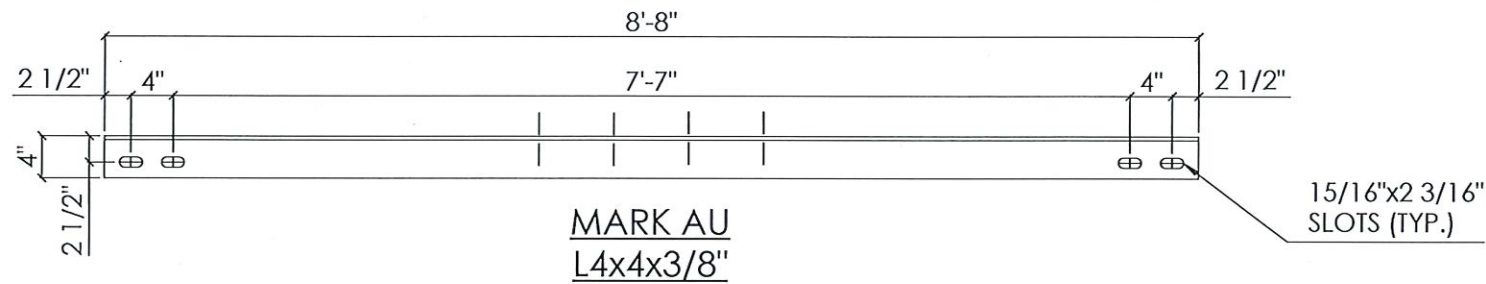
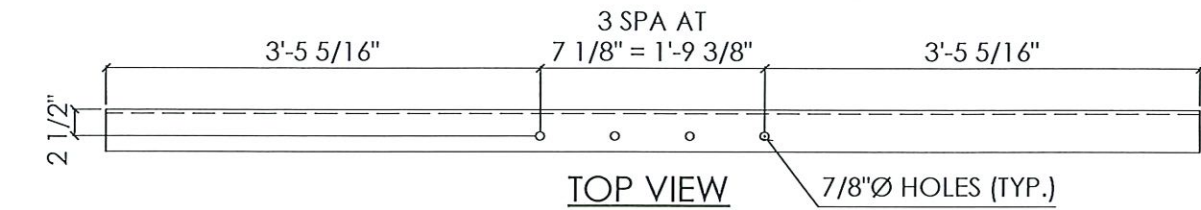


DR: KDP	DWG START DATE: 04/28/20
	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20
	APPROVAL DATE: 11/11

CONNECTION PLATES				
CUSTOMER: KOKOSING				
CUYAHOGA CO, OHIO				
CONTRACT ID: 173000-96833				
FEDERAL PROJECT NO: E140 (249)				
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE				
SHOP RELEASED DATE	DWG NO. 003	JOB NO. 19-106	17 OF 19	

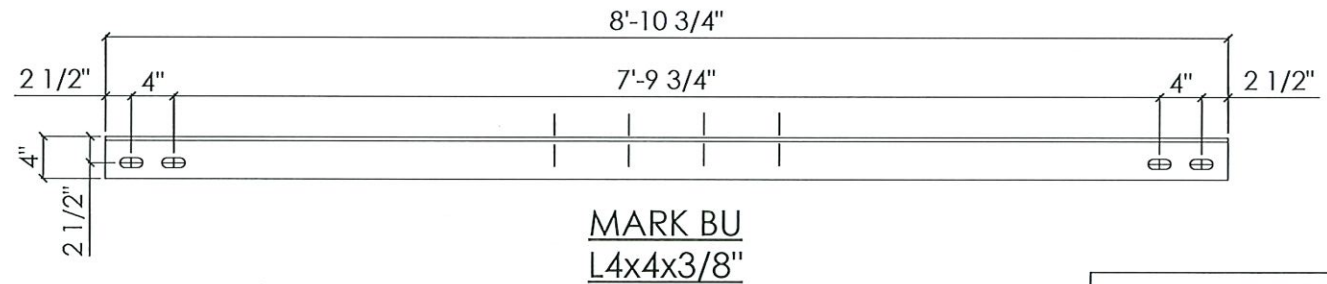
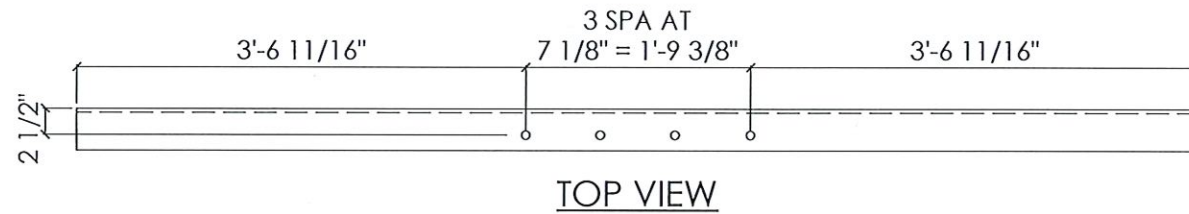
PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAUT RD, FRANKFORT, KY 40601
(P) 502-778-2201 (F) 502-695-2201

REV.	BY	DATE	CHK.	DESCRIPTION
2	KDP	11/27/19	DCT	DIMENSIONS IN HOLE PATTERN



ANGLE DETAILS
(NOTE: ALL SLOTS ARE 15/16" x 2 3/16")

BILL OF MATERIALS							
NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS
1	4	AU	ANGLE	L4x4x3/8"	8'-8"	A36	HDG
2	8	BU	ANGLE	L4x4x3/8"	8'-10 3/4"	A36	HDG
3	4	CU	ANGLE	L4x4x3/8"	9'-0 3/4"	A36	HDG
4							
5							
6							
7							
8							
9							
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11							
12							
13							
14							
15							



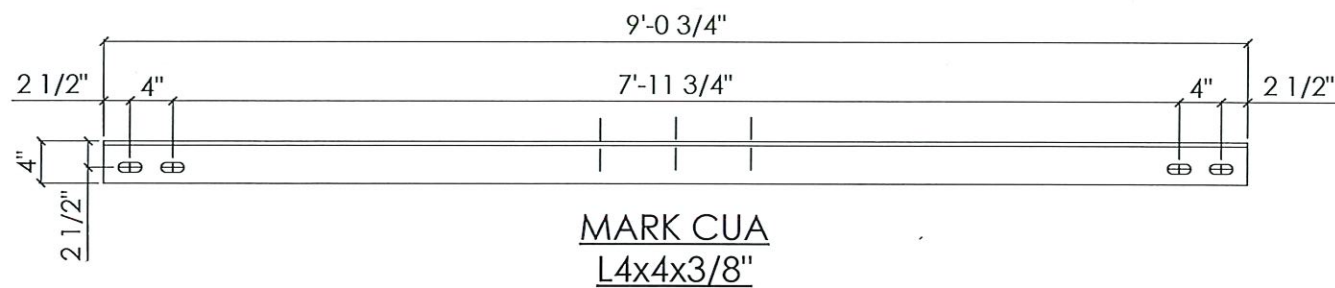
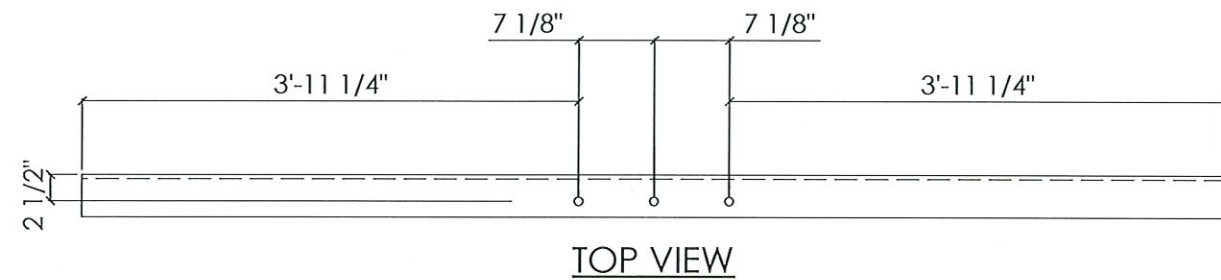
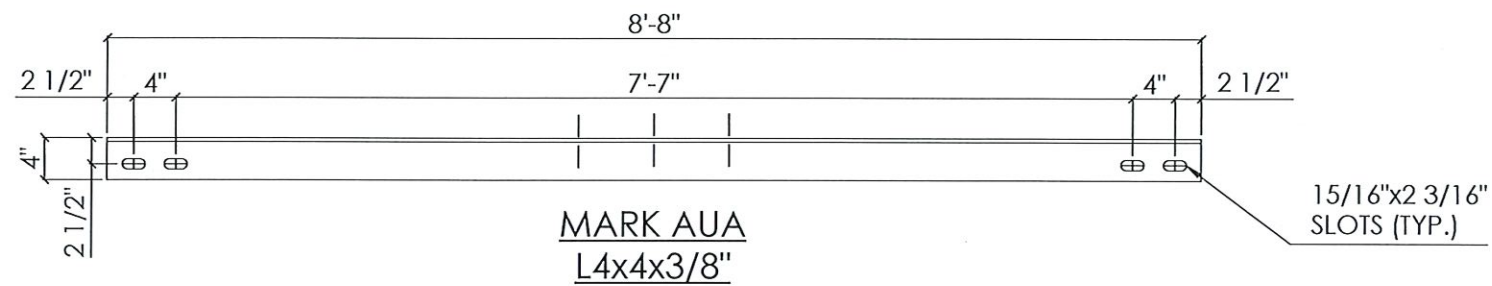
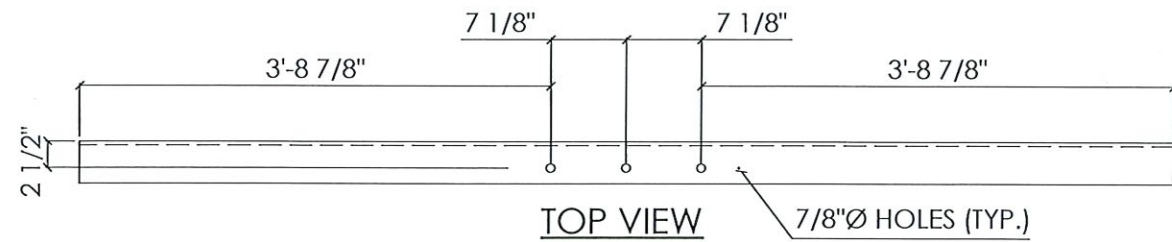
DA 7.2.1 1-6-21



DR: KDP	DWG START DATE: 04/28/20	DWG LAST EDIT: 05/27/20
CHK: DCT	DWG CHECK DATE: 05/27/20	APPROVAL DATE: 11/27/19

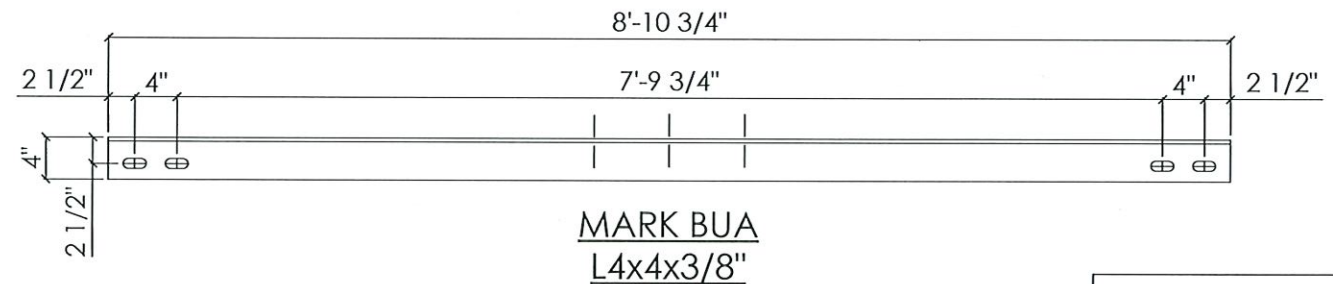
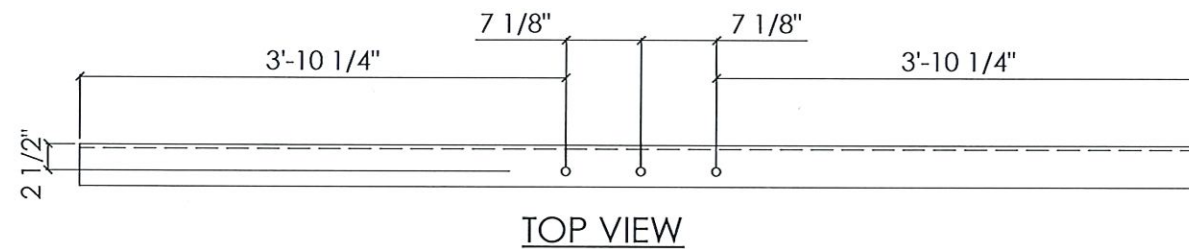
ANGLE & PLATE DETAILS			
CUSTOMER: KOKOSING			
CUYAHOGA CO, OHIO			
CONTRACT ID: 173000-96833			
FEDERAL PROJECT NO: E140 (249)			
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE			
SHOP RELEASED DATE: 11/27/19	DWG NO. 003	JOB NO. 19-106	18 OF 19

PROPERTY OF BOTTOMS ENGINEERING & SERVICE, INC 955 CHENAULT RD, FRANKFORT, KY 40601
(P) 800-778-2201 (F) 502-695-2201



ANGLE DETAILS
(NOTE: ALL SLOTS ARE 15/16" x2 3/16")

BILL OF MATERIALS							
NO.	QTY.	MARK	SHAPE	SECTION	LENGTH	GRADE	REMARKS
1	4	AUA	ANGLE	L4x4x3/8"	8'-8"	A36	HDG
2	8	BUA	ANGLE	L4x4x3/8"	8'-10 3/4"	A36	HDG
3	4	CUA	ANGLE	L4x4x3/8"	9'-0 3/4"	A36	HDG
4							
5							
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Dcf. Traini H-21

BOTTOMS		
ENGINEERING & SERVICE INC		
DR: KDP	DWG START DATE: 04/28/20	
	DWG LAST EDIT: 05/27/20	
CHK: DCT	DWG CHECK DATE: 05/27/20	
	APPROVAL DATE: _/_/_	

ANGLE & PLATE DETAILS					
CUSTOMER: KOKOSING					
CUYAHOGA CO, OHIO					
CONTRACT ID: 173000-96833					
FEDERAL PROJECT NO: E140 (249)					
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE					
SHOP RELEASED DATE		DWG NO.	003	JOB NO.	19-106
//_					19 OF 19

REV.	BY	DATE	CHK.	DESCRIPTION
2	KDP	11/27/19	DCT	DIMENSIONS IN HOLE PATTERN

GENERAL NOTES

1.0 GENERAL

- 1.1 THE CONTRACTOR MUST VERIFY ALL DIMENSIONS PRIOR TO FABRICATION TO ENSURE ACCURACY OF THE EXPANSION JOINT.
- 1.2 ALL WORK SHALL COMPLY WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION'S 2016 STANDARD SPECIFICATION INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL, EXCEPT AS NOTED HEREIN.
- 1.3 IN THE EVENT OF DISCREPANCY BETWEEN ANY CONTRACT DOCUMENTS THE FOLLOWING ORDER OF PRECEDENCE SHALL BE FOLLOWED PER STANDARD SPECIFICATION SECTION 105.04: ADDENDA
PROPOSALS AND SPECIAL PROVISIONS
PLANS
SUPPLEMENTAL SPECIFICATIONS
STANDARD CONSTRUCTION DRAWINGS
STANDARD SPECIFICATIONS

2.0 STANDARD SPECIFICATION AND STANDARD SUPPLEMENTARY SPECIFICATION CRITERIA

3.0 SPECIAL PROVISIONS

4.0 MATERIALS

- 4.1 ALL STRUCTURAL AND PERMANENT MATERIALS SHALL BE OF DOMESTIC ORIGIN, AND MATERIAL CERTIFICATION STATING ALL SUCH MATERIALS ARE "MELTED AND MANUFACTURED" IN THE UNITED STATES OF AMERICA SHALL BE SUBMITTED
- 4.2 SUPPLY NEOPRENE SEALS CONFORMING TO ASTM D5973.
- 4.3 LUBRICANT/ADHESIVE SHALL BE ONE PART MOISTURE CURING POLYURETHANE COUMPOUND MEETING THE REQUIREMENTS OF ASTM D4070 AND AS SPECIFIED BY THE EXPANSION JOINT MANUFACTURER.
- 4.4 HEADED STUDS SHALL CONFORM TO AASHTO M 169/ASTM A 108 GRADES 1010 THROUGH 1020.
- 4.5 NOT REQUIRED
- 4.6 HARDWARE SHALL BE ASTM A325 TYPE ONE, GALVANIZED.
- 4.7 THE MATERIAL FOR THE NEOPRENE SEALING ELEMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS NOTED BELOW:

REQUIRED PHYSICAL PROPERTIES ASTM PROCEDURE PHYSICAL REQUIREMENTS

TENSILE STRENGTH, MIN. psi (MPa)	D-412	2000 (13.8)
ELONGATION @ BREAK, MIN.	D-412	250 %
HARDNESS, TYPE A DUROMETER	D-2240	MODIFIED 55 ± 5 %
COMPRESSION SET, 70 hrs. 212°F MAX. METHOD B (MODIFIED)	D-395	40%
OVEN AGING 70 hrs. @ 212°F TENSILE STRENGTH, LOSS, MAX. ELONGATION, LOSS, MAX.	D-573	20%
HARDNESS, TYPE A DURO (POINTS CHANGE)		0 TO +10
OIL SWELL, ASTM #3 OIL, 70 hrs. @ 212°F WEIGHT CHANGE, MAX.	D-471	45%
OZONE RESISTANCE, 20% STRAIN 300 pphm IN AIR 70 hrs. @ 104°F (WIPE WITH TOLUENE TO REMOVE SURFACE CONTAMINANTS)	D-1149	NO CRACKS
METHOD B		
LOW TEMPERATURE STIFFENING 7 DAYS @ 14°F HARDNESS TYPE A DURO, POINTS CHANGE	D-2240	0 TO +15

- 4.8 PRIMA LUB ADHESIVE IS USED TO BOND THE NEOPRENE STRIP SEAL TO THE STEEL EXTRUSIONS. THIS ADHESIVE SHALL BE A ONE-PART MOISTURE CURING POLYURETHANE HYDROCARBON SOLVENT MIXTURE WHICH MEETS OR EXCEEDS ASTM D-4070 IN ACCORDANCE WITH THE REQUIREMENTS NOTED BELOW:

AVERAGE WEIGHT PER GALLON	8.5 lbs ± 10%
SOLIDS CONTENT	72% (MIN.)
ADHESIVE TO REMAIN WORKABLE	FROM 5 - 120°F
FILM STRENGTH	2000 psi (MIN.)
ELONGATION AT ROOM TEMPERATURE	350% (MIN.)
FLASH POINT (SETA CLOSED CUP)	OVER 100°F

5.0 INSPECTION

- 5.1 IN HOUSE SHOP INSPECTION BY A REPRESENTATIVE OF OHIO DEPARTMENT OF TRANSPORATATION INDEPENDENT OF WATSON BOWMAN ACME CORP.'S QUALITY CONTROL INSPECTION IS REQUIRED PER ODOT CMS 513.
- 5.2 QUALITY CONTROL INSPECTION
- 5.2.1 DURING FABRICATION OF THE EXPANSION JOINT, WATSON BOWMAN ACME SHALL PROVIDE FULL TIME QUALITY CONTROL INSPECTION TO INSURE THAT THE MATERIALS AND WORKMANSHIP MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE CONTRACT.
- 5.2.2 QUALITY CONTROL INSPECTION SHALL BE THE RESPONSIBILITY OF A QUALITY CONTROL GROUP, WHICH SHALL BE INDEPENDENT OF THE FABRICATION GROUP.

6.0 FABRICATION

- 6.1 FABRICATION SHALL BE IN ACCORDANCE WITH WATSON BOWMAN ACME'S QUALITY CONTROL MANUAL AND MANUFACTURING TOLERANCES.
- 6.2 NOT REQUIRED
- 6.3 ALL WELDING SHALL BE EXECUTED USING EITHER GMAW OR FCAW PROCESSES UNLESS A PROCESS IS SPECIFICALLY IDENTIFIED ON THE SHOP DRAWINGS HEREIN.
- 6.4 THE NEOPRENE SEALS SHALL BE FIELD INSTALLED BY THE CONTRACTOR USING PRIMA LUB ADHESIVE AND THE SEAL INSTALLATION TOOLS. ADHESIVE SHALL BE APPLIED TO THE FULL PERIMETER OF THE WALLS OF THE STRIP SEAL CAVITY. FACTORY SPLICES SHALL BE PERMITTED. THE SEAL SHALL BE ONE CONTINUOUS PIECE, FIELD SPLICES WILL NOT BE PERMITTED
- 6.5 THE EXPANSION JOINT OPENING SHALL BE PRESET BY WATSON BOWMAN ACME CORP. TO THE JOINT OPENING NOTED AT 60°F (SEE TEMPERATURE ADJUSTMENT TABLE). FINAL ADJUSTMENTS SHALL BE MADE IN THE FIELD BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER IN CHARGE, PRIOR TO FINAL CONCRETE PLACEMENT.
- 6.6 DISTORTED MEMBERS SHALL BE STRAIGHTENED BY MECHANICAL MEANS OR, IF APPROVED BY THE ENGINEER, BY CAREFULLY PLANNED PROCEDURE AND SUPERVISED APPLICATION OF A LIMITED AMOUNT OF LOCALIZED HEAT.
- 6.7 WATSON BOWMAN ACME SHALL PREPARE THE ENDS OF THE STEEL SHAPE FOR FIELD WELDING, EXCEPT AT FIELD CUT PIECES.
- 6.8 NEOPRENE SEAL LENGTHS SHOWN HEREIN ARE FOR GENERAL GUIDANCE TO CONTRACTOR WHEN FIELD INSTALLATION OF SEALS ARE REQUIRED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CUT NEOPRENE SEALS IN THE FIELD FROM LONGEST AVAILABLE SHIPPED LENGTH TO FINISHED EXPANSION JOINT LENGTHS AS REQUIRED TO SUIT AS-BUILT CONDITIONS.

7.0 COATINGS

- 7.1 THE EXPANSION JOINT ASSEMBLIES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A-123 "ZINC (HOT-GALVANIZED) COATINGS ON PRODUCTS FABRICATED FROM ROLLED, PRESSED AND FORGED STEEL SHAPES, PLATES, BARS AND STRIP" AFTER FABRICATION.
- 7.2 WHERE LIMITED AREAS OF GALVANIZING SURFACES ARE DAMAGED DURING SHIPPING OR ERECTION, THE DAMAGE SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.
- 7.2.1 DAMAGED GALVANIZING SHALL BE REPAIRED AS NOTED BELOW, PER THE REQUIREMENTS OF ASTM A-780.
- 7.2.1.1 SURFACES TO BE REPAIRED WITH ZINC-RICH PAINT SHALL BE CLEAN, DRY AND FREE OF OIL, GREASE AND CORROSION PRODUCTS.
- 7.2.1.2 SURFACES TO BE REPAIRED SHALL BE POWER DISK SANDED TO BRIGHT METAL. TO ENSURE THAT THE ZINC-RICH PAINT ADHERES PROPERLY, SURFACE PREPARATION SHALL EXTEND INTO THE UNDAMAGED GALVANIZED COATING.
- 7.2.1.3 IF THE AREA TO BE REPAIRED INCLUDES WELDS, FIRST REMOVE ALL FLUX RESIDUE AND WELD SPATTER.
- 7.2.1.4 SPRAY OR BRUSH APPLY THE ZINC-RICH PAINT TO THE PREPARED AREA. APPLY THE PAINT AS RECOMMENDED BY THE PAINT MANUFACTURER IN A SINGLE APPLICATION EMPLOYING MULTIPLE SPRAY PASSES TO ACHIEVE A DRY FILM THICKNESS OF 3 MILS.
- 7.2.1.5 TAKE THICKNESS MEASUREMENTS WITH EITHER A MAGNETIC OR ELECTROMAGNETIC GAGE TO ENSURE THAT THE APPLIED COATING IS AS SPECIFIED.
- 7.2.1.6 THERE IS NO REQUIREMENT FOR THE PAINT TYPE. USE ANY AVAILABLE ZINC-RICH REPAIR PAINT.
- 7.3 SIDEWALK COVER PLATES SHALL BE GALVANIZED WITH A SLIP RESISTANT STEEL TOP SURFACE CONSISTING OF A RANDOM HATCH MATRIX OR OTHER SUITABLE PATTERN. DIAMOND PLATE, CHECKER PLATE OR SURFACE APPLIED SLIP RESISTANT TAPES, FILMS, NONMETALLIC COATINGS OR OTHER SIMILAR MATERIALS SHALL NOT BE USED.

TOLERANCES (UNLESS OTHERWISE SPECIFIED)
• ALL DIMENSIONS ARE IN INCHES

DECIMAL:
.X ± .030 .XX ± .015 .XXX ± .010

FRACTION:
OVERALL LGTH: ±1/4 / 20FT SWEEP/CAMBER: ASTM A6 T21 STUD
ANGULAR: ±2' (FAB) / ±1' (FORM) LOCATION: ±1
LINEAR (Dtls): ±1/16 BUTT SPICE LOCATION: ±1/2
HOLE SIZE/DEPTH: +1/16 -0 HOLE LOCATION: ±1/2

* WELD LOCATIONS PER APPLICABLE CODE/SPEC

DRAWING ACTION:

SUBMITTED FOR APPROVAL

DATE: 03/03/21

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△

△

NO

DESCRIPTION

NAME


DATE

REMOVED NOTE REGARDING ANCHOR STUDS (NOT APPLICABLE)

JWM

03/03/21

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JWM

CHECKED BY:
JFW

SCALE:
NTS

SHEET NO.:
1 of 11

DATE:
02/17/21

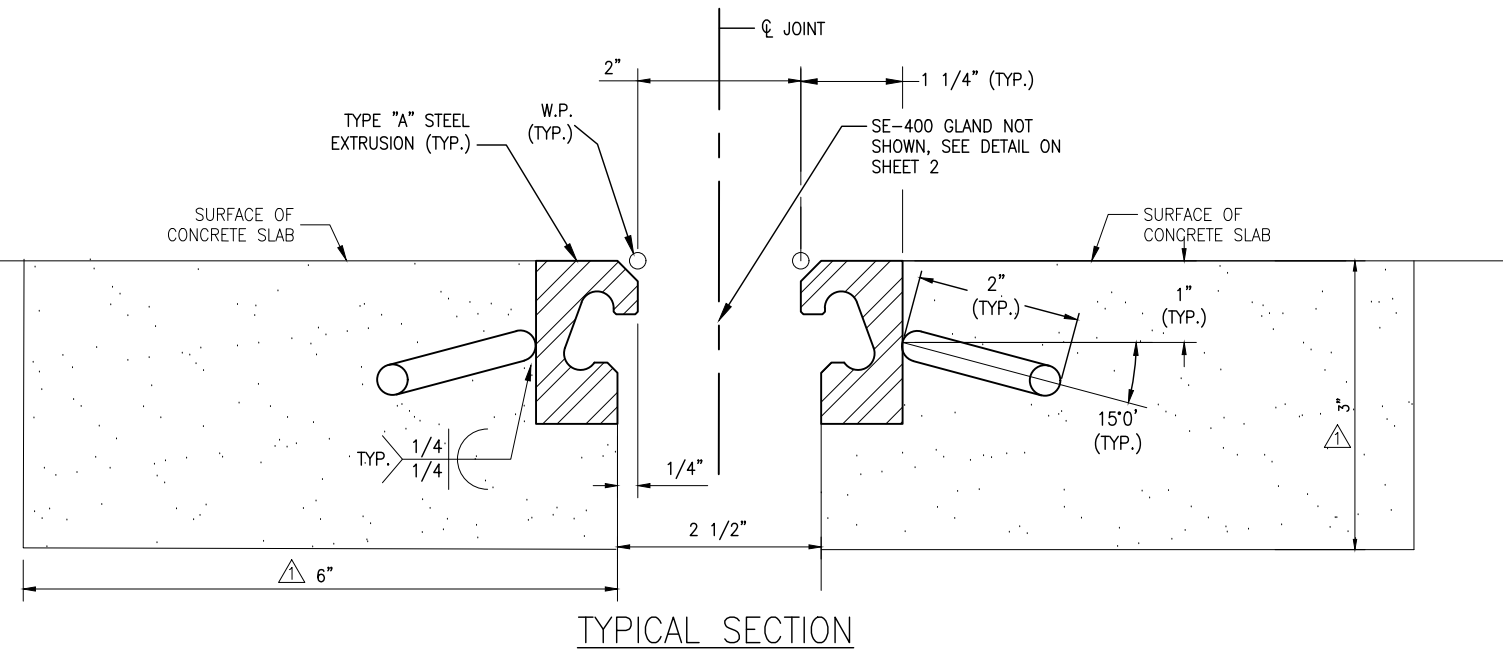
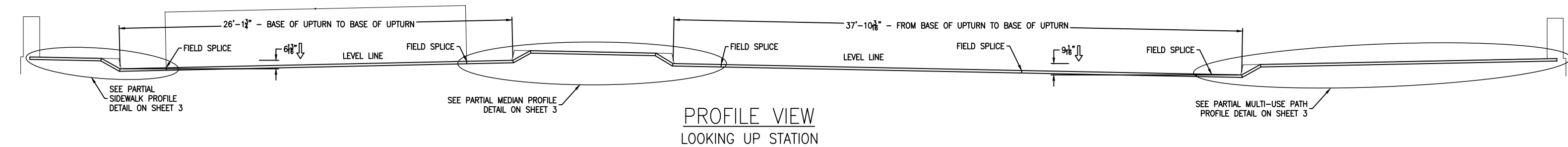
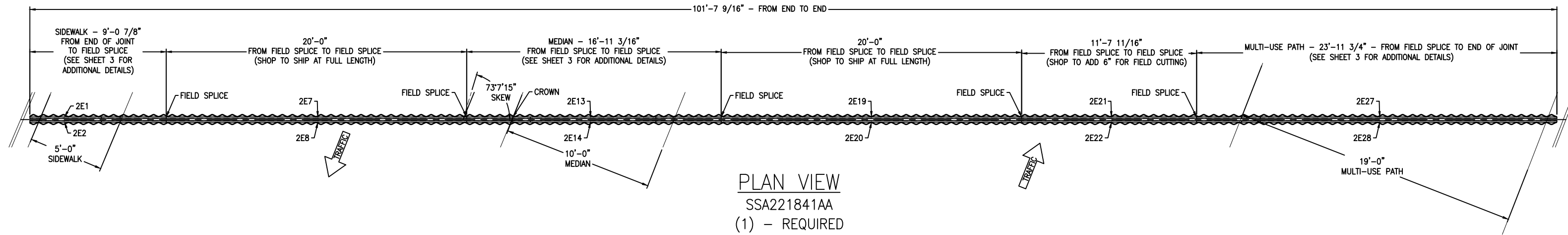
DATE:
02/17/21

WBA JOB NO.:
221841

DRAWING NO.:
221841-01

PROJECT:
CUY-IR490/ SR010-2.09/ 19.28
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE
WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

L:\2566-BAS\US\AMHERST\ENGINEER\WBA Projects\221841-WBA-State Highway Supply, Inc. - Project 96833 17-3000\020-CAD\221841-01.dwg, 3/3/2021 3:49:58 PM, DWG-To-PDF.pc3



() - Denotes Millimeters

DIMENSION CHART					
PROFILE	MODEL	"A" @ MIN	"A" @ MID	"A" @ MAX	TOTAL MOVMENT
	SE-400	0"(0)	2"(51)	4"(102)	4"(102)

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DECIMAL:		
.X ± .030	.XX ± .015	.XXX ± .010
FRACTION:		
OVERALL LGTH: ±1/4 / 20FT	SWEEP/CAMBER: ASTM A6 T21 STUD	
ANGULAR: ±2" (FAB) / ±1" (FORM)	LOCATION: ±1	
LINEAR (DTLS): ±1/16	BUTT SPLICE LOCATION: ±1/2	
HOLE SIZE/DEPTH: +1/16 -0	HOLE LOCATION: ±1/2	
* WELD LOCATIONS PER APPLICABLE CODE/SPEC		

DRAWING ACTION:

SUBMITTED FOR APPROVAL

DATE: 03/03/21

REVISED BLOCKOUT DIMENSIONS TO MATCH CONTRACT PLANS		NAME	DATE
		JWM	02/25/21
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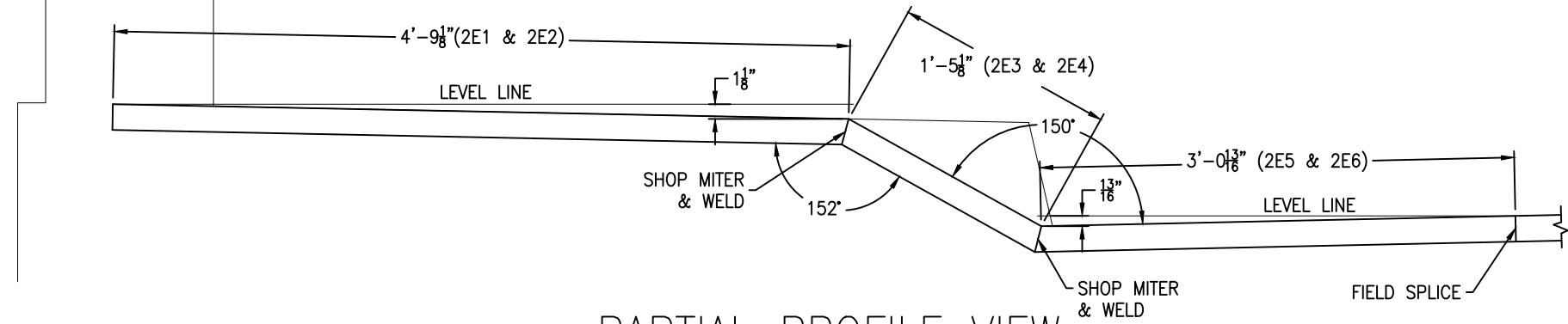


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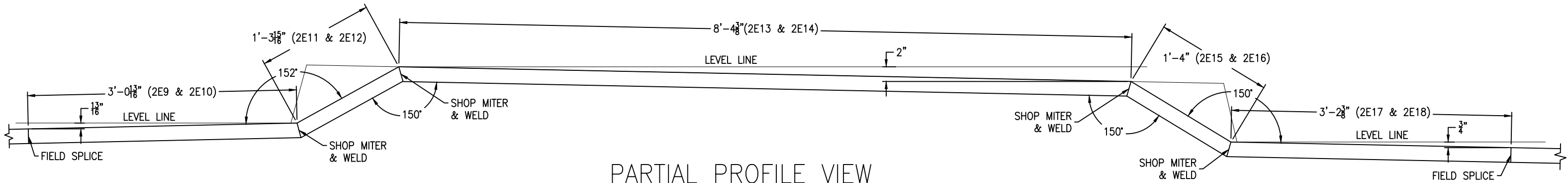
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WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

DETAILED BY:	JWM	DATE:	02/17/21
CHECKED BY:	JFW	DATE:	02/17/21
SCALE:	NTS	WBA JOB NO.:	221841
SHEET NO.:	2 of 11	DRAWING NO.:	221841-01

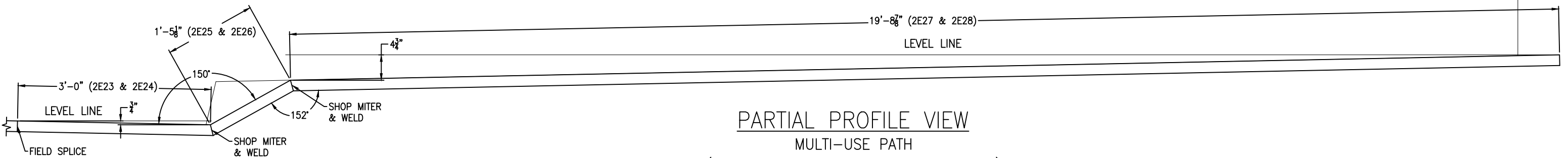
PARTIAL PROFILE VIEW
SIDEWALK
(SEE SHEET 4 FOR COVER PLATE DETAILS)



PARTIAL PROFILE VIEW
MEDIAN
(SEE SHEET 4 FOR COVER PLATE DETAILS)



PARTIAL PROFILE VIEW
MULTI-USE PATH
(SEE SHEET 5 FOR COVER PLATE DETAIL)

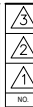


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.X ± .030	.XX ± .015	.XXX ± .010	
FRACTION:			
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ANGULAR: ±2" (FAB) / ±1" (FORM)	LOCATION: ±1		
LINEAR (Dtls): ±1/16	BUTT SPLICE LOCATION: ±1/2		
HOLE SIZE/DEPTH: +1/16 -0	HOLE LOCATION: ±1/2		
* WELD LOCATIONS PER APPLICABLE CODE/SPEC			

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NO.	DESCRIPTION	NAME	DATE

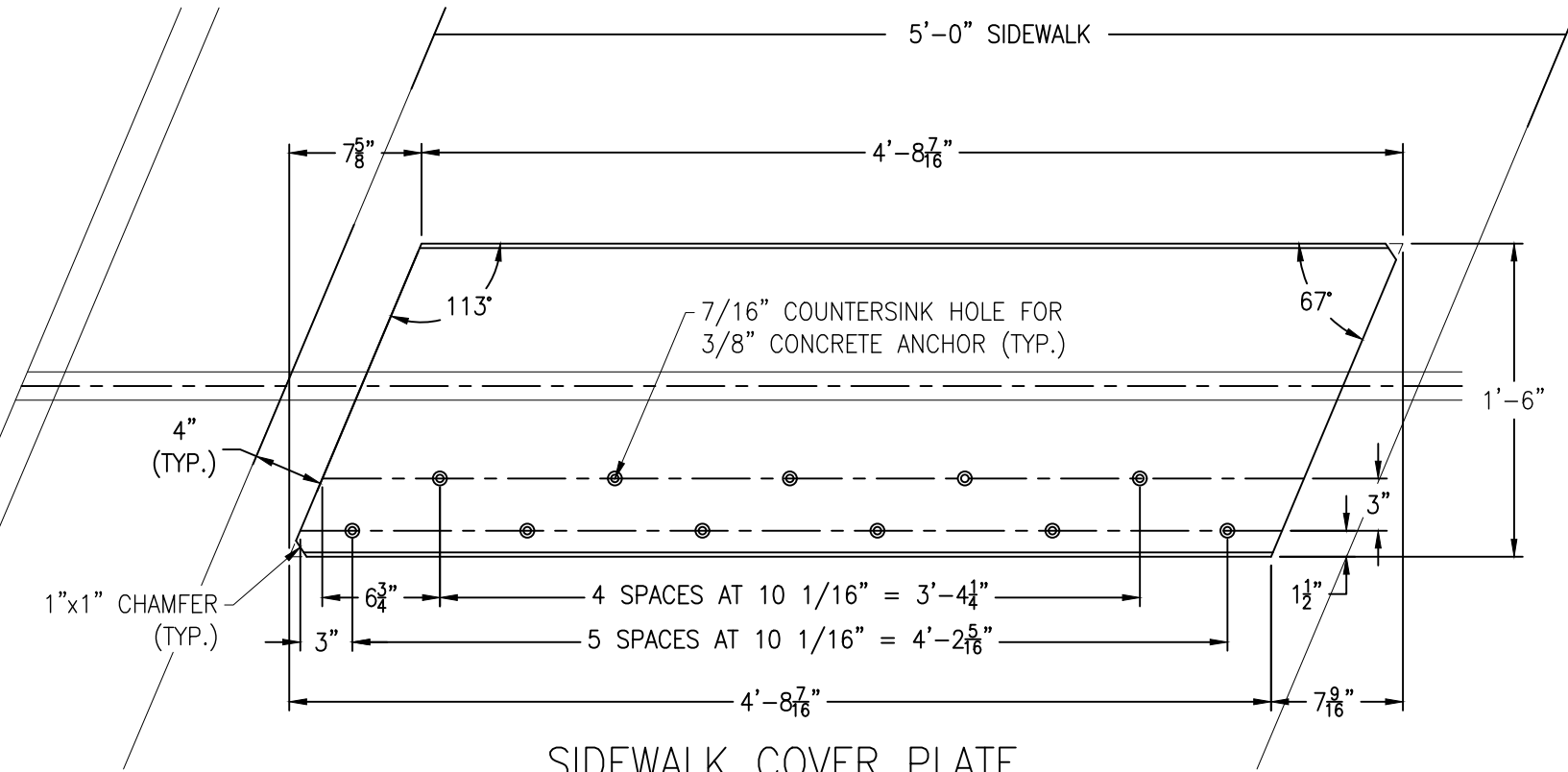
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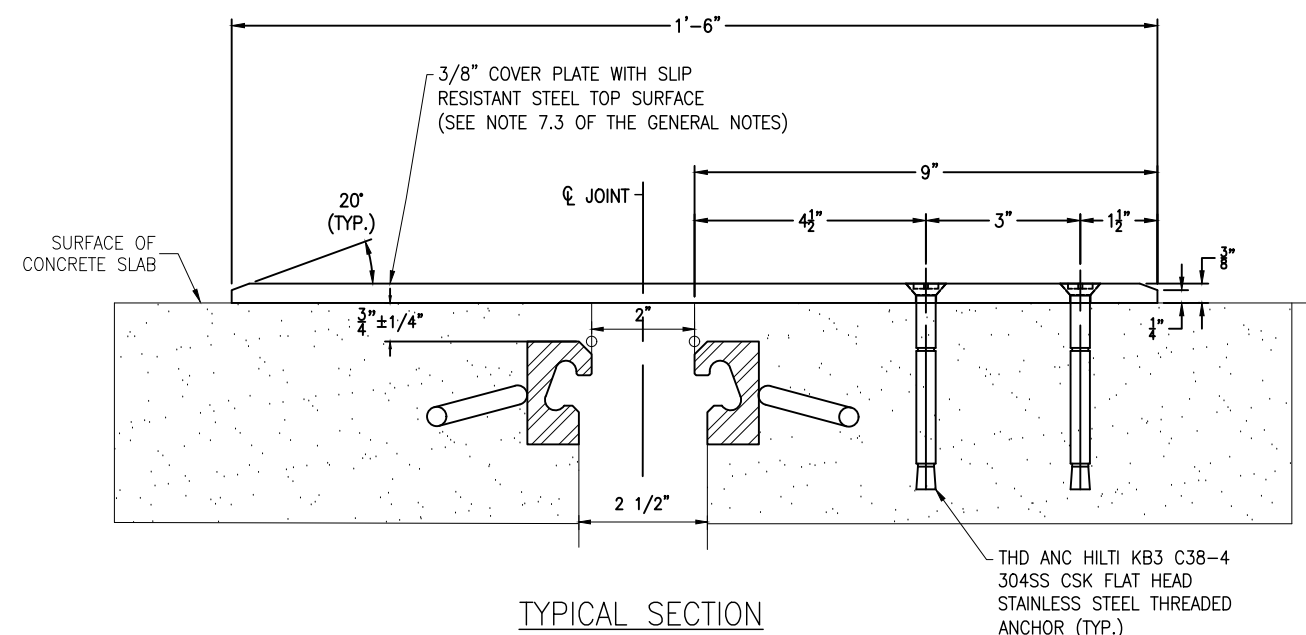
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PROJECT: CUY-IR490/ SR010-2.09/ 19.28
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE
WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

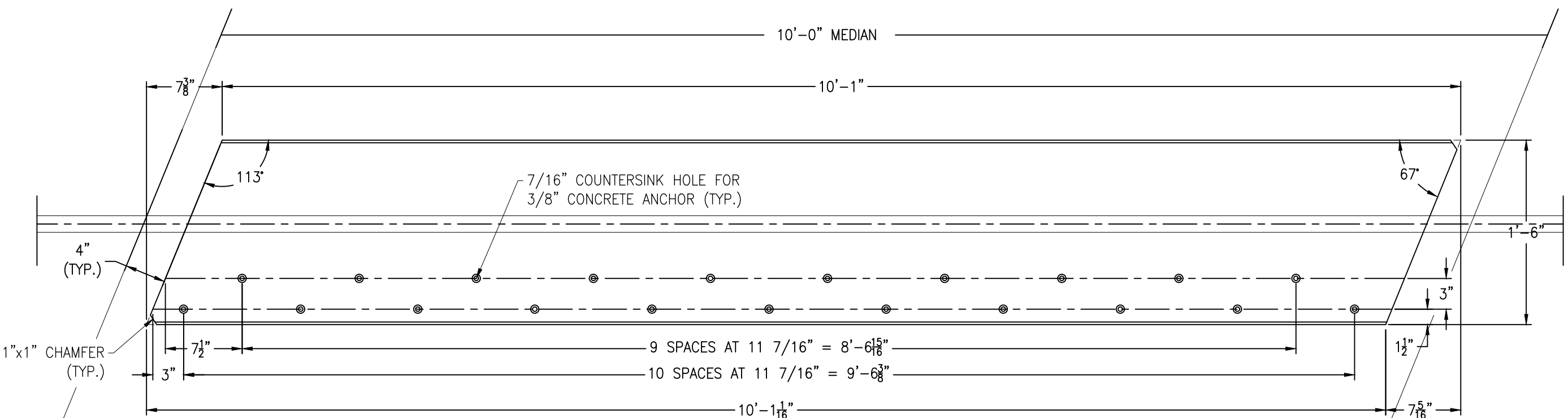
DETAILED BY:	JWM	DATE:	02/17/21
CHECKED BY:	JFW	DATE:	02/17/21
SCALE:	NTS	WBA JOB NO.:	221841
SHEET NO.:	3 of 11	DRAWING NO.:	221841-01



SIDEWALK COVER PLATE
SLI221841AA
PLAN VIEW



TYPICAL SECTION



MEDIAN COVER PLATE
SLI221841AB
PLAN VIEW


TOLERANCES (UNLESS OTHERWISE SPECIFIED)			
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.X ± .030	.XX ± .015	.XXX ± .010	
FRACTION:			
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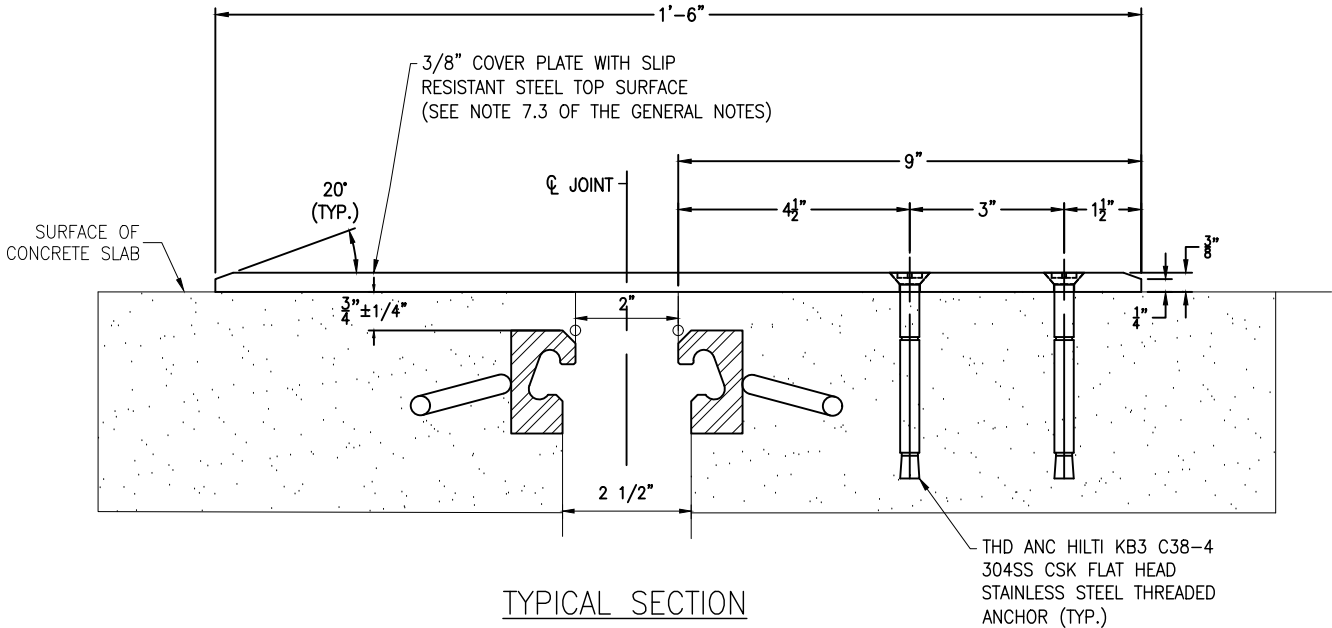
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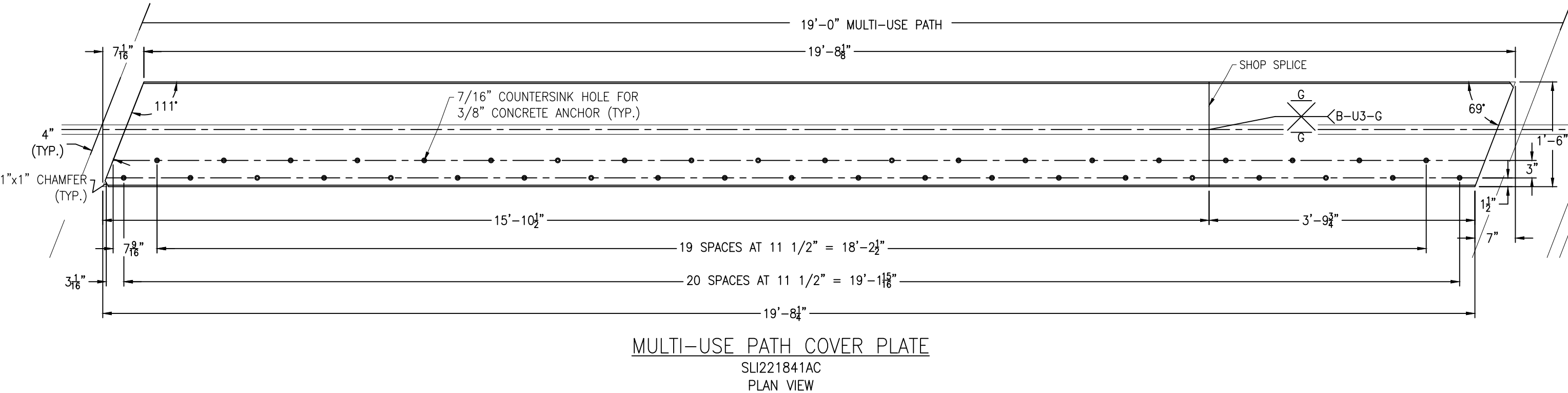
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	DETAILED BY:	JWM
	CHECKED BY:	JFW
	SCALE:	NTS
	DATE:	02/17/21
	WBA JOB NO.:	221841
	DRAWING NO.:	221841-01
	SHEET NO.:	4 of 11



COVER PLATE INSTALLATION INSTRUCTIONS

1. SEAL THE SURFACE OF THE SIDEWALK, WITHIN THE LIMITS OF THE COVER PLATE AND THE UNDERSIDE OF THE COVER PLATE WITH AN EPOXY-URETHANE SEALER (SUPPLIED BY OTHERS) AS SPECIFIED IN CMS 512.03. SURFACE PREPARATION OF THE SIDEWALK COVER PLATE IS WAVED.
2. AFTER INSERTION OF THE ANCHOR AND PRIOR TO TIGHTENING, PLACE CAULKING UNDER THE HEAD OF THE SCREW TO COMPLETELY SEAL THE ANCHOR FROM MOISTURE. THE CAULK (SUPPLIED BY OTHERS) IS TO BE A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.




MULTI-USE PATH COVER PLATE
SLI221841AC
PLAN VIEW

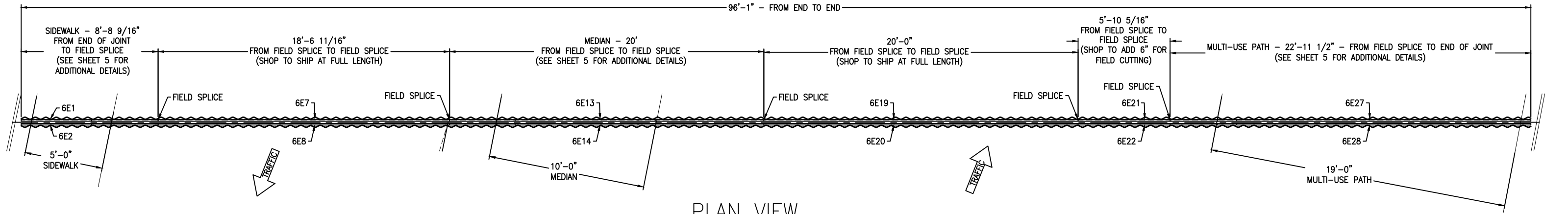
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FRACTION:			
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ANGULAR: ±2" (FAB) / ±1" (FORM)	LOCATION: ±1		
LINEAR (DLS): ±1/16	BUTT SPICE LOCATION: ±1/2		
HOLE SIZE/DEPTH: +1/16 -0	HOLE LOCATION: ±1/2		
* WELD LOCATIONS PER APPLICABLE CODE/SPEC			

DRAWING ACTION:
SUBMITTED FOR APPROVAL
DATE: 03/03/21

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 Watson Bowman Acme Corp. 95 Pinelawn Drive Amherst, NY 14228 phone: (716)691-7566 fax: (716)691-9239 www.wbacorp.com	DETAILED BY:	JWM	DATE:	02/17/21
	CHECKED BY:	JFW	DATE:	02/17/21
	SCALE:	NTS	WBA JOB NO.:	221841
	SHEET NO.:	5 of 11	DRAWING NO.:	221841-01

PROJECT: CUY-IR490/ SR010-2.09/ 19.28
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE
WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

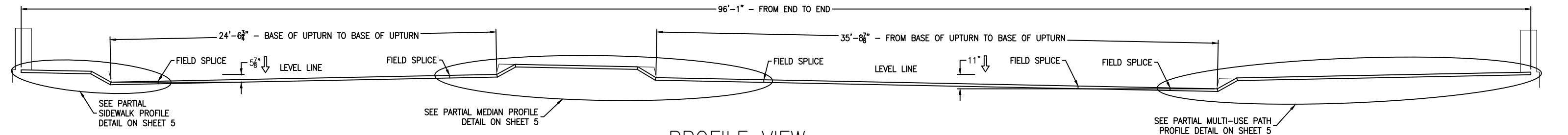


PLAN VIEW

SSA221841AB

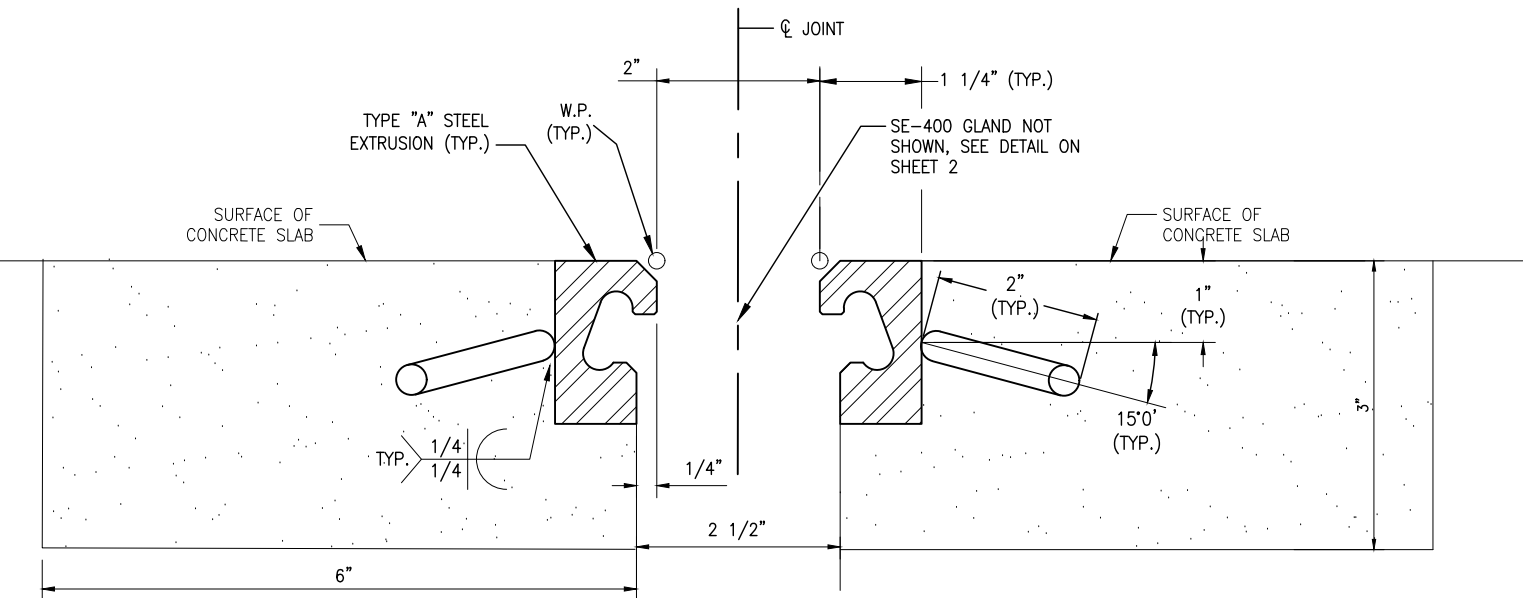
(1) - REQUIRED

FORWARD ABUTMENT




PROFILE VIEW

LOOKING UP STATION



TYPICAL SECTION

() - Denotes Millimeters

DIMENSION CHART					
PROFILE	MODEL	"A" @ MIN	"A" @ MID	"A" @ MAX	TOTAL MOVMENT
	SE-400	0"(0)	2"(51)	4"(102)	4"(102)

TOLERANCES (UNLESS OTHERWISE SPECIFIED)		
• ALL DIMENSIONS ARE IN INCHES		
DECIMAL:		
.X ± .030	.XX ± .015	.XXX ± .010
FRACTION:		
OVERALL LGTH: ±1/4" / 20FT	SWEEP/CAMBER: ASTM A6 T21 STUD	
ANGULAR: ±2" (FAB) / ±1" (FORM)	LOCATION: ±1	
LINEAR (DLS): ±1/16	BUTT SPlice LOCATION: ±1/2	
HOLE SIZE/DEPTH: +1/16 -0	HOLE LOCATION: ±1/2	
* WELD LOCATIONS PER APPLICABLE CODE/SPEC		

DRAWING ACTION:

SUBMITTED FOR APPROVAL

DATE: 03/03/21

NO.		DESCRIPTION	NAME	DATE
1				
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PROJECT: CUY-IR490/ SR010-2.09/ 19.28
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WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

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WBA JOB NO.:	221841
SHEET NO.:	6 of 11
DRAWING NO.:	221841-01

PARTIAL PROFILE VIEW
SIDEWALK
(SEE SHEET 8 FOR COVER PLATE DETAILS)

PARTIAL PROFILE VIEW
MEDIAN
(SEE SHEET 8 FOR COVER PLATE DETAILS)

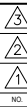
PARTIAL PROFILE VIEW
MULTI-USE PATH
(SEE SHEET 9 FOR COVER PLATE DETAIL)

TOLERANCES (UNLESS OTHERWISE SPECIFIED)			
• ALL DIMENSIONS ARE IN INCHES			
DECIMAL:			
.X ± .030	.XX ± .015	.XXX ± .010	
FRACTION:			
OVERALL LGTH: ±1/4" / 20FT	SWEEP/CAMBER: ASTM A6 T21 STUD		
ANGULAR: ±2" (FAB) / ±1" (FORM)	LOCATION: ±1		
LINEAR (Dtls): ±1/16	BUTT SPICE LOCATION: ±1/2		
HOLE SIZE/DEPTH: +1/16 -0	HOLE LOCATION: ±1/2		
* WELD LOCATIONS PER APPLICABLE CODE/SPEC			

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DATE: 03/03/21



NO.	DESCRIPTION	NAME	DATE

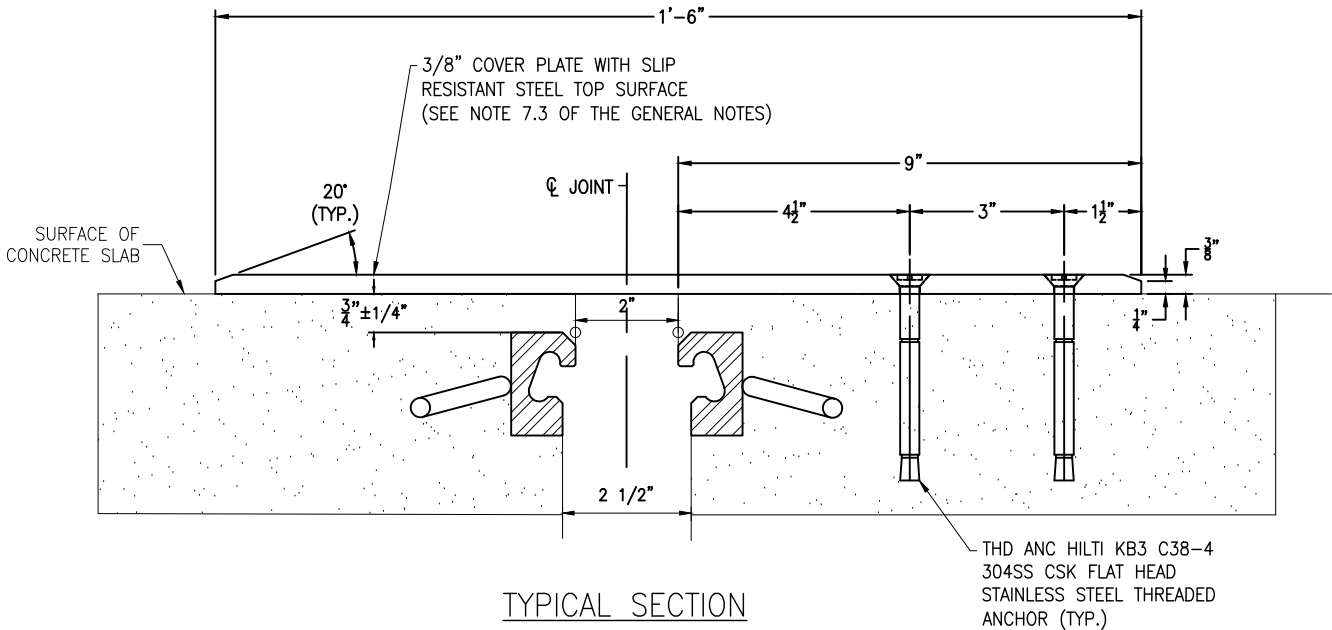
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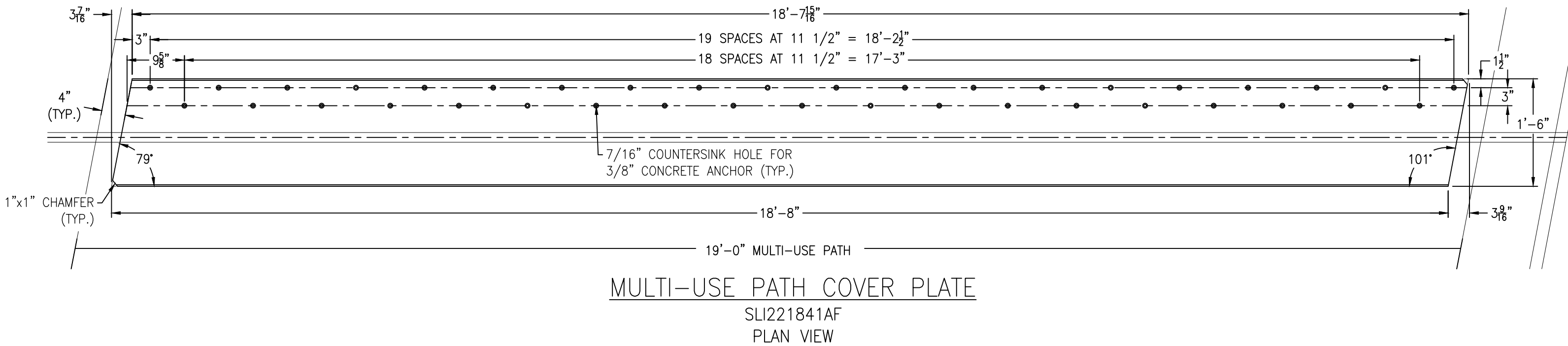
PROJECT: CUY-IR490/ SR010-2.09/ 19.28
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE
WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

DETAILED BY: JWM	DATE: 02/17/21
CHECKED BY: JFW	DATE: 02/17/21
SCALE: NTS	WBA JOB NO.: 221841
SHEET NO.: 7 of 11	DRAWING NO.: 221841-01



COVER PLATE INSTALLATION INSTRUCTIONS


1. SEAL THE SURFACE OF THE SIDEWALK, WITHIN THE LIMITS OF THE COVER PLATE AND THE UNDERSIDE OF THE COVER PLATE WITH AN EPOXY-URETHANE SEALER (SUPPLIED BY OTHERS) AS SPECIFIED IN CMS 512.03. SURFACE PREPARATION OF THE SIDEWALK COVER PLATE IS WAVED.
2. AFTER INSERTION OF THE ANCHOR AND PRIOR TO TIGHTENING, PLACE CAULKING UNDER THE HEAD OF THE SCREW TO COMPLETELY SEAL THE ANCHOR FROM MOISTURE. THE CAULK (SUPPLIED BY OTHERS) IS TO BE A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S.

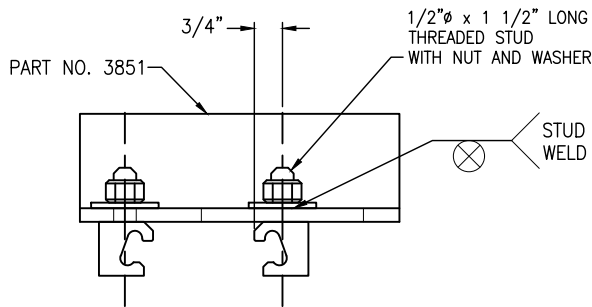


TOLERANCES (UNLESS OTHERWISE SPECIFIED)			
• ALL DIMENSIONS ARE IN INCHES			
DECIMAL:			
.X ± .030	.XX ± .015	.XXX ± .010	
FRACTION:			
OVERALL LGTH: ±1/4" / 20FT	SWEEP/CAMBER: ASTM A6 T21 STUD		
ANGULAR: ±2" (FAB) / ±1" (FORM)	LOCATION: ±1		
LINEAR (D/L): ±1/16	BUTT SPICE LOCATION: ±1/2		
HOLE SIZE/DEPTH: +1/16 -0	HOLE LOCATION: ±1/2		
* WELD LOCATIONS PER APPLICABLE CODE/SPEC			

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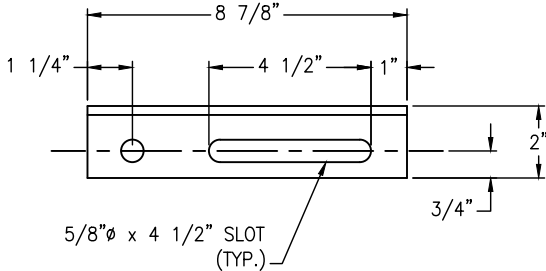
 Watson Bowman Acme Corp. 95 Pinetree Drive Amherst, NY 14228 phone: (716)691-7566 fax: (716)691-9239 www.wbacorp.com	PROJECT:	CUY-IR490/ SR010-2.09/ 19.28 BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS
	DETAILED BY:	JWM
	CHECKED BY:	JFW
	SCALE:	NTS
	SHEET NO.:	9 of 11
	DATE:	02/17/21
	WBA JOB NO.:	221841
	DRAWING NO.:	221841-01



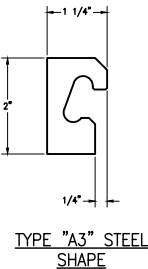
SHIPPING CLAMP ASSEMBLY
(THIS IS A TEMPORARY DEVICE)

NOTES:

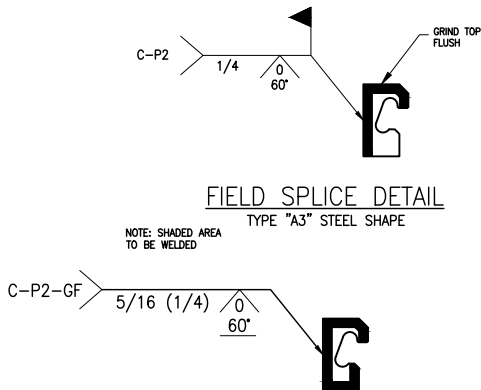
1. SHIPPING CLAMPS SHALL BE PLACED AT EVERY THREADED STUD LOCATION. SET THE JOINT AT MID-RANGE FOUND IN THE TABLE ON SHEET 2
2. 1/2"Ø x 1 3/4" THREADED STUD FOR SHIPPING ANGLES SHALL BE SPACED A MAXIMUM OF 2'-" FROM MITER LINES, SPLICES AND/OR END OF JOINTS AND 4'-0"± 1'-0" THERE AFTER.
3. THE STUDS SHALL BE PLACED ACROSS FROM EACH OTHER PER THE SKEW ANGLE PROVIDED ON THE JOINT PLAN VIEWS.
3. THE CONTRACTOR IS TO REMOVE THE SHIPPING CLAMPS AND STUDS, WHEN THE JOINT IS SET. WELDS ARE TO BE GROUND SMOOTH.
4. EACH SHIPPING CLAMP ASSEMBLY SHALL INCLUDE:
 - 1 - ANGLE (3851) - 2" x 2" x 1/4"
 - 2 - 1/2"Ø x 1 1/2" LONG THREADED STUD
 - 2 - 1/2"Ø WASHER
 - 2 - 1/2"Ø NUT



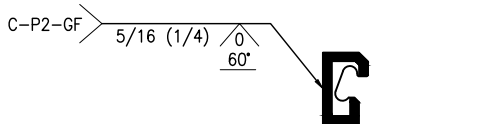
DETAIL ANGLE (3851)
2" x 2" x 1/4" ANGLE



TYPE "A3" STEEL
SHAPE

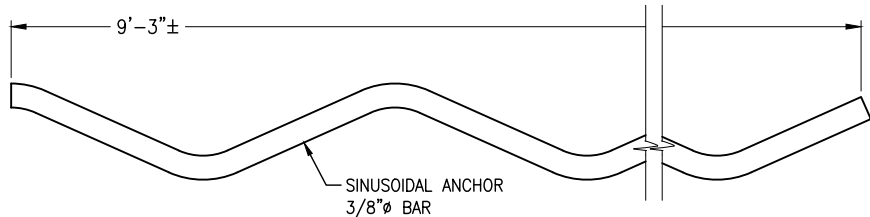


FIELD SPLICE DETAIL
TYPE "A3" STEEL SHAPE

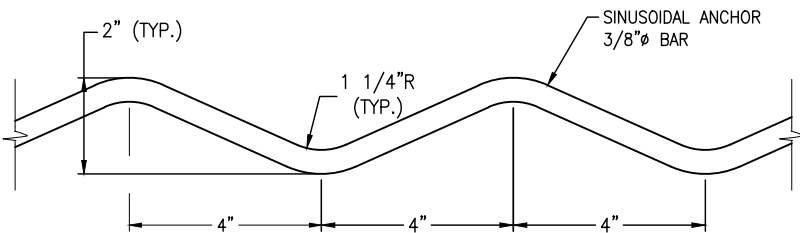


SHOP SPLICE DETAIL
TYPE "A3" STEEL SHAPE

NOTE: SHADED AREA
TO BE WELDED



STANTARD 3/8"Ø SINUSOIDAL ANCHOR DETAIL



NEOPRENE SEAL INSTALLATION PROCEDURE

1. PRIOR TO INSTALLATION OF THE SEAL, THE EXTRUSION CAVITY MUST BE FREE OF ALL CONCRETE, DIRT, OIL OR ANY OTHER CONTAMINANTS. THOROUGHLY CLEAN THE EXTRUSION CAVITY AND THE SEAL EARS WITH AN APPROVED SOLVENT (ex. TOLUENE OR XYLENE).
2. APPLY THE LUBRICANT/ADHESIVE TO THE INSIDE OF THE EXTRUSION CAVITY AND TO THE SEAL EAR LUGS ON BOTH SIDES OF THE EXPANSION JOINT. (APPLY THE LUBRICANT/ ADHESIVE IN APPROX. 4'-0" INCREMENTS TO PREVENT IT FROM SETTING BEFORE THE SEAL IS INSERTED INTO THE EXTRUSION CAVITY.)
3. MANUALLY FOLD SEAL AS SHOWN IN FIG. 1, AND INSERT INTO THE OPENING BETWEEN THE EXTRUSIONS. MAKE SURE THAT THE NEOPRENE SEAL IS NOT INSERTED THROUGH AND PAST THE EXTRUSION SEAL CAVITY. ONCE PROPERLY INSERTED, THE BOTTOM HALF OF THE EAR LUGS SHOULD BE AUTOMATICALLY EXTENDED OUTWARD AND SEAT THEMSELVES INTO THE BOTTOM PORTION OF THE EXTRUSION CAVITY. (SEE FIGURE 2)
4. USING THE INSTALLATION TOOLS PROVIDED, WORK THE UPPER EARLUG OF THE SEAL TO ROTATE TOWARD THE BACK OF THE EXTRUSION CAVITY AND LOCK IN UNDER THE UPPER LIP. (SEE FIG. 3) USE ONE OF THE TOOLS TO HOLD THE UPPER EARLUG AND A SECOND TOOL TO APPLY THE LEVER ACTION, UNTIL THE UPPER EARLUG HAS BEEN PROPERLY SEATED AND LOCKED INTO PLACE. REVERSE THE TOOL AND INSTALL OPPOSITE SIDE IN THE SAME MANNER. (FIGURE 4)
5. REPEAT STEPS 2 THRU 4 UNTIL THE ENTIRE SEAL HAS BEEN INSTALLED. INSPECT THE OVERALL SEAL INSTALLATION AND INSURE THAT THE SEAL HAS BEEN PROPERLY INSTALLED AND LOCKED IN THE EXTRUSION CAVITY. ANY PORTION OF THE SEAL NOT PROPERLY LOCKED MUST BE CORRECTED AT ONCE BY REPEATING STEP 4. ALLOW LUBRICANT/ ADHESIVE 24 HOURS TO FULLY CURE.

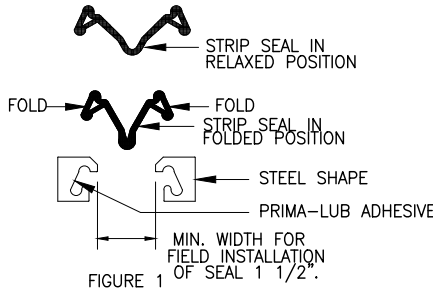


FIGURE 1

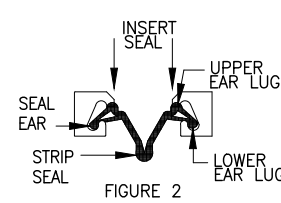


FIGURE 2

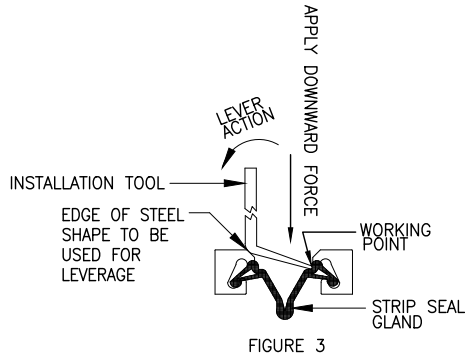


FIGURE 3

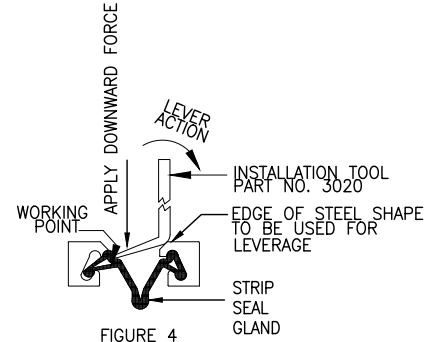
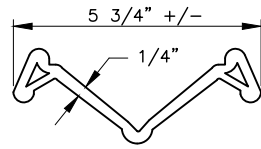
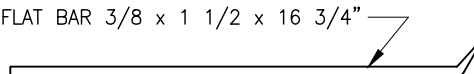


FIGURE 4



MOVEMENT RATING - 4"
SE-400 SEAL



SEAL INSTALLTION TOOL

TOLERANCES (UNLESS OTHERWISE SPECIFIED)			
* ALL DIMENSIONS ARE IN INCHES			
DECIMAL:			
.X ± .030	.XX ± .015	.XXX ± .010	
FRACTION:			
OVERALL LGTH: ±1/4 / 20FT		SWEEP/CAMBER: ASTM A6 T21 STUD	
ANGULAR: ±2' (FAB) / ±1' (FORM)		LOCATION: ±1	
LINEAR (Dtls): ±1/16		BUTT SPLICE LOCATION: ±1/2	
HOLE SIZE/DEPTH: +1/16 -0		HOLE LOCATION: ±1/2	
* WELD LOCATIONS PER APPLICABLE CODE/SPEC			

DRAWING ACTION:

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DATE: 03/03/21

NO.	DESCRIPTION	NAME	DATE
1	REVISED AS PER REVIEWER'S COMMENTS	JWM	01/13/17
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	SCALE:	NTS	WBA JOB NO.:	221841
	SHEET NO.:	10 of 11	DRAWING NO.:	221841-01

PROJECT:
CUY-IR490/ SR010-2.09/ 19.28
BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE
WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

SSA221841AA QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SSA221841AA	1.00	EA	SSA EXPANSION JOINT; PAY LENGTH = 102 LF REAR ABUTMENT - APPROX SHPG WGT: 1300 LB		GALVANIZED SHIPPING LENGTH = 20' ±
1	1918	210.00	FT	SS A3 FM 1.250x2 A36 C11810(W)	A	
1	7357	23	EA	SINUSOID 3/8" BENT BAR 9'3" (W)	B	
1	3851	30	EA	SHIP ANGLE STRIP SL A24667 (W)	C	TEMPORARY
1	6980	60	EA	THD STUD 1/2x1-3/4AWL NP108-*	A	TEMPORARY
1	7512	60	EA	WASHER 1/2(A) ZNC PLTED F436-*	A	TEMPORARY
1	7954	60	EA	NUT 1/2 (A) zinc pltd A325-*	A	TEMPORARY

SSA221841AB QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SSA221841AB	1.00	EA	SSA EXPANSION JOINT; PAY LENGTH = 97 LF FORWARD ABUTMENT - APPROX SHPG WGT: 1300 LB		GALVANIZED SHIPPING LENGTH = 20' ±
1	1918	200.00	FT	SS A3 FM 1.250x2 A36 C11810(W)	A	
1	7357	21	EA	SINUSOID 3/8" BENT BAR 9'3" (W)	B	
1	3851	30	EA	SHIP ANGLE STRIP SL A24667 (W)	C	TEMPORARY
1	6980	60	EA	THD STUD 1/2x1-3/4AWL NP108-*	A	TEMPORARY
1	7512	60	EA	WASHER 1/2(A) ZNC PLTED F436-*	A	TEMPORARY
1	7954	60	EA	NUT 1/2 (A) zinc pltd A325-*	A	TEMPORARY

SSA221841S1 QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SSA221841S1	1.00	EA	SEAL FOR SHIPPING (FOR JOINT AA & AB)		
1	100	206.00	FT	SE STRIP SEAL 400 C1703-3	A	

SSA221841S1 QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SSA221841S1	1.00	EA	PARTS FOR SHIPPING (FOR JOINTS & SLIDERS)		
1	2720	1	EA	PRIMA-LUB GALLON CAN		
1	3020	2	EA	INSTALLATION TOOL STRIP SEAL(W		
1	6579	140	EA	THD ANC HILTI KB3 C38-4 304SS		(FOR SLIDERS)

SLI221841AA QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SLI221841AA	1.00	EA	SIDEWALK COVER PLATE FOR REAR ABUTMENT		GALVAGRIT
1	3540	125.00	LB	PLATE 3/8 A36 (6 FT WDE)	A	

SLI221841AB QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SLI221841AB	1.00	EA	MEDIAN COVER PLATE FOR REAR ABUTMENT		GALVAGRIT
1	NTS221841A	247.00	LB	PLATE 3/8 A36 (20 FT LENGTH)	#N/A	

SLI221841AC QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SLI221841AC	1.00	EA	MULTI USE PATH COVER PLATE FOR REAR ABUTMENT		GALVAGRIT
1	NTS221841A	468.00	LB	PLATE 3/8 A36 (20 FT LENGTH)	#N/A	

SLI221841AD QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SLI221841AD	1.00	EA	SIDEWALK COVER PLATE FOR FRONT ABUTMENT		GALVAGRIT
1	3540	110.00	LB	PLATE 3/8 A36 (6 FT WDE)	A	

SLI221841AE QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SLI221841AE	1.00	EA	MEDIAN COVER PLATE FOR FRONT ABUTMENT		GALVAGRIT
1	3540	228.00	LB	PLATE 3/8 A36 (6 FT WDE)	A	

SLI221841AF QTY: 1 REQ'D. <u>STRUCTURED BILL OF MATERIALS</u>						
LV	PART NO.	QTY	UM	DESCRIPTION	CLASS	MATERIAL
0	SLI221841AF	1.00	EA	MULTI USE PATH COVER PLATE FOR FRONT ABUTMENT		GALVAGRIT
1	NTS221841A	437.00	LB	PLATE 3/8 A36 (20 FT LENGTH)	#N/A	

TOLERANCES (UNLESS OTHERWISE SPECIFIED) • ALL DIMENSIONS ARE IN INCHES
DECIMAL: .X ± .030 .XX ± .015 .XXX ± .010
FRACTION: OVERALL LGTH: ±1/4 / 20FT SWEEP/CAMBER: ASTM A6 T21 STUD ANGULAR: ±2° (FAB) / ±1° (FORM) LOCATION: ±1 LINEAR (Dtls): ±1/16 BUTT SPICE LOCATION: ±1/2 HOLE SIZE/DEPTH: +1/16 -0 HOLE LOCATION: ±1/2
* WELD LOCATIONS PER APPLICABLE CODE/SPEC

DRAWING ACTION:

SUBMITTED FOR APPROVAL

DATE: 03/03/21

△

△

△

REVISED AS PER REVIEWER'S COMMENTS

NO


DESCRIPTION

NAME

DATE

JWM01/13/17

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Amherst, NY 14228

phone: (716)691-7566

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www.wbacorp.com

PROJECT:

CUY-IR490/ SR010-2.09/ 19.28

BU-17 OH-10 BRIDGE OVER KINGSBURY RUN RAVINE

WABO STRIP SEAL TYPE "A" EXPANSION JOINT DETAILS

DETAILED BY:

JWM

CHECKED BY:

JFW

SCALE:

NTS

SHEET NO.:

11 of 11

DATE:

02/17/21

DATE:

02/17/21

WBA JOB NO.:

221841

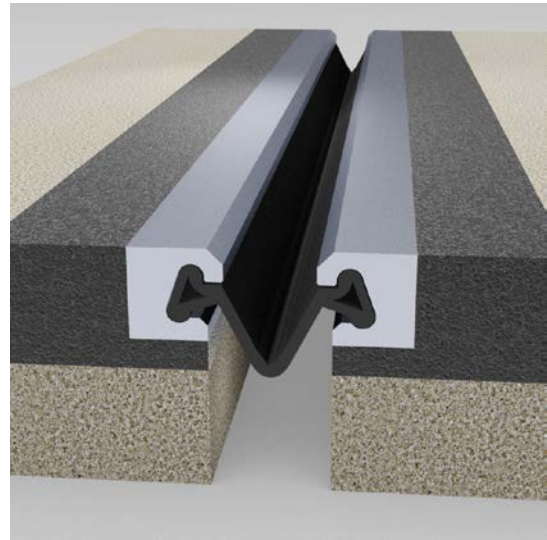
DRAWING NO.:

221841-01

Wabo®Crete StripSeal

*Armored joint and elastomeric concrete expansion joint system
Bridge Series*

Features	Benefits
• Flexible applications	Variable steel extrusions provide greater flexibility to accommodate any new construction or repair project condition
• Versatile movement	Accommodates various expansion joint movements and configurations.
• Heavy duty	Accommodates heavy duty loads and bridge deflections.
• Watertight	Continuous sealing element prevents water from leaking through the expansion joint opening



DESCRIPTION:

The WaboCrete StripSeal expansion joint system is a unique and superior joint system used in the construction and rehabilitation of expansion joints for bridges and parking decks. When poured into the blockout, WaboCrete II flows and completely fills any voids, spalls or irregularities forming a monolithic unit.

The WaboCrete StripSeal system is well suited to high impact applications due to its durability and resistance to chemical attack in harsh environments. The rugged design of the system and WaboCrete II's high bond capability to both steel and concrete allows the system to accommodate the high loads of vehicular traffic. WaboCrete StripSeal systems can accommodate a variety of field configurations along with multidirectional movements. WaboCrete II, a unique aggregate reinforced elastomeric concrete used in conjunction with the WaboStripSeal and steel sinusoidal anchorage, provide an effective and easily installed waterproof sealing system. Ideal for asphalt or concrete overlay Bridge Applications.

RECOMMENDED FOR:

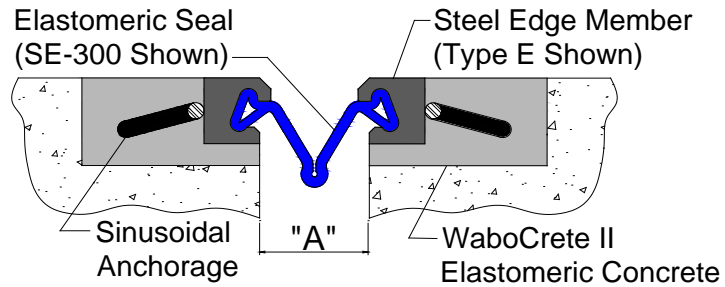
- New bridge construction or repair and maintenance of existing bridge expansion joint systems.
- Skewed joints
- High impact and repetitive loading conditions
- Expansion joint applications with a maximum movement of 5 inches.
- Overlay projects/ Low profile applicability

PACKAGING/COVERAGE:

- Steel extrusions are shipped in standard 20 foot lengths. Other lengths available, contact WBA for details.
- Rubber seals are cut to length and shipped on pallets per limitations of shipping methods

- WaboCrete II
 - PTA – ½ gal container
 - PTB – 1 gal container
 - PTC – 60 lbs aggregate
 - A+B+C = 1 unit
1 unit = 0.6 ft³ (1030 in³)
- Wabo®PrimaLub – 1 gal container
 - Coverage = lineal ft x 0.00361

TECHNICAL DATA:



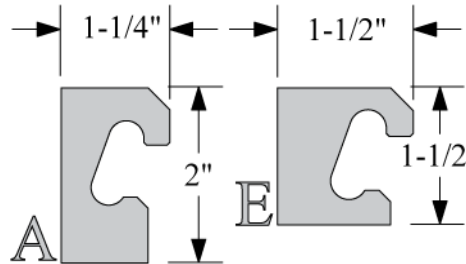
Movement Table

Model Number	Movement Range "A"						Min. Install Width	
	Min.		Max.		Total			
	in	mm	in	mm	in	mm	in	mm
SE-300	0.00	0	3.00	76	3.00	76	1.50	38
SE-400	0.00	0	4.00	102	4.00	102	1.50	38
SE-500	0.00	0	5.00	127	5.00	127	2.00	51
EFE-400	0.50	13	4.50	114	4.00	102	2.50	64

Consult your WBA Representative for factory molded horizontal changes, severe skews or joint intersections.

Steel Edge Members

The WaboCrete StripSeal system incorporates the use of two standard profile configurations. See details below for profile configurations. All steel edge members are produced from ASTM A588 or A36 grade steel. Available in coated or uncoated finishes. Customers need to specify options when ordering.



Elastomeric Gland

The WaboStripSeal system utilizes two standard glands; SE and EFE series. The elastomeric gland of the WaboStripSeal system can handle movements up to 5 inches (127mm). Several sizes of the elastomeric gland offer solutions to a wide range of field applications. The elastomeric glands can be factory molded for horizontal changes, severe skew, or joint intersections. All glands are produced from neoprene and meet the properties identified in the physical properties table.



SE Series

EFE Series

PHYSICAL PROPERTIES (Elastomeric Gland)

PHYSICAL PROPERTY	ASTM TEST METHOD	REQUIREMENTS
Tensile Strength, min	D 412	2,000 psi (13.8 Mpa)
Elongation at Break, min	D 412	250%
Hardness, Shore A	D 2240	55 +/- 5
Oven Aging, 70 hrs. @ Tensile, max loss Elongation, max loss Change in Hardness	D 573	20% 20% 0 to 10 pts.
Oil Swell, 70 hrs. @ 212°F(100°C) Weight Change, max	D 471	45%
Ozone Resistance 70 hrs. @ 104°F(40°C)	D 1149	no cracks
Low Temperature Stiffening	D 2240	0 to +15

PHYSICAL PROPERTIES (WaboCrete II)

PHYSICAL PROPERTY	ASTM TEST METHOD	REQUIREMENTS
Binder Only		
Tensile Strength	D 638	750 psi (5MPa) min.
Elongation at Break	D 638	150% min.
Hardness (Shore D)	D 2240	30-49
Compression Set (22hrs @ 158F)	D 395	50% max.
Tear Resistance	D 624	80lbs/in min.
Water Absorption (By Weight)	D 570	3% max.
Heat Shrinkage	D 1299	1.6% max.
Over Aging (@158F, 72 hrs)		
Tensile Strength	D 638	750 psi (5MPa) min.
Elongation		150%
Binder and Aggregate		
Compressive Strength	D 695 ¹	Min. 15 MPa (2200 psi)
Resilience (@5% deflection)	D 695	90% min.
Pot Life (@75F)		10 mn
Slant Shear Bond Strength	D 882	251 psi (2MPa) min.
Impact Resistance		
@ -20F (-29C)	See Note ²	no cracks
@ 32F (0C)		no cracks
@ 158F (70C)		no cracks

1 - ASTM D 695 modified for compressive properties by performing the test at 0.25 in/min.
2 - Specimens are cast discs with a 2.5" diameter and 0.375" thickness. Specimens are conditioned for four hours at test temperatures. A one pound steel ball is dropped onto the center of the specimen through a plastic tube from an initial height of 5 feet. The drop height is increased by intervals up to 7 feet or until the specimen cracks.

APPLICATION:

INSTALLATION SUMMARY:

- Concrete substrates must be abrasive blasted to remove all latencies and contaminants which may cause bonding problems.
- Apply WaboBonding Agent (primer) to surface of the properly prepared concrete prior to installation of WaboCrete II. Do NOT apply WaboBonding Agent to steel substrates. There must be no visible moisture prior to the application of the primer. Primer can be brush applied. Do NOT allow primer to dry prior to placement of WaboCrete II.
- Thoroughly pre-mix (approximately 20 seconds) Part B separately before pouring entire contents of Part B into clean 5 gallon container. Add Part A and mix both components for approximately 30 seconds, or until well blended.
- Slowly add the aggregate component to the mixed liquids and mix until all aggregate is coated (approximately 1 minute). This mix can be poured into the properly prepared blackout, in which the primer is still wet. The material will flow and self-level. Use a margin trowel to work material and finish surface.
- For sloped conditions, add WaboNon Flow Additive to the liquid-aggregate mixture.
- If the system is to be installed in sections, special care should be taken to the field weld details on shop drawings.
- The WaboStripSeal joint system is lifted and lowered into final position. The steel edge members are suspended into the blackout utilizing adjustable leveling devices.



We create chemistry

- Before securing or casting the system to the structure, the joint opening of the system should be adjusted to the proper ambient temperature.
- Complete all bolted or welded connections to the superstructure. When casting the joint into the structure, proper compaction of concrete around the system is required.
- The neoprene elastomeric gland should be field installed in continuous lengths spanning the entire roadway width. WaboPrimaLub adhesive is brushed into the full perimeter of the gland cavity on the steel edge member prior to actual gland installation.
- Periodically inspect the applied material and repair localized areas as needed. Consult a Watson Bowman Acme representative for additional information.
- Make certain the most current version of the product data sheet is being used. Please consult the website (www.wbacorp.com) or contact a customer service representative.
- Proper application is the responsibility of the user. Field visits by Watson Bowman Acme personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

FOR BEST RESULTS:

- Install when concrete substrate is clean, sound, dry, and cured (14 day minimum).
- Do NOT install if the joint's anticipated movement will exceed the total movement range of the system.
- Protect the work area with appropriate plastic sheeting.
- Minimize splice points by installing seals in longest possible continuous lengths.
- Do NOT allow any of the components to freeze prior to installation. Store all components out of direct sunlight in a clean, dry location between 50°F (10°C) and 90°F (32°C). Do NOT install when surface temperature is less than 40°F (4°C).
- Shelf life of chemical components is 1 year.

RELATED DOCUMENTS:

- Material Safety Data Sheets
- WaboCrete StripSeal Specification
- WaboCrete StripSeal Sales Drawings
- WaboCrete StripSeal Installation Procedure

OPTIONS/EQUIPMENT:

- Elastomeric gland installation tool, contact WBA for details.
- Use a ¾" slow speed, high torque, drill with a egg-beater (or mud beater) style mixing paddle to mix WaboCrete II
- Certified welder to be utilized for field welding of sections.

LIMITED WARRANTY:

Watson Bowman Acme Corp. warrants that this product conforms to its current applicable specifications. WATSON BOWMAN ACME CORP. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. The sole and exclusive remedy of Purchaser for any claim concerning this product, including, but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of Watson Bowman Acme Corp. Any claims concerning this product shall be submitted in writing within one year of the delivery date of this product to Purchaser and any claims not presented within that period are waived by Purchaser. IN NO EVENT SHALL WATSON BOWMAN ACME CORP. BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDES LOSS OF PROFITS) OR PUNITIVE DAMAGES. Other warranties may be available when the product is installed by a factory trained installer. Contact your local Watson Bowman Acme representative for details. The data expressed herein is true and accurate to the best of our knowledge at the time published; it is, however, subject to change without notice.

WaboCreteStripSeal_1216

Watson Bowman Acme Corp.
95 Pineview Drive
Amherst, NY 14228
phone: 716-691-7566
fax: 716-691-9239
wbacorp.com



Submittal: 129

Revision:

Date Submitted: 4/26/2021

Response Due By:



Project: 16051 - ODOT 173000 CUY IR 490/SR010 (OC3)

Description: BU-17 Decorative Fence

To: Mark Gabele, PE
Ohio Department of Transportation - District 12

Email: Mark.Gabele@dot.ohio.gov

From: Nicole DeVille
Kokosing Construction Company, Inc.

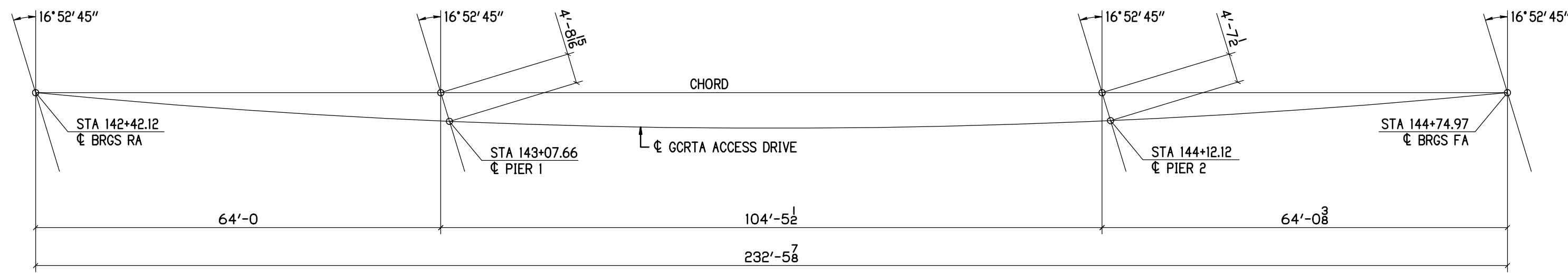
Email: nfd@kokosing.biz

Submittal Type:	Submitted For:
<input type="checkbox"/> Engineered Drawings	<input checked="" type="checkbox"/> Approval
<input checked="" type="checkbox"/> Shop Drawings	<input type="checkbox"/> Record
<input type="checkbox"/> Working Drawings	<input type="checkbox"/> Other
<input type="checkbox"/> CPM Schedule	
<input type="checkbox"/> Material Certifications / Test Results	Sent Via:
<input type="checkbox"/> Reports	<input checked="" type="checkbox"/> Attached (Electronic)
<input type="checkbox"/> Product Data/Samples	<input type="checkbox"/> Attached (Hard Copy)
<input type="checkbox"/> Other:	

Submittal #	Copies	Spec #	Rev. #	Description	
129	1			129 – BU-17 Decorative Fence	

Comments: Attached are BU-17's decorative fence drawings for anchor and post location approval.

Signed: 



CURVE DATA
 $\Delta = 38.5333^\circ$ (LT)
PC = STA 137+37.30
PI = STA 141+58.93
PT = STA 145+48.53
R = 1206.23
L = 811.23
T = 421.63
E = 71.56

INDEX OF SHEETS	
SHEET #	DESCRIPTION
E500	GENERAL PLANS & NOTES
E501	ANCHOR SETTING PLANS
E502	ANCHOR SETTING DETAILS

GENERAL NOTES

FINISH

THE FABRICATED RAILING AND HARDWARE (EXCEPT EMBED ANCHORS) SHALL BE GALVANIZED PER C&MS 711.02 EXCEPT THAT FABRICATED RAILING ELEMENTS SHALL NOT BE POST TREATED WITH WATER QUENCHING OR CHROMATE CONVERSION COATED.

ALL VENT HOLES REQUIRED FOR GALVANIZING SHALL BE AT THE DISCRETION OF THE FABRICATOR AND GALVANIZER.

THE PAINT SYSTEM SHALL BE PROVIDED UNDER A SEPARATE COVER. THE FINISH COAT SHALL MATCH FEDERAL COLOR STANDARD FS 595C-17038 BLACK.

WELDING

AWS - BRIDGE WELDING CODE D1.5 - LATEST EDITION

AWS - STRUCTURAL WELDING CODE D1.1 - LATEST EDITION

WELD PROCESS SHALL BE GMAW

RAILING NOTES

- ALL POSTS SHALL BE FABRICATED AND SET NORMAL (PERPENDICULAR) TO GRADE. THE GRADE SLOPE IS NOT GREAT ENOUGH TO SUPPORT FABRICATING PLUMB POSTS WITH SLOPED RAIL PANELS.
- ALL EMBEDDED ANCHORS SHALL BE INSTALLED WITH A TOLERANCE OF $\pm 1/16"$.
- ALL TEMPLATE PLATES FOR THE ANCHORS SHALL NOT BE SUPPLIED BY THIS FABRICATOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL THE ANCHORS WITH THE PRECISION REQUIRED FOR POST INSTALLATION.
- ALL PLASTIC BASE & SHIMS AND CAULKING SHALL NOT BE SUPPLIED BY THIS FABRICATOR. THE CONTRACTOR OR INSTALLER SHALL BE REQUIRED TO SUPPLY AND INSTALL THESE REQUIREMENTS PER THE CONTRACT.

WIRE MESH NOTES

- THE WELDED WIRE MESH SHALL BE 10.5 GA CORE WIRE, GALVANIZED AFTER WELDING.
- THE WIRE MESH PATTERN SHALL BE 1x1 SET IN THE SQUARE POSITION AS PLUMB.
- THE WIRE MESH PANELS SHALL BE FIELD INSTALLED USING CLAMP BARS.
- THE CLAMP BARS SHALL BE SHOP DRILLED FOR FASTENER LOCATIONS.
- FIELD INSTALLATION SHALL USE THE 1/4" SELF DRILL AND TAP SCREWS.
- THE TEK SCREW HEADS SHALL BE FIELD PAINTED BLACK AFTER INSTALLATION.

MATERIAL NOTES

NO	MATERIAL	ASTM	GRADE	TYPE	NOTES
1	PLATES, ANGLES & BARS	A709	36 / 50		
2	HSS RAIL TUBES	A500	B		
3	WIRE MESH	A185-1064			

FASTENER NOTES

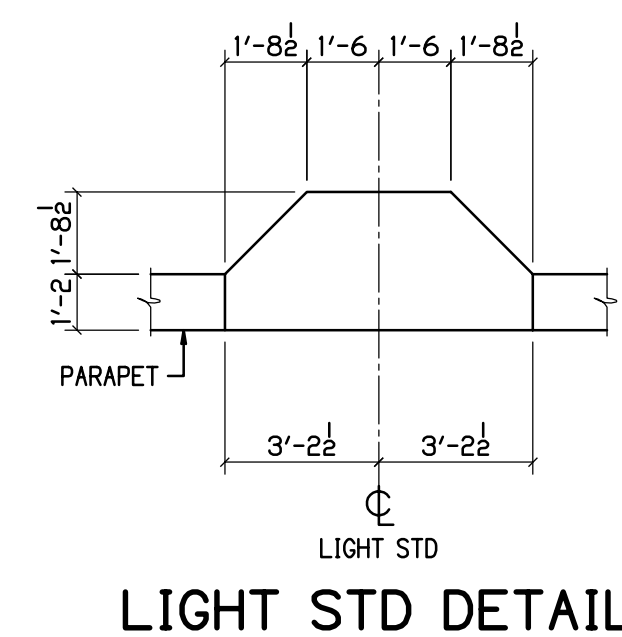
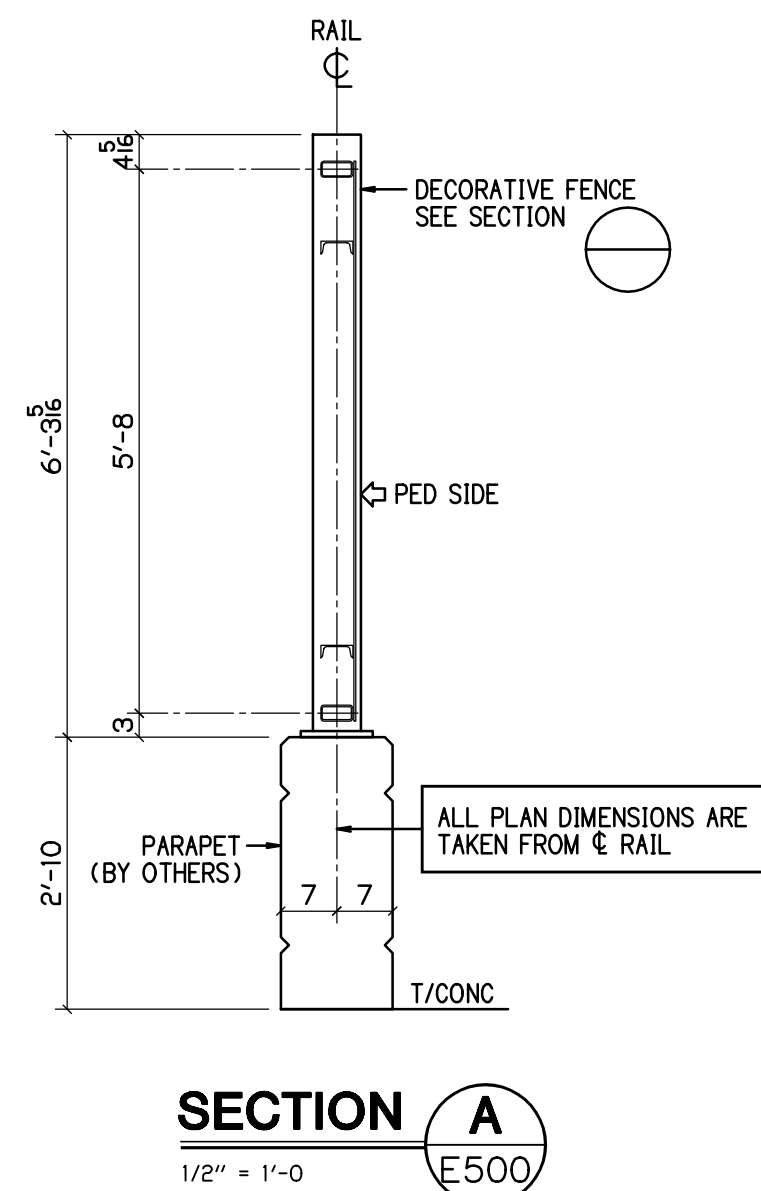
NO	MATERIAL	ASTM/ANSI	GRADE	TYPE	REMARKS
1	HIGH STRENGTH BOLTS	A325			GALV ASTM A153
2	HIGH STRENGTH NUTS	A563			GALV ASTM A153
3	HIGH STRENGTH WASHERS	F436			GALV ASTM A153
4	SS ALL THREAD ANCHOR RODS	A320	B8	304	MILL FINISH
5	SS HEX BOLTS	A194	B8	304	MILL FINISH
6	SS HEX NUTS	A194	B8	304	MILL FINISH
7	SS WASHERS	A194	B8	304	MILL FINISH

MATERIAL QUANTITY

DESCRIPTION	POSTS	CONTRACT LN/FT	ACTUAL LN/FT	REMARKS
BU-17 KINGSBURY RUN DECORATIVE FENCE	145	554'-0	586'-5 1/2	+32'-5 1/2

GENERAL PLAN

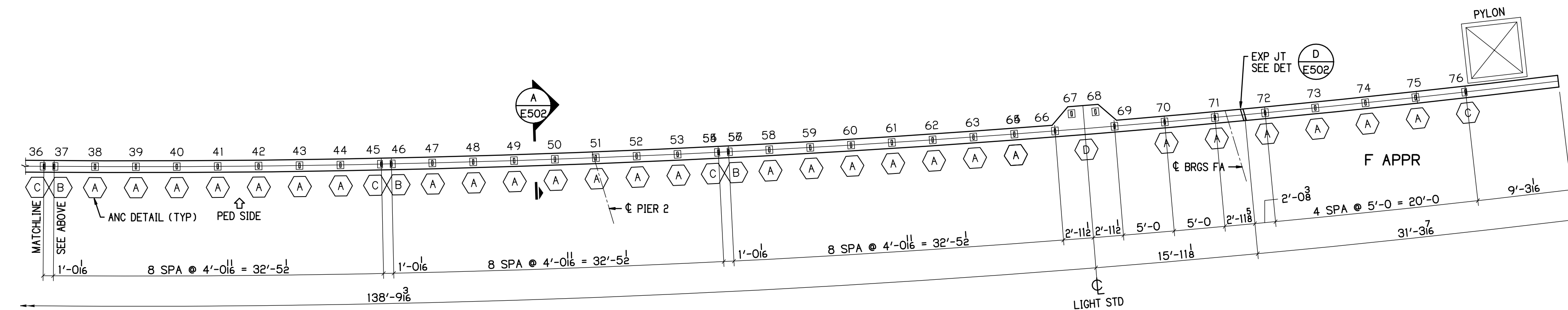
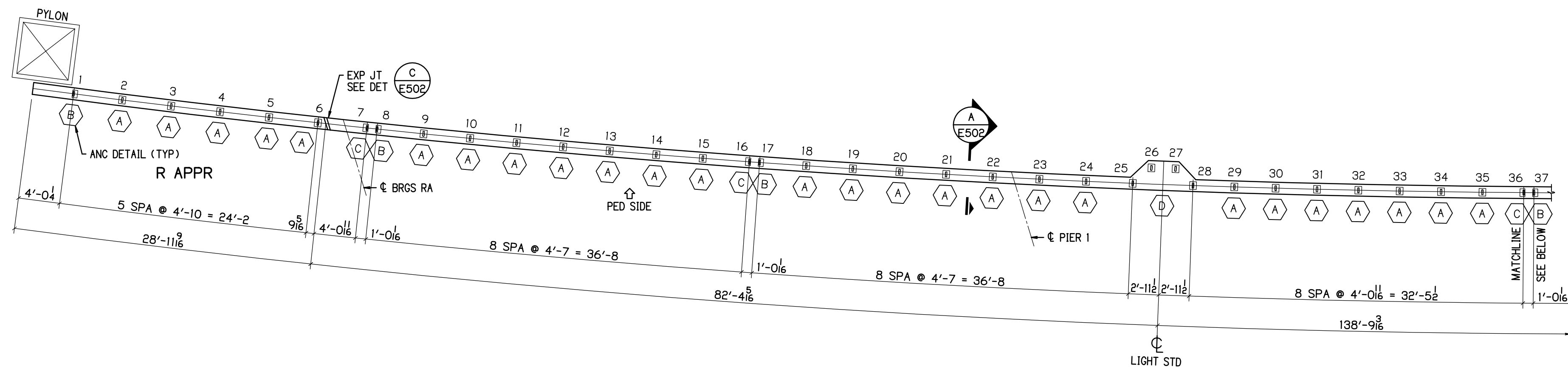
GRADE NOTE
THE GRADE SLOPE IS NOT GREAT ENOUGH TO INCREASE LENGTHS OR TO FABRICATE AND SET PLUMB POSTS WITH SLOPED RAILS



APPROVAL SUBMIT FOR ANCHOR AND POST LOCATIONS ONLY 04-02-21

BU-17 KINGSBURY RUN

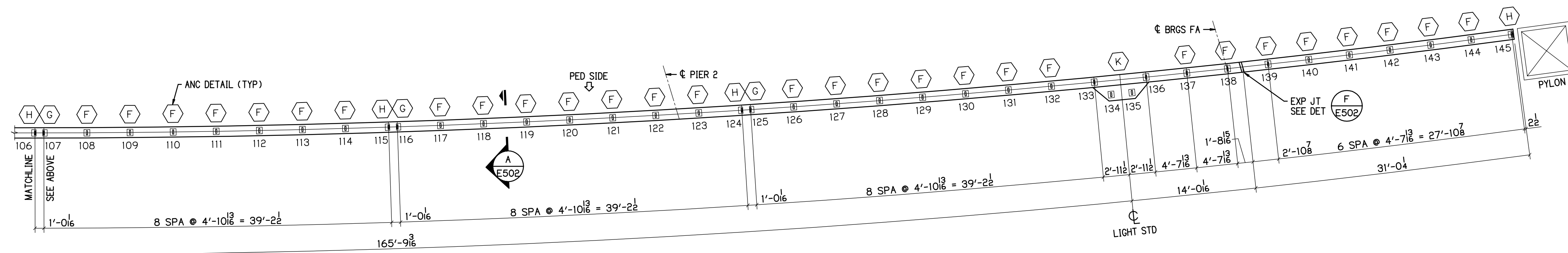
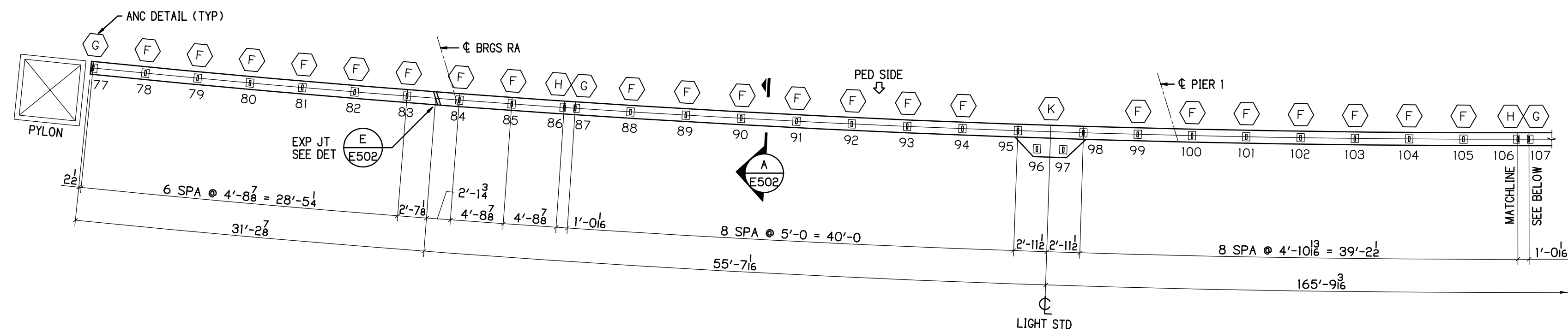
P.H. DREW INC. 2450 N. RACEWAY RD. - P.O. BOX 34295 INDIANAPOLIS, INDIANA 46234		PHONE : (317) 297-5152 FAX : (317) 297-5313		APPROVAL
CUY-IR490 / SR010-2.09 / 19.28 DECORATIVE FENCE GENERAL PLANS & NOTES				
REVISION	REV	DATE	DESCRIPTION	BY
APPROVAL RECORD	DATE	ISSUED	APP. DATE	APPROVAL STATUS
STATE		OHIO		
COUNTY		CUYAHOGA (CITY OF CLEVELAND)		
PROJECT		3000 (17)		
CONTRACT		PID 96833		
SECTION				
STRUCTURE				
STATE JOB				
CUSTOMER		LAKE ERIE CONSTRUCTION COMPANY		
CONTRACTOR				
APPROVING				
REFERENCE				
ITEM				
FINISH		SEE NOTES-SHT E400		
DRAWN BY		MRH	JOB MGR	DATE
04-02-21		1914	JL	04-02-21
JOB NO.		19-1108		SHEET
TOTAL SHEETS		19-1108		E500



ANCHOR SETTING PLAN @ 5'-0 SW

ALL DIMENSIONS TAKEN FROM C RAIL
SCALE 1/8" = 1'-0"

SEE SHEET E502 FOR ANC ROD DETAILS



ANCHOR SETTING PLAN @ 19'-0 SW

ALL DIMENSIONS TAKEN FROM C RAIL
SCALE 1/8" = 1'-0"

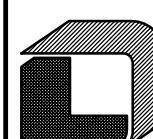
SEE SHEET EE02 FOR ANC ROD DETAILS

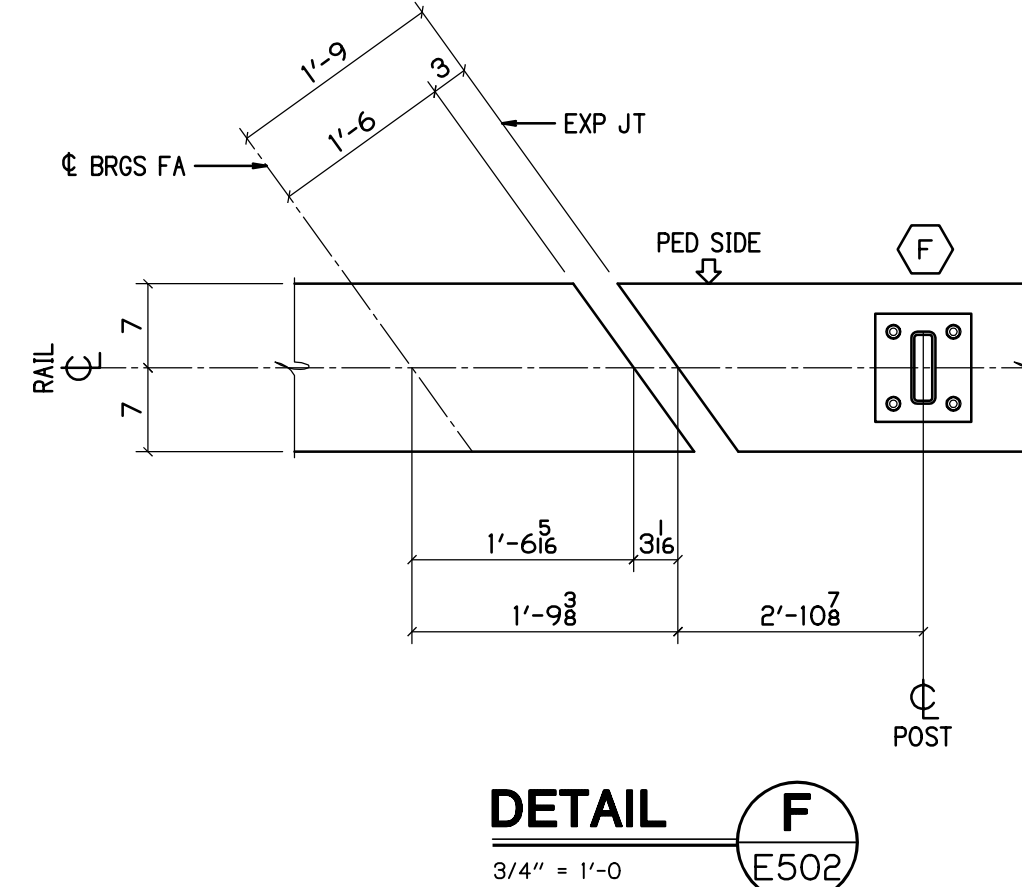
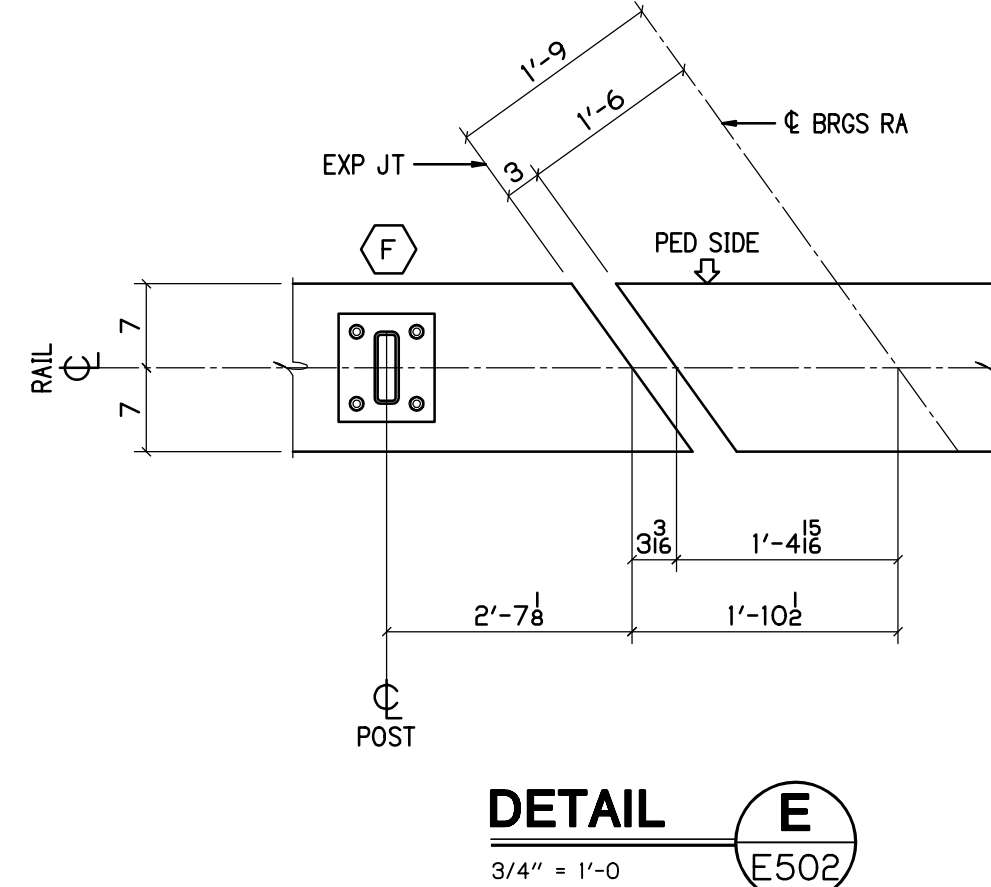
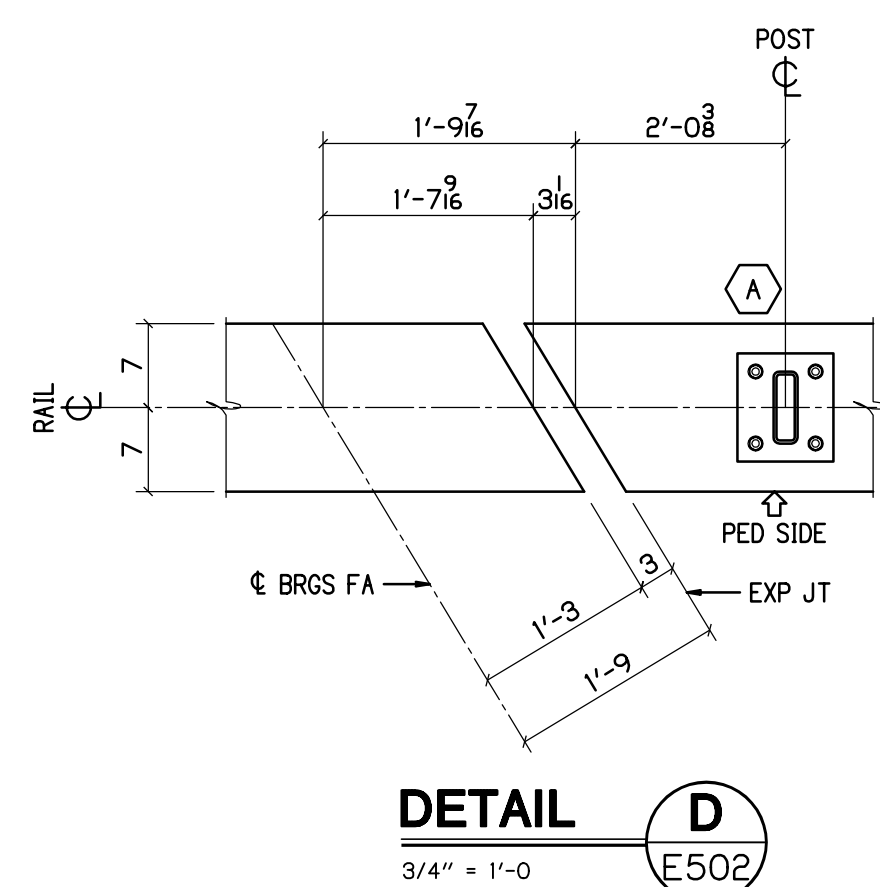
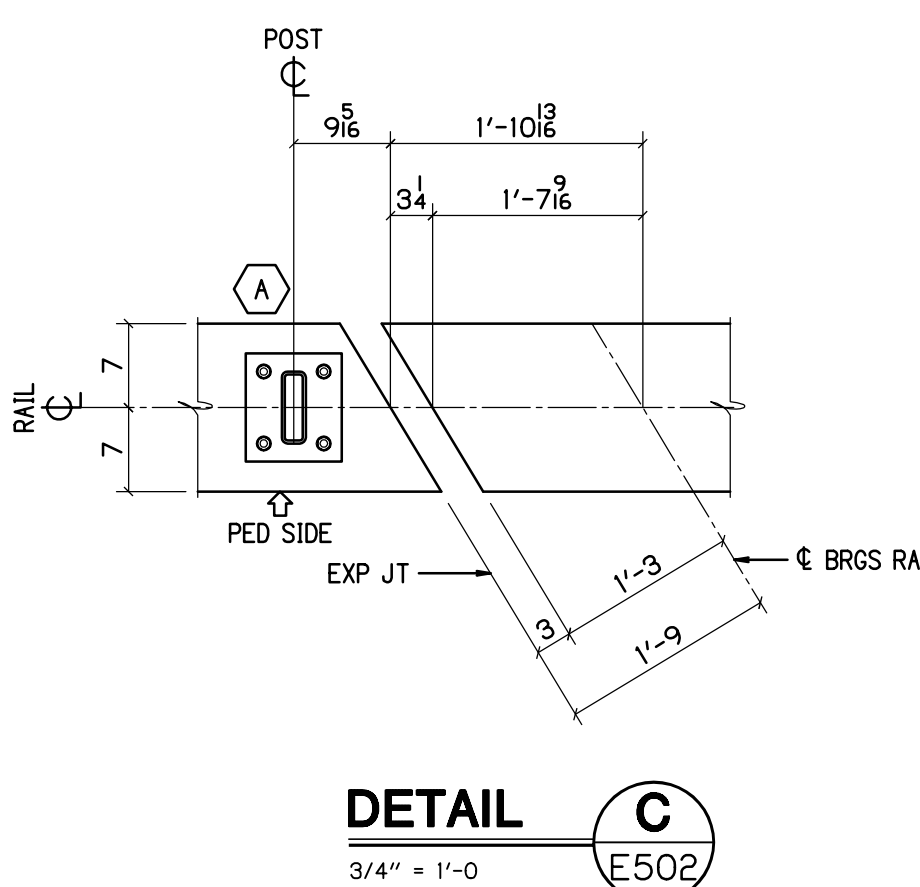
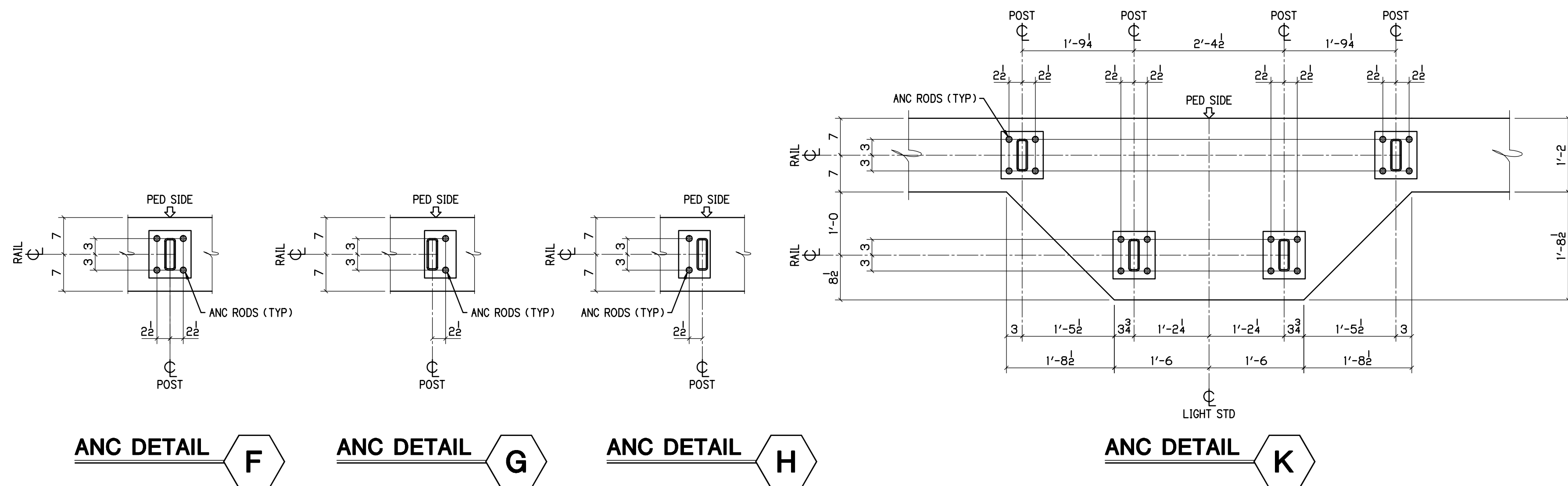
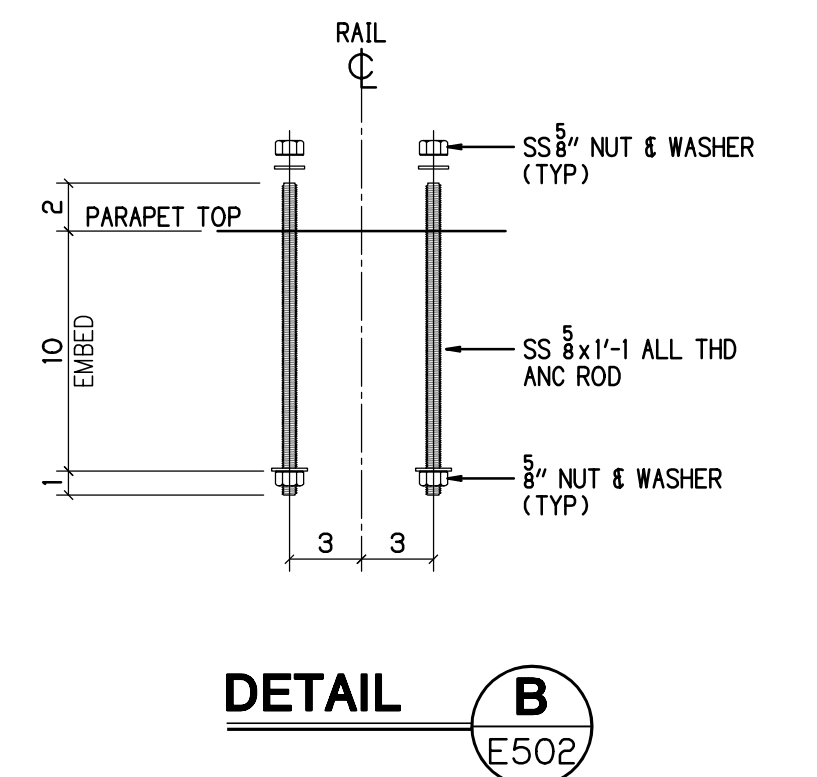
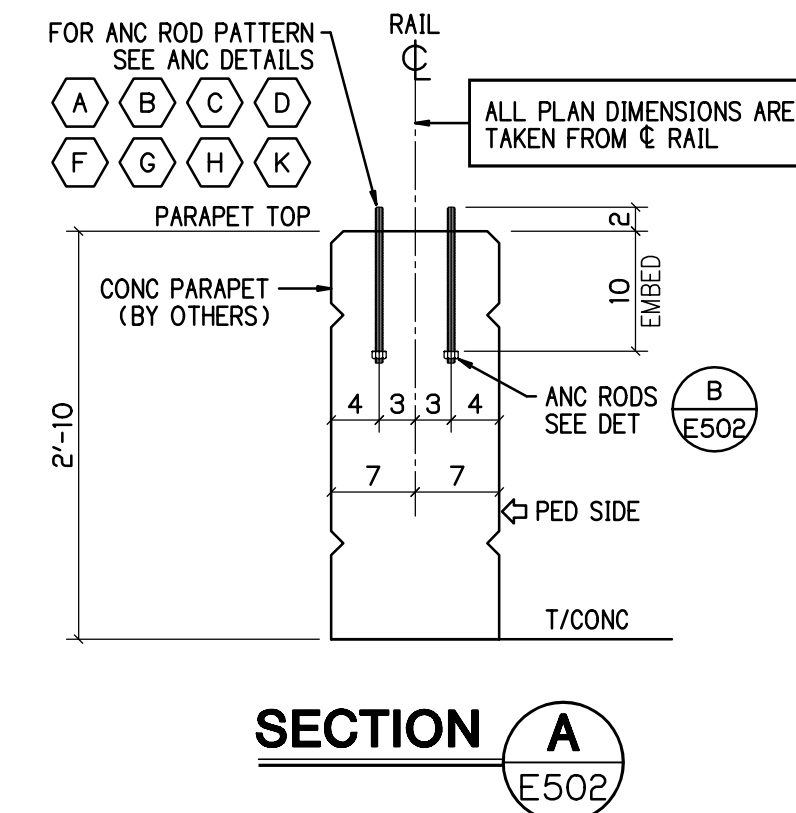
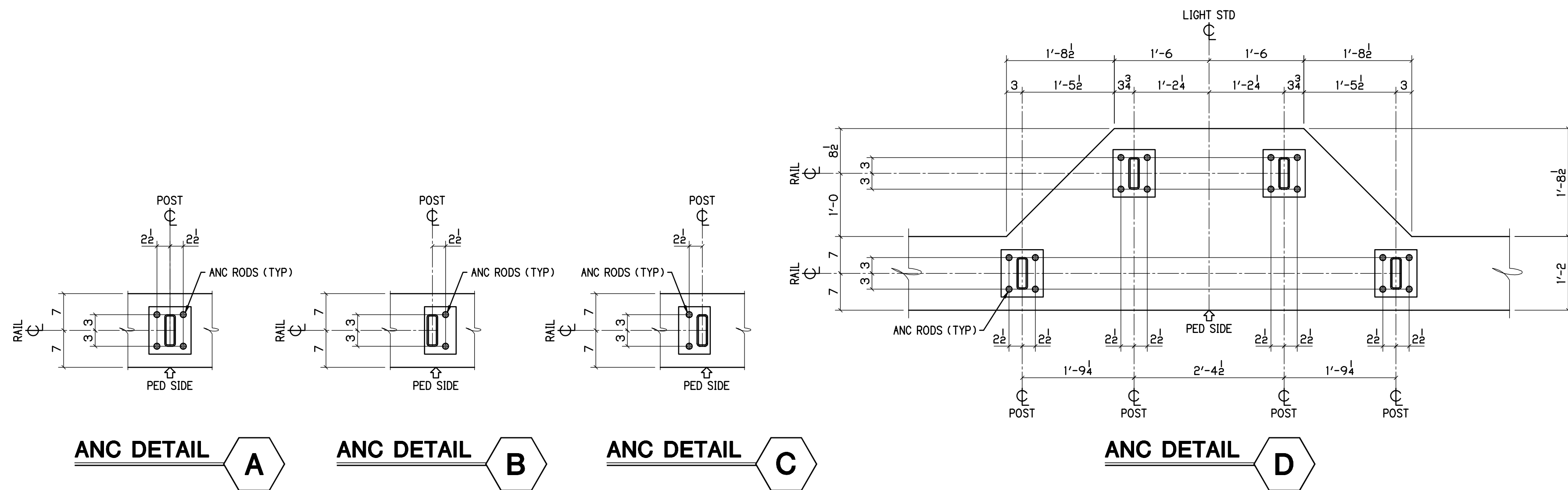
RFI 001

THE DEFLECTION JOINT DIMENSIONS AS SHOWN ON SHEET 35 OF 51 FOR THE PARAPET AT THE 5'-0 SIDEWALK SEEMS TO BE IN ERROR. THE POST LOCATIONS ARE CORRECT.

PLEASE VERIFY THE DEFLECTION JOINT DIMENSIONS.

BU-17 KINGSBURY RUN

		P.H. DREW INC.		APPROVAL	
2450 N. RACEWAY RD. - P.O. BOX 34295 INDIANAPOLIS, INDIANA 46234		PHONE : (317) 297-5152 FAX : (317) 297-5313			
CUY-IR490 / SR010-2.09 / 19.28					
DECORATIVE FENCE					
ANCHOR SETTING PLANS					
REV		DATE	DESCRIPTION	BY	STATE OHIO
COUNTY		CUYAHOGA (CITY OF CLEVELAND)			
PROJECT		3000 (17)			
CONTRACT		PID 96833			
SECTION					
STRUCTURE					
STATE JOB					
DATE		ISSUED	APP. DATE	APPROVAL STATUS	CUSTOMER LAKE ERIE CONSTRUCTION COMPANY
CONTRACTOR					
APPROVED					
REFERENCE					
ITEM					
FINISH		SEE NOTES-SHT E400			
DRAWN BY MRH		CHECKED BY	MRH NO	JOB MGR	DWG STATUS
04-02-21			1914	JL	APPROVAL 04-02-21
JOB NO.		19-1108		TOTAL SHEETS	SHEET E501



BU-17 KINGSBURY RUN

<p>2450 N. RACEWAY RD. - P.O. BOX 34295 INDIANAPOLIS, INDIANA 46234</p>		<p>PHONE : (317) 297-5152 FAX : (317) 297-5313</p>		APPROVAL		
		<p>CUY-IR490 / SR010-2.09 / 19.28 DECORATIVE FENCE ANCHOR SETTING DETAILS</p>				
REVISION	REV	DATE	DESCRIPTION	BY	STATE	OHIO
					COUNTY	CUYAHOGA (CITY OF CLEVELAND)
					PROJECT	3000 (17)
					CONTRACT	PID 96833
					SECTION	
APPROVAL RECORD	DATE	ISSUED	APP. DATE	APPROVAL STATUS	CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY
					CONTRACTOR	
					ARCHITECT	
					REFERENCE	
					ITEM	
FINISH					SEE NOTES-SHT E400	
DRAWN BY	CHECKED BY	MRH NO	JOB MGR	DWG STATUS	JOB NO.	TOTAL SHEETS
04-02-21	1914	JL	APPROVAL	04-02-21	19-1108	E502

Submittal: 139

Revision:

Date Submitted: 6/10/2021

Response Due By:



886 McKinley Ave.
Columbus, OH 43222
Phone: (614) 228-1029
Fax: (614) 228-7065

Project: 16051 - ODOT 173000 CUY IR 490/SR010 (OC3)

Description: BU17 Kingsbury Run Decroative Rail

To: Mark Gabele, PE
Ohio Department of Transportation - District 12

Email: Mark.Gabele@dot.ohio.gov

From: Nicole DeVille
Kokosing Construction Company, Inc.

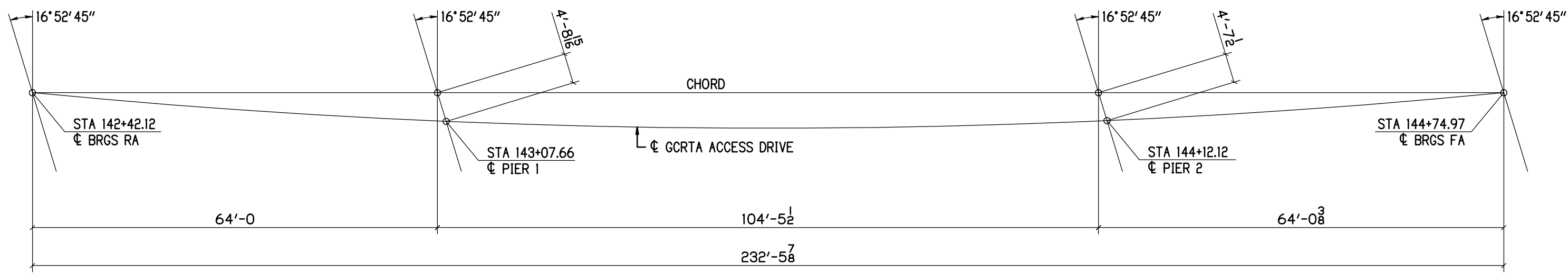
Email: nfd@kokosing.biz

Submittal Type:	Submitted For:
<input type="checkbox"/> Engineered Drawings	<input checked="" type="checkbox"/> Approval
<input checked="" type="checkbox"/> Shop Drawings	<input type="checkbox"/> Record
<input type="checkbox"/> Working Drawings	<input type="checkbox"/> Other
<input type="checkbox"/> CPM Schedule	
<input type="checkbox"/> Material Certifications / Test Results	Sent Via:
<input type="checkbox"/> Reports	<input checked="" type="checkbox"/> Attached (Electronic)
<input type="checkbox"/> Product Data/Samples	<input type="checkbox"/> Attached (Hard Copy)
<input type="checkbox"/> Other:	

Submittal #	Copies	Spec #	Rev. #	Description	
139	1			139 – BU17 Kingsbury Run Decroative Rail	

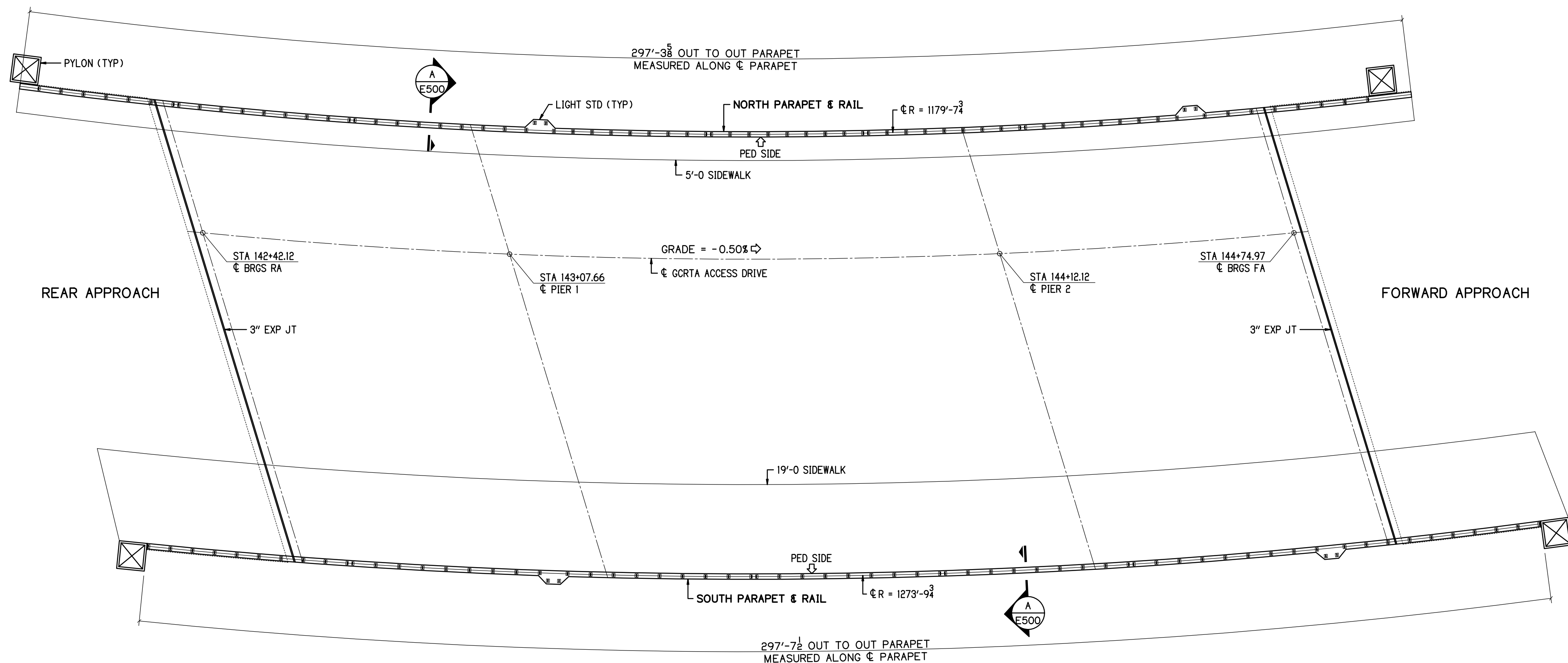
Comments:

Signed: _____
A handwritten signature in black ink, reading "Nicole DeVille".



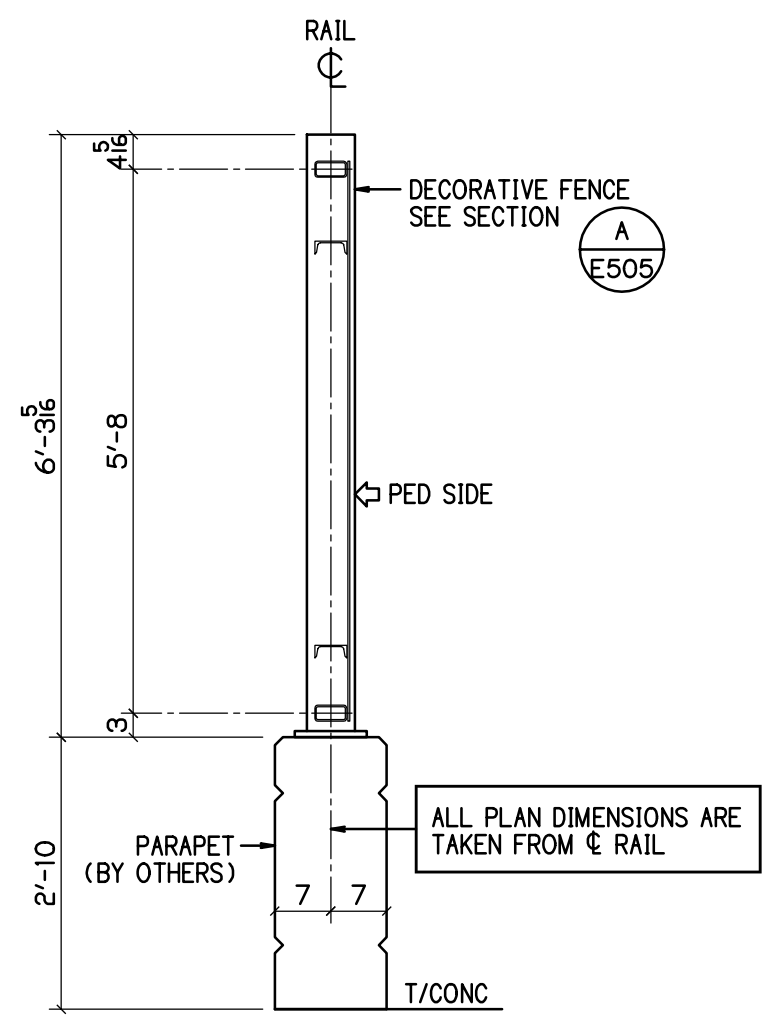
CURVE DATA
Δ = 38.5333° (LT)
PC = STA 137+37.30
PI = STA 141+58.93
PT = STA 145+48.53
R = 1206.23
L = 811.23
T = 421.63
E = 71.56

GEOMETRIC LAYOUT

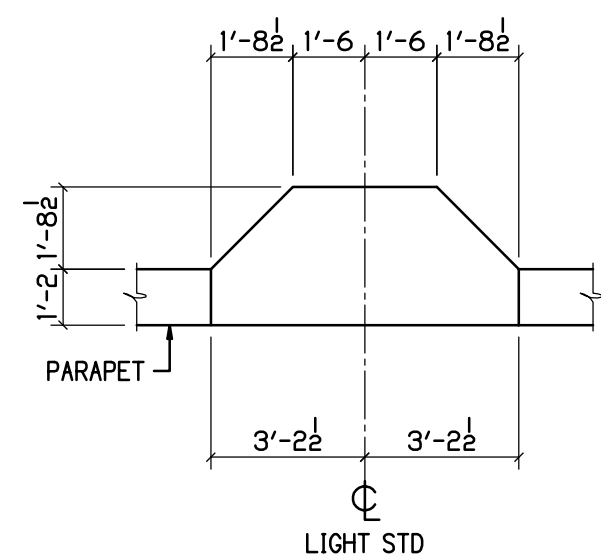


GENERAL PLAN

GRADE NOTE
THE GRADE SLOPE IS NOT GREAT ENOUGH TO INCREASE LENGTHS
OR TO FABRICATE AND SET PLUMB POSTS WITH SLOPED RAILS



SECTION A
1/2" = 1'-0"



LIGHT STD DETAIL

INDEX OF SHEETS

SHEET #	DESCRIPTION
E500	GENERAL PLANS & NOTES
E501	ANCHOR SETTING PLANS
E502	ANCHOR SETTING DETAILS
E503	NORTH PARAPET RAIL ELEVATION
E504	SOUTH PARAPET RAIL ELEVATION
E505	RAIL STANDARD DETAILS
E506	RAIL LIGHT STD DETAILS
E507	WIRE ROPE DETAILS

GENERAL NOTES

FINISH

THE FABRICATED RAILING AND HARDWARE (EXCEPT EMBED ANCHORS) SHALL BE GALVANIZED PER C&MS 711.02 EXCEPT THAT FABRICATED RAILING ELEMENTS SHALL NOT BE POST TREATED WITH WATER QUENCHING OR CHROMATE CONVERSION COATED.

ALL VENT HOLES REQUIRED FOR GALVANIZING SHALL BE AT THE DISCRETION OF THE FABRICATOR AND GALVANIZER.

THE PAINT SYSTEM SHALL BE PROVIDED UNDER A SEPARATE COVER. THE FINISH COAT SHALL MATCH FEDERAL COLOR STANDARD FS 595C-17038 BLACK.

WELDING

AWS - BRIDGE WELDING CODE D1.5 - LATEST EDITION

AWS - STRUCTURAL WELDING CODE D1.1 - LATEST EDITION

WELD PROCESS SHALL BE GMAW

RAILING NOTES

- ALL POSTS SHALL BE FABRICATED AND SET NORMAL (PERPENDICULAR) TO GRADE. THE GRADE SLOPE IS NOT GREAT ENOUGH TO SUPPORT FABRICATING PLUMB POSTS WITH SLOPED RAIL PANELS.
- ALL EMBEDDED ANCHORS SHALL BE INSTALLED WITH A TOLERANCE OF +/- 1/16".
- ALL TEMPLATE PLATES FOR THE ANCHORS SHALL NOT BE SUPPLIED BY THIS FABRICATOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL THE ANCHORS WITH THE PRECISION REQUIRED FOR POST INSTALLATION.
- ALL PLASTIC BASE & SHIMS AND CAULKING SHALL NOT BE SUPPLIED BY THIS FABRICATOR. THE CONTRACTOR OR INSTALLER SHALL BE REQUIRED TO SUPPLY AND INSTALL THESE REQUIREMENTS PER THE CONTRACT.

WIRE MESH NOTES

- THE WELDED WIRE MESH SHALL BE 10.5 GA CORE WIRE, GALVANIZED AFTER WELDING.
- THE WIRE MESH PATTERN SHALL BE 1x1 SET IN THE SQUARE POSITION AS PLUMB.
- THE WIRE MESH PANELS SHALL BE FIELD INSTALLED USING CLAMP BARS.
- THE CLAMP BARS SHALL BE SHOP DRILLED FOR FASTENER LOCATIONS.
- FIELD INSTALLATION SHALL USE THE 1/4" SELF DRILL AND TAP SCREWS.
- THE TEK SCREW HEADS SHALL BE FIELD PAINTED BLACK AFTER INSTALLATION.

MATERIAL NOTES

NO	MATERIAL	ASTM	GRADE	TYPE	NOTES
1	PLATES, ANGLES & BARS	A709	36 / 50		
2	HSS RAIL TUBES	A500	B		
3	WIRE MESH	A185-1064			

FASTENER NOTES

NO	MATERIAL	ASTM/ANSI	GRADE	TYPE	REMARKS
1	HIGH STRENGTH BOLTS	A325			GALV ASTM A153
2	HIGH STRENGTH NUTS	A563			GALV ASTM A153
3	HIGH STRENGTH WASHERS	F436			GALV ASTM A153
4	SS ALL THREAD ANCHOR RODS	A320	B8	304	MILL FINISH
5	SS HEX BOLTS	A194	B8	304	MILL FINISH
6	SS HEX NUTS	A194	B8	304	MILL FINISH
7	SS WASHERS	A194	B8	304	MILL FINISH

MATERIAL QUANTITY

DESCRIPTION	POSTS	CONTRACT LN/FT	ACTUAL LN/FT	REMARKS
BU-17 KINGSBURY RUN DECORATIVE FENCE	143	554'-0	586'-5 1/2	+32'-5 1/2

BU-17 KINGSBURY RUN FOR APPROVAL 05-06-21



CUY-IR490 / SR010-2.09 / 19.28

DECORATIVE FENCE

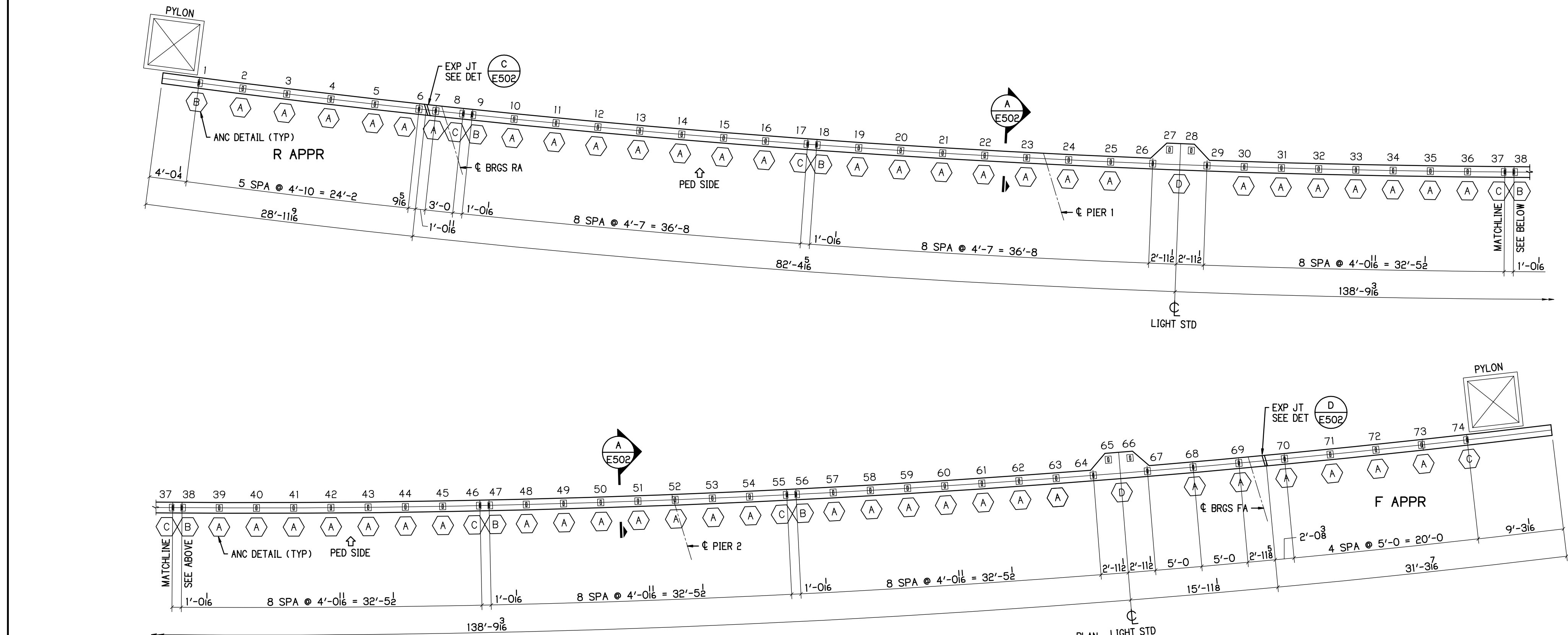
GENERAL PLANS & NOTES

REV	DATE	DESCRIPTION	BY	STATE	OHIO
				COUNTY	CUYAHOGA (CITY OF CLEVELAND)
				PROJECT	3000 (17)
				CONTRACT	PID 96833
				SECTION	
				STRUCTURE	
				STATE JOB	
				CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY
				CONTRACTOR	
				APPROVED	
				REFERENCE	
				ITEM	
				FINISH	SEE NOTES-SHT E500
DRAWN BY	CHECKED BY	MRH NO	JOB MGR	DATE STATUS	JOB NO.
MRH	SRF	1914	JL	APPROVAL 05-06-21	19-1108
04-02-21	05-05-21				TOTAL SHEETS
					E507
					SHEET
					E500

- DIMENSION NOTES
1. ALL DIMENSIONS SHOWN ARE TAKEN FROM THE CENTERLINE OF RAIL & PARAPET.
 2. ALL DIMENSIONS SHOWN ARE IN PLAN ONLY.
 3. SEE SHEET E502 FOR ANCHOR DETAILS.

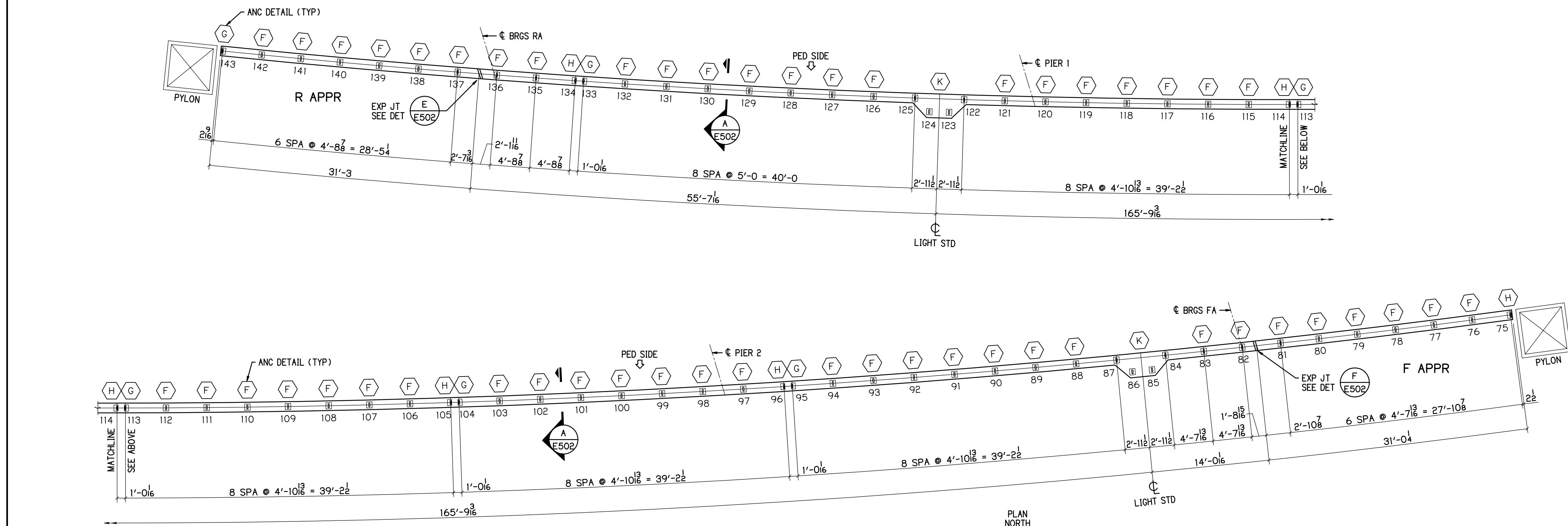
LEGEND

- (X) ANCHOR SETTING DETAIL
- X POST NUMBER



NORTH PARAPET ANCHOR PLAN

ALL DIMENSIONS TAKEN FROM C RAIL
SCALE 1/8" = 1'-0"
5'-0" SIDEWALK
SEE SHEET E502 FOR ANC ROD DETAILS



SOUTH PARAPET ANCHOR PLAN

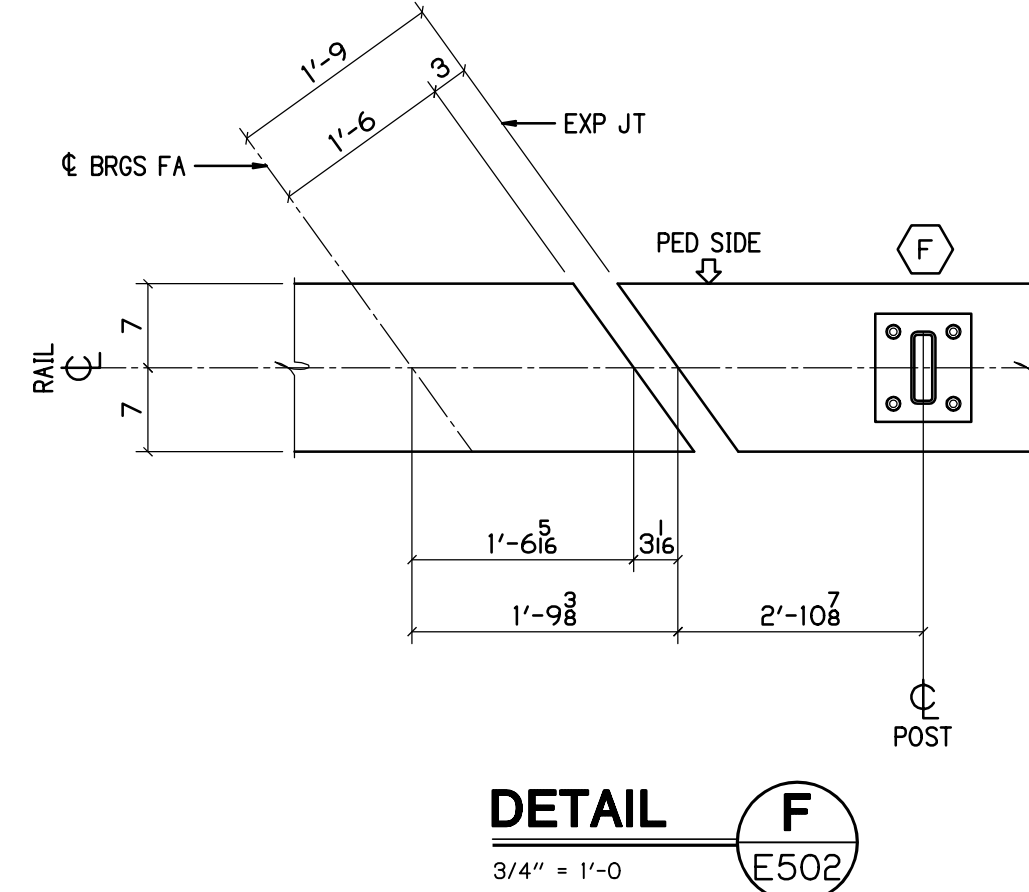
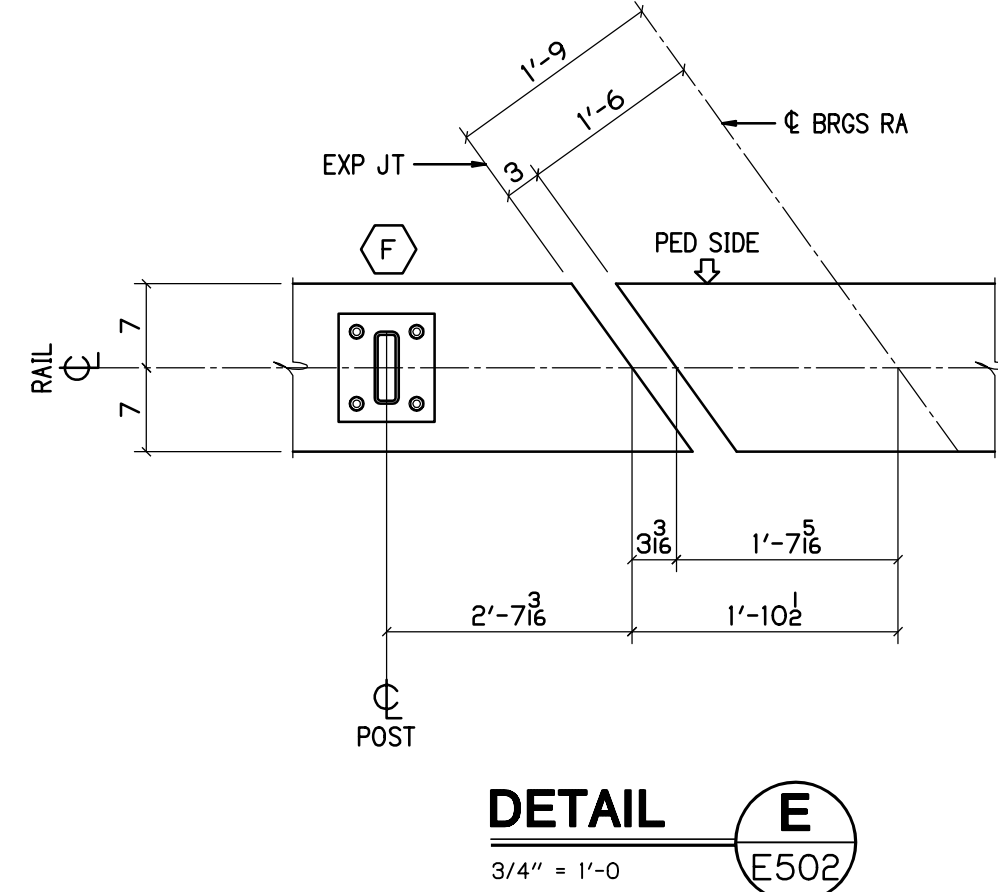
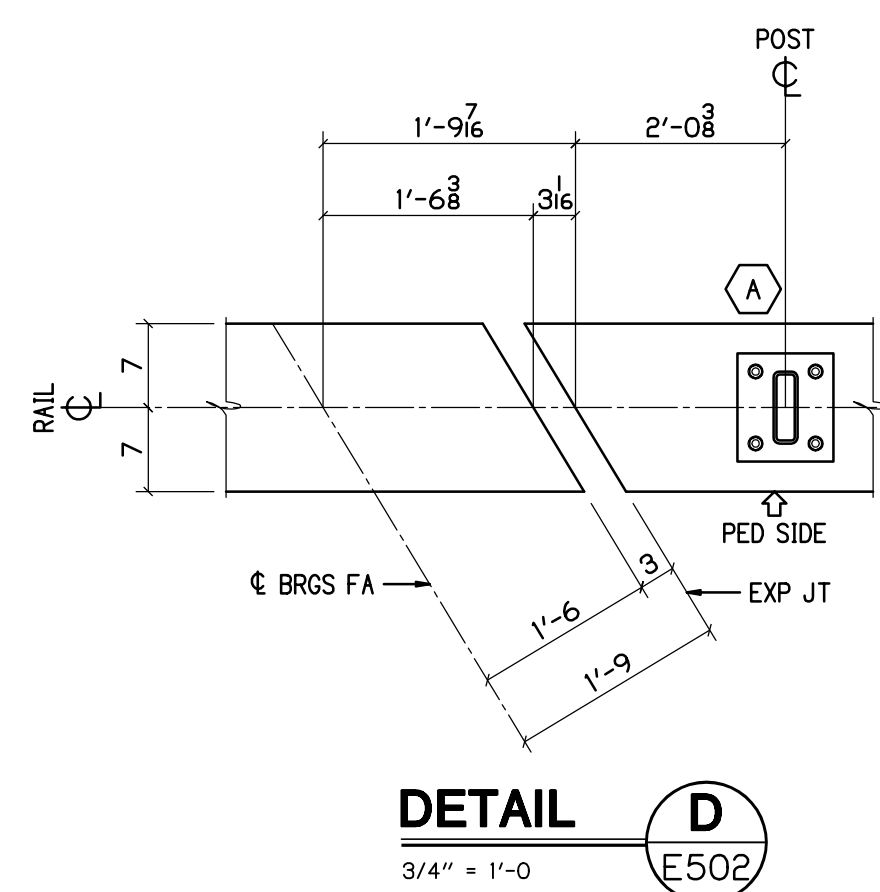
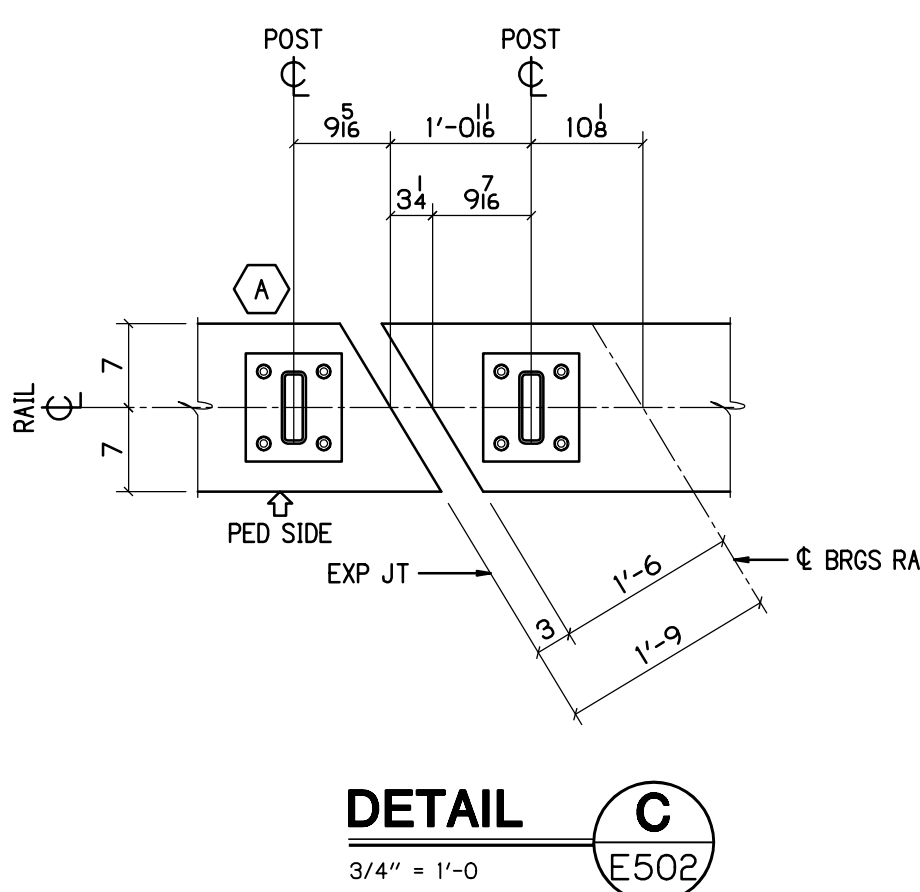
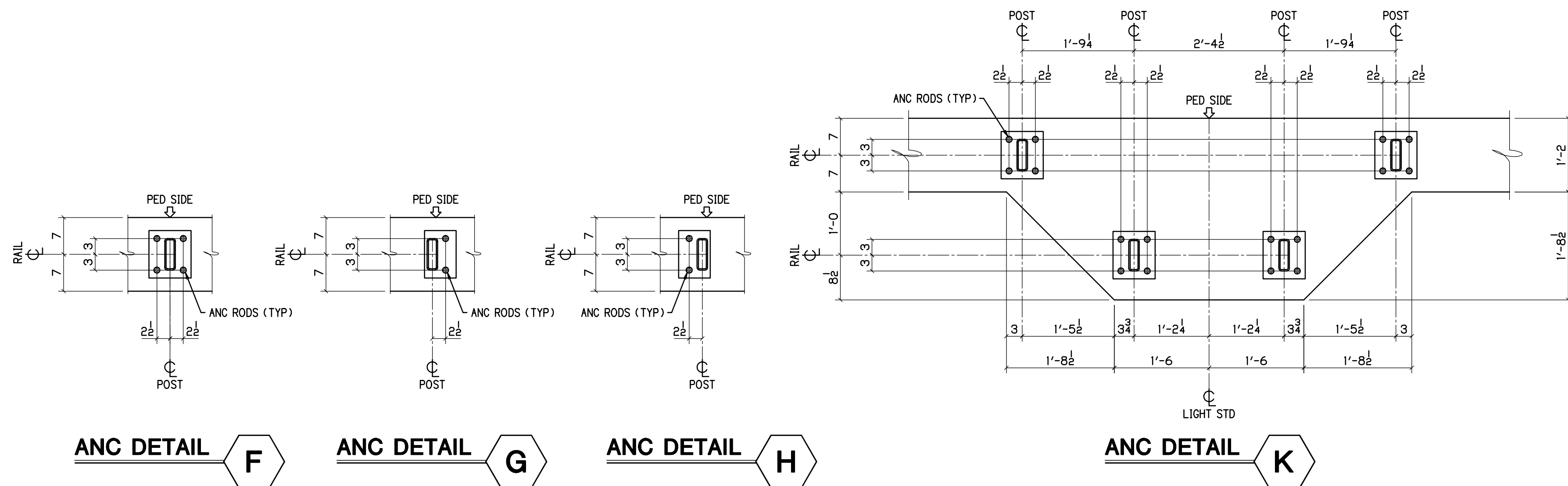
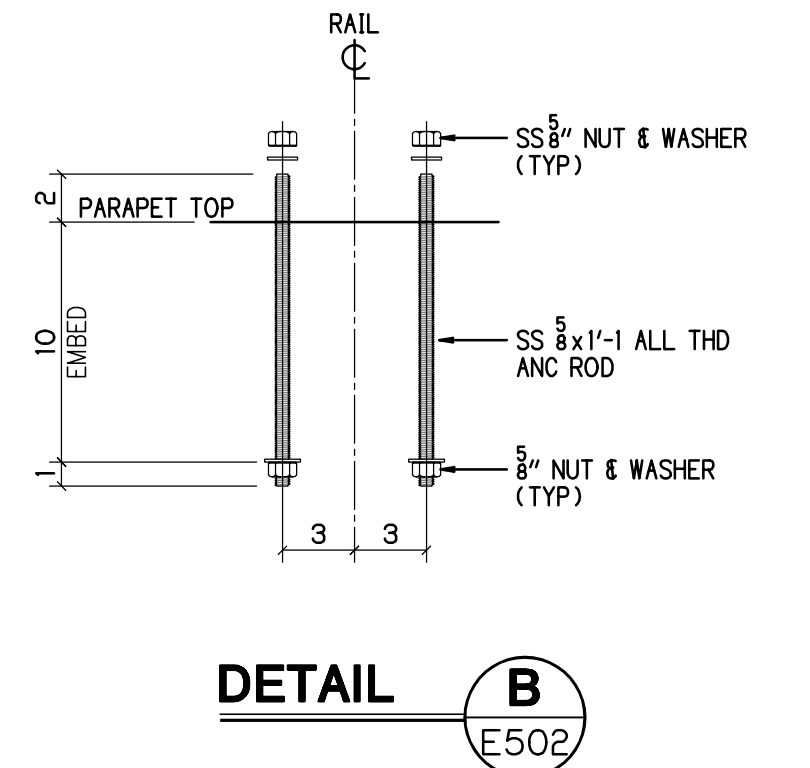
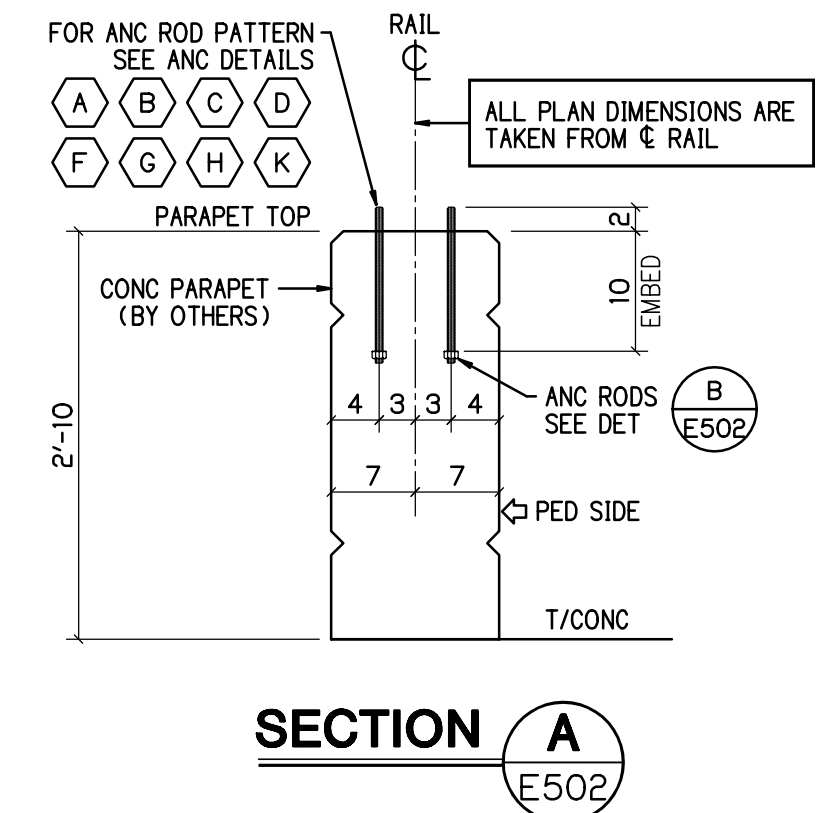
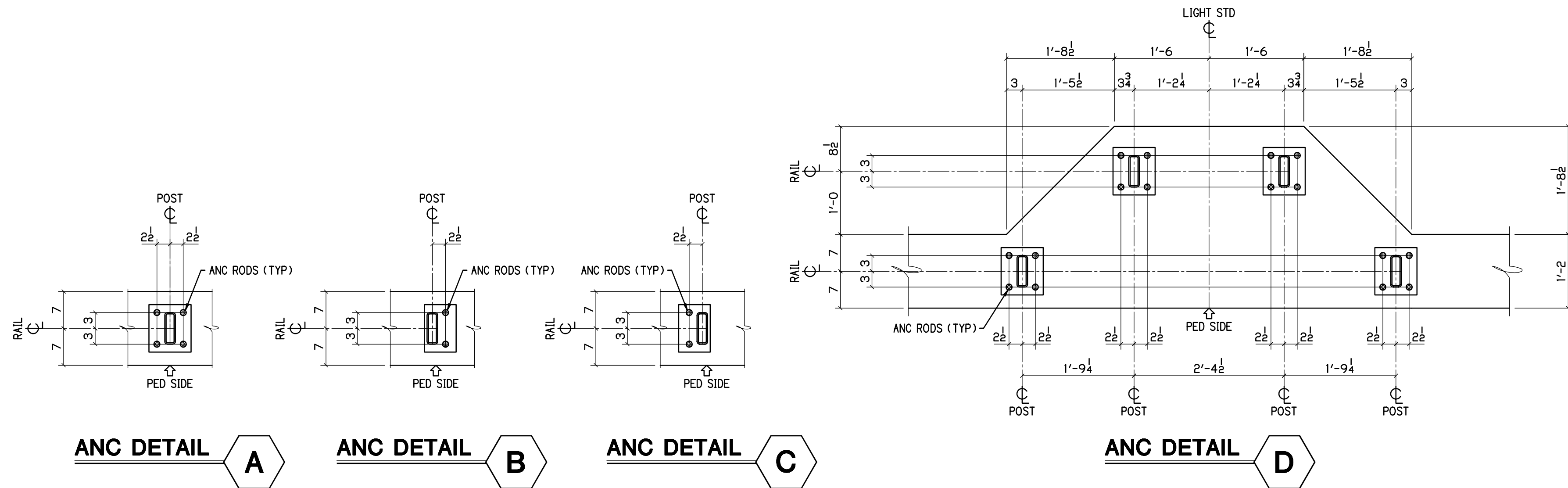
ALL DIMENSIONS TAKEN FROM C RAIL
SCALE 1/8" = 1'-0"
19'-0" SIDEWALK
SEE SHEET E502 FOR ANC ROD DETAILS

BU-17 KINGSBURY RUN
FOR APPROVAL 05-06-21

P.H. DREW INC.
2450 N. RACEWAY RD. - P.O. BOX 34295
INDIANAPOLIS, INDIANA 46234
PHONE : (317) 297-5152
FAX : (317) 297-5313

CUY-IR490 / SR010-2.09 / 19.28
DECORATIVE FENCE
ANCHOR SETTING PLANS

REVISION	REV	DATE	DESCRIPTION	BY	STATE	OHIO
					COUNTY	CUYAHOGA (CITY OF CLEVELAND)
					PROJECT	3000 (17)
					CONTRACT	PID 96833
					SECTION	
APPROVAL RECORD					STRUCTURE	
					STATE JOB	
	DATE	ISSUED	APP. DATE	APPROVAL STATUS	CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY
	05-06-21	APPROVAL			CONTRACTOR	
					APPROVED	
					REFERENCE	
					ITEM	
					FINISH	SEE NOTES-SHT E500
	DRAWN BY	CHECKED BY	MRH NO	JOB MGR	DWG STATUS	JOB NO.
	MRH	SRF	1914	JL	APPROVAL	19-1108
	04-02-21	05-05-21			05-06-21	TOTAL SHEETS
						E507
						SHEET
						E501

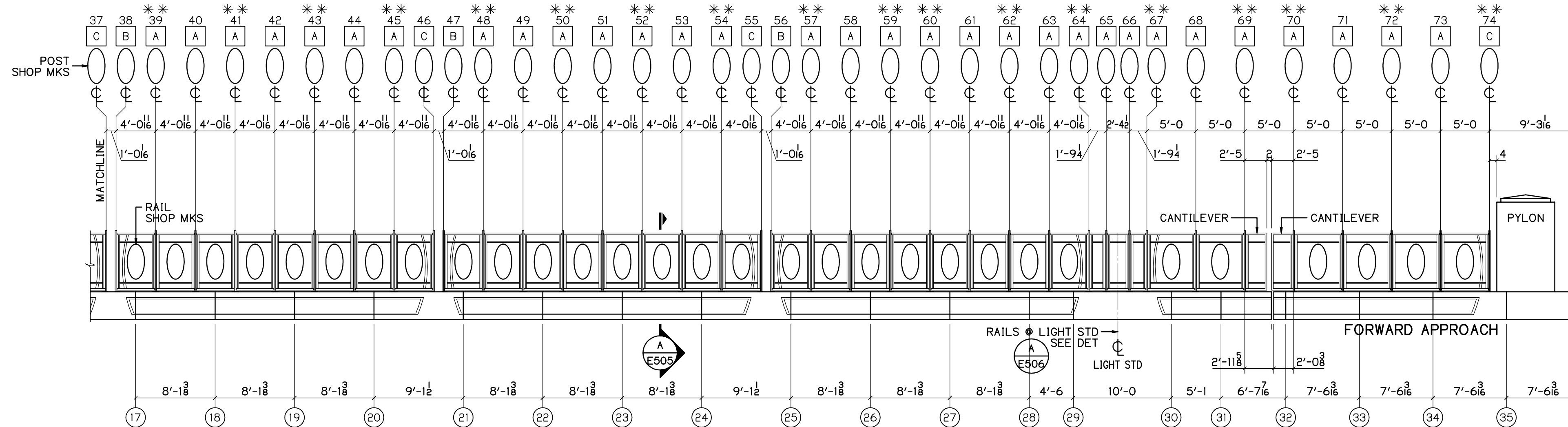


BU-17 KINGSBURY RUN
FOR APPROVAL 05-06-21

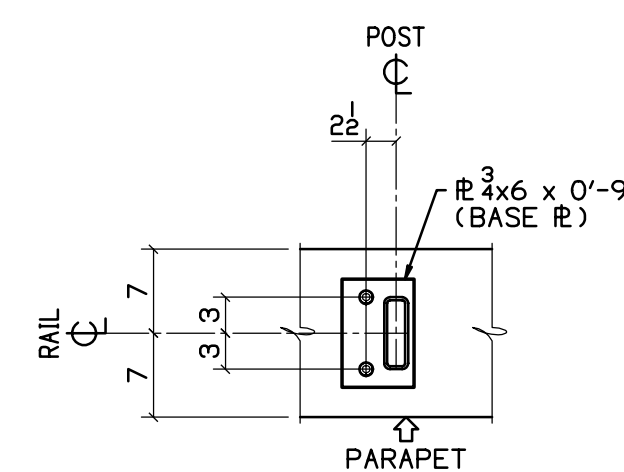
P.H. DREW INC.
2450 N. RACEWAY RD. - P.O. BOX 34295
INDIANAPOLIS, INDIANA 46234
PHONE : (317) 297-5152
FAX : (317) 297-5313

CUY-IR490 / SR010-2.09 / 19.28
DECORATIVE FENCE
ANCHOR SETTING DETAILS

REV	DATE	DESCRIPTION	BY	STATE	OHIO
				COUNTY	CUYAHOGA (CITY OF CLEVELAND)
				PROJECT	3000 (17)
				CONTRACT	PID 96833
				SECTION	
				STRUCTURE	
				STATE JOB	
				CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY
				CONTRACTOR	
				ARCHITECT	
				REFERENCE	
				ITEM	
				FINISH	SEE NOTES-SHT E500
				JOB NO.	19-1108
				TOTAL SHEETS	E507
				SHEET	E502



PEDESTRIAN SIDE SHOWN
WIRE ROPE SYSTEM ON FAR SIDE
5'-0 SIDEWALK

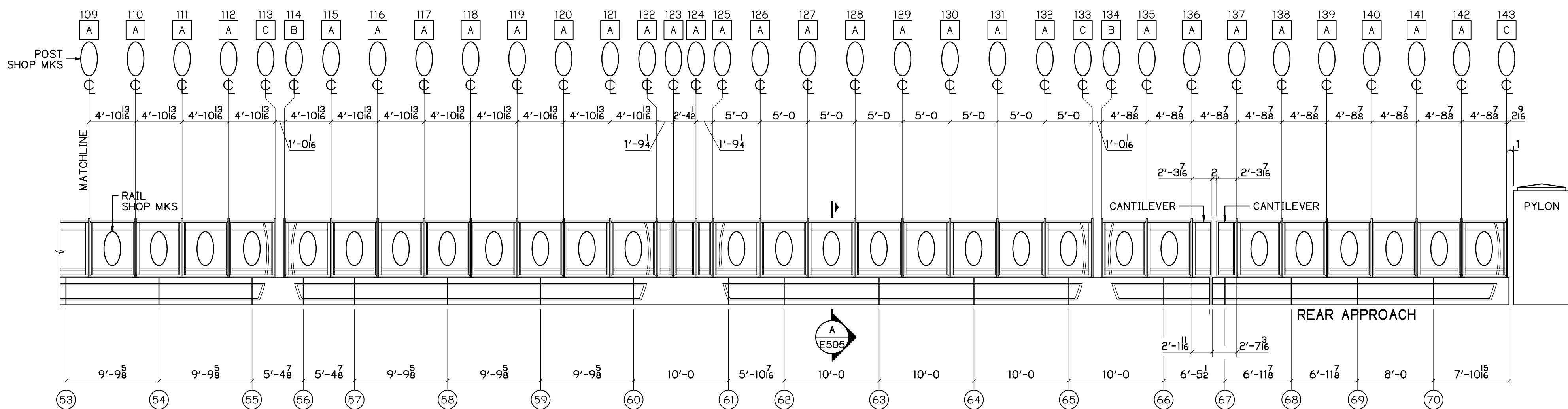
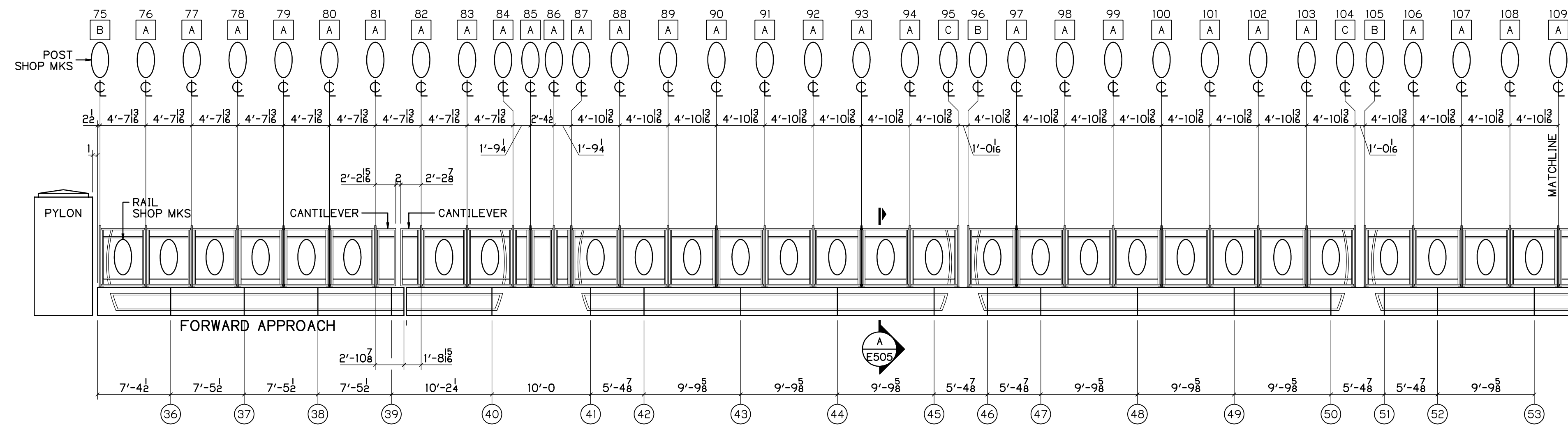


BASE & DETAIL	C
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[illegible]

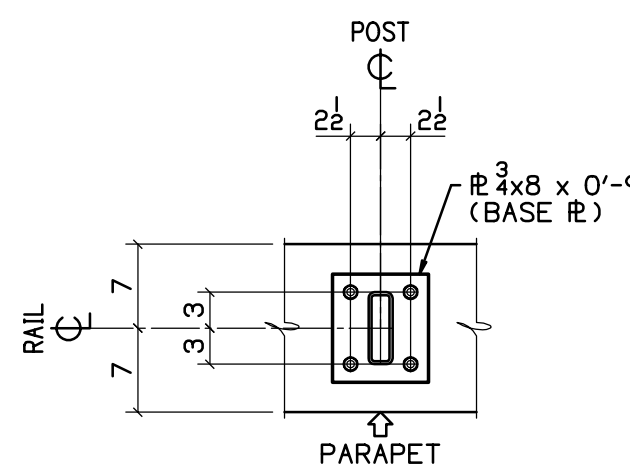
※※ POST WITH DEAD END CABLE CONNECTION

BU-17 KINGSBURY RUN FOR APPROVAL 05-06-21						
	P.H. DREW INC.			APPROVAL		
2450 N. RACEWAY RD. - P.O. BOX 34295 INDIANAPOLIS, INDIANA 46234						
PHONE : (317) 297-5152 FAX : (317) 297-5313						
CUY-IR490 / SR10-2.09 / 19.28 DECORATIVE FENCE NORTH PARAPET RAIL ELEVATION						
REVISION	REV	DATE	DESCRIPTION	BY	STATE	
					OHIO	
					COUNTY CUYAHOGA (CITY OF CLEVELAND)	
					PROJECT 3000 (17)	
					CONTRACT PID 96833	
					SECTION	
					STRUCTURE	
					STATE JOB	
					CUSTOMER LAKE ERIE CONSTRUCTION COMPANY	
					CONTRACTOR	
APPROVAL RECORD	DATE	ISSUED	APP. DATE	APPROVAL STATUS	CUSTOMER	
	05-06-21	APPROVAL			LAKE ERIE CONSTRUCTION COMPANY	
					CONTRACTOR	
					ARCH/ENG	
					REFERENCE	
					ITEM	
					FINISH	
					SEE NOTES-SHT E500	
DRAWN BY	CHECKED BY	MRH NO	JOB MGR	DWG STATUS	JOB NO.	
MRH	05-05-21	1914	JL	APPROVAL	19-1108	
04-24-21	05-05-21			05-06-21		
					TOTAL SHEETS	SHEET
					E507	E503

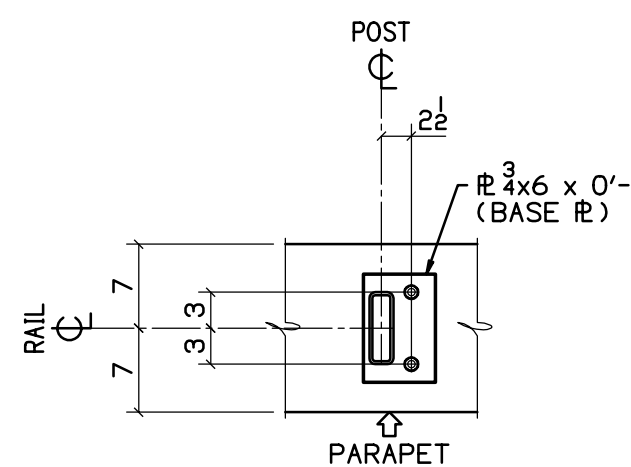


SOUTH PARAPET RAIL ELEVATION

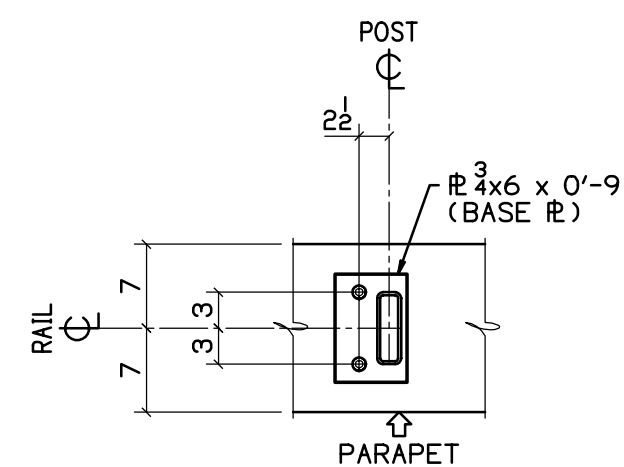
PEDESTRIAN SIDE SHOWN
NO WIRE ROPE
19'-0 SIDEWALK



BASE R DETAIL **A**



BASE R DETAIL **B**



BASE R DETAIL **C**

POST COUNT	
QUAN	MARK
X	X

RAIL COUNT	
QUAN	MARK
X	X

RAILING NOTES

- ALL POSTS SHALL BE SET NORMAL TO GRADE, PERPENDICULAR.

WIRE MESH NOTES

- SEE SHOP DRAWINGS FOR WIRE MESH & CLAMP BAR INSTALLATION.

DIMENSION NOTES

- ALL DIMENSIONS SHOWN ARE TAKEN FROM THE CENTERLINE OF RAIL.
- ALL DIMENSIONS SHOWN ARE IN PLAN ONLY.
- SEE SHEET E502 FOR ANCHOR DETAILS.

LEGEND

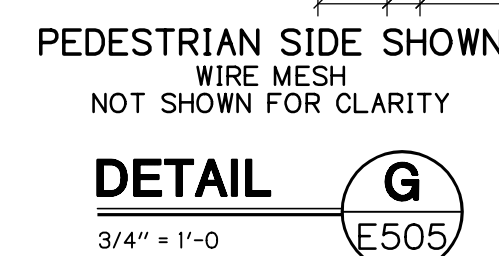
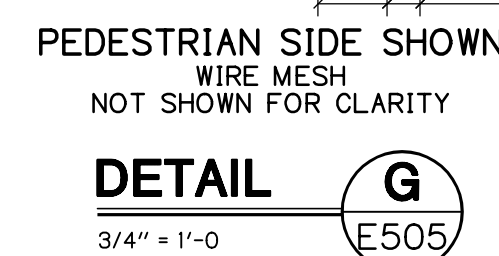
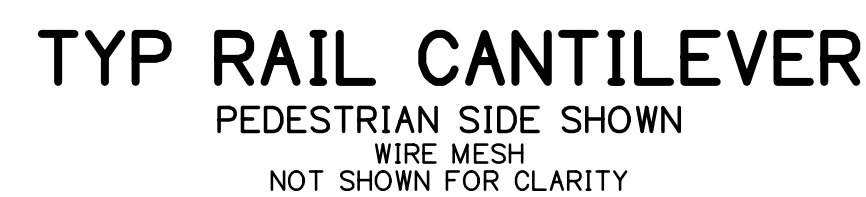
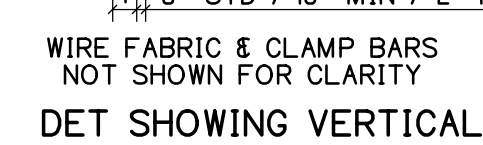
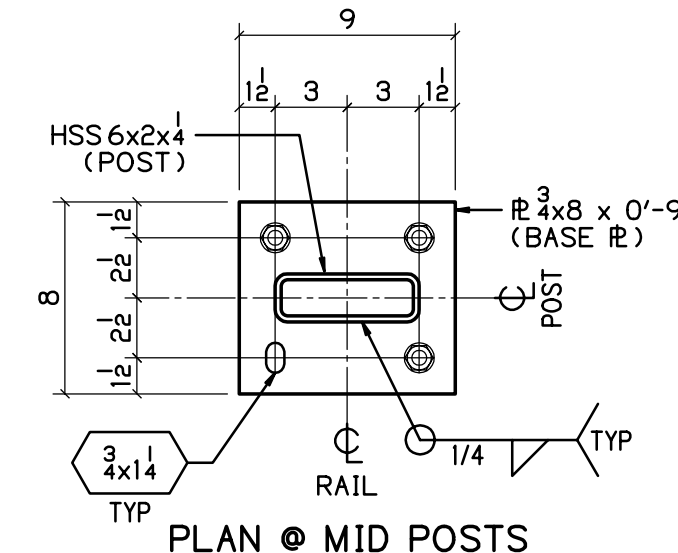
- ☒ BASE R DETAIL
☒ CONTR OR EXP JOINT NUMBER
X POST NUMBER

BU-17 KINGSBURY RUN
FOR APPROVAL 05-06-21



CUY-IR490 / SR010-2.09 / 19.28
DECORATIVE FENCE
SOUTH PARAPET RAIL ELEVATION

REVISION	REV	DATE	DESCRIPTION	BY	STATE	OHIO		
					COUNTY	CUYAHOGA (CITY OF CLEVELAND)		
					PROJECT	3000 (17)		
					CONTRACT	PID 96833		
					SECTION			
					STRUCTURE			
APPROVAL RECORD					STATE JOB			
	DATE	ISSUED	APP. DATE	APPROVAL STATUS	CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY		
	05-06-21	APPROVAL			CONTRACTOR			
					ARCHITECT			
					REFERENCE			
					ITEM			
					FINISH	SEE NOTES - SHT E500		
	DRWN BY	CHECKED BY	MRH NO	JOB MGR	DWG STATUS	JOB NO	TOTAL SHEETS	SHEET
	MRH				APPROVAL	19-1108	E507	E504
	04-24-21	05-05-21	1914	JL	05-06-21			



BU-17 KINGSBURY RUN
FOR APPROVAL 05-06-21



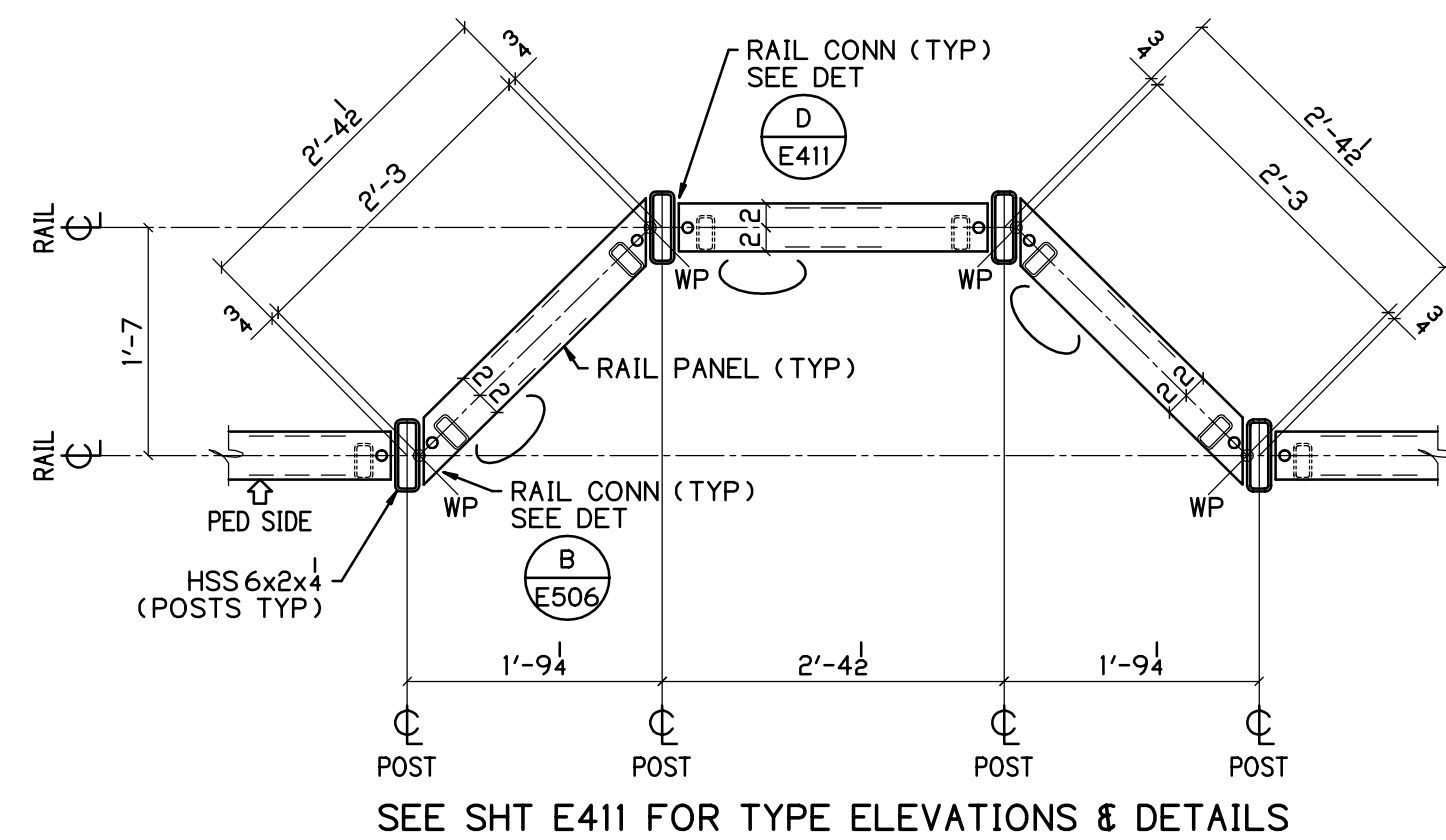
APPROVAL

CUY-IR490 / SR010-2.09 / 19.28

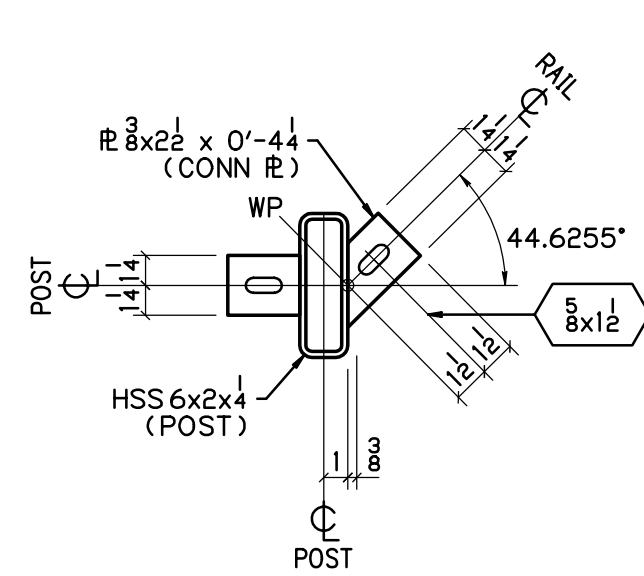
DECORATIVE FENCE

RAIL STANDARD DETAILS

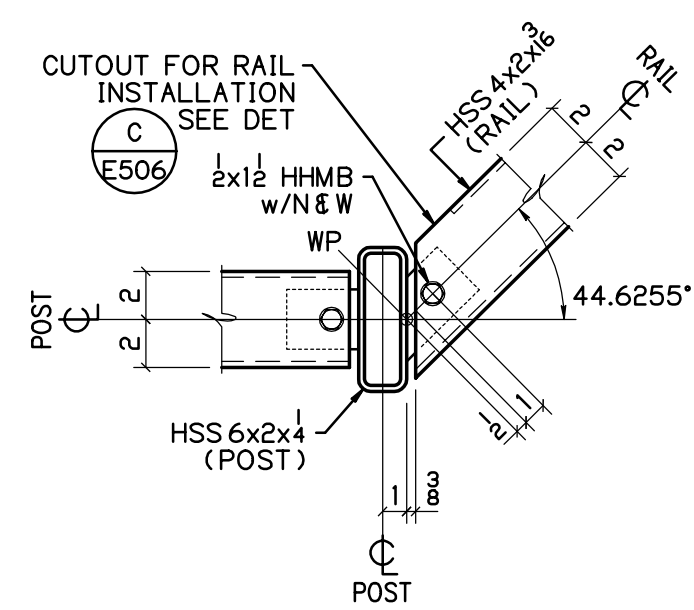
THE STANDARD DETAILS									
REVISION	REV.	DATE	DESCRIPTION			BY	STATE	OHIO	
							COUNTY	CUYAHOGA (CITY OF CLEVELAND)	
							PROJECT	3000 (17)	
							CONTRACT	PID 96833	
							SECTION		
APPROVAL RECORD							STRUCTURE		
							STATE JOB		
	DATE	ISSUED	APP. DATE	APPROVAL STATUS		CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY		
	05-06-21	APPROVAL				CONTRACTOR			
						ARCHIVING			
						REFERENCE			
						ITEM			
						FINISH	SEE NOTES-SHT E500		
	DRAWN BY	CHECKED BY	MRH NO	JOB MOR	DWG STATUS	JOB NO.	TOTAL SHEETS	SHEET	
	MRH				APPROVAL	19-1108	E507	E505	
04-24-21	05-05-21	1914	JL	05-06-21					



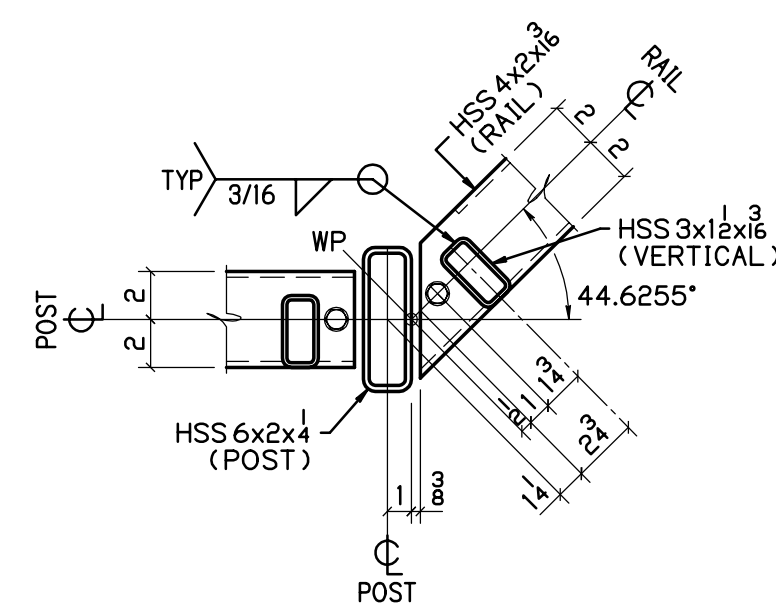
DETAIL A
1 1/2" = 1'-0"



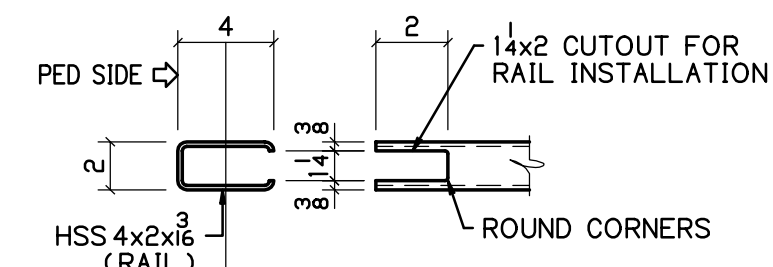
DET SHOWING CONN BAR



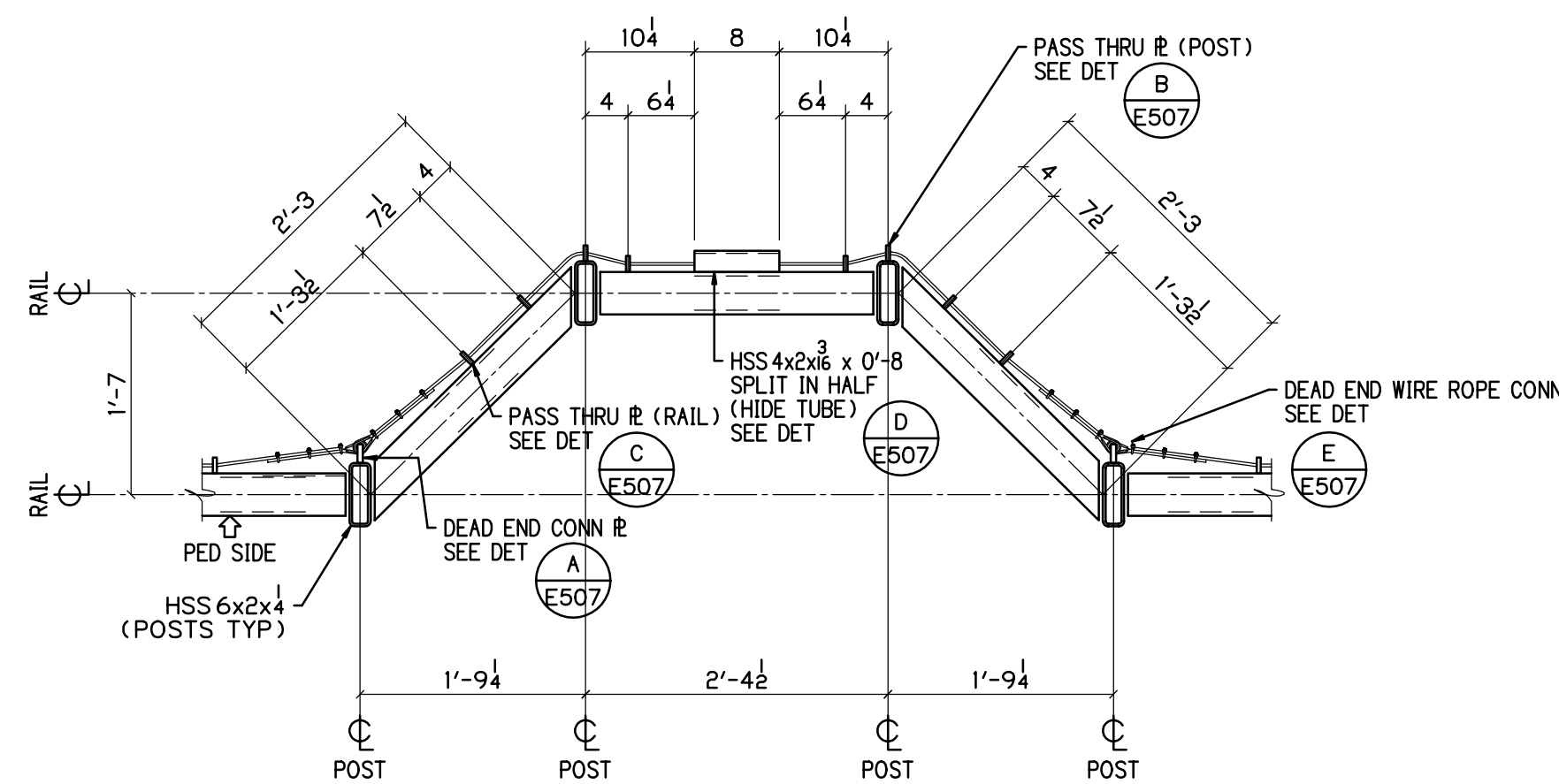
DET SHOWING RAIL CONN



DET SHOWING VERTICLE



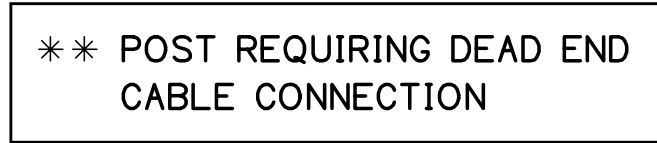
DETAIL C
1 1/2" = 1'-0"



TYP WIRE ROPE ELEVATION
FOR RAILS • LIGHT STD
SEE SHT E413 FOR ADDITIONAL DETAILS

BU-17 KINGSBURY RUN
FOR APPROVAL 05-06-21

		2450 N. RACEWAY RD. - P.O. BOX 34295 INDIANAPOLIS, INDIANA 46234		PHONE : (317) 297-5152 FAX : (317) 297-5313		APPROVAL
		CUY-IR490 / SR010-2.09 / 19.28 DECORATIVE FENCE RAIL • LIGHT STD DETAILS				
REVISION	REV	DATE	DESCRIPTION	BY	STATE	OHIO
					COUNTY	CUYAHOGA (CITY OF CLEVELAND)
					PROJECT	3000 (17)
					CONTRACT	PID 96833
					SECTION	
APPROVAL RECORD	DATE	ISSUED	APP. DATE	APPROVAL STATUS	CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY
	05-06-21	APPROVAL			CONTRACTOR	
					ARCH/ENG	
					REFERENCE	
					ITEM	
FINISH					SEE NOTES-SHT E500	
DRAWN BY	CHECKED BY	MRH NO	JOB MGR	DWG STATUS	JOB NO.	TOTAL SHEETS
MRH	05-05-21	1914	JL	APPROVAL 05-06-21	19-1108	E507
					SHEET E506	



1. WIRE ROPE SHALL BE STAINLESS STEEL TYPE 304, 1/4" DIAMETER, 7x19 STRAND AND SHALL BE VINYL COATED BLACK TO 5/16".
2. WIRE ROPE CLAMPS SHALL BE STAINLESS STEEL FOR 1/4" WIRE ROPE. THE VINYL COATING SHALL BE REMOVED ONLY AT EACH CLAMP LOCATION AT THE LIVE AND DEAD ENDS TO ALLOW THE CLAMPS DIRECT CONTACT WITH THE WIRE ROPE.
3. WIRE ROPE THIMBLES SHALL BE STAINLESS STEEL TYPE 304 SIZED FOR 5/16". THE THIMBLES SHALL BE OPEN STANDARD DUTY.
4. WIRE ROPE SHALL BE HAND TENSIONED ONLY TO REMOVE SLACK BY WORKING THE COILED PART INSIDE THE HIDE TUBES WITH THE CLAMPS AT THE DEAD END.
5. THE COILED WIRE ROPE SHALL BE BOUND BY A BREAK AWAY CLIP TO ALLOW FOR LANYARD TYPE EXTENSION TO HOLD THE POSTS, RAILS AND LIGHTS FROM FALLING BELOW DUE TO ACCIDENTAL VEHICULAR IMPACT.
6. THE STAINLESS STEEL 3/8" ANCHOR BASE WITH STUD, SUNCOR #S0116-HC10F FOR THE RENO LIGHT SHALL NOT BE SUPPLIED BY THIS FABRICATOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THIS ITEM.

1. ALL WIRE ROPE AND HARDWARE SHALL BE BY FEHR BROS. INDUSTRIES, INC.
2. THE WIRE ROPE SHALL BE PART NO 259250
3. THE WIRE ROPE THIMBLES SHALL BE PART NO STH312SD
4. THE WIRE ROPE CLAMPS SHALL BE PART NO SWRC250

SCHEMATIC ONLY
BACK SIDE SHOWN / WEST PARAPET ONLY



REVISION	REV	DATE	DESCRIPTION	BY	STATE	OHIO
					COUNTY	CUYAHOGA (CITY OF CLEVELAND)
					PROJECT	3000 (17)
					CONTRACT	PID 96833
					SECTION	
APPROVAL RECORD					STRUCTURE	
					STATE JOB	
	DATE	ISSUED	APP DATE	APPROVAL STATUS	CUSTOMER	LAKE ERIE CONSTRUCTION COMPANY
	05-06-21	APPROVAL			CONTRACTOR	
					ARCH/ENG	
					REFERENCE	
					ITEM	
					FINISH	
					SEE NOTES- SHT E500	
	DRAWN BY	CHECKED BY	MRH NO	JOB MR	OWG STATUS	JOB NO.
MRH		1914	JL	APPROVAL	19-1108	E507
04-24-21	05-05-21			05-06-21		E507