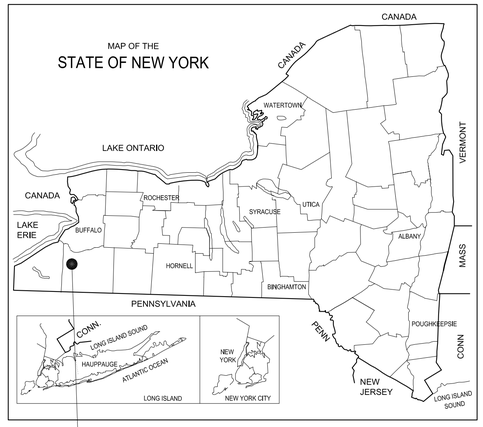

SITE OF WORK

CATTARAUGUS COUNTY
DEPARTMENT OF PUBLIC WORKS

REPLACEMENT OF LEON BRIDGE #7
LEON-NEW ALBION ROAD (CR 6) OVER MUD CREEK
TOWN OF LEON
CATTARAUGUS COUNTY
PIN 5758.49 & BIN 3322110

41 SHEETS

TYPE OF CONSTRUCTION

BRIDGE REPLACEMENT WITH CAST IN PLACE CONCRETE CANTILEVER ABUTMENTS FOUNDED ON ROCK, PRESTRESSED CONCRETE BEAM SUPERSTRUCTURE AND APPROACH ROADWAY IMPROVEMENTS.

HIGHWAY STANDARD SHEETS

209-01, 209-06, 402-01, 606-04, 619-01, 619-02, 619-04, 619-10, 619-11, 619-12, 645-01, 645-03, 646-13, 646-14, 685-01

NOTICE:
ALL WORK CONTEMPLATED UNDER THIS CONTRACT IS TO BE COVERED BY AND IN CONFORMANCE WITH THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION'S (NYSDOT'S) STANDARD SPECIFICATIONS (ENGLISH UNITS) AND ALL CURRENT ADDITIONS AND MODIFICATIONS EXCEPT AS MODIFIED BY THESE PLANS OR BY CHANGES SET FORTH IN THE CONTRACT PROJECT PROPOSAL.

MAINTENANCE JURISDICTION:
NO CHANGES IN MAINTENANCE JURISDICTION WILL RESULT FROM THIS PROJECT.

WARNING:
IT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER ANY ITEM IN THESE PLANS IN ANY WAY. IF ALTERATIONS TO THESE PLANS ARE REQUIRED, THE ALTERATIONS SHALL BE MADE IN ACCORDANCE WITH ARTICLE 145 SUBSECTION 7209 OF THE NEW YORK STATE EDUCATION LAW.

STREAM RESTRICTION:
THERE WIL BE NO IN STREAM WORK ALLOWED FROM SEPTEMBER 15 - MAY 31

RECOMMENDED BY:

MARK C. BURR, P.E.
DIRECTOR OF ENGINEERING
CATTARAUGUS COUNTY DPW

PREPARED AND RECOMMENDED BY:

TIMOTHY E. MAJOR, P.E.
N.Y.S.P.E. LICENSE NO. 081051
WATTS ARCHITECTURE & ENGINEERING

PROJECT LOCATION

NOT TO SCALE

THE LEON-NEW ALBION ROAD BRIDGE (BIN 3322110) IS LOCATED IN THE TOWN OF LEON IN CATTARAUGUS COUNTY. THE EXISTING BRIDGE CARRIES LEON-NEW ALBION ROAD (CR 6) OVER MUD CREEK.

CONTRACTOR'S NAME: _____

AWARD DATE: _____

COMPLETION DATE: _____

ENGINEER IN CHARGE: _____

INDEX ON SHEET NO. 2

WATTS ARCHITECTURE & ENGINEERING
95 Perry Street , Suite 300
Buffalo, New York 14203
p: 716.206.5100 f: 716.206.5199

PROJECT NO.
DWG. NO. COVER
SHEET 1 OF 41
PROJECT NO. 11045
FILE NAME H:\2011\11045 Leon Bridge 7\CAD\11045_cpb_cov.dwg

POINT LEGEND

	—\—	STOCKADE FENCE	THH	◯	TELEPHONE HAND HOLE
MB	□	MAIL BOX	TLM	○	TELEPHONE LINE MARKER
	⫞⫞	DOUBLE SIGN	TMH	◯	TELEPHONE MANHOLE
	⫞	SIGN	TJB	□	TELEPHONE JUNCTION BOX
	○——	OVERHEAD TRAFFIC SIGN	WV	⌖	WATER VALVE
GP	△	GUARD POSTS		⌖	HYDRANT
FP	○	FLAG POLE	WS	⌖	WATER SERVICE
	✿	TREE DECIDUOUS	INV	(	INVERT ELEVATION
	✳	TREE CONIFEROUS	WCR		WHEEL CHAIR RAMP
GAS	□	GAS METER	CONC		CONCRETE
GLM	○	GAS LINE MARKER	BC		BOTTOM OF CURB
GV	⋈	GAS VALVE	TC		TOP OF CURB
GS	⋈	GAS SERVICE	SW		SIDEWALK
DI	□	DRAINAGE INLET	EP		EDGE OF PAVEMENT
ST MH	◯	STORM MANHOLE	EPS		EDGE OF PAVED SHOULDER
SA MH	◯	SANITARY MANHOLE	FA		FIRE ALARM
CO	○	CLEANOUT	CC		CURB ENTRANCE CUT
SV	○	SEWER VENT	BH#	◓	TEST BORE W/ ELEVATION
SCO	○	CLEANOUT\SEWER VENT	L.		LIBER
SP	⊙	SIGNAL SUPPORT POLE	P.		PAGE
TCB	□	TRAFFIC CONTROL BOX	M		MEASURED
	☼	EXISTING LIGHT STANDARD	D		DEED
	☼	PROPOSED LIGHT STANDARD	R		RECORD
EHH	◯	ELECTRIC HANDHOLE		PL	PROPERTY LINE
EM	□	ELECTRIC METER	LD		LOOP DETECTOR
EMH	◯	ELECTRIC MANHOLE	TCPP	○	TRAFFIC CONTROL PEDESTRIAN POLE
UP	⌀	UTILITY POLE			
UPL	○┐	UTILITY POLE W/ LIGHT			
FLT	⫞	FLOOD LIGHT			

LINE LEGEND

—— ——	HIGHWAY BOUNDARY
—— // —— // ——	RAIL FENCE
— G —— —— —	UNDERGROUND GAS LINE
—— — —O/H T— — —O/H T——	OVERHEAD TELEPHONE/ COMMUNICATION LINE
— UT —— —— —	UNDERGROUND TELEPHONE/ COMMUNICATION LINE
—— — —O/H E— — —O/H E——	OVERHEAD ELECTRIC
— UE —— —— —	UNDERGROUND ELECTRIC
— SA —— —— —	UNDERGROUND SANITARY
— ST —— —— —	UNDERGROUND STORM
— W —— —— —	UNDERGROUND WATER
—LD— —LD— —	LOOP DETECTORS
—◆—◆—◆—	SILT FENCE
—○———○—	TURBIDITY CURTAIN

STANDARD SYMBOL (PLANS)	ITEM PAYMENT UNIT: SUMMARY OF QUANTITIES SHEET	EQUIVALENT NOMENCLATURE: (SPECS/PROPOSAL)
'	ft	LINEAR FEET
ft²	SF	SQUARE FEET
ẎD	CY	CUBIC YARD
mi	MI	MILES
AC	AC	ACRES
lb	LB	POUND
TON	TON	TON
GAL	GAL	GALLON

DRAWING TITLE	DWG. NO.
COVER	COVER
INDEX, SYMBOLS & ABBREVIATIONS	SA-01
SYMBOLS & ABBREVIATIONS	SA-02
SUMMARY OF QUANTITIES	SQ-01
WORK ZONE TRAFFIC CONTROL	WTC-01
WORK ZONE TRAFFIC CONTROL	WTC-02
SURVEY CONTROL DATA	SC-01
ROADWAY TABLES & DETAILS	RT-01
SIGNS, PAVEMENT & SEDIMENT CONTROL PLAN	SE-01
PLAN	BR-01
ELEVATION	BR-02
PROFILE	BR-03
TYPICAL SECTIONS	BR-04
TYPICAL SECTIONS	BR-05
GENERAL NOTES	BR-06
BORING LOGS	BR-07
BORING LOGS	BR-08
EXCAVATION & EMBANKMENT	BR-09
EAST ABUTMENT PLAN & ELEVATION	BR-10
EAST ABUTMENT REINFORCEMENT	BR-11
EAST ABUTMENT SECTION & DETAILS	BR-12
WEST ABUTMENT PLAN & ELEVATION	BR-13
WEST ABUTMENT REINFORCEMENT	BR-14
WEST ABUTMENT SECTION & DETAILS	BR-15
SUPERSTRUCTURE PLAN & TYPICAL SECTION	BR-16
BOX BEAM DETAILS	BR-17
BOX BEAM DETAILS	BR-18
BOX BEAM DETAILS	BR-19
BOX BEAM DETAILS	BR-20
DECK PLAN	BR-21
APPROACH SLAB PLAN & DETAILS	BR-22
RAILING LAYOUT PLAN	BR-23
RAILING DETAILS	BR-24
RAILING DETAILS	BR-25
RAILING DETAILS	BR-26
RAILING DETAILS	BR-27
BEARING DETAILS	BR-28
JOINT DETAILS	BR-29
BAR BENDING DIAGRAMS	BR-30
BAR LIST	BR-31
BAR LIST	BR-32

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

WATTS ARCHITECTURE & ENGINEERING
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signature and seal

STATE OF NEW YORK · TIMOTHY E. MAJOR · No. 081051 · LICENSED PROFESSIONAL ENGINEER

proprietary notes:

drawing history

number	date	description

sheet title

INDEX, SYMBOLS, AND ABBREVIATIONS

project number:	11045
drawn by:	JMR
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

SA-01

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Aug 23, 2017, 11:23am

ALIGNMENT

ABBR.	DESCRIPTION
AH	AHEAD
AZ	AZIMUTH
BK	BACK
b	BASELINE
BRG	BEARING
c	CENTERLINE
CS	CURVE TO SPIRAL
e	SUPERELEVATION RATE (CROSS SLOPE)
EQ	EQUALITY
EXT	EXTERNAL
HCL	HORIZONTAL CONTROL LINE
HSD	HEADLIGHT SIGHT DISTANCE
L	LENGTH OF CIRCULAR CURVE
LS	LENGTH OF SPIRAL
LVC	LENGTH OF VERTICAL CURVE
E	CENTER CORRECTION OF VERTICAL CURVE
f	MAIN LINE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
POL	POINT ON LINE
PSD	PASSING SIGHT DISTANCE
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS
SC	SPIRAL TO CURVE
SSD	STOPPING SIGHT DISTANCE
ST	SPIRAL TO TANGENT
STA	STATION
T	TANGENT LENGTH
TGL	THEORETICAL GRADE LINE
TS	TANGENT TO SPIRAL
VC	VERTICAL CURVE

TOPOGRAPHY (DRAINAGE)

ABBR.	DESCRIPTION
BB	BOTTOM OF BANK (STREAM)
BC	BOTTOM OF CURB
BO	BOTTOM OF OPENING
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CIP	CAST IRON PIPE
c STRM	CENTERLINE OF STREAM
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CSP	CORRUGATED STEEL PIPE
CULV	CULVERT
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
DS	DRAINAGE STRUCTURE PIPE
D'XING	DITCH CROSSING
EHW	EXTREME HIGH WATER
EL	ELEVATION
ELEV	ELEVATION
ELW	EXTREME LOW WATER
ES	END SECTION
HW	HEADWALL
INV	INVERT
MH	MANHOLE
MHW	MEAN HIGH WATER
OHW	ORDINARY HIGH WATER
OLW	ORDINARY LOW WATER
RCP	REINFORCED CONCRETE PIPE
TB	TOP OF BANK (STREAM)
TC	TOP OF CURB
TG	TOP OF GRATE
VCP	VITRIFIED CLAY PIPE
SICPP	SMOOTH INTERIOR CORRUGATED PE

TOPOGRAPHY (MISCELLANEOUS)

ABBR.	DESCRIPTION
ABUT	ABUTMENT
AOBE	AS ORDERED BY ENGINEER
ASPH	ASPHALT
BDY	BOUNDARY
BLDG	BUILDING
BM	BENCH MARK
CC	CENTER TO CENTER
CONC	CONCRETE
CONST	CONSTRUCTION
CR	COUNTY ROAD
D	DEED DISTANCE
DM	DIRECT MEASUREMENT
DWY	DRIVEWAY
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
FEE	FEE ACQUISITION
FEE WO/A	FEE ACQUISITION WITHOUT ACCESS
FP	FENCE POST
FD	FOUNDATION
FL	FENCE LINE
GAR	GARAGE
GR	GRAVEL
HO	HOUSE
HWY	HIGHWAY
IP	IRON PIN OR IRON PIPE
MB	MAILBOX
MON	MONUMENT
N&W	NAIL AND WASHER
OG	ORIGINAL GROUND
O/H	OVERHEAD
P	PARCEL
PAV'T	PAVEMENT
PE	PERMANENT EASEMENT
PED POLE	PEDESTRIAN POLE
p	PROPERTY LINE
POR	PORCH
RR	RAILROAD
RTE	ROUTE
ROW	RIGHT OF WAY
RW	RETAINING WALL
SH	STATE HIGHWAY
SHLDR	SHOULDER
SPK	SPIKE
ST	STREET
STK	STAKE
STY	STORY
SW	SIDEWALK
TE	TEMPORARY EASEMENT
TO	TEMPORARY OCCUPANCY
U/G	UNDERGROUND
WW	WING WALL

UTILITIES

ABBR.	DESCRIPTION
E	ELECTRIC
EMH	ELECTRIC MANHOLE
G	GAS
GP	GUY POLE
GSB	GAS SERVICE BOX (HOUSE LINE)
GV	GAS VALVE (MAIN LINE)
HYD	HYDRANT
LP	LIGHT POLE
LPG	LOW PRESSURE GAS
PP	POWER POLE
SA	SANITARY SEWER
SMH	SANITARY MANHOLE
ST	STORM SEWER
T	TELEPHONE
TCB	TRAFFIC CONTROL BOX
TELBOX	TELEPHONE BOX
TEL P	TELEPHONE POLE
TMH	TELEPHONE MANHOLE
CTV	CABLE TELEVISION
W	WATER
WSB	WATER SERVICE BOX (HOUSE LINE)
WV	WATER VALVE (MAIN LINE)

SUBSURFACE EXPLORATION

ABBR.	DESCRIPTION
	REPLACE ABBREVIATION "AB" WITH:
AH	HAND AUGER
CP	CONE PENETROMETER
DA	2 INCHES CASED DRILL HOLE
DM	DRILLING MUD
DN	4 INCHES CASED DRILL HOLE
FH	HOLLOW FLIGHT AUGER
PA	POWER AUGER
PH	PROBE
PT	PERCOLATION TEST HOLE
RP	1 INCH SAMPLER (RETRACTABLE PLUG)
	TO BE DEFINED AT THE TIME OF EXPLORATION
SP	SEISMIC POINT
TP	TEST PIT
	ABBREVIATION "C" IN CATAGORIES: DA, DM, DN, AND FH WITH:
B	BRIDGE
C	CUT
D	DAM
F	FILL
K	CULVERT
W	WALL
X	TO BE USED IF ONE OF THE ABOVE CANNOT BE DEFINED AT THE TIME THE EXPLORATION IS MADE

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

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SYMBOLS AND ABBREVIATIONS

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sheet number

SA-02

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Aug 23, 2017, 11:23am

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
201.06	CLEARING AND GRUBBING	LS	1	
202.120001	REMOVING EXISTING SUPERSTRUCTURES	LS	1	
202.19	REMOVAL OF SUBSTRUCTURES	CY	310	
203.02	UNCLASSIFIED EXCAVATION AND DISPOSAL	CY	85	
203.03	EMBANKMENT IN PLACE	CY	453	
203.21	SELECT STRUCTURE FILL	CY	231	
206.01	STRUCTURE EXCAVATION	CY	1113	
206.0201	TRENCH AND CULVERT EXCAVATION	CY	112	
207.26	PREFABRICATED COMPOSITE STRUCTURAL DRAIN	SY	202	
209.1003	SEED AND MULCH - TEMPORARY	SY	132	
209.13	SILT FENCE - TEMPORARY	LF	256	
209.1501	TURBIDITY CURTAIN - TEMPORARY	LF	260	
209.1801	ROLLED EROSION CONTROL PRODUCT, CLASS I TYPE A, SHORT TERM	SY	99	
304.15	SUBBASE COURSE OPTIONAL TYPE	CY	189	
402.098303	9.5 F3 TOP COURSE HMA, 80 SERIES COMPACTION	TON	60	
402.198903	19 F9 BINDER COURSE HMA, 80 SERIES COMPACTION	TON	39	
402.378903	37.5 F9 BASE COURSE HMA, 80 SERIES COMPACTION	TON	79	
407.0102	DILUTED TACK COAT	GAL	78	
490.10	PRODUCTION COLD MILLING OF BITUMINOUS CONCRETE	SY	367	
553.020001	COFFERDAMS (TYPE 2)	EA	1	
553.020002	COFFERDAMS (TYPE 2)	EA	1	
555.08	FOOTING CONCRETE, CLASS HP	CY	147	
555.09	CONCRETE FOR STRUCTURES, CLASS HP	CY	216	
555.95000007	CORROSION INHIBITOR FOR STRUCTURAL CONCRETE	GAL	864	
556.0201	UNCOATED BAR REINFORCEMENT FOR CONCRETE STRUCTURES	LB	21970	
557.0503	SUPERSTRUCTURE SLAB WITH INTEGRAL WEARING SURFACE - BOTTOM FORMWORK NOT REQUIRED - TYPE 3 FRICTION	SY	212	
557.2003	STRUCTURAL APPROACH SLAB WITH INTEGRAL WEARING SURFACE TYPE 3 FRICTION	SY	219	
558.02	LONGITUDINAL SAWCUT GROOVING OF STRUCTURAL SLAB SURFACE	SY	358	
559.16960118	PROTECTIVE SEALING OF STRUCTURAL CONCRETE	SF	1854	
559.18960118	PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS	SF	3966	
563.02	PRESTRESSED CONCRETE BOX BEAMS UNITS	SF	1773	
565.1922	TYPE E.L. BEARING (56 TO 111 KIPS)	EA	16	
567.60	ARMORLESS BRIDGE JOINT SYSTEM	FT	47	
568.54	STEEL BRIDGE RAILING (THREE RAIL)	LF	204	
568.70	TRANSITION BRIDGE RAILING	LF	128	
586.02	DRILLING AND GROUTING BOLTS OR REINFORCEMENT BARS	EA	60	
606.120102	BOX BEAM GUIDE RAILING END ASSEMBLY, TYPE I	EA	4	
606.71	REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAIL	LF	298	
606.7910	REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAIL AND MEDIAN BARRIER	EA	4	
610.1402	TOPSOIL - ROADSIDE	CY	15	
610.1601	TURF ESTABLISHMENT - ROADSIDE	SY	132	
614.060302	TREE REMOVAL OVER 12 INCHES TO 18 INCHES DIAMETER BREAST HEIGHT - STUMPS CUT FLUSH	EA	7	
619.01	BASIC WORK ZONE TRAFFIC CONTROL	LS	1	
619.04	TYPE III CONSTRUCTION BARRICADES	EA	45	
619.1701	TEMPORARY CONCRETE BARRIER (UNPINNED)	LF	56	
620.04	STONE FILLING (MEDIUM)	CY	194	
621.51000015	GRADING, CLEANING AND RESHAPING EXISTING DITCHES	LF	100	
625.01	SURVEY OPERATIONS	LS	1	
637.03	CONCRETE CYLINDER CURING BOX	EA	1	
637.11	ENGINEERS FILED OFFICE, TYPE I	MO	6	
637.34	OFFICE TECHNOLOGY AND SUPPLIES	DC	500	
640.20	WHITE PAINT REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	418	
640.21	YELLOW PAINT REFLECTORIZED PAVEMENT STRIPES - 20 MILS	LF	718	
646.22	DELINEATOR, SNOWPLOWING MARKER, SUPPLEMENTARY SNOWPLOWING MARKER PANELS	EA	6	
646.31	STEEL POST, 1.1 LB/FT	EA	4	
647.61	REM & DISPOSE GROUND MOUNTED TYPE A SIGN SUPPORT(S), FDNS AND ANY ATTACHED SIGNS - SIZE I (UNDER 30 SQFT)	EA	4	
697.03	FIELD CHANGE PAYMENT	DC	44000	
698.04	ASPHALT PRICE ADJUSTMENT	DC	100	
698.05	FUEL PRICE ADJUSTMENT	DC	100	
698.06	STEEL / IRON PRICE ADJUSTMENT	DC	100	
699.040001	MOBILIZATION	LS	1	

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Jan 12, 2018, 12:07pm

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY DPW PUBLIC WORKS

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STATE OF NEW YORK · TIMOTHY E. MAJOR · No. 081051 · LICENSED PROFESSIONAL ENGINEER

proprietary notes:

drawing history

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sheet title

SUMMARY OF QUANTITIES

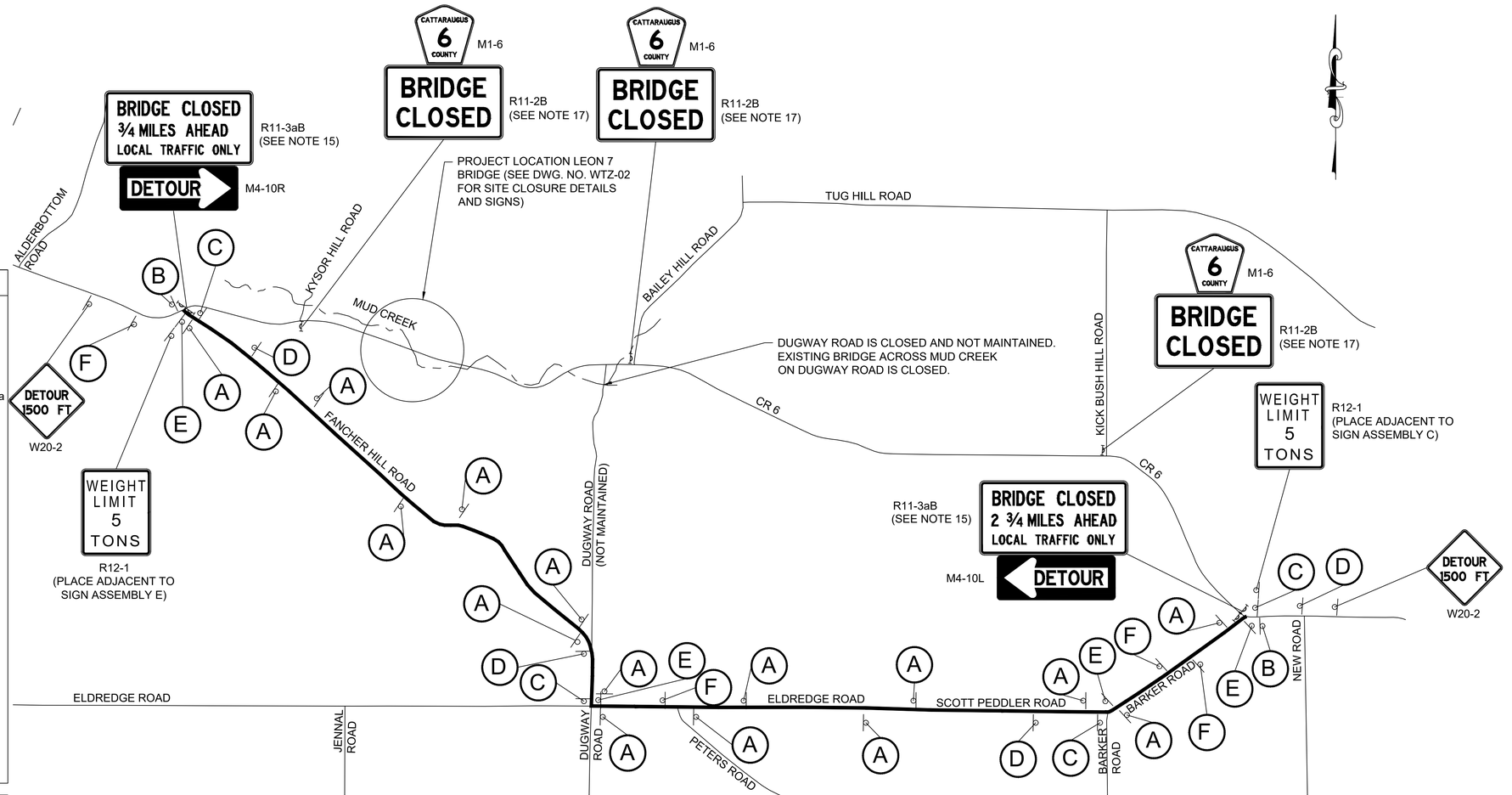
project number:	11045
drawn by:	JMR
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

SQ-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL MAINTAIN TRAFFIC THROUGHOUT THE LENGTH OF THE CONTRACT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 619 OF THE CURRENT NYSDOT STANDARD SPECIFICATIONS AND SUBSEQUENT ADDENDUMS, THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) WITH THE NEW YORK STATE SUPPLEMENT, THE WORK ZONE TRAFFIC CONTROL DETAILS IN THE PLANS, STANDARD SHEETS, AND PROPOSAL OF THIS CONTRACT, AND AS ORDERED BY THE ENGINEER (A.O.B.E.).
2. THE WORK ZONE TRAFFIC CONTROL PLANS SHOWN ARE TO BE CONSIDERED MINIMUM REQUIREMENTS ADDITIONAL SIGNS AND/ OR CONTROL DEVICES MAY BE REQUIRED AS DETERMINED BY THE ENGINEER AND MUST BE PROVIDED WHERE REQUIRED UNDER ITEM 619.01.
3. THE CONTRACTOR MAY SUBMIT REVISIONS TO THE WORK ZONE TRAFFIC CONTROL PLANS FOR APPROVAL. ANY CHANGES THAT ALTER THE BASIC CONCEPTS OF THE PLANS MUST BE APPROVED BY THE ENGINEER.
4. ALL MATERIALS FOR ESTABLISHING CONSTRUCTION WORK ZONES (I.E. SIGNS, BARRIERS, DRUMS, CONES, ETC.) SHALL BE IN PLACE PRIOR TO BEGINNING WORK.
5. IF AT ANY TIME THE ENGINEER DETERMINES THAT TRAFFIC IS NOT BEING PROPERLY MAINTAINED WITHIN A WORK ZONE, THE CONTRACTOR SHALL IMMEDIATELY CORRECT THE INDICATED DEFICIENCY AS DIRECTED, TO THE SATISFACTION OF THE ENGINEER.
6. THE CONTRACTOR SHALL INSURE THAT PLACEMENT OF CONES, DRUMS, OR BARRICADES WILL NOT INTERFERE WITH SIGHT DISTANCE.
7. VEHICLES BELONGING TO THE CONTRACTOR AND THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED ON THE PAVEMENT OR SHOULDERS ALONG THE ROADWAY BEING USED BY THE GENERAL PUBLIC (WITHIN THE PROJECT LIMITS).
8. VEHICLES BELONGING EITHER TO THE CONTRACTOR AND THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED IN A MANNER WHICH OBSTRUCTS SIGNS, BARRIERS, BARRICADES, OR OTHER TRAFFIC CONTROL DEVICES, NOR IN A MANNER WHICH INTERFERES WITH ACCESS TO ABUTTING PROPERTIES.
9. THE CONTRACTOR SHALL NOT PARK EQUIPMENT OR STORE MATERIAL WHERE IT IS DEEMED BY THE ENGINEER TO BE A SAFETY HAZARD. THE CONTRACTOR SHALL NOT PARK EQUIPMENT OVERNIGHT WHERE IT IS DEEMED A SAFETY HAZARD TO TRAFFIC.
10. DELINEATION DEVICES SHALL CONFORM TO THE M.U.T.C.D. AND NEW YORK STATE SUPPLEMENT.
11. THE CONTRACTOR SHALL NOT MIX DELINEATION DEVICES IN A LINEAR CLOSURE OR TAPER (I.E., CONES, VERTICAL PANELS, TUBULAR MARKERS, OR DRUMS SHALL NOT BE USED IN THE SAME TAPER OR CLOSURE). HOWEVER, DIFFERENT DELINEATION DEVICES MAY BE USED IN DIFFERENT AREAS OF THE PROJECT.
12. THE CONTRACTOR SHALL NOTIFY ALL LOCAL AGENCIES ONE (1) WEEK BEFORE THE DETOUR IS SIGNED AND THE ROAD IS CLOSED (A.O.B.E.).
13. THE SIGN LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.
14. THE MODIFICATION, RELOCATION OR ADJUSTMENT OF EXISTING SIGNS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND SHALL BE INCLUDED IN ITEM 619.01.
15. FOR BRIDGE CLOSED SIGN (R 11-3aB) PLACE THE SIGN ON TWO BARRICADES WITH WARNING LIGHTS, ITEM 619.04.
16. OFFSITE DETOUR SIGNS TO BE PROVIDED BY THE CONTRACTOR - ITEM 619.01.
17. PLACE SIGN BARRICADE AT SHOULDER WITH WARNING LIGHTS - ITEM 619.04.



SIGN SCHEDULE

CATTARAUGUS 6 COUNTY M1-6 DETOUR M4-9 (A)		CATTARAUGUS 6 COUNTY M1-6 END DETOUR M4-8a (B)	
CATTARAUGUS 6 COUNTY M1-6 DETOUR M4-9 (C)		CATTARAUGUS 6 COUNTY M1-6 DETOUR M4-9 (D)	
CATTARAUGUS 6 COUNTY M1-6 DETOUR M4-9 (E)		CATTARAUGUS 6 COUNTY M1-6 DETOUR M4-9 (F)	

LEGEND

- TYPE III CONSTRUCTION BARRICADE (WITH WARNING LIGHTS) ITEM 619.04
- CONSTRUCTION SIGN INCLUDED IN ITEM 619.01

OFF-SITE DETOUR PLAN

-1000 0 1000 2000 3000 FT

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Aug 23, 2017, 11:23am

project:

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OVER
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signature and seal

STATE OF NEW YORK TIMOTHY E. MAJOR LICENSED PROFESSIONAL ENGINEER No. 081051

proprietary notes:

drawing history

number	date	description

sheet title

OFF-SITE DETOUR PLAN

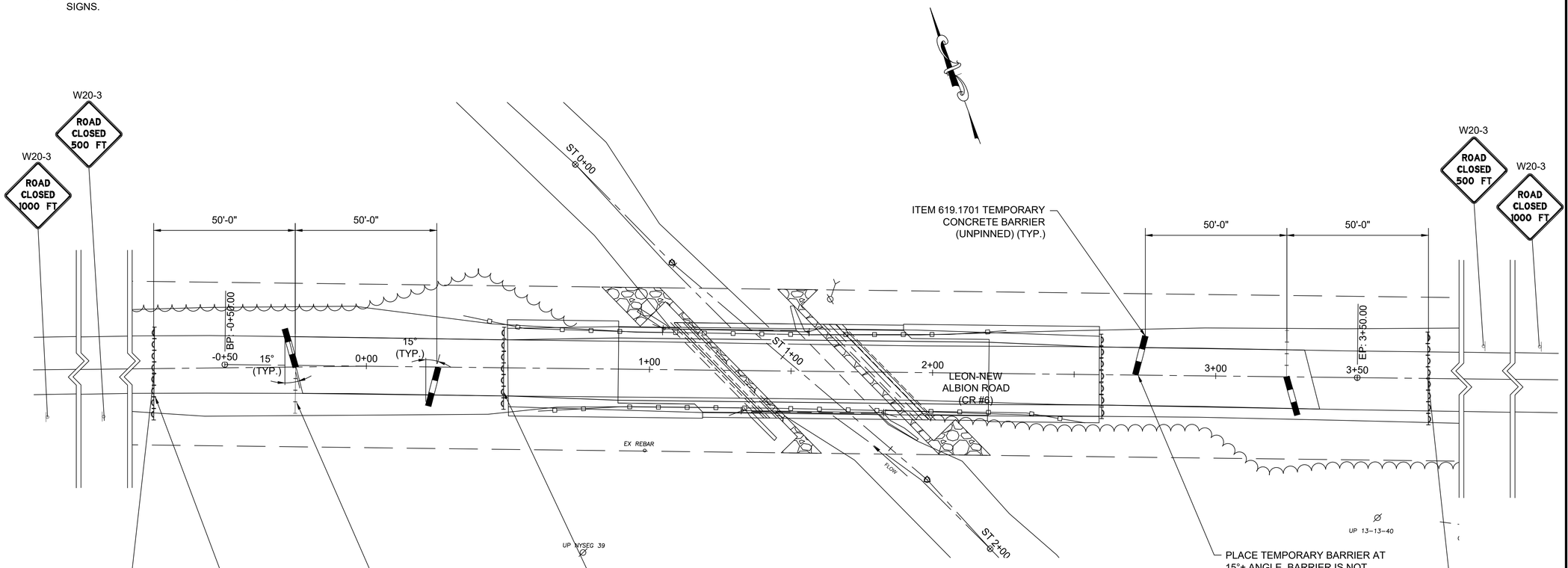
project number:	11045
drawn by:	JCK
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

WTZ-01

NOTES:

1. THE WORK ZONE TRAFFIC CONTROL SHOULD BE PLACED AS SHOWN ON THIS PLAN OR AS ORDERED BY THE ENGINEER. DURING NON-WORKING HOURS AND SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 619 - WORK ZONE TRAFFIC CONTROL OF THE NYSDOT STANDARD SPECIFICATIONS, THE M.U.T.C.D. AND NYS SUPPLEMENT AND ANY PROVISIONS IN THE PLANS AND/OR PROPOSAL OF THIS CONTRACT.
2. THE COST OF THE CONSTRUCTION SIGNS SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 619.01.
3. THE TEMPORARY CONCRETE BARRIER SHALL BE REPLACED WITH TYPE III BARRICADES WHEN THE DROP OFF NO LONGER EXISTS.
4. ACCESS TO ALL PROPERTIES WITHIN THE WORK ZONE MUST BE MAINTAINED DURING CONSTRUCTION.
5. SEE DWG. NO. WTZ-01 FOR ADDITIONAL INFORMATION AND ADDITIONAL DETOUR SIGNS.



BRIDGE CLOSURE PLAN

LEGEND	
	TYPE III CONSTRUCTION BARRICADE (WITH WARNING LIGHTS) ITEM 619.04
	TYPE III CONSTRUCTION BARRICADE ITEM 619.04
	CONSTRUCTION SIGN INCLUDED IN ITEM 619.01
	TEMPORARY CONCRETE BARRIER (UNPINNED) ITEM 619.1701

-20 0 20 40 60 FT

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

WATTS ARCHITECTURE & ENGINEERING
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drawing history

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BRIDGE CLOSURE

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scale:	AS NOTED

sheet number

WTZ-02

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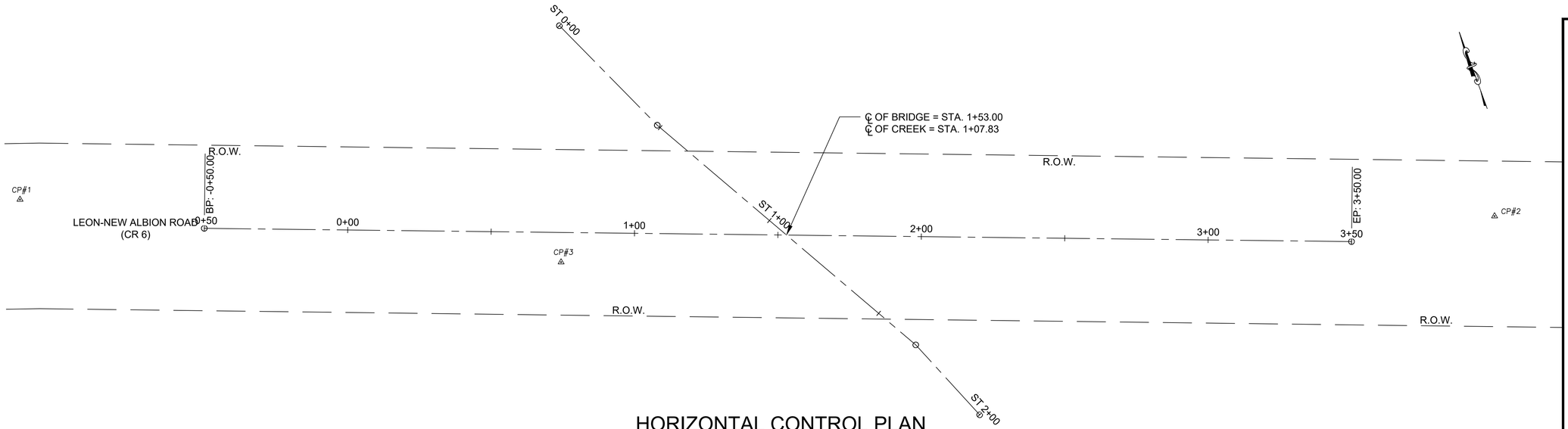

HORIZONTAL CONTROL PLAN

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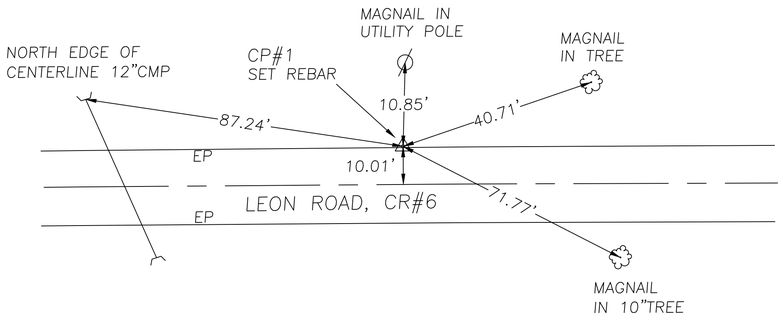
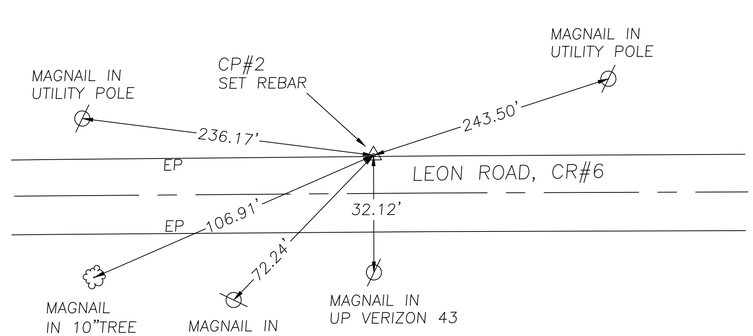
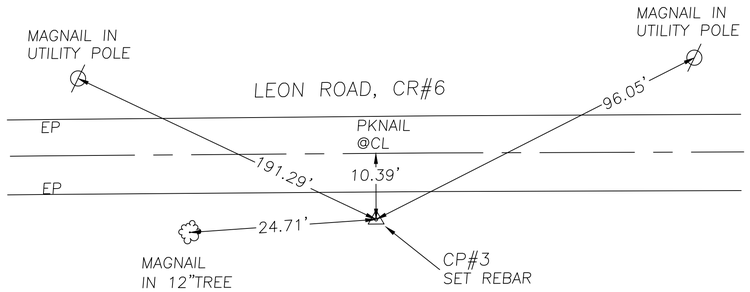


CP#1
N 833444.7387
E 1043735.5697
ELEV 1477.67



CP#2
N 833260.8143
E 1044215.6968
ELEV 1487.11



CP#3
N 833358.7413
E 1043904.9047
ELEV 1481.60

CONTROL POINTS

HORIZONTAL AND VERTICAL CONTROL:

HORIZONTAL DATUM: NAD 83/96
VERTICAL DATUM: NAVD 88

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Aug 23, 2017, 11:23am

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

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proprietary notes:

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number	date	description

sheet title

SURVEY CONTROL DATA

project number:	11045
drawn by:	JMR
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

SC-01

SIGN REMOVAL TABLE				
ITEM 647.61 - REMOVE AND DISPOSE GROUND MOUNTED TYPE A SIGN SUPPORT(S), FDNS AND ANY ATTACHED SIGNS - SIZE I (UNDER 30 SQUARE FEET)				
LOCATION			ITEM 647.61 (EA)	DESCRIPTION
STATION	SIDE	OFFSET		
1+05	LT	14.3	1	TYPE 3 OBJECT MARKER
1+33	RT	14.3	1	TYPE 3 OBJECT MARKER
1+56	LT	13.9	1	TYPE 3 OBJECT MARKER
1+83	RT	14.3	1	TYPE 3 OBJECT MARKER
		COLUMN TOTAL:	4	

SNOWPLOWING MARKER TABLE			
ITEM 646.22 DELINEATOR, SNOWPLOWING MARKER, SUPPLEMENTARY SNOWPLOWING MARKER PANELS			
ITEM 646.31 STEEL POST, 1.1 LB/FT			
STATION	SIDE	ITEM 646.22 (EA)	ITEM 646.31 (EA)
0+86	RT	2	1
2+53	RT	1	1
0+56	LT	1	1
2+23	LT	2	1
TOTAL ITEM:		6	4

SILT FENCE TABLE					
ITEM NO.	DESCRIPTION				
209.13	SILT FENCE - TEMPORARY				
STATION		OFFSET		SIDE	209.13 (FT.)
BEGIN	END	BEGIN	END		
2+24	2+36	26.4	29.0	RT	12.5
2+30	2+76	26.3	21.2	RT	47.1
2+74	2+87	27.9	22.3	RT	14.1
0+14	0+29	20.0	21.3	LT	14.8
0+28	0+86	18.8	18.8	LT	57.9
1+72	1+89	26.8	24.6	LT	16.5
1+84	2+76	18.4	28.6	LT	93.1
				TOTAL:	256.0

GUIDE RAIL TABLE								
ITEM 568.54 - STEEL BRIDGE RAILING (THREE RAIL) ITEM 568.70 - TRANSITION BRIDGE RAILING ITEM 606.120102 - BOX BEAM GUIDE RAILING END ASSEMBLY, TYPE I								
BEGIN STATION	OFFSET (FT)	SIDE	END STATION	OFFSET (FT)	SIDE	ITEM 568.54 (LF)	ITEM 568.70 (LF)	ITEM 606.120102 (EA)
0+19.5	26.1	RT	0+86.2	15.0	RT	-	-	1
0+86.2	15.0	RT	1+18.2	15.0	RT	-	32.0	-
1+18.2	15.0	RT	2+20.2	15.0	RT	102.0	-	-
2+20.2	15.0	RT	2+52.2	15.0	RT	-	32.0	-
2+52.2	15.0	RT	3+19.0	26.1	RT	-	-	1
-0+10.5	26.1	LT	0+56.3	15.0	LT	-	-	1
0+56.3	15.0	LT	0+88.3	15.0	LT	-	32.0	-
0+88.3	15.0	LT	1+90.3	15.0	LT	102.0	-	-
1+90.3	15.0	LT	2+22.3	15.0	LT	-	32.0	-
2+22.3	15.0	LT	2+89.0	26.1	LT	-	-	1
TOTAL ITEM:						204.0	128.0	4

GUIDE RAIL REMOVAL TABLE					
ITEM 606.71 - REMOVING AND DISPOSING CORRUGATED BEAM GUIDE RAILING ITEM 606.7910 - REMOVING AND DISPOSING ANCHORAGE UNITS FOR CORRUGATED BEAM GUIDE RAILING AND MEDIAN BARRIER					
BEGIN STATION	SIDE	END STATION	SIDE	ITEM 606.71 (LF)	ITEM 606.7910 (EACH)
0+60	RT	-	RT	-	1
0+60	RT	1+35	RT	75.0	-
1+79	RT	2+54	RT	75.0	-
2+54	RT	-	RT	-	1
0+34	LT	-	LT	-	1
0+34	LT	1+09	LT	75.0	-
1+53	LT	2+26	LT	73.0	-
2+26	LT	-	LT	-	1
TOTAL ITEM:				298.0	4

project:

LEON-NEW ALBION ROAD

OVER
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PIN 5758.49, BIN 3322110

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proprietary notes:

drawing history

number	date	description

sheet title

ROADWAY TABLES & DETAILS

project number:	11045
drawn by:	JMR
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

RT-01

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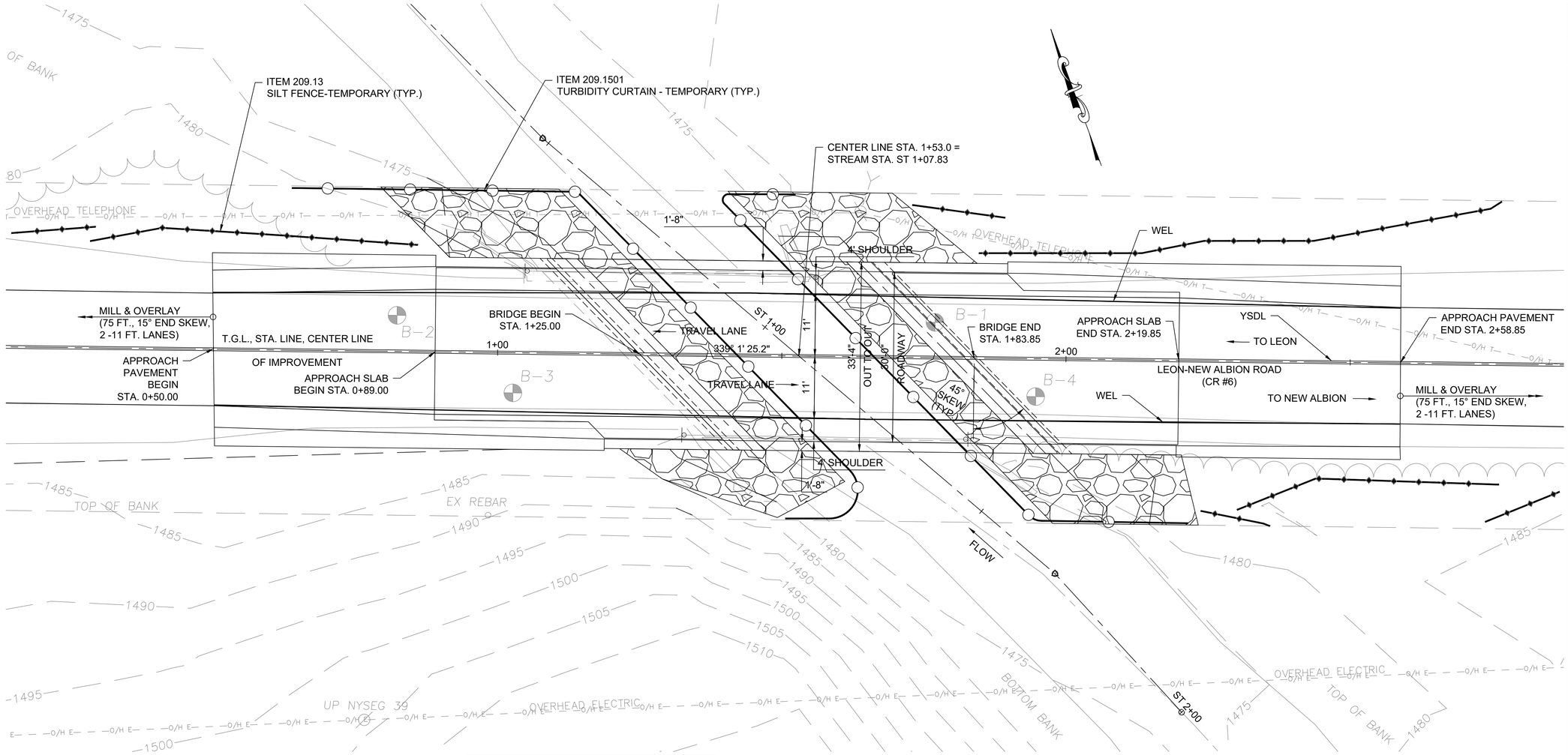

PAVEMENT MARKING ABBREVIATIONS	
WEL -	WHITE NORMAL EDGE LINE ITEM 640.20
YSDL -	YELLOW NORMAL SOLID DOUBLE LINE ITEM 640.21

SIGN LEGEND	
SYMBOL	DESCRIPTION
⊢	EXISTING SIGN

EROSION & SEDIMENT CONTOL LEGEND	
SYMBOL	DESCRIPTION
	SIT FENCE
	TURBIDITY CURTAIN

GENERAL NOTES:

1. SEE DWG. NO. RT-01 FOR SIGN REMOVAL AND GUIDE RAIL TABLES.
2. SEE DWG. NO. RT-01 FOR SILT FENCE TABLE.

EROSION AND SEDIMENT CONTROL NOTES:

1. THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES FOR THE UNITED STATES ARMY CORPS OF ENGINEERS, SECTION 404 NATIONWIDE PERMITS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL GENERAL NOTES FOR THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, SECTION 401 WATER QUALITY CERTIFICATION, WHICH ARE INCLUDED IN THE PROPOSAL.
3. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORM WATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL DEVICES.
4. STORM WATER FROM DISTURBED ARES MUST BE PASSED THROUGH A SILTATION FENCE BEFORE DISCHARGE BEYOND DISTURBED AREAS OR INTO INLETS OF OTHER DRAINAGE SYSTEMS.
5. DURING CONSTRUCTION, NO WET OR FRESH CONCRETE OR LEACHATE SHALL BE ALLOWED TO ESCAPE TO ANY WATERS NOR SHALL WASHINGS FROM CONCRETE TRUCKS, MIXERS, OR OTHER DEVICES BE ALLOWED TO ENTER ANY WATERS.
6. ANY DEBRIS OR EXCESS MATERIALS FROM CONSTRUCTION OF THE PROJECT SHALL BE IMMEDIATELY AND COMPLETELY REMOVED FROM THE BED AND BANKS OF ALL WATER AREAS TO AN APPROPRIATE UPLAND AREA FOR DISPOSAL.
7. ALL DREDGED AND EXCAVATED MATERIAL SHALL BE DISPOSED OF ON AN UPLAND SITE AND BE SUITABLY STABILIZED SO THAT IT CANNOT REASONABLY RE-ENTER ANY WATER BODY.
8. THE COST OF INSTALLING, CLEANING, MAINTAINING, AND REMOVING TEMPORARY SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PAID FOR UNDER THE APPROPRIATE 209 ITEM.
9. THE LOCATIONS OF EROSION AND SEDIMENT CONTROL MEASURES, AS INDICATED IN THE CONTACT DOCUMENTS MAY REQUIRE FIELD ADJUSTMENT DEPENDING ON THE SEQUENCE OF CONSTRUCTION ACTIVITIES, CONSTRUCTION METHODS, AND/OR ACTUAL FIELD CONDITIONS. THE ENGINEER SHALL BE NOTIFIED OF ANY SIGNIFICANT FIELD CHANGES TO THE EROSION AND SEDIMENT CONTROL MEASURES INDICATED IN THE CONTRACT DOCUMENTS.
10. THE CONTRACTOR SHALL NOT USE THE STREAM BED OR BANKS AS A STAGING AREA FOR EQUIPMENT OR MATERIALS. AFTER EACH WORK DAY, ALL MECHANIZED EQUIPMENT SHALL BE REMOVED FROM THE STREAM BED AND BANKS AND STORED IN AN APPROVED UPLAND SITE.
11. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE ENGINEER A WRITTEN SCHEDULE AND PROPOSED MEASURES FOR TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENT CONTROL AS REQUIRED BY SECTION 209 OF THE NYSDOT STANDARD SPECIFICATIONS.

-10 0 10 20 30 FT

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

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SIGNS, PAVEMENT MARKINGS, AND SEDIMENT CONTROL

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drawn by:	JMR
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sheet number

SE-01

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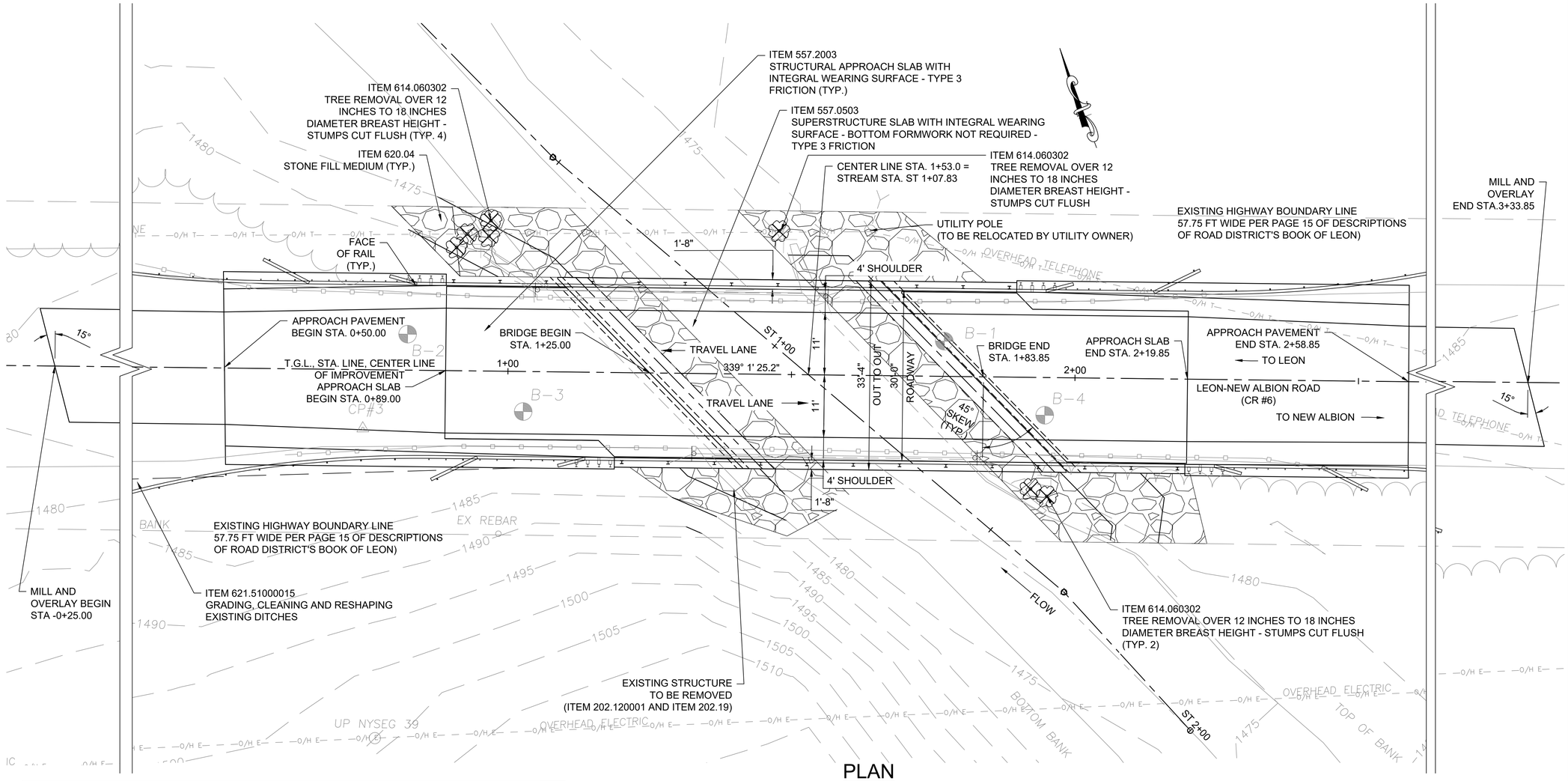

PLAN

DRAINAGE AREA ------ 4.02 mi²						DESIGN FLOOD	BASIC FLOOD
RECURRENCY INTERVAL		1.5 yr	2 yr	5yr	10yr	50yr	100 yr
PEAK DISCHARGE (ft3/s)		265	334	536	694	1100	1290
HIGH WATER ELEV. @ PT. OF MAX. BACKWATER	EXISTING	1476.99	1477.43	1478.48	1479.17	1480.63	1481.32
	PROPOSED	1476.21	1476.42	1476.97	1477.33	1478.14	1478.46
AVG. VELOCITY THRU STRUCTURE @ DESIGN FLOOD – 7.86 ft/s							
SCOUR ANALYSIS IS NOT APPLICABLE, FOUNDATIONS WILL BE ON BEDROCK							

* POINT OF MAXIMUM BACK WATER IS TAKEN AT APPROXIMATELY ONE BRIDGE LENGTH UPSTREAM

NOTES:

1. SEE DWG. NO. BR-07 & BR-08 FOR BORING LOGS FOR BORES B-1 THRU B-4 ON THIS PLAN.
2. SEE DWG. NO. BR-23 FOR RAILING PLAN AND ASSOCIATED ITEM NUMBERS.

-10 0 10 20 30 FT

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Aug 23, 2017, 11:24am

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LEON-NEW ALBION ROAD

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STATE OF NEW YORK TIMOTHY E. MAJOR No. 081051 LICENSED PROFESSIONAL ENGINEER

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PLAN

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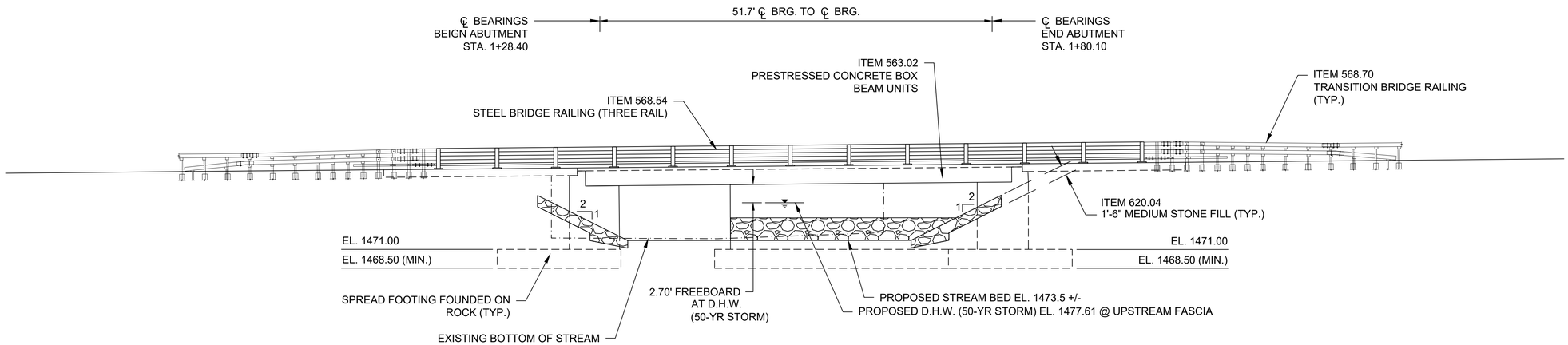
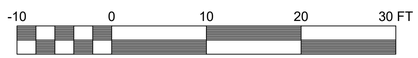
BR-01



ELEVATION



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ELEVATION

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BR-02

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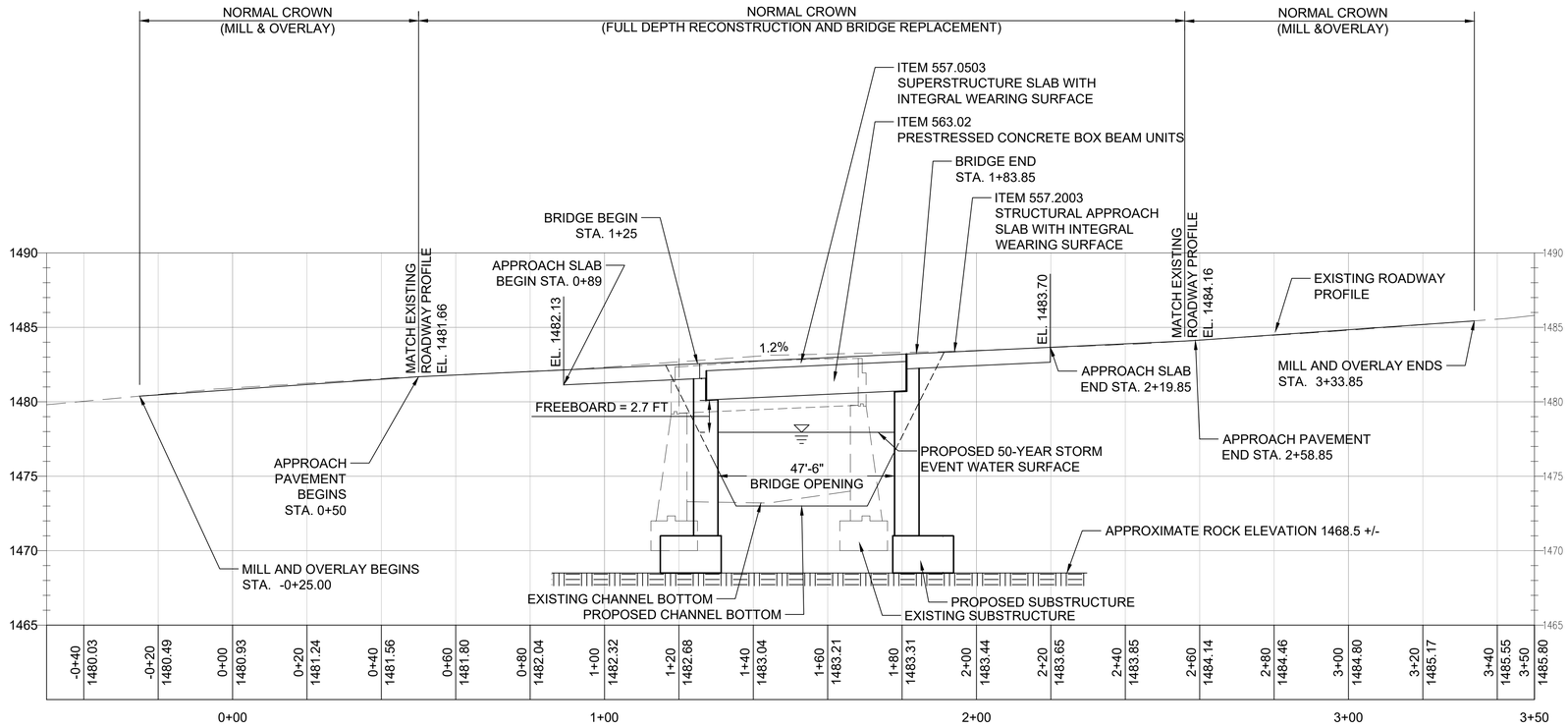
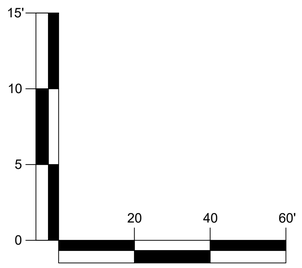


CENTERLINE PROFILE

NOTE:

RECORD PLANS FOR THIS BRIDGE ARE NOT AVAILABLE. EXACT SHAPE AND LIMITS OF THE EXISTING SUBSTRUCTURE IS UNKNOWN. ASSUMPTIONS WERE MADE AS TO THE TYPE AND LIMITS OF THE EXISTING ABUTMENT FOR ESTIMATING PURPOSES.



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PROFILE

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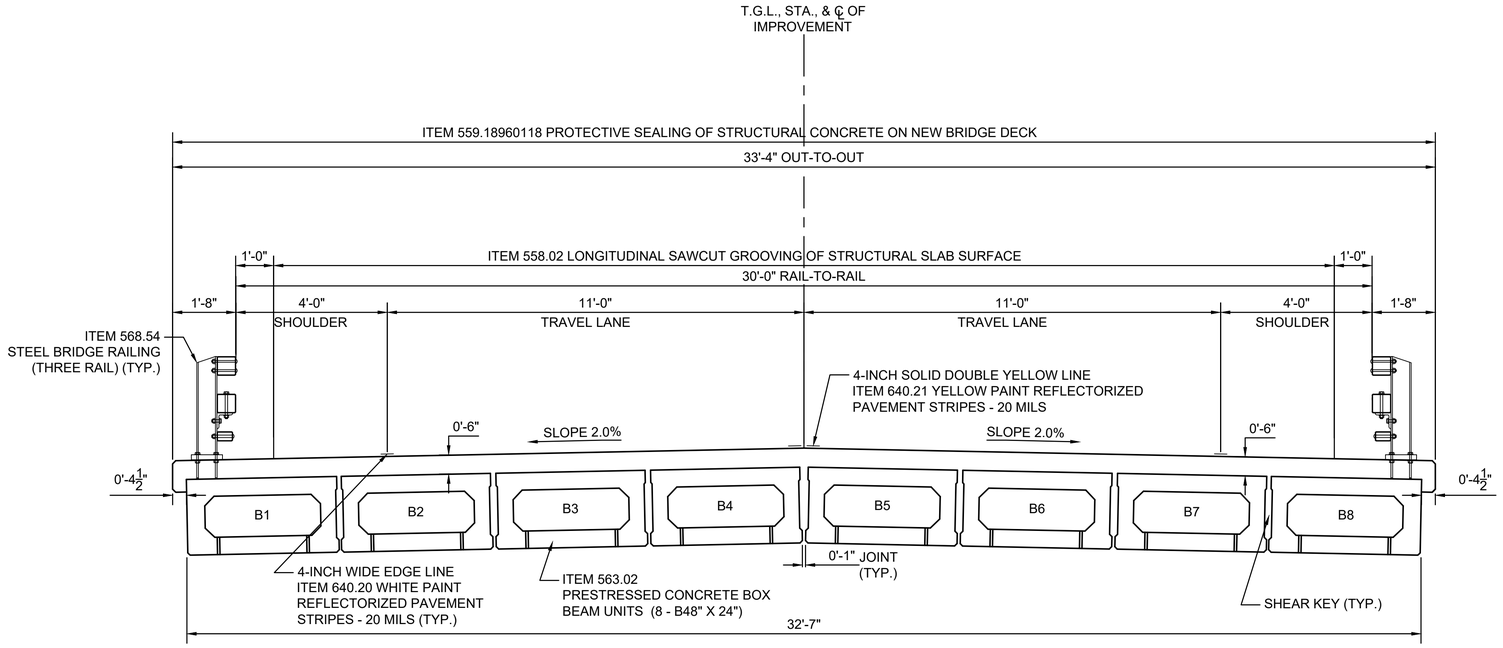
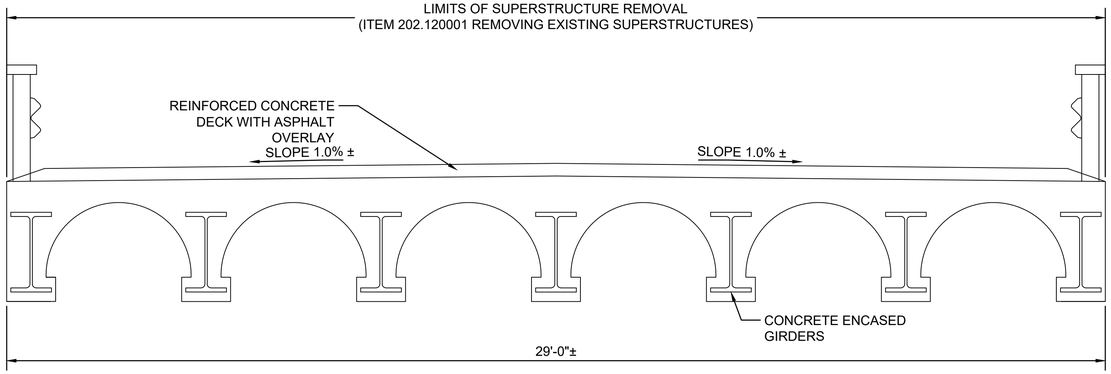
BR-03



PROPOSED TRANSVERSE BRIDGE SECTION



EXISTING TRANSVERSE BRIDGE SECTION

-2 0 2 4 6 FT

project:

LEON-NEW ALBION ROAD

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TYPICAL SECTIONS

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BR-04

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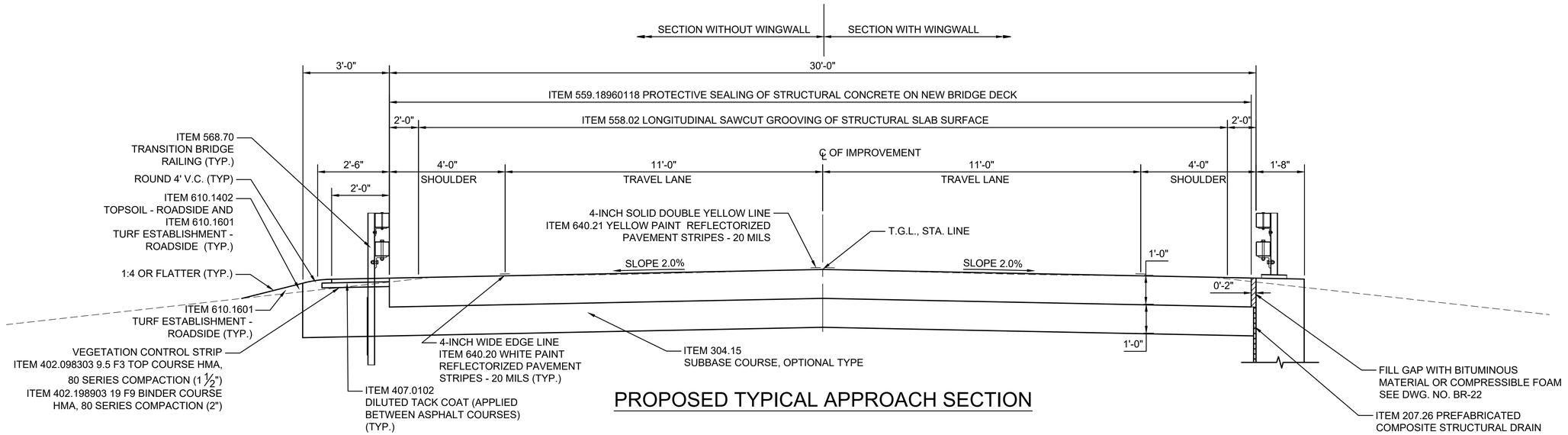
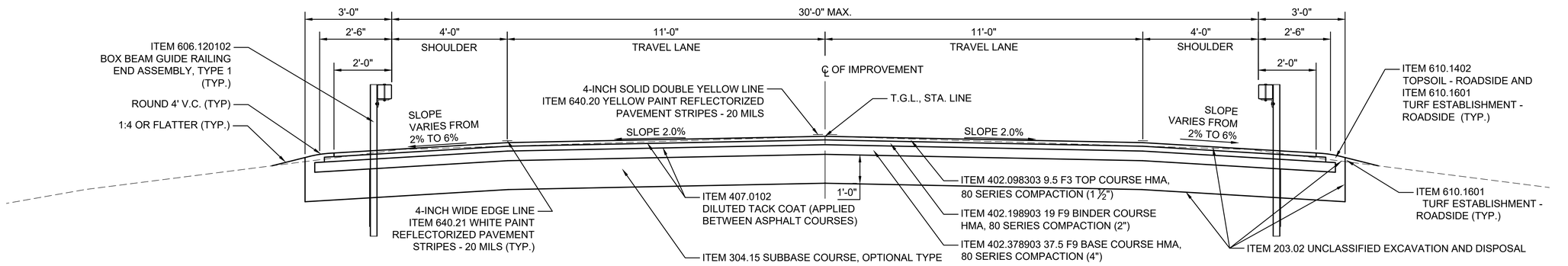
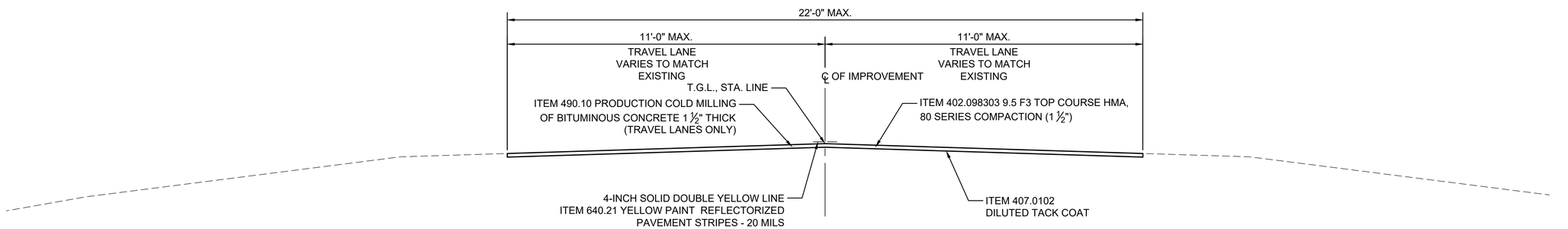


PROPOSED TYPICAL APPROACH SECTION



PROPOSED TYPICAL HIGHWAY SECTION (FULL DEPTH RECONSTRUCTION)



PROPOSED TYPICAL HIGHWAY SECTION (MILL AND OVERLAY)

-2 0 2 4 6 FT

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Aug 23, 2017, 11:24am

project:

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STATE OF NEW YORK TIMOTHY E. MAJOR No. 081051 LICENSED PROFESSIONAL ENGINEER

proprietary notes:

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TYPICAL SECTIONS

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BR-05

GENERAL NOTES

1. DESIGN SPECIFICATIONS: NYSDOT LRFD BRIDGE DESIGN SPECIFICATIONS WITH ALL PROVISIONS IN EFFECT AS OF AUGUST 2017. (FOR DESIGN PURPOSES, COMPRESSIVE STRENGTH OF CONCRETE FOR SUBSTRUCTURES AND DECK SLABS AT 28 DAYS: f'c = 3000 PSI.)

2. LIVE LOAD: AASHTO HL-93 AND NYSDOT DESIGN PERMIT VEHICLE.

3. CONSTRUCTION AND MATERIALS SPECIFICATIONS: STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, OFFICE OF ENGINEERING, ALL CURRENT ADDITIONS AND MODIFICATIONS.

4. DETAILS ON THE DRAWINGS LABELED AS "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS FOR WHICH NO SCALE IS SHOWN ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.

5. ALL SHOP DRAWINGS SUBMITTED FOR THIS PROJECT SHALL BE IN U.S. CUSTOMARY UNITS.

6. THE COST OF WATER USED FOR COMPACTION OF SELECT FILL ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203.21 - SELECT STRUCTURE FILL.

7. THE COST OF ALL JOINT MATERIAL SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

8. THE LOAD RATINGS ARE IN ACCORDANCE WITH THE AASHTO MANUAL FOR BRIDGE EVALUATION - FIRST EDITION 2008.

9. THIS BRIDGE SHALL BE MAINTAINED IN ACCORDANCE WITH THE GUIDELINES CONTAINED IN THE CURRENT EDITION OF THE AASHTO MAINTENANCE MANUAL: THE MAINTENANCE AND MANAGEMENT OF ROADWAYS AND BRIDGES.

10. THE CONTRACTOR MUST COMPLY WITH ALL PERMITS, INCLUDING N.Y.S.D.E.C. WATER QUALITY CERTIFICATION.

11. THE CONTRACTOR SHALL REMOVE, STORE AND RE-ATTACH THE BIN PLATE TO THE BEGIN RIGHT WINGWALL AS DIRECTED BY THE ENGINEER.

SUBSTRUCTURE NOTES

1. ALL PLACEMENTS OF SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY.

2. HIGHWAY EMBANKMENT MATERIAL AND SELECT STRUCTURE FILL, ITEM 203.21, SHALL BE PLACED SIMULTANEOUSLY, IN CONTACT, ON BOTH SIDES OF THE VERTICAL PAYMENT LINE.

3. THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, MAY ELECT TO INTRODUCE CONSTRUCTION JOINTS IN THE FOOTINGS AT LOCATIONS NOT SHOWN ON THE PLANS. THESE CONSTRUCTION JOINTS SHALL BE PROVIDED WITH SHEAR KEYS AND WATERSTOPS.

4. ALL EXPOSED EDGES OF CONCRETE ARE TO BE CHAMFERED 1 INCH UNLESS OTHERWISE NOTED.

5. ALL FORMING HARDWARE SUCH AS TIES AND "ALL THREADS" THAT ARE TO REMAIN IN THE CONCRETE SHALL BE ELECTROPLATED OR MADE OF A NONFERROUS MATERIAL TO PREVENT CORROSION.

SUPERSTRUCTURE NOTES

1. TOP SURFACES OF NEW BRIDGE DECKS AND APPROACH SLABS SHALL BE SEALED ACCORDING TO ITEM 559.18960118-PROTECTIVE SEALING OF STRUCTURAL CONCRETE ON NEW BRIDGE DECKS AND BRIDGE DECK OVERLAYS.

2. CORROSION INHIBITOR SHALL BE ADDED TO THE PRESTRESSED CONCRETE BOX UNITS AT A RATE OF 5 GALLONS PER CUBIC YARD IN ACCORDANCE WITH THE NYSDOT PRESTRESSED CONCRETE CONSTRUCTION MANUAL (PCCM). COST TO BE INCLUDED IN THE UNIT PRICE BID IN ACCORDANCE WITH THE NYSDOT PRESTRESSED CONCRETE CONSTRUCTION MANUAL (PCCM) FOR ITEM 563.02. PENETRATING SEALER AS SPECIFIED IN THE PCCM SHALL BE APPLIED TO THE SIDES AND BOTTOM OF ALL PRESTRESSED CONCRETE BOX UNITS. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 563.02.

REMOVAL NOTES

1. EXISTING SUBSTRUCTURE SHALL BE REMOVED WITHIN THE LIMITS SHOWN ON THE PLANS UNDER ITEM 202.19.

2. EXISTING SUPERSTRUCTURE SHALL BE REMOVED UNDER ITEM 202.120001.

3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF SUBSECTION 202-3.01 GENERAL AND SAFETY REQUIREMENTS. A REMOVAL PLAN SHALL BE SUBMITTED TO THE ENGINEER FIFTEEN (15) DAYS PRIOR TO BEGINNING THE DEMOLITION. THE REQUIREMENT THAT IT BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER IS WAIVED.

4. RECORD PLANS FOR THIS STRUCTURE ARE NOT AVAILABLE.

5. DURING REMOVAL OPERATIONS, THE CONTRACTOR SHALL NOT BE ALLOWED TO DROP WASTE CONCRETE, DEBRIS AND OTHER MATERIALS TO THE AREA BELOW THE BRIDGE, EXCEPT WHERE PLANS SPECIFICALLY PERMIT THE DROPPING OF MATERIAL. PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES SHALL BE USED TO CATCH THE MATERIAL. IF THE ENGINEER DETERMINES THAT ADEQUATE PROTECTIVE DEVICES ARE NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

6. ALL MATERIAL FALLING ON THE AREA BELOW AND ADJACENT TO THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, AT NO COST TO THE COUNTY.

7. CARE SHOULD BE TAKEN TO RETAIN NATURAL GROWTH AND PREVENT DAMAGE TO TREES WITHIN AND OUTSIDE THE LIMITS OF CONSTRUCTION, AND NOT SCHEDULED FOR REMOVAL. ANY DAMAGE CAUSED TO THIS NATURAL GROWTH SHALL BE RESTORED AT THE EXPENSE OF THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

8. EXCAVATION BELOW THE PLANNED BOTTOM OF FOOTING ELEVATION WILL NOT BE ALLOWED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. BACKFILL OF UNAUTHORIZED EXCAVATIONS BEYOND THE PAYMENT LINES WILL BE AT THE CONTRACTOR'S EXPENSE. BACKFILL MATERIAL WILL BE AS DIRECTED BY THE ENGINEER.

9. WHENEVER ITEMS IN THE CONTRACT REQUIRE MATERIALS TO BE REMOVED AND DISPOSED OF, THE COST OF SUPPLYING A DISPOSAL AREA AND TRANSPORTATION TO THAT AREA SHALL BE INCLUDED IN THE UNIT PRICES FOR THOSE ITEMS.

10. THE COST OF FURNISHINGS, INSTALLING, MAINTAINING, REMOVING AND DISPOSING OF ALL PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ITEMS OF THE CONTRACT.

11. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS, BRACING AND OTHER DEVICES REQUIRED OR DIRECTED BY THE ENGINEER TO PROTECT THE SAFETY OF THE ADJACENT STRUCTURES, ROADWAY AND UTILITIES.

12. ASPHALT, TAR OR MACADAM PAVEMENT SHALL BE REMOVED FROM BRIDGE DECKS BEFORE PROCEEDING WITH OTHER DISMANTLING ACTIVITIES. ALL ASPHALT MATERIALS SHALL BE PROPERLY RECYCLED AND/OR DISPOSED OF AT AN APPROVED LANDFILL.

STREAM PROTECTION NOTE

DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO ANY STREAM FROM POLLUTION BY DEBRIS, SEDIMENT OR OTHER FOREIGN MATERIAL, OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR SUCH STREAMS. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO A STREAM ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT CEMENT, OIL, OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM A STREAM, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM REQUIRED TO PROTECT AND MAINTAIN WATER RIGHTS AND TO SUSTAIN FISH LIFE DOWNSTREAM.

UTILITY NOTES

1. LOCATION OF UTILITIES, PUBLIC AND/OR PRIVATE, INDICATED AS EXISTING AND/OR TO BE CONSTRUCTED AS SHOWN ON THE PLANS, ARE APPROXIMATE ONLY. THEIR EXACT LOCATION SHALL BE DETERMINED IN THE FIELD. ADDITIONAL UTILITY LINES, WHETHER ABANDONED OR IN SERVICE, MAY EXIST AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT HIS OPERATIONS AND TAKE THE NECESSARY PRECAUTIONS TO PREVENT INTERFERENCE WITH OR DAMAGE TO THESE OR OTHER FACILITIES DURING THE COURSE OF CONSTRUCTION.

2. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGING EXISTING UTILITIES. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE COUNTY.

3. IN THE EVENT THE CONTRACTOR DAMAGES AN EXISTING UTILITY SERVICE, CAUSING AN INTERRUPTION IN SAID SERVICE, HE/SHE SHALL IMMEDIATELY COMMENCE WORK TO RESTORE SERVICE AND MAY NOT CEASE HIS/HER WORK OPERATION UNTIL SERVICE IS RESTORED.

4. OVERHEAD ELECTRICAL AND TELEPHONE LINES ARE IN PROXIMITY TO THIS BRIDGE. REFER TO SUBSECTION 107-05 OF THE STANDARD SPECIFICATIONS FOR CONTRACTOR SAFETY REQUIREMENTS.

5. THE EXISTING UTILITY POLE ALONG THE NORTH R.O.W. LINE IS TO BE RELOCATED BY VERIZON.

DECK PLACEMENT NOTES

1. CONCRETE PLACEMENT AND FINISHING OPERATIONS SHALL BE PERFORMED AS RAPIDLY AS POSSIBLE. THE ENGINEER MAY ORDER THE CONTRACTOR TO STOP PLACEMENT OPERATIONS AT ANY TIME, IF IN THE ENGINEER'S OPINION, CONCRETE PLACED DURING THE PLACEMENT HAS STARTED TO SET, OR IS ABOUT TO SET, AND FURTHER PLACEMENT OF CONCRETE WILL CAUSE DEFLECTION CRACKING.

2. LONGITUDINAL CONSTRUCTION JOINTS WILL NOT BE PERMITTED.

3. FINISHING MACHINE(S) SHALL BE OPERATED AS CLOSE TO THE SKEW ANGLE AS PRACTICABLE FOR SKEW ANGLES BETWEEN 0 DEG. AND 50 DEG. MAXIMUM.

4. WET BURLAP CURING BLANKETS ARE REQUIRED TO BE PLACED ON THE CONCRETE DECK WITHIN 30 MINUTES OF THE CONCRETE BEING DEPOSITED INTO THE FORMS OR 5 MINUTES AFTER FINISHING, WHICHEVER COMES FIRST. THE PLACEMENT OF THE TURF DRAG TEXTURE SHALL NOT INTERFERE WITH THESE REQUIREMENTS.

5. IN THE EVENT THE CONTRACTOR'S DECK PLACEMENT OPERATION IS STOPPED PRIOR TO COMPLETION, WHETHER BY THE CONTRACTOR'S OWN DECISION OR BY ORDER OF THE ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FINISHED DECK GRADE WHICH MATCHES THE PLANNED PROFILE.

CONCRETE NOTE

ALL STRUCTURAL HP CONCRETE (EXCEPT ABUTMENT FOOTINGS) SHALL CONTAIN CORROSION INHIBITOR (4 GALLONS PER CUBIC YARD). THE COST OF THE CORROSION INHIBITOR SHALL BE PAID FOR UNDER ITEM 555.95000007.

REINFORCEMENT NOTES

1. BAR REINFORCEMENT SPACINGS INDICATED ON THESE PLANS ARE MAXIMUM UNLESS OTHERWISE SPECIFIED.

2. COVER FOR BAR REINFORCEMENT ON THESE PLANS SHALL BE 3" IN FOOTINGS AND 2" ELSEWHERE UNLESS OTHERWISE SPECIFIED.

STORAGE NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMISSION FROM THE COUNTY FOR LOCATIONS TO BE USED TO STORE MATERIALS WITHIN THE RIGHT-OF-WAY. THE CONTRACTOR SHALL OBTAIN THE WRITTEN PERMISSION OF PRIVATE PROPERTY OWNERS PRIOR TO UTILIZING ANY AREAS OUT OF THE RIGHT-OF-WAY TO STORE MATERIALS. A COPY OF ANY WRITTEN PERMISSION TO STORE MATERIALS ON PRIVATE PROPERTY, IF OBTAINED, SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED PRIOR TO STORAGE OF ANY MATERIALS AT THE PROPOSED SITE.

COFFERDAM NOTES

1. SHOULD THE CONTRACTOR ELECT TO LAY BACK A PORTION OF THE EXISTING EARTH ADJACENT TO AN EXCAVATION REQUIRING A COFFERDAM, ANY REQUIRED EXTENSIONS OF THE COFFERDAM NECESSARY TO KEEP WATER FROM ENTERING THE EXCAVATION SHALL BE FURNISHED AND PLACED AT NO COST TO THE COUNTY.

2. WHERE A COFFERDAM IS USED, THE COST OF DEWATERING THE ENTIRE EXCAVATION, REGARDLESS OF THE SOURCE OF WATER, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE COFFERDAM ITEM.

3. SHOULD FIELD CONDITIONS REQUIRE A CHANGE FROM THE TYPE OF COFFERDAM SYSTEM CALLED FOR IN THE PLANS, THE ENGINEER-IN-CHARGE SHALL CONTACT THE COUNTY FOR COORDINATION WITH APPROPRIATE AGENCIES TO APPROVE THE CHANGE.

4. DEWATERING THE COFFERDAM SHALL BE ACCOMPLISHED BY PUMPING THE WATER TO AN APPROVED UPLAND VEGETATED AREA OUTSIDE OF THE STREAMBED AS SHOWN ON THE PLANS AND/OR APPROVED BY THE E.I.C. TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL, SUCH AS HAY BALES OR APPROVED EQUAL, MAY BE REQUIRED AS DETERMINED BY THE ENGINEER-IN-CHARGE. NO SETTLEMENT BASIN SHALL BE CONSTRUCTED.

5. ORDINARY HIGH WATER IS ESTIMATED TO BE 1477.43. THIS IS DEFINED AS THE WATER SURFACE ELEVATION FOR THE MEAN ANNUAL FLOOD, WHICH IS THE FLOOD THAT HAS A RECURRENCE INTERVAL OF 2.33 YEARS.

   ORDINARY WATER IS ESTIMATED TO BE 1475.00. THIS IS DEFINED AS THE HIGHEST SURFACE WATER ELEVATION LIKELY TO BE ENCOUNTERED DURING ONE CONSTRUCTION SEASON (OTHER THAN MAJOR FLOODS). IT IS ALWAYS LESS THAN THE ORDINARY HIGH WATER ELEVATION AND IT IS USUALLY AN OBSERVED ELEVATION RATHER THAN A COMPUTED ONE.

   LOW WATER IS ESTIMATED TO BE 1474.00. THIS WATER ELEVATION IS THE NORMAL LOW WATER ELEVATION PREVALENT DURING ONE CONSTRUCTION SEASON FOR MORE THAN 25% OF THE TIME. IT IS AN OBSERVED ELEVATION RATHER THAN A COMPUTED ONE.

PRESTRESSED CONCRETE BEAM NOTE

THE CONTRACTOR MAY PROPOSE DEBONDING OF PRETENSIONING STRANDS FOR 6 INCHES FROM ENDS OF BEAMS TO REDUCE THE TENDENCY FOR BEAM ENDS TO CRACK. TOTAL NUMBER OF DEBONDED STRANDS (DESIGN BONDING SHOWN ON THE CONTRACT PLANS AND CRACK CONTROL DEBONDING COMBINED) SHALL NOT EXCEED 50% OF THE TOTAL NUMBER OF STRANDS.

TREE REMOVAL RESTRICTION NOTE

THIS PROJECT PROPOSES TO REMOVE SEVEN (7) TREES IN A FORESTED AREA THAT IS A POTENTIALLY SUITABLE SUMMER HABITAT FOR THE NORTHERN LONG-EARED BAT. TO MINIMIZE THE POTENTIAL FOR HARMING THIS SPECIES, THE TREES SHALL BE CUT DURING THE WINTER MONTHS (FROM OCTOBER 3IST TO MARCH 31ST) WHEN BATS ARE PRESUMED TO HAVE MIGRATED TO THEIR WINTER HIBERNACULUM.

ENGINEER'S FIELD OFFICE AND EQUIPMENT

THE CONTRACTOR SHALL SUPPLY THE FOLLOWING
- ITEM 637.03 - CONCRETE CYLINDER CURING BOX
- ITEM 637.11 - ENGINEERS FILED OFFICE, TYPE I
- ITEM 637.34 - OFFICE TECHNOLOGY AND SUPPLIES

project:

LEON-NEW ALBION ROAD

OVER MUD CREEK PIN 5758.49, BIN 3322110

WATTS ARCHITECTURE & ENGINEERING
95 Perry Street , Suite 300
Buffalo, New York 14203
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signature and seal

STATE OF NEW YORK · TIMOTHY E. MAJOR · No. 081051 · LICENSED PROFESSIONAL ENGINEER

proprietary notes:

drawing history

number	date	description

sheet title

GENERAL NOTES

project number:	11045
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BR-06

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Aug 23, 2017, 11:24am

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

18E11 HOLE NO. Bore Hole 1-11 SURF. ELEVATION 1483.3

PROJECT Prop. Bridge Replacement, #7 Bridge over Mud Creek LOCATION _
Town of Leon, Cattaraugus Co., NY

CLIENT McMahon & Mann Consulting Engineers, PC DATE STARTED 06/08/11 COMPLETED 06/08/11

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
0	1	16						Gray asphalt pavement. 0.4	Asphalt pavement to 0.4 feet over sandy soil fill with some gravel and slag, little silt to 2.5 feet over silty soil fill with little sand and clay, trace to little gravel to 4.0 feet over sandy soil fill with some gravel, little silt to 6.0 feet over water sorted and deposited sand with some gravel, little silt to 9.0 feet over loamy glacial till to 11.0 feet over apparent shale bedrock with thin siltstone interbeds to 14.0 feet over sandstone bedrock to end of coring.
	11		25			50		Extremely moist brownish gray gravelly (SILTY-SAND) fill with 20 to 40% gravel and slag, very fine to very coarse size sand, little silt, dense, massive soil structure, (SM). 2.5	
	2	24		25					
	14		10			15			
				5	7				
	3	15							
5	12		12			23		Extremely moist faintly mottled brown (SAND-SILT-CLAY) fill with 5 to 15% gravel, little sand and clay, stiff, massive soil structure, (ML-CL). 4.0	
				11	16				
	4	11							
	13		12			25		Extremely moist to moist grayish brown gravelly (SILTY-SAND) fill with 20 to 40% gravel, little silt, compact, massive soil structure, (SM). 6.0	
				13	12				
	5	16							
	16		12			22			
				10	13				
10	6	20							
	17		38			80		Extremely moist faintly mottled grayish brown gravelly (SILTY-SAND) with 20 to 40% gravel, very fine to very coarse size sand, little silt, compact, stratified, (SM).	
				42	47			clear transition to 9.0	
								Wet grayish brown and bluish gray gravelly (SAND-SILT-CLAY) with 20 to 40% gravel, little sand and clay, very stiff, massive soil structure, (SC).	
15								clear transition to 11.0	
								Gray apparent shale bedrock, very soft and soft with occasional thin siltstone beds with medium hardness. 14.0	
	Run #1								
20								See next sheet.	

EDI Bedrock Hardness Classification

Very soft: can be easily crushed between fingers into soil material.
Soft: can be crushed between fingers into soil material with some effort.
Medium hardness: can be easily etched with knife.

Note: No apparent water loss into formation during coring.

Run #	Depth (ft)	Length (ft)	Rec (ft)	Rec %	RQD %
1	14.0 to 24.0	10.0	8.6	86	33

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW
LOGGED BY Brian R. Bartron, Geologist, (mw) SHEET 1 OF 2

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
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18E11 HOLE NO. Bore Hole 2-11 SURF. ELEVATION 1482.1

PROJECT Prop. Bridge Replacement, #7 Bridge over Mud Creek LOCATION _
Town of Leon, Cattaraugus Co., NY

CLIENT McMahon & Mann Consulting Engineers, PC DATE STARTED 06/08/11 COMPLETED 06/08/11

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
0	1	12						Gray asphalt pavement. 0.5	Asphalt pavement to 0.5 feet over mostly slag fill to 1.7 feet over coarse silty soil fill with little sand, trace to little gravel to 3.2 feet over mostly sand and gravel fill to 3.6 feet over coarse silty soil fill with little sand to 4.2 feet over water sorted and deposited sand with some gravel, little silt to 8.3 feet over silty saprolite with little sand and clay to 11.3 feet over apparent shale bedrock with occasional thin siltstone interbeds to 14.0 feet over sandstone bedrock to 22.5 feet over siltstone bedrock to end of coring.
	9		18			36		Gray mostly slag fill. 1.7	
				18					
	2	8							
	18		11			23		Extremely moist brown (SANDY-SILT) fill with 5 to 15% gravel, little sand, trace organic matter, compact, massive soil structure, (ML). 3.2	
				12	7				
	3	8							
5	14		14			24		Moist gray very gravelly (SAND) fill with 40 to 80% gravel, trace silt, compact in place, loose when disturbed, single grain, (SW). 3.8	
				10	7				
	4	10							
	17		12			17		Extremely moist brown (SANDY-SILT) fill with 3 to 7% gravel, little sand, trace clay and organic matter, compact, massive soil structure, (ML). 4.2	
				5	6				
	5	4							
	19		6			13			
				7	10				
10	6	8							
	12		8			17		Extremely moist distinctly mottled grayish brown gravelly (SILTY-SAND) with 20 to 40% gravel, very fine to very coarse size sand, little silt, compact, stratified, (SM). 8.3	
				9	100/4				
								Extremely moist to wet bluish gray saprolite (SAND-SILT-CLAY) with trace to little very fine size sand and clay, stiff, weakly thinly bedded, (ML-CL). 11.3	
15									
								Gray apparent shale bedrock, very soft, soft and moderately soft with occasional thin siltstone and sandstone fragments, medium hardness. 14.0	
	Run #1								
20								See next sheet.	

EDI Bedrock Hardness Classification

Very soft: can be easily crushed between fingers into soil material.
Soft: can be crushed between fingers into soil material with some effort.
Moderately soft: can be etched with fingernail.
Medium hardness: can be easily etched with knife.

Saprolite bedrock weathered in place to soil.

Run #	Depth (ft)	Length (ft)	Rec (ft)	Rec %	RQD %
1	14.0 to 24.0	10.0	7.4	74	30

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW
LOGGED BY Brian R. Bartron, Geologist, (mw) SHEET 1 OF 2

NOTE:

A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT AND IS AVAILABLE AT THE CATTARAUGUS COUNTY DPW.

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Aug 23, 2017, 4:18pm

project:

LEON-NEW ALBION ROAD

OVER MUD CREEK PIN 5758.49, BIN 3322110

CATTARAUGUS PUBLIC WORKS COUNTY

WATTS ARCHITECTURE & ENGINEERING
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signature and seal

STATE OF NEW YORK TIMOTHY E. MAJOR LICENSED PROFESSIONAL ENGINEER No. 081051

proprietary notes:

drawing history

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BORING LOGS -1

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BR-07

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
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18E11 HOLE NO. Bore Hole 3-11 SURF. ELEVATION 1462.3

PROJECT Prop. Bridge Replacement, #7 Bridge over Mud Creek LOCATION –
Town of Leon, Cattaraugus Co., NY

CLIENT McMahon & Mann Consulting Engineers, PC DATE STARTED 08/09/11 COMPLETED 08/09/11

DEPTH IN FT	SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
0	1	28						Gray asphalt pavement. 0.4	Asphalt pavement to 0.4 feet over sandy soil fill with some gravel, slag and asphalt remnants, little silt to 2.5 feet over water sorted and deposited sand with some gravel, little silt to 8.3 feet over apparent shale bedrock to 9.0 feet over shale bedrock to 13.0 feet over siltstone bedrock to end of coring.
	14		21			34		Moist gray gravelly (SILTY-SAND) fill with 20 to 40% gravel, slag and asphalt remnants, little silt, dense, massive soil structure, (SM). 2.5	
	2	10						Extremely moist distinctly mottled, faintly mottled below 4.0 feet grayish brown gravelly (SILTY-SAND) with 20 to 40% gravel, very fine to very coarse size sand, little silt, compact, stratified, (SM). 6.3	
	20		8			18			
				8					
					9				
	3	13							
5	17		12			22			
				10					
					24				
	4	31							EDI Bedrock Hardness Classification
	20		43			99		Olive gray apparent shale bedrock, very soft and soft with occasional thin layers of moderately soft rock. 9.0	Very soft: can be easily crushed between fingers into soil material.
				56					Soft: can be crushed between fingers into soil material with some effort.
					82				Moderately soft: can be etched with fingernail.
	5	100/4							Medium hardness: can be easily etched with knife.
	4								
10								Olive gray shale bedrock, moderately soft with occasional thin beds of very soft and soft rock, highly broken and fractured with occasional mud seams. 13.0	
		Run	#1						
									Run # / Depth (ft) / Length (ft) / Rec (ft) / Rec % / RQD % 1: 9.0 to 13.0 / 4.0 / 2.2 / 55 / 0
15								Light bluish gray sandstone bedrock, medium hardness, moderately to highly fractured horizontally along bedding planes, vertical fractures 13.2 to 13.8 and 19.3 to 19.8 foot depths, thinly bedded to banded, slightly porous with an occasional pit and vug.	
		Run	#2						2: 13.0 to 20.0 / 7.0 / 6.3 / 90
20								Coring completed at 20.0 feet. 20.0	

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW
LOGGED BY Brian R. Bartron, Geologist, (mw) SHEET 1 OF 1

EARTH DIMENSIONS, INC.
Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

18E11 HOLE NO. Bore Hole 4-11 SURF. ELEVATION 1483.5

PROJECT Prop. Bridge Replacement, #7 Bridge over Mud Creek LOCATION –
Town of Leon, Cattaraugus Co., NY

CLIENT McMahon & Mann Consulting Engineers, PC DATE STARTED 08/09/11 COMPLETED 08/09/11

DEPTH IN FT	SN	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	Run	#2						Light bluish gray sandstone bedrock, medium hardness, moderately to highly fractured horizontally along bedding planes, slightly porous with an occasional pit and vug. 21.0	EDI Bedrock Hardness Classification Medium hardness: can be easily etched with knife.
25								Coring completed at 21.0 feet.	Run # / Depth (ft) / Length (ft) / Rec (ft) / Rec % / RQD % 1: 11.0 to 15.0 / 4.0 / 2.9 / 73 / 10 2: 15.0 to 21.0 / 6.0 / 4.9 / 82 / 45
30									
35									
40									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW
LOGGED BY Brian R. Bartron, Geologist, (mw) SHEET 2 OF 2

NOTE:

A GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT AND IS AVAILABLE AT THE CATTARAUGUS COUNTY DPW.

project:

LEON-NEW ALBION ROAD

OVER MUD CREEK PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

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STATE OF NEW YORK · TIMOTHY E. MAJOR · No. 081051 · LICENSED PROFESSIONAL ENGINEER

proprietary notes:

drawing history

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BORING LOGS -2

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BR-08

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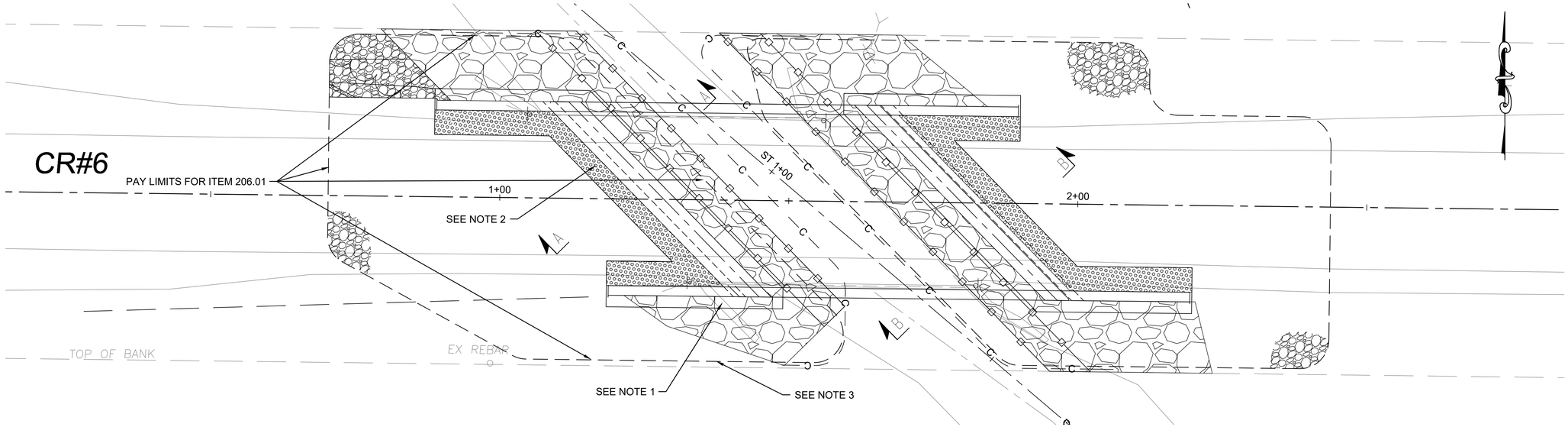
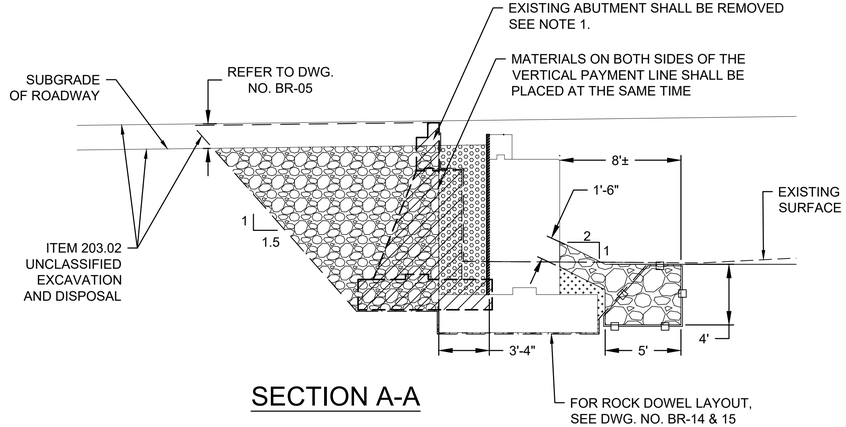
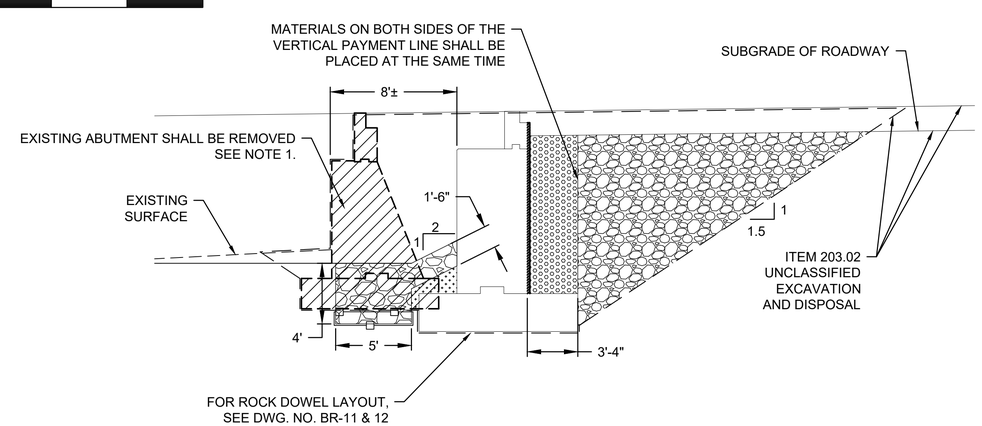


EXCAVATION AND BACKFILL PLAN

-10 0 10 20 30 FT



SECTION A-A



SECTION B-B

LEGEND

- STRUCTURE EXCAVATION, ITEM 206.01
- STONE FILLING, MEDIUM, ITEM 620.04 (SEE NOTE 4)
- EMBANKMENT IN PLACE, ITEM 203.03
- SELECT STRUCTURE FILL, ITEM 203.21
- BACKFILL WITH SUITABLE EXCAVATED MATERIAL AS PROVIDED UNDER STRUCTURE EXCAVATION, ITEM 206.01
- REMOVAL OF SUBSTRUCTURES, ITEM 202.19
- PREFABRICATED COMPOSITE STRUCTURAL DRAIN ITEM 207.26
- C — COFFERDAM TYPE 2, ITEM 553.020001 OR ITEM 553.020002
- TRENCH AND CULVERT, ITEM 206.0201

NOTES:

1. PORTION OF EXISTING WING WALLS MAY BE LEFT IN PLACE. WING WALLS LEFT IN PLACE SHALL BE CUT OF 2' BELOW GRADE AND SHALL NOT INTERFERE WITH ANY OF THE PROPOSED STRUCTURE.
2. RECORD PLANS FOR THIS BRIDGE ARE NOT AVAILABLE. EXACT SHAPE AND LIMITS OF THE EXISTING ABUTMENTS AND WING WALLS ARE UNKNOWN. ASSUMPTIONS WERE MADE AS TO THE TYPE AND LIMITS OF THE EXISTING ABUTMENT FOR ESTIMATING PURPOSES.
3. BEDROCK IN THIS QUADRANT IS AT OR NEAR THE GROUND SURFACE AND SLOPES UP FROM A SHALLOW ROADSIDE SWALE AT APPROXIMATELY 1 VERTICAL TO 1.5 HORIZONTAL. BASED ON THIS STABLE ROCK OUTCROP FORMATION, IT IS ANTICIPATED THAT A STABLE EXCAVATION - THAT IS STEEPER THAN THE TYPICAL 1 VERTICAL TO 1.5 HORIZONTAL LAYBACK - CAN BE ACHIEVED IN THIS AREA. THE ENGINEER WILL EVALUATE THE STABILITY OF THIS SLOPE DURING THE EXCAVATION.
4. STONE FILLING SHALL BE GROUTED BELOW ORDINARY HIGH WATER (EL. 1477.43). GROUT SHALL MEET THE REQUIREMENTS OF TABLE 733-22B IN THE NYSDOT STANDARD SPECIFICATIONS. COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 620.04

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Aug 23, 2017, 11:24am

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

WATTS ARCHITECTURE & ENGINEERING
95 Perry Street , Suite 300
Buffalo, New York 14203
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drawing history

number	date	description

sheet title

EXCAVATION AND EMBANKMENT

project number:	11045
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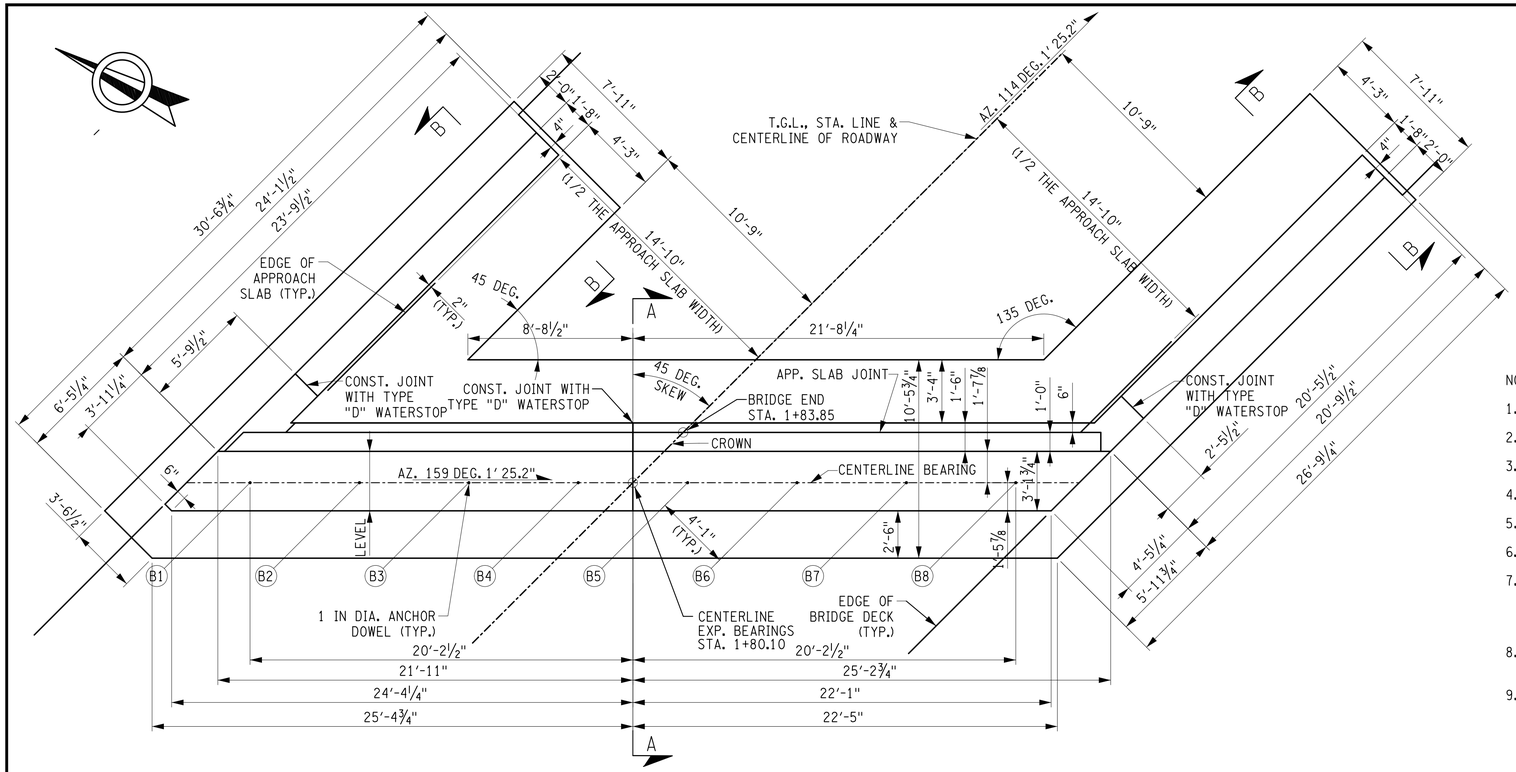
BR-09



PLAN

CONCRETE TABLE (CY)		
POUR	QUANTITY	ITEM NO.
①	73.5	555.08
②	40.5	555.09
③	38.0	555.09
④	3.5	555.09
⑤	3.5	555.09
⑥	13.5	555.09
⑦	13.5	555.09
TOTAL	186.0	

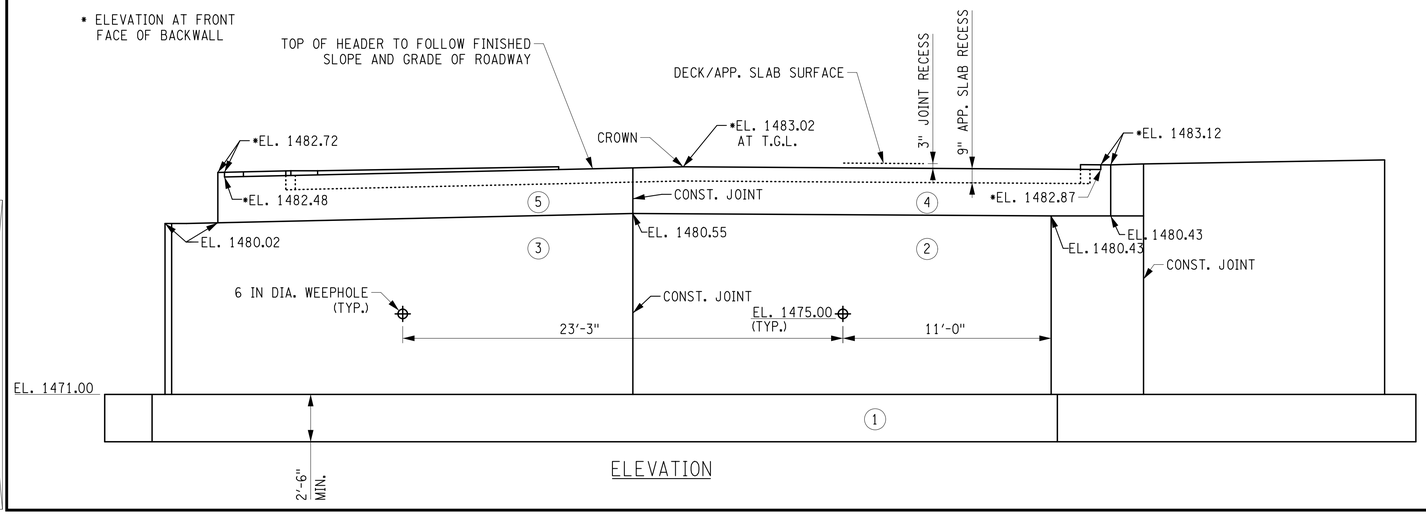
LEGEND

- (BX) - BEAM NO.
- (X) - POUR NO.
- ⌖ - WEEP HOLE

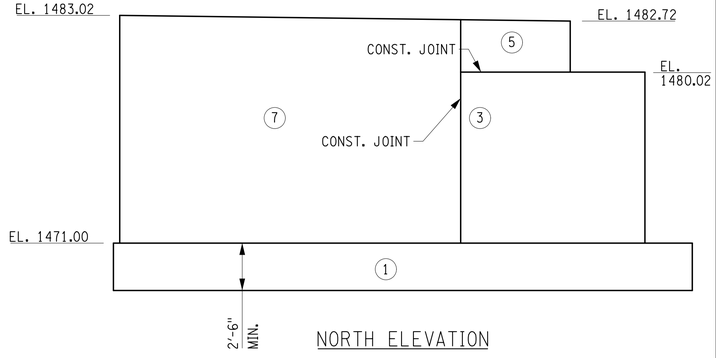
0 2 4 6 8 10 FT
SCALE

NOTES:

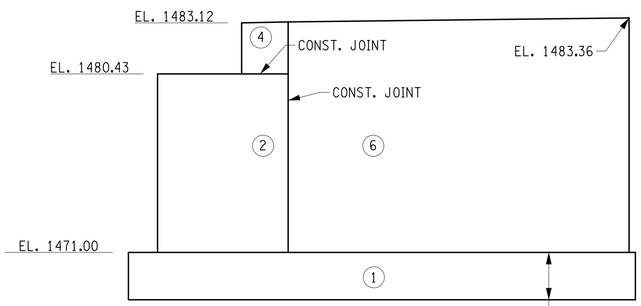
1. TOP OF BACKWALL TO CONFORM TO FINISHED SLOPE AND GRADE OF ROADWAY.
2. INSTALL TYPE 'D' WATERSTOP AT CONSTRUCTION JOINTS.
3. SEE DWG. NO. BR-12 FOR SECTIONS A-A AND B-B.
4. FOR KEYWAY DETAILS, SEE DWG. NO. BR-12.
5. FOR CHAMFER DETAILS, SEE DWG. NO. BR-12.
6. FOR TYPE D WATERSTOP DETAILS, SEE DWG. NO. BR-15.
7. THE BEDROCK BEARING GRADE SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER, PRIOR TO THE PLACEMENT OF THE FOUNDATION. ANY LOOSE, DISTURBED OR OTHERWISE DELETERIOUS SOIL OR BEDROCK MATERIAL BENEATH THE PROPOSED FOUNDATION BEARING GRADES, SHALL BE REMOVED.
8. ITEM 559.16960118 - PROTECTIVE SEALING OF STRUCTURAL CONCRETE SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE SUBSTRUCTURE, A.O.B.E.
9. CONCRETE (EXCEPT FOR POUR 1) SHALL CONTAIN CORROSION INHIBITOR (4 GALLONS PER CUBIC YARD). ITEM 555.95000007.



ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

project:

LEON-NEW ALBION ROAD

OVER MUD CREEK PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

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EAST ABUTMENT PLAN & ELEVATION

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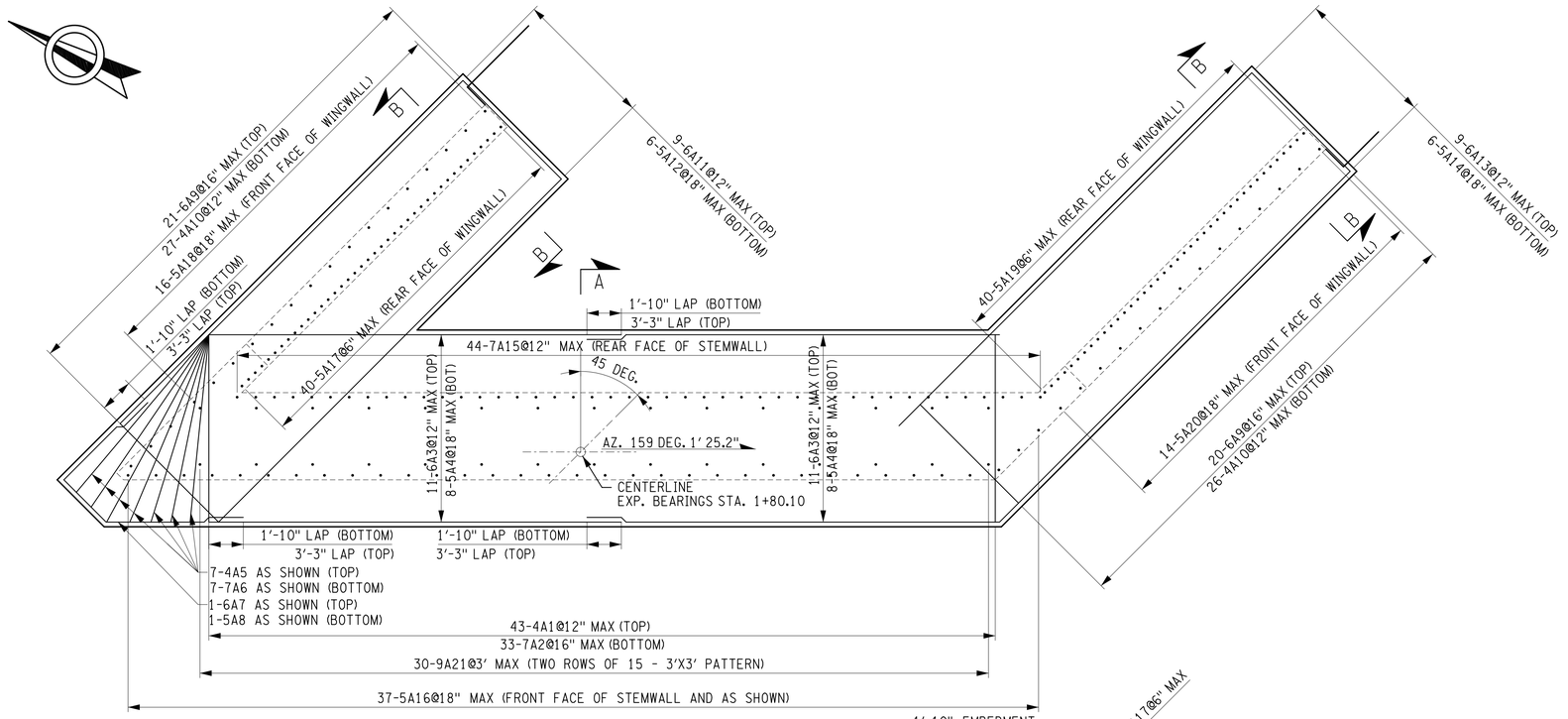
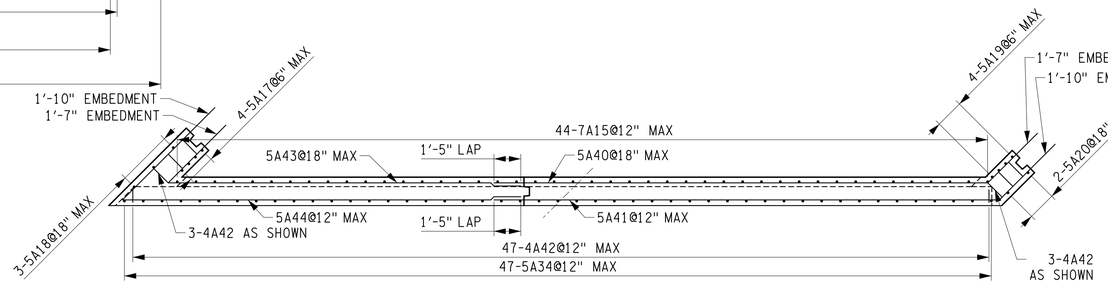
scale:	AS NOTED

sheet number

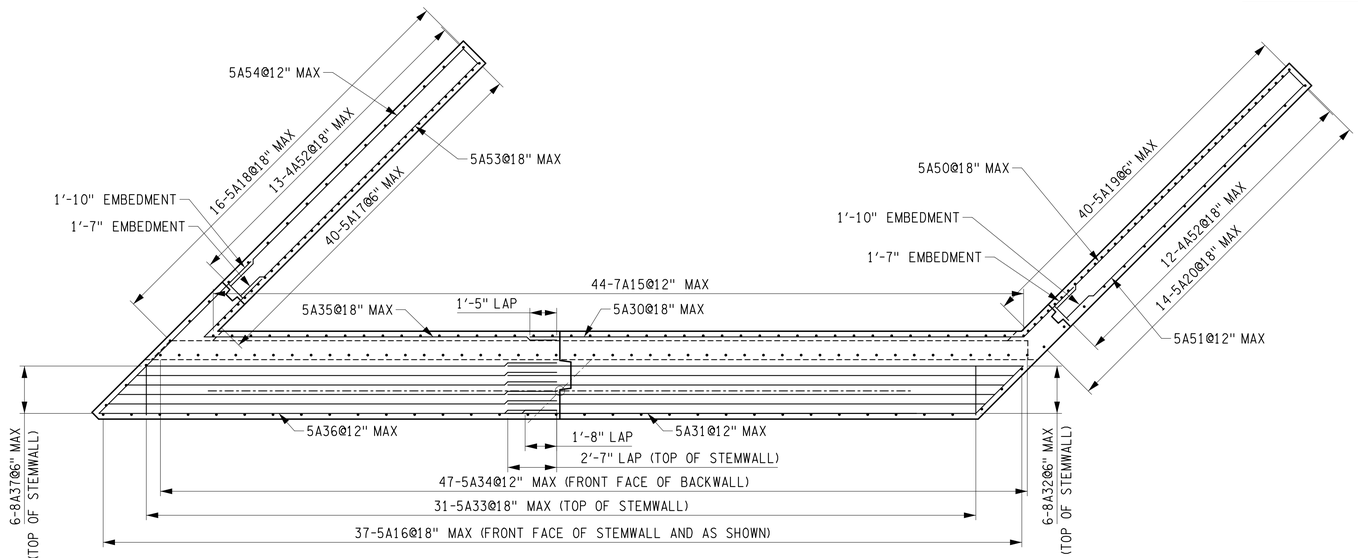
BR-10



FOOTING REINFORCEMENT PLAN



BACKWALL REINFORCEMENT PLAN



STEM AND WINGWALL REINFORCEMENT PLAN

0 2 4 6 8 10 FT
SCALE

NOTES:

1. COVER FOR FOOTING REINFORCEMENT SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
2. COVER FOR WALL REINFORCEMENT SHALL BE 2 INCHES UNLESS OTHERWISE NOTED.

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

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EAST ABUTMENT REINFORCEMENT

project number:	11045
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scale:	AS NOTED

sheet number

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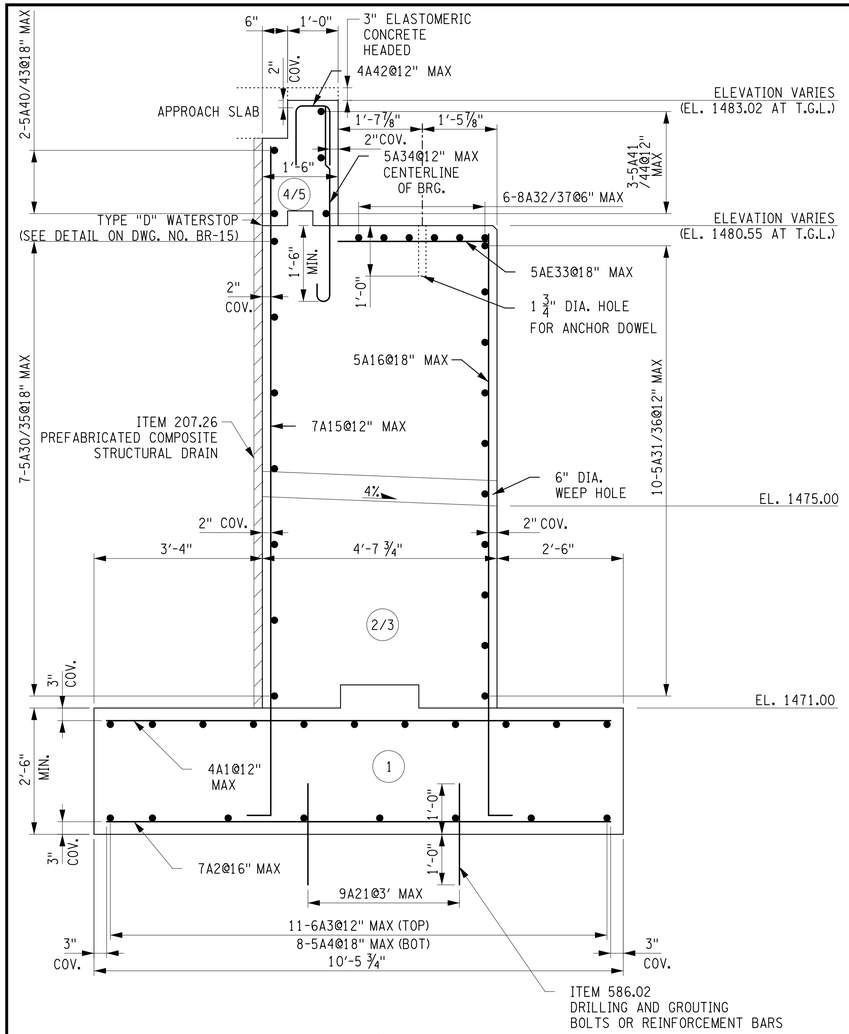

ABUTMENT SECTION A-A

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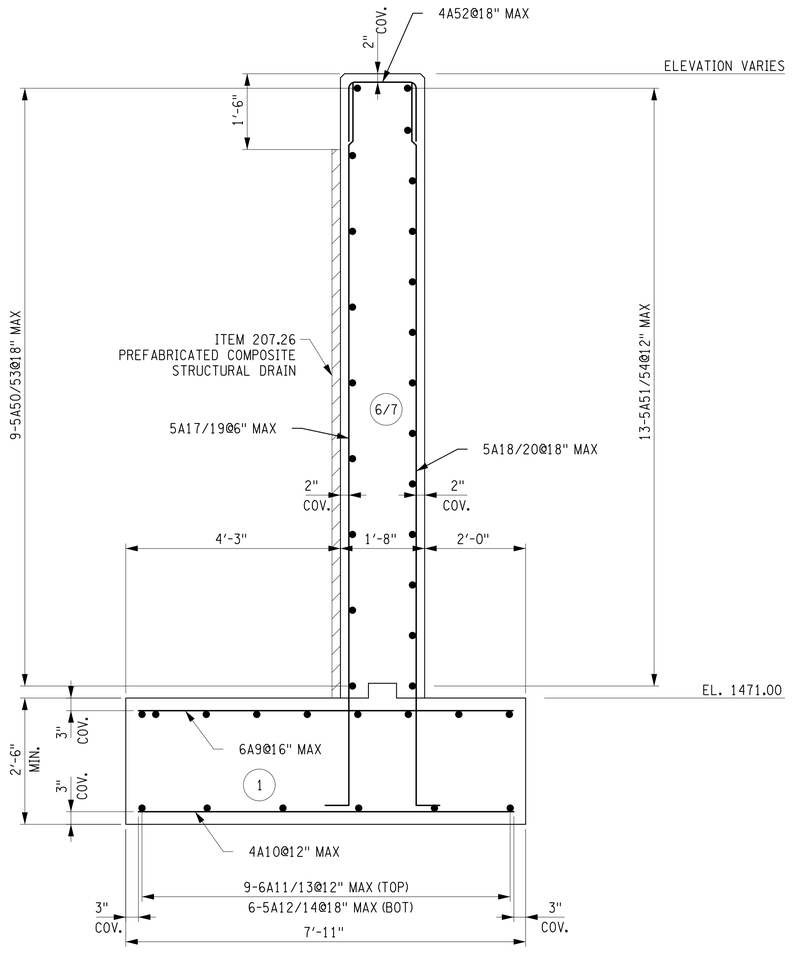
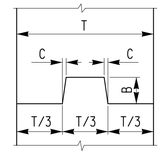


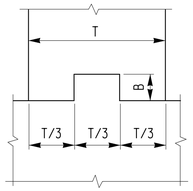
WINGWALL SECTION B-B

(X) - INDICATES CONCRETE PLACEMENT NUMBER



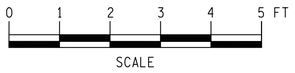
NOTE:
WATERSTOP NOT SHOWN.

VERTICAL SECTION

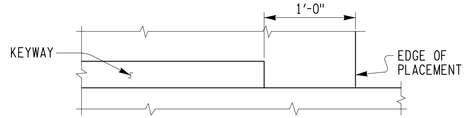


NOTE:
WATERSTOP NOT SHOWN.

HORIZONTAL SECTION



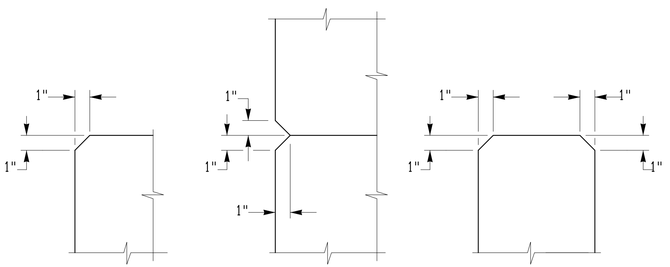
SCALE



KEYWAY PROFILE

NOTES:

1. COVER FOR FOOTING REINFORCEMENT SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
2. COVER FOR WALL REINFORCEMENT SHALL BE 2 INCHES UNLESS OTHERWISE NOTED.
3. SEE DWG. NO. BR-11 FOR LOCATION OF THE SECTIONS.



TYPICAL CHAMFER DETAILS
NOT TO SCALE

CONSTRUCTION JOINTS		
C	B	T/3
3/16"	1 1/2"	0 TO 6"
3/8"	3 1/2"	6" TO 10"
3/4"	5 1/2"	10" AND OVER

KEYWAY DETAILS
NOT TO SCALE

project:

LEON-NEW ALBION ROAD

OVER MUD CREEK PIN 5758.49, BIN 3322110

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EAST ABUTMENT SECTIONS & DETAILS

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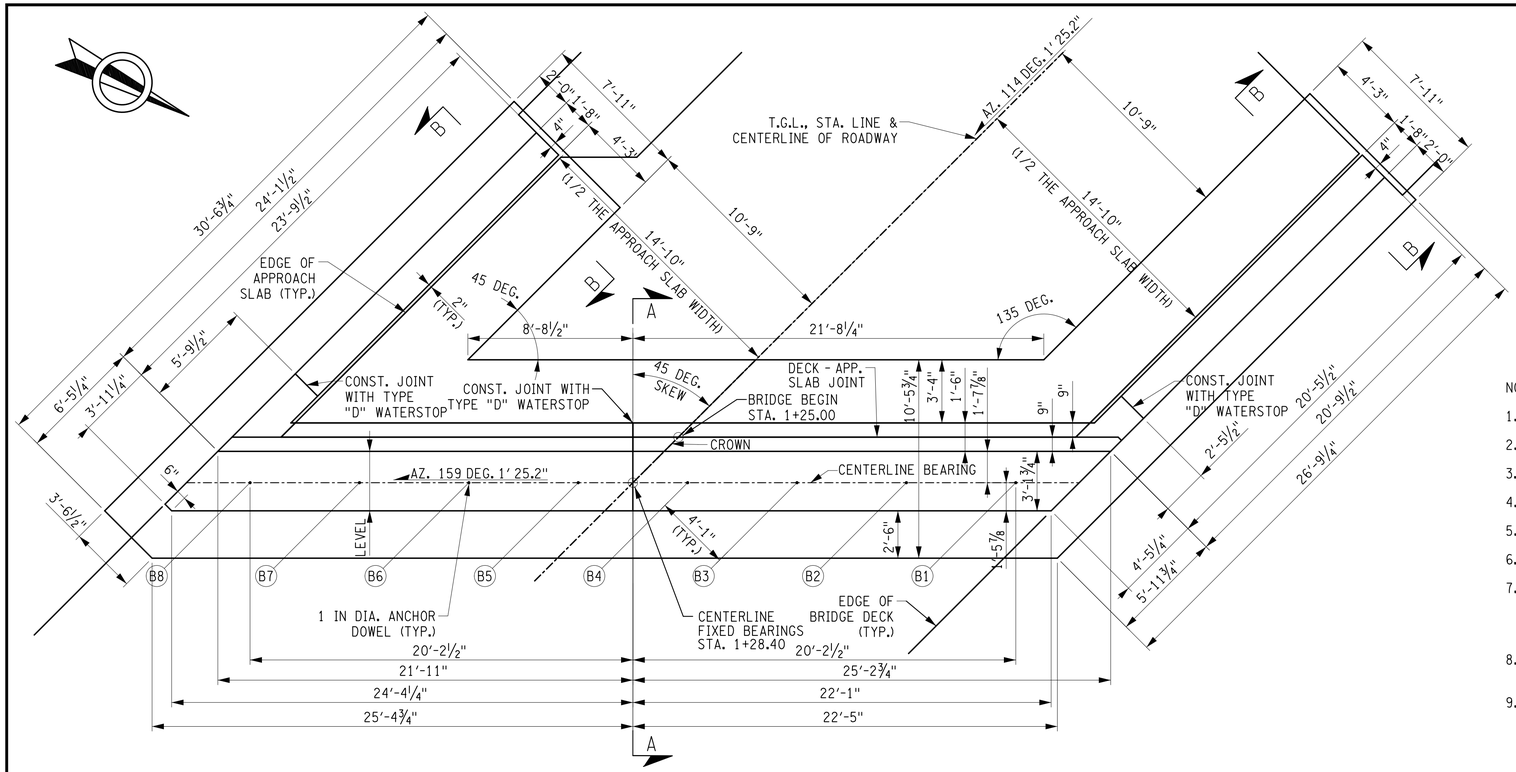
BR-12



PLAN

NOTES:

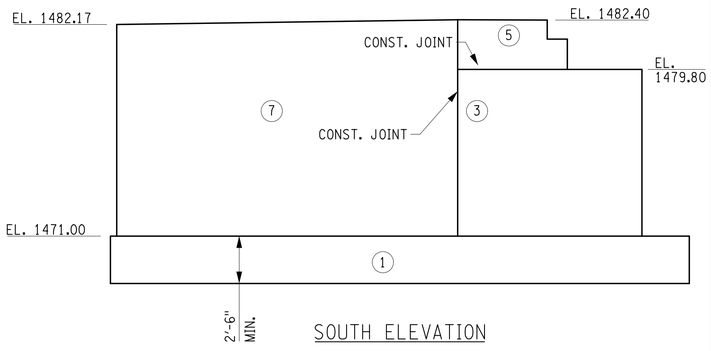
1. TOP OF BACKWALL TO CONFORM TO FINISHED SLOPE AND GRADE OF ROADWAY.
2. INSTALL TYPE 'D' WATERSTOP AT CONSTRUCTION JOINTS.
3. SEE DWG. NO. BR-15 FOR SECTIONS A-A AND B-B.
4. FOR KEYWAY DETAILS, SEE DWG. NO. BR-12.
5. FOR CHAMFER DETAILS, SEE DWG. NO. BR-12.
6. FOR TYPE D WATERSTOP DETAILS, SEE DWG. NO. BR-15.
7. THE BEDROCK BEARING GRADE SHALL BE OBSERVED AND EVALUATED BY THE ENGINEER, PRIOR TO THE PLACEMENT OF THE FOUNDATION. ANY LOOSE, DISTURBED OR OTHERWISE DELETERIOUS SOIL OR BEDROCK MATERIAL BENEATH THE PROPOSED FOUNDATION BEARING GRADES, SHALL BE REMOVED.
8. ITEM 559.16960118 - PROTECTIVE SEALING OF STRUCTURAL CONCRETE SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE SUBSTRUCTURE, A.O.B.E.
9. CONCRETE (EXCEPT FOR POUR 1) SHALL CONTAIN CORROSION INHIBITOR (4 GALLONS PER CUBIC YARD). ITEM 555.95000007.

CONCRETE TABLE (CY)		
POUR	QUANTITY	ITEM NO.
①	73.5	555.08
②	37.0	555.09
③	36.0	555.09
④	3.0	555.09
⑤	3.0	555.09
⑥	12.0	555.09
⑦	12.5	555.09
TOTAL	177.0	

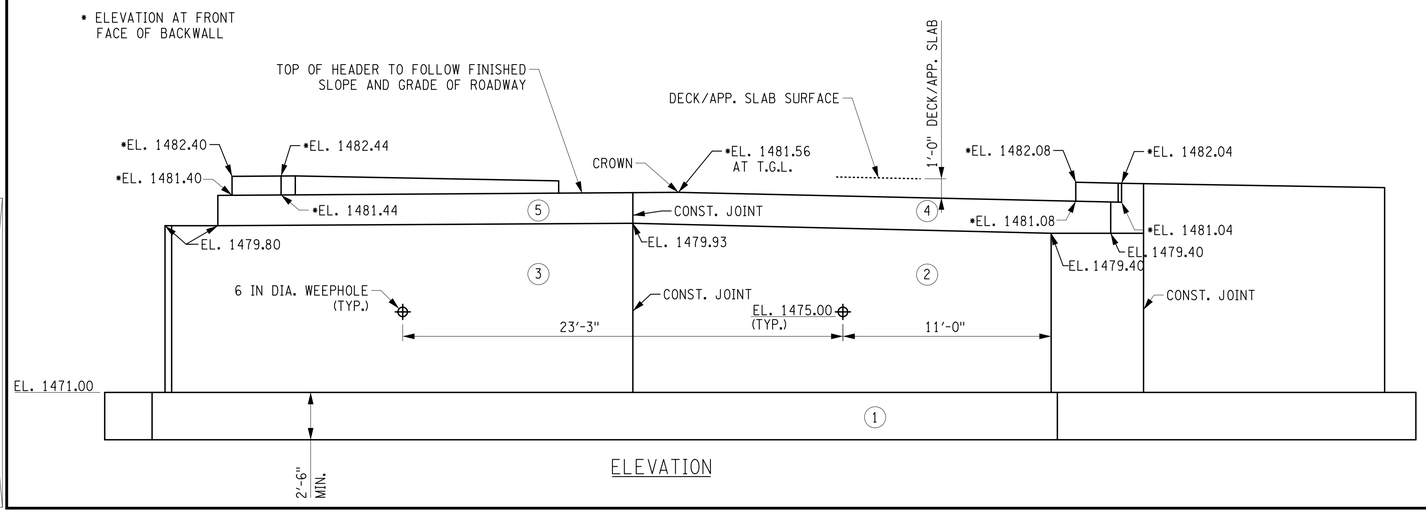
LEGEND

- (BX) - BEAM NO.
- (X) - POUR NO.
- ⌖ - WEEP HOLE

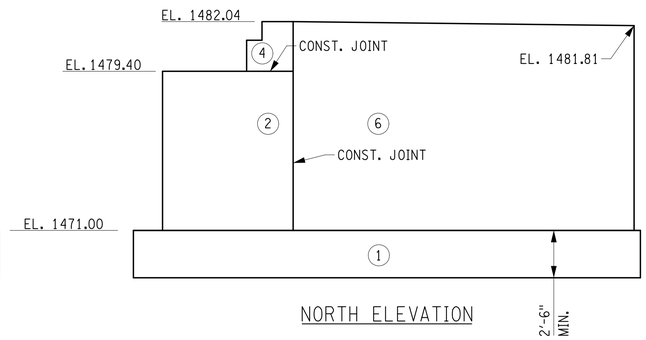
0 2 4 6 8 10 FT
SCALE



SOUTH ELEVATION



ELEVATION



NORTH ELEVATION

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

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WEST ABUTMENT PLAN & ELEVATION

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scale:	AS NOTED

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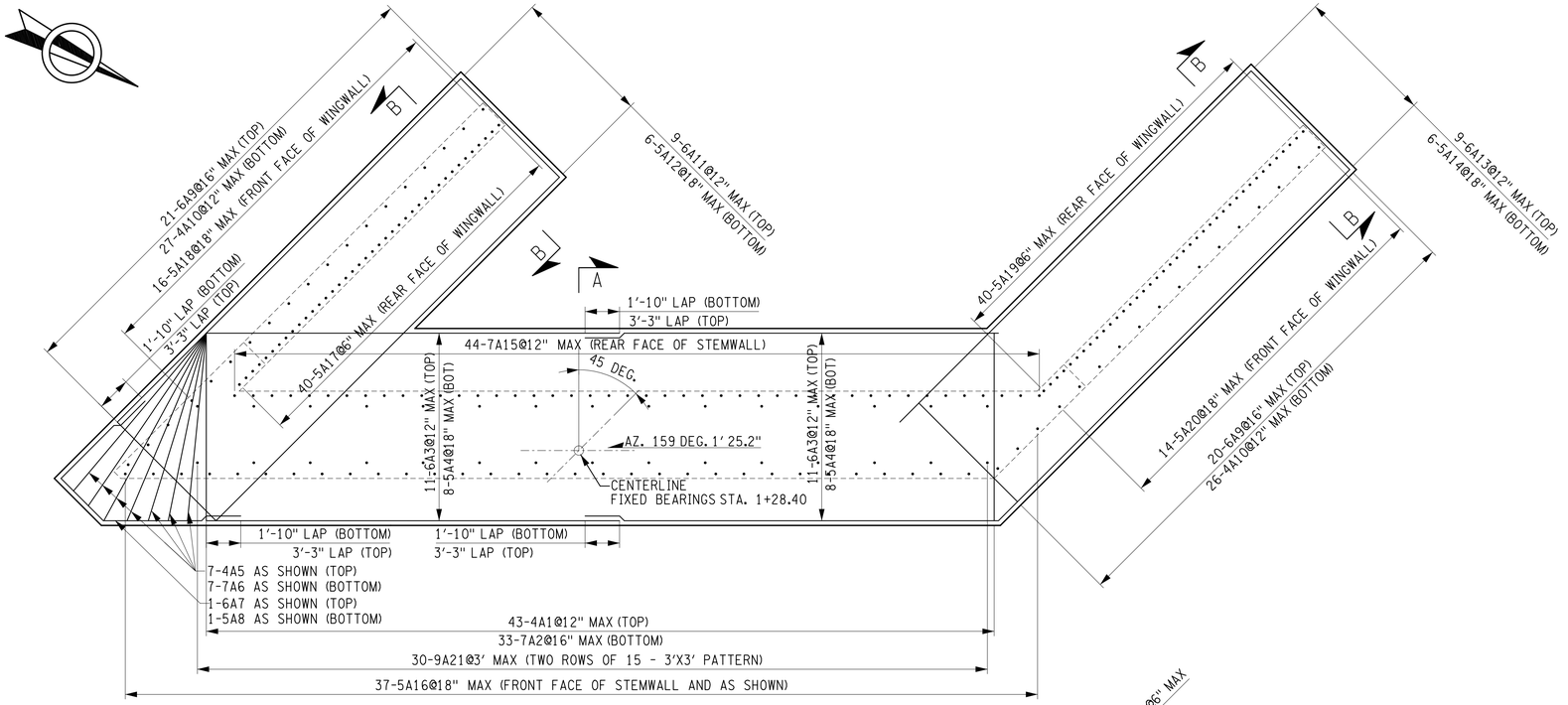
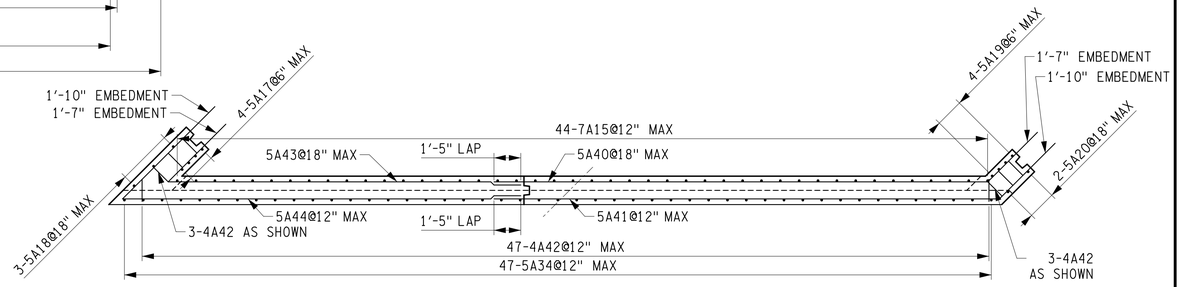
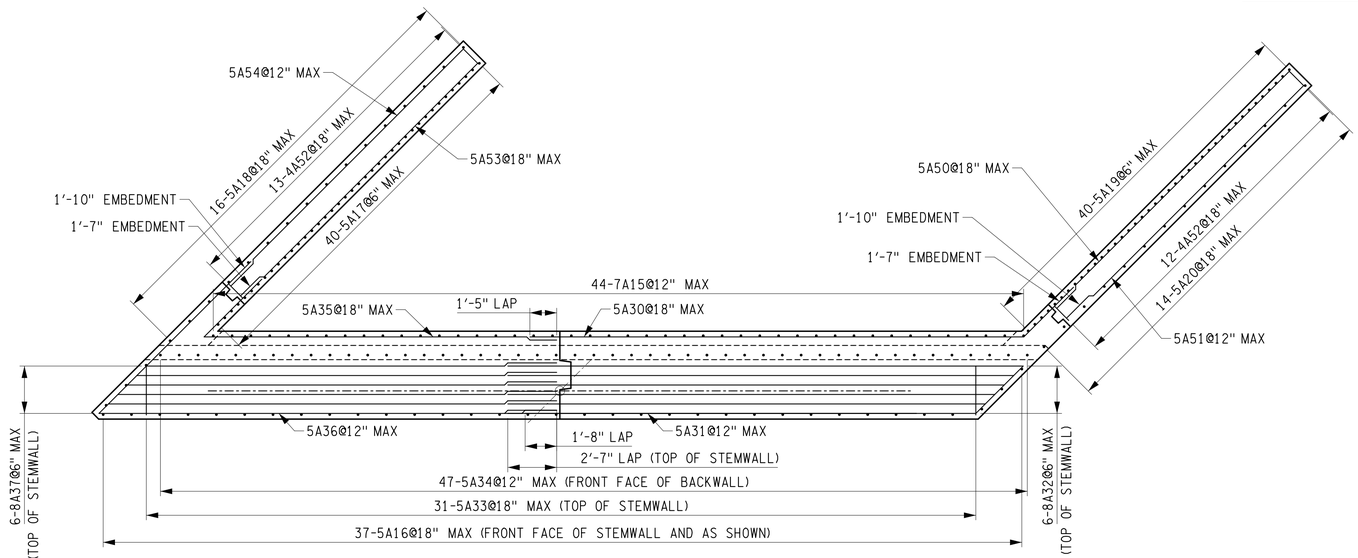


FOOTING REINFORCEMENT PLAN



BACKWALL REINFORCEMENT PLAN



STEM AND WINGWALL REINFORCEMENT PLAN

0 2 4 6 8 10 FT
SCALE

NOTES:

1. COVER FOR FOOTING REINFORCEMENT SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
2. COVER FOR WALL REINFORCEMENT SHALL BE 2 INCHES UNLESS OTHERWISE NOTED.

project:

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OVER
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WEST ABUTMENT REINFORCEMENT

project number:	11045
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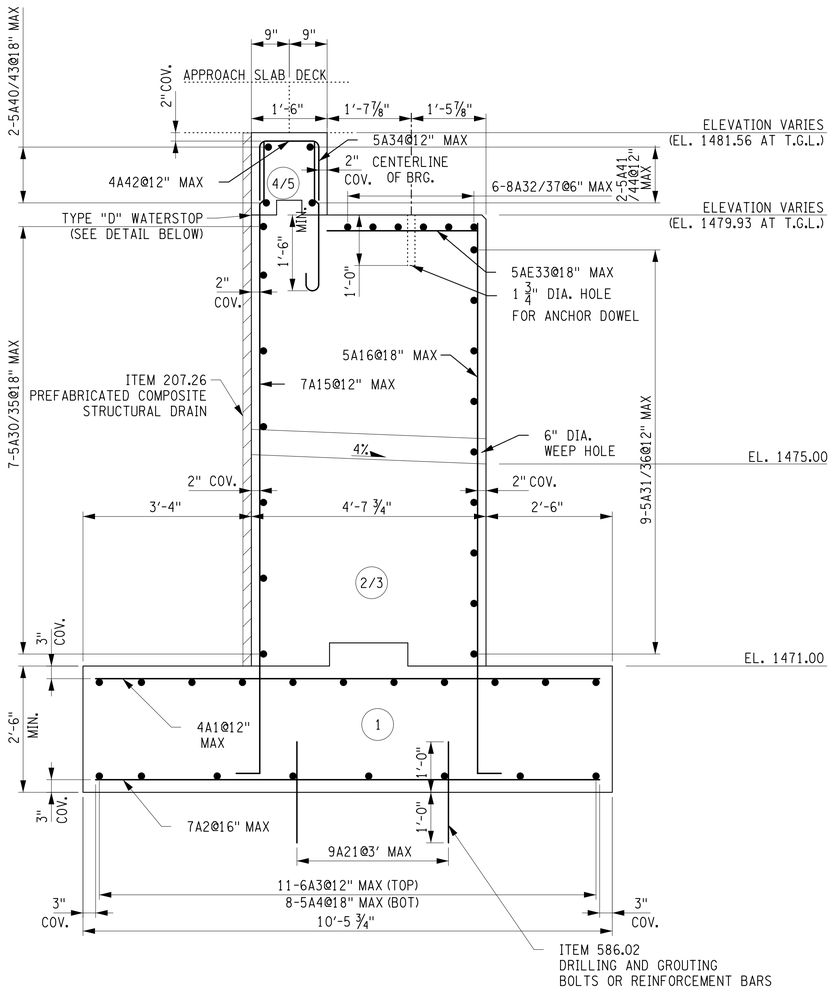
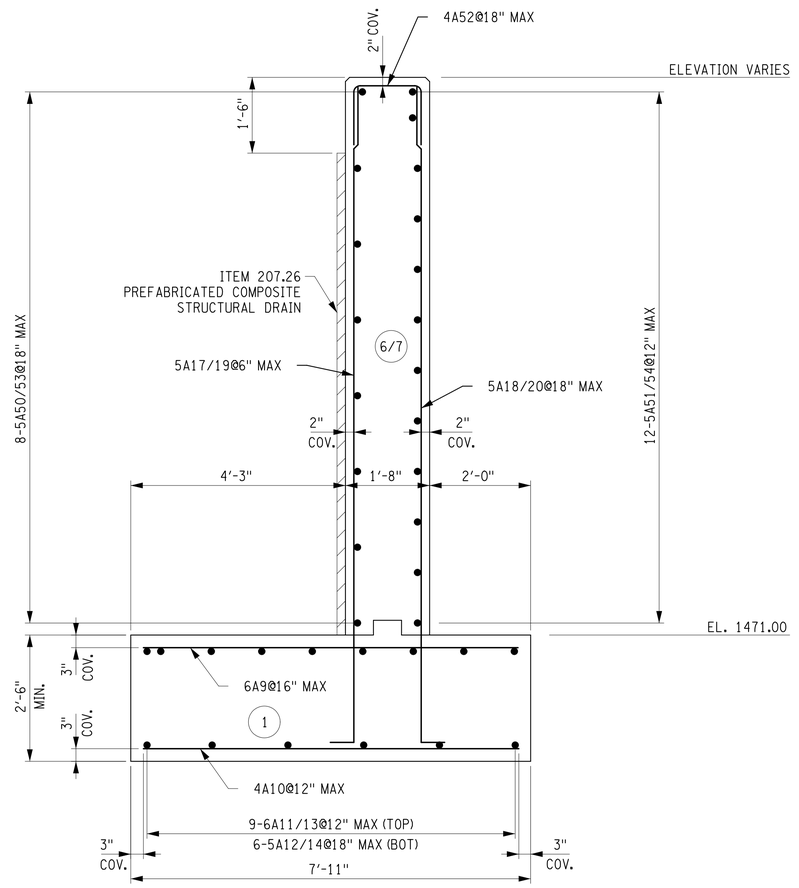


ABUTMENT SECTION A-A

(X) - INDICATES CONCRETE PLACEMENT NUMBER



WINGWALL SECTION B-B

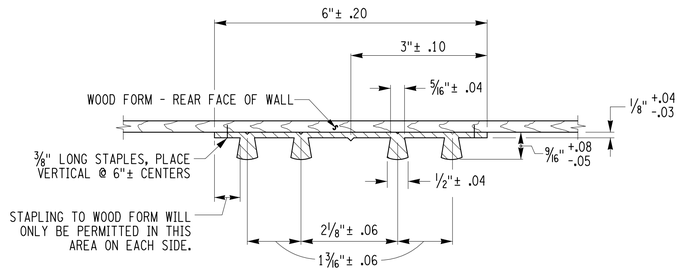
(X) - INDICATES CONCRETE PLACEMENT NUMBER

0 1 2 3 4 5 FT

SCALE

NOTES:

1. COVER FOR FOOTING REINFORCEMENT SHALL BE 3 INCHES UNLESS OTHERWISE NOTED.
2. COVER FOR WALL REINFORCEMENT SHALL BE 2 INCHES UNLESS OTHERWISE NOTED.
3. SEE DWG. NO. BR-11 FOR LOCATION OF THE SECTIONS.
4. SEE DWG. NO. BR-12 FOR KEYWAY AND CHAMFER DETAILS.



TYPE D WATERSTOP

NOT TO SCALE

WATERSTOP NOTES:

HOLES MUST NOT BE MADE IN WATERSTOP FOR ANY PURPOSE EXCEPT AS REQUIRED FOR STAPLING TO FORMS.

TYPE D WATERSTOP SHALL BE LIGHT GRAY IN COLOR.

PVC USED IN WATERSTOPS SHALL CONFORM TO THE REQUIREMENTS OF N.Y.S. STANDARD SPECIFICATIONS SUBSECTION 705-11.

THE COST OF FURNISHING AND PLACING WATERSTOPS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE CONCRETE ITEMS.

FIELD SPLICES SHOULD BE AVOIDED IF POSSIBLE, HOWEVER, HEAT WELDED BUTT SPLICES WILL BE PERMITTED ON LONG STRAIGHT RUNS (GENERALLY IN EXCESS OF 50 FEET) AT POINTS APPROVED BY THE ENGINEER.

WATERSTOP SHALL BE SHIPPED IN STRAIGHT SECTIONS HAVING A MINIMUM LENGTH OF 10 FEET UNLESS SHORTER LENGTHS ARE REQUIRED.

project:

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OVER
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PIN 5758.49, BIN 3322110

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WEST ABUTMENT SECTIONS & DETAILS

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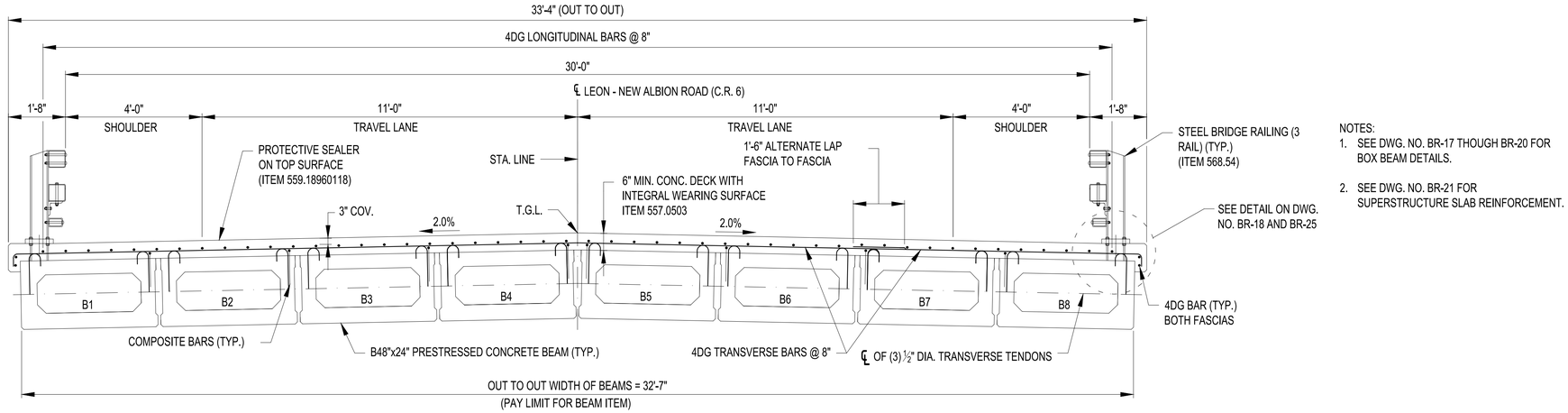
sheet number

BR-15

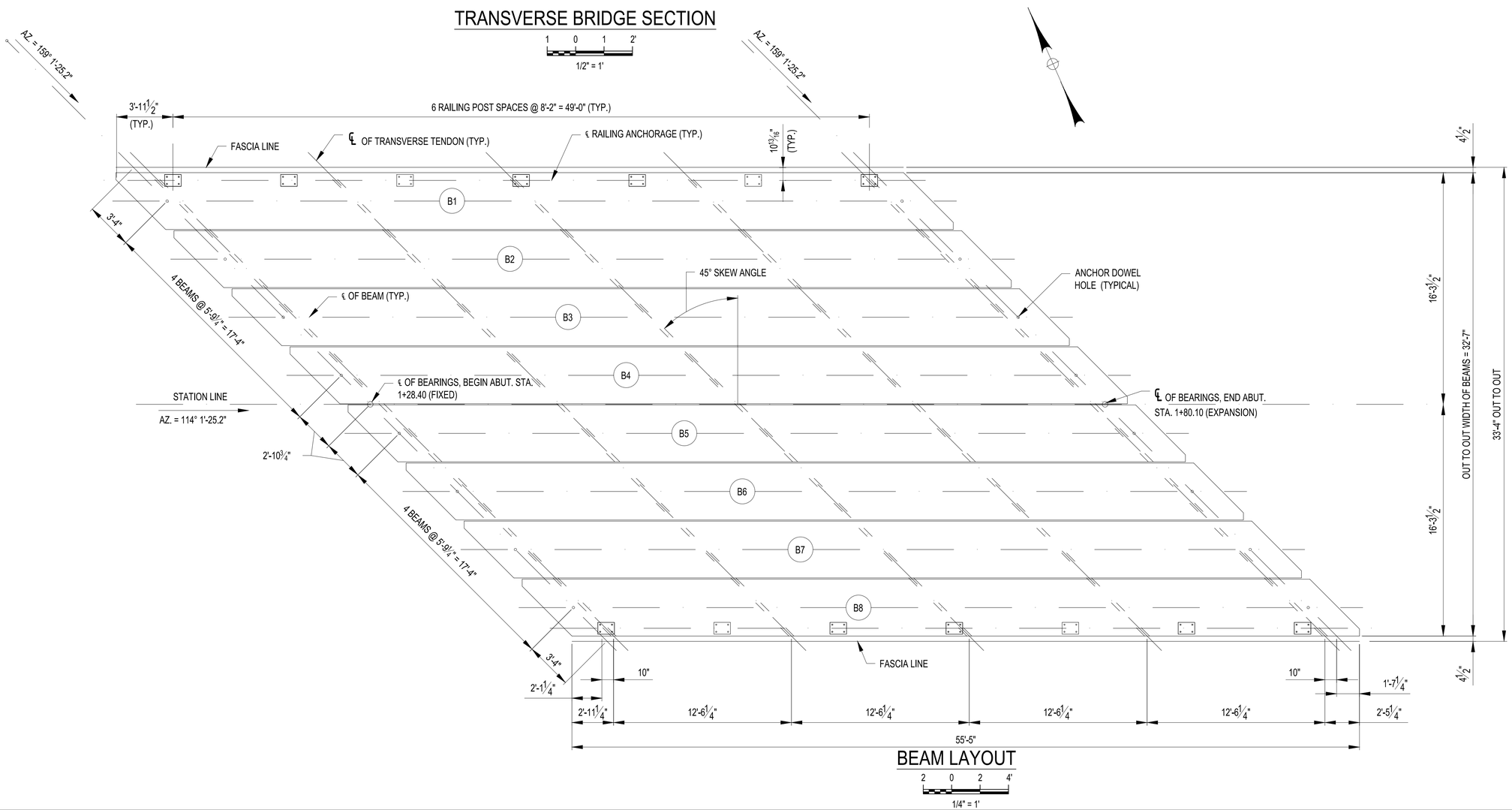


NOTES:
1. SEE DWG. NO. BR-17 THOUGH BR-20 FOR BOX BEAM DETAILS.
2. SEE DWG. NO. BR-21 FOR SUPERSTRUCTURE SLAB REINFORCEMENT.

TRANSVERSE BRIDGE SECTION

1 0 1 2'

1/2" = 1'



BEAM LAYOUT

2 0 2 4'

1/4" = 1'

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SUPERSTRUCTURE PLAN & TYPICAL SECTION

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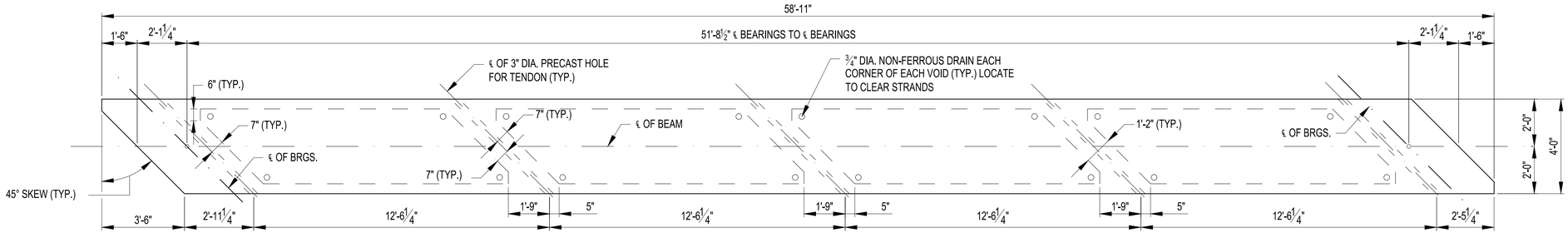
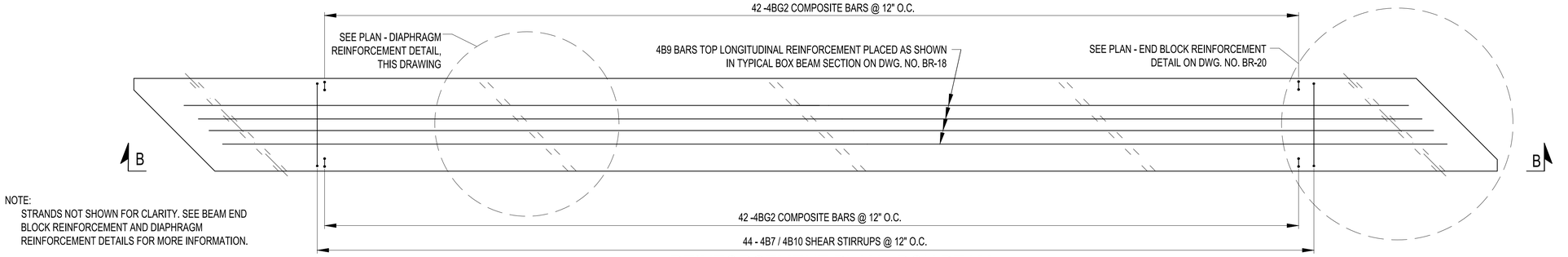
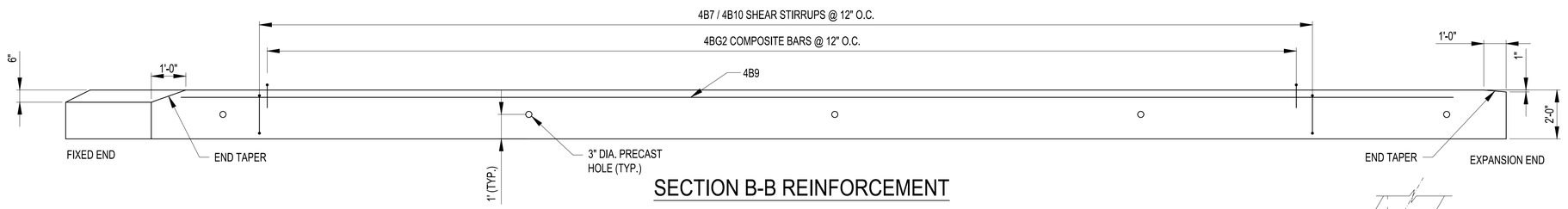


PLAN - BOX BEAM



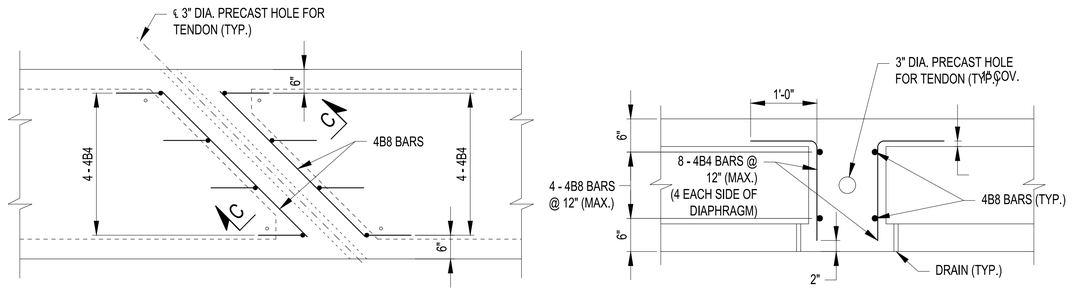
NOTE:
STRANDS NOT SHOWN FOR CLARITY. SEE BEAM END BLOCK REINFORCEMENT AND DIAPHRAGM REINFORCEMENT DETAILS FOR MORE INFORMATION.

REINFORCEMENT PLAN - BOX BEAM



SECTION B-B REINFORCEMENT

1 0 1 2'
3/8" = 1'



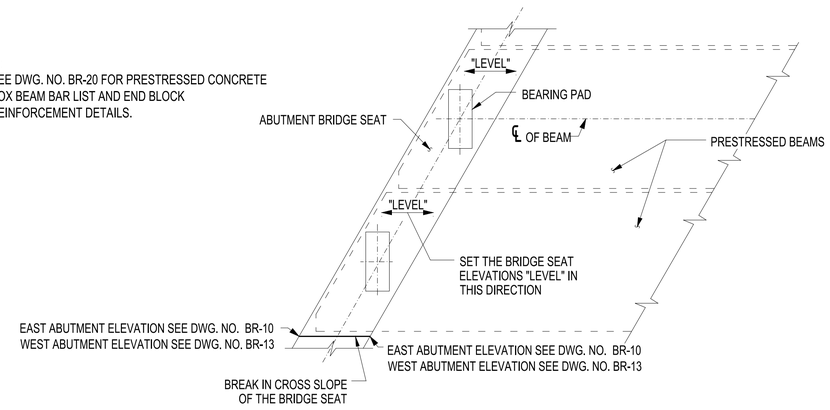
PLAN

SECTION C-C

DIAPHRAM REINFORCEMENT

NOT TO SCALE

NOTES:
1. SEE DWG. NO. BR-20 FOR PRESTRESSED CONCRETE BOX BEAM BAR LIST AND END BLOCK REINFORCEMENT DETAILS.



PROCEDURE FOR ESTABLISHING ABUTMENT ELEVATIONS FOR ADJACENT PRESTRESSED BEAMS

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Aug 23, 2017, 11:24am

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

WATTS ARCHITECTURE & ENGINEERING
95 Perry Street , Suite 300
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p: 716.206.5100 f: 716.206.5199

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proprietary notes:

drawing history

number	date	description

sheet title

BOX BEAM DETAILS - 1

project number:	11045
drawn by:	NDB
checked by:	TEM
date:	AUGUST 2017
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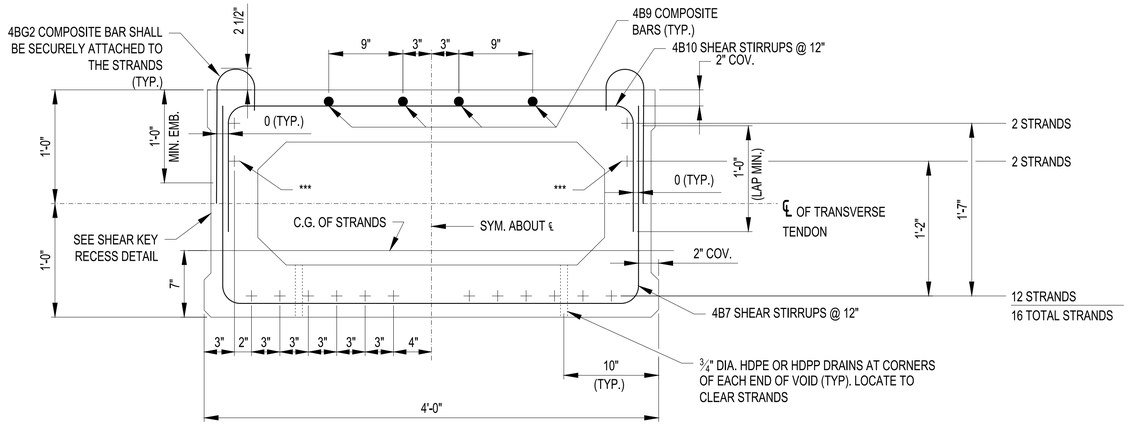
sheet number

BR-17



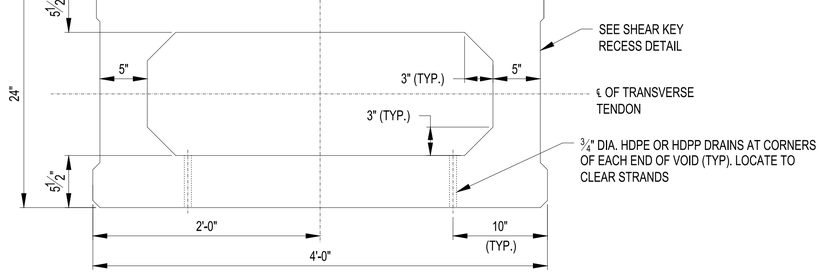
+ - DENOTES STRAIGHT BONDED STRANDS

*** THESE STRANDS SHALL BE TENSIONED TO A JACKING FORCE OF 2.2 KIPS, TO USE AS STIRRUP SUPPORT ONLY.

TYPICAL BOX BEAM REINFORCING SECTION

1 0 1 2'

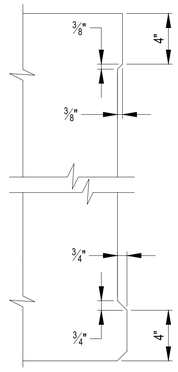
1-1/2" = 1'



TYPICAL BOX BEAM SECTION (B48"x24")

1 0 1 2'

1-1/2" = 1'

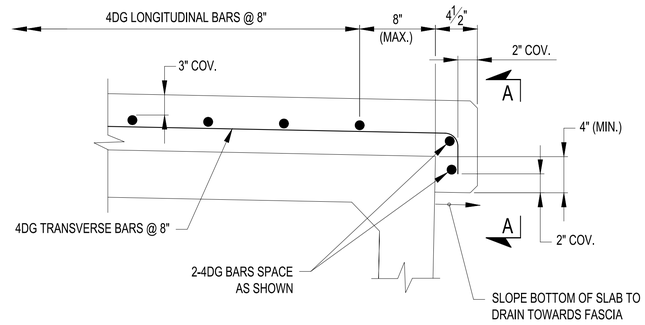


NOTE:

OMIT SHEAR KEY FROM OUTSIDE OF FASCIA BEAMS

SHEAR KEY RECESS DETAIL

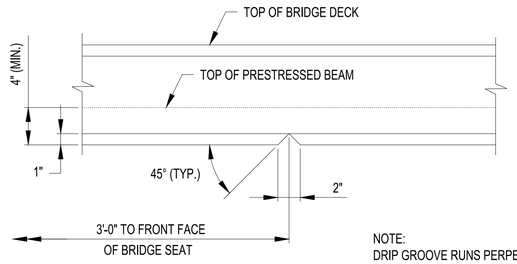
NOT TO SCALE



NOTE:
1. STEEL RAILING NOT SHOWN FOR CLARITY
2. SEE DECK SLAB DRAWING FOR REINFORCEMENT CALL-OUTS, ETC.

STEEL RAILING FASCIA DETAIL

NOT TO SCALE



NOTE:
DRIP GROOVE RUNS PERPENDICULAR FROM THE FASCIA BEAM TO THE FASCIA.

ELEVATION A-A (SHOWING DRIP GROOVE DETAIL)

NOT TO SCALE

DESIGN LOAD TABLE			
	UNIT	REACTION AT ABUTMENT (kips)	MAX. MOM. MIDSPAN (kip-ft.)
D.L.	BEAM + DIAPHRAM	20.9	270.0
	SLAB	8.4	106.9
S.D.L.	RAILINGS	0.5	6.3
	FUTURE W.S.	2.3	29.5
L.L.	HL-93	129.6	510.3

CAMBER TABLE		
CAMBER DUE TO PRESTRESSED FORCE AND BEAM D.L. (WITHOUT GROWTH) @ TRANSFER (IN.)	↑	0.83"
DEFLECTION DUE TO SLAB DEAD LOAD (IN.)	↓	0.17"
DEFLECTION DUE TO SUPERIMPOSED D.L. (IN.)	↓	0.05"

TOP OF SLAB ELEVATIONS					
UNIT	℄ BRGS.	1/4 PT.	MIDSPAN	3/4 PT.	℄ BRGS.
1	1482.14	1482.31	1482.45	1482.61	1482.76
2	1482.27	1482.43	1482.58	1482.74	1482.89
3	1482.40	1482.56	1482.71	1482.87	1483.02
4	1482.54	1482.69	1482.85	1483.00	1483.16
5	1482.58	1482.74	1482.89	1483.05	1483.20
6	1482.55	1482.71	1482.86	1483.02	1483.17
7	1482.52	1482.67	1482.83	1482.98	1483.14
8	1482.49	1482.64	1482.80	1482.95	1483.11

NOTES:

1. THE PRESTRESSING STRANDS SHALL BE 0.6 in. DIAMETER WITH A GUARANTEED ULTIMATE STRENGTH OF 270 ksi.
   JACKING FORCE = 44 kips PER STRAND
   REQUIRED MINIMUM CONCRETE STRENGTH AT TRANSFER = 8 ksi.
   REQUIRED MINIMUM CONCRETE STRENGTH AT 56 DAYS = 10 ksi.
   THE ALLOWABLE TENSION IN THE PRESTRESSED CONCRETE UNITS:
   AT TRANSFER = 0.20 ksi.
   AT SERVICE LIMIT STATE = 0.44 ksi.
2. ALL EXPOSED CORNERS, EXCEPT THE TOP, SHALL BE CHAMFERED 3/4 in.
3. ALL TEMPORARY INSERTS SHALL BE APPROVED BY THE ENGINEER AND DETAILED ON THE PRESTRESSED CONCRETE "SHOP DRAWINGS".
4. BAR REINFORCEMENT SHALL BE ASTM A615, GRADE 60. THE TOPS OF PRESTRESSED UNITS SHALL RECEIVE A TRANSVERSE ROUGHENED FINISH WITH AN AMPLITUDE OF 1/4 in.
5. SEE DWG. NO. BR-20 FOR PRESTRESSED CONCRETE BOX BEAM BAR LIST.
6. SEE DWG. NO. BR-21 FOR SUPERSTRUCTURE SLAB REINFORCEMENT.

project:

LEON-NEW ALBION ROAD

OVER MUD CREEK PIN 5758.49, BIN 3322110

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proprietary notes:

drawing history

number	date	description

sheet title

BOX BEAM DETAILS - 2

project number:	11045
drawn by:	NDB
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date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-18

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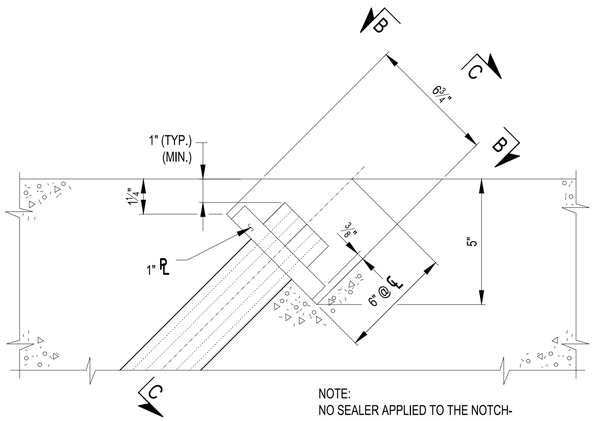


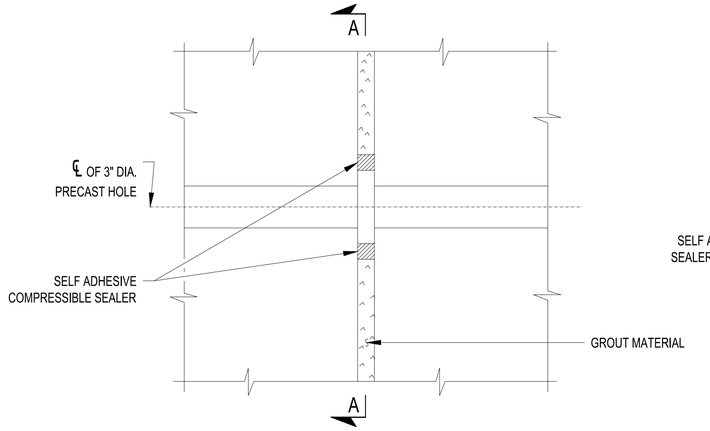
NOTE:
NO SEALER APPLIED TO THE NOTCH-OUT FOR TRANSVERSE TENDONS

TRANSVERSE TENDON RECESS DETAIL PLAN

NOT TO SCALE

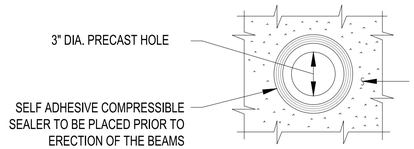
NOTES:
6"X6"X1" PLATES SHALL BE PERPENDICULAR TO THE LONGITUDINAL AXIS OF THE TENDON IN ALL PLANES AND SHALL HAVE THREE HOLES TO ACCOMMODATE STRANDS.

BEAM REINFORCEMENT NOT SHOWN FOR CLARITY.



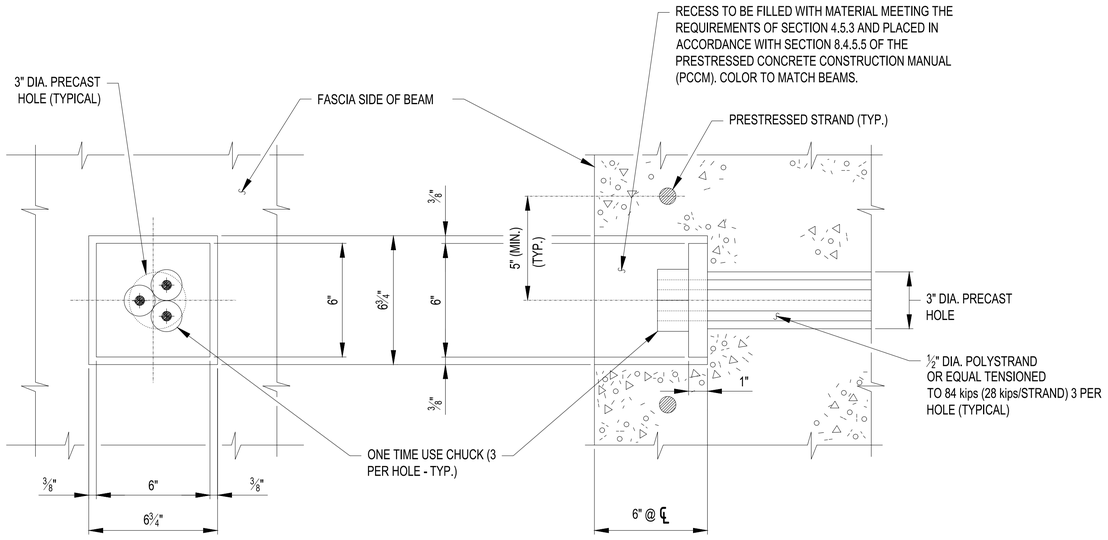
SHEAR KEY AT TRANSVERSE TENDON DETAIL

NOT TO SCALE



SECTION A-A

NOT TO SCALE

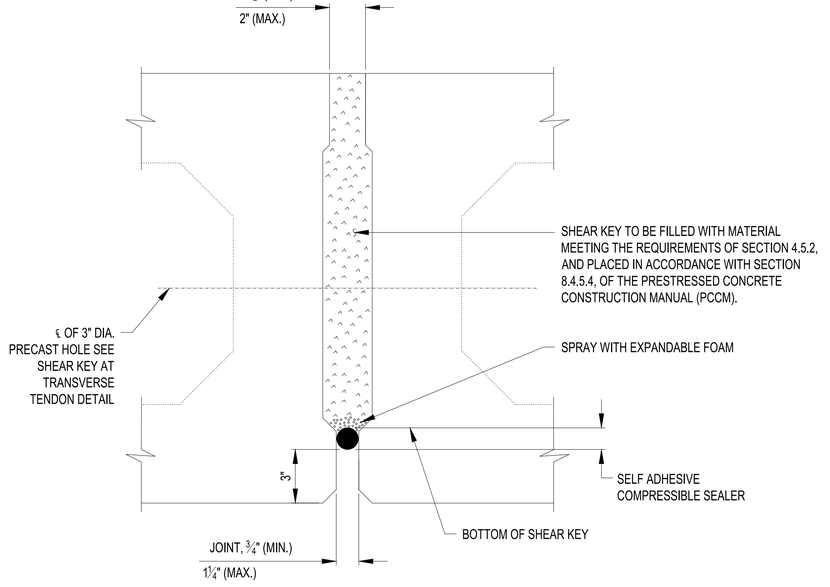


SECTION B-B

NOT TO SCALE

SECTION C-C

NOT TO SCALE



BOX BEAM SHEAR KEY DETAIL

NOT TO SCALE

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

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proprietary notes:

drawing history

number	date	description

sheet title

BOX BEAM DETAILS - 3

project number:	11045
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checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-19

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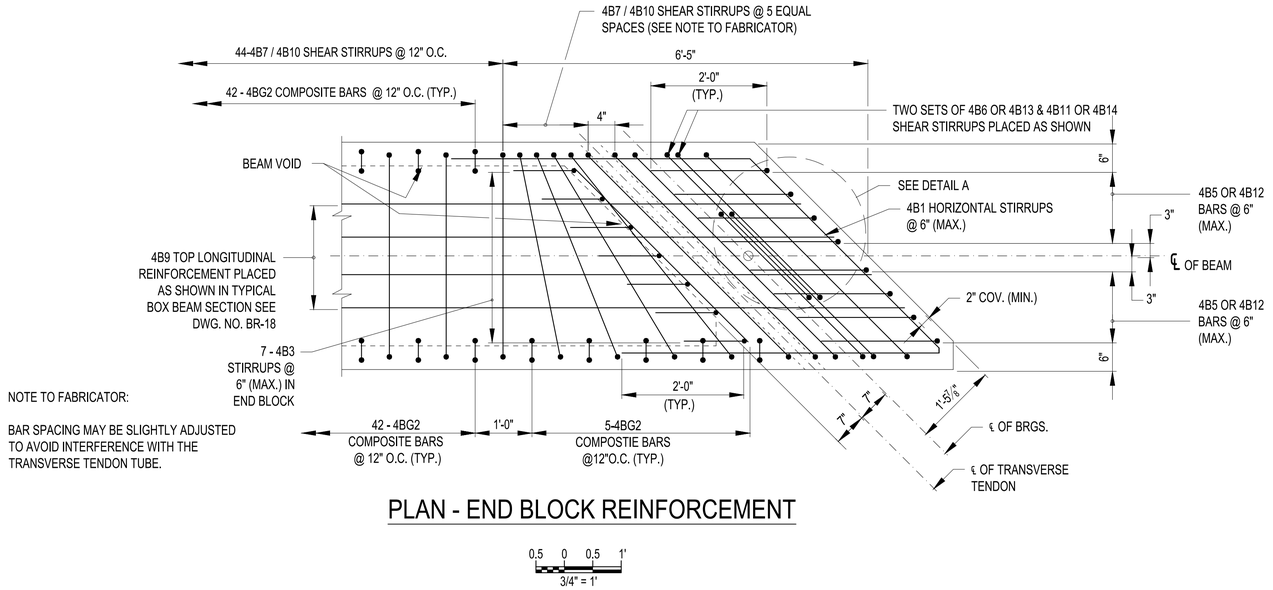
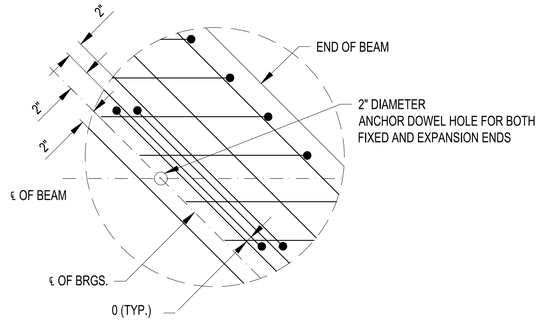


NOTE TO FABRICATOR:

BAR SPACING MAY BE SLIGHTLY ADJUSTED TO AVOID INTERFERENCE WITH THE TRANSVERSE TENDON TUBE.

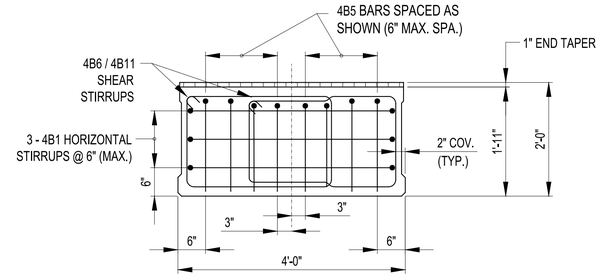
PLAN - END BLOCK REINFORCEMENT

0.5 0 0.5 1'
3/4" = 1'



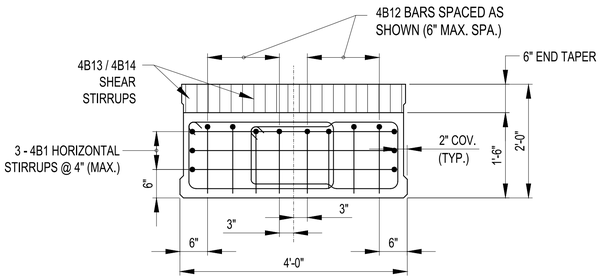
DETAIL 'A'

NOT TO SCALE



EXPANSION END BLOCK REINFORCEMENT

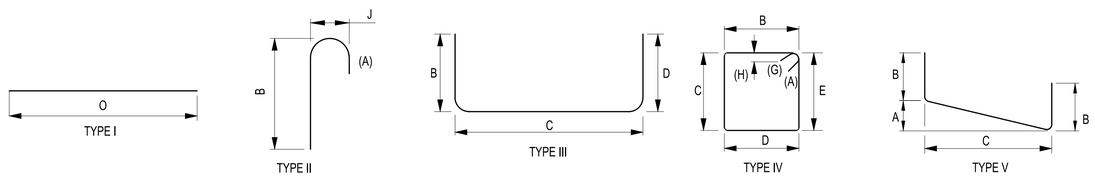
0.5 0 0.5 1'
3/4" = 1'



FIXED END BLOCK REINFORCEMENT

0.5 0 0.5 1'
3/4" = 1'

PRESTRESSED CONCRETE BOX BEAM REINFORCEMENT																	
MARK	# / BEAM	LENGTH (FT)	TYPE	WEIGHT (LB)	A	B	C	D	E	F	G	H	J	K	O	R	REMARKS
4B1	6	16-1	V	64	3-6	5-6	3-6										END BLOCK
4BG2	94	1-9	II	107	0-6	1-3							0-4				GALVANIZED COMPOSITE BARS
4B3	14	2-6	III	23		1-0	1-6	0-0									END BLOCK
4B4	24	2-6	III	39		1-0	1-6	0-0									DIAPHRAGM
4B5	8	4-1	III	22		2-0	1-7	0-0									END BLOCK
4B6	4	8-10	IV	24	0-5	2-4	1-8	2-4	1-8		0-5	0-4					END BLOCK
4B7	54	7-0	III	253		1-8	3-8	1-8									BOTTOM STIRRUPS
4B8	12	5-0	I	40											5-0		DIAPHRAGM
4B9	4	53-5	I	143											53-5		TOP
4B10	54	5-8	III	204		1-0	3-8	1-0									TOP STIRRUP
4B11	4	8-10	IV	24	0-5	2-4	1-8	2-4	1-8		0-5	0-4					END BLOCK
4B12	8	3-8	III	20		2-0	1-2	0-0									END BLOCK
4B13	4	8-0	IV	21	0-5	2-4	1-3	2-4	1-3		0-5	0-4					END BLOCK
4B14	4	8-0	IV	21	0-5	2-4	1-3	2-4	1-3		0-5	0-4					END BLOCK
TOTAL BARS PER BEAM				1006	LBS PER BEAM												
TOTAL BARS				8048	LBS												



ALL DIMENSIONS ARE OUT-TO-OUT DIMENSIONS
COST OF BAR REINFORCEMENT TO BE INCLUDED IN PRESTRESSED BEAM ITEM

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

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drawing history

number	date	description

sheet title

BOX BEAM DETAILS - 4

project number:	11045
drawn by:	JCK
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-20

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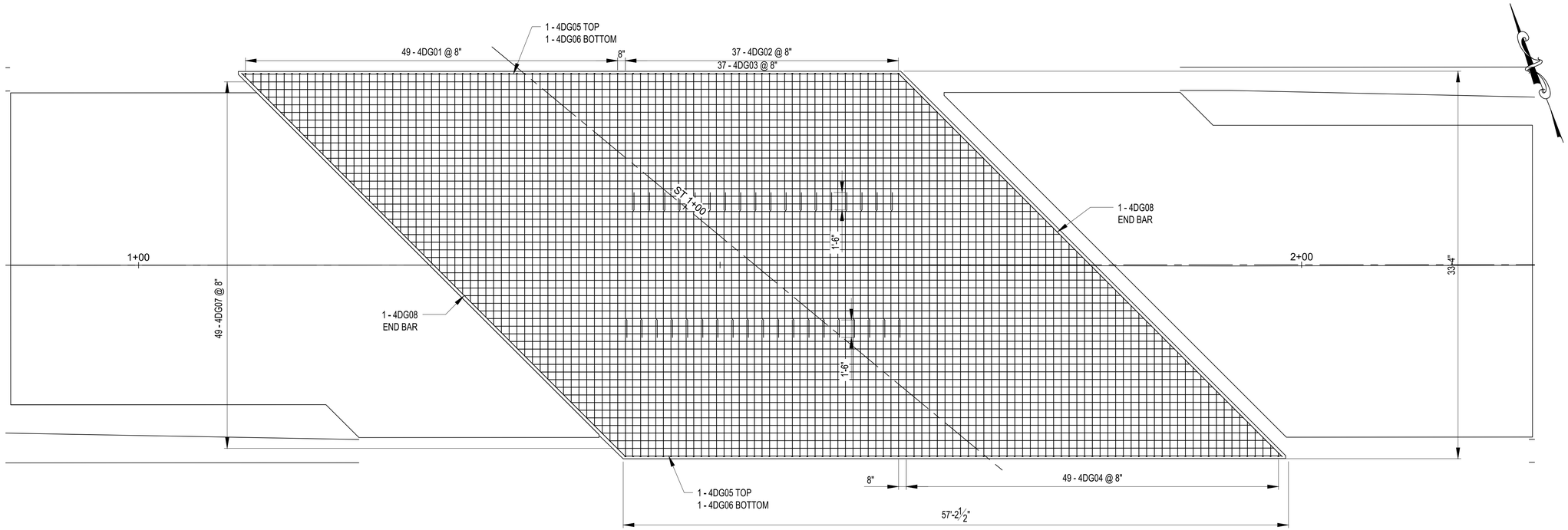

DECK PLAN

2 0 2 4 6 8'

1" = 5'

NOTES:

1. CONTRACTOR MAY HAVE TO MODIFY SUPERSTRUCTURE SLAB AND REINFORCEMENT TO ACCOMODATE ARMORLESS BRIDGE JOINT SYSTEM SELECTED.
2. REFER TO BRIDGE RAIL SUPPORT POST LOCATIONS ON DWG. NO. BR-14.
3. REFER TO DWG. NO. BR-22 FOR APPROACH SLAB PLAN AND DETAILS. (NOTE SOME BARS THAT ORIGINATE IN THE APPROACH SLAB, TERMINATE IN THE SUPERSTRUCTURE SLAB.)
4. REFER TO DWG. NO. BR-06 FOR ADDITIONAL DECK PLACEMENT NOTES.

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sheet title

DECK PLAN

project number:	11045
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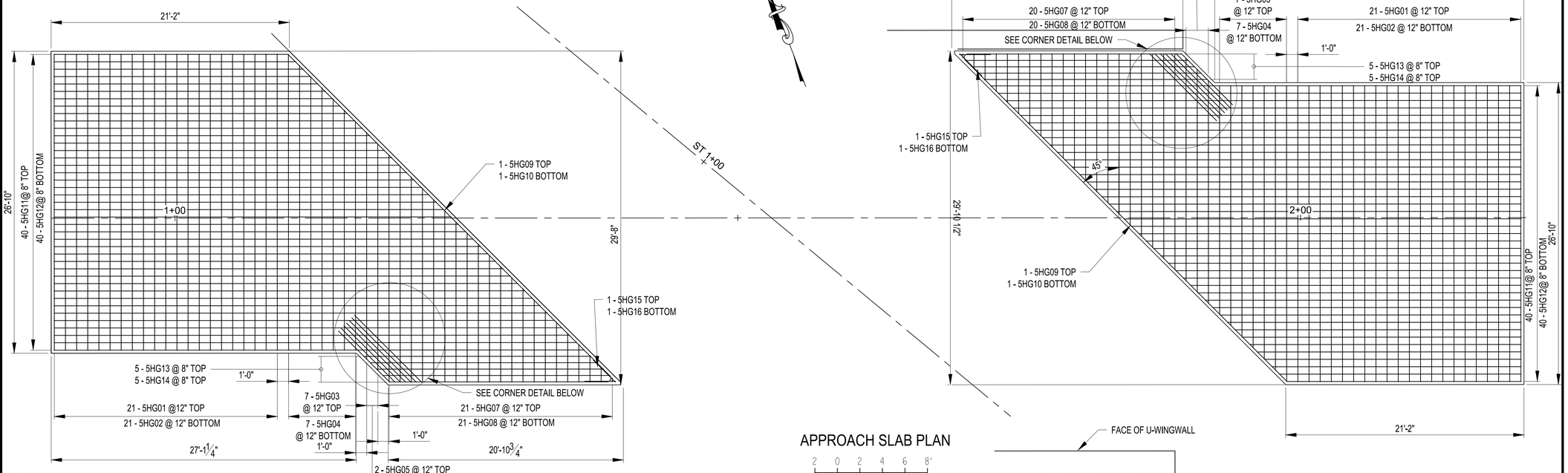
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-21



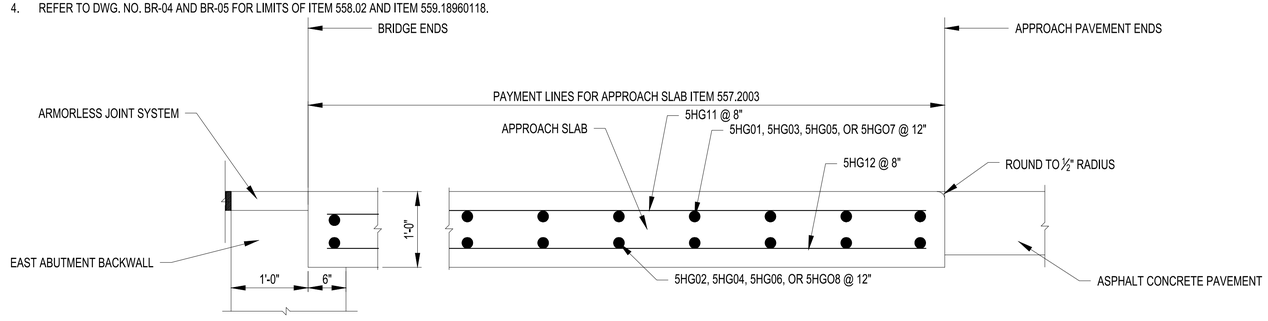
NOTES:

1. ALL REINFORCEMENT SHALL HAVE 3 IN. COVER UNLESS OTHERWISE NOTED.
2. (G) DENOTES GALVINIZED STEEL BARS
3. DETAILS ON THE DRAWINGS LABELED "NOT TO SCALE" ARE INTENTIONALLY DRAWN NOT TO SCALE FOR VISUAL CLARITY. ALL OTHER DETAILS, FOR WHICH NO SCALE IS SHOWN, ARE DRAWN PROPORTIONAL AND ARE FULLY DIMENSIONED.
4. REFER TO DWG. NO. BR-04 AND BR-05 FOR LIMITS OF ITEM 558.02 AND ITEM 559.18960118.

APPROACH SLAB PLAN

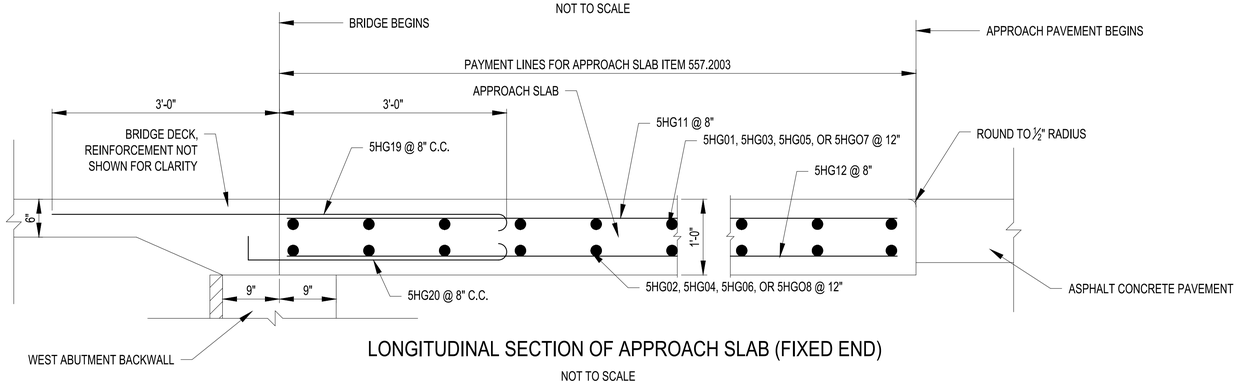
2 0 2 4 6 8′

1" = 5′



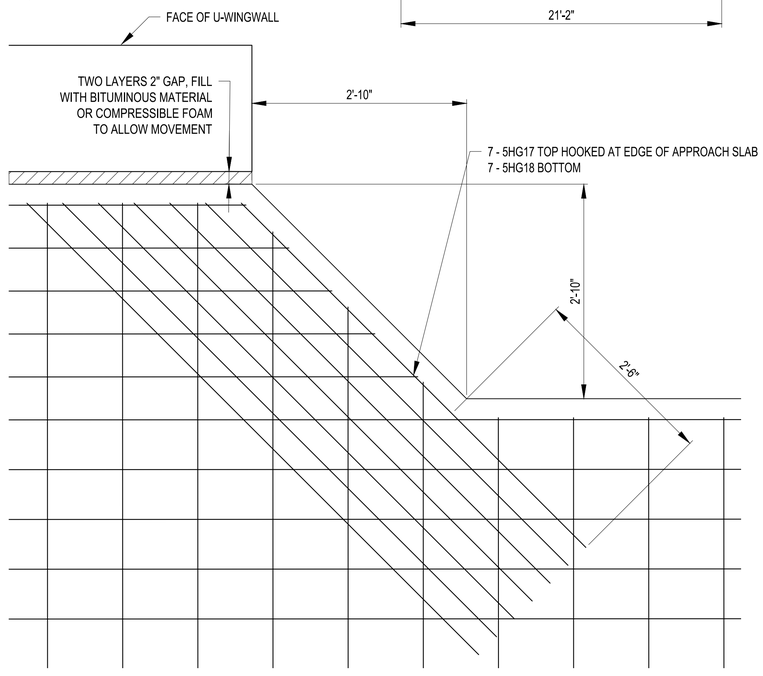
LONGITUDINAL SECTION OF APPROACH SLAB (EXPANSION END)

NOT TO SCALE



LONGITUDINAL SECTION OF APPROACH SLAB (FIXED END)

NOT TO SCALE



CORNER DETAIL

NOT TO SCALE

APPROACH SLAB TABLE			
LOCATION	CONCRETE ITEM 557.2003 (SY)	LONGITUDINAL SAWCUT GROOVING ITEM 558.02 (SY)	PROTECTIVE SEALER ITEM 559.18960118 (SF)
BEGIN APPROACH SLAB	110	94	987
END APPROACH SLAB	110	94	986

project:

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APPROACH SLAB PLAN & DETAILS

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date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-22

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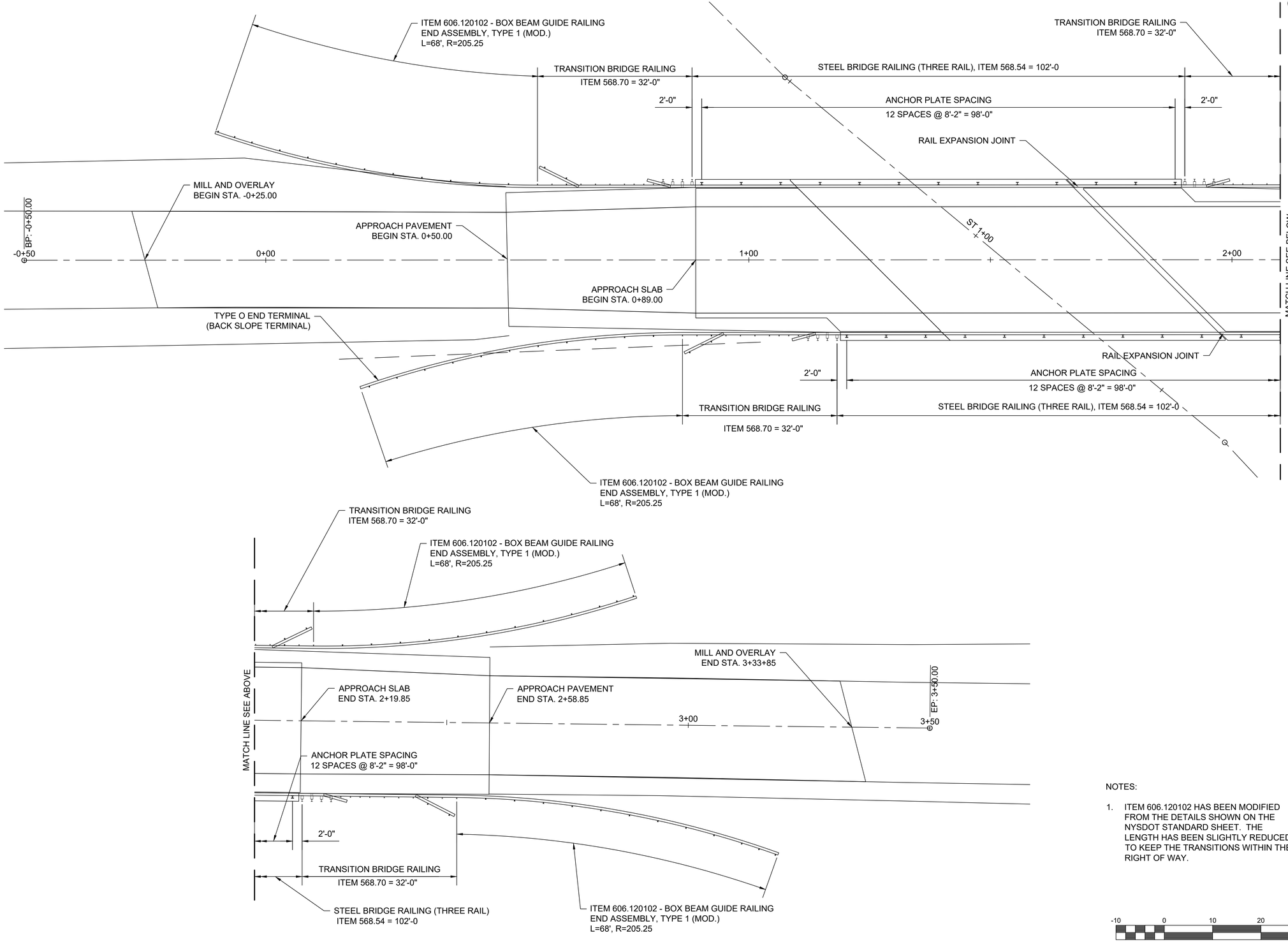

NOTES:

1. ITEM 606.120102 HAS BEEN MODIFIED FROM THE DETAILS SHOWN ON THE NYSDOT STANDARD SHEET. THE LENGTH HAS BEEN SLIGHTLY REDUCED TO KEEP THE TRANSITIONS WITHIN THE RIGHT OF WAY.

-10 0 10 20 30 FT

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

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drawing history

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sheet title

RAILING LAYOUT PLAN

project number:	11045
drawn by:	PGP
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

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BR-23

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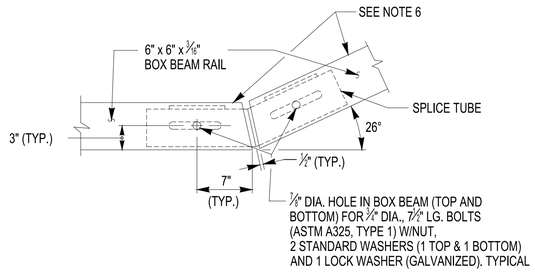
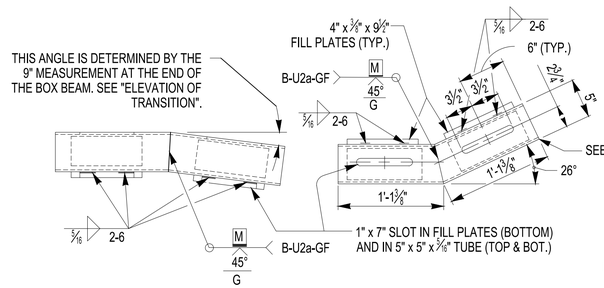
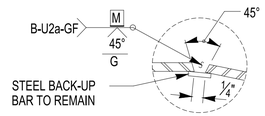


SPLICE DETAIL AT TURN BACK IN LOWER TRANSITION GUIDE RAIL



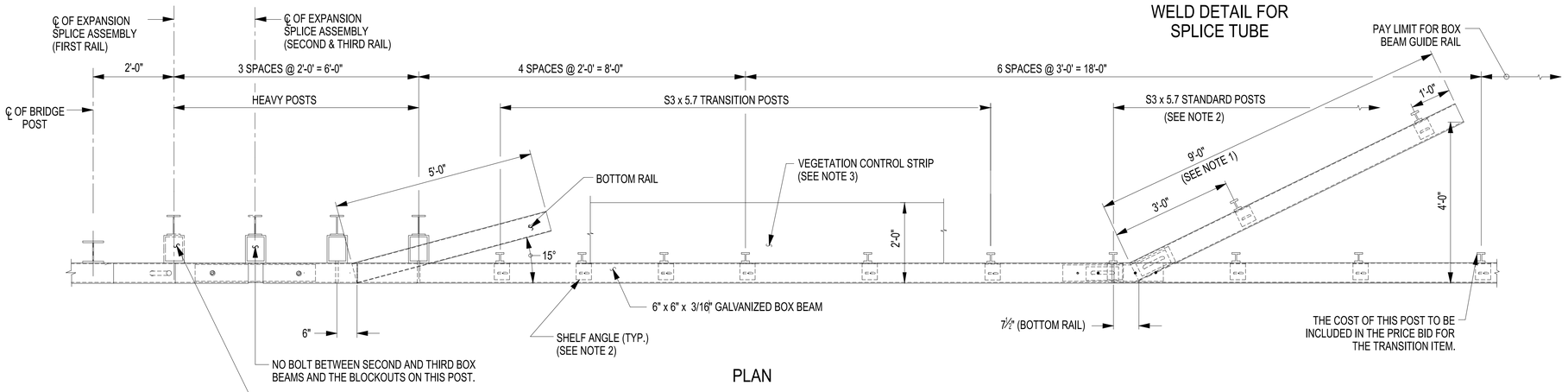
SPLICE TUBE DETAIL FOR TURN BACK



WELD DETAIL FOR SPLICE TUBE

NOTES:

1. THE COST OF THE POSTS, SPLICE TUBE AND RAIL FOR THE LOWER TUBE FLARE SECTION IS INCLUDED IN THE PRICE BID FOR THE TRANSITION ITEM.
2. SEE TYPICAL RAIL TO POST CONNECTION DETAIL ON CURRENT HIGHWAY STANDARD SHEET TITLED "BOX BEAM GUIDE RAIL".
3. SEE DWG. NO. BR-05 FOR VEGETATION CONTROL STRIP.
4. SEE DWG. NO. BR-27 FOR SPLICE DETAILS.
5. SEE DWG. NO. BR-26 FOR POST DETAILS.
6. PROTRUSION CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.



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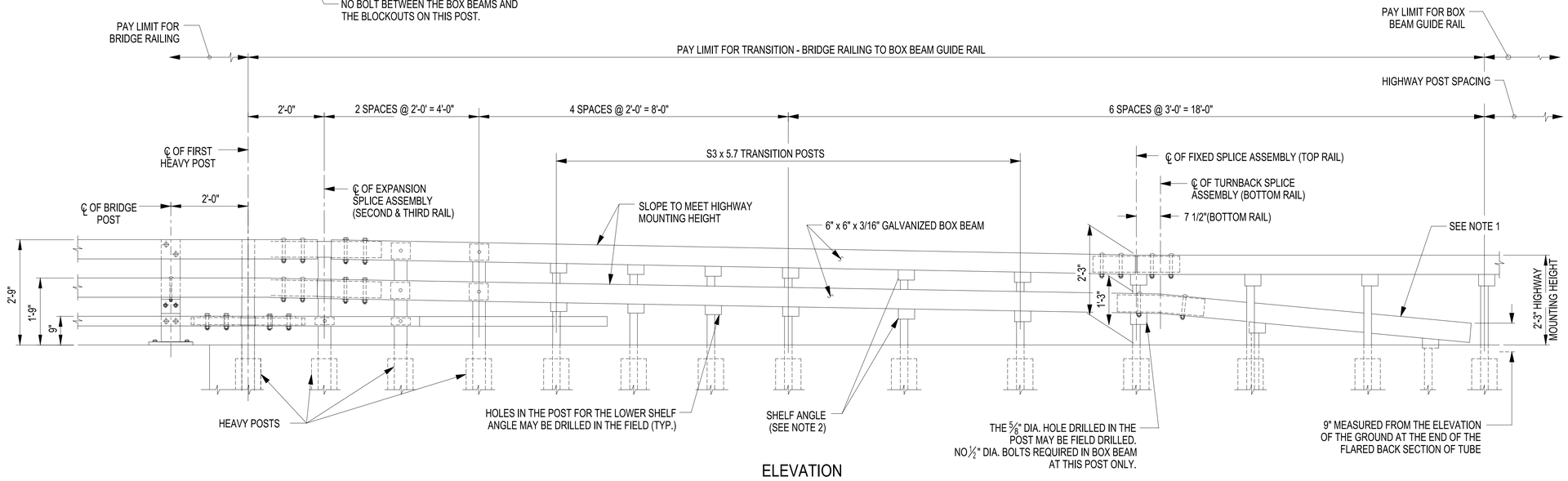

ELEVATION

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS

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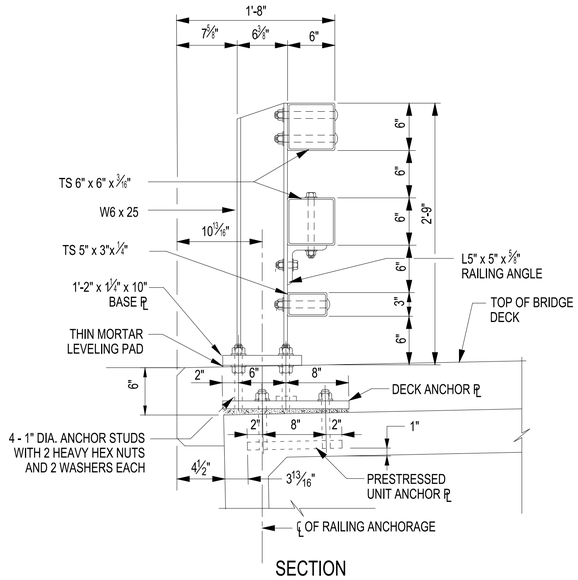
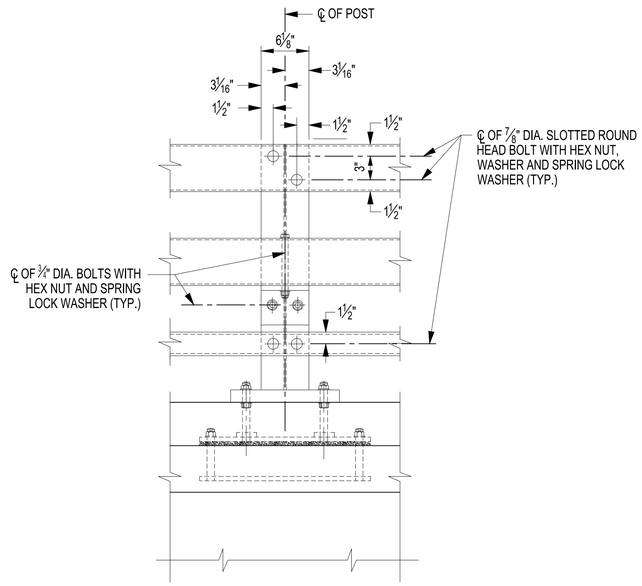
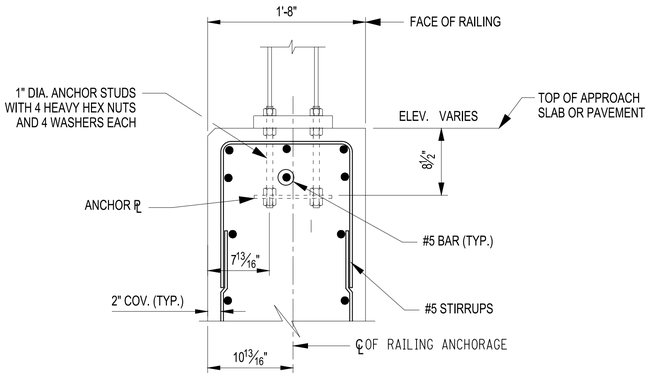
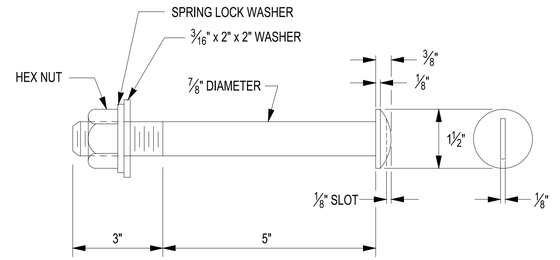




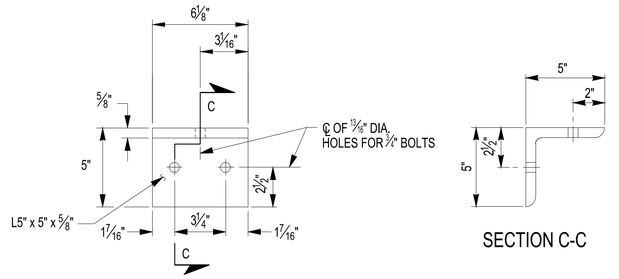
STEEL BRIDGE RAILING



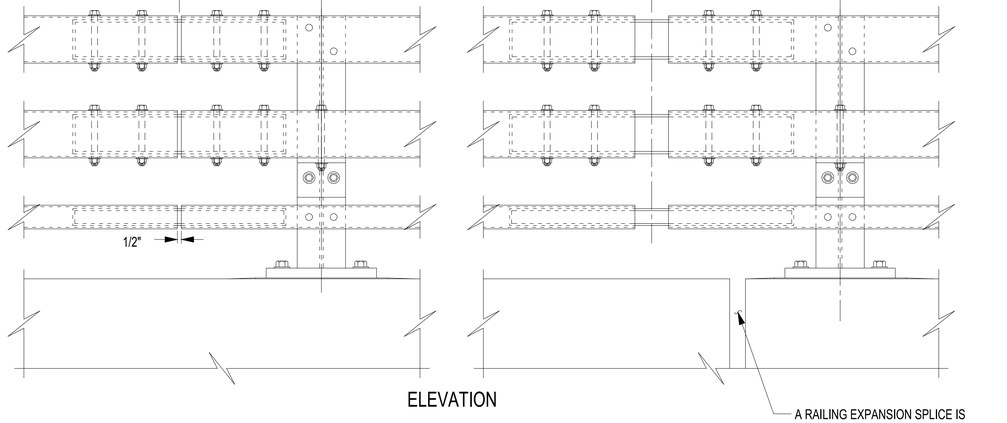
U-WINGWALL RAILING ANCHOR DETAIL



ROUND HEAD BOLT



RAILING ANGLE DETAILS



STEEL BRIDGE RAILING SPLICE DETAILS

NOTES:

1. ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 568 OF THE NYSDOT STANDARD SPECIFICATIONS.
2. PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF ⅛".
3. BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB.).

project:

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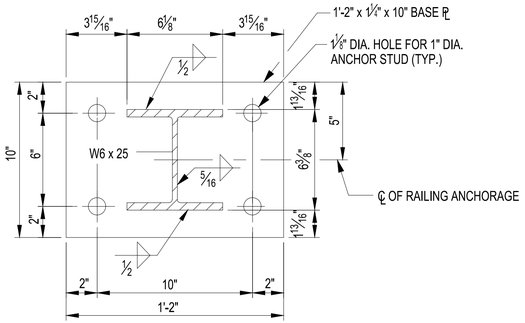
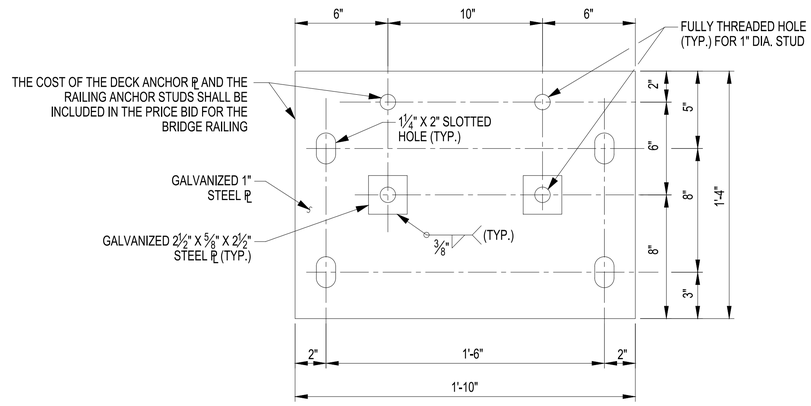


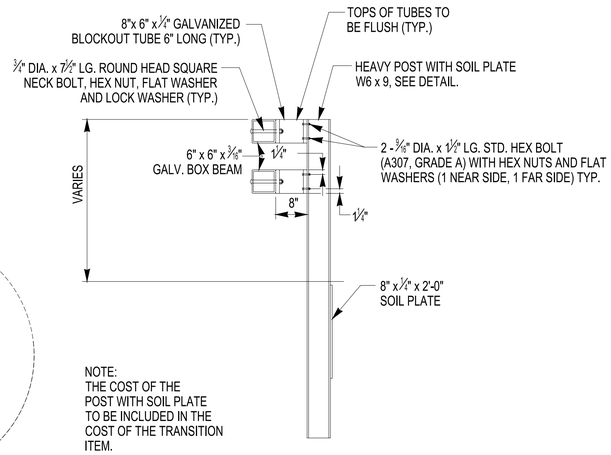
BASE PLATE



DECK ANCHOR PLATE

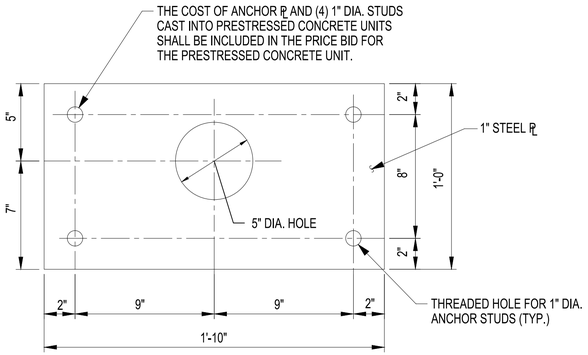
NOTES:

1. PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
2. HOLES IN THE POST FOR THE LOWER RAIL MAYBE LOCATED AND DRILLED IN THE FIELD. IF SO, THE GALVANIZING SHALL BE REPAIRED IN ACCORDANCE WITH SUBSECTION 716-01.
3. SEE DWG. NO. BR-24 FOR RAILING TRANSITIONS.

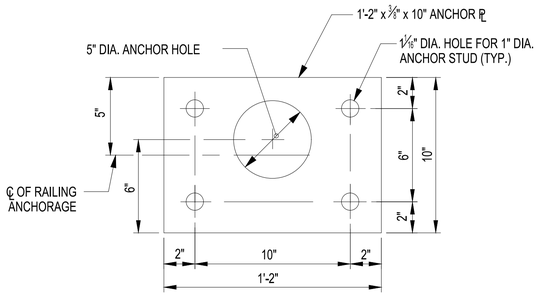


NOTE:
THE COST OF THE POST WITH SOIL PLATE TO BE INCLUDED IN THE COST OF THE TRANSITION ITEM.

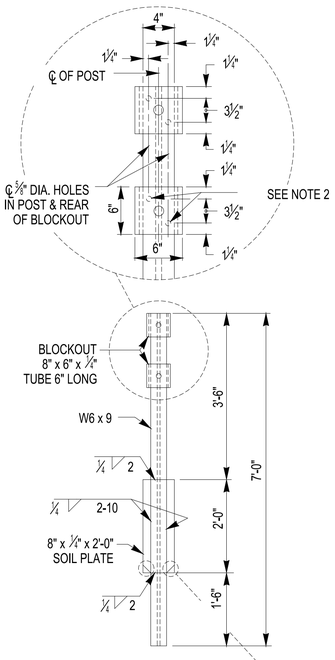
HEAVY POST ELEVATION



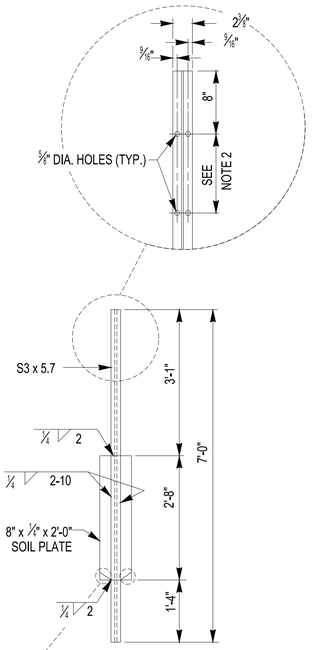
PRESTRESSED UNIT ANCHOR PLATE



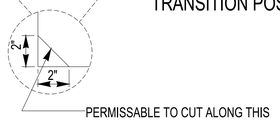
ANCHOR PLATE



HEAVY POST DETAIL



TRANSITION POST DETAIL



project:

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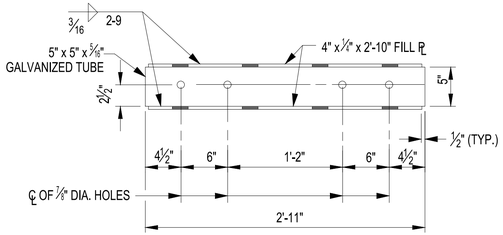

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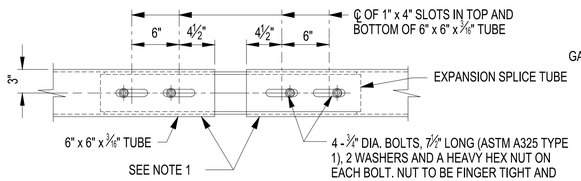

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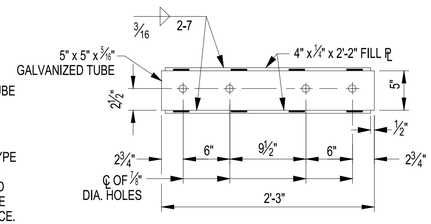

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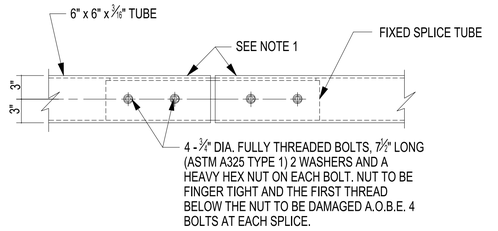

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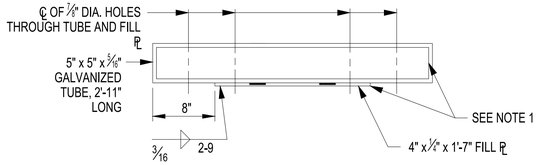
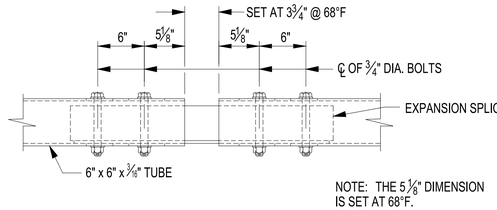


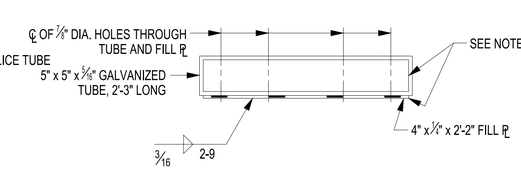
ELEVATION

EXPANSION SPLICE TUBE



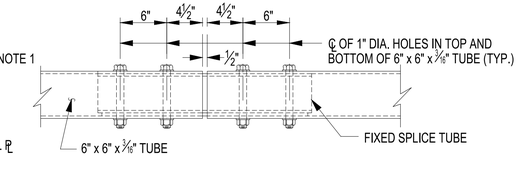
ELEVATION

EXPANSION SPLICE ASSEMBLY



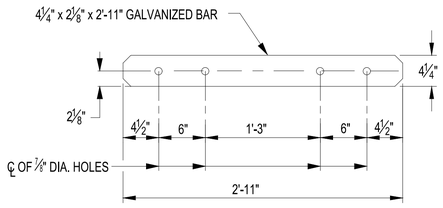
ELEVATION

FIXED SPLICE TUBE



ELEVATION

FIXED SPLICE ASSEMBLY



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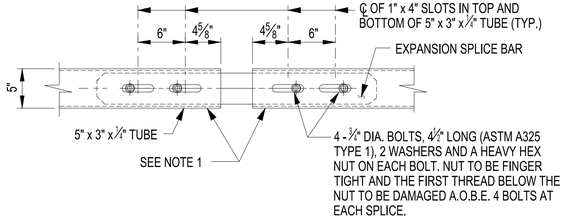

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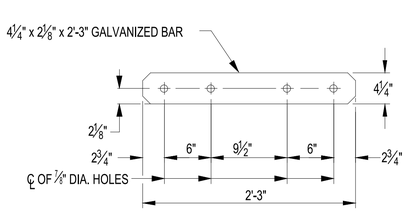

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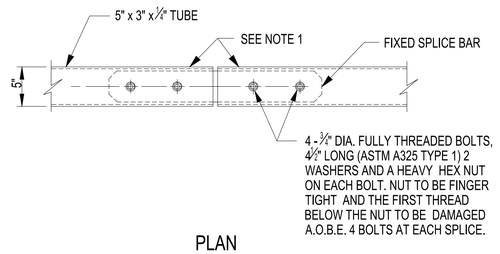

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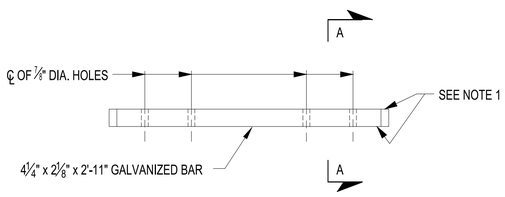
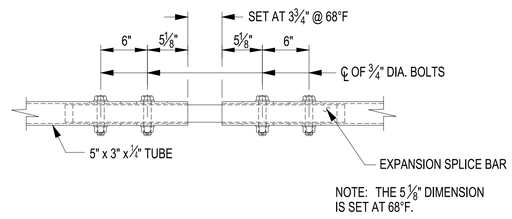


ELEVATION

EXPANSION SPLICE BAR



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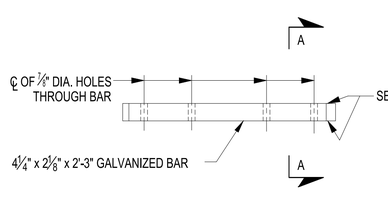
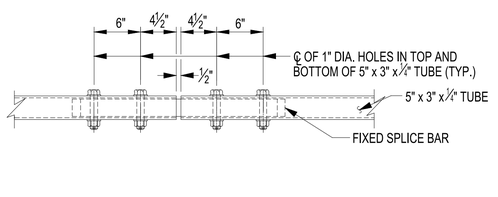
EXPANSION SPLICE ASSEMBLY



ELEVATION

FIXED SPLICE BAR



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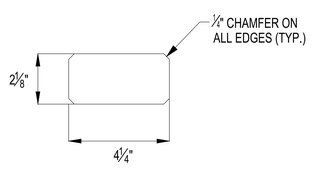
FIXED SPLICE ASSEMBLY



SECTION A-A

NOTES:

1. PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.

project:

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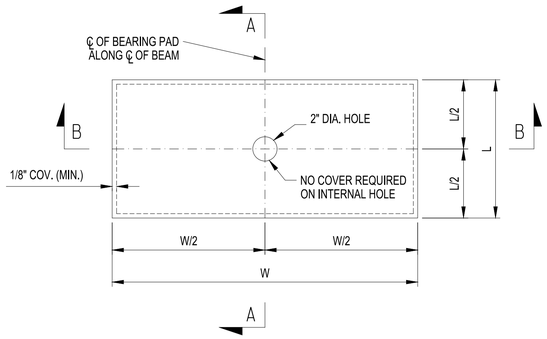
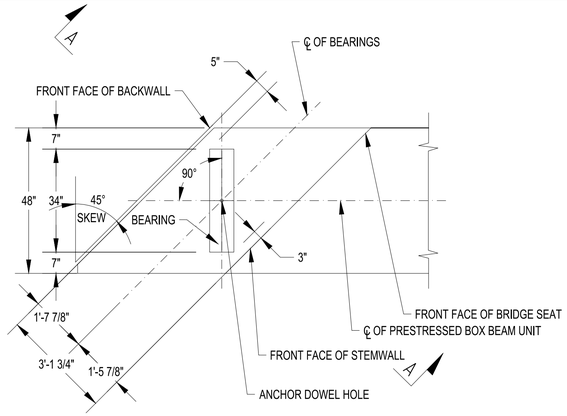
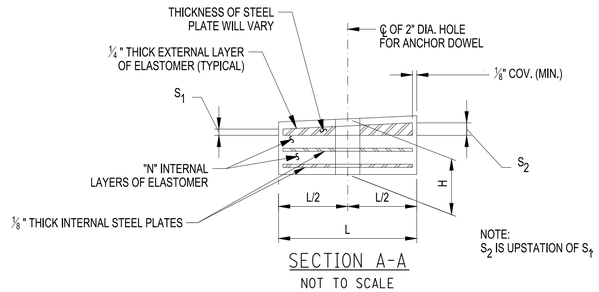


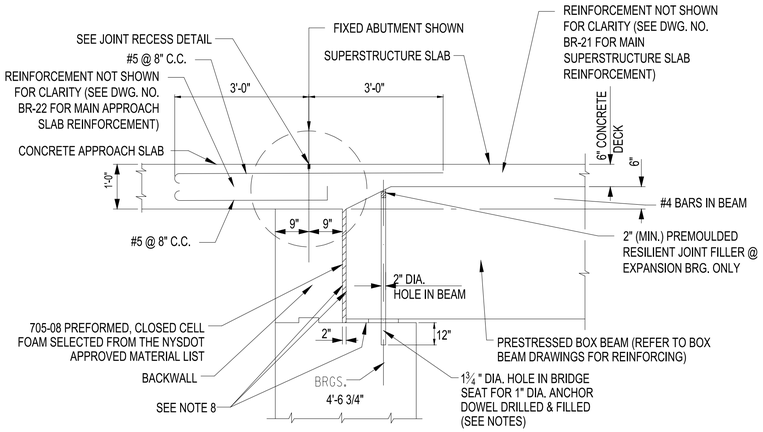
PLAN
STEEL LAMINATED ELASTOMERIC BEARING (TYPE E.L.)
NOT TO SCALE



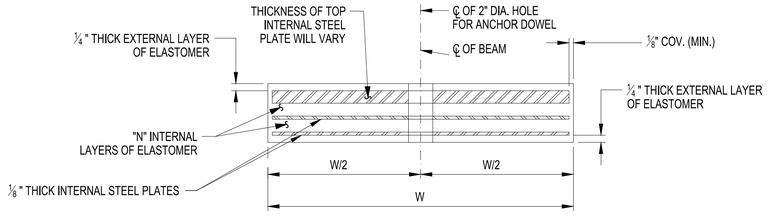
PARTIAL PLAN - SKEWED
NOT TO SCALE



SECTION A-A
NOT TO SCALE



JOINT SECTION AT FIXED ABUTMENT
NOT TO SCALE



SECTION B-B
NOT TO SCALE

NOTES:

1. THE BEARINGS SHALL MEET THE REQUIREMENTS OF N.Y.S. STANDARD SPECIFICATION SECTION 565 UNLESS OTHERWISE NOTED.
2. ELASTOMER SHALL BE 50 DUROMETER HARDNESS ON THE SHORE A SCALE.
3. INSTALLATION ALIGNMENT: THE MAXIMUM VARIATION FROM PERFECT ALIGNMENT UNDER FULL DEAD LOAD SHALL NOT EXCEED 3/16 in. THIS VARIATION SHALL BE MEASURED AS THE HORIZONTAL DISTANCE BETWEEN THE CENTERLINE OF THE HIGHEST ELASTOMER SURFACE AND THE CENTERLINE OF THE LOWEST ELASTOMER SURFACE.
4. CONCRETE SURFACES UNDER THE BEARINGS SHALL CONFORM TO SUBSECTION 565-3.02 "CONCRETE BEARING SURFACE PREPARATION" OF THE N.Y.S. STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS.
5. ALL EXTERNAL ELASTOMER LAYERS ARE ONE-HALF THE THICKNESS OF THE INTERNAL ELASTOMER LAYERS.
6. PREMOULDED RESILIENT JOINT FILLER SHALL MEET THE REQUIREMENTS OF 705-07 AND BE PAID FOR UNDER THE BEARING ITEM.
7. THE ENDS OF BEAM AND ANCHOR DOWEL HOLES SHALL BE MADE VERTICAL: ¼", UNDER D.L. AND GRADE. ANCHOR DOWELS TO BE PAID FOR UNDER BEARING ITEM. DOWEL HOLE FILL MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ELASTOMERIC BEARING ITEM AND SHALL MEET MATERIAL REQUIREMENTS AS FOLLOWS:

   EXPANSION END MATERIAL OPTION:

   N.Y.S. MAT. SPEC. 702-0700 - ASPHALT FILLER
   FED. MAT. SPEC. SS-S-200E - ELASTOMERIC POLYMER TYPE, TWO COMPONENT JET FUEL RESISTANT, COLD APPLIED

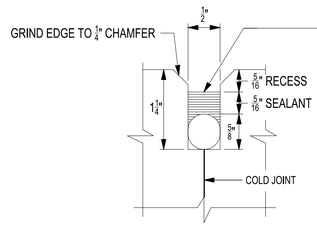
   FIXED END MATERIAL OPTION:

   **N.Y.S. MAT. SPEC. 721-03 - EPOXY POLYSULFIDE GROUT WITH SAND
   **N.Y.S. MAT. SPEC. 721-01 - EPOXY RESIN SYSTEM WITH SAND
   N.Y.S. MAT. SPEC. 701-05 - CONCRETE GROUTING MATERIAL
   N.Y.S. MAT. SPEC. 701-06 - CEMENT BASED GROUT MATERIALS FOR SHEAR KEYS

   ** - MOISTURE FREE, SANDBLAST SAND SHALL BE ADDED IN THE RATIO OF (1) PART EPOXY AND (2) PARTS SAND
8. ITEM 559.16960118 SHALL BE APPLIED TO THE BRIDGE SEAT, FRONT FACE OF THE BACK WALL AND THE PRECAST BOX ENDS, (ONLY THE COATING TYPE PROTECTIVE SEALER (717-04) WILL BE ALLOWED AT THESE LOCATIONS.)

SEQUENCE OF CONSTRUCTION
ADJACENT BOX BEAMS:

1. PLACE BEARINGS AS SHOWN ON THE CONTRACT PLANS
2. PLACE THE BOX BEAMS ON THE BEARINGS
3. DRILL AND CLEAN DOWEL HOLES IN THE BRIDGE SEAT
4. INSTALL ANCHOR DOWELS
5. WASH SHEAR KEYS THOROUGHLY TO REMOVE ANY FOREIGN MATERIAL. INSTALL BACKER RODS IN THE SHEAR KEYS
6. GROUT AND CURE THE SHEAR KEYS WITH AN APPROVED GROUT MATERIAL FOLLOWING THE MANUFACTURER'S INSTRUCTIONS. ALL SHEAR KEYS SHALL BE COMPLETELY FILLED
7. TENSION THE TRANSVERSE TENDONS TO 28 KIP/STRAND NO SOONER THAN 24 HOURS AFTER BUT WITHIN 21 DAYS AFTER PLACEMENT OF GROUT IN THE LAST SHEAR KEY
8. CLEAN AND PRE-WET THE TOP SURFACES OF THE BEAMS PRIOR TO PLACING CONCRETE FOR DECK POUR. CURE THE SLAB USING APPROPRIATE APPROVED METHODS.



JOINT RECESS DETAIL

FILL THE RECESS WITH A STRUCTURAL JOINT MATERIAL, SILICONE SEALANT, FROM THE DEPARTMENT'S APPROVED LIST FOR ITEM 567.51--16. IF THE RECESS IS SAW CUT, WATER BLAST IMMEDIATELY FOLLOWING CUTTING TO REMOVE ANY RESIDUAL SLURRY BEFORE IT DRIES. CLEAN THE VERTICAL FACES OF THE RECESS BY ABRASIVE BLAST, AND AIR BLOW THE RESIDUE FROM THE RECESS. PRIME THE VERTICAL FACES WITH THE MANUFACTURER'S RECOMMENDED PRIMER, AND ALLOW TO DRY. PLACE A 1" DIA. SOFT CLOSED CELL BACKER ROD IN THE BOTTOM OF THE RECESS. POUR THE SILICONE SEALANT TO A DEPTH OF APPROX. 5/16". PAYMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROACH SLAB.

STEEL LAMINATED ELASTOMERIC BEARING (TYPE E.L.) TABLE

LOCATION	FIX/ EXP.	ITEM NO.	QUANTITY REQUIRED	D.L. + S.D.L. (kips)	L.L. WITHOUT IMPACT (kips)	TOTAL DESIGN REACTION (kips)	SHAPE FACTOR	ELASTOMER LAYER				hrt	COMP. AREA (SQ. In.)	SHEAR AREA (SQ. In.)	BEVELED LAYER		BRG. H	ANCHOR DOWEL DIAMETER
								THK/LAYER	NO. LAYERS	L	W				S_1	S_2		
E. ABUT	EXP	565.1922	8	32	67	99	5.96	1/2	2	8	34	1 1/2	258.42	268.86	1/4	3/8	2	1
W. ABUT	FIX	565.1922	8	32	67	99	5.96	1/2	2	8	34	1 1/2	258.42	268.86	1/4	3/8	2	1

TABLE DIMIENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

S_2 IS UPSTATION OF S_1
H IS TAKEN AT THE CENTERLINE OF THE BEARING.

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS PUBLIC WORKS COUNTY

WATTS ARCHITECTURE & ENGINEERING
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STATE OF NEW YORK
TIMOTHY E. MAJOR
No. 081051
LICENSED PROFESSIONAL ENGINEER

proprietary notes:

drawing history

number	date	description

sheet title

BEARING DETAILS

project number:	11045
drawn by:	JMR
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-28

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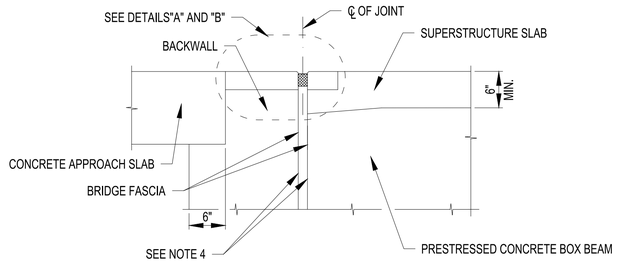
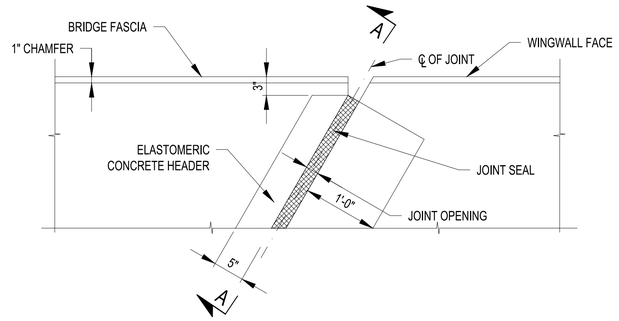


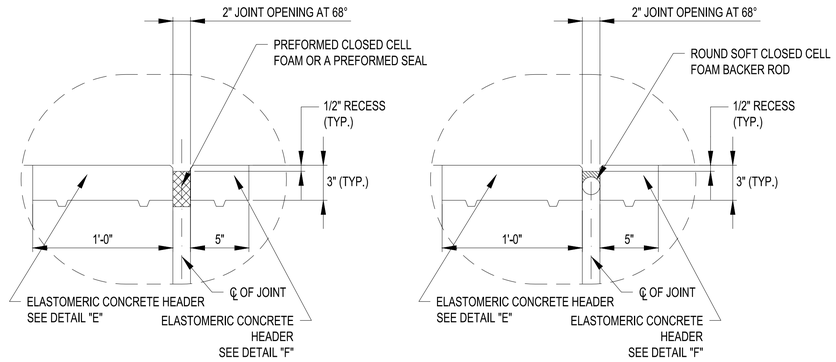
JOINT SECTION AT EXPANSION ABUTMENT

NOT TO SCALE



PARTIAL PLAN

NOT TO SCALE

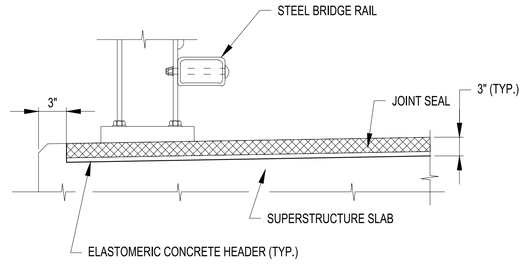


DETAIL "A"
CLOSED CELL FOAM / PREFORMED SEAL

NOT TO SCALE

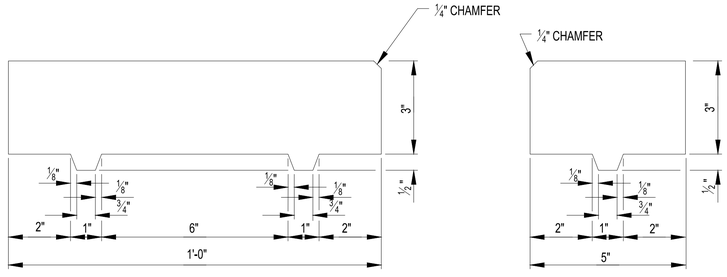
DETAIL "B"
POURABLE SEAL

NOT TO SCALE



SECTION A-A

NOT TO SCALE



DETAIL "E"

NOT TO SCALE

DETAIL "F"

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL DETERMINE AND APPLY CLOSED CELL FOAM/PREFORMED SEAL DIMENSIONS BASED UPON JOINT OPENING SIZE AND EXPECTED MOVEMENT.
2. CONTRACTOR MAY HAVE TO MODIFY SUPERSTRUCTURE SLAB TO ACCOMMODATE ARMORLESS BRIDGE JOINT SYSTEM SELECTED.
3. CONCRETE HEADERS SHALL NOT OVERHANG THE CONCRETE SLAB UNDER ANY CIRCUMSTANCES.
4. ITEM 559.16960118 SHALL BE APPLIED TO THE BRIDGE SEAT, FRONT FACE OF THE BACK WALL AND THE PRECAST BOX ENDS, (ONLY THE COATING TYPE PROTECTIVE SEALER (717-04) WILL BE ALLOWED AT THESE LOCATIONS.)

project:

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number	date	description

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JOINT DETAILS

project number:	11045
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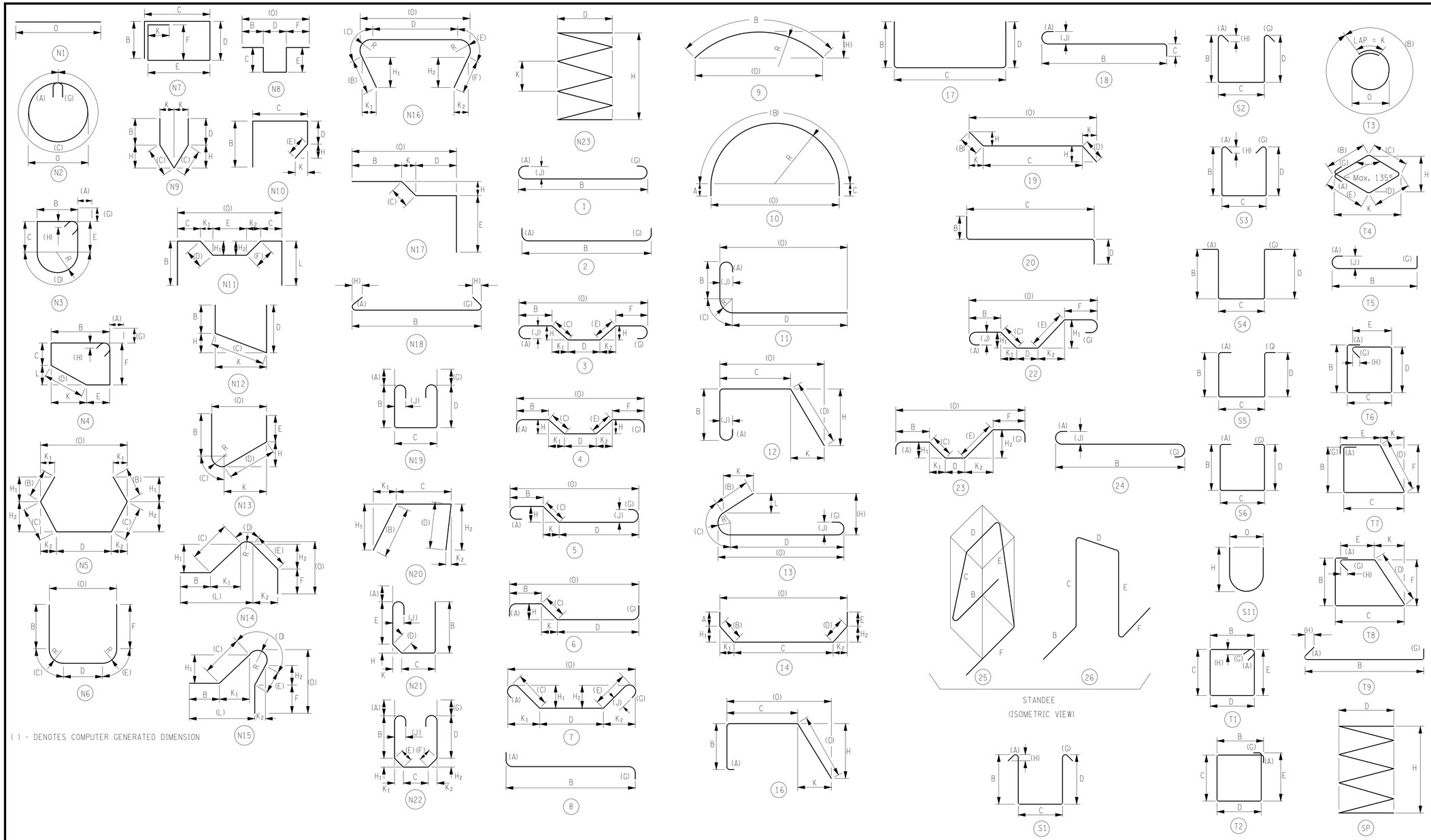

( ) - DENOTES COMPUTER GENERATED DIMENSION

NOTES:

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING No. 16 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT," AASHTO M31 (ASTM A615-S1). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED P.I.N. DIAMETER "D" OF BENDS HOOK AND OTHER STANDARD PRACTICES, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE (C.R.S.I.) "MANUAL OF STANDARD PRACTICES" (M.S.P.).
3. ALL DIMENSIONS ARE OUT-TO-OUT OF BAR, EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
4. DIMENSIONS "A", "G" AND "J" ARE STANDARD BENDING DIMENSIONS PER SIZE OF BAR. REFER TO C.R.S.I. - M.S.P. FOR DETAILS.

STRUCTURAL UNIT

A - ABUTMENT
B - BOXBEAM
D - DECK
H - HIGHWAY APPROACH SLAB

BAR MARK DESIGNATION IS AS FOLLOWS:

6 A E 0 3
- SEQUENTIAL BAR NUMBER
- INDICATES BAR COATING/TYPE (I.E. E=EPOXY, G=GALVANIZED, BLANK=BLACK, S=STAINLESS STEEL)
- INDICATES STRUCTURE TYPE (I.E. A =ABUTMENT, D=DECK, ETC.)
- INDICATES BAR SIZE (I.E. #5, #6, #7, ETC.)

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BAR BENDING DIAGRAMS

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date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-30

MARK	NO.	LENGTH	TYPE	WEIGHT	A	B	C	D	E	F	G	H H1	H2	J	K K1	K2	L	O	R
DECK REINFORCEMENT																			
POUR 1																			
4DG01	49	16-8	17	546		0-0	16-4	0-4		C = 4" MIN, 32'-4" MAX, 16'-4" AVE								9-11	
4DG02	37	12-0	17	297		0-0	11-8	0-4										9-11	
4DG03	37	21-8	17	536		0-0	21-4	0-4										22-7	
4DG04	49	16-8	17	546		0-0	16-4	0-4		C = 4" MIN, 32'-4" MAX, 16'-4" AVE								21-11	
4DG05	2	56-6	N1	75														56-6	
4DG06	2	56-6	N1	75														56-6	
4DG07	49	56-6	N1	1849														56-6	
4DG08	2	46-8	N1	62														46-8	
SUBTOTAL GALVANIZED BARS				3986	LB THIS POUR (INCLUDED UNDER ITEM 557.0503)														
APPROACH SLAB REINFORCEMENT																			
POUR 1 - WEST APPROACH SLAB																			
5HG01	21	26-4	N1	577														26-4	
5HG02	21	26-4	N1	577														26-4	
5HG03	7	23-4	N1	170						O = 20'-4" MIN, 26'-4" MAX, 23'-4" AVE								23-4	
5HG04	7	23-4	N1	170						O = 20'-4" MIN, 26'-4" MAX, 23'-4" AVE								23-4	
5HG05	2	20-2	N1	42														20-2	
5HG06	2	20-2	N1	42														20-2	
5HG07	21	10-3	N1	225						O = 4" MIN, 20'-2" MAX, 10'-3" AVE								10-3	
5HG08	21	10-3	N1	225						O = 4" MIN, 20'-2" MAX, 10'-3" AVE								10-3	
5HG09	1	41-2	N1	43														41-2	
5HG10	1	41-2	N1	43														41-2	
5HG11	40	34-0	N1	1418						O = 20'-10" MIN, 47'-1" MAX, 34'-0" AVE								34-0	
5HG12	40	34-0	N1	1418						O = 20'-10" MIN, 47'-1" MAX, 34'-0" AVE								34-0	
5HG13	5	20-2	N1	105														20-2	
5HG14	5	20-2	N1	105														20-2	
5HG15	1	4-9	13	5		2-0	0-9	2-0			0-0	1-11		0-0	1-5		1-5	2-4	0-4
5HG16	1	4-9	13	5		2-0	0-9	2-0			0-0	1-11		0-0	1-5		1-5	2-4	0-4
5HG17	7	7-5	N1	54						O = 6'-5" MIN, 8'-5" MAX, 7'-5" AVE								7-5	
5HG18	7	7-5	N1	54						O = 6'-5" MIN, 8'-5" MAX, 7'-5" AVE								7-5	
5HG19	45	6-7	T5	309	0-7	6-0					0-0			0-5					
5HG20	45	4-7	N19	215	0-7	3-6	0-6	0-0			0-0			0-5					
SUBTOTAL GALVANIZED BARS				5802	LB THIS POUR (INCLUDED UNDER ITEM 557.2003)														
POUR 2 - EAST APPROACH SLAB																			
5HG01	21	26-4	N1	577														26-4	
5HG02	21	26-4	N1	577														26-4	
5HG03	7	23-4	N1	170						O = 20'-4" MIN, 26'-4" MAX, 23'-4" AVE								23-4	
5HG04	7	23-4	N1	170						O = 20'-4" MIN, 26'-4" MAX, 23'-4" AVE								23-4	
5HG05	3	19-9	N1	62														19-9	
5HG06	3	19-9	N1	62														19-9	
5HG07	20	9-9	N1	203						O = 4" MIN, 19'-3" MAX, 9'-9" AVE								9-9	
5HG08	20	9-9	N1	203						O = 4" MIN, 19'-3" MAX, 9'-9" AVE								9-9	
5HG09	1	41-2	N1	43														41-2	
5HG10	1	41-2	N1	43														41-2	
5HG11	40	34-0	N1	1419						O = 20'-10" MIN, 47'-1" MAX, 34'-0" AVE								34-0	
5HG12	40	34-0	N1	1418						O = 20'-10" MIN, 47'-1" MAX, 34'-0" AVE								34-0	
5HG13	5	19-9	N1	103														19-9	
5HG14	5	19-9	N1	103														19-9	
5HG15	1	4-9	13	5		2-0	0-9	2-0			0-0	1-11		0-0	1-5		1-5	2-4	0-4
5HG16	1	4-9	13	5		2-0	0-9	2-0			0-0	1-11		0-0	1-5		1-5	2-4	0-4
5HG17	7	7-5	N1	54						O = 6'-5" MIN, 8'-5" MAX, 7'-5" AVE								7-5	
5HG18	7	7-5	N1	54						O = 6'-5" MIN, 8'-5" MAX, 7'-5" AVE								7-5	
SUBTOTAL GALVANIZED BARS				5271	LB THIS POUR (INCLUDED UNDER ITEM 557.2003)														

MARK	NO.	LENGTH	TYPE	WEIGHT	A	B	C	D	E	F	G	H H1	H2	J	K K1	K2	L	O	R
WEST ABUTMENT REINFORCEMENT																			
POUR 1 - FOOTING																			
4A1	43	9-11	N1	285														9-11	
7A2	33	9-11	N1	669														9-11	
6A3	22	22-7	N1	746														22-7	
5A4	16	21-11	N1	366														21-11	
4A5	7	10-8	N1	50						O = 10'-0" MIN, 11'-4" MAX, 10'-8" AVE								10-8	
7A6	7	10-8	N1	153						O = 10'-0" MIN, 11'-4" MAX, 10'-8" AVE								10-8	
6A7	1	16-6	N10	25		0-0	6-0	3-2	7-4			5-2			5-2				
5A8	1	16-6	N10	17		0-0	6-0	3-2	7-4			5-2			5-2				
6A9	41	7-5	N1	457														7-5	
4A10	53	7-5	N1	263														7-5	
6A11	9	25-10	N1	349														25-10	
5A12	6	25-10	N1	162														25-10	
6A13	9	26-5	N1	357														26-5	
5A14	6	26-5	N1	165														26-5	
7A15	44	13-6	2	1214	1-2	12-4					0-0		B = 12'-1" MIN, 12'-7" MAX, 12'-4" AVE						
5A16	37	13-4	2	515	1-0	12-4					0-0		B = 12'-1" MIN, 12'-7" MAX, 12'-4" AVE						
5A17	40	14-4	2	598	1-0	13-4					0-0		B = 13'-3" MIN, 13'-5" MAX, 13'-4" AVE						
5A18	16	14-4	2	239	1-0	13-4					0-0		B = 13'-3" MIN, 13'-5" MAX, 13'-4" AVE						
5A19	40	14-5	2	601	1-0	13-5					0-0		B = 13'-1" MIN, 12'-10" MAX, 13'-5" AVE						
5A20	14	14-5	2	211	1-0	13-5					0-0		B = 13'-1" MIN, 12'-10" MAX, 13'-5" AVE						
9A21	30	2-0	N1	204														2-0	
SUBTOTAL PLAIN STEEL BARS				7646	LB THIS POUR														
POUR 2 - STEMWALL																			
5A30	7	29-9	N10	217		0-0	0-0	26-0	3-9			2-8			2-8				
5A31	9	27-3	N10	256		0-0	0-0	23-9	3-6			2-6			2-6				
8A32	6	26-0	N1	417						O = 24'-9" MIN, 27'-3" MAX, 26'-0" AVE								26-0	
5A33	15	2-7	N1	40														2-7	
5A34	25	3-7	1	93	0-7	3-0					0-0			0-5					
SUBTOTAL PLAIN STEEL BARS				1023	LB THIS POUR														
POUR 3 - STEMWALL																			
5A33	16	2-7	N1	43														2-7	
5A34	22	3-7	1	82	0-7	3-0					0-0			0-5					
5A35	7	23-0	N12	168		0-0	4-4	18-8				3-0			3-0				
5A36	9	35-6	N12	333		0-0	11-4	24-2				8-0			8-0				
8A37	6	22-11	N1	367						O = 21'-8" MIN, 24'-2" MAX, 22'-11" AVE								22-11	
SUBTOTAL PLAIN STEEL BARS				993	LB THIS POUR														
POUR 4 - BACKWALL																			
5A40	2	29-9	N10	62		0-0	0-0	26-0	3-9			2-8			2-8				
5A41	2	30-10	N10	64		0-0	0-0	26-8	4-2			2-11			2-11				
4A42	28	3-8	17	69		1-3	1-2	1-3											
SUBTOTAL PLAIN STEEL BARS				195	LB THIS POUR														
POUR 5 - BACKWALL																			
4A42	25	3-8	17	61		1-3	1-2	1-3											
5A43	2	23-0	N12	48		0-0	4-4	18-8				3-0			3-0				
5A44	2	27-11	N12	58		0-0	6-11	21-0				4-11			4-11				
SUBTOTAL PLAIN STEEL BARS				167	LB THIS POUR														
POUR 6 - NORTH WINGWALL																			
5A50	8	17-6	N1	146														17-6	
5A51	12	17-6	N1	219														17-6	
4A52	12	4-0	17	32		1-4	1-4	1-4											
SUBTOTAL PLAIN STEEL BARS				397	LB THIS POUR														
POUR 7 - SOUTH WINGWALL																			
4A52	13	4-0	17	35		1-4	1-4	1-4											
5A53	8	17-6	N1	146														17-6	
5A54	12	17-6	N1	219														17-6	
SUBTOTAL PLAIN STEEL BARS				400	LB THIS POUR														

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

CATTARAUGUS COUNTY PUBLIC WORKS DEPT

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STATE OF NEW YORK
TIMOTHY E. MAJOR
No. 081051
LICENSED PROFESSIONAL ENGINEER

proprietary notes:

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BAR LIST

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scale:	AS NOTED

sheet number

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Aug 23, 2017, 11:26am

MARK	NO.	LENGTH	TYPE	WEIGHT	A	B	C	D	E	F	G	H H1	H2	J	K K1	K2	L	O	R
EAST ABUTMENT REINFORCEMENT																			
POUR 1 - FOOTING																			
4A1	43	9-11	N1	285														9-11	
7A2	33	9-11	N1	669														9-11	
6A3	22	22-7	N1	746														22-7	
5A4	16	21-11	N1	366														21-11	
4A5	7	10-8	N1	50						O = 10'-0" MIN, 11'-4" MAX, 10'-8" AVE								10-8	
7A6	7	10-8	N1	153						O = 10'-0" MIN, 11'-4" MAX, 10'-8" AVE								10-8	
6A7	1	16-6	N10	25		0-0	6-0	3-2	7-4			5-2			5-2				
5A8	1	16-6	N10	17		0-0	6-0	3-2	7-4			5-2			5-2				
6A9	41	7-5	N1	457														7-5	
4A10	53	7-5	N1	263														7-5	
6A11	9	25-10	N1	349														25-10	
5A12	6	25-10	N1	162														25-10	
6A13	9	26-5	N1	357														26-5	
5A14	6	26-5	N1	165														26-5	
7A15	44	14-2	2	1274	1-2	13-0					0-0		B = 12'-9" MIN, 13'-4" MAX, 13'-0" AVE						
5A16	37	12-4	2	476	1-0	11-4					0-0		B = 11'-1" MIN, 11'-7" MAX, 11'-4" AVE						
5A17	40	14-11	2	622	1-0	13-11					0-0		B = 13'-9" MIN, 11'-1" MAX, 13'-11" AVE						
5A18	16	14-11	2	249	1-0	13-11					0-0		B = 13'-9" MIN, 11'-1" MAX, 13'-11" AVE						
5A19	40	15-4	2	640	1-0	14-4					0-0		B = 14'-2" MIN, 14'-5" MAX, 14'-4" AVE						
5A20	14	15-4	2	224	1-0	14-4					0-0		B = 14'-2" MIN, 14'-5" MAX, 14'-4" AVE						
9A21	30	2-0	N1	204														2-0	
SUBTOTAL PLAIN STEEL BARS				7753	LB THIS POUR														
POUR 2 - STEMWALL																			
5A30	7	29-9	N10	217		0-0	0-0	26-0	3-9			2-8			2-8				
5A31	10	27-3	N10	284		0-0	0-0	23-9	3-6			2-6			2-6				
8A32	6	26-0	N1	417						O = 24'-9" MIN, 27'-3" MAX, 26'-0" AVE								26-0	
5A33	15	2-7	N1	40														2-7	
5A34	25	4-5	1	115	0-7	3-10					0-0			0-5					
SUBTOTAL PLAIN STEEL BARS				1073	LB THIS POUR														
POUR 3 - STEMWALL																			
5A33	16	2-7	N1	43														2-7	
5A34	22	4-5	1	101	0-7	3-10					0-0			0-5					
5A35	7	23-0	N12	168		0-0	4-4	18-8				3-0			3-0				
5A36	10	35-6	N12	370		0-0	11-4	24-2				8-0			8-0				
8A37	6	22-11	N1	367						O = 21'-8" MIN, 24'-2" MAX, 22'-11" AVE								22-11	
SUBTOTAL PLAIN STEEL BARS				1049	LB THIS POUR														
POUR 4 - BACKWALL																			
5A40	2	29-9	N10	62		0-0	0-0	26-0	3-9			2-8			2-8				
5A41	3	30-10	N10	96		0-0	0-0	26-8	4-2			2-11			2-11				
4A42	28	3-2	17	59		1-3	0-8	1-3											
SUBTOTAL PLAIN STEEL BARS				217	LB THIS POUR														
POUR 5 - BACKWALL																			
4A42	25	3-2	17	53		1-3	0-8	1-3											
5A43	2	23-0	N12	48		0-0	4-4	18-8				3-0			3-0				
5A44	3	27-11	N12	87		0-0	6-11	21-0				4-11			4-11				
SUBTOTAL PLAIN STEEL BARS				188	LB THIS POUR														
POUR 6 - NORTH WINGWALL																			
5A50	9	17-6	N1	164														17-6	
5A51	13	17-6	N1	237														17-6	
4A52	12	4-0	17	32		1-4	1-4	1-4											
SUBTOTAL PLAIN STEEL BARS				433	LB THIS POUR														
POUR 7 - SOUTH WINGWALL																			
4A52	13	4-0	17	35		1-4	1-4	1-4											
5A53	9	17-6	N1	164														17-6	
5A54	13	17-6	N1	237														17-6	
SUBTOTAL PLAIN STEEL BARS				436	LB THIS POUR														

project:

LEON-NEW ALBION ROAD

OVER
MUD CREEK
PIN 5758.49, BIN 3322110

WATTS ARCHITECTURE & ENGINEERING
95 Perry Street , Suite 300
Buffalo, New York 14203
p: 716.206.5100 f: 716.206.5199

signature and seal

STATE OF NEW YORK
TIMOTHY E. MAJOR
No. 081051
LICENSED PROFESSIONAL ENGINEER

proprietary notes:

drawing history

number	date	description

sheet title

BAR LIST

project number:	11045
drawn by:	JMR
checked by:	TEM
date:	AUGUST 2017
scale:	AS NOTED

sheet number

BR-32

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Aug 23, 2017, 11:26am