

EXISTING SYMBOLS

DRAINAGE	
	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
	DRAINAGE INLET
	DRAINAGE JUNCTION BOX
	DRAINAGE MANHOLE
	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES	
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	CURB
	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
	LAMP AND POST - RESIDENTIAL
	MAILBOX
	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES	
	GRASS LAWN
	HEDGEROW OR THICKET
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

RIGHT-OF-WAY SYMBOLS	
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE
	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING DENIAL OF ACCESS
	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION	
	SURVEY BENCHMARK LOCATION
	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
	CABLE TV DISTRIBUTION BOX
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
	GAS MANHOLE
	GAS METER
	GAS VALVE
	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
	SANITARY SEWER MANHOLE
	SANITARY SEWER VALVE
	SANITARY SEWER VENT OR CLEANOUT
	SEPTIC DRAIN FIELD
	TELEPHONE BOOTH
	TELEPHONE MANHOLE
	TELEPHONE TEST POINT
	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER - FIRE HYDRANT
	WATER METER
	WATER VALVE
	WELL HEAD
	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES	
	COMCAST CABLE
	DELAWARE ELECTRIC COOPERATIVE

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
	CONSTRUCTION BASELINE
	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
	HORIZONTAL CLEARANCE
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
	LIMIT OF CONSTRUCTION
	MAILBOX
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK - 4"
	P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
	PROPOSED DENIAL OF ACCESS
	PROPOSED PERMANENT EASEMENT
	PROPOSED RIGHT-OF-WAY
	PROPOSED R/W & DENIAL OF ACCESS
	TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED RIGHT-OF-WAY BASELINE

PROPOSED SYMBOLS

IDENTIFIERS	
	ADJUST BY CONTRACTOR
	ADJUST BY OTHERS
	CONCRETE SAFETY BARRIER
	CURB OR CURB & GUTTER
	CONVERT TO JUNCTION BOX
	CONVERT TO DRAINAGE MANHOLE
	CURB OPENING
	CURB RAMP / TYPE
	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
	CONSTRUCTION SAFETY FENCE
	DRAINAGE INLET
	DO NOT DISTURB
	ENERGY DISSIPATOR
	FENCE
	FLARED END SECTION
	FILL WITH FLOWABLE FILL
	FILTRATION STRUCTURE
	GUARDRAIL
	JUNCTION BOX
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

LANDSCAPING	
	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

TRAFFIC	
	ITMS CONDUIT
	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

PAVEMENT SECTION(S)	
	2" SUPERPAVE TYPE C, PG 64-22, 160 GYRATIONS ON 2 1/4" SUPERPAVE TYPE B, PG 64-22, 160 GYRATIONS ON 8" GABC
	DRIVEWAY AND GUARDRAIL PAVEMENT - 2" SUPERPAVE TYPE C, PG 64-22, 160 GYR. ON 6" GABC

EROSION & SEDIMENT CONTROL	
	DEWATERING BAG
	DEWATERING BASIN
	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
	PORTABLE SEDIMENT TANK
	SANDBAG DIKE
	SANDBAG DIVERSION
	STONE CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE / LENGTH
	SILT FENCE
	SILT FENCE - REINFORCED
	SUMP PIT, TYPE 1
	SUMP PIT, TYPE 2
	SEDIMENT TRAP
	SEDIMENT TRAP
	SEDIMENT TRAP WITH INLET AS OUTLET
	SEDIMENT TRAP PIPE OUTLET
	STILLING WELL
	TEMPORARY SWALE
	TEMPORARY SLOPE DRAIN
	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN

UTILITY COMPANY FACILITIES	
	COMCAST CABLE
	DELAWARE ELECTRIC COOPERATIVE

MISCELLANEOUS	
	TOP OF BANK

LAST REVISED: 01/30/2012
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GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
() INSIGNIFICANT	NONE
() MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MEDIUM	THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
() MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR PRIOR TO THE EXECUTION OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

- ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

()	NONE
()	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	ALL PLAN SHEETS, IN PDF FORMAT.
()	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

- PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(X)	CROSS SECTIONS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)
()	RIGHT-OF-WAY PLANS (INCLUDED IN PLAN SET)

- AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 743000.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

- THE DISTURBED AREA FOR THIS PROJECT IS 0.976 ACRES.
- THE ADDITIONAL IMPERVIOUS AREA FOR THIS PROJECT IS 3500 SQ FEET.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

PROJECT NOTES

SECTION 100

- ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

SECTION 200

- ALL EXISTING PAVEMENT FROM STA. 23+00 TO STA. 33+50 AS SHOWN ON THE CONSTRUCTION PLANS SHALL BE EXCAVATED IN ITS ENTIRETY. PAYMENT FOR HOTMIX REMOVAL UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT.
- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - BRIDGE 2-213A IN ITS ENTIRETY EXCEPT FOR THE EXISTING PILES AND TIMBER SHEETING. FOR INFORMATION ONLY AND AS PER THE EXISTING PLANS, THE EXISTING PILES ARE 35' LONG AND THE SHEETING IS 10' LONG WITH A TOP ELEVATION APPROX. 7' BELOW GRADE. THE CONTRACTOR HAS THE OPTION OF REMOVING THE PILES AND/OR SHEETING COMPLETELY OR CUTTING THEM 2' BELOW EXISTING GRADE OR BELOW RIPRAP PLACEMENT, WHICHEVER IS APPLICABLE.
 - ALL HAZARDOUS MATERIALS (I.E. CREOSOTED TIMBER) SHALL BE HANDLED AS PER SPECIAL PROVISION 202560.
 - ALL EXISTING GUARDRAIL ATTACHED TO THE BRIDGE.
- THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.
- THE CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE MAILBOXES AS REQUIRED BY THE PROPOSED GEOMETRICS AND AS DIRECTED BY THE ENGINEER. WHEN RELOCATING MAILBOXES IN CURBED SECTIONS, THE FACE OF THE MAILBOX SHALL BE FLUSH WITH THE BACK EDGE OF CURB. WHEN RELOCATING MAILBOXES IN OPEN SECTIONS, THE FACE OF THE MAILBOX SHALL SET BACK 8 INCHES FROM THE EDGE OF THE PAVED SHOULDER. THE BOTTOM OF THE MAILBOX SHALL BE SET 46 INCHES ABOVE THE ROADWAY SURFACE. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. POSTS BEING RESET IN CONCRETE SIDEWALK SHALL BE PLACED IN AN APPROPRIATE SIZE PVC SLEEVE. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.

SECTION 300

- A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
 - CRUSHED STONE (PER STANDARD SPECIFICATION 821)
 - CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
 - HOT-MIX MILLINGS (PER SPECIAL PROVISION 302514 MILLED HOT-MIX BASE COURSE)

THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

ALL OF THE ABOVE LISTED MATERIALS ARE PERMITTED FOR USE ON THE JOB, PROVIDED THEY ARE SEPARATED INTO APPROVED AREAS. EACH AREA OF BASE COURSE MUST BE CONSTRUCTED USING MATERIALS FROM A SINGULAR SOURCE, FULL DEPTH, IN ORDER THAT PROPER TESTING MAY BE ACCOMPLISHED. THE CONTRACTOR AND ENGINEER SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.
- B. THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL BEING EQUAL TO THE ACTUAL QUANTITY USED UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.
- C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR USE IN HOT-MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE CHOICE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR. ALL EXCESS MILLING MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.
- D. HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
 - MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
 - MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE. ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 302514 - MILLED HOT-MIX BASE COURSE.
- E. PAYMENT CLARIFICATION:
 - SHOULD THE CONTRACTOR ELECT TO MILL PORTIONS OF HOT-MIX SHOWN ON THE PLANS TO BE REMOVED UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT THE COST OF MILLING THIS HOT-MIX WILL BE PAID AS ITEM 202000 - EXCAVATION AND EMBANKMENT. THE MILLINGS GENERATED MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE, OR DISPOSED OF TO AN APPROVED SITE. HAULING COSTS FOR DISPOSAL AND/OR RECYCLING ARE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.
 - SHOULD THE CONTRACTOR ELECT TO TEMPORARILY STOCKPILE MILLINGS ON THE JOB SITE FOR LATER USE, ALL COSTS FOR STOCKPILING AND SUBSEQUENT REHANDLING SHALL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.
 - MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID FOR AT THE UNIT BID PRICE FOR ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.
 - ALL COSTS TO UTILIZE MILLINGS IN RECYCLED HOT-MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE HOT-MIX ITEM USING THE RECYCLED MATERIAL.
 - SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM - 302514 MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

SECTION 600

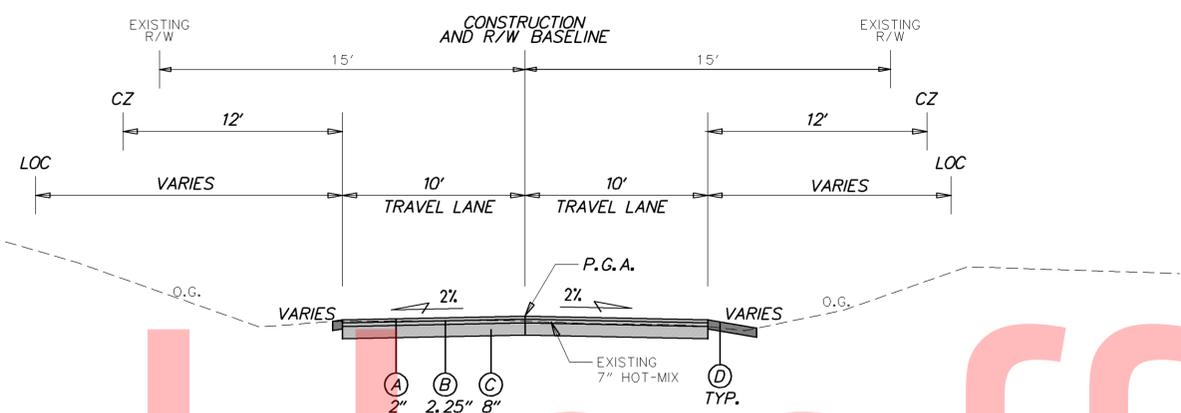
- LIMITS OF COARSE AGGREGATE FOR FOUNDATION STABILIZATION SHALL EXTEND 18" OUTSIDE OF THE NEAT LINE PERIMETER OF THE VERTICAL FACES OF ANY FOOTER, ENCASUREMENT OR STRUCTURAL UNIT.
- PORTLAND CEMENT CONCRETE
 - STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED: (F'c = 28 DAY COMPRESSIVE STRENGTH)
 - CLASS A CONCRETE - ABUTMENT, BACKWALL, WINGWALL CAPS, PARAPET (F'c = 4500 psi)
 - CLASS D CONCRETE - DECK (F'c = 4500 psi)
 - MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE SPECIFICATIONS.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
 - ALL KEYPED CONSTRUCTION JOINTS SHALL BE 2" x 4" UNLESS OTHERWISE NOTED.
 - ALL EXPOSED CONSTRUCTION JOINTS EDGES SHALL HAVE A 3/4" V-NOTCH.
 - ANY NECESSARY HEATING TECHNIQUES FOR COLD WEATHER CONCRETE ARE THE CONTRACTOR'S RESPONSIBILITY AND INCIDENTAL TO THE RESPECTIVE CONCRETE ITEMS.
- BAR REINFORCEMENT
 - REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963) AND IS DENOTED WITH A SUFFIX 'E' IN THE BAR MARKS.
- PILES
 - THE PILES WILL BE FURNISHED UNDER CONTRACT T201547301. PILE DETAILS FROM THAT CONTRACT ARE INCLUDED HERE FOR INFORMATIONAL PURPOSES. UNDER THIS CONTRACT, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND DYNAMIC TESTING ONLY. PAYMENT SHALL BE UNDER ITEM #619061 - INSTALL PRECAST PRESTRESSED CONCRETE PILES, 14"x14". TESTING SHALL BE PAID UNDER ITEM #619519 - DYNAMIC PILE TESTING BY CONTRACTOR. SEE DETAIL SHEET FOR THE FABRICATOR'S CONTACT INFORMATION.
- PRESTRESSED REINFORCED CONCRETE MEMBERS
 - THE PRECASTER IS RESPONSIBLE FOR FABRICATION AND DELIVERY OF THE PRECAST ELEMENTS PROVIDED UNDER CONTRACT T201547302. PRECAST ELEMENT DETAILS FROM THAT CONTRACT ARE INCLUDED HERE FOR INFORMATIONAL PURPOSES. UNDER THIS CONTRACT, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION ONLY (I.E. SETTING THE PRECAST ELEMENTS, POST-TENSIONING, GROUTING, SHEAR CONNECTORS, ETC.). THE CONTRACTOR SHALL PROVIDE ALL NECESSARY HARDWARE FOR INSTALLATION (I.E.) TIE ROD, WASHERS, SHEAR CONNECTOR PLATES, ETC.). PAYMENT FOR ITEM #623002 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX-BEAMS SHALL BE FOR INSTALLATION COSTS ONLY. ALL PORTIONS OF SPECIAL PROVISION FOR ITEM #623002 PERTAINING TO INSTALLATION SHALL APPLY. SEE DETAIL SHEET FOR THE FABRICATOR'S CONTACT INFORMATION.

SECTION 700

- ALL PAVED AREAS TO BE REPLACED OR OVERLAYED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT-MIX SAWCUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- ALL GEOTEXTILES SHALL BE KEYPED UNDER ADJACENT SOIL OR RIPRAP A MINIMUM OF 6" IN LENGTH TO PREVENT FREE EDGES.
- MAINTENANCE OF TRAFFIC
 - THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE DETOUR AT THE BEGINNING OF THE CONTRACT. CONTACT DELDOT CENTRAL DISTRICT MAINTENANCE TO COORDINATE.
 - THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE REED DRIVEWAY DURING CONSTRUCTION.
- SOIL RETENTION BLANKET MULCH, TYPE 5 SHALL BE PLACED ON ALL RIPRAP SLOPES AND ON 2:1 SLOPES IN THE RELOCATED DITCHES - PAYMENT UNDER ITEM 735535. ALL OTHER AREAS SHALL BE SEEDED AND STABILIZED AS PER SECTION 734 - PAYMENT INCIDENTAL TO THE RESPECTIVE SEEDING ITEMS.

MISCELLANEOUS

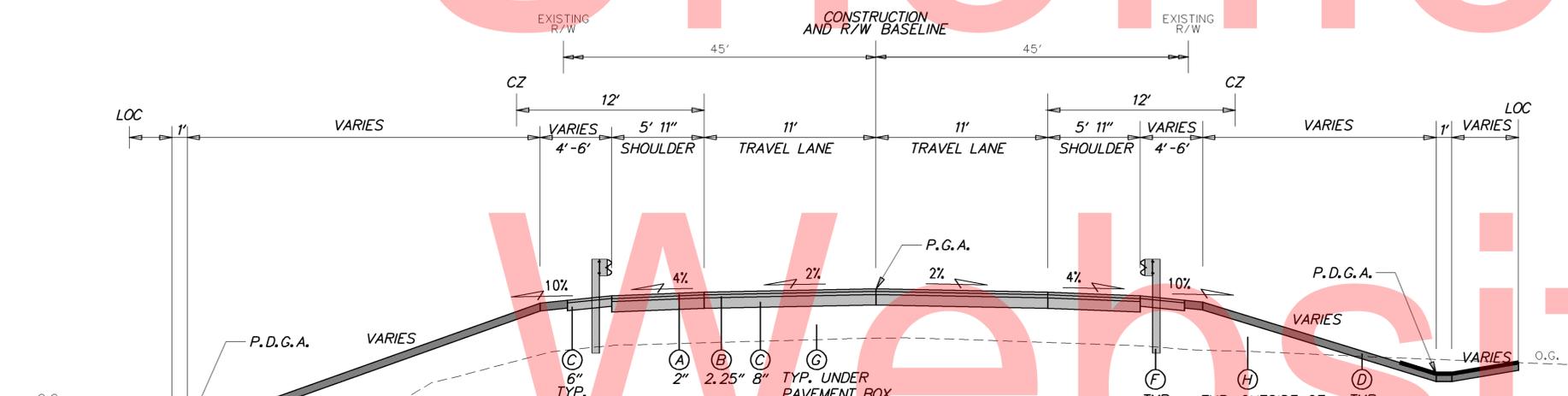
- DESIGN CRITERIA
 - 2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5th EDITION,
 - USING AASHTO HL93 FOR LIVE LOAD, 25 psf FOR FUTURE WEARING SURFACE.
- HYDRAULIC DATA
 - DRAINAGE AREA = 21.4 sq. miles
 - DESIGN FREQUENCY = 25 years
 - DESIGN DISCHARGE = 1685 cfs
 - 25 yr FLOOD ELEVATION = 44.51 ft
 - PROPOSED OPENING = 534.35 SF
- SCOUR ANALYSIS
 - THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-18 - 'EVALUATING SCOUR AT BRIDGES' AND HEC-23 - 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES.'
 - SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE OF THE OVERTOPPING FLOOD OR THE SCOUR DESIGN FLOOD EVENT.
 - DESIGN EVENT = 100 years
 - DESIGN VELOCITY = 5.66 ft/s
 - DESIGN DISCHARGE = 2527 cfs
 - DESIGN DEPTH OF FLOW = 13.31 ft
- ENVIRONMENTAL COMPLIANCE
 - REFER TO THE ENVIRONMENTAL COMPLIANCE PLAN FOR ANY RESTRICTIONS AND ADDITIONAL GUIDANCE THAT MAY BE ASSOCIATED TO THIS PROJECT.
- STAGING AND STOCKPILING
 - STAGING AND STOCKPILING AREAS ARE SHOWN ON THE ENVIRONMENTAL COMPLIANCE PLAN SHEETS. STAGING AND STOCKPILING AREAS CAN BE CHANGED WITH THE APPROVAL OF THE DEPARTMENT. THESE AREAS SHALL NOT BE MOVED OUTSIDE OF THE EXISTING ROADWAY.
- THE CONTRACTOR SHALL COORDINATE WITH THE OWNERS OF THE RTCP FARM PARTNERSHIP TO MINIMIZE IMPACTS TO THEIR CROPS AND HARVESTING OPERATIONS. CONTACT INFORMATION WILL BE PROVIDED TO THE SUCCESSFUL BIDDER.
- LOAD RATING SUMMARY - SEE TABLE ON TYPICAL SECTIONS SHEET



**HOLLERING HILL ROAD
TYPICAL ROAD SECTION**

LEGEND	
(A)	ITEM 401801 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRA., PG 64-22 (CARBONATE STONE)
(B)	ITEM 401810 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRA., PG 64-22
(C)	ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
(D)	ITEM 732002 - TOPSOIL, 6" DEPTH
(E)	ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
(F)	ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5
(G)	ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
(H)	ITEM 209003 - BORROW, TYPE C
(I)	ITEM 209006 - BORROW, TYPE F

*LIMITS FOR ITEM# 735535 SHALL BE UP TO THE DITCH FLOW LINE (MAX. HEIGHT 2.5') AND ON ANY 2:1 SLOPE

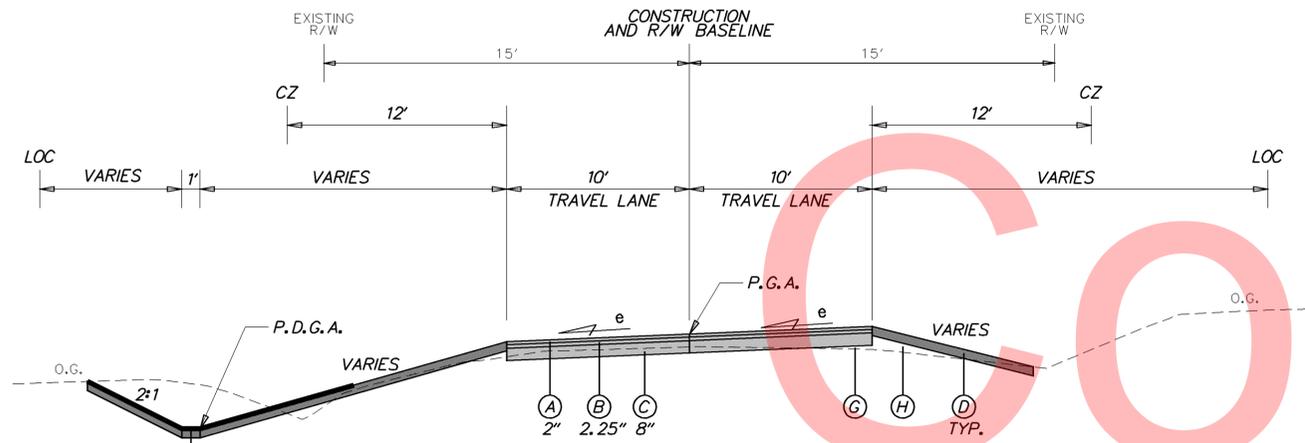


**TYPICAL GUARDRAIL SECTION
STATION 26+14.29 TO STATION 28+75.73**

LOAD RATING SUMMARY					
DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.23	N/A	SPAN # EXTERIOR BEAM	104	STRENGTH I
HL-93 TANDEM (INVENTORY)	1.34	N/A	SPAN # EXTERIOR BEAM	105	STRENGTH I
HS-20 (INVENTORY)	1.50	53.86	SPAN # EXTERIOR BEAM	104	STRENGTH I
HL-93 TRUCK (OPERATING)	1.56	N/A	SPAN # EXTERIOR BEAM	104	STRENGTH I
HL-93 TANDEM (OPERATING)	1.71	N/A	SPAN # EXTERIOR BEAM	105	STRENGTH I
HS-20 (OPERATING)	1.91	68.78	SPAN # EXTERIOR BEAM	104	STRENGTH I
DE S220 & LEGAL-LANE (LEGAL)	2.16	43.19	SPAN # EXTERIOR BEAM	105	SERVICE III
DE S335 & LEGAL-LANE (LEGAL)	1.19	41.60	SPAN # EXTERIOR BEAM	105	SERVICE III
DE S437 & LEGAL-LANE (LEGAL)	1.13	41.42	SPAN # EXTERIOR BEAM	105	SERVICE III
DE S330 & LEGAL-LANE (LEGAL)	1.83	54.82	SPAN # EXTERIOR BEAM	105	SERVICE III
DE S435 & LEGAL-LANE (LEGAL)	1.60	56.13	SPAN # EXTERIOR BEAM	105	SERVICE III
DE S540 & LEGAL-LANE (LEGAL)	1.45	58.19	SPAN # EXTERIOR BEAM	105	SERVICE III

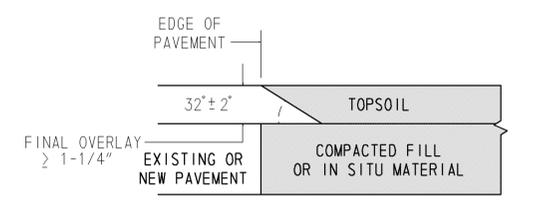
NOTE: LOAD RATING INCLUDES FUTURE WEARING SURFACE AS NOTED IN THE PLANS.

*TYP. FOR DITCHES & 2:1 SLOPE



**TYPICAL SUPERELEVATION
STATION 29+83.36 TO STATION 32+14.00
e = 0.042**

*TYP. FOR DITCHES & 2:1 SLOPE



HOT-MIX PAVEMENTS AND OVERLAYS

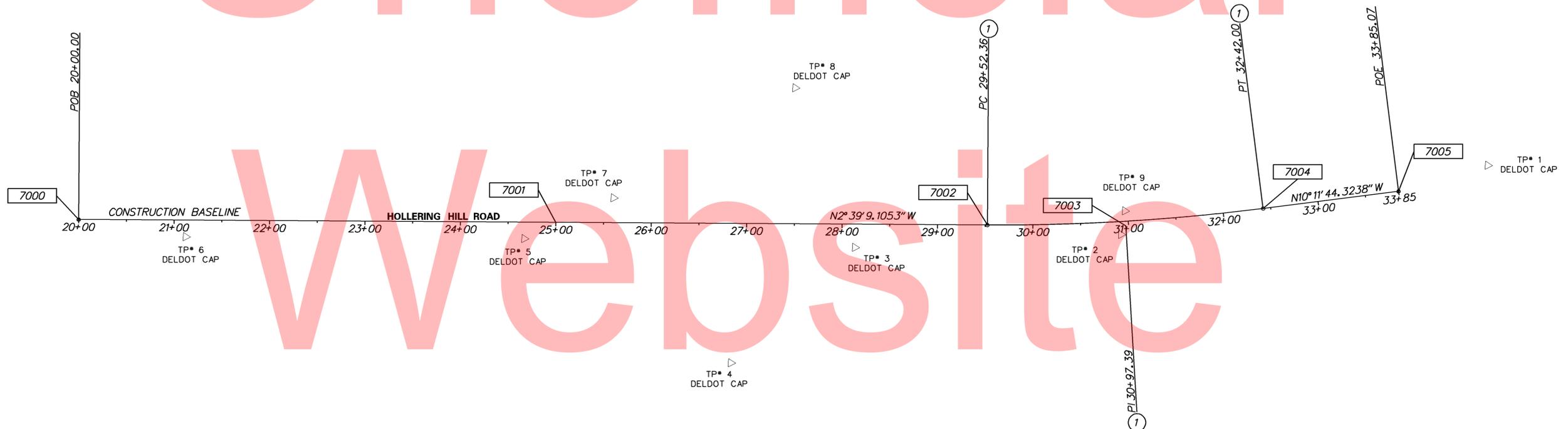
**SAFETY EDGE DETAIL
NOT TO SCALE**

MATERIAL	LIFT THICKNESS	
	MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE 'C'	1.25"	2"
BITUMINOUS CONCRETE, TYPE 'B'	2.25"	4"
BITUMINOUS CONCRETE BASE COURSE	3"	6"
GRADED AGGREGATE BASE COURSE	-	8"

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HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP# 1	-	-	384811.1628	584175.3211	50.84
TP# 2	30+91.76	13.49	384431.1340	584267.5913	45.79
TP# 3	28+13.65	24.26	384153.2606	584295.6975	43.70
TP# 4	26+84.44	145.79	384029.8178	584423.0726	42.96
TP# 5	24+67.11	17.17	383806.7598	584304.6542	47.56
TP# 6	21+12.31	17.38	383452.3588	584321.2873	52.27
TP# 7	25+60.44	-26.01	383897.9939	584257.1976	45.73
TP# 8	27+50.14	-142.15	384082.1211	584132.4020	41.80
TP# 9	30+97.18	-10.91	384433.8228	584242.7437	45.63

CONSTRUCTION ALIGNMENT CONTROL					
POINT	STATION	OFFSET	NORTHING	EASTING	
7000	20+00.00	0.00	383339.36	584309.12	
7001	25+00.00	0.00	383838.82	584285.98	
7002	29+52.36	0.00	384290.70	584265.04	
7003	30+97.39	4.78	384435.57	584258.33	
7004	32+42.00	0.00	384578.31	584232.66	
7005	33+85.07	0.00	384719.12	584207.34	



CIRCULAR CURVE (1)			
Element	STATION	NORTHING	EASTING
PC (7002)	29+52.36	384290.7018	584265.0447
PI (7003)	30+97.39	384435.5734	584258.3330
CC (-)	-	384188.8884	582067.4019
PT (7004)	32+42.00	384578.3102	584232.6618
Radius:	2200.00		
Delta:	$7^{\circ}32'35.2184''$ Left		
Degree of Curvature (Arc):	$2^{\circ}36'15.6730''$		
Length:	289.63		
Tangent:	145.03		
Chord:	289.43		
Middle Ordinate:	4.76		
External:	4.78		
Tangent Direction:	N $2^{\circ}39'09.1053''$ W		
Radial Direction:	N $87^{\circ}20'50.8947''$ E		
Chord Direction:	N $6^{\circ}25'26.7145''$ W		
Radial Direction:	N $79^{\circ}48'15.6762''$ E		
Tangent Direction:	N $10^{\circ}11'44.3238''$ W		

DATUM REFERENCE:
 HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
 VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.

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 DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE FEET	BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT	CONTRACT T201547303	BRIDGE NO. 2-213A	HORIZONTAL AND VERTICAL CONTROL	SHEET NO. 5
				COUNTY KENT	DESIGNED BY: SM		TOTAL SHTS. 22
				CHECKED BY: CAS			

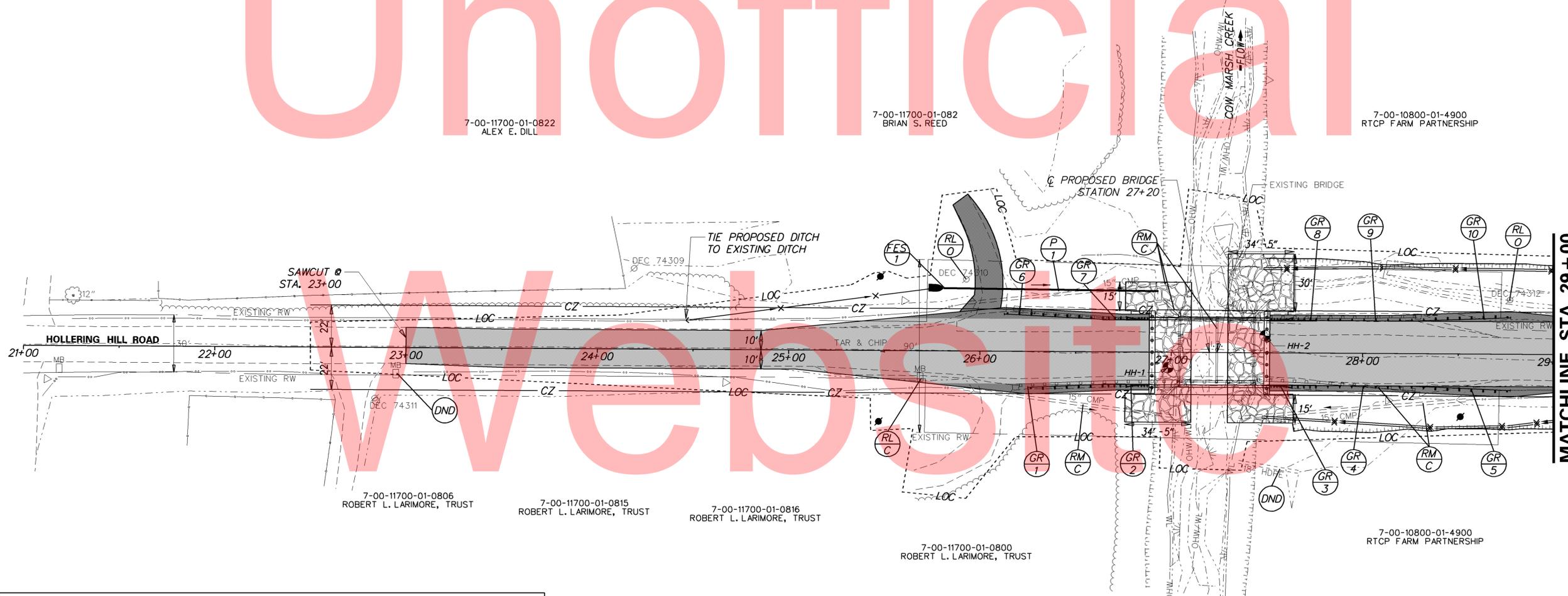
FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
1	15" RCP	0.0100	YES

SOIL BORING SCHEDULE			
NO.	STATION	OFFSET	DESCRIPTION
HH-1	26+98.37	8.04'	SEE SOIL BORING SHEET
HH-2	27+49.02	-9.00'	SEE SOIL BORING SHEET



DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
1	15" RCP	111	112.00'	0.0259	44.90	42.00

Unofficial



GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
*1	GUARDRAIL END TREATMENT, TYPE 1-31	26+26.77	18.42'	37.50'
2	GR TO BARRIER CONN., APPR. TYPE 2-31	26+64.23	16.92'	26.94'
3	GR TO BARRIER CONN., APPR. TYPE 2-31	27+52.33	16.92'	26.94'
4	STEEL BEAM GUARDRAIL, TYPE 1-31	27+75.77	16.92'	50.00'
5	GUARDRAIL END TREATMENT, TYPE 1-31	28+25.77	16.92'	50.00'
6	GUARDRAIL END TREATMENT, TYPE 1-31	26+14.29	18.92'	50.00'
7	GR TO BARRIER CONN., APPR. TYPE 2-31	26+64.23	16.92'	26.94'
8	GR TO BARRIER CONN., APPR. TYPE 2-31	27+52.33	16.92'	26.94'
9	STEEL BEAM GUARDRAIL, TYPE 1-31	27+75.77	16.92'	50.00'
10	GUARDRAIL END TREATMENT, TYPE 1-31	28+25.77	16.92'	50.00'

*NOTE: GR-1 PAY LIMIT SHALL BE 37.50'

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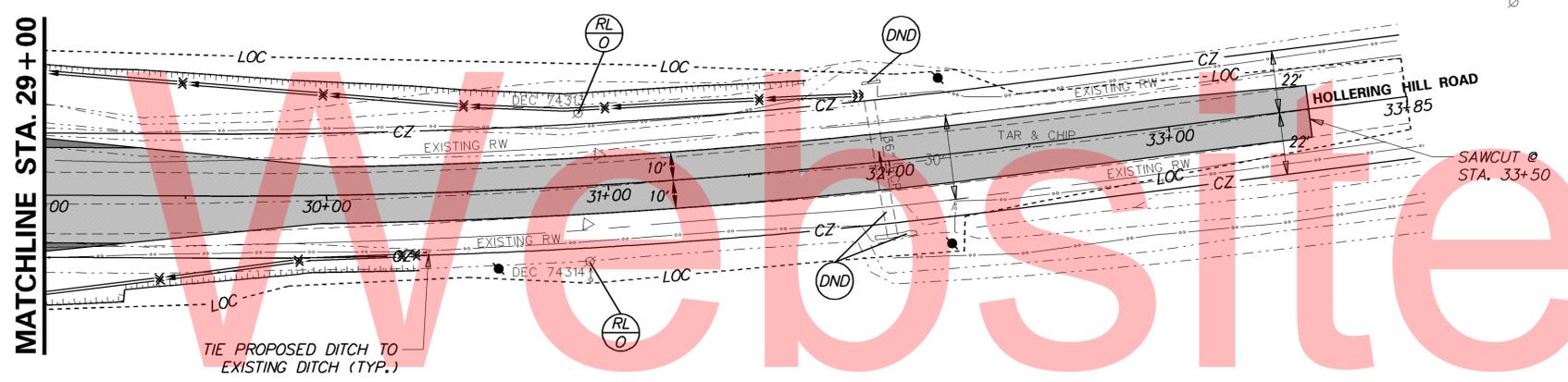
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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE FEET	BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT	CONTRACT T201547303 COUNTY KENT	BRIDGE NO. 2-213A DESIGNED BY: SM CHECKED BY: CAS	CONSTRUCTION PLAN	SHEET NO. 6 TOTAL SHTS. 22



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RTCP FARM PARTNERSHIP

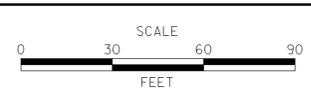


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RTCP FARM PARTNERSHIP

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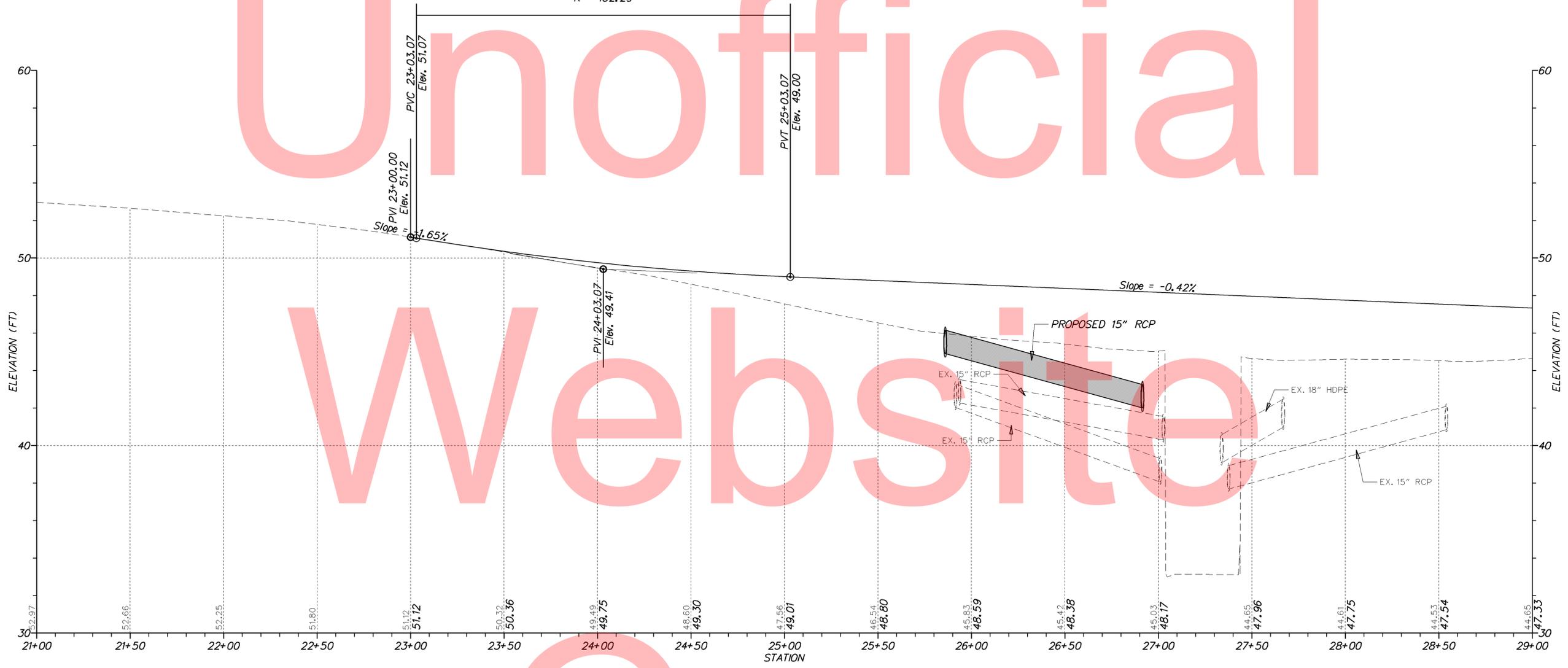
ADDENDUMS / REVISIONS	



CONTRACT T201547303	BRIDGE NO. 2-213A
COUNTY KENT	DESIGNED BY: SM
	CHECKED BY: CAS

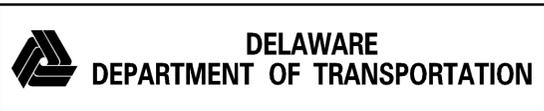
SHEET NO. 7
TOTAL SHTS. 22

Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 200.00'
 L1 = 100.00'
 L2 = 100.00'
 G1 = -1.65%
 G2 = -0.42%
 SSD = 665.56'
 K = 162.29

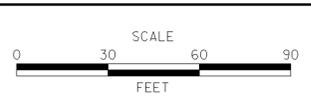


HOLLERING HILL ROAD

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ADDENDUMS / REVISIONS	



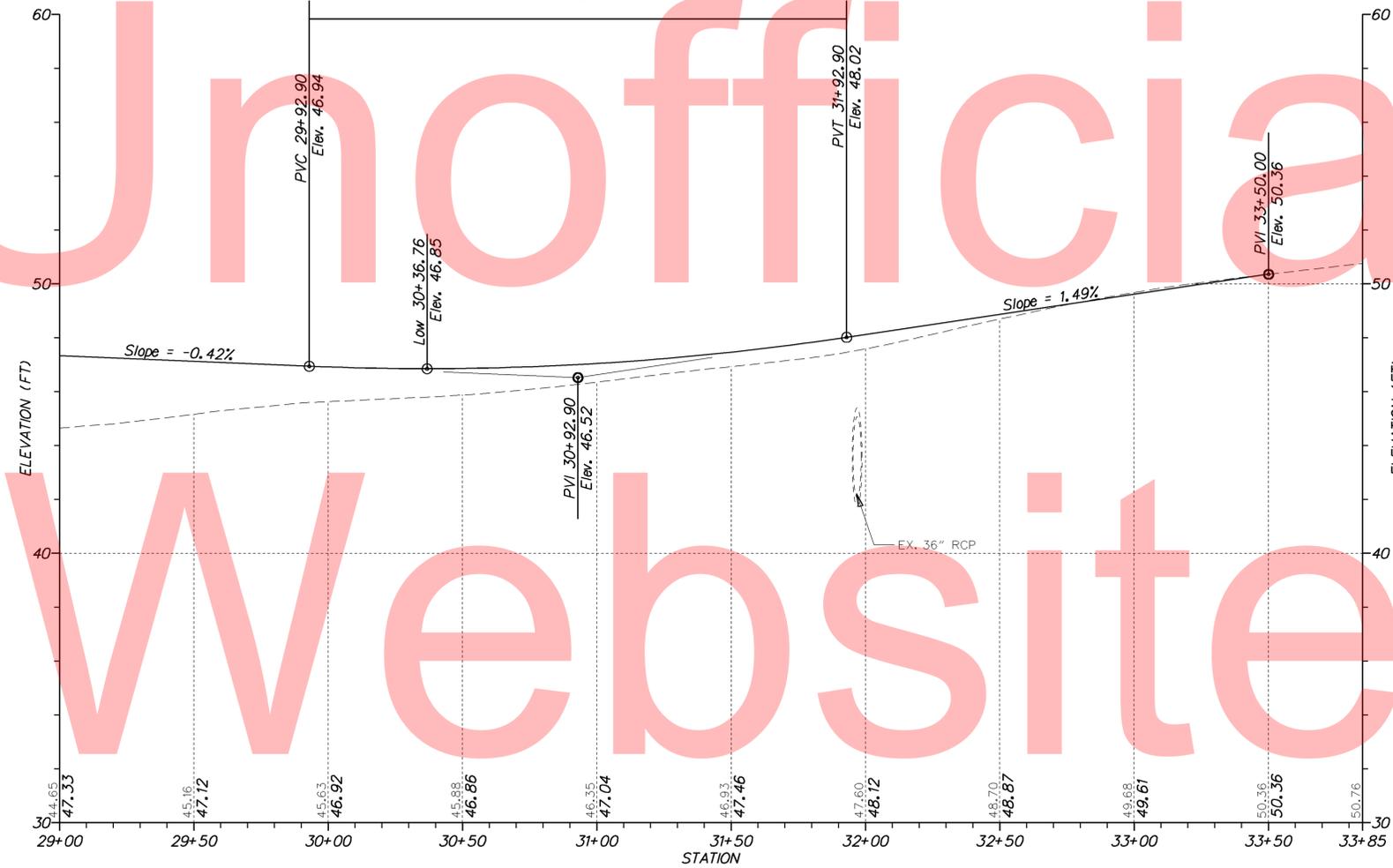
BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT

CONTRACT T201547303	BRIDGE NO. 2-213A
COUNTY KENT	DESIGNED BY: GCL III/SM
	CHECKED BY: CAS

PROFILES

VERTICAL SCALE	9
	6
	3
	0
FEET	
SHEET NO.	8
TOTAL SHTS.	22

Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 200.00'
 L1 = 100.00'
 L2 = 100.00'
 G1 = -0.42%
 G2 = 1.49%
 SSD = 2444.41'
 K = 104.71



HOLLERING HILL ROAD

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ADDENDUMS / REVISIONS



BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT

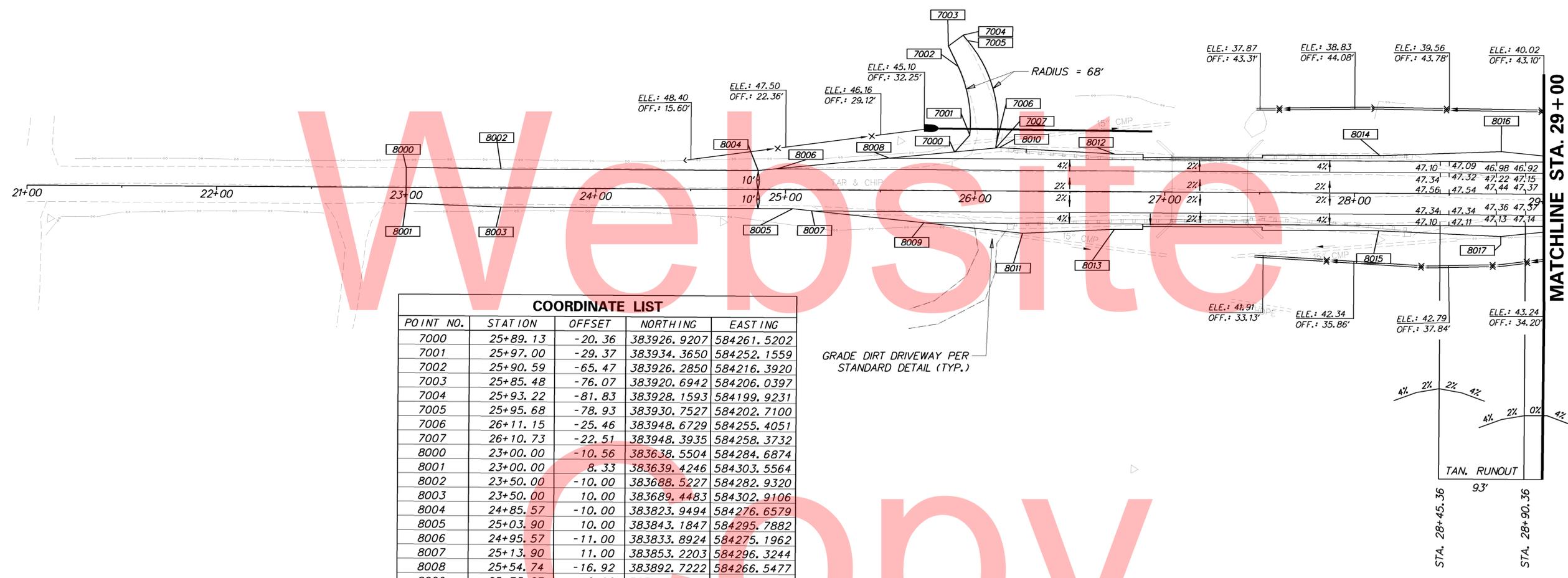
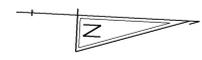
CONTRACT	BRIDGE NO.	2-213A
T201547303	DESIGNED BY:	GCL III/SM
COUNTY	CHECKED BY:	CAS
KENT		

PROFILES



SHEET NO.	9
TOTAL SHTS.	22

Unofficial

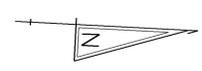


COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
7000	25+89.13	-20.36	383926.9207	584261.5202
7001	25+97.00	-29.37	383934.3650	584252.1559
7002	25+90.59	-65.47	383926.2850	584216.3920
7003	25+85.48	-76.07	383920.6942	584206.0397
7004	25+93.22	-81.83	383928.1593	584199.9231
7005	25+95.68	-78.93	383930.7527	584202.7100
7006	26+11.15	-25.46	383948.6729	584255.4051
7007	26+10.73	-22.51	383948.3935	584258.3732
8000	23+00.00	-10.56	383638.5504	584284.6874
8001	23+00.00	8.33	383639.4246	584303.5564
8002	23+50.00	-10.00	383688.5227	584282.9320
8003	23+50.00	10.00	383689.4483	584302.9106
8004	24+85.57	-10.00	383823.9494	584276.6579
8005	25+03.90	10.00	383843.1847	584295.7882
8006	24+95.57	-11.00	383833.8924	584275.1962
8007	25+13.90	11.00	383853.2203	584296.3244
8008	25+54.74	-16.92	383892.7222	584266.5477
8009	25+73.07	16.92	383912.5977	584299.4966
8010	26+12.68	-22.71	383950.3353	584258.0780
8011	26+25.16	22.13	383964.8769	584302.2895
8012	26+73.50	-19.75	384011.2249	584258.2213
8013	26+73.50	19.75	384013.0529	584297.6790
8014	28+13.47	-19.75	384151.0456	584251.7436
8015	28+12.95	19.75	384152.3529	584291.2254
8016	28+77.37	-22.30	384214.7555	584246.2409
8017	28+77.37	22.33	384216.8200	584290.8175

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	DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT	CONTRACT T201547303	BRIDGE NO. 2-213A	GRADES AND GEOMETRICS	SHEET NO. 10
					COUNTY KENT	DESIGNED BY: SM CHECKED BY: CAS		TOTAL SHTS. 22

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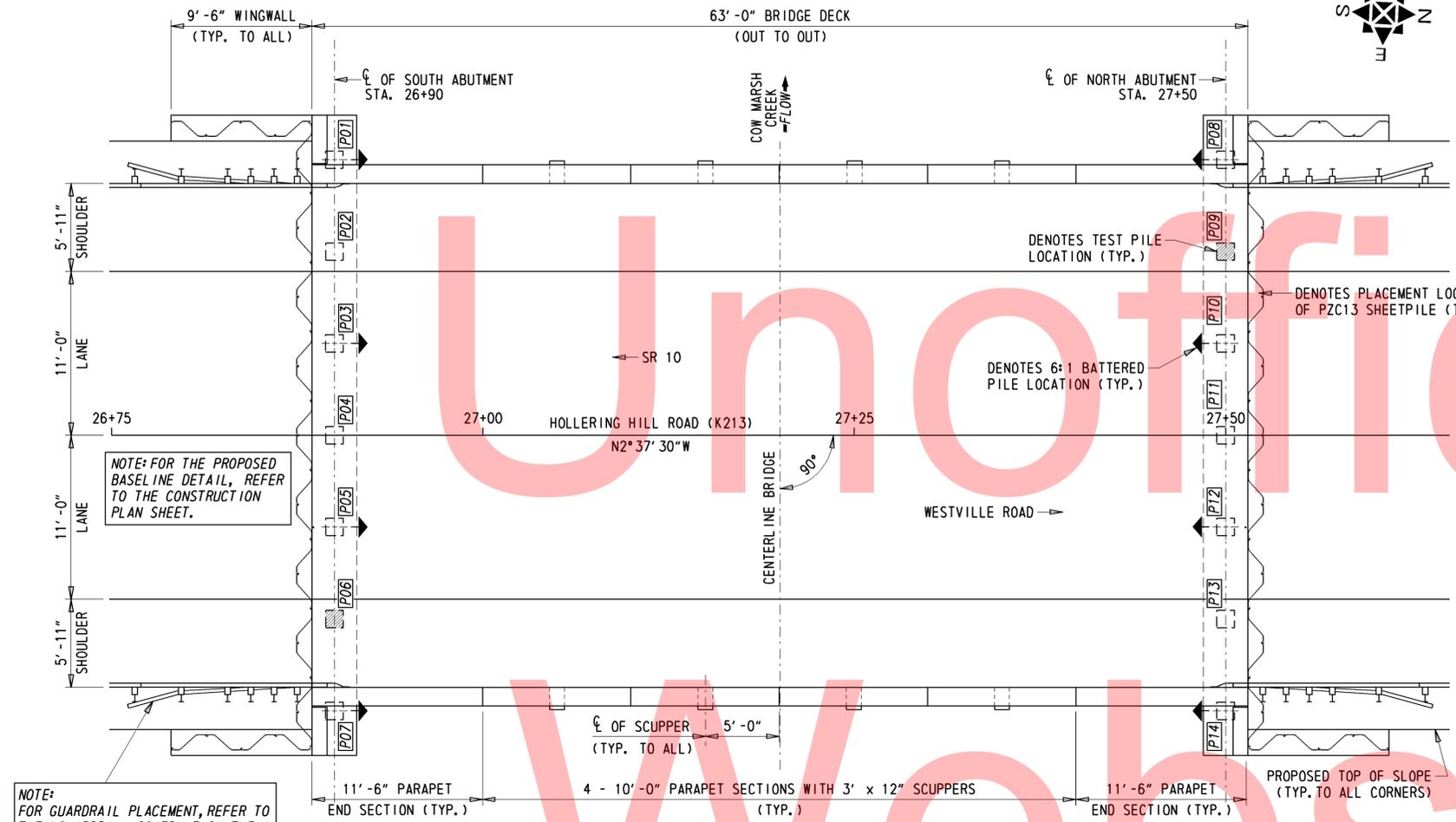


COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
8020	29+34.69	-16.92	384272.2693	584248.9638
8021	29+28.34	16.92	384267.4845	584283.0552
8022	29+93.79	-11.00	384331.3524	584251.7611
8023	29+86.41	11.00	384325.3814	584274.1848
8024	30+02.54	-10.00	384340.1011	584252.1753
8025	29+97.73	10.00	384336.6691	584272.4554
8026	33+00.00	-10.00	384633.6277	584212.5525
8027	33+00.00	10.00	384637.1679	584232.2367
8028	33+50.00	-8.37	384683.1272	584205.3092
8029	33+50.00	10.04	384686.3862	584223.4300

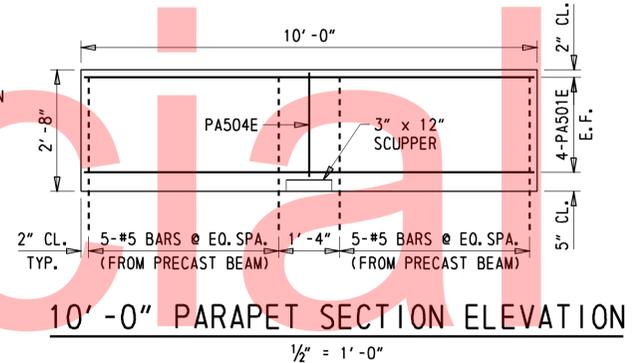
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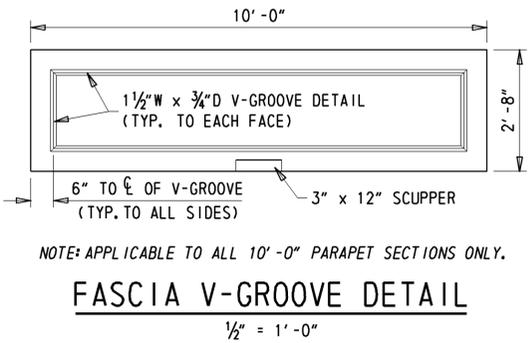
SOUTH ABUTMENT PILE COORDINATES					NORTH ABUTMENT PILE COORDINATES				
POINT	STATION	OFFSET	NORTHING	EASTING	POINT	STATION	OFFSET	NORTHING	EASTING
P01	26+90	-18.50	384027.77	584258.71	P08	27+50	-18.50	384087.70	584255.93
P02	26+90	-12.33	384028.05	584264.87	P09	27+50	-12.33	384087.99	584262.09
P03	26+90	-6.16	384028.34	584271.03	P10	27+50	-6.16	384088.27	584268.25
P04	26+90	0	384028.62	584277.19	P11	27+50	0	384088.56	584274.41
P05	26+90	6.16	384028.91	584283.35	P12	27+50	6.16	384088.84	584280.57
P06	26+90	12.33	384029.19	584289.51	P13	27+50	12.33	384089.13	584286.73
P07	26+90	18.50	384029.48	584295.67	P14	27+50	18.50	384089.41	584292.89



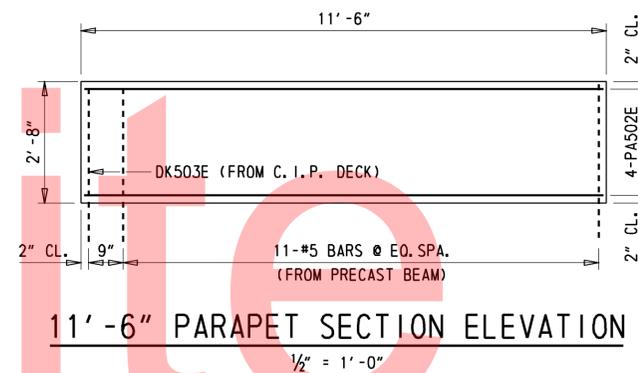
BRIDGE PLAN
3/8" = 1'-0"



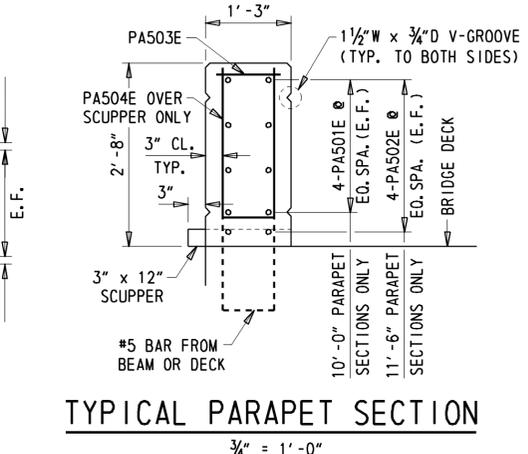
10'-0" PARAPET SECTION ELEVATION
1/2" = 1'-0"



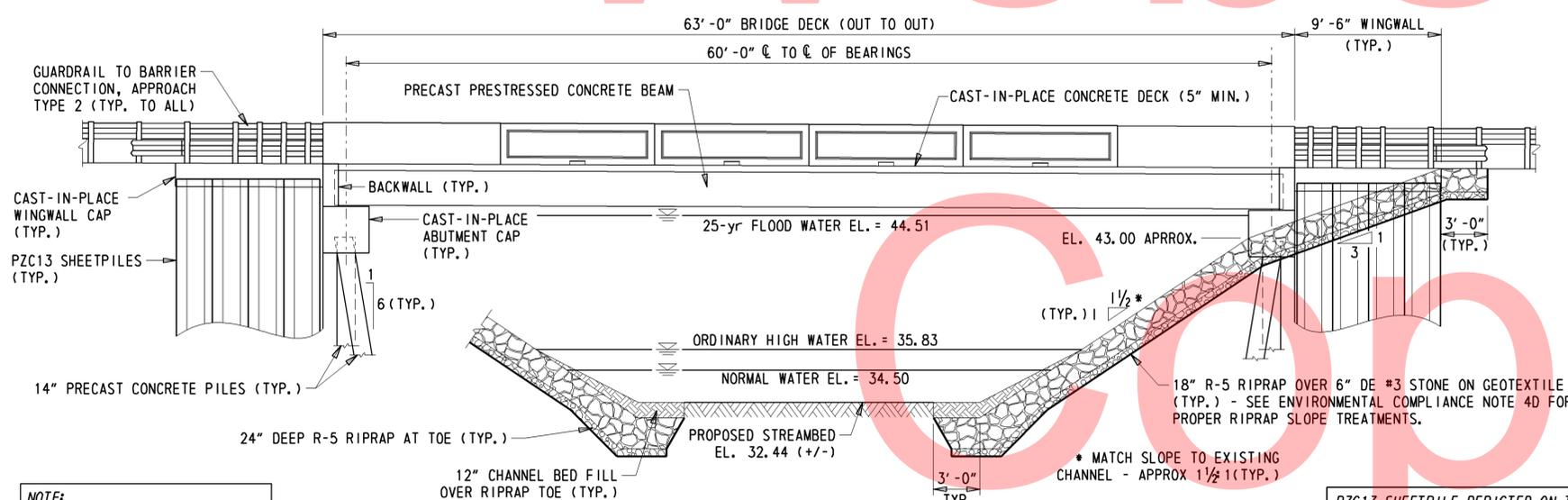
FASCIA V-GROOVE DETAIL
1/2" = 1'-0"



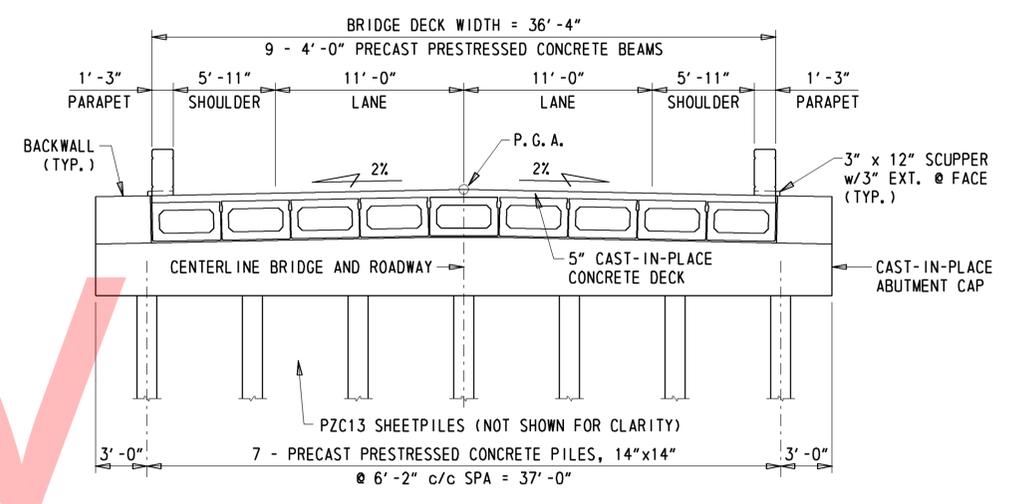
11'-6" PARAPET SECTION ELEVATION
1/2" = 1'-0"



TYPICAL PARAPET SECTION
3/4" = 1'-0"

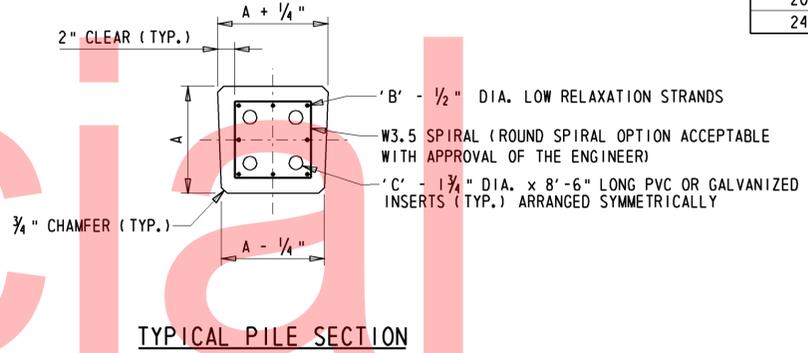
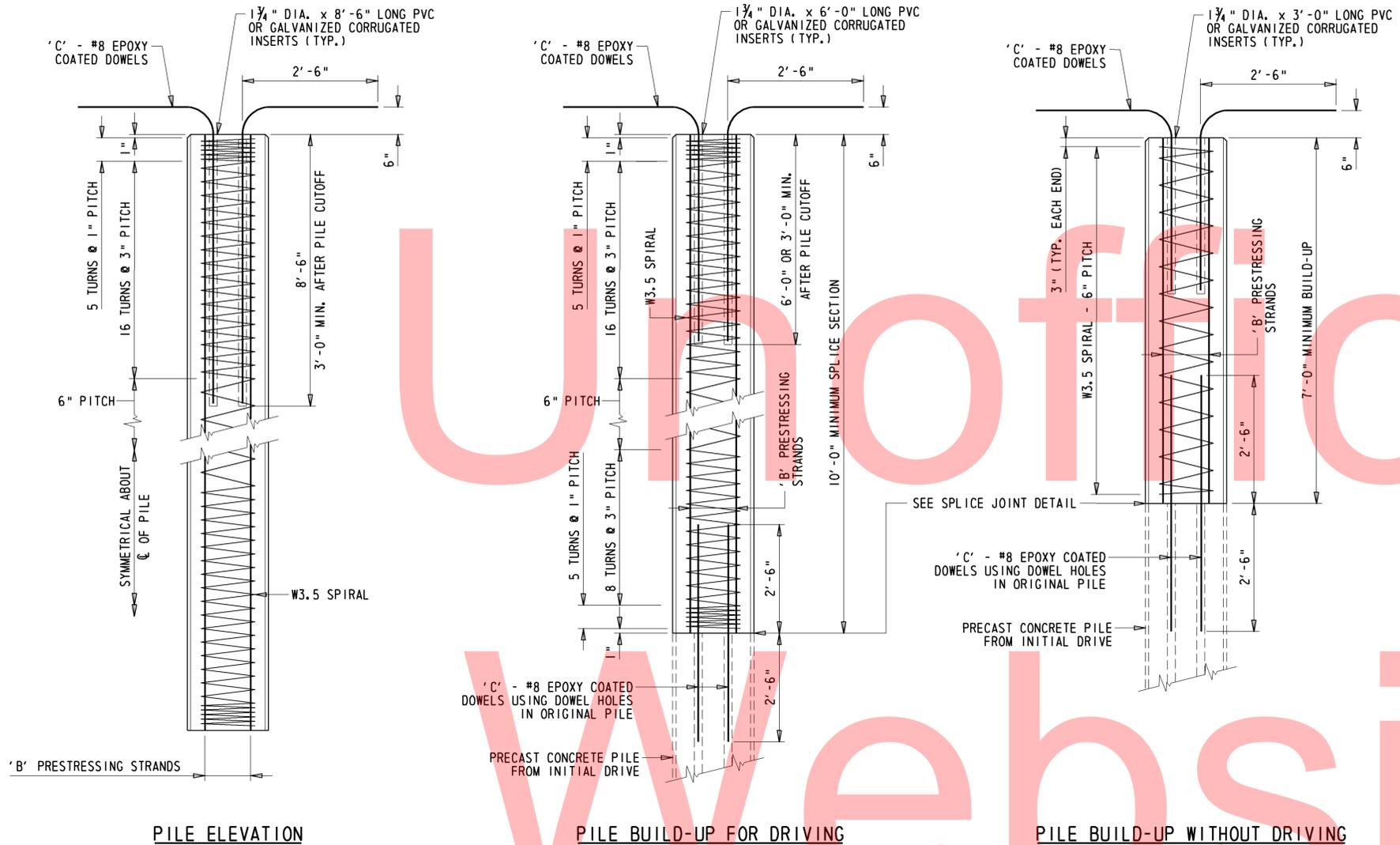


BRIDGE ELEVATION
3/8" = 1'-0"



TYPICAL SECTION AT NORTH ABUTMENT
3/8" = 1'-0"

PRECAST PRESTRESSED CONCRETE PILE SIZES		
PILE SIZE	STRANDS	DOWELS
'A'	'B'	'C'
12"	6	4
14"	8	4
16"	10	6
18"	12	8
20"	16	8
24"	24	12



PROJECT SPECIFIC PILE NOTES

1. PILE TYPE
THIS PROJECT SHALL UTILIZE 14" x 14" PRESTRESSED-PRECAST CONCRETE PILE.
2. ESTIMATED PRODUCTION PILE LENGTH IS 30'.
3. REQUIRED TEST PILE LENGTH IS 30'. SEE NOTE 4 BELOW.
4. PILES SHALL BE DRIVEN TO A BEARING RESISTANCE OF 325 KIPS USING A RESISTANCE FACTOR OF 0.65.
5. MINIMUM TIP ELEVATION SHALL NOT BE REQUIRED FOR THIS PROJECT.
6. A TOTAL OF 14 PILES ARE REQUIRED FOR THIS PROJECT.

GENERAL PILE NOTES

1. FOR MORE INFORMATION REGARDING PILE MATERIALS AND FABRICATION, REFER TO SECTION 618 (PILE MATERIALS) OF THE STANDARD SPECIFICATIONS. FOR MORE INFORMATION REGARDING PILE DRIVING AND INSTALLATION, REFER TO SECTION 619 (INSTALLATION OF PILES) OF THE STANDARD SPECIFICATIONS.
2. EACH TEST PILE SHALL BE DYNAMICALLY TESTED BY THE CONTRACTOR IN ACCORDANCE WITH ITEM #619519 - DYNAMIC PILE TESTING BY CONTRACTOR. THE QUANTITY FOR DYNAMIC PILE TESTING SHALL INCLUDE ONE FOR THE INITIAL DRIVE AND ONE FOR THE RE-STRIKE OF EACH TEST PILE. THE NEED TO RESTRIKE EITHER A TEST PILE OR A PRODUCTION PILE SHALL BE THE SOLE DECISION OF THE ENGINEER.
3. WAVE EQUATION ANALYSIS SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW BY THE ENGINEER (ELECTRONIC PREFERRED, OTHERWISE 8 COPIES MINIMUM).
4. ALL PILES SHALL BE ORDERED THE SAME LENGTH (I.E. WITHOUT A LONGER TEST PILE). TEST PILES, AS NOTED, SHALL BE DRIVEN FIRST TO ESTABLISH DRIVING CRITERIA FOR THE OTHER PILES IN EACH SUBSTRUCTURE ELEMENT. AN ADDITIONAL 5' HAS BEEN ADDED TO THE DESIGN LENGTH OF EACH PILE AS A CONTINGENCY.

PRESTRESSED-PRECAST CONCRETE PILE NOTES

1. DOWEL HOLES CAST IN THE TOP OF THE PILES SHALL BE CLEANED BY INSERTING A HIGH PRESSURE AIR HOSE TO THE BOTTOM AND BLOWING THE HOLE CLEAN FROM THE BOTTOM UPWARD PRIOR TO SETTING AND GROUTING THE DOWEL BARS. DOWELS SHALL BE SET WITH AN APPROVED NON-SHRINK EPOXY GROUT.
2. IF, AFTER A PILE CUTOFF, THE PREFORMED HOLES IN THE TOP OF PRESTRESSED-PRECAST CONCRETE PILES ARE NOT LONG ENOUGH TO PROVIDE SUFFICIENT DOWEL EMBEDMENT, THEY SHALL BE DRILLED TO THE PROPER DEPTH AT NO ADDITIONAL COST TO THE DEPARTMENT. THE MINIMUM LENGTH OF THE DOWEL BAR EMBEDMENT IN THE HOLE SHALL BE 3'-0" FEET.
3. EPOXY GROUT FOR GROUTING THE DOWEL BARS IN THE TOP OF THE PRESTRESSED-PRECAST CONCRETE PILE SHALL BE AN APPROVED NON-SHRINK EPOXY GROUT SPECIFICALLY DESIGNED AS A FAST SETTING COMPOUND THAT POURS EASILY TO FILL THE VOIDS. THE COST OF GROUTING THE DOWEL BARS SHALL BE INCIDENTAL TO THE UNIT BID ITEM FOR THAT RESPECTIVE PILE.
4. THE WORKING DRAWINGS SHALL ALSO INCLUDE DESIGN AND DETAILS OF THE PROPOSED PICK-UP AND SUPPORT POINTS, AND LIFTING LOOPS FOR THE DEPARTMENT'S APPROVAL.
5. THE CONTRACTOR MAY CONSIDER USING ALTERNATIVE PILE BUILD-UP DETAILS FOR BOTH DRIVING AND WITHOUT DRIVING. ALL ALTERNATIVE DETAILS FOR PILE BUILD-UPS SHALL BE SUBMITTED TO THE DEPARTMENT FOR APPROVAL.
6. THE CONTRACTOR MAY CONSIDER USING ALTERNATIVE SPLICE JOINT DETAIL. ALL ALTERNATIVE DETAILS FOR SPLICE JOINT SHALL BE SUBMITTED TO THE DEPARTMENT FOR APPROVAL.

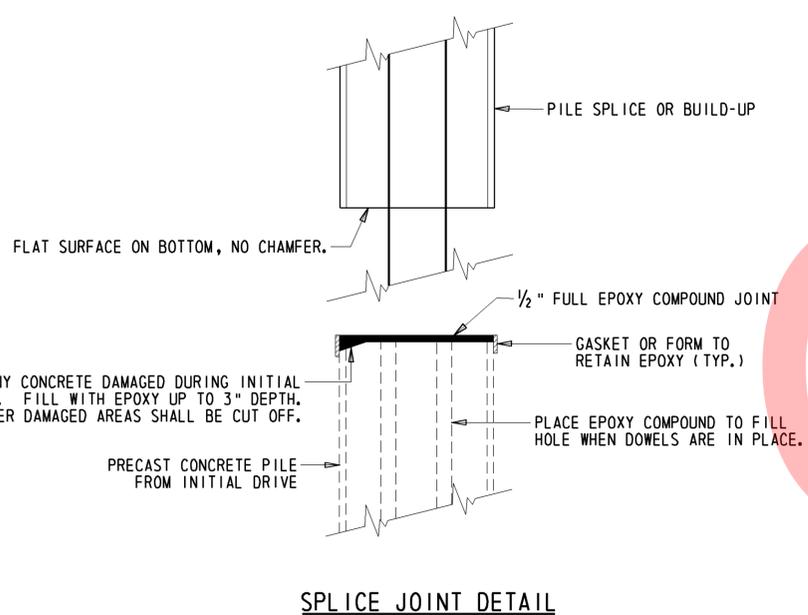
CONTRACT 30-472-01 PILE PROJECT NOTES

1. THIS SHEET IS FROM CONTRACT T201547301 - PROVIDE PILES FOR BR 2-213A ON HOLLERING HILL RD OVER COW MARSH CREEK - EMERGENCY REPAIRS. IT IS INCLUDED HERE FOR INFORMATIONAL PURPOSES.
2. PRECAST PRESTRESSED CONCRETE PILES WERE CHOSEN FOR USE IN CONTRACT 30-472-01. THE CONTRACTOR SHALL CONTACT GARY SHRIEVES AT BAYSHORE CONCRETE PRODUCTS (757-331-2300 OR GARY.SHRIEVES@SKANSKA.COM) TO COORDINATE DELIVERY. PILES WILL BE READY FOR DELIVERY ON SEPTEMBER 24, 2014. DELIVERY IS THE RESPONSIBILITY OF THE PRECASTER AND SHOULD NOT BE INCLUDED IN THE BID PRICE FOR INSTALLATION OF PILES.
3. AS NOTED (SEE GENERAL PILE NOTE #4), EACH PILE WAS ORDERED 5' LONGER THAN THE ANTICIPATED NEED. CUTOFF AND DISPOSAL OF EXTRA LENGTH SHALL BE INCIDENTAL TO ITEM 619061 - INSTALL PRECAST PRESTRESSED CONCRETE PILE, 14" x 14".

PILE ELEVATION

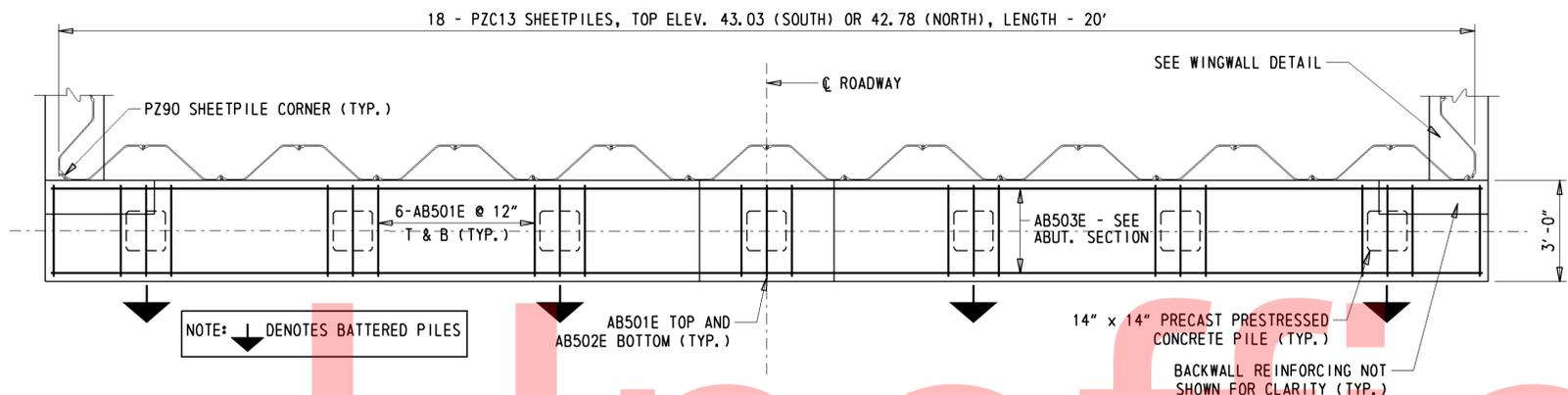
PILE BUILD-UP FOR DRIVING

PILE BUILD-UP WITHOUT DRIVING



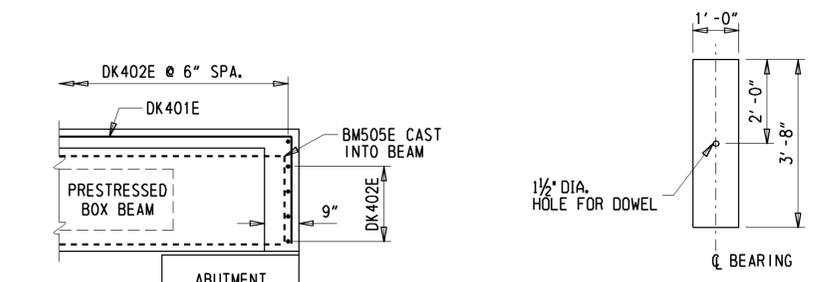
SPLICE JOINT DETAIL

Y:\KENT\213\BRIDGE\T201547301\PLANS\PL01.DGN



ABUTMENT PLAN

3/8" : 1'-0"



DECK OVERHANG DETAIL

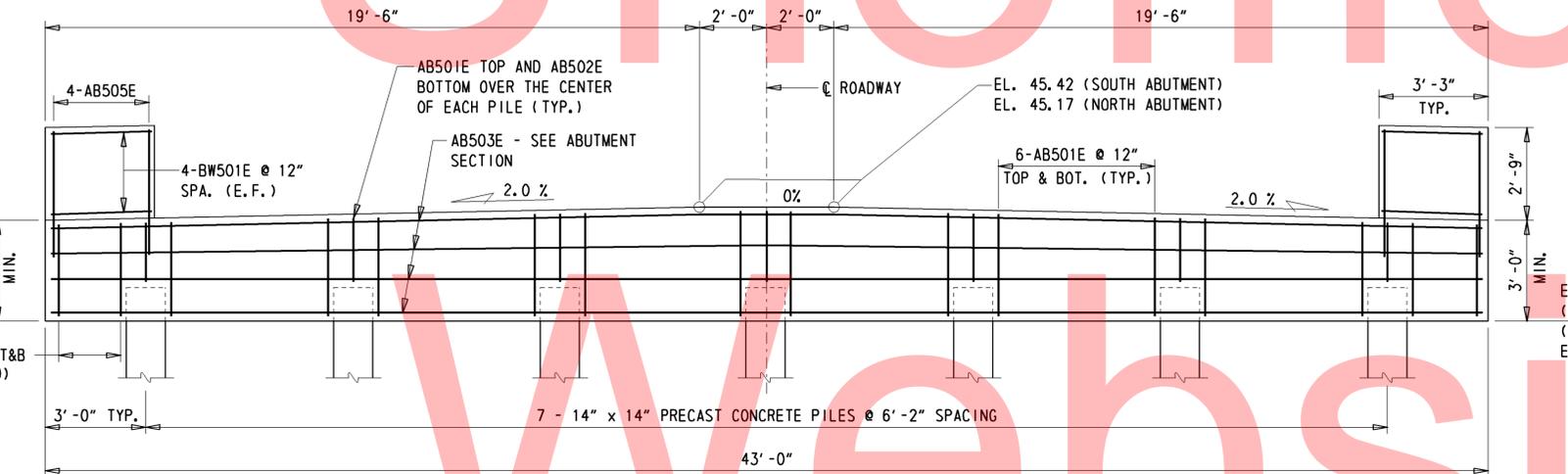
1/2" : 1'-0"

ABUTMENT BEARING PAD

1/2" : 1'-0"

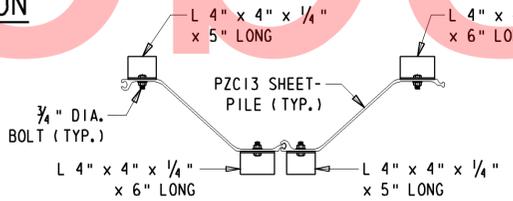
- NOTES:
1. ALL BEARING PADS SHALL BE 1" THICK 50 DUROMETER ELASTOMERIC.
 2. PADS SHALL BE GLUED TO THE ABUTMENT SEAT, WITH A RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.
 3. ELASTOMERIC BEARING PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE SETTING BEAMS.
 4. PAYMENT FOR PADS SHALL BE INCIDENTAL TO ITEM #623002 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS.

- SHEET PILE NOTES:
1. PZC SHAPES ARE DEPICTED IN THESE DETAILS. PZ AND SCZ SHAPES ARE ALSO ACCEPTABLE FOR USE. IF PZ OR SCZ SHAPES ARE USED, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING THE ALTERNATE LAYOUT, CORNER PIECES, ANY ADJUSTMENTS TO ABUTMENT DIMENSIONS OR REINFORCING BARS, ETC. ALTERNATE SHAPES SHALL HAVE A SECTION MODULUS HIGHER THAN PZC13.
 2. SHEET PILES SHALL BE DRIVEN TO ELEVATIONS SHOWN ON PLANS.
 3. ALL MATERIALS UNDER ITEM #622015 (PZC 13, JOINTS, STRUCTURAL L'S, HARDWARES, ETC.) SHALL BE GALVANIZED.
 4. ALL STEEL SHEET PILES AND FABRICATED PIECES SHALL CONFORM TO ASTM A572 GRADE 345 (50 KSI).
 5. ALL CONNECTION UNITS SHALL BE COMPATIBLE WITH THE UNITS THEY CONNECT, PERTAINING TO THE ASTM DESIGNATIONS. FOR PAYMENT PURPOSES, THE CONNECTIONS UNITS SHALL BE TREATED AS THE ADJACENT UNITS OF SHEET PILING. ALL HARDWARE IS INCIDENTAL TO THE APPROPRIATE SHEETING ITEM.
 6. THE STRUCTURAL L SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M183 (ASTM A36).
 7. SHEET PILES SHALL BE ORDERED IMMEDIATELY UPON AWARD OF THE PROJECT.
- THE FOLLOWING ARE TWO SUGGESTED SUPPLIERS:
- A. LB FOSTER - JOSH RAGER
610-266-1763
JRAGER@LBFOSTERCO.COM
- B. SKYLINE STEEL - JASON ESTOCK
703-978-2500
JESTOCK@SKYLINESTEEL.COM



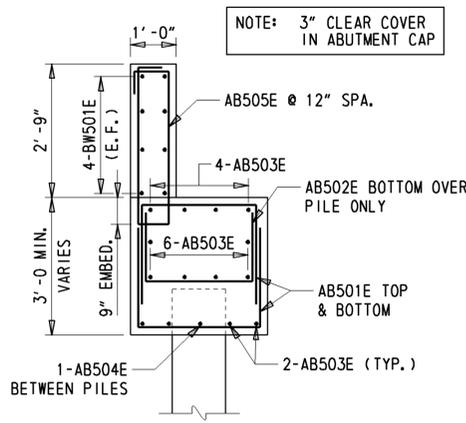
ABUTMENT ELEVATION

3/8" : 1'-0"



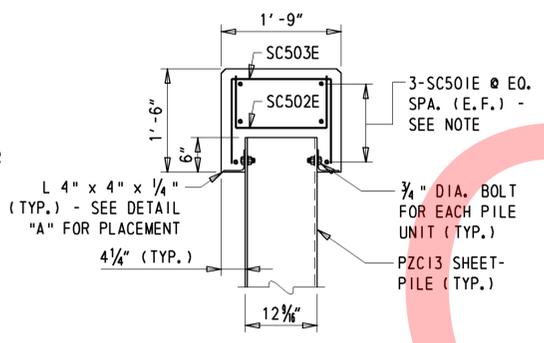
DETAIL "A"

3/4" : 1'-0"



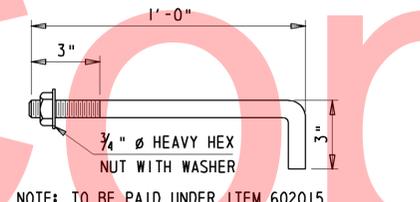
ABUTMENT REINFORCEMENT

1/2" : 1'-0"



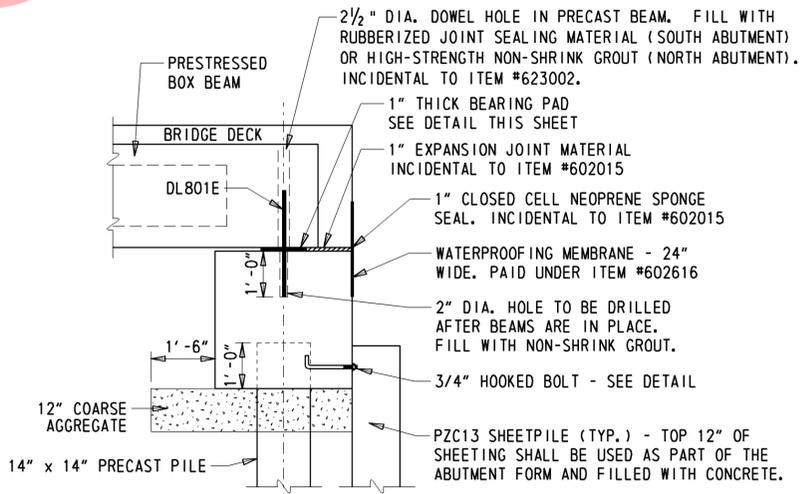
WINGWALL SECTION

3/4" : 1'-0"



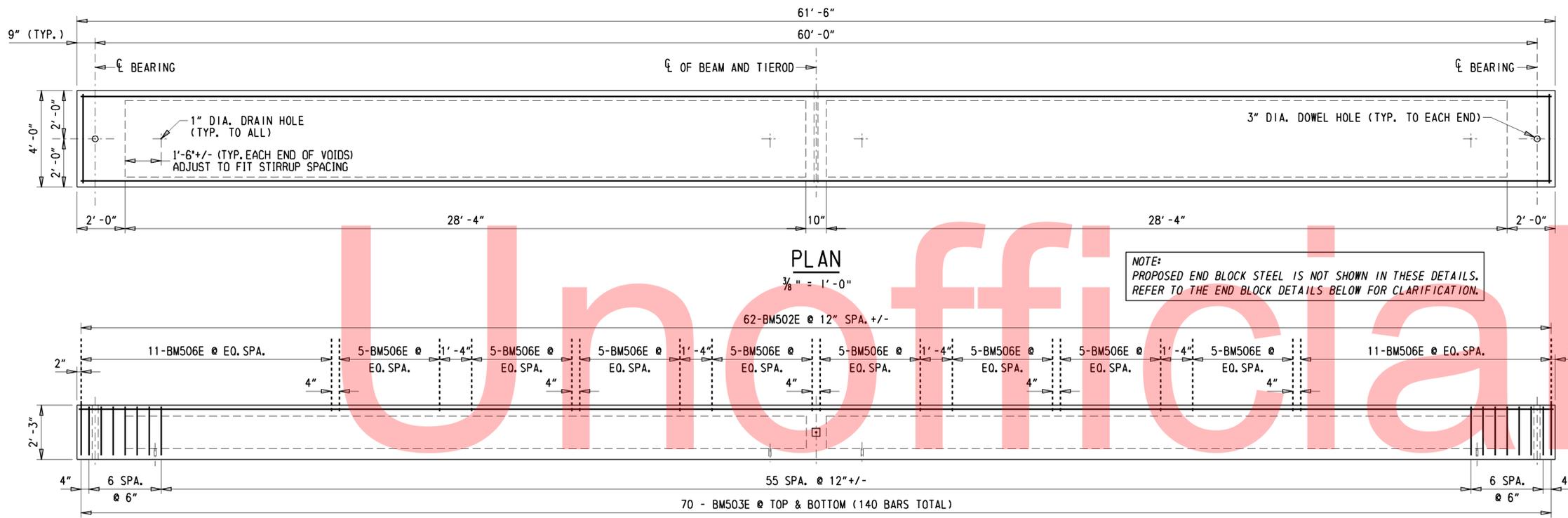
TYPICAL WINGWALL DETAIL

3/8" : 1'-0"

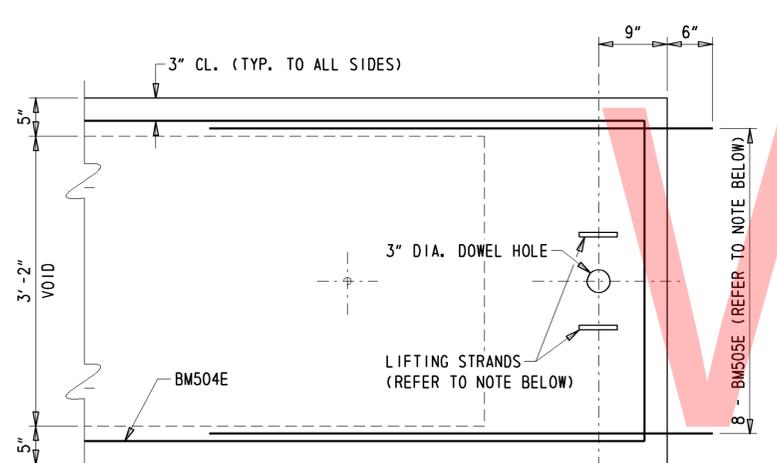
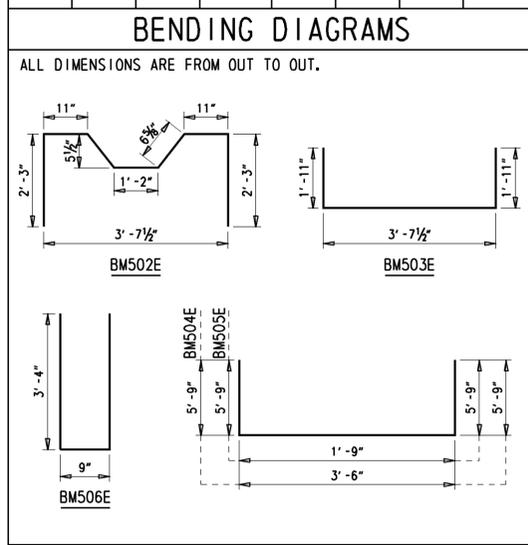


TYPICAL ABUTMENT SECTION

1/2" : 1'-0"

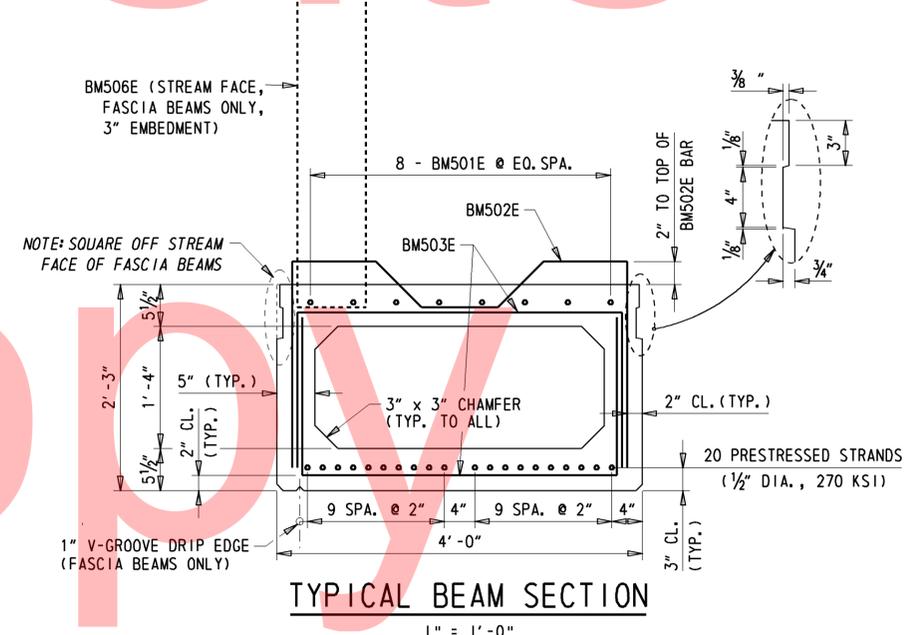
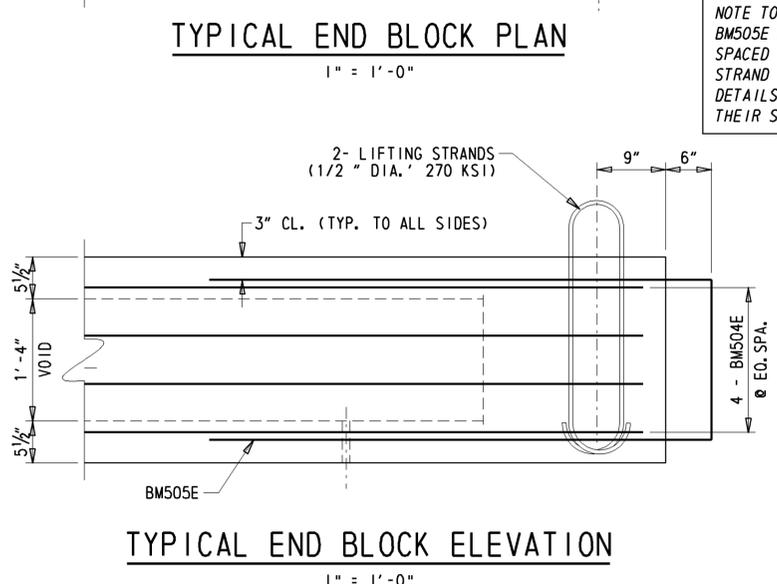
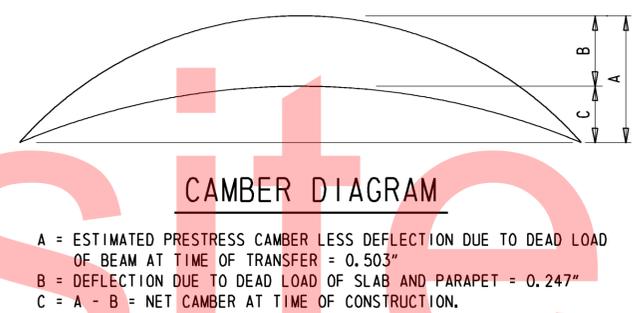


REINFORCING BAR LIST							
STRAIGHT BARS				BENT BARS			
MARK	SIZE	NUMBER	LENGTH	MARK	SIZE	NUMBER	LENGTH
BM501E	5	8	61'-0"	BM502E	5	62	8'-7 1/2"
				BM503E	5	140	7'-5 1/2"
				BM504E	5	8	13'-6"
				BM505E	5	16	15'-0"
				BM506E	5	62	7'-5"



BEAM PROJECT NOTES:

- THIS SHEET IS FROM CONTRACT T201547302 - PROVIDES BEAMS FOR BR 2-213A ON HOLLERING HILL RD OVER COW MARSH CREEK - EMERGENCY REPAIRS. IT IS INCLUDED HERE FOR INFORMATIONAL PURPOSES.
- PRECAST CONCRETE BEAMS SHALL BE SUPPLIED BY NORTHEAST PRESTRESSED PRODUCTS. THE CONTRACTOR SHALL CONTACT DANIEL PLOCH (570-573-0535 OR DPLOCH@NPPBEAMS.COM) TO COORDINATE DELIVERY. BEAMS WILL BE READY FOR DELIVERY ON OR ABOUT OCTOBER 13, 2014. DELIVERY IS THE RESPONSIBILITY OF THE PRECASTER AND SHOULD NOT BE INCLUDED IN THE BID PRICE FOR INSTALLATION OF BEAMS.
- REFER TO THE PROJECT NOTES FOR MORE INFORMATION CONCERNING THE CONTRACTOR'S RESPONSIBILITY FOR INSTALLATION OF BEAMS.



PRESTRESSED BEAM NOTES (48" x 27")

DESIGN PLANS - WORKING DRAWINGS
 INFORMATION PERTAINING TO THE PRESTRESSED PRECAST REINFORCED CONCRETE BOX BEAMS IS INTENDED TO SERVE AS AN INDICATION OF THE TYPE OF CONSTRUCTION ACCEPTABLE FOR USE. THE CONTRACTOR WILL BE REQUIRED TO PREPARE AND SUBMIT, FOR APPROVAL, A COMPLETE SET OF DETAILED SHOP PLANS FOR THE PRESTRESSED PRECAST CONCRETE UNITS THEY PROPOSE TO FURNISH.

HANDLING
 PRESTRESSED BEAMS SHALL BE HANDLED ONLY BY LIFTING STRANDS PROVIDED ESPECIALLY FOR THIS PURPOSE. THE APPROXIMATE DEAD WEIGHT OF EACH UNIT IS 24.18 tons.

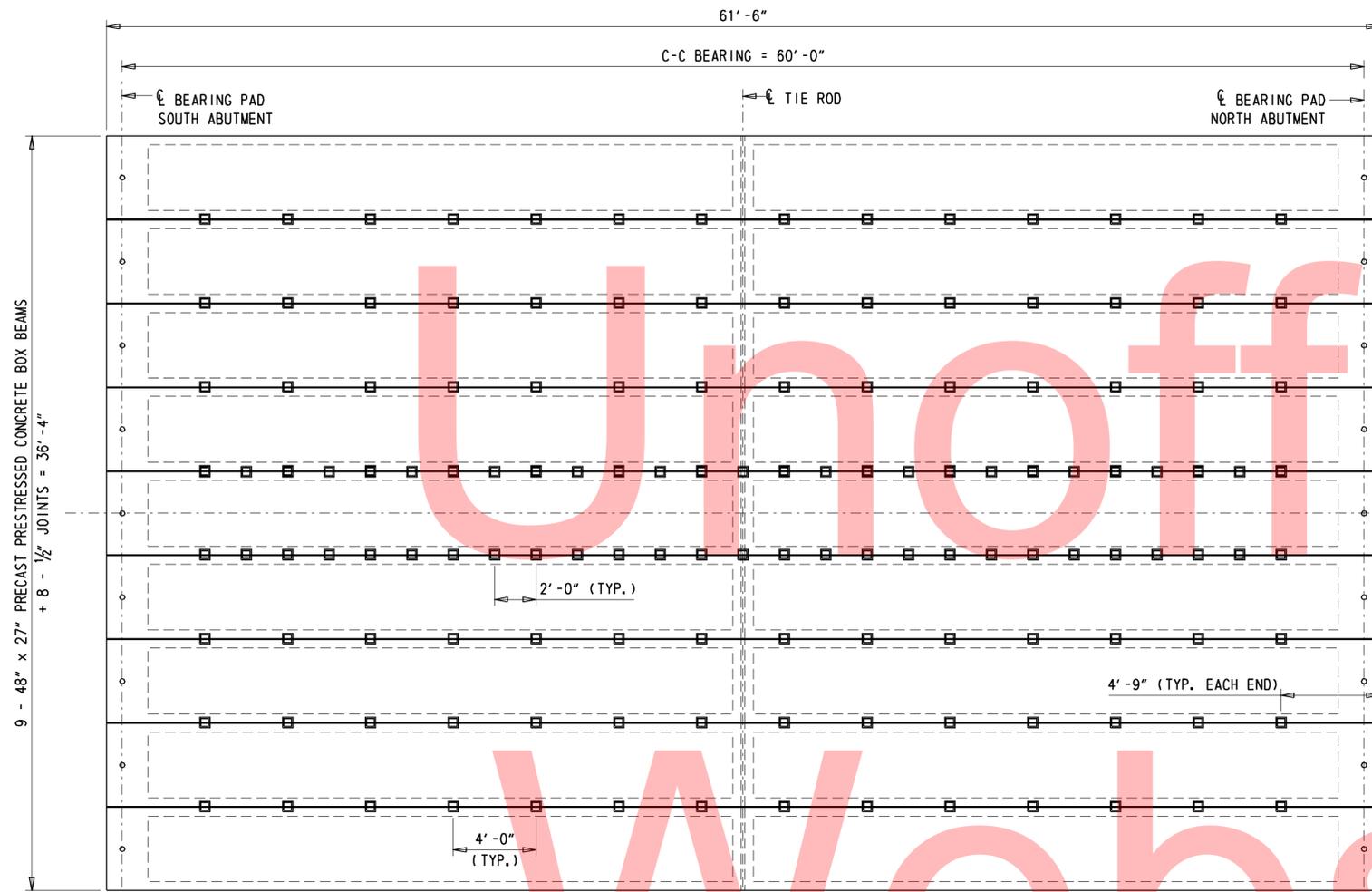
CONCRETE STRESSES
 THE MINIMUM COMPRESSIVE STRENGTH AT TIME OF INITIAL PRESTRESS EQUALS 4800 psi.
 THE MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS EQUALS 6000 psi.

BAR REINFORCEMENT
 MATERIALS REQUIREMENT: ASTM M31 - GRADE 60
 ALL BAR REINFORCEMENT TO HAVE 2" MINIMUM COVER EXCEPT AS NOTED OR DETAILED.
 ALL BAR REINFORCEMENT AND CHAIR SUPPORTS SHALL BE PROTECTED WITH FUSION BONDED EPOXY.
 PAYMENT FOR REINFORCING BARS IS INCIDENTAL TO ITEM 623002 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS.

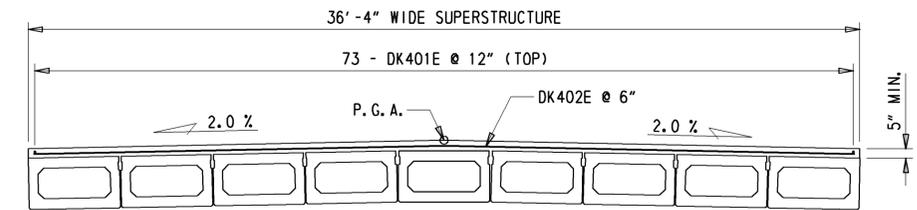
STRAND
 INITIAL PRESTRESSES ON EACH 1/2" DIA. 270 ksi LOW RELAXATION STRAND EQUALS 30975 lbs MINIMUM ULTIMATE STRENGTH EQUALS 41310 lbs PER STRAND.

CONCRETE FINISH
 TOP OF BEAMS ARE TO HAVE A HEAVY SCORED FINISH. BOTTOM AND SIDES OF BEAMS SHALL BE PROTECTED WITH A WATER MISCIBLE, PENETRATING ALKYL EPOXY SILANE SEALER SUCH AS CHEM-TRETE B.S.M. BY TROCAL OR APPROVED EQUAL. PAYMENT INCIDENTAL TO ITEM 623002 - PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS.

NOTE: 9 TOTAL REQUIRED

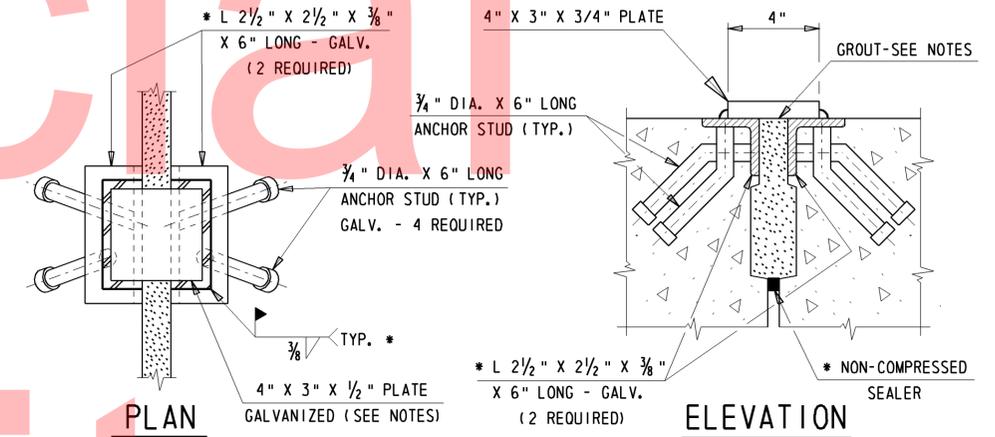


FRAMING PLAN
SCALE: 1/4" = 1'-0"

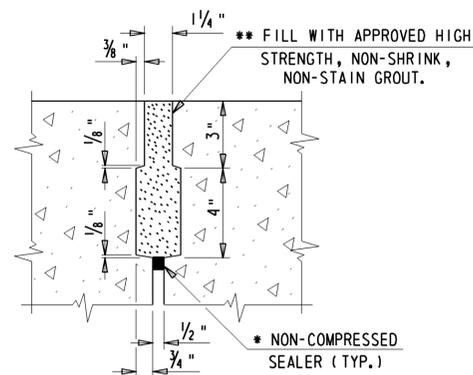


DECK SECTION
1/4" = 1'-0"

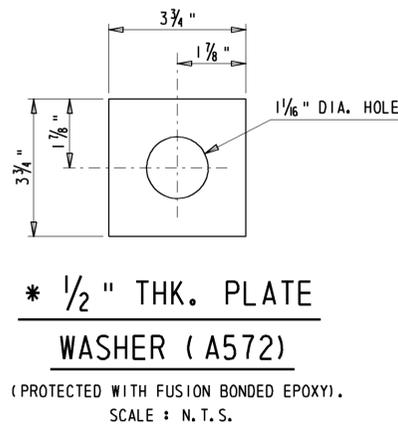
NOTE: SEE BRIDGE PLAN FOR PROPOSED DECK GRADES.



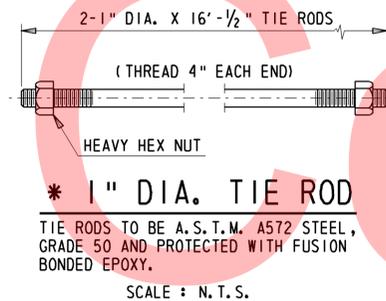
SHEAR CONNECTION
SCALE: N. T. S.



SHEAR KEY DETAIL
SCALE: N. T. S.



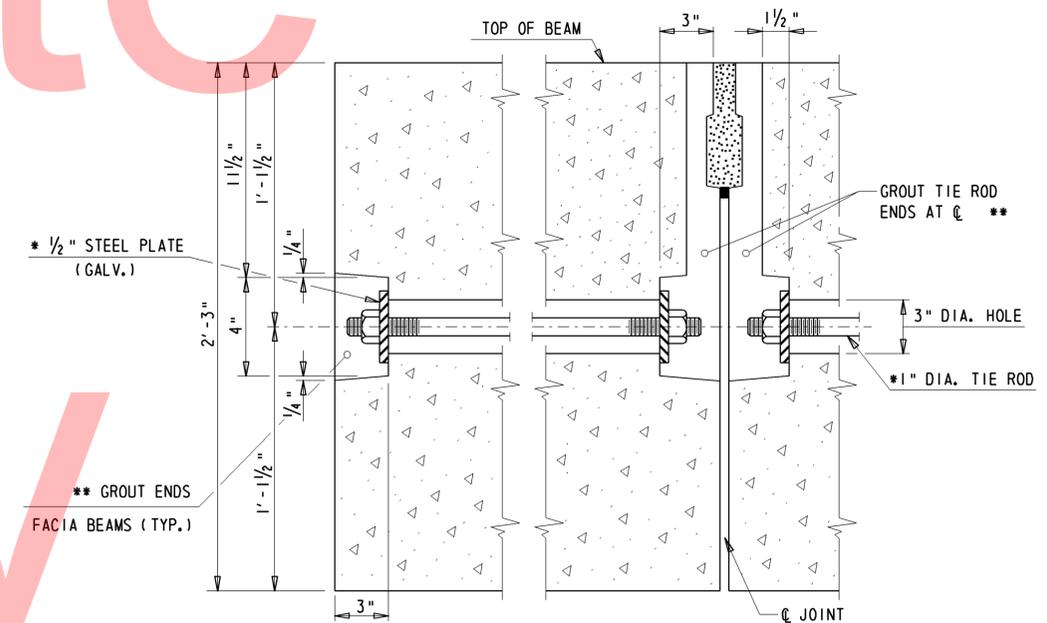
*** 1/2" THK. PLATE WASHER (A572)**
(PROTECTED WITH FUSION BONDED EPOXY).
SCALE: N. T. S.



*** 1" DIA. TIE ROD**
TIE RODS TO BE A. S. T. M. A572 STEEL, GRADE 50 AND PROTECTED WITH FUSION BONDED EPOXY.
SCALE: N. T. S.

FRAMING PLAN NOTES

- 138 SHEAR CONNECTORS ARE REQUIRED, SEE FRAMING PLAN FOR SPACING AND LOCATION.
 - ANGLES AND PLATES ARE TO BE STRUCTURAL STEEL CONFORMING TO AASHTO M270 GRADE 50 AND SHALL BE GALVANIZED. ANCHOR STUDS ARE TO BE AUTOMATIC END-WELDED TYPE.
 - INSTALL AND TIGHTEN TIE RODS IN ACCORDANCE WITH SPECIFICATIONS AFTER ERECTION OF PRESTRESSED BEAMS. FIELD WELD PLATE TO SHEAR CONNECTOR ANGLES AND GALVANIZE. FILL ALL KEYWAYS AND CAVITIES WITH APPROVED HIGH STRENGTH, NON-SHRINK, NON-STAIN GROUT **.
 - GROUTING BETWEEN BEAM SECTIONS SHALL BE DONE WHEN AIR TEMPERATURE IS ABOVE 40° F. NO TRAFFIC OR EQUIPMENT SHALL BE PERMITTED ON THE BRIDGE UNTIL THE GROUT HAS CURED FOR AT LEAST 72 HOURS.
 - ADJUST BAR SPACING TO CLEAR SHEAR CONNECTORS.
- * PAYMENT FOR MATERIAL AND LABOR SHALL BE INCIDENTAL TO ITEM 623002 - PRECAST PRESTRESSED REINFORCED CONCRETE MEMBERS, BOX BEAMS.
- ** GROUT SHALL BE QUIKRETE OR L & M CRYSTEX OR APPROVED EQUAL.



TIE ROD END DETAIL
SCALE: N. T. S.

① ANY MARK NUMBER WITH SUFFIX 'E' DENOTES EPOXY COATED REINFORCING STEEL.

② ALL MARK 'LOCATION PREFIXES' SHALL CONSIST OF TWO LETTERS AND ARE AS FOLLOWS: AB = ABUTMENT, AS = APPROACH SLAB, BC = BOX CULVERT, BW = BACKWALL, CL = COLUMN, DK = DECK, DL = DOWEL, FT = FOOTING, HW = HEADWALL, MB = MISC. BARS, MS = MOMENT SLAB, PA = PARAPET, PR = PIER, RF = RIGID FRAME, SC = SHEETPILE CAP, SS = SLEEPER SLAB, TW = TOEWALL, WL = WALL (UNIQUE LOCATION), WW = WINGWALL

SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)											
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
182	5	6-60	AB501E	17		2-00	2-60	2-00							
14	5	5-60	AB502E	17		1-60	2-60	1-60							
28	5	42-60	AB503E	STR		42-60									
12	5	4-100	AB504E	STR		4-100									
16	5	9-00	AB505E	T2	0-60	0-80	3-40	0-80	3-40		0-60				
32	5	2-110	BW501E	STR		2-110									
73	5	67-40	DK401E	17		2-40	62-80	2-40							
135	5	36-00	DK402E	STR		36-00									
4	5	7-50	DK503E	17		3-40	0-90	3-40							
18	8	2-10	DL801E	STR		2-10									
64	5	9-80	PA501E	STR		9-80									
32	5	11-20	PA502E	STR		11-20									
136	5	0-110	PA503E	STR		0-110									
8	5	5-10	PA504E	17		2-20	0-90	2-20							
12	5	21-90	SC501E	17		10-20	1-50	10-20							
40	5	2-50	SC502E	17		0-60	1-50	0-60							
40	5	3-90	SC503E	17		1-20	1-50	1-20							

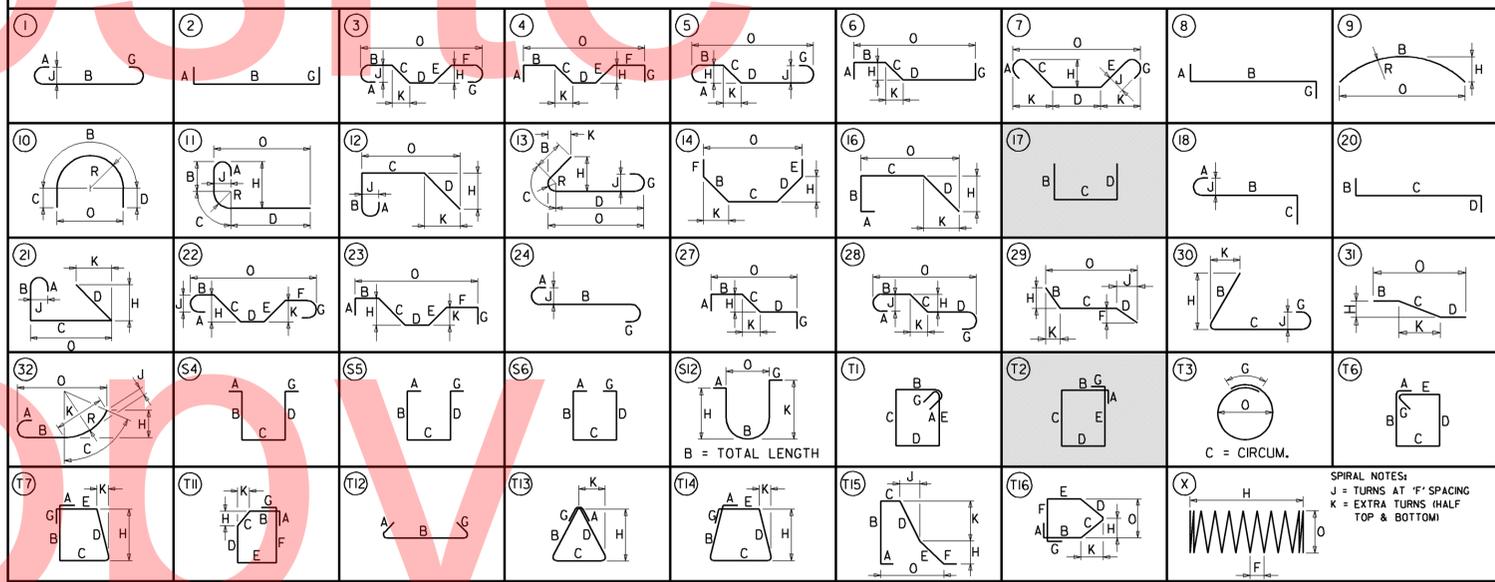
SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)											
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O

SPECIFICATIONS				BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)											
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O

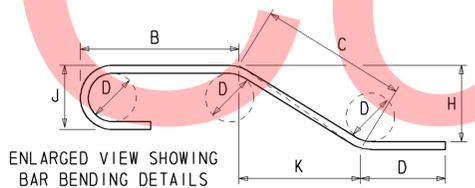
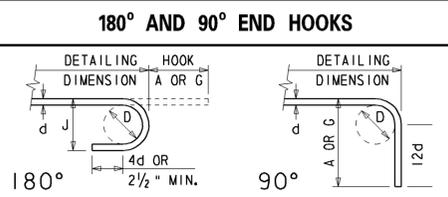
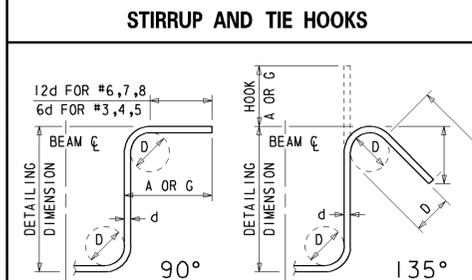
ASTM STANDARD ENGLISH REINFORCING BARS				RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES				STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES			
BAR SIZE	NOMINAL DIMENSIONS			180° HOOKS		90° HOOKS		90° HOOK		135° HOOK	
	DIAMETER (INCHES)	AREA (INCHES ²)	WEIGHT (LBS./FT.)	D	A OR G	J	A OR G	D	A OR G	A OR G	A OR G
3	0.375	0.110	0.376	2 1/4"	5"	3"	6"	1 1/2"	4"	4"	2 1/2"
4	0.500	0.200	0.668	3"	6"	4"	8"	2"	4 1/2"	4 1/2"	3"
5	0.625	0.310	1.043	3 3/4"	7"	5"	10"	2 1/2"	6"	5 1/2"	3 3/4"
6	0.750	0.440	1.502	4 1/2"	8"	6"	1-0"	4 1/2"	1-0"	8"	4 1/2"
7	0.875	0.600	2.044	5 1/4"	10"	7"	1-2"	5 1/4"	1-2"	9"	5 1/4"
8	1.000	0.790	2.670	6"	11"	8"	1-4"	6"	1-4"	10 1/2"	6"
9	1.128	1.000	3.400	9 1/2"	1-3"	11 3/4"	1-7"				
10	1.270	1.270	4.303	10 3/4"	1-5"	1-1 1/4"	1-10"				
11	1.410	1.560	5.313	1-0"	1-7"	1-2 3/4"	2-0"				
14	1.693	2.250	7.650	1-6 1/4"	2-3"	1-9 3/4"	2-7"				
18	2.257	4.000	13.600	2-0"	3-0"	2-4 1/2"	3-5"				

- NOTES:
- FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
 - STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
 - ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "C" ON STD. 180° AND 135° HOOKS.
 - "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
 - WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H", IT SHALL BE SHOWN.
 - "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
 - UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
 - WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
 - WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
 - FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRS1' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
 - TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

STANDARD BAR BENDS



SUPPLEMENTAL BAR BENDS



BORING: HH-1		DATE DRILLED: 8/5/14			
STATION:	OFFSET:	ELEVATION:	NORTHING:		
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	15	MOIST MEDIUM DENSE BROWN COARSE TO FINE SAND AND FINE GRAVEL W/SOME SILT.	A-1-B	
		13			
		11			
2	0.5	7	MOIST MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
		11			
		9			
3	4.0	7	WET VERY LOOSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
		5			
		2			
4	9.0	2	WET LOOSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
		1			
		3			
5	14.0	1	WET LOOSE BLACK FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL ORGANIC MATTER.	A-2-4(0)	
		4			
		4			
6	19.0	6	WET DENSE BLACK FINE SAND W/TRACE COARSE SAND, FINE GRAVEL AND SILT.	A-3	
		9			
		37			
7	24.0	34	WET VERY DENSE GRAY FINE TO COARSE SAND W/TRACE FINE GRAVEL AND SILT.	A-3	
		32			
		47			
8	29.0	50	WET VERY DENSE GRAY FINE GRAVELLY COARSE TO FINE SAND W/SOME SILT.	A-1-B	
		19			
		50			
9	34.0	35	WET VERY DENSE GRAY FINE TO COARSE SAND W/TRACE FINE GRAVEL AND SILT.	A-3	
		50			
		50			
10	39.0	35	WET VERY DENSE GRAY COARSE TO FINE SAND W/TRACE FINE GRAVEL AND SILT.	A-1-B	
		50			
		50			
11	44.0	6	WET VERY STIFF GRAY ORGANIC CLAYEY COARSE TO FINE SANDY SILT.	A-5(4)	
		7			
		10			
48.0	48.0	15	END BORING.		

BORING: HH-2		DATE DRILLED: 8/6/14			
STATION:	OFFSET:	ELEVATION:	NORTHING:		
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	13	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/TRACE FINE GRAVEL.	A-2-4(0)	
		13			
		13			
2	0.5	8	MOIST LOOSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
		5			
		5			
3	4.0	4	WET VERY LOOSE GRAY FINE TO COARSE SAND W/TRACE SILT AND FINE GRAVEL.	A-3	
		3			
		2			
4	9.0	2	WET VERY LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
		2			
		2			
5	14.0	2	WET LOOSE GRAY FINE TO COARSE SAND W/TRACE FINE GRAVEL AND SILT.	A-3	
		3			
		4			
6	19.0	5	WET VERY DENSE GRAY FINE SAND W/SOME COARSE SAND, TRACE OF SILT AND ORGANIC MATTER.	A-3	
		16			
		21			
7	24.0	26	WET VERY DENSE GRAY FINE TO COARSE SAND W/TRACE FINE GRAVEL AND SILT.	A-3	
		34			
		50			
8	29.0	20	WET VERY DENSE GRAY SILTY FINE TO COARSE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
		50			
		50			
9	34.0	17	WET VERY DENSE GRAY COARSE SAND W/SOME FINE SAND, TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		45			
		50			
10	39.0	17	WET VERY DENSE GRAY SILTY COARSE TO FINE SAND W/TRACE FINE GRAVEL.	A-2-4(0)	
		50			
		50			
11	44.0	6	WET MEDIUM DENSE GRAY COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.	A-1-B	
		10			
		10			
48.0	48.0	11	WET STIFF GRAY ORGANIC CLAYEY COARSE TO FINE SANDY SILT.	A-5(2)	
49.5	49.5		END BORING		

BORING: HH-2		DATE DRILLED: 8/6/14			
STATION:	OFFSET:	ELEVATION:	NORTHING:		
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	13	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/TRACE FINE GRAVEL.	A-2-4(0)	
		13			
		13			
2	0.5	8	MOIST LOOSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
		5			
		5			
3	4.0	4	WET VERY LOOSE GRAY FINE TO COARSE SAND W/TRACE SILT AND FINE GRAVEL.	A-3	
		3			
		2			
4	9.0	2	WET VERY LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
		2			
		2			
5	14.0	2	WET LOOSE GRAY FINE TO COARSE SAND W/TRACE FINE GRAVEL AND SILT.	A-3	
		3			
		4			
6	19.0	5	WET VERY DENSE GRAY FINE SAND W/SOME COARSE SAND, TRACE OF SILT AND ORGANIC MATTER.	A-3	
		16			
		21			
7	24.0	26	WET VERY DENSE GRAY FINE TO COARSE SAND W/TRACE FINE GRAVEL AND SILT.	A-3	
		34			
		50			
8	29.0	20	WET VERY DENSE GRAY SILTY FINE TO COARSE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
		50			
		50			
9	34.0	17	WET VERY DENSE GRAY COARSE SAND W/SOME FINE SAND, TRACE OF FINE GRAVEL AND SILT.	A-1-B	
		45			
		50			
10	39.0	17	WET VERY DENSE GRAY SILTY COARSE TO FINE SAND W/TRACE FINE GRAVEL.	A-2-4(0)	
		50			
		50			
11	44.0	6	WET MEDIUM DENSE GRAY COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.	A-1-B	
		10			
		10			
48.0	48.0	11	WET STIFF GRAY ORGANIC CLAYEY COARSE TO FINE SANDY SILT.	A-5(2)	
49.5	49.5		END BORING		

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ADDENDUMS / REVISIONS	



BRIDGE 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT

CONTRACT	BRIDGE NO.	2-213A
T201547303	DESIGNED BY:	
COUNTY	CHECKED BY:	
KENT		

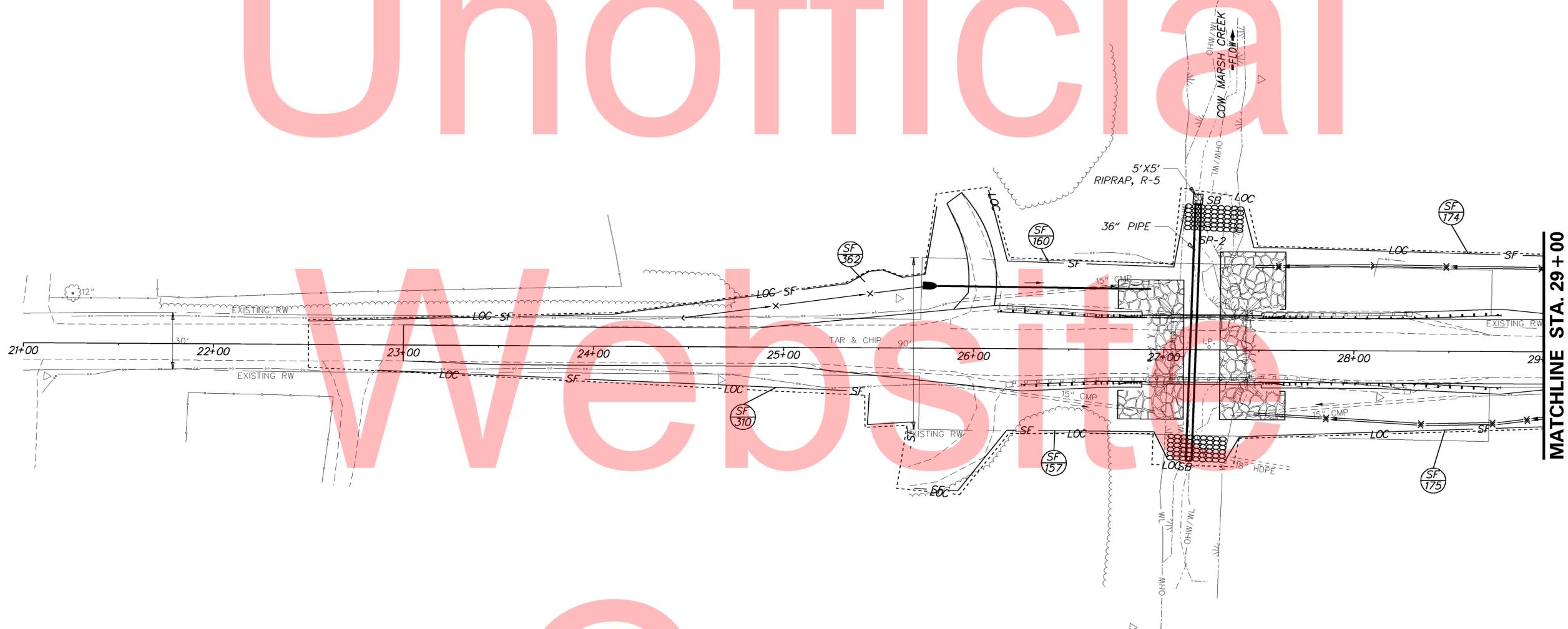
BORING LOG		SHEET NO.
		18
		TOTAL SHTS.
		22



Unofficial

Website

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MATCHLINE STA. 29+00

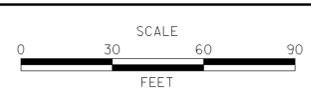
SEQUENCE OF CONSTRUCTION

1. INSTALL ALL M.O.T. ITEMS AS SHOWN ON THE DETOUR PLAN SHEET OR AS DIRECTED BY THE ENGINEER.
2. INSTALL SILT FENCE AS SHOWN ON THE PLANS, CONSTRUCT 3' HIGH SANDBAG, INSTALL TEMPORARY 36" PIPE, PLACE RIPRAP TO STABILIZE OUTFALL, INSTALL SUMP PIT AND CONNECT SILT FENCE TO THE SANDBAG TO ENCLOSE THE WORK AREA.
3. DEWATER WORK AREA IN ACCORDANCE WITH SECTION 111 OF THE STANDARD SPECIFICATIONS.
4. REMOVE EXISTING STRUCTURES AND OBSTRUCTIONS AS PER PROJECT NOTE #3 ON SHEET 3.
5. PERFORM ALL CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS.
6. RESTORE DISTURBED AREAS IN ACCORDANCE WITH ENVIRONMENTAL COMPLIANCE NOTE 4.
REMOVE STREAM DIVERSION WHEN ALL IN STREAM WORK IS COMPLETE.
7. COMPLETE ALL REMAINING WORK.
8. TOPSOIL AND SEED DISTURBED AREAS.
9. REMOVE ALL REMAINING TEMPORARY EROSION, SEDIMENT DEVICES AND STABILIZE AS NECESSARY.
10. REMOVE ALL M.O.T. DEVICES.

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

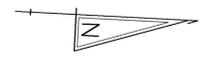


**BR 2-213A ON HOLLERING HILL
ROAD OVER COW MARSH CREEK
EMERGENCY REPLACEMENT**

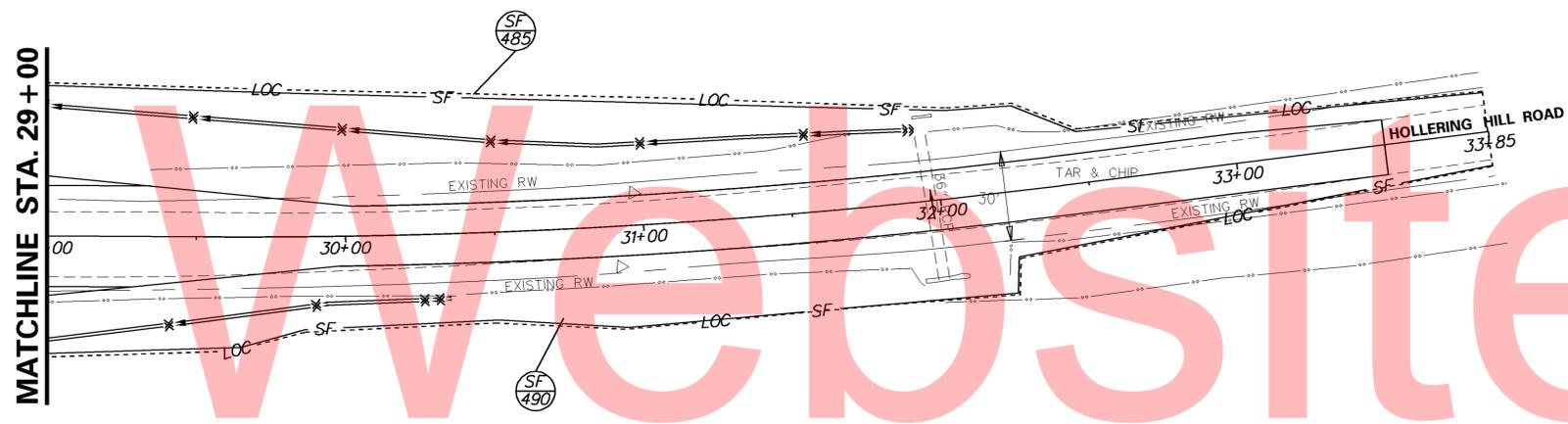
CONTRACT T201547303	BRIDGE NO. 2-213A
COUNTY KENT	DESIGNED BY: SM
	CHECKED BY: CAS

**CONSTRUCTION SEQUENCE,
AND EROSION
CONTROL PLAN**

SHEET NO. 19
TOTAL SHTS. 22



Unofficial



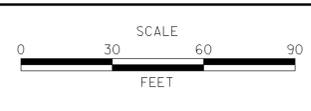
Website

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	



BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT

CONTRACT T201547303	BRIDGE NO. 2-213A
COUNTY KENT	DESIGNED BY: SM
	CHECKED BY: CAS

CONSTRUCTION SEQUENCE, AND EROSION CONTROL PLAN

SHEET NO. 20
TOTAL SHTS. 22

ENVIRONMENTAL COMPLIANCE NOTES

5. ALL STAGING AND STOCKPILING SHALL BE WITHIN THE EXISTING ROADWAY.

1. GENERAL NOTES:

- A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302)760-2264 TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
- C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

- A. PERMIT REQUIREMENTS/APPROVALS*:
 - U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT - NATIONWIDE *3(a) AND (c) (NO PCN)
 - DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL CODE CH. 72, SECTION 7217(b), AS AMENDED BY SB186
 - DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW)
- B. CONSTRUCTION RESTRICTIONS:
 - FISHERIES - NO IN WATER WORK FROM MARCH 15 TO JUNE 30 (INCLUSIVE)
 - ENDANGERED SPECIES - NONE
 - MIGRATORY BIRDS - IMPACTS SHOULD BE AVOIDED BY PERFORMING CONSTRUCTION ACTIVITIES FROM AUGUST 1 TO APRIL 15 OF ANY CALENDAR YEAR. WORK ON THE UNDERSIDE OF THE STRUCTURE SHOULD BEGIN PRIOR TO APRIL 15 (TO PREVENT BIRDS FROM NESTING) OR WAIT UNTIL AFTER AUGUST 1 (AFTER THE HATCHLINGS HAVE LEFT) TO BEGIN WORK TO THE UNDERSIDE. IF NEITHER OF THESE OPTIONS IS PRACTICABLE, THEN DETERRENT NETTING (OR A SIMILAR DEVICE) NEEDS TO BE INSTALLED PRIOR TO APRIL 15. IF NETTING NEEDS TO BE INSTALLED, IT SHOULD BE A MAXIMUM OF 3/4 INCH X 3/4 INCH OPENING AND SHOULD BE PLACED HORIZONTALLY UNDERNEATH THE STRUCTURE. THE NETTING SHOULD BE PULLED TAUT AND ATTACHED IN A WAY THAT BIRDS ARE UNABLE TO ENTER THE AREA BETWEEN THE NETTING AND THE STRUCTURE.

3. CULTURAL RESOURCE ISSUES:

- A. PROJECT CONSISTENT WITH II. B. OF DELDOT'S PROGRAMMATIC AGREEMENT WITH DE SHPO, FHWA, AND ACHP

4. STREAM RESTORATION AND SLOPE RIPRAP TREATMENT

- A. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM #712531 CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF ITEM #712531 CHANNEL BED FILL. ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) SHALL BE RECESSED ONE FOOT BELOW STREAM BED ELEVATION AND CHOKED WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM #209002 BORROW TYPE 'B'. THE RIPRAP SHALL THEN BE COVERED WITH A MINIMUM OF 12" CHANNEL BED FILL. FINAL CHANNEL ELEVATIONS SHALL MATCH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS SHALL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM #712531 CHANNEL BED FILL.
- B. OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) SHALL BE RESTORED TO EXISTING CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM #712531 CHANNEL BED FILL.
- C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
- D. ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF CHANNELBED FILL OR TOPSOIL (DEPENDING ON LOCATION AS INDICATED BELOW) THROUGH THE RIPRAP.
 - BENEATH THE BRIDGE: AFTER PLACING THE DE #57 STONE, DO A FINAL CHOKE OF CHANNELBED FILL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PAYMENT UNDER ITEM #712531 CHANNEL BED FILL. DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM.
 - ALL OTHER LOCATIONS: FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SLOPE SEEDING SHALL BE WITH ITEM #734531 STREAMBANK SEED MIX. FOLLOWING THE SEEDING OPERATION, ITEM #735535 SOIL RETENTION BLANKET MULCH, TYPE 5, OR OTHER BLANKET AS SHOWN ON THE PLANS SHALL BE INSTALLED. ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM.
- E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF IT OCCURS AFTER STREAM DIVERSION REMOVAL, A TURBIDITY CURTAIN SHALL BE USED TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT SHALL BE INCIDENTAL TO ITEM 265500 STREAM DIVERSION.

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	DOWNSTREAM SANDBAG/RIPRAP	337.43	0.0077	16.66	COE/DNREC
OT-2	DIVERSION PIPE/SUMP PIT	372.94	0.0086	14.53	COE/DNREC
OT-2	UPSTREAM SANDBAG	146.79	0.0034	7.25	COE/DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		857.16	0.0197	38.44	COE/DNREC

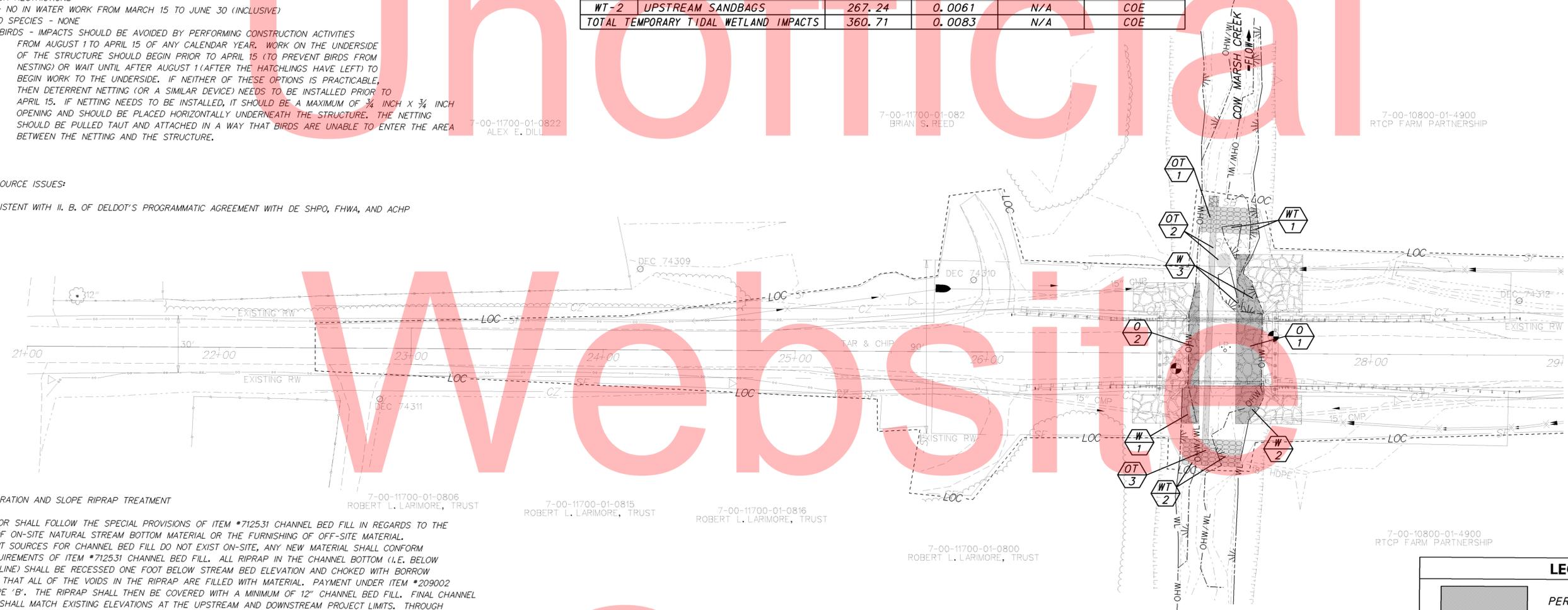
TEMPORARY WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	DOWNSTREAM SANDBAGS	93.47	0.0022	N/A	COE
WT-2	UPSTREAM SANDBAGS	267.24	0.0061	N/A	COE
TOTAL TEMPORARY TIDAL WETLAND IMPACTS		360.71	0.0083	N/A	COE

PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	RIPRAP (NORTH)	718.24	0.0165	35.47	COE/DNREC
O-2	RIPRAP (SOUTH)	331.86	0.0076	16.39	COE/DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		1050.10	0.0241	51.86	COE/DNREC

PERMANENT WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	UPSTREAM RIPRAP (SOUTH)	108.23	0.0025	N/A	COE
W-2	UPSTREAM RIPRAP (NORTH)	118.62	0.0027	N/A	COE
W-3	DOWNSTREAM RIPRAP (NORTH)	166.96	0.0038	N/A </td <td>COE</td>	COE
TOTAL PERMANENT WETLAND IMPACT AREAS		393.81	0.0090	N/A	COE

WETLANDS DELINEATED BY KEN DUNNIE AND CHRISTIE BONNIEWELL ON 07/30/2014 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)" AND REGIONAL SUPPLEMENTS.

ORIGINAL SHEET PREPARED BY SUSAN MALDONADO ON 08/25/14. SHEET LAST UPDATED ON 09/02/14.



LEGEND	
	PERMANENT IMPACT AREA
	TEMPORARY IMPACT AREA
	WL - WETLAND BOUNDARY
	OHW - ORDINARY HIGH WATER
	OHW/WL - ORD. HIGH WATER / WETLAND
	IMPACT AREA TYPE ID. (SEE BELOW)
	IMPACT AREA ID. AND/OR NUMBER
O = OPEN WATER IMPACT T = TEMPORARY IMPACT	
W = WETLAND IMPACT	

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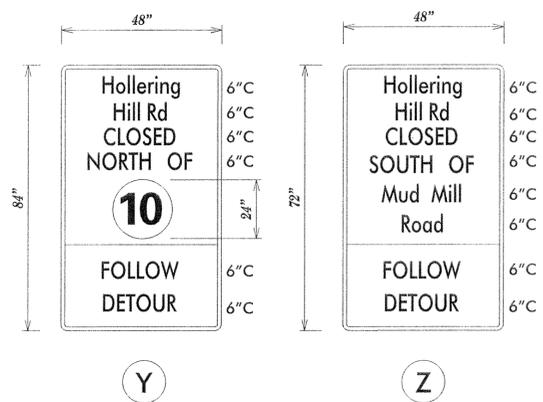
<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS		<p>SCALE</p> <p>0 30 60 90</p> <p>FEET</p>	<p>BR 2-213A ON HOLLERING HILL ROAD OVER COW MARSH CREEK EMERGENCY REPLACEMENT</p>	CONTRACT	BRIDGE NO.	2-213A	<p>ENVIRONMENTAL COMPLIANCE PLAN</p>	SHEET NO.	21
	T201547303	DESIGNED BY:			SM	TOTAL SHTS.	22			
	COUNTY	CHECKED BY:			CAS					
	KENT									

PORTABLE CHANGEABLE MESSAGE SIGNS

LEGEND



SPECIAL SIGNS



*DG RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND

*ROUTE SHIELDS-WHITE BACKGROUND; BLACK LEGEND

GENERAL NOTES

- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD).
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
- SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

WA:MSV8\CELLS\PROJDEV\15B.CEL

RECOMMENDED _____ DATE: _____	RECOMMENDED _____ DATE: _____	RECOMMENDED <i>Michael J. Rivera</i> DATE: 8-11-14	APPROVED CHIEF SAFETY OFFICER _____ DATE: 8-18-14	APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: 8/18/14
<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>		ADDENDUM / REVISIONS	NOT TO SCALE	BR 2-213A OVER COW MARSH CREEK
			CONTRACT TXXXXXXXXXX	ROAD NO. K213
			COUNTY KENT	DESIGNED BY: MFR
			CHECKED BY: GAN	VEHICULAR DETOUR PLAN HOLLERING HILL RD (K213)
				SHEET NO. 22
				TOTAL SHTS. 22