THE STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY UNITS

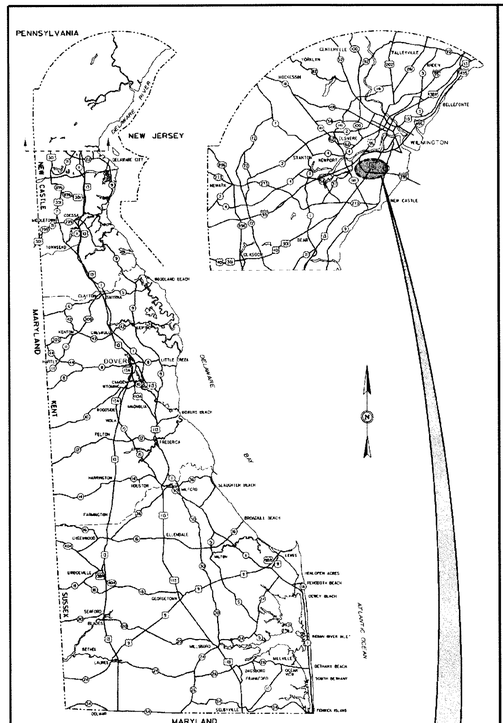
CONSTRUCTION & RIGHT-OF-WAY PLANS FOR:

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BLVD.

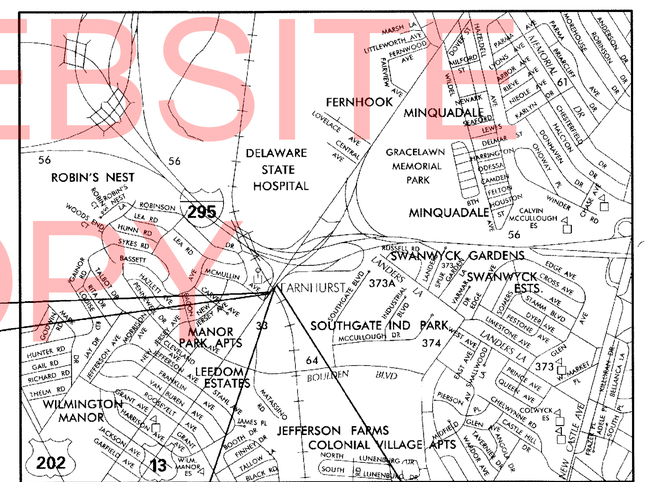
UNOFFICIAL WEBSITE COPY

CONTRACT NUMBER: T201107401
FEDERAL AID PROJECT NUMBER: EBHN-N033(2)

COUNTY: NEW CASTLE M.R. #: N033



GENERAL LOCATION OF CONTRACT



NTS

BEGIN AQUISITION
STATION 112+80

BEGIN CONTRACT
STATION 110+80

END AQUISITION
STATION 115+96

END CONTRACT
STATION 116+94

PREPARED BY
THE CONSULTING FIRM OF
McCormick Taylor
Engineers & Planners Since 1946

MICHAEL A. ANGELO REGISTERED No. 6725 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED 2/15/13
DATE

RECOMMENDED

SQUAD MANAGER, CONSTRUCTION 2/21/13
DATE

GROUP ENGINEER, CONSTRUCTION 2/21/13
DATE

ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION) DATE

DESIGN DESIGNATION

FUNCTIONAL CLASS: URBAN PRINCIPAL ARTERIAL	D.H.V. PROJECTED: 7140	YEAR: 2020
TYPE OF CONSTRUCTION: BRIDGE REPLACEMENT	DESIGN SPEED: N/A	
A.A.D.T. CURRENT: 57200 YEAR: 2010	TRUCKS: 6.28%	
A.A.D.T. PROJECTED: 69700 YEAR: 2020	DIRECTION OF DISTRIBUTION: 57.22%	

INDEX OF SHEETS

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TOTAL SHEETS: 62

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
I-1(6)	FARNHURST INTERCHANGE
85-061-19	US 13, N. OF HARES CORNER TO I-295 INTERCHANGE (4R)
DMB-12-XX	I-295 SOUTHBOUND RECONSTRUCTION PROJECT FROM I-95 TO LANDERS LANE (DRBA CONTRACT)

RECOMMENDED
Vincent W. Davis
STORMWATER ENGINEER
DATE 27 FEB 2013
VINCENT W. DAVIS REGISTERED No. 12745 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED
PROJECT MANAGER, BRIDGE DESIGN
DATE 2/19/13
STEPHEN DIRK RICE REGISTERED No. 9629 DELAWARE PROFESSIONAL ENGINEER
SEAL

RECOMMENDED
BRIDGE DESIGN ENGINEER
DATE 2/27/13
DOUGLAS A. ROBB REGISTERED No. 11438 DELAWARE PROFESSIONAL ENGINEER
SEAL

~~RECOMMENDED~~
GROUP ENGINEER, PROJECT DEVELOPMENT
DATE
SEAL

RECOMMENDED
ASSISTANT DIRECTOR, BRIDGE
DATE FEBRUARY 28, 2013
BARRY A. BENTON REGISTERED No. 10774 DELAWARE PROFESSIONAL ENGINEER
SEAL

APPROVED
CHIEF ENGINEER
DATE 2/28/13
NATALIE M. BARNHART REGISTERED No. 9629 DELAWARE PROFESSIONAL ENGINEER
SEAL

1/31/2013
...\PSE Plans\TC001_3R 1-665.dgn

EXISTING SYMBOLS

DRAINAGE

	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
D.I.	DRAINAGE INLET
J.B.	DRAINAGE JUNCTION BOX
D	DRAINAGE MANHOLE
SIZE/TYPE LABEL	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

MANMADE ROADSIDE FEATURES

	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
(TYPE LABEL)	CURB
(TYPE LABEL)	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
FP	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
LAMP	LAMP AND POST - RESIDENTIAL
MB	MAILBOX
PM	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
WL	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

RIGHT-OF-WAY SYMBOLS

C.M.	PROPERTY MARKER - CONCRETE MON.
I.P.	PROPERTY MARKER - IRON PIPE
100+00	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
EASEMENT TYPE	EXISTING EASEMENT
DA	EXISTING DENIAL OF ACCESS
R/W-DA	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION

B.M.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

UTILITY

	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
TV	CABLE TV DISTRIBUTION BOX
E	ELECTRIC MANHOLE
EM	ELECTRIC METER
E	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
G	GAS MANHOLE
G.M.	GAS METER
G.V.	GAS VALVE
G.P.	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
S	SANITARY SEWER MANHOLE
S.V.	SANITARY SEWER VALVE
VENT	SANITARY SEWER VENT OR CLEANOUT
S.D.F.	SEPTIC DRAIN FIELD
B	TELEPHONE BOOTH
T	TELEPHONE MANHOLE
T	TELEPHONE TEST POINT
J.W.	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
U	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
F.H.	WATER - FIRE HYDRANT
W.M.	WATER METER
W.V.	WATER VALVE
WELL	WELL HEAD
?	MANHOLE - UNDETERMINED OWNER

PROPOSED SYMBOLS

CONSTRUCTION

	CONCRETE SAFETY BARRIER - PERMANENT
BFS	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
100+00	CONSTRUCTION BASELINE
CSF	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
CZ	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
HC	HORIZONTAL CLEARANCE
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
LOC	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS

	PROPOSED RIGHT-OF-WAY MONUMENT
DA	PROPOSED DENIAL OF ACCESS
PE	PROPOSED PERMANENT EASEMENT
R/W	PROPOSED RIGHT-OF-WAY
R/W-DA	PROPOSED R/W & DENIAL OF ACCESS
TCE	TEMPORARY CONSTRUCTION EASEMENT
100+00	PROPOSED RIGHT-OF-WAY BASELINE

IDENTIFIERS

A C	ADJUST BY CONTRACTOR
A O	ADJUST BY OTHERS
B	CONCRETE SAFETY BARRIER
C	CURB OR CURB & GUTTER
C.J.B.	CONVERT TO JUNCTION BOX
C.M.H.	CONVERT TO DRAINAGE MANHOLE
C.O.	CURB OPENING
CR	CURB RAMP / TYPE
CR-N	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
CSF	CONSTRUCTION SAFETY FENCE
D.I.	DRAINAGE INLET
DND	DO NOT DISTURB
E.D.	ENERGY DISSIPATOR
F	FENCE
F.E.S.	FLARED END SECTION
F.F.C.	FILL WITH FLOWABLE FILL
F.S.	FILTRATION STRUCTURE
GR	GUARDRAIL
J.B.	JUNCTION BOX
M.H.	MANHOLE
M	MONUMENT - RIGHT-OF-WAY
P	PIPE
R.L. C	RELOCATE BY CONTRACTOR
R.L. O	RELOCATE BY OTHERS
R.M. C	REMOVE BY CONTRACTOR
R.M. O	REMOVE BY OTHERS
U.D.	UNDERDRAIN / LENGTH
U.O.D.	UNDERDRAIN OUTLET PIPE

LANDSCAPING

L.S.	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

TRAFFIC

ITMS-CON	ITMS CONDUIT
SIG-CON	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

PAVEMENT SECTION(S)

	HOT-MIX PAVING - FULL DEPTH ROADWAY -2" SUPERPAVE, TYPE C, WMA -6" SUPERPAVE, TYPE B, WMA -6" SUPERPAVE, BCBC, WMA -8" GRADED AGGREGATE BASE COURSE
	HOT-MIX PAVING - FULL DEPTH PATH/MAINT PAVE -2" SUPERPAVE, TYPE C, WMA -8" GRADED AGGREGATE BASE COURSE
	HOT-MIX PATCHING -2" SUPERPAVE, TYPE C, WMA -6" SUPERPAVE, TYPE B, WMA -6" SUPERPAVE, BCBC, WMA -8" GRADED AGGREGATE BASE COURSE

UTILITY COMPANY FACILITIES

AW-W	ARTESIAN WATER COMPANY
ATT-C	AT&T TRANSMISSION
COM-C	COMCAST CABLE
COM-FO	COMCAST FIBER OPTIC
DP-E	DELMARVA POWER ELECTRIC
DP-G	DELMARVA POWER GAS
VER-C	VERIZON
DPC	DELAWARE PIPELINE COMPANY
G4S	G4S TECHNOLOGY LLC
L3-C	LEVEL 3 COMMUNICATION
FT-C	FIBERTECH
NO-C	NEON OPTICA
24/7-C	24/7 CABLE COMPANY
EX-CON	DELDOT CONDUIT

NOTE: SEE CS SHEETS FOR ADDITIONAL LEGEND ITEMS.

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT T201107401	BRIDGE NO.	1-665
COUNTY NEW CASTLE	DESIGNED BY: TM	
	CHECKED BY: MAA	

LEGEND

LG-01

SHEET NO. 2

TOTAL SHTS. 62

2/28/2013
...\PSF Plans\LG001 BR 1-665.dgn

GENERAL NOTES

1. 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.

2. THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.

3. THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

4. THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.

5. STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.

6. 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 AT THE TIME OF BID. 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 AT THE TIME OF BID. 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	AT THE TIME OF BID OF THE CONTRACT, EITHER 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 AT THE TIME OF BID OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

7. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR INCLUDE:

(X)	NONE
( )	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
( )	RASTER FILES, IN .CAL FILE FORMAT, FOR ALL PLAN SHEETS.
( )	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.

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

( )	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 ITEM 743031.
(X)	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.

9. THE DISTURBED AREA FOR THIS PROJECT IS 3.0 ACRES.

10. 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.

11. 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

1. 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

2. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 202000 - EXCAVATION AND EMBANKMENT, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.

3. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
   - HEADWALL
   - CHAINLINK FENCE
   - GUARDRAIL
   - JERSEY WALLS
   - DRAINAGE INLETS
   - BRIDGE SUPERSTRUCTURE (SEE SHEET ST-01)

4. 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.

5. PRIOR TO CONSTRUCTING DI-1 THE CONTRACTOR SHALL FLUSH EXISTING CONNECTING DRAINAGE INLET AND 15" RCP. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 201000 - CLEARING AND GRUBBING.

SECTION 300

6. 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':
   a. CRUSHED STONE (PER STANDARD SPECIFICATION 821)
   b. CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
   c. 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:
   a. MATERIAL MADE AVAILABLE WHEN MILLED ON THIS CONTRACT.
   b. MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
   c. 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:
   a. 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.
   b. MILLINGS GENERATED UNDER ITEM 760502 - PAVEMENT MILLINGS, TAPERCUT MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE OR DISPOSED OF BY THE CONTRACTOR TO AN APPROVED SITE. NO SEPARATE PAYMENT WILL BE MADE FOR TRANSPORTING MILLINGS ON SITE OR TO AN APPROVED DISPOSAL SITE.
   c. 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.
   d. 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'.
   e. 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.
   f. 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

7. THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. EXISTING PIPES AND DRAINAGE STRUCTURES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.

SECTION 700

8. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

9. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762002 - SAWCUTTING, CONCRETE, FULL DEPTH.

10. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT-MIX SAW CUTTING SHALL BE FULL DEPTH.

MISCELLANEOUS

11. THE CONTRACTOR SHALL CONTACT MICHAEL ELLER, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AND 14 DAYS PRIOR TO ANY LANE CLOSURE AT 302-576-6061.

12. CROSS SECTIONS USED IN THE PREPARATION OF THIS CONTRACT WILL BE MADE AVAILABLE FROM THE DEPARTMENT TO THE WINNING BIDDER.

13. ALL EXISTING UTILITY MARKERS TO BE ADJUSTED OR RELOCATED BY THE UTILITY COMPANY.

14. THERE ARE NO ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT. AS SUCH, AN ENVIRONMENTAL COMPLIANCE SHEET WAS NOT PREPARED.

15. THE DELAWARE RIVER AND BAY AUTHORITY WILL BE CONSTRUCTING DRBA CONTRACT DMB-12-XX DURING THE CONSTRUCTION PERIOD FOR THIS CONTRACT. CONSTRUCTION LIMITS FOR THE DRBA CONTRACT WILL OVERLAP WITH THIS CONTRACT. DRBA WORK WILL INCLUDE SIGN STRUCTURE REPLACEMENT AND MARKINGS UPGRADES ON US 13. DELDOT AND THE CONTRACTOR WILL COORDINATE WORK WITH DRBA AS NECESSARY.

16. SEE UTILITY STATEMENT FOR RESTRICTIONS NEAR EXISTING DP-L ELECTRIC LINES.

17. DURING CONSTRUCTION COVER NEON OPTICA JUNTION WELL AT STA. 113+85 OFFSET 147' WITH 8' X 8' X ¼" STEEL PLATE. COST SHALL BE INCIDENTAL TO 201000 - CLEARING AND GRUBBING.

EARTHWORK SUMMARY

EXCAVATION	
EXCAVATION FROM CROSS SECTIONS	3747 C.Y.
ROCK EXCAVATION FOR ROADWAY AND TRENCHES	0 C.Y.
TOPSOIL STRIPPING	0 C.Y.
TOTAL EXCAVATION	3747 C.Y.
EXCAVATION AVAILABLE FOR EMBANKMENT	
EXCAVATION MEETING BORROW TYPE 'A'	0 C.Y.
EXCAVATION MEETING BORROW TYPE 'F'	0 C.Y.
EXCAVATION MEETING TOPSOIL	0 C.Y.
EMBANKMENT REQUIREMENTS	
BORROW TYPE 'A' REQUIRED (INCLUDING UNDERCUT)	2015 C.Y.
BORROW TYPE 'F' REQUIRED	5731 C.Y.
BORROW TYPE 'C' REQUIRED	6031 C.Y.
TOPSOIL REQUIRED	1907 C.Y.
MATERIAL BALANCE ("+"= EXCESS, "-"= NEED)	
BORROW TYPE 'A'	-2015 C.Y.
BORROW TYPE 'F'	-5679 C.Y.
BORROW TYPE 'C'	-6031 C.Y.
TOPSOIL	-1907 C.Y.
UNSUITABLE MATERIAL	3747 C.Y.

NOTES:
1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.
2) OTHER SOURCES OF EXCAVATION MAY INCLUDE PIPE TRENCH EXCAVATION, STRUCTURE EXCAVATION, UNDERCUT EXCAVATION, STORMWATER MANAGEMENT POND EXCAVATION, ENVIRONMENTAL SITE EXCAVATION, MAINTENANCE OF TRAFFIC EXCAVATION, ETC.
3) UNSUITABLE MATERIALS INCLUDE UNDERCUT SOILS, BITUMINOUS PAVEMENT, ETC.

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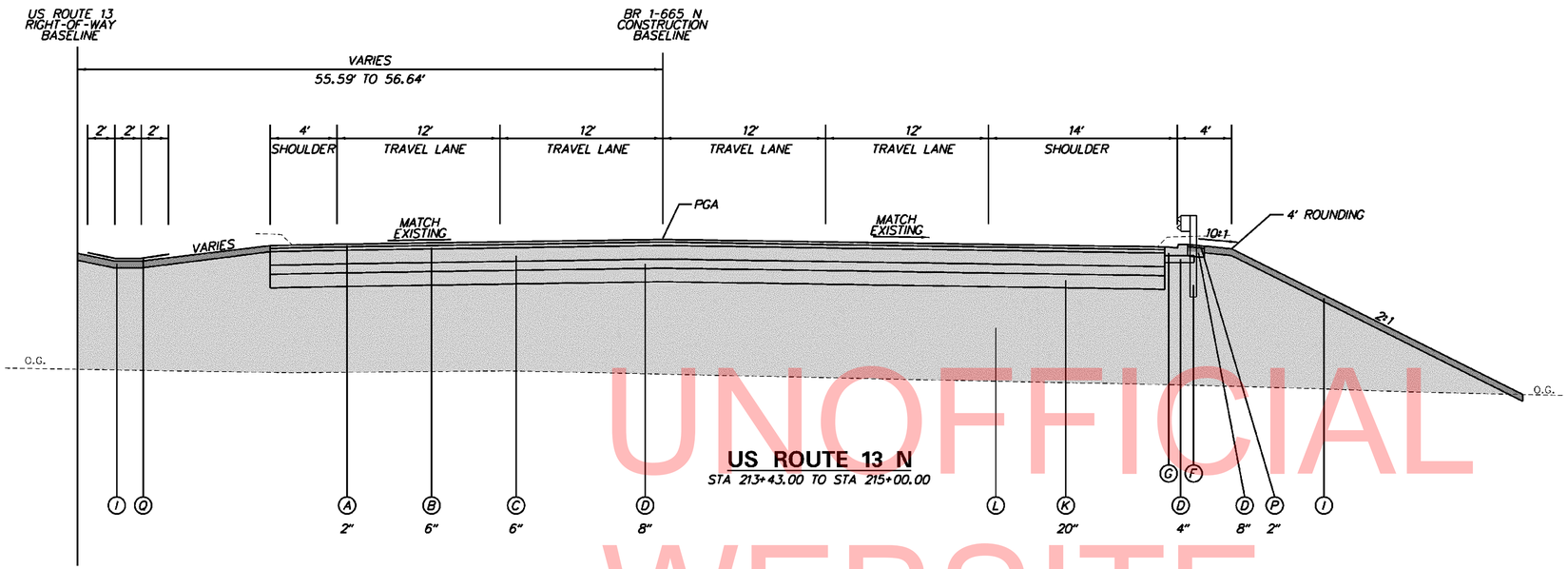
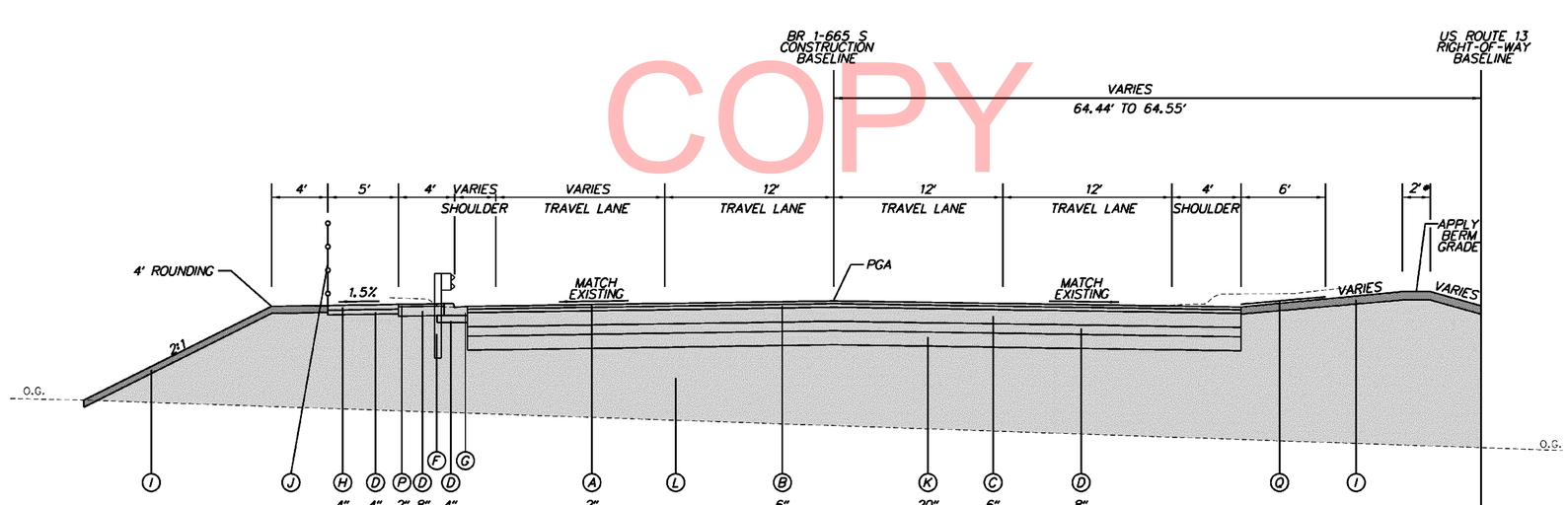


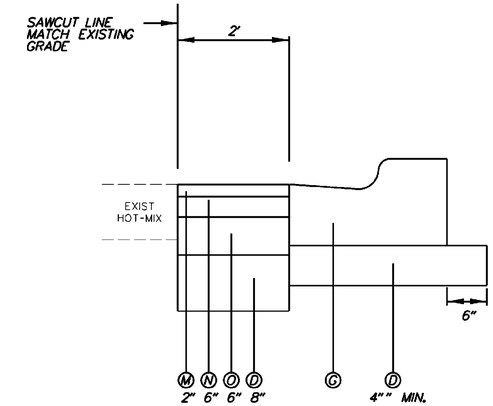
US ROUTE 13 N

STA 213+43.00 TO STA 215+00.00



US ROUTE 13 S

STA 314+05.00 TO STA 315+65.00



PAVEMENT PATCH TYPICAL

LEGEND

- (A) ITEM 401833 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 76-22, (NON-CARBONATE STONE)
- (B) ITEM 401816 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 76-22
- (C) ITEM 401819 - WMA, SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22
- (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (F) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL TYPE 1-31
- (G) ITEM 701019 - INTEGRAL PORTLAND CEMENT CURB AND GUTTER, TYPE 3-4
- (H) ITEM 705001 - P.C.C. SIDEWALK 4"
- (I) ITEM 732002 - TOPSOIL, 6" DEPTH
  ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
- (J) ITEM 727004 - CHAIN-LINK FENCE, 6' HIGH
- (K) ITEM 209001 - BORROW, TYPE A
- (L) ITEM 209006 - BORROW, TYPE F OR ITEM 208001 - FLOWABLE FILL.
- (M) ITEM 401821 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, PATCHING
- (N) ITEM 401822 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING
- (O) ITEM 401823 - WMA, SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, 160 GYRATIONS, PG 64-22, PATCHING
- (P) ITEM 401801 - WMA, SUPERPAVE TYPE C, 160 GYRATIONS, PG 64-22, (CARBONATE STONE)
- (Q) ITEM 735535 - SOIL RETENTION BLANKET MULCH, TYPE 5

THE LIFTS FOR THE INDIVIDUAL PAVING MATERIALS ARE:

	MIN.	MAX.
SUPERPAVE TYPE C	1.25"	2"
SUPERPAVE TYPE B	2.25"	3"
SUPERPAVE BCBC	3"	6"
GABC	4"	8"

• FLAT, CENTER OVER EXISTING 16" DELAWARE PIPELINE PETROLEUM PIPE STA. 114+20 TO STA. 115+05

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	N.T.S.	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	TYPICAL SECTIONS	SHEET NO. 4
				COUNTY NEW CASTLE	DESIGNED BY: TM		TOTAL SHTS. 62
					CHECKED BY: MAA		

TS-01

4/9/2013
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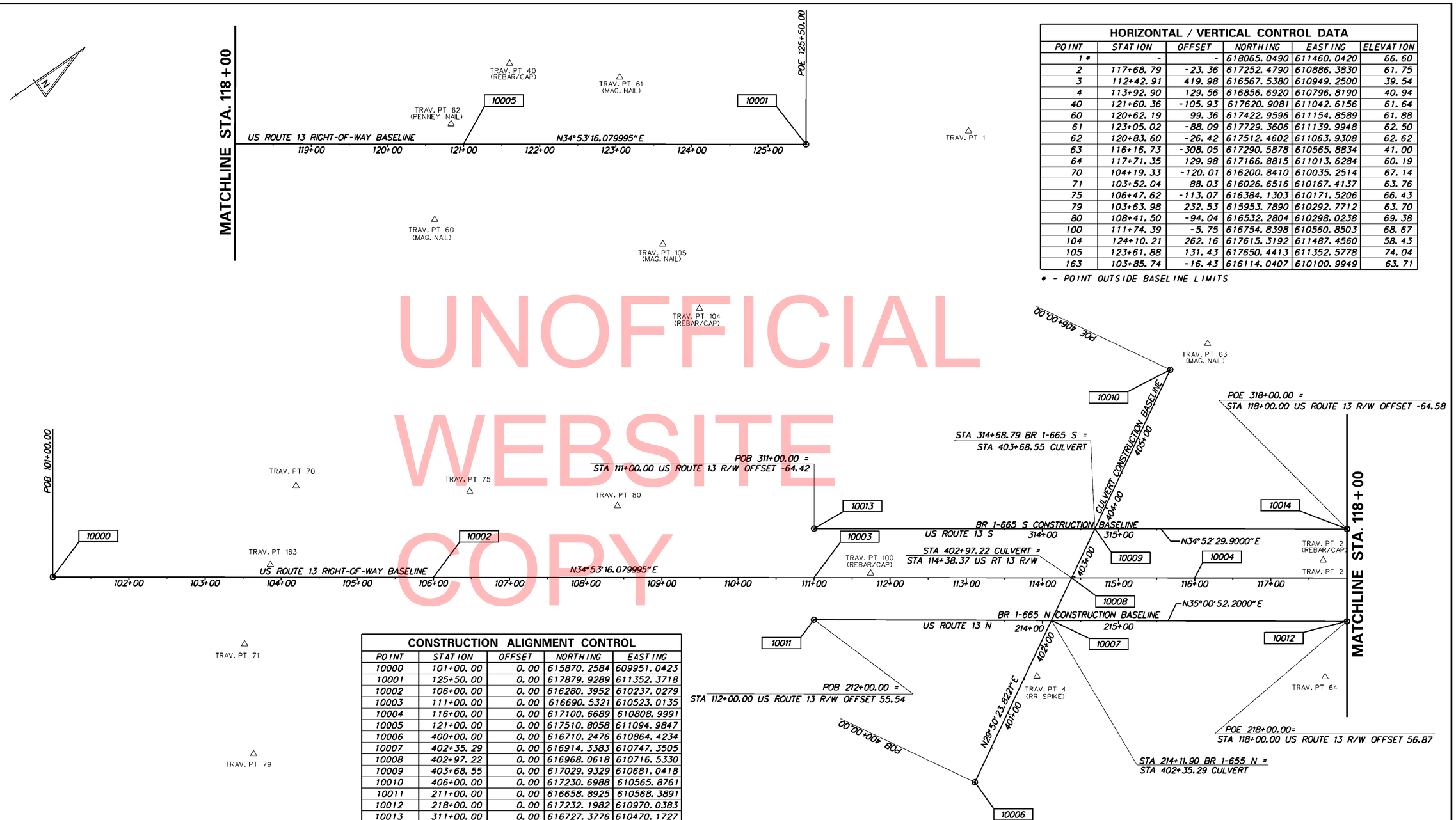

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HORIZONTAL / VERTICAL CONTROL DATA

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
1 *	-	-	618065.0490	611460.0420	66.60
2	117+68.79	-23.36	617252.4790	610886.3830	61.75
3	112+42.91	419.98	616567.5380	610949.2500	39.54
4	113+92.90	129.56	616856.6920	610796.8190	40.94
40	121+60.36	-105.93	617620.9081	611042.6156	61.64
60	120+62.19	99.36	617422.9596	611154.8589	61.88
61	123+05.02	-88.09	617729.3606	611139.9948	62.50
62	120+83.60	-26.42	617512.4602	611063.9308	62.62
63	116+16.73	-308.05	617290.5878	610565.8834	41.00
64	117+71.35	129.98	617166.8815	611013.6284	60.19
70	104+19.33	-120.01	616200.8410	610035.2514	67.14
71	103+52.04	88.03	616026.6516	610167.4137	63.76
75	106+47.62	-113.07	616384.1303	610171.5206	66.43
79	103+63.98	232.53	615953.7890	610292.7712	63.70
80	108+41.50	-94.04	616532.2804	610298.0238	69.38
100	111+74.39	-5.75	616754.8398	610560.8503	68.67
104	124+10.21	262.16	617615.3192	611487.4560	58.43
105	123+61.88	131.43	617650.4413	611352.5778	74.04
163	103+85.74	-16.43	616114.0407	610100.9949	63.71

* - POINT OUTSIDE BASELINE LIMITS

CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
10000	101+00.00	0.00	615870.2584	609951.0423
10001	125+50.00	0.00	617879.9289	611352.3718
10002	106+00.00	0.00	616280.3952	610237.0279
10003	111+00.00	0.00	616690.5321	610523.0135
10004	116+00.00	0.00	617100.6689	610808.9991
10005	121+00.00	0.00	617510.8058	611094.9847
10006	400+00.00	0.00	616710.2476	610864.4234
10007	402+35.29	0.00	616914.3383	610747.3505
10008	402+97.22	0.00	616968.0618	610716.5330
10009	403+68.55	0.00	617029.9329	610681.0418
10010	406+00.00	0.00	617230.6988	610565.8761
10011	211+00.00	0.00	616658.8925	610568.3891
10012	218+00.00	0.00	617232.1982	610970.0383
10013	311+00.00	0.00	616727.3776	610470.1727
10014	318+00.00	0.00	617301.6588	610870.4240

DATUM REFERENCE:
-NEGATIVE OFFSET DENOTES LEFT OF BASELINE
-HORIZONTAL DATUM BASED ON NATIONAL GEODETIC SURVEY (NAD 83/91)
-VERTICAL DATUM BASED ON NATIONAL GEODETIC SURVEY (NAVD 88)

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

HORIZONTAL AND VERTICAL CONTROL

HV-01

SHEET NO. 5

TOTAL SHTS. 62

2/28/2013
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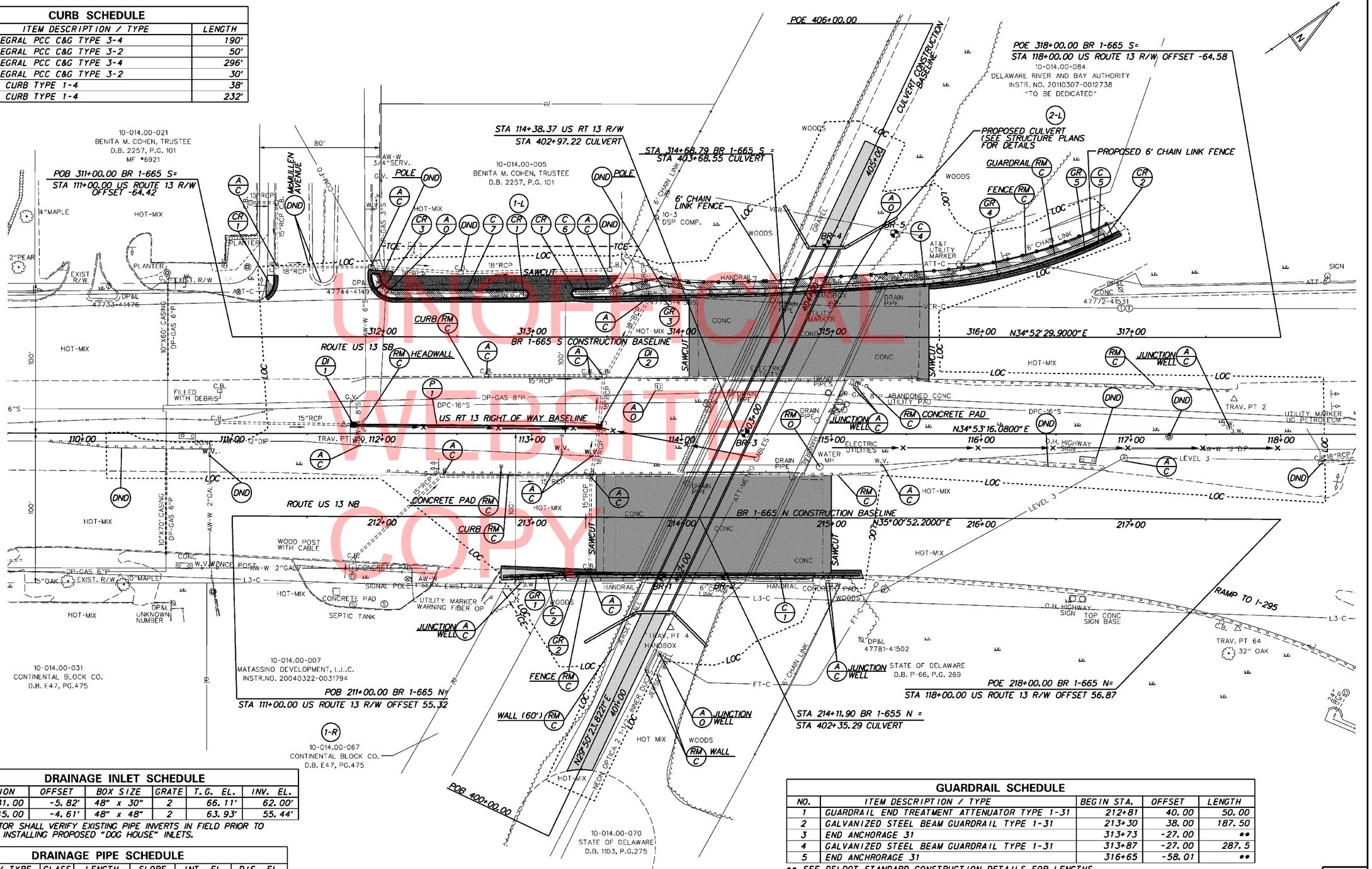
CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	INTEGRAL PCC C&G TYPE 3-4	190'
2	INTEGRAL PCC C&G TYPE 3-2	50'
4	INTEGRAL PCC C&G TYPE 3-4	296'
5	INTEGRAL PCC C&G TYPE 3-2	30'
6	PCC CURB TYPE 1-4	38'
7	PCC CURB TYPE 1-4	232'



DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
1•	111+81.00	-5.82'	48" x 30"	2	66.11'	62.00'
2•	113+45.00	-4.61'	48" x 48"	2	63.93'	55.44'

•NOTE: CONTRACTOR SHALL VERIFY EXISTING PIPE INVERTS IN FIELD PRIOR TO FURNISHING AND INSTALLING PROPOSED "DOG HOUSE" INLETS.

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
1	18" RCP	IV	163'	0.0245	62.00'	58.00'

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	GUARDRAIL END TREATMENT ATTENUATOR TYPE 1-31	212+81	40.00	50.00
2	GALVANIZED STEEL BEAM GUARDRAIL TYPE 1-31	213+30	38.00	187.50
3	END ANCHORAGE 31	313+73	-27.00	••
4	GALVANIZED STEEL BEAM GUARDRAIL TYPE 1-31	313+87	-27.00	287.5
5	END ANCHRORAGE 31	316+65	-58.01	••

•• SEE DELDOT STANDARD CONSTRUCTION DETAILS FOR LENGTHS

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PLAN

CP-01

SHEET NO. 6

TOTAL SHTS. 62

4/8/2013
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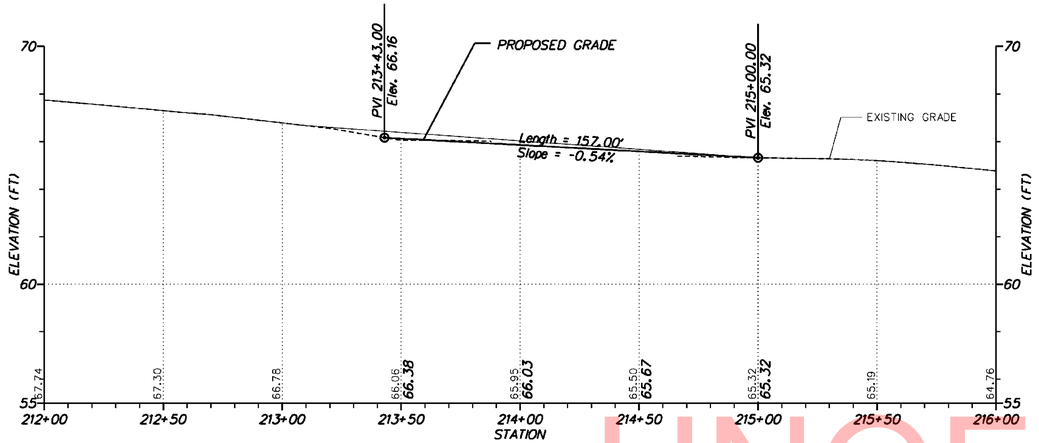
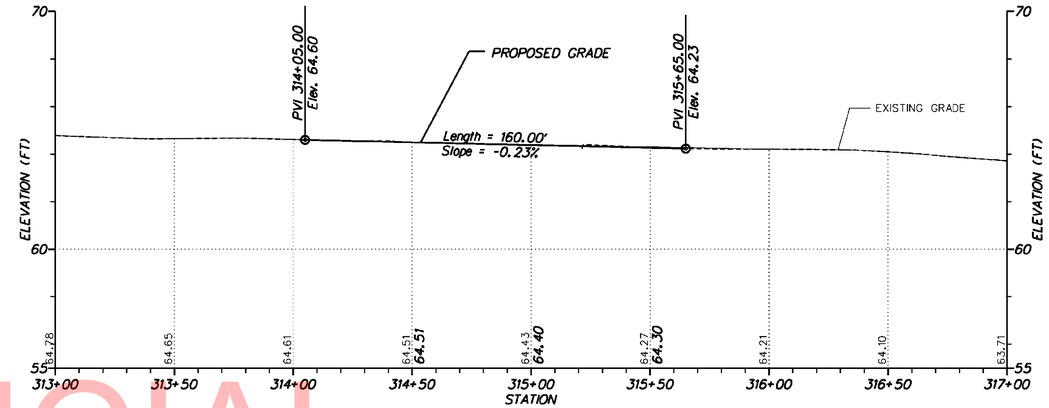


BR 1-665 NB



BR 1-665 SB

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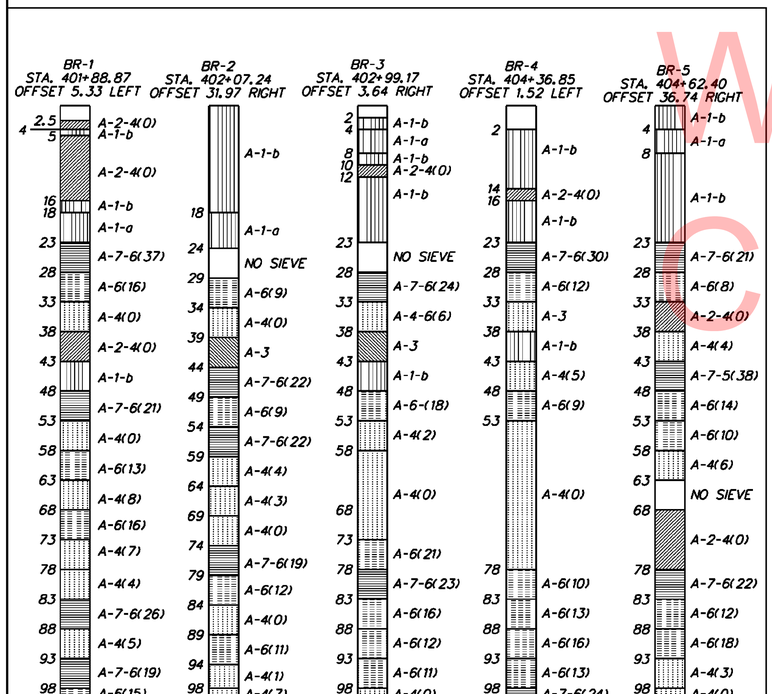
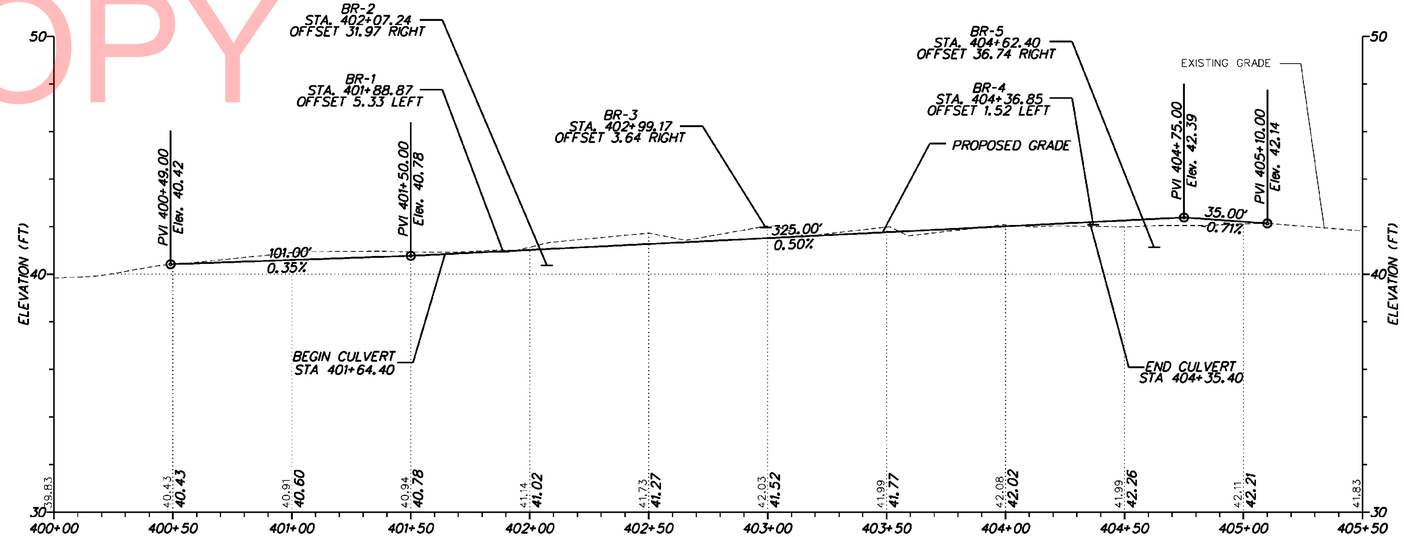


SOIL BORINGS

NTS

NOTE: BORING INFORMATION IS FOR INFORMATIONAL PURPOSES ONLY



CULVERT

VERTICAL SCALE FEET 9 6 3 0

PF-01

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401 / COUNTY NEW CASTLE	BRIDGE NO. 1-665 / DESIGNED BY: TM / CHECKED BY: MAA	PROFILES	SHEET NO. 7 / TOTAL SHTS. 62

2/28/2013
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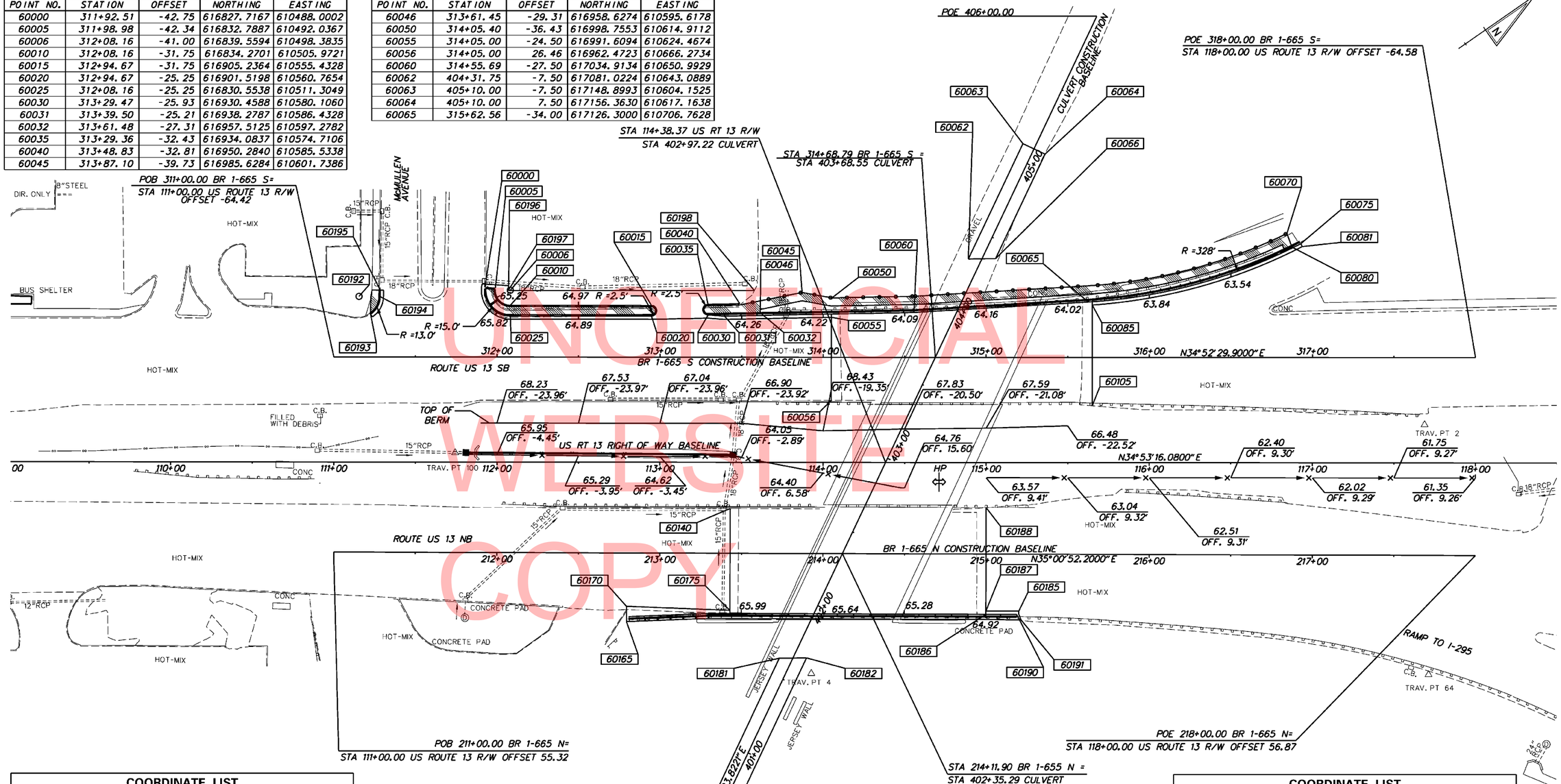
COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
60000	311+92.51	-42.75	616827.7167	610488.0002
60005	311+98.98	-42.34	616832.7887	610492.0367
60006	312+08.16	-41.00	616839.5594	610498.3835
60010	312+08.16	-31.75	616834.2701	610505.9721
60015	312+94.67	-31.75	616905.2364	610555.4328
60020	312+94.67	-25.25	616901.5198	610560.7654
60025	312+08.16	-25.25	616830.5538	610511.3049
60030	313+29.47	-25.93	616930.4588	610580.1060
60031	313+39.50	-25.21	616938.2787	610586.4328
60032	313+61.48	-27.31	616957.5125	610597.2782
60035	313+29.36	-32.43	616934.0837	610574.7106
60040	313+48.83	-32.81	616950.2840	610585.5338
60045	313+87.10	-39.73	616985.6284	610601.7386

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
60046	313+61.45	-29.31	616958.6274	610595.6178
60050	314+05.40	-36.43	616998.7553	610614.9112
60055	314+05.00	-24.50	616991.6094	610624.4674
60056	314+05.00	26.46	616962.4723	610666.2734
60060	314+55.69	-27.50	617034.9134	610650.9929
60062	404+31.75	-7.50	617081.0224	610643.0889
60063	405+10.00	-7.50	617148.8993	610604.1525
60064	405+10.00	7.50	617156.3630	610617.1638
60065	315+62.56	-34.00	617126.3000	610706.7628



COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
60066	404+39.05	7.50	617094.8210	610652.4663
60070	316+87.32	-76.10	617250.2630	610741.8481
60075	316+92.82	-69.86	617253.6751	610751.8324
60080	316+87.37	-67.79	617248.0158	610750.4047
60081	316+93.74	-68.08	617253.4106	610753.8148
60085	315+65.00	-32.15	617127.2497	610709.6747
60105	315+65.00	29.69	617091.8880	610760.4117

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
60140	213+40.00	-27.48	616779.7408	610619.6730
60165	212+79.58	42.06	616781.8422	610705.8770
60170	212+79.56	32.70	616787.1873	610698.1979
60175	213+43.00	35.00	616837.8275	610736.4860
60181	404+60.75	-7.50	616845.9557	610777.9306
60182	404+68.06	7.50	616859.7543	610787.3080
60183	400+52.00	7.50	616759.0814	610845.0571
60184	400+44.40	-7.50	616745.0303	610835.8246
60185	215+20.15	35.00	616982.9149	610838.1289

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
60186	215+00.00	37.00	616965.2655	610828.2060
60187	215+00.00	35.00	616966.4131	610826.5679
60188	215+00.00	-28.41	617002.7987	610774.6319
60190	215+18.96	37.00	616980.7943	610839.0852
60191	215+21.62	40.39	616981.0277	610843.3841
60192	111+15.38	-101.60	616761.2635	610448.4704
60193	111+22.48	-90.71	616760.8560	610461.4640
60194	111+28.38	-101.42	616771.8216	610456.0551
60195	111+28.44	-105.42	616774.1553	610452.8065
60196	112+07.08	-108.27	616840.2938	610495.4534
60197	112+06.89	-105.23	616838.4020	610497.8305
60198	113+57.84	-105.36	616962.2926	610584.0640

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT T201107401 | COUNTY NEW CASTLE | BRIDGE NO. 1-665 | DESIGNED BY: TM | CHECKED BY: MAA

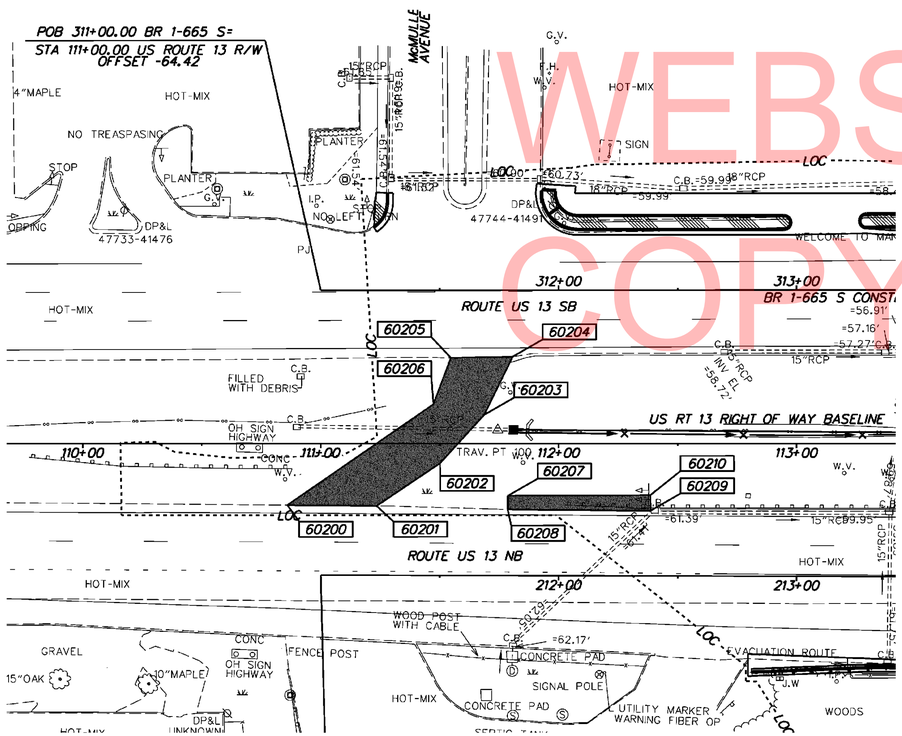
GRADES AND GEOMETRICS

GG-01

SHEET NO. 8 | TOTAL SHTS. 62

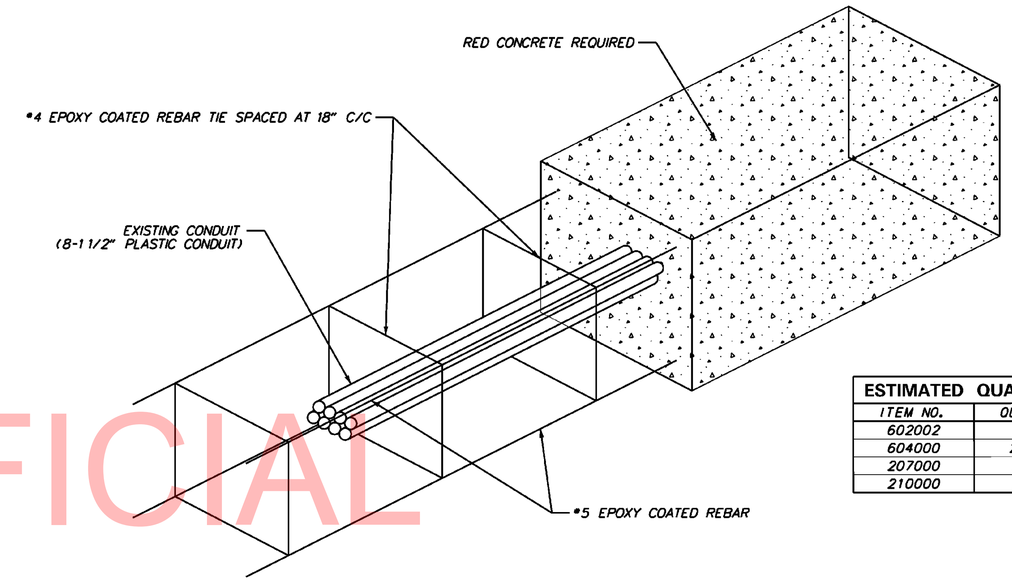
4/8/2013 ...\PSE Plans\GG001_BR 1-665.dgn

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
•60200	110+85.99	25.87	616664.2434	610536.2153
•60201	111+23.46	26.19	616694.8021	610557.9139
•60202	111+50.11	8.27	616726.9048	610558.4526
•60203	111+68.67	-12.10	616753.7819	610552.3698
•60204	111+80.64	-36.53	616777.5683	61053931715
•60205	111+54.70	-36.06	616756.0255	610524.7164
•60206	111+47.39	-16.54	616738.8643	610536.5486
•60207	111+78.54	21.99	616742.3823	610585.9742
•60208	111+78.58	27.68	616739.1555	610590.6587
•60209	112+38.58	28.22	616788.0629	610625.4273
•60210	112+38.54	21.64	616791.7943	610620.0103

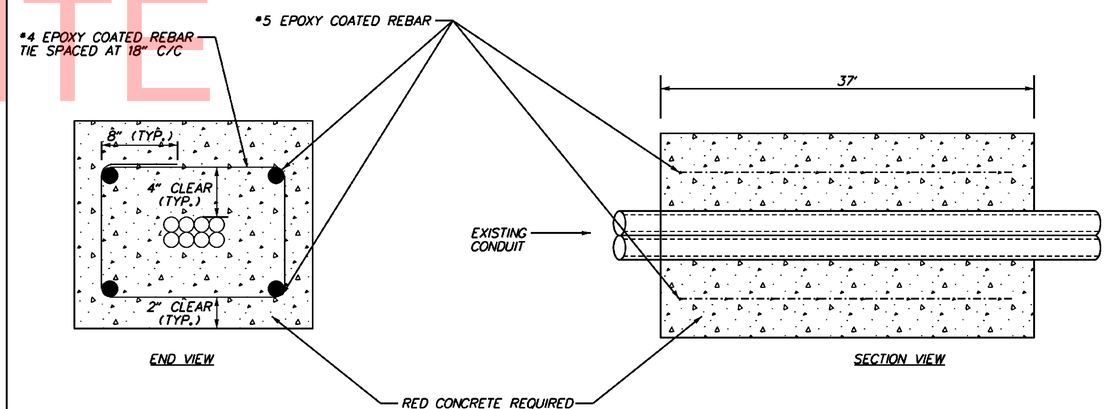


TEMPORARY PAVEMENT LAYOUT

• SEE CONSTRUCTION PHASING NOTES FOR TEMPORARY PAVEMENT SECTION



ESTIMATED QUANTITIES	
ITEM NO.	QUANTITY
602002	3 CY
604000	251 LB
207000	24 CY
210000	24 CY



REINFORCED CONCRETE UTILITY (LEVEL 3) ENCASEMENT

1. RED CONCRETE DYE IS REQUIRED SO THAT EXCAVATORS WILL KNOW THAT ELECTRICAL CONDUIT IS LOCATED INSIDE THE CONCRETE.
2. UTILITY MUST BE TOTALLY EXPOSED PRIOR TO ENCASING.
3. REBAR SHALL BE GRADE 60 AND SHALL BE EPOXY COATED AS PER SECT. 604.
4. PCC MASONRY SHALL BE CLASS B AS PER SECTION 602.
5. EXCAVATION SHALL BE UNDER ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES.
6. BACKFILL PER SECTION 210000 - FURNISHING BORROW TYPE "C" FOR PIPE, UTILITY TRENCH, AND STRUCTURE BACKFILL

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DT-01

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NTS

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION DETAILS

SHEET NO. 9

TOTAL SHTS. 62

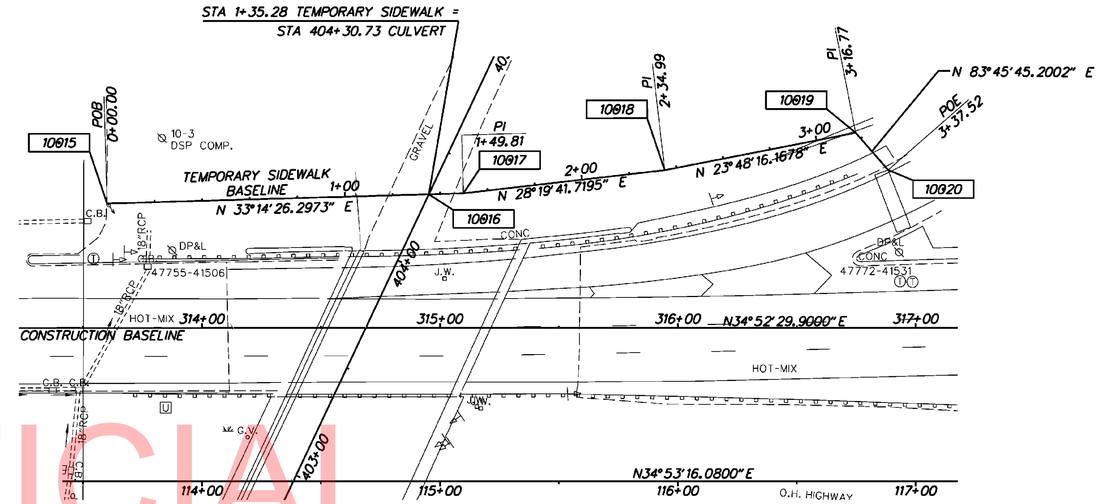
4/8/2013
...\PSF Plans\DT001 BR 1-665.dgn

LEGEND

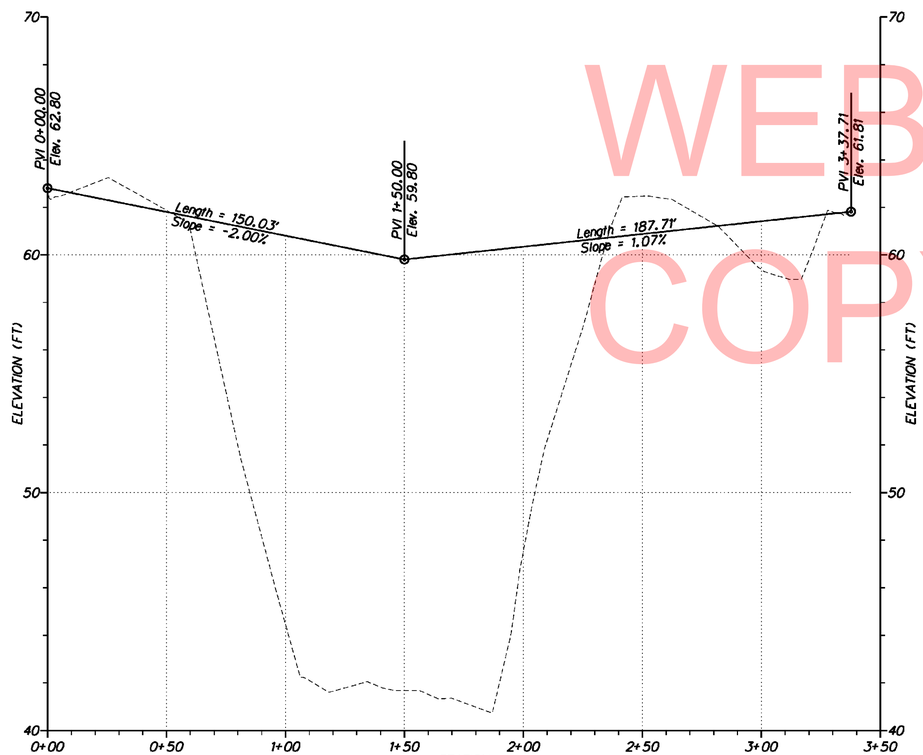
- (A) ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22, (CARBONATE STONE)
- (B) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (C) ITEM 201006 - BORROW, TYPE F
- (D) ITEM 743552 - PEDESTRIAN CHANNELIZING BARRICADE SYSTEM
- (E) ITEM 734017 - TEMPORARY GRASS SEEDING, DRY GROUND
- (F) ITEM 209003 - BORROW, TYPE C OR ITEM 210000 - FURNISHING BORROW, TYPE C

CONSTRUCTION ALIGNMENT CONTROL

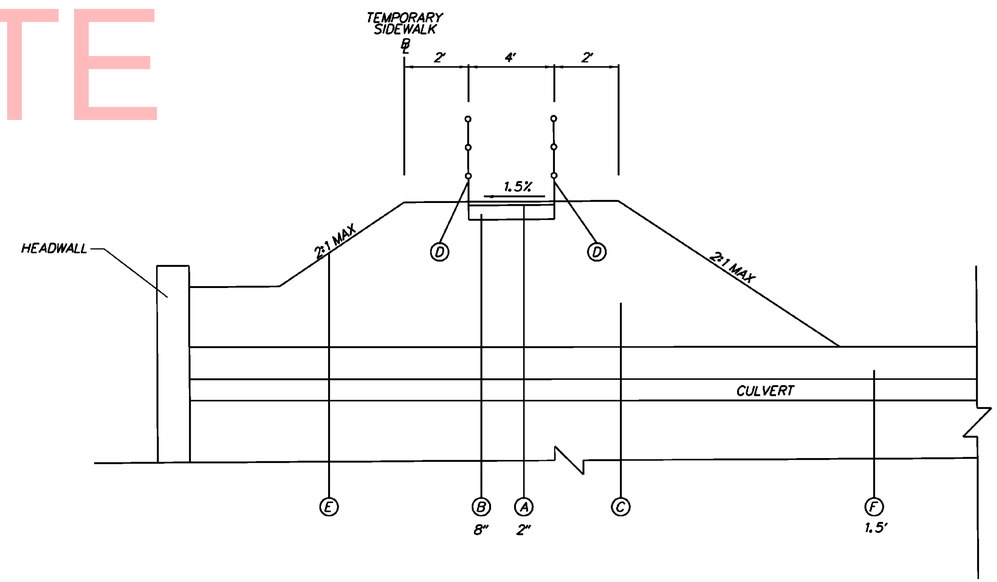
POINT	STATION	OFFSET	NORTHING	EASTING
•10015	0+00.00	0.00	616970.7225	610575.9469
•10016	1+35.28	0.00	617083.8688	610650.1024
•10017	1+49.81	0.00	617096.0214	610658.0672
•10018	2+34.99	0.00	617170.9976	610698.4854
•10019	3+16.77	0.00	617245.8183	610731.4923
•10020	3+37.52	0.00	617248.0732	610752.1239



TEMPORARY SIDEWALK HORIZONTAL ALIGNMENT



TEMPORARY SIDEWALK PROFILE



TEMPORARY SIDEWALK TYPICAL SECTION

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION DETAILS	DT-02
				COUNTY NEW CASTLE	DESIGNED BY: TM		SHEET NO. 10
					CHECKED BY: MAA		TOTAL SHTS. 62

4/8/2013
...\PSF Plans\DT002_BR 1-665.dgn

GENERAL NOTES

1. LOCATION
INSTALLATION OF NEW REINFORCED CONCRETE BOX CULVERT CARRYING US ROUTE 13 OVER ABANDONED BAYLOR BOULEVARD TO REPLACE EXISTING BR1-665 N & S IN NEW CASTLE COUNTY, DELAWARE.

2. ELEVATIONS
VERTICAL DATUM IS REFERENCED TO NAVD 1988.

3. DESIGN CRITERIA
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FOURTH EDITION (INCLUDING 2009 INTERIMS), AND SUPPLEMENTED BY THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION BRIDGE DESIGN MANUAL, 2005 EDITION (INCLUDING 2009 REVISIONS).

4. LOADING
LIVE LOAD: AASHTO HL-93 AND DELAWARE LEGAL LOADS.
FUTURE OVERLAY = 25 P.S.F.
FILL SOIL = 120 P.C.F.

5. FOUNDATIONS
FOUNDATION DESIGN AND QUANTITIES ARE BASED ON A STUDY OF THE SUBSOIL BORINGS MADE AT THE SITE. (THE BORING INFORMATION SHOWN ON THE SOIL BORING SHEET IS BASED ON LIMITED INVESTIGATIONS AND IS IN NO WAY WARRANTED TO BE INDICATIVE OF ACTUAL CONDITIONS THAT MAY BE ENCOUNTERED DURING CONSTRUCTION. SEE SECTION 102.05 OF THE STANDARD SPECIFICATIONS FOR MORE DETAIL.) THIS BORING INFORMATION, THE ACCURACY OF WHICH THE STATE DOES NOT GUARANTEE, IS PRESENTED ON THESE PLANS TO THE CONTRACTOR FOR HIS INFORMATION ONLY.

THE CRITICAL APPLIED PRESSURE FOR THE CONTROLLING LOAD CASES FOR THE CULVERT AND WINGWALLS ARE 3.12 KSF AND 5.15 KSF RESPECTIVELY WHICH IS LESS THAN THE BEARING RESISTANCES OF 15.87 KSF AND 5.81 KSF RESPECTIVELY. FOOTINGS MAY BE ORDERED BY THE ENGINEER TO BE AT ANY ELEVATION OR OF ANY DIMENSION NECESSARY TO PROVIDE PROPER FOUNDATION.

6. CONCRETE
ALL CONCRETE PROPERTIES SHALL BE IN ACCORDANCE WITH DIVISION 800 OF THE DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

CLASS A - HEADWALLS, WINGWALL STEMS, PRECAST PANELS (f'c = 4,500 PSI).
CLASS B - WINGWALL FOOTING NOT EXPOSED (f'c = 3000 PSI.)
PRECAST BOX CULVERT CONCRETE (f'c = 5000 PSI).

ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" X ¾" UNLESS NOTED OTHERWISE.

USE EPOXY BONDING COMPOUND IN ACCORDANCE WITH ASTM C881-90 WHEREVER CAST-IN-PLACE CONCRETE COMES IN CONTACT WITH PRECAST CEMENT CONCRETE.

7. REINFORCING STEEL
ALL REINFORCING STEEL SHALL BE AASHTO M31 (ASTM A615), GRADE 60 AND UNLESS SPECIFIED OTHERWISE ON THE PLANS SHALL BE PROTECTED WITH FUSION BONDED EPOXY, CONFORMING TO AASHTO M284 (ASTM D3963) AND DENOTED WITH A PREFIX 'E' IN THE BAR MARKS.

MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE:
PRECAST CULVERT: 2".
FOUNDATION ELEMENTS: 3".
OTHER ELEMENTS: AS NOTED.

PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH OF 30 DIAMETERS OR IN ACCORDANCE WITH AASHTO, WHICHEVER IS GREATER.

8. BACKFILL
DO NOT EXCEED A 2 FEET DIFFERENCE IN FILL ELEVATION ON THE SIDES OF THE BOX CULVERT DURING PLACEMENT OF THE BACKFILL. DO NOT ALLOW WHEELS OF ROLLERS TO COME CLOSER THAN 1 FOOT TO THE FACE OF THE BOX CULVERT DURING COMPACTION OF THE BACKFILL.

9. UTILITIES
BEFORE BEGINNING WORK, THE CONTRACTOR SHALL GIVE NOTIFICATION BY TELEPHONE BY CALLING "MISS UTILITY" AT 1-800-282-8555 A MINIMUM OF 48 HOURS PRIOR TO START OF WORK. VERIFY AND LOCATE ALL UTILITIES PRIOR TO STARTING WORK.

COORDINATE THE REQUIREMENTS FOR PROTECTION OF ANY UTILITY WITH THE UTILITY OWNER PRIOR TO STARTING WORK.

CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED. ANY DAMAGE INCURRED TO THESE UTILITIES OR ANY OTHER UTILITIES, SHOWN OR NOT SHOWN ON THE PLANS, DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE APPROPRIATE UTILITY COMPANY. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISIONS, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

THE CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY SUPPORTING, PROTECTING, OR RELOCATING ANY UTILITIES DURING CONSTRUCTION. WHERE NECESSARY, THE COST FOR THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

NOTES FOR PRECAST ELEMENTS

1. DESIGN PLANS / WORKING DRAWINGS
INFORMATION PERTAINING TO THE PRECAST REINFORCED CONCRETE BOX CULVERT 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 DRAWINGS FOR THE PRECAST CONCRETE UNITS THEY PROPOSE TO FURNISH. THE SHOP DRAWINGS SHALL INCLUDE:
   A. AN OVERALL PLAN SHOWING ALL UNITS TOGETHER AND DETAILS OF EACH TYPE OF UNIT.
   B. A PLAN VIEW OF REINFORCEMENT FOR ANY IRREGULAR SHAPED (SKEWED, CURVED, ETC.) SECTIONS.
   C. REINFORCING BAR LIST.
   D. BILL OF MATERIALS INCLUDING ALL ACCESSORIES.
   E. METHOD AND SEQUENCE OF POST-TENSIONING.

2. PRECAST ELEMENTS, ACCESSORIES AND INSTALLATION
PAYMENT FOR PRECAST CONCRETE CULVERT SHALL INCLUDE:
   A. ALL PRECAST ELEMENTS FOR BOX CULVERT.
   B. ALL ASSOCIATED REINFORCEMENT.
   C. ALL ACCESSORIES INCLUDING POST-TENSIONING TENDONS, CONNECTION PLATES, GROUT, JOINT MATERIAL, JOINT WRAP, THREADED INSERTS, CONCRETE FINISH.
   D. DELIVERY AND INSTALLATION OF ALL PRECAST ELEMENTS AND ALL ACCESSORIES.

3. MISCELLANEOUS CONCRETE NOTES
   A. ALL EXPOSED SURFACES SHALL BE PROTECTED WITH A WATER MISCIBLE, PENETRATING SILANE SEALER.
   B. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" UNLESS NOTED OTHERWISE.

4. JOINTS BETWEEN PRECAST SECTIONS
   A. NEOPRENE GASKETS SHALL BE PROVIDED AT THE JOINTS BETWEEN ALL PRECAST UNITS IN ORDER TO MAKE THE JOINTS WATERTIGHT. AFTER INSTALLATION, THE GASKETS SHALL BE COMPRESSED SUCH THAT GAPS ARE NOT VISIBLE.
   B. ALL JOINTS BETWEEN PRECAST BOX CULVERT SECTIONS SHALL BE TONGUE AND GROOVE. PRECAST BOX CULVERT SECTIONS DIFFERENT IN LENGTH THAN THOSE INDICATED ON THE PLANS ARE ALLOWED.
   C. ALL WINGWALL TO WINGWALL AND WINGWALL TO CULVERT JOINTS SHALL HAVE A SHEAR KEY.
   D. THE LOCATIONS OF THE JOINTS IN THE BOX CULVERT SHALL BE DETERMINED BY THE PRECASTER AND SUBMITTED IN THE SHOP DRAWINGS FOR APPROVAL.
   E. THE REINFORCEMENT SHALL HAVE 2" COVER AT THE END OF EACH SECTION AND MEET OR EXCEED THE MINIMUM AREA OF STEEL PER FOOT DENOTED IN THE PLANS.
   F. ALL JOINT EXTERIORS SHALL BE COVERED WITH A MINIMUM 9" WIDE WRAP CENTERED ON THE JOINT AS PER THE SPECIAL PROVISION FOR ITS RESPECTIVE ITEM.

5. PRECAST PANELS AT CULVERT ENTRANCE
   A. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FOR APPROVAL A COMPLETE SET OF DETAILED SHOP DRAWINGS, INCLUDING REINFORCING BAR LIST.

DEMOLITION NOTES

1. PARTIALLY DEMOLISH THE EXISTING BRIDGE SUPERSTRUCTURE, ABUTMENT BACKWALLS, AND CONNECTING RETAINING WALLS AS INDICATED AND AS REQUIRED CONSISTENT WITH CONSTRUCTION PHASING AND M.O.T. PLANS.

2. THE REMAINDER OF EACH EXISTING BRIDGE SUPERSTRUCTURE WILL BE COMPLETELY REMOVED DURING A WEEKEND SHUT DOWN OF THE RESPECTIVE ROADWAY.

3. SEE SHEET ST-07 FOR SUBSTRUCTURE DEMOLITION LIMITS.

4. BRIDGE SUPERSTRUCTURE FOR BR 1-665 N & S SHALL BE REMOVED IN ITS ENTIRETY UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS INCLUDING:
   A. REINFORCED CONCRETE BRIDGE DECK
   B. STEEL BEAMS AND DIAPHRAMS
   C. STEEL BEARINGS
   D. REINFORCED CONCRETE BRIDGE BARRIERS
   E. STEEL BRIDGE RAIL AND GUARDRAIL
   F. EXPANSION JOINTS
   G. OTHER MISCELLANEOUS SUPERSTRUCTURE ITEMS

5. BRIDGE APPROACH SLABS SHALL BE REMOVED IN THEIR ENTIRETY UNDER ITEM 758000 - REMOVAL OF EXISTING PCC PAVEMENT, CURB, SIDEWALK, ETC.

PRECAST BOX CULVERT POST-TENSIONING NOTES

1. SHOP DRAWINGS ARE REQUIRED FOR POST-TENSIONING OPERATIONS AND MATERIALS.
2. PROVIDE ½" DIAMETER STRANDS HAVING A YIELD STRENGTH OF 270 KSI.
3. SNUG FIT ALL JOINTS BEFORE POST-TENSIONING.
4. INSTALL STRANDS IN PRECAST SECTIONS. STRESS EACH STRAND TO A MAXIMUM TENSION OF 31 KIPS. CHECK RAM AREA AND CALIBRATION CURVES OF EQUIPMENT FURNISHED FOR GAGE PRESSURES.
5. AFTER STRESSING, GROUT ALL STRAND VOIDS. PLACE GROUT MIX INTO TUBING USING PRESSURE GROUT.
6. USE 4 STRANDS FOR A TOTAL JACKING FORCE OF 124 KIPS.
7. STRAND LOCATIONS SHALL NOT INTERFERE WITH REINFORCEMENT DETAILS.
8. PROVIDE SEALS OR GASKETS AROUND THE DUCTS AT THE JOINTS TO MAKE THE JOINTS GROUT TIGHT.
9. PRECISE ALIGNMENT OF DUCTS AT JOINTS IS CRITICAL.
10. ALL POST-TENSIONING MUST BE WITNESSED AND APPROVED BY THE ENGINEER. THE CULVERT SHALL BE POST-TENSIONED SUCH THAT THE NEOPRENE GASKETS ARE COMPRESSED ALL AROUND AND THERE IS A ½" MAXIMUM GAP BETWEEN SECTIONS.
11. AFTER POST-TENSIONING IS APPROVED, CUT STRANDS TO PROVIDE A MINIMUM OF 2½" CLEAR FROM THE OUTSIDE FACE OF CONCRETE AND COAT RECESS WITH EPOXY BONDING COMPOUND AND FILL WITH NON-SHRINK GROUT.
12. POST-TENSION AND GROUT BEFORE BACKFILLING. ALLOW GROUT TO ACHIEVE MINIMUM STRENGTH BEFORE BACKFILLING. ALL POCKETS FOR POST-TENSIONING DUCTS SHALL BE FILLED WITH NON-SHRINK GROUT.
13. END CHUCKS AND SPLICE CHUCKS MUST BE OF THE REUSABLE TYPE. OPERATORS MUST EXERCISE PROPER PRECAUTIONS WHEN REALIGNING WEDGES AFTER THE RELEASE OF TENDONS AND PRIOR TO RETENSIONING AND RESEATING.
14. KEEP JOINT CLEAN AT POST-TENSIONING STAGE.
15. POST-TENSION NO MORE THAN 50' SEGMENTS. INSTALL CONCRETE WEARING SURFACE INSIDE BOX CULVERT AFTER 50' SEGMENTS ARE POST-TENSIONED.
16. PLACE CONTRACTION JOINTS FOR CONCRETE WEARING SURFACE AT EACH BOX SEGMENT JOINT AND EXPANSION JOINTS AT ENDS AND MIDPOINT OF POST-TENSIONING SEGMENTS.
17. PAYMENT FOR CONCRETE WEARING SURFACE SHALL BE MADE UNDER ITEM 602002 - PCC MASONRY, CLASS B.

CULVERT LOAD RATINGS

RATING VEHICLE	RATING TYPE	CONTROLLING UNIT/SPAN/MEMBER	CONTROLLING POINT (FT.)	LOAD EFFECT	LIMIT STATE	LOAD RATING FACTOR	LOAD RATING (TONS)
HL-93 TRUCK	INVENTORY	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.51	N/A
HL-93 TANDEM	INVENTORY	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.13	N/A
HL-93 TRUCK	OPERATING	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.96	N/A
HL-93 TANDEM	OPERATING	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.47	N/A
S220	LEGAL	TOP SLAB	LEFT END	SHEAR	STRENGTH I	2.20	44.00
S335	LEGAL	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.04	36.40
S437	LEGAL	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.11	41.07
T330	LEGAL	TOP SLAB	LEFT END	SHEAR	STRENGTH I	2.03	60.90
T435	LEGAL	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.41	49.35
T540	LEGAL	TOP SLAB	LEFT END	SHEAR	STRENGTH I	1.37	54.80

THE LOAD AND RESISTANCE FACTOR METHOD WAS USED TO LOAD RATE THIS STRUCTURE.

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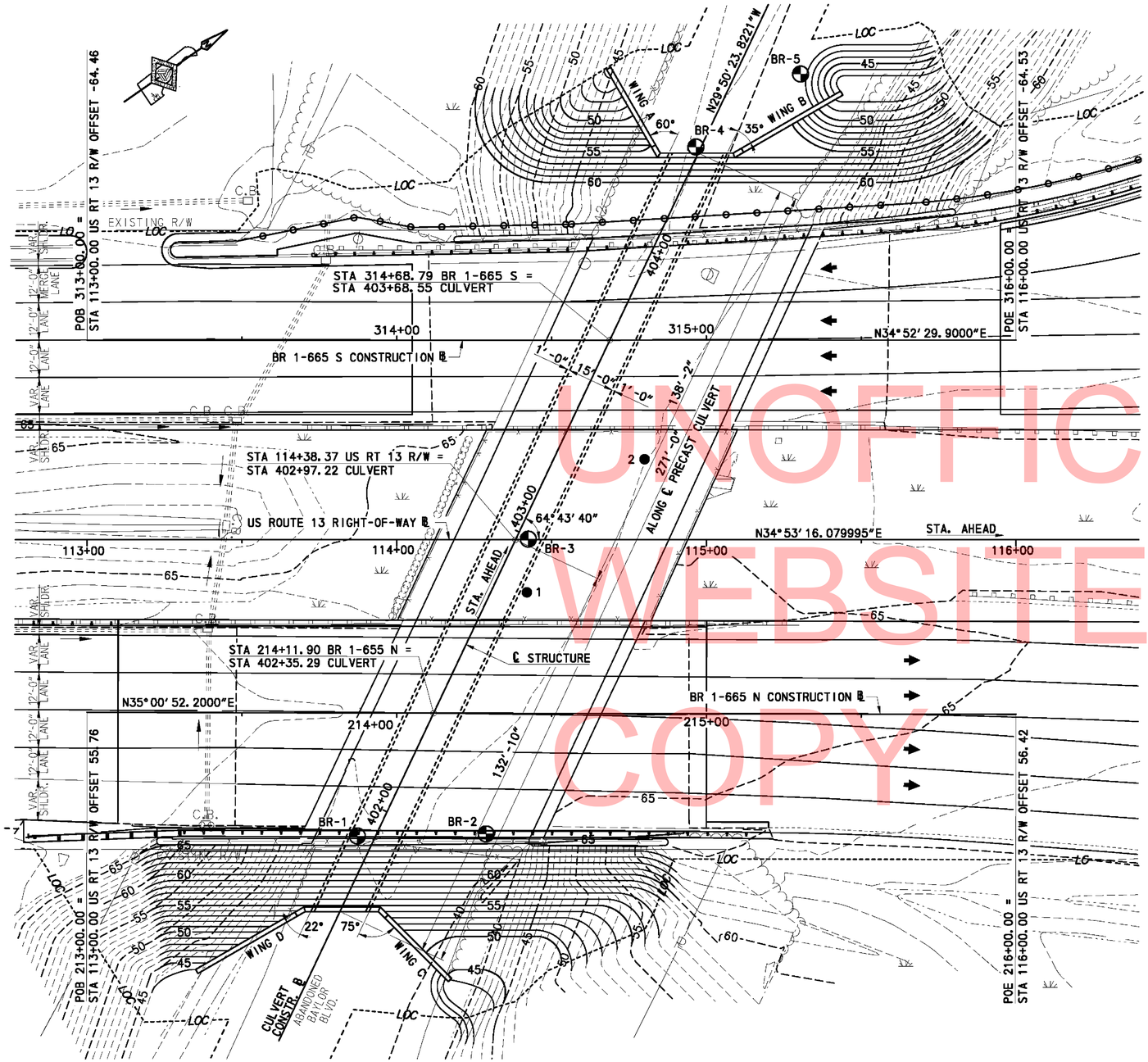

PLAN

SCALE

0 20 40 60

FEET

SETTLEMENT PLATFORM LOCATION		
	STATION	OFFSET (FT.)
1	114+42.00	17.0 RT.
2	114+80.00	26.0 LT.

NOTES:

- REMOVE EXISTING BRIDGE SUPERSTRUCTURES COMPLETELY. REMOVE PORTION OF EXISTING BRIDGE SUBSTRUCTURES AS INDICATED, (SEE SHEET ST-07).
- FOR ARCHITECTURAL TREATMENT AT CULVERT ENTRANCE, SEE SHEET WW-01.
- FOR SETTLEMENT PLATFORM DETAIL, SEE SHEET ST-07.

LEGEND:

CONSTR. = CONSTRUCTION
E.F. = EACH FACE
STA. = STATION
TYP. = TYPICAL
● = LOCATION OF SETTLEMENT PLATFORM
BR-1 = BORING LOCATION

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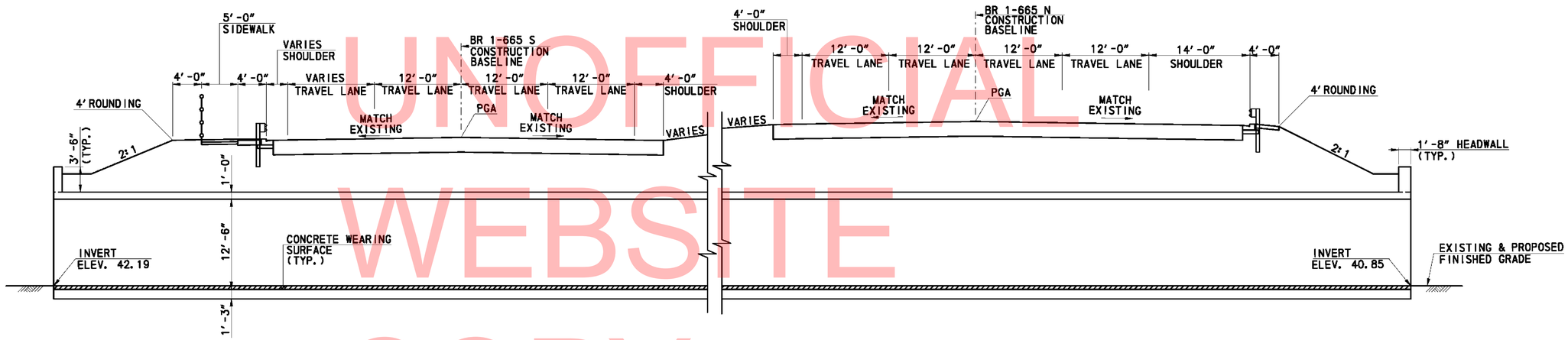
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401 / COUNTY NEW CASTLE	BRIDGE NO. 1-665 / DESIGNED BY: MDM / CHECKED BY: BJH	BRIDGE PLAN

ST-02
SHEET NO. 12
TOTAL SHTS. 62

$DATE$
$FILEAS



SECTION THROUGH CULVERT
NOT TO SCALE

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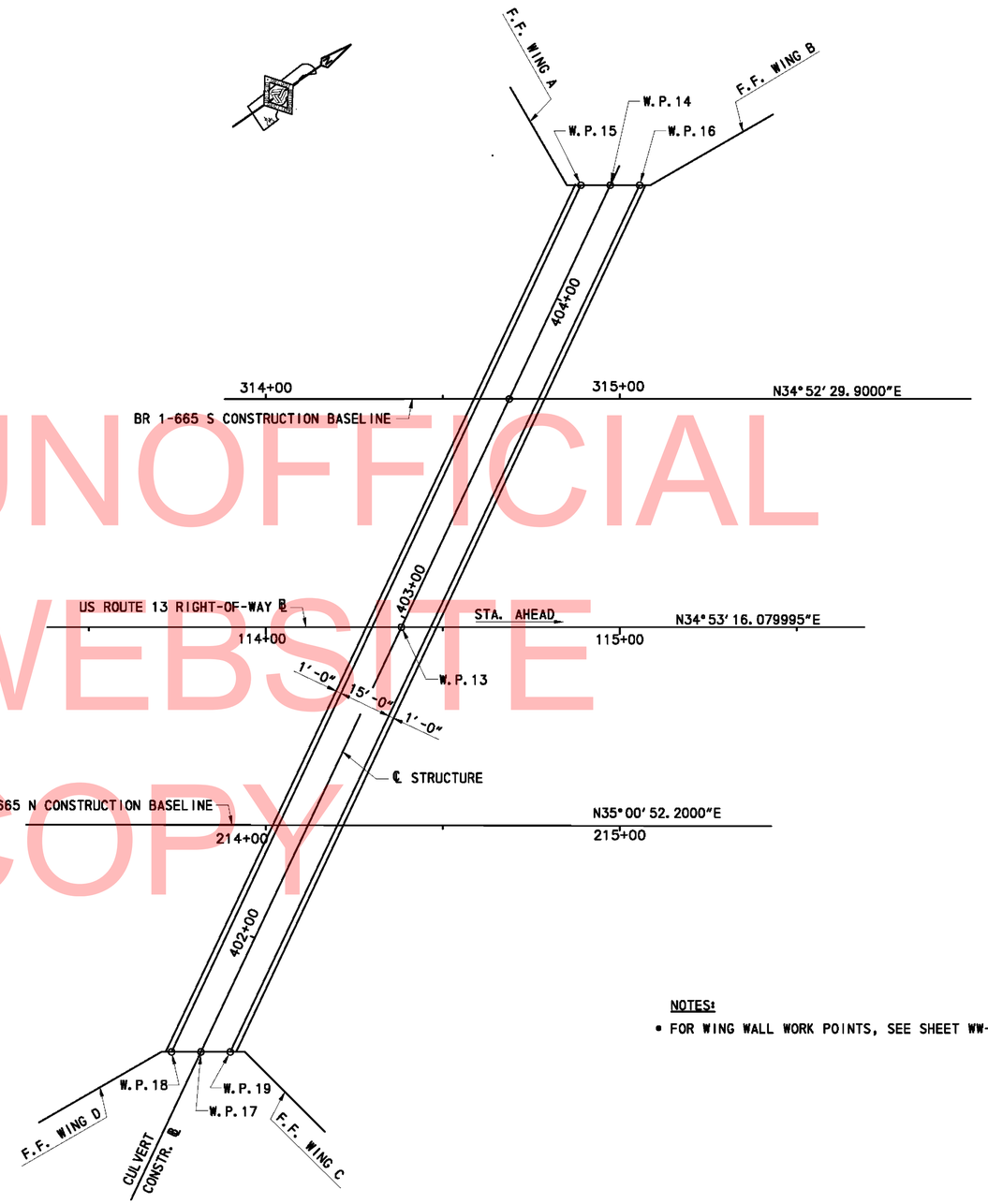
ST-03

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	SECTION THROUGH BOX CULVERT	SHEET NO. 13
				COUNTY NEW CASTLE	DESIGNED BY: MDM		TOTAL SHTS. 62
					CHECKED BY: BJH		

$DATE$
$FILE$

WORK POINT COORDINATES				
W.P.	STATION	OFFSET	NORTHING	EASTING
13	114+38.37	0	616968.0617	610716.5330
14	114+97.32	124.94 L	617087.9101	610647.7842
15	115+05.62	124.94 L	617094.7133	610652.5280
16	114+89.03	124.94 L	617081.1069	610643.0404
17	113+81.63	120.12 R	616852.8397	610782.6280
18	113+89.92	120.12 R	616859.6428	610787.3719
19	113+73.33	120.12 R	616846.0365	610777.8843



UNOFFICIAL WEBSITE
COPY

STAKEOUT PLAN

NOT TO SCALE

NOTES:

- FOR WING WALL WORK POINTS, SEE SHEET WW-02.

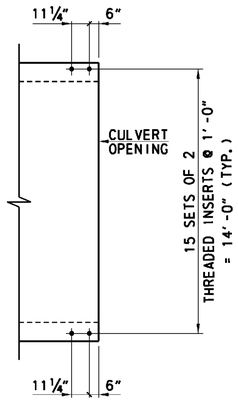
LEGEND:

F.F. = FRONT FACE
L = LEFT
R = RIGHT
W.P. = WORK POINT

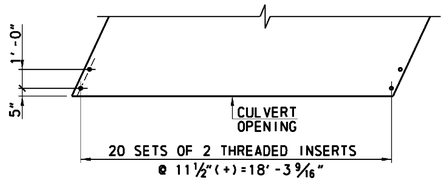
ST-04

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	STAKEOUT PLAN	SHEET NO. 14
				COUNTY NEW CASTLE	DESIGNED BY: BJH		TOTAL SHTS. 62
					CHECKED BY: MDM		

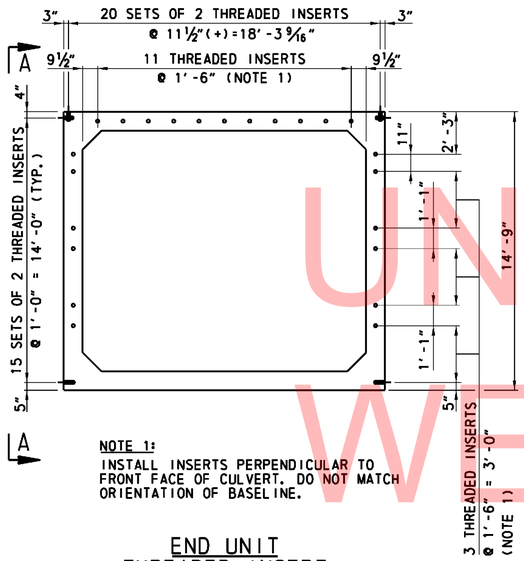
$DATE$
$FILEAS



SECTION A-A
NOT TO SCALE

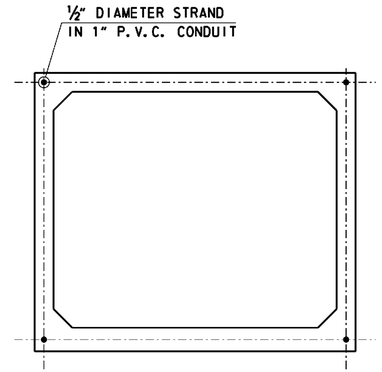


PLAN

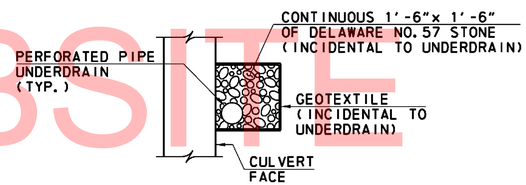


NOTE 1:
INSTALL INSERTS PERPENDICULAR TO FRONT FACE OF CULVERT. DO NOT MATCH ORIENTATION OF BASELINE.

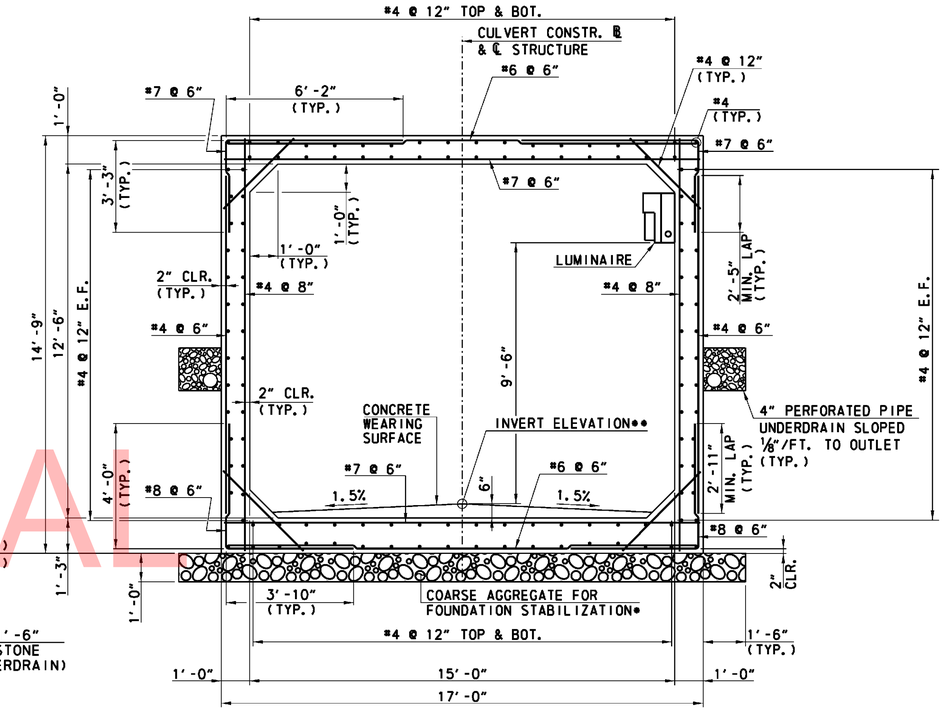
END UNIT THREADED INSERT DETAILS
NOT TO SCALE



TYPICAL POST-TENSIONING STRAND LOCATIONS
NOT TO SCALE

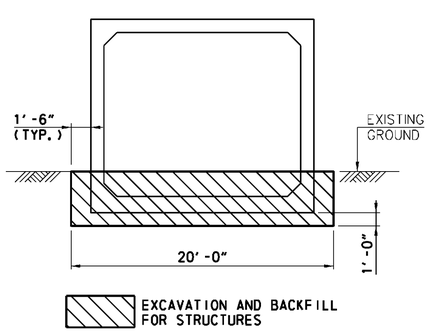


PERFORATED PIPE UNDERDRAIN
NOT TO SCALE

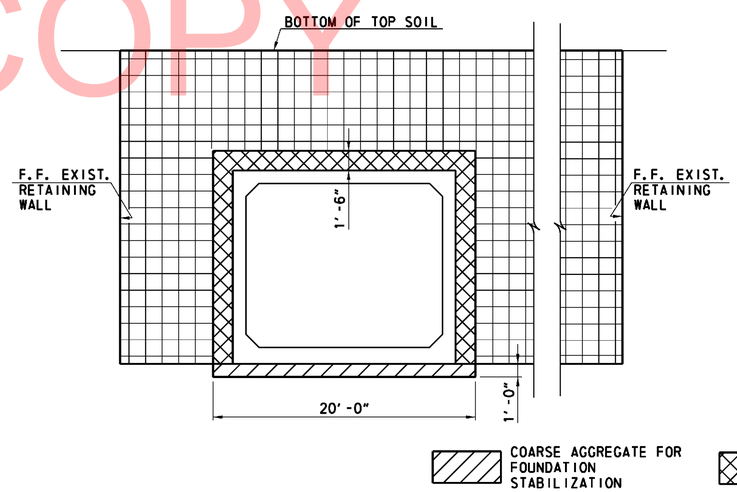


SECTION
NOT TO SCALE

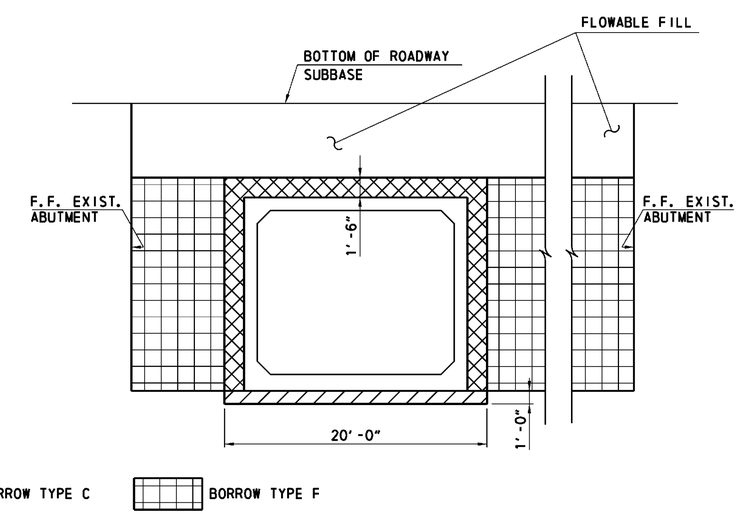
• DELAWARE NO. 57 STONE
•• SEE SHEET ST-03



EXCAVATION



BACKFILL IN MEDIAN



BACKFILL UNDER ROADWAY

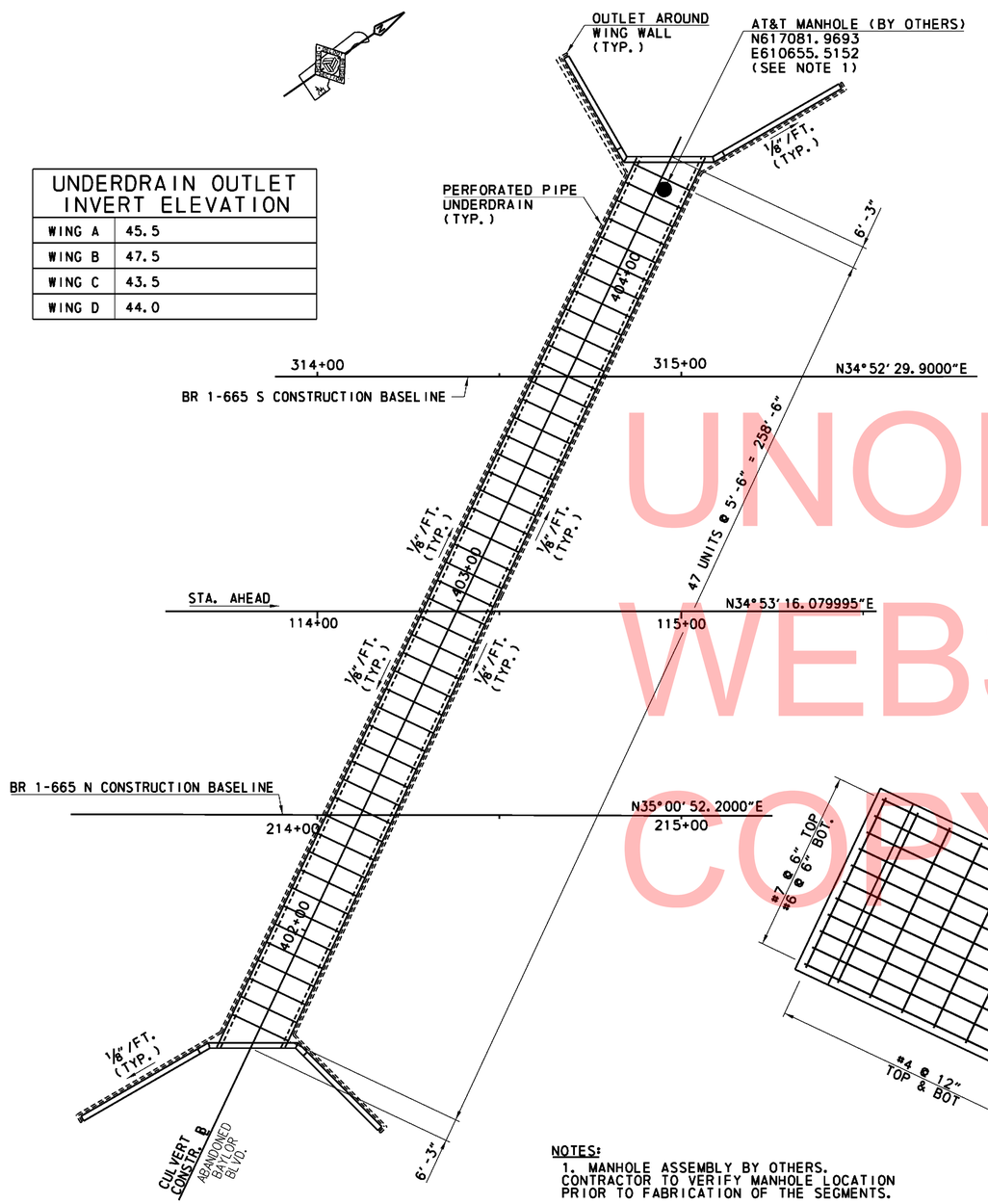
PAY LIMIT DETAILS
NOT TO SCALE

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	BOX CULVERT DETAILS – 1	ST-05
				COUNTY NEW CASTLE	DESIGNED BY: MDM		SHEET NO. 15
					CHECKED BY: BJH		TOTAL SHTS. 61

4/12/2013
...\ST-05_BR1-665_DETAILS-1.dgn

UNDERDRAIN OUTLET INVERT ELEVATION	
WING A	45.5
WING B	47.5
WING C	43.5
WING D	44.0



PLAN

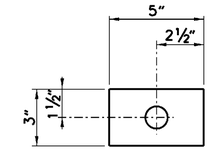
SCALE

0 20 40 60

FEET

NOTES:

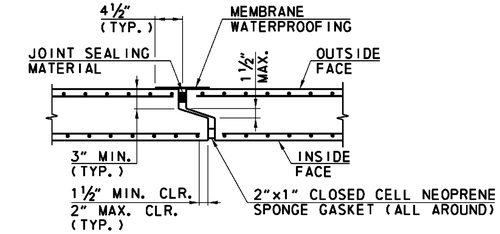
1. MANHOLE ASSEMBLY BY OTHERS. CONTRACTOR TO VERIFY MANHOLE LOCATION PRIOR TO FABRICATION OF THE SEGMENTS.
2. AFTER SEGMENT IS INSTALLED AND POST-TENSIONING IS COMPLETED, GROUT THE OPENING BETWEEN THE CULVERT SLAB AND THE MANHOLE RISER.
3. DURING POST-TENSIONING, ENSURE THAT MANHOLE ASSEMBLY IS NOT DISPLACED.



½" THICK PLATE WASHER (M270 GR. 345)

(PROTECTED WITH FUSION BONDED EPOXY)

NOT TO SCALE

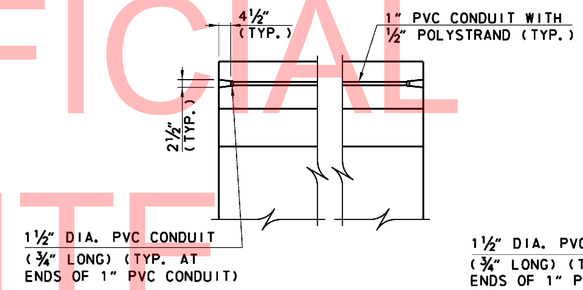


WALLS AND TOP SLAB

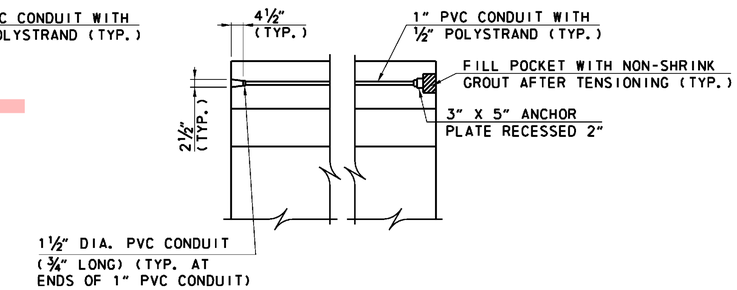
PRECAST BOX CULVERT SEGMENT JOINT DETAIL

SEAL AROUND EACH DUCT JOINT WITH A NEOPRENE SPONGE DONUT.

NOT TO SCALE



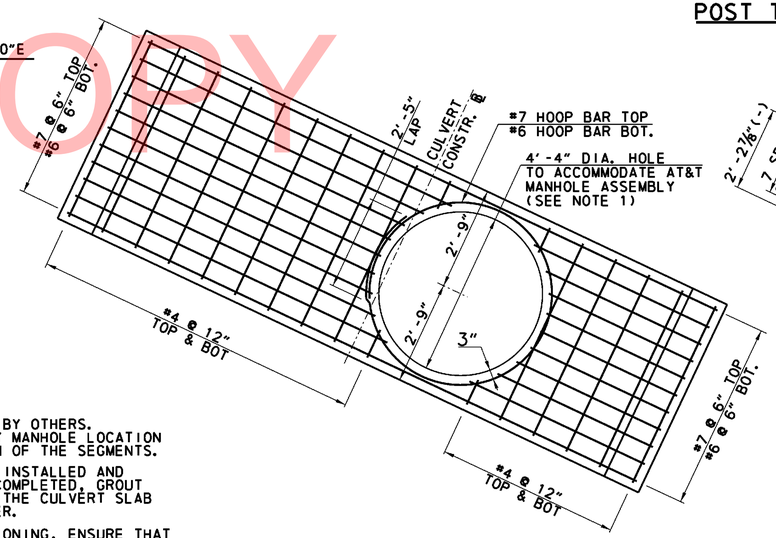
CENTER SECTION



END SECTION

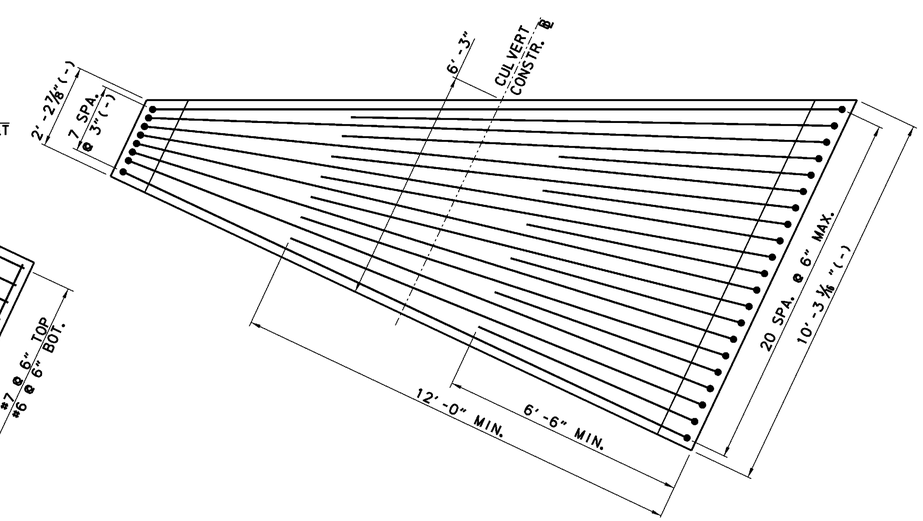
POST TENSIONING COMPONENT DETAIL

NOT TO SCALE



BOTTOM SLAB REINFORCEMENT FOR AT&T MANHOLE ASSEMBLY

NOT TO SCALE



END UNIT REINFORCEMENT DETAILS

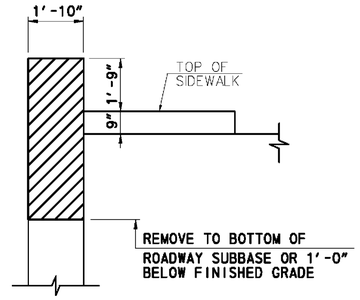
NOT TO SCALE

UNOFFICIAL WEBSITE COPY

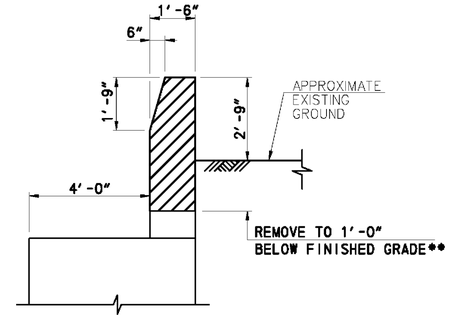
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401 / COUNTY NEW CASTLE	BRIDGE NO. 1-665 / DESIGNED BY: BJH / CHECKED BY: MDM	BOX CULVERT DETAILS – 2

ST-06
SHEET NO. 16
TOTAL SHTS. 61

$DATE$
$FILEA$

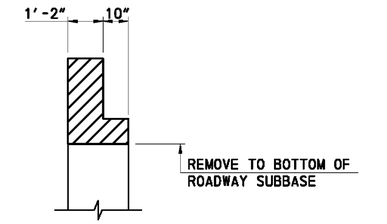


WINGWALL



CONNECTING WALL

**DO NOT DISTURB CONNECTING WALL WITHIN 3' OF EXISTING 16" PETROLEUM LINE



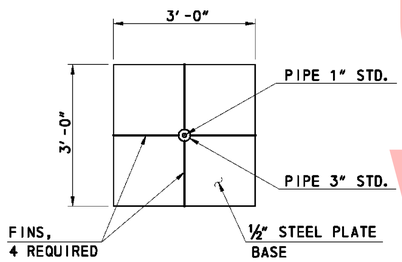
ABUTMENT BACKWALL

LIMITS OF REMOVAL OF PCC MASONRY
ITEM 602580-PARTIAL REMOVAL OF PCC MASONRY

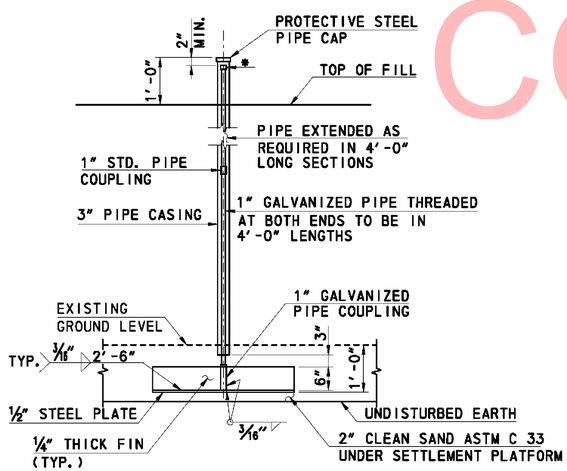
EXISTING SUBSTRUCTURE DEMOLITION LIMITS

NOT TO SCALE

UNOFFICIAL WEBSITE COPY



PLAN



ELEVATION

* PIPE CAP WITH ¼" DIA. ROUND HEAD STAINLESS STEEL BOLT SET SECURELY IN CAP. TACK WELD CAP TO PIPE.

SETTLEMENT PLATFORM DETAIL

NOT TO SCALE

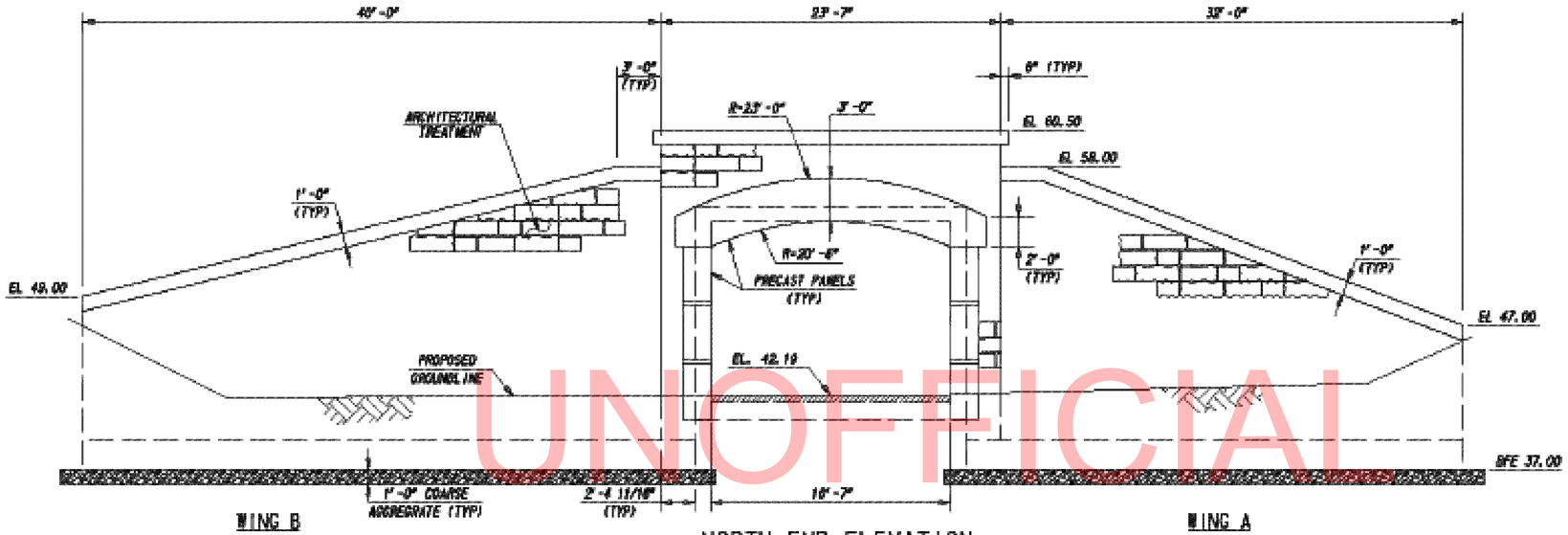
NOTES:

1. THIS PROJECT INCLUDES THE INSTALLATION OF SETTLEMENT PLATFORMS IN EMBANKMENT AREAS OR LOCATIONS AS DIRECTED. THE CONTRACTOR IS REQUIRED TO OBTAIN, RECORD, COMPILE AND ANALYZE THE SETTLEMENT READINGS.
2. LOCATE SETTLEMENT PLATFORMS HORIZONTALLY AND VERTICALLY AT THE DIRECTION OF THE ENGINEER. PROVIDE A TEMPORARY BENCHMARK FOR THE MONITORING OF THIS WORK. THE BENCHMARK SHALL BE LOCATED IN A PROTECTED AREA OUTSIDE OF THE AREA OF ANTICIPATED SETTLEMENT.
3. ALLOW A MINIMUM OF 30 DAYS QUARANTINE PERIOD FOR SETTLEMENT MONITORING.
4. BEGIN THE QUARANTINE PERIOD WHEN THE EMBANKMENT IN PHASE 1 IS AT THE PROPOSED LIMITS AS DIRECTED BY THE ENGINEER, AND THE SETTLEMENT PLATFORMS ARE COMPLETELY CONSTRUCTED. THE ENGINEER WILL DETERMINE THE DURATION OF THE QUARANTINE PERIOD BASED ON THE SETTLEMENT READINGS.
5. THE ENGINEER WILL NOTIFY THE CONTRACTOR, IN WRITING, WHEN THE QUARANTINE PERIOD CAN BE LIFTED AND WILL BE BASED ON THE RESULTS OF THE SETTLEMENT READINGS.
6. THE INFORMATION DERIVED FROM THE SETTLEMENT PLATFORMS WILL BE USED AS A GUIDE TO DETERMINE HOW LONG THE WAITING PERIOD WILL BE, AFTER THE FLOWABLE FILL UNDERNEATH THE BRIDGES IS IN PLACE.
7. AFTER THE FLOWABLE FILL IS COMPLETED, A MINIMUM OF 30 DAYS WAITING PERIOD IS REQUIRED AT THE BRIDGES, BEFORE THE NEW ROADWAY IS CONSTRUCTED. THIS WAITING PERIOD COULD BE LONGER BASED ON THE SETTLEMENT PLATFORM READINGS.
8. PROVIDE QUALIFIED PERSONNEL WITH EXPERIENCE IN SETTLEMENT MONITORING AND THE NECESSARY EQUIPMENT AND MATERIALS TO OBTAIN, RECORD, COMPILE AND ANALYZE THE VERTICAL SETTLEMENT READINGS AS SPECIFIED OR DIRECTED. SEE SPECIAL PROVISION 202505.
9. OBTAIN WRITTEN APPROVAL OF THE ENGINEER BEFORE FIRST (INITIAL) SETTLEMENT READING AND COORDINATE SUBSEQUENT READINGS. PROVIDE THE RESULTS WITHIN 24 HOURS AFTER THE READINGS ARE OBTAINED IN A FORMAT SUCH THAT IMMEDIATE EVALUATION OF THE CONDITIONS CAN BE MADE.
10. TAKE READINGS AT EACH OF THE LOCATIONS IMMEDIATELY AFTER CONSTRUCTION OF THE EMBANKMENT TO THE SPECIFIED ELEVATION IS COMPLETED, AND THE SETTLEMENT PLATFORMS ARE INSTALLED.
11. DURING FILL PLACEMENT, READINGS ON ALL SETTLEMENT PLATFORMS SHALL BE TAKEN AT A MINIMUM OF 3 CALENDAR DAY INTERVALS. AFTER COMPLETION OF THE FILL, INSTALL SETTLEMENT MONUMENTS AND TAKE INITIAL READINGS. READINGS ON ALL SETTLEMENT MONITORING DEVICES SHALL THEN BE TAKEN AT A MINIMUM OF 3 CALENDAR DAY INTERVALS. IF THE SETTLEMENT HAS CEASED BY CALENDAR DAY 6, THAT IS THREE READINGS, AFTER THE COMPLETION OF FILL AND SETTLEMENT MONUMENT PLACEMENT, THE QUARANTINE PERIOD CAN BE TERMINATED.
12. DO NOT ALLOW CONSTRUCTION ACTIVITY, OTHER THAN MONITORING, WITHIN THE QUARANTINE AREAS DURING THE QUARANTINE TIME PERIOD.

ST-07

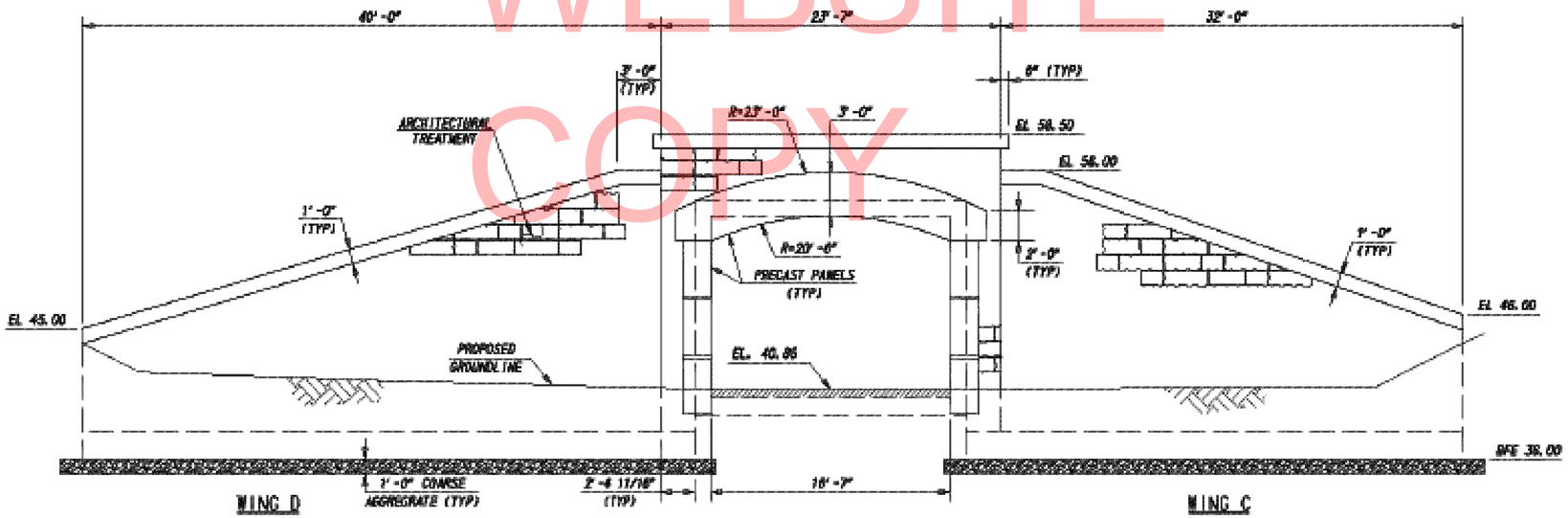
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401 / COUNTY NEW CASTLE	BRIDGE NO. 1-665 / DESIGNED BY: SJM / CHECKED BY: BJH	MISCELLANEOUS CONSTRUCTION DETAILS	SHEET NO. 17 / TOTAL SHTS. 62

$DATE$
$FILEAS



NORTH END ELEVATION

SCALE 0 2.5' 5' 10'



SOUTH END ELEVATION

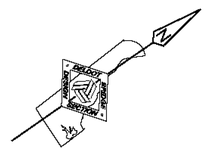
SCALE 0 2.5' 5' 10'

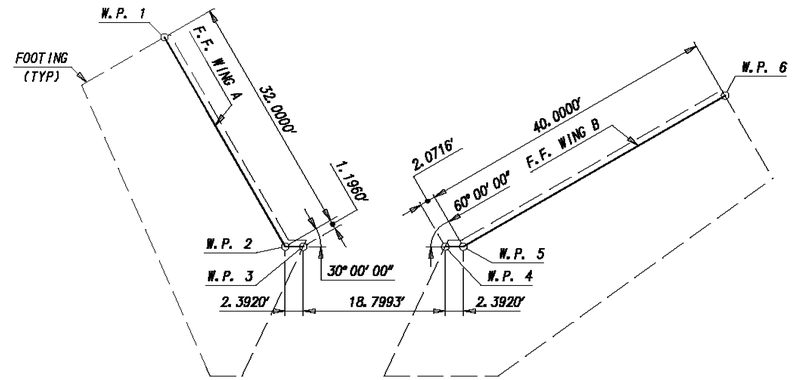
UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201907401	BRIDGE NO. 1-665	WINGWALL ELEVATIONS	WW-01
				COUNTY NEW CASTLE	DESIGNED BY: DJM		SHEET NO. 18
					CHECKED BY: LAA		TOTAL SHTS. 82

WORK POINT COORDINATES				
W.P.	STATION	OFFSET	NORTHING	EASTING
1	114+69.53	152.66 L	617080.9643	610609.1561
2*	114+85.53	124.94 L	617078.2378	610641.0397
3*	114+87.92	124.94 L	617080.1999	610642.4079
4*	115+06.72	124.94 L	617095.6204	610653.1605
5*	115+09.12	124.94 L	617097.5825	610654.5287
6	115+43.76	144.94 L	617137.4371	610657.9369
7	114+16.05	142.74 R	616868.1305	610820.8755
8*	113+93.42	120.12 R	616862.5121	610789.3726
9*	113+91.03	120.12 R	616860.5500	610788.0044
10*	113+72.23	120.12 R	616845.1294	610777.2518
11*	113+69.84	120.12 R	616843.1673	610775.8836
12	113+35.20	140.12 R	616803.3127	610772.4754

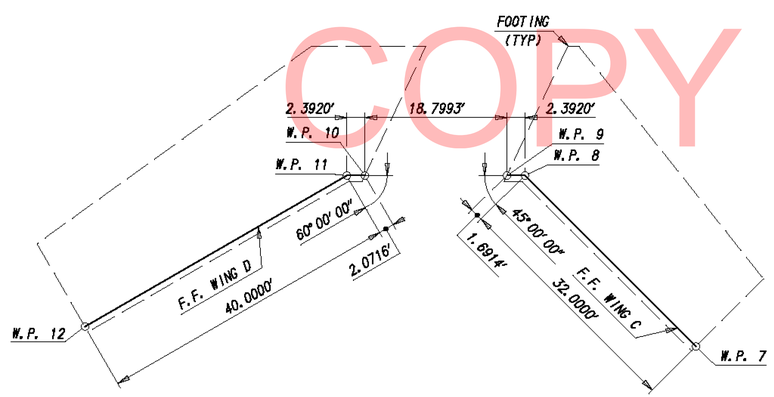
* WORKING POINT SHOULD BE FLUSH WITH FRONT FACE OF CULVERT.





UNOFFICIAL WEBSITE COPY

NOTE: WORKING POINTS ARE REFERENCED TO THE FRONT OF THE 2" ARCHITECTURAL TREATMENT ON THE FRONT FACE OF THE WINGWALLS.



STAKEOUT PLAN
(NOT TO SCALE)

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

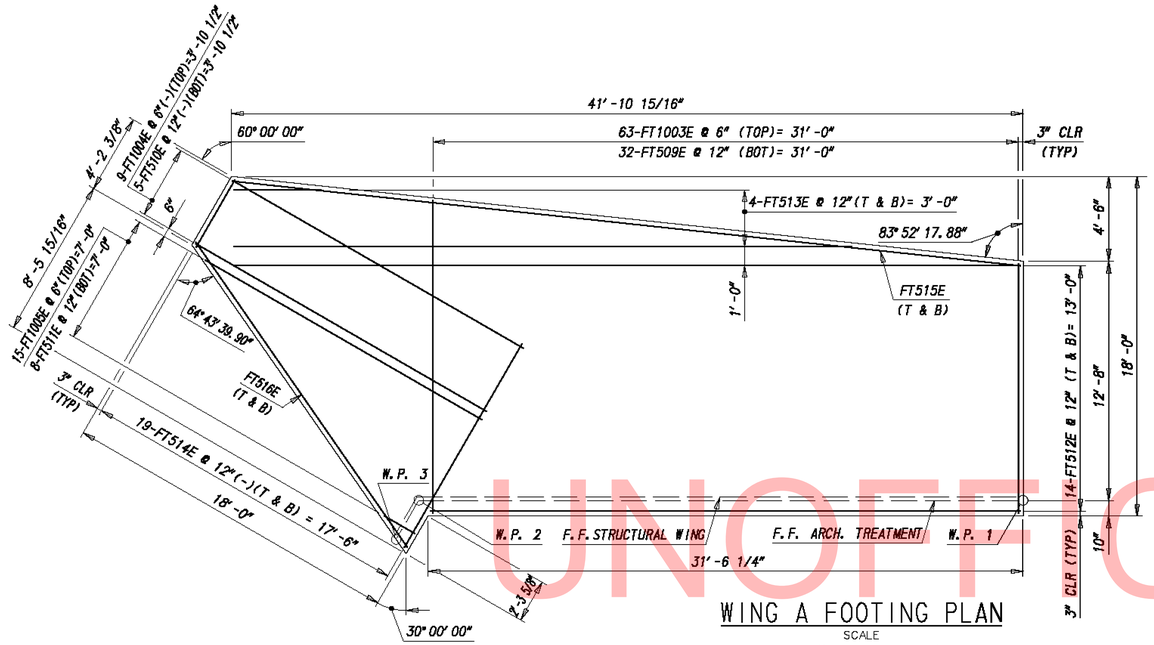
SCALE: AS NOTED

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: BJM	
COUNTY		
NEW CASTLE	CHECKED BY: LAA	

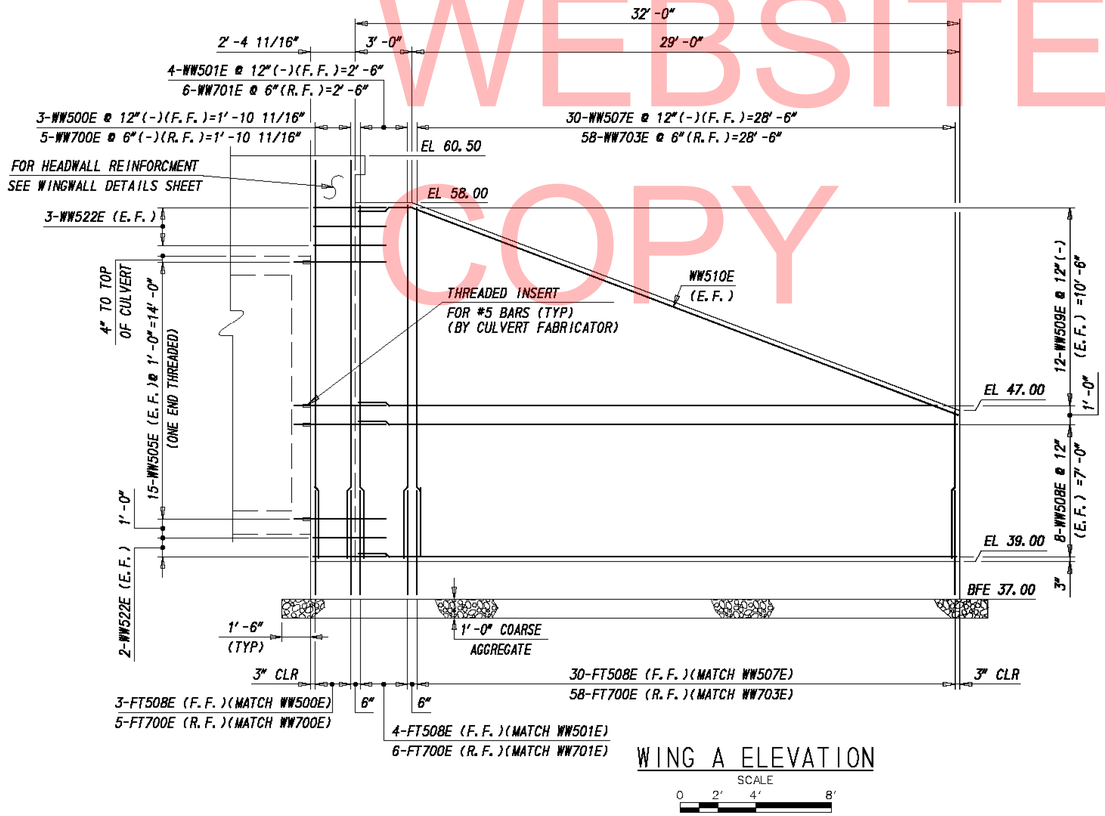
STAKEOUT PLAN

WW-02
SHEET NO.
19
TOTAL SHTS.
62



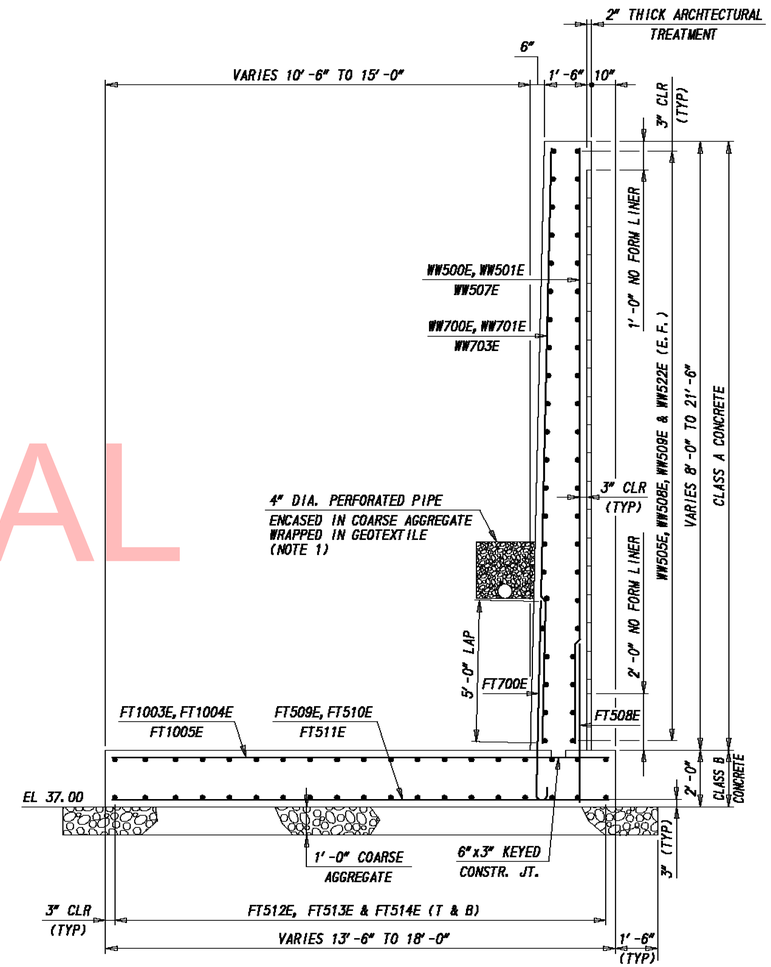
WING A FOOTING PLAN

SCALE
0 2' 4' 8'



WING A ELEVATION

SCALE
0 2' 4' 8'



WING A TYPICAL SECTION

SCALE
0 2' 4' 6'

NOTES:

1. PERFORATED PIPE, COARSE AGGREGATE, AND GEOTEXTILE TO BE PAID FOR UNDER ITEM 715000 - PERFORATED PIPE UNDERDRAINS, 4" (TYP ALL WINGS).

UNOFFICIAL WEBSITE COPY

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE: AS NOTED

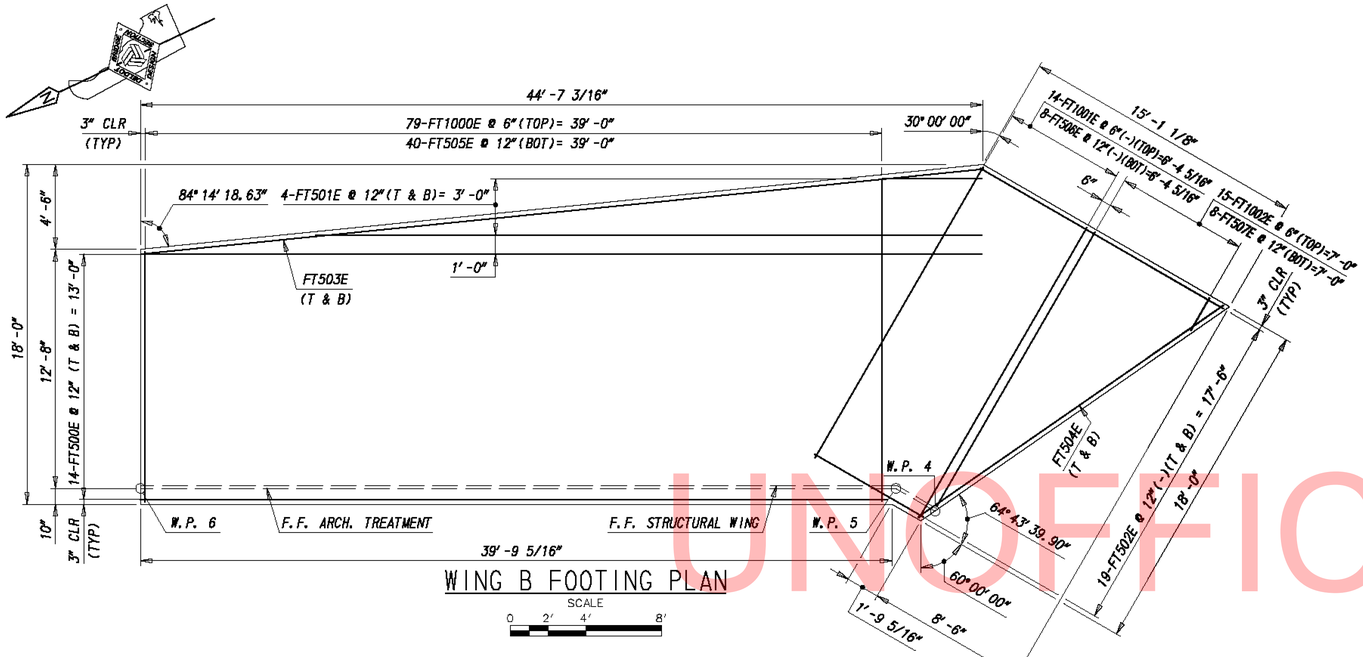
BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: BJM	
COUNTY		
NEW CASTLE	CHECKED BY: LAA	

WING A PLAN, ELEVATION AND SECTION

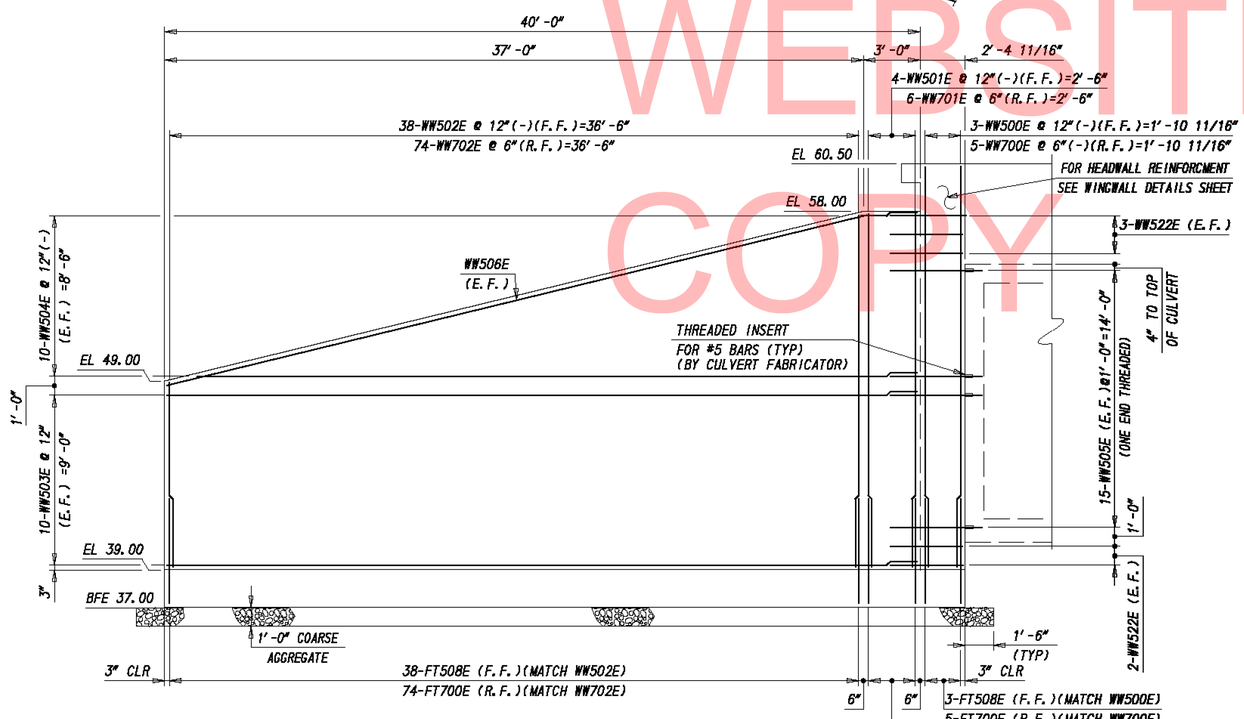
WW-03

SHEET NO.
20
TOTAL SHTS.
62



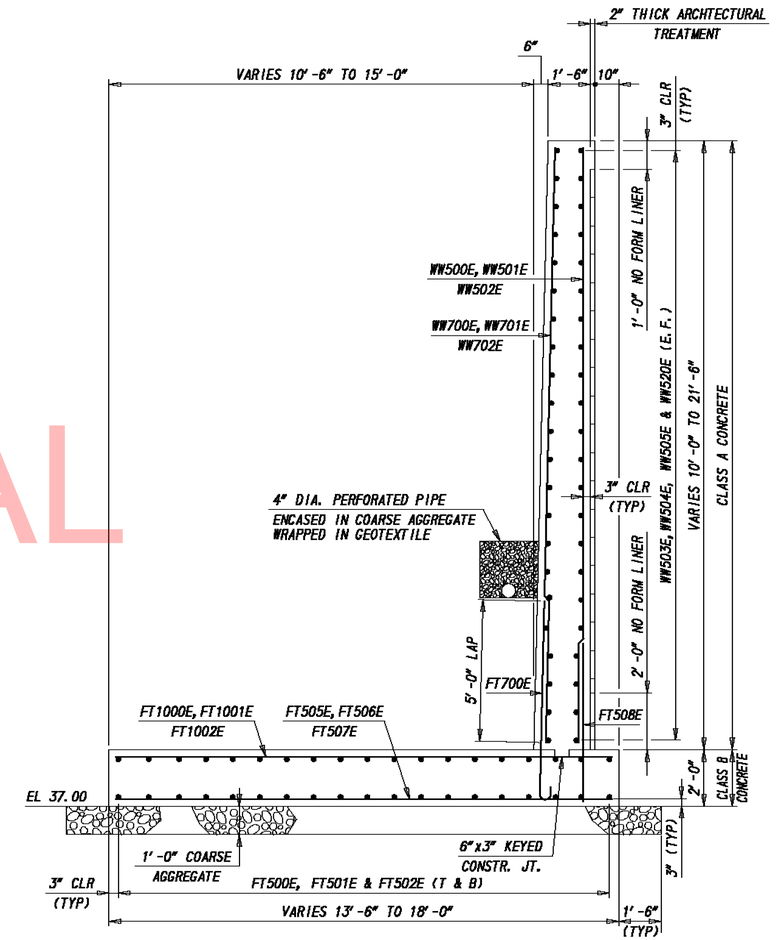
WING B FOOTING PLAN

SCALE 0 2' 4' 8'



WING B ELEVATION

SCALE 0 2' 4' 8'



WING B TYPICAL SECTION

SCALE 0 2' 4' 6'

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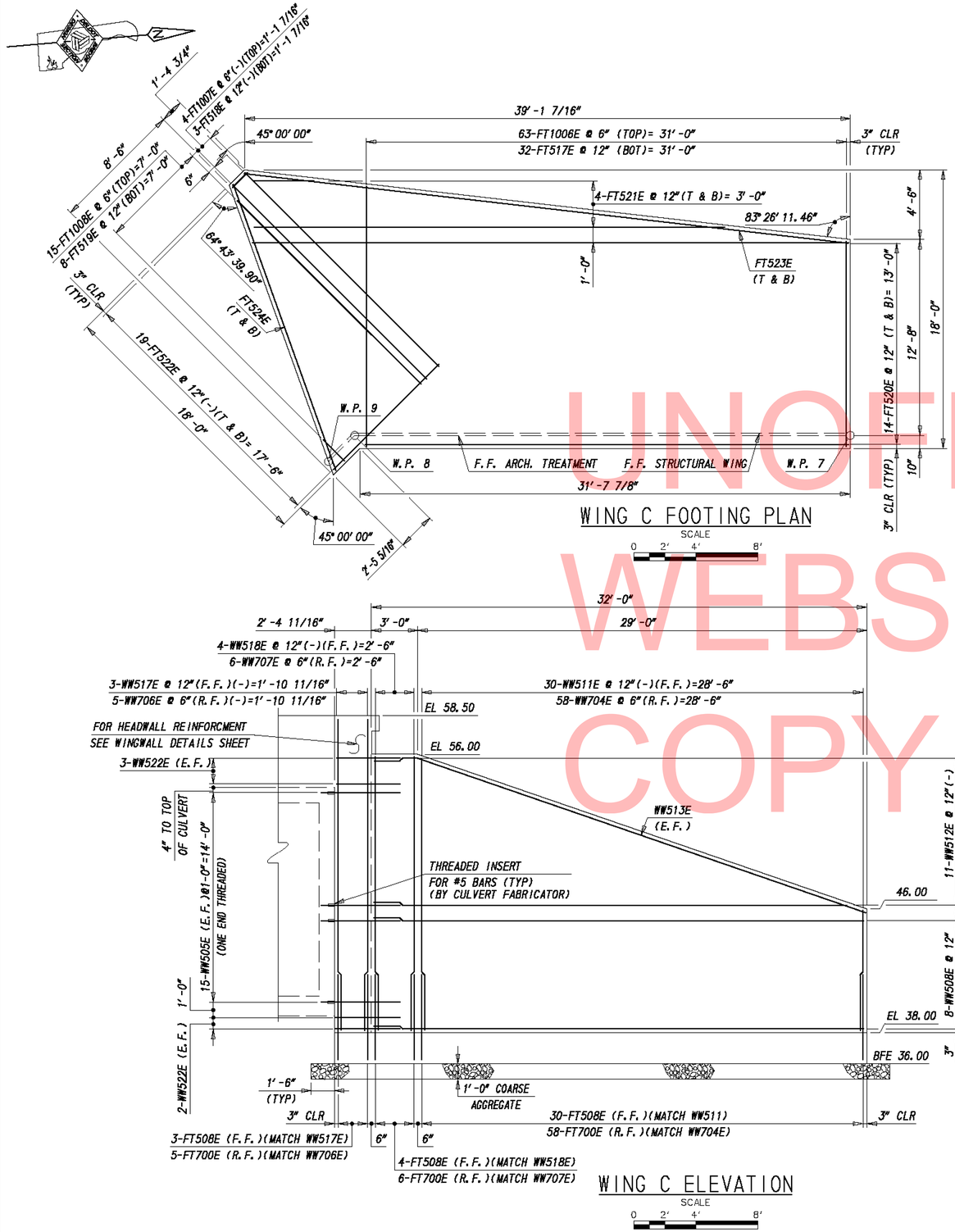
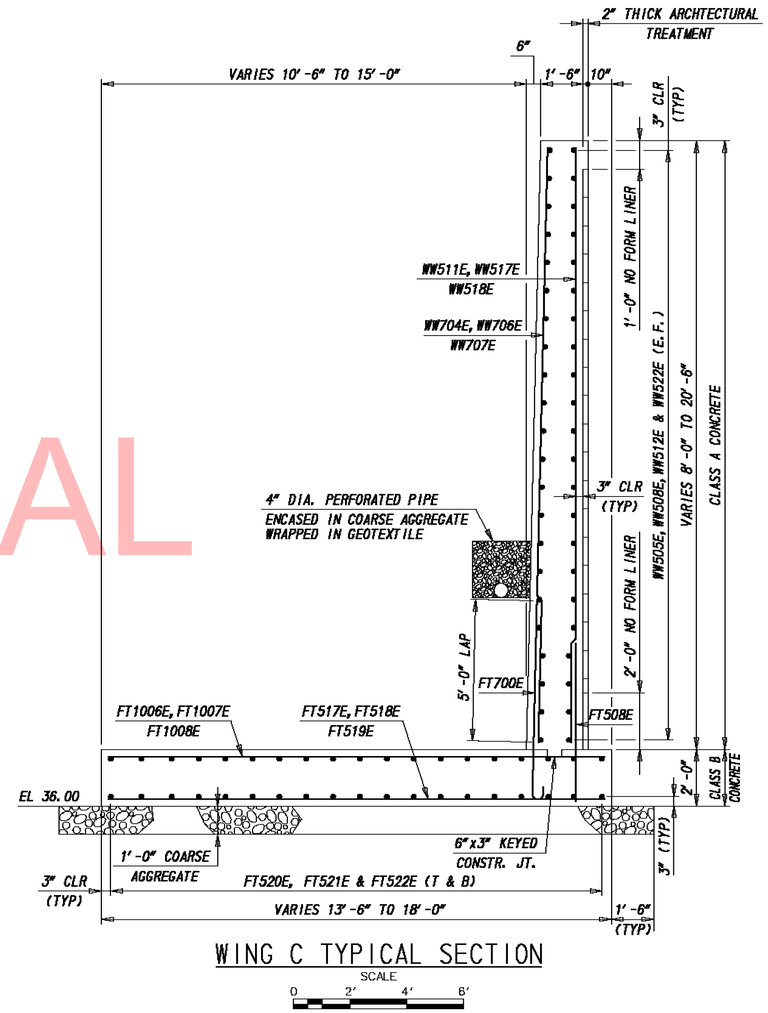
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	WING B PLAN, ELEVATION AND SECTION	WW-04
				COUNTY NEW CASTLE	DESIGNED BY: BJM		SHEET NO. 21
					CHECKED BY: LAA		TOTAL SHTS. 62





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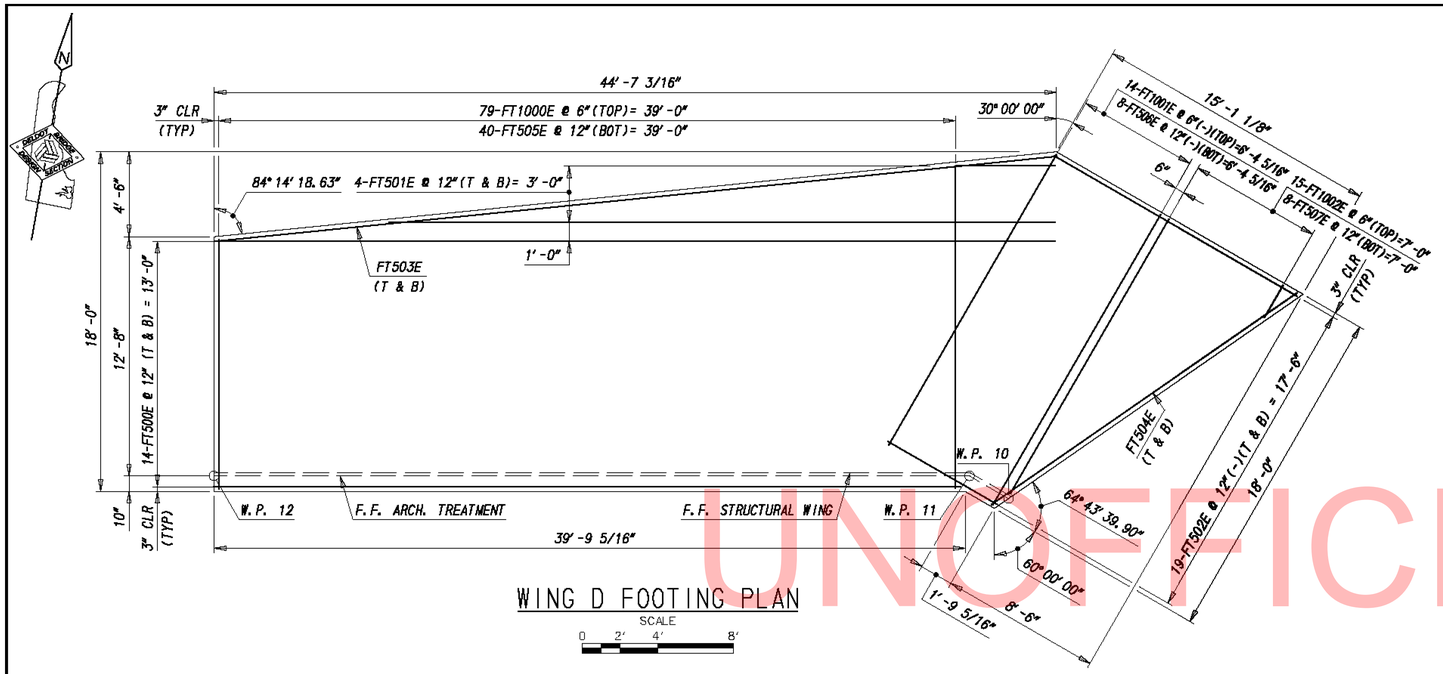
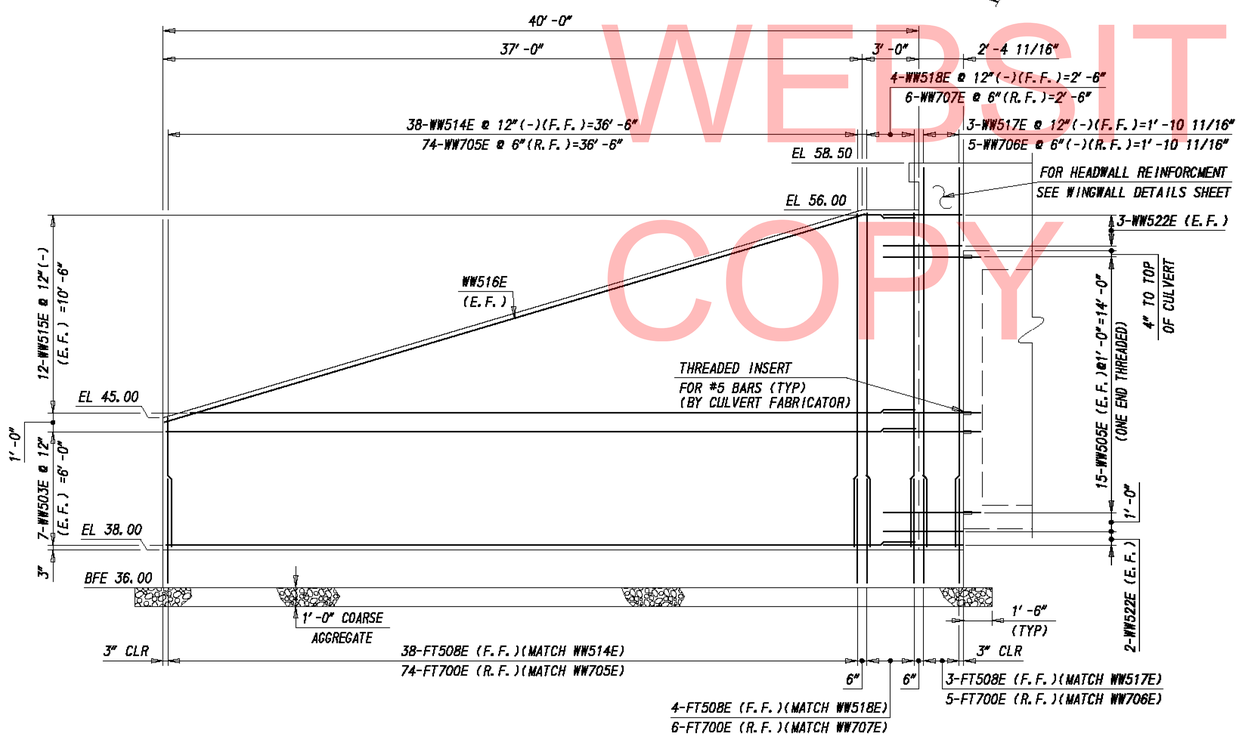
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	WING C PLAN, ELEVATION AND SECTION	WW-05 SHEET NO. 22 TOTAL SHTS. 62
				COUNTY NEW CASTLE	DESIGNED BY: BJM CHECKED BY: LAA		



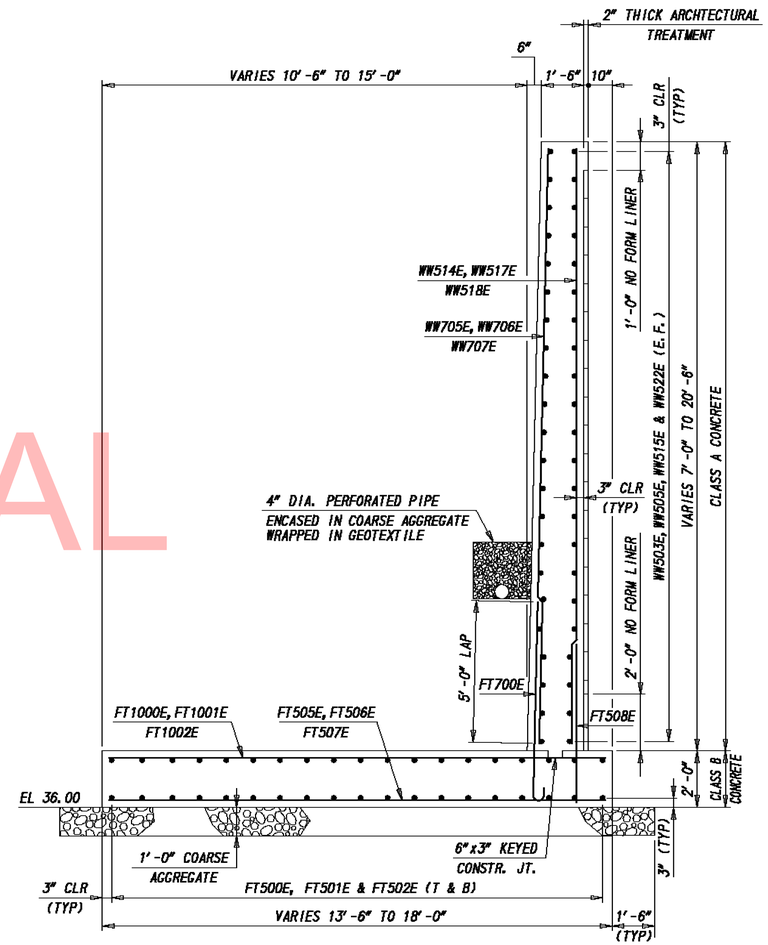
WING D FOOTING PLAN

SCALE 0 2' 4' 8'



WING D ELEVATION

SCALE 0 2' 4' 8'



WING D TYPICAL SECTION

SCALE 0 2' 4' 6'

UNOFFICIAL WEBSITE COPY

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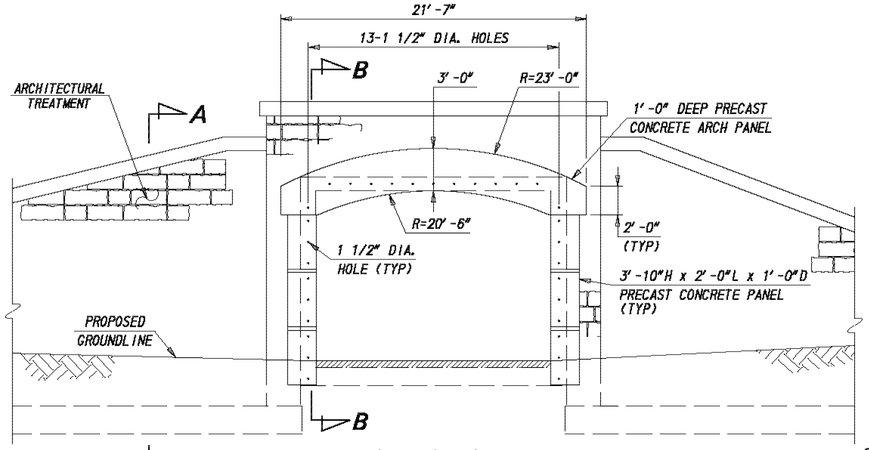
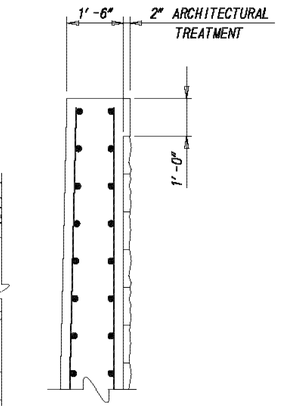
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE: AS NOTED	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	WING D PLAN, ELEVATION AND SECTION	WW-06
				COUNTY NEW CASTLE	DESIGNED BY: BJM		SHEET NO. 23
					CHECKED BY: LAA		TOTAL SHTS. 62



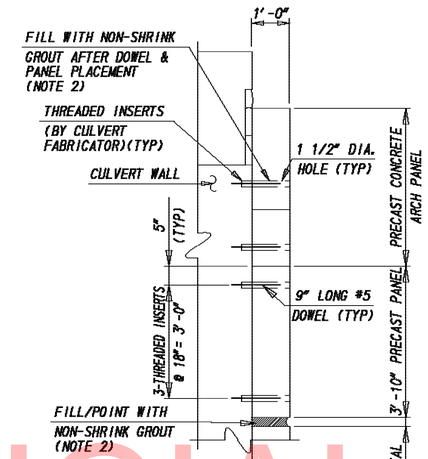
ELEVATION VIEW

SCALE 0 4' 8' 12'



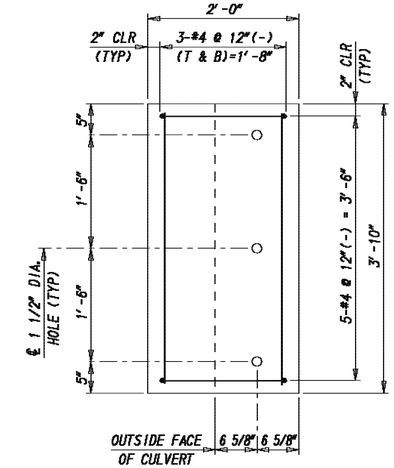
SECTION A-A

SCALE 0 1' 2' 4'



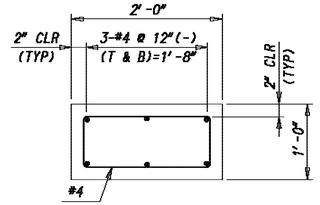
SECTION B-B

SCALE 0 1' 2' 4'



PRECAST PANEL DETAIL

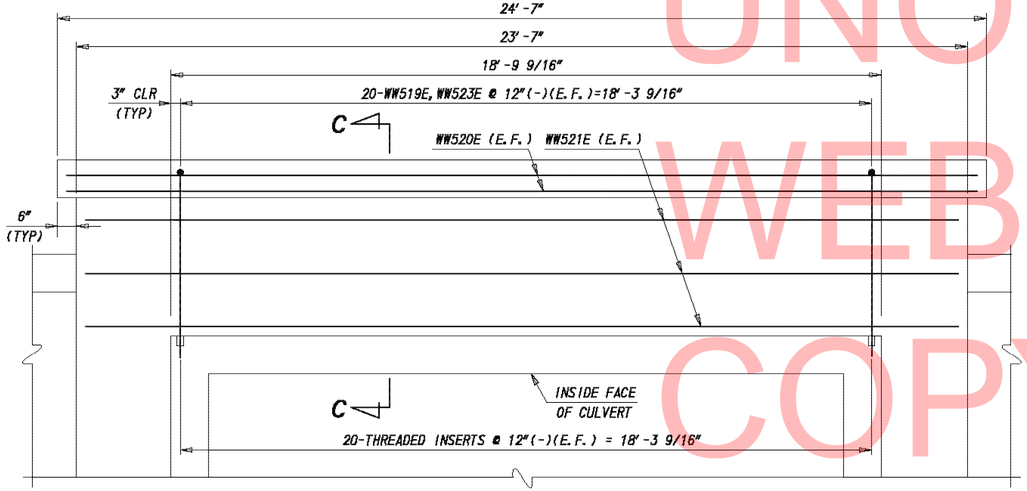
SCALE 0 0.5' 1' 2'



PRECAST PANEL SECTION

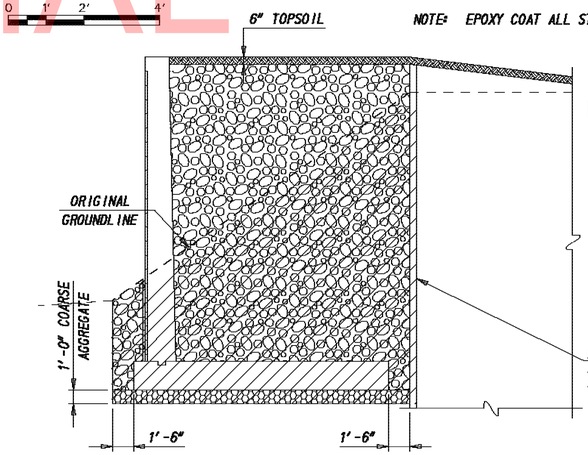
SCALE 0 0.5' 1' 2'

NOTE: EPOXY COAT ALL STEEL REINFORCEMENT IN PRECAST PANELS



HEADWALL ELEVATION

SCALE 0 1' 2' 4'



LIMITS OF PAY ITEMS

SCALE 0 4' 8' 12'

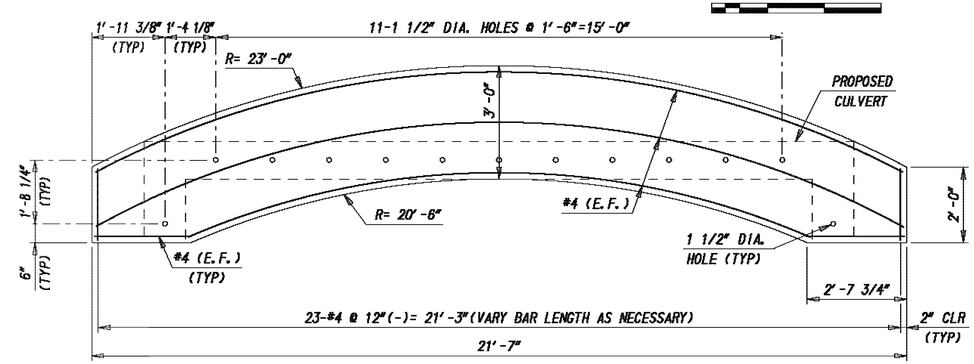
LEGEND:

- ITEM 207000 - EXCAVATION AND BACKFILL FOR STRUCTURES
- ITEM 210000 - FURNISHING BORROW TYPE C FOR STRUCTURE BACKFILL AND ITEM 209003 - BORROW TYPE, C
- ITEM 608000 - COARSE AGGREGATE FOR FOUNDATION STABILIZATION AND SUBFOUNDATION BACKFILL

PER STANDARD SPECIFICATION SUBSECTION 207.03, SHORING SHALL BE INCIDENTAL TO ITEM 207000 AND SHALL BE PROVIDED FOR ANY EXCAVATION OVER 5'-0" IN HEIGHT.

NOTES:

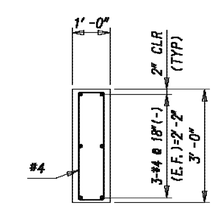
1. ALL PRECAST CONCRETE PANELS SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH (f'c) OF 5000 PSI. PRECAST ARCH AND PANELS SHALL BE INCIDENTAL TO ITEM 602736 - PRECAST CONCRETE CULVERT.
2. USE HIGH STRENGTH, NON-SHRINK, NON-STAINING GROUT IN PRECAST PANEL JOINTS AND DOWEL HOLES.
3. ARCHITECTURAL TREATMENT SHALL BE TEXTURED TO CLOSELY WATCH RANDOM CUT STONE. PAYMENT SHALL BE PAID FOR UNDER ITEM 602549 - FORM LINERS. EXAMPLE PATTERS INCLUDE:
   - PATTERN 1104-R2 RANDOM CUT STONE BY CUSTOM ROCK INTERNATIONAL
   - PATTERN 17034 LIBERTY ISLAND STONE BY FITZGERALD FORMLINERS
   - APPROVED EQUAL
4. ARCHITECTURAL TREATMENT SHALL BE TINTED. PRECAST PANELS AND TOP 1'-0" OF HEADWALL AND WINGWALLS (NO ARCHITECTURAL TREATMENT) SHALL NOT BE TINTED. PAYMENT SHALL BE PAID FOR UNDER ITEM 602549 - FORM LINERS. COLOR ON STONE PATTERN SHALL BE A MIX OF THE FOLLOWING FEDERAL COLOR NUMBERS:
   - 36373 LIGHT GRAY - 36424 MEDIUM GRAY
   - 36492 GRAY - 36320 BLUE-GRAY
5. THE CONTRACTOR SHALL CONTACT MARCO BOYCE (302-760-2527) AT THE DELDOT DIVISION OF PLANNING AT LEAST 2 WEEKS PRIOR TO BEGINNING THE APPLICATION OF THE TINT FOR THE CONCRETE WINGWALLS. A REPRESENTATIVE OF THE DIVISION OF PLANNING SHALL BE PRESENT DURING THIS PROCESS TO PROVIDE COLOR PATTERN APPLICATION RECOMMENDATIONS.



PRECAST ARCH DETAIL

SCALE 0 1' 2' 4'

NOTE: EPOXY COAT ALL STEEL REINFORCEMENT IN PRECAST PANELS



PRECAST ARCH SECTION

SCALE 0 1' 2' 4'

UNOFFICIAL WEBSITE COPY

PENNONI ASSOCIATES INC.
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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE: AS NOTED

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: BJM	
COUNTY		
NEW CASTLE	CHECKED BY: LAA	

WINGWALL DETAILS

WW-07
SHEET NO.
24
TOTAL SHTS.
62

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, MS = MISC. BARS, PA = PARAPET, PR = PIER, SC = SHEETPILE CAP, SL = 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
2X28	5	39-00	FT500E	STR		39-00									
		TO				TO									
		44-30				44-30									
2X8	5	4-10¾	FT501E	STR		4-10¾									
		TO				TO									
		34-71				34-71									
4X19	5	6-42	FT502E	STR		6-42									
		TO				TO									
		14-72				14-72									
4	5	44-53	FT503E	STR		44-53									
4	5	19-41	FT504E	STR		19-41									
2X40	5	13-00	FT505E	STR		13-00									
		TO				TO									
		16-11¾				16-11¾									
16	5	17-60	FT506E	STR		17-60									
2X8	5	1-72	FT507E	STR		1-72									
		TO				TO									
		16-52				16-52									
164	5	5-60	FT508E	STR		5-60									
1X32	5	13-00	FT509E	STR		13-00									
		TO				TO									
		16-42				16-42									
5	5	17-60	FT510E	STR		17-60									
1X8	5	1-72	FT511E	STR		1-72									
		TO				TO									
		16-52				16-52									
2X14	5	31-00	FT512E	STR		31-00									
		TO				TO									
		41-51				41-51									
2X4	5	4-60	FT513E	STR		4-60									
		TO				TO									
		32-42				32-42									
2X19	5	3-10¾	FT514E	STR		3-10¾									
		TO				TO									
		12-13				12-13									
2	5	41-91	FT515E	STR		41-91									
2	5	19-41	FT516E	STR		19-41									
1X32	5	13-00	FT517E	STR		13-00									
		TO				TO									
		16-71				16-71									

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)											
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
3	5	17-60	FT518E	STR		17-60									
1X8	5	1-72	FT519E	STR		1-72									
		TO				TO									
		16-52				16-52									
1X28	5	31-00	FT520E	STR		31-00									
		TO				TO									
		38-30				38-30									
1X8	5	3-53	FT521E	STR		3-53									
		TO				TO									
		29-63				29-63									
2X18	5	1-12	FT522E	STR		1-12									
		TO				TO									
		9-43				9-43									
2	5	39-02	FT523E	STR		39-02									
2	5	19-41	FT524E	STR		19-41									
308	7	7-100	FT700E	18	0-100	7-00							0-70		
2X79	1	13-00	FT1000E	STR		13-00									
		TO				TO									
		16-11¾				16-11¾									
28	1	17-60	FT1001E	STR		17-60									
2X15	1	1-72	FT1002E	STR		1-72									
		TO				TO									
		16-52				16-52									
1X63	1	13-00	FT1003E	STR		13-00									
		TO				TO									
		16-42				16-42									
9	1	17-60	FT1004E	STR		17-60									
1X15	1	1-72	FT1005E	STR		1-72									
		TO				TO									
		16-52				16-52									
1X63	1	13-00	FT1006E	STR		13-00									
		TO				TO									
		16-71				16-71									
4	1	17-60	FT1007E	STR		17-60									
1X15	1	1-72	FT1008E	STR		1-72									
		TO				TO									
		16-52				16-52									

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

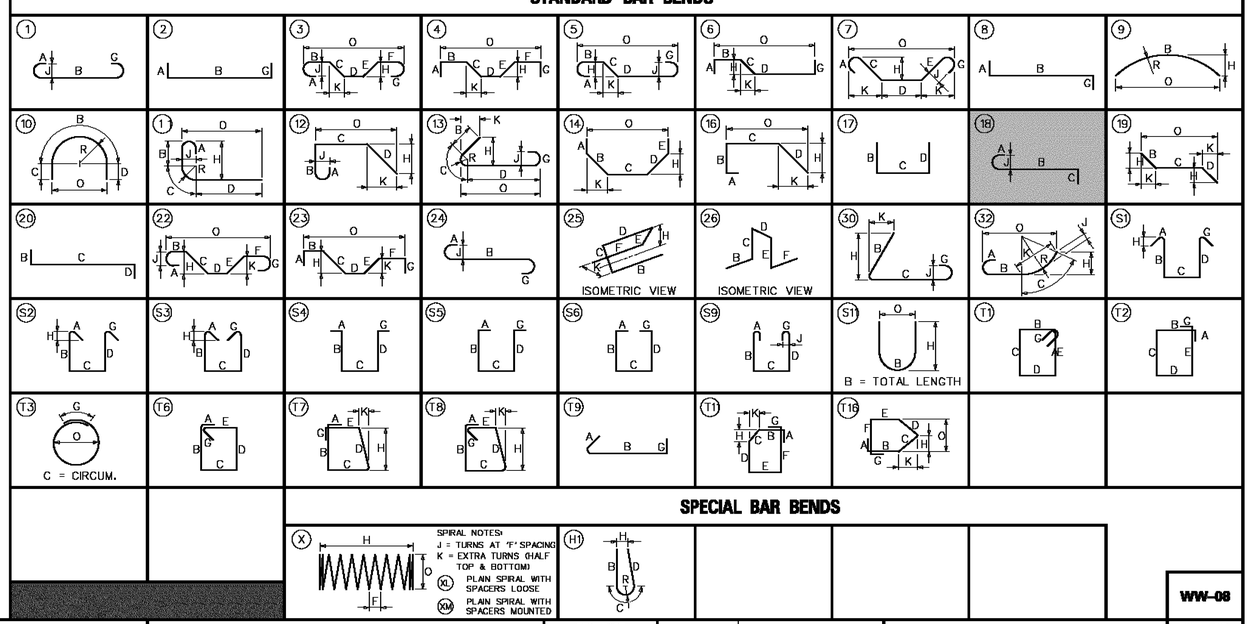
ASTM STANDARD ENGLISH REINFORCING BARS

BAR SIZE	NOMINAL DIMENSIONS: DIAMETER (INCHES)	AREA (INCHES²)	WEIGHT (LBS./FT.)	RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES: 180° HOOKS D	180° HOOKS A OR G	180° HOOKS J	90° HOOKS A OR G	STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES: 90° HOOK D	90° HOOK A OR G	135° HOOK A OR G	135° HOOK A OR G
3	0.375	0.110	0.376	2¼"	5"	3"	6"	1½"	4"	4"	2½"
4	0.500	0.200	0.668	3"	6"	4"	8"	2"	4½"	4½"	3"
5	0.625	0.310	1.043	3¾"	7"	5"	10"	2½"	6"	5½"	3¾"
6	0.750	0.440	1.502	4½"	8"	6"	1-0"	4½"	1-0"	8"	4½"
7	0.875	0.600	2.044	5¼"	10"	7"	1-2"	5¼"	1-2"	9"	5¼"
8	1.000	0.790	2.670	6"	11"	8"	1-4"	6"	1-4"	10½"	6"
9	1.128	1.000	3.400	9½"	1-3"	11¾"	1-7"				
10	1.270	1.270	4.303	10¾"	1-5"	1-1¼"	1-10"				
11	1.410	1.560	5.313	1-0"	1-7"	1-2¾"	2-0"				
14	1.693	2.250	7.650	1-6¼"	2-3"	1-9¾"	2-7"				
18	2.257	4.000	13.600	2-0"	3-0"	2-4½"	3-5"				

NOTES:

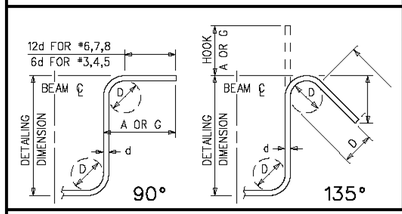
1. FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
2. STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
3. ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "G" ON STD. 180° AND 135° HOOKS.
4. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
5. WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" ON TYPES 3, 5 AND 22. WHERE "J" CAN EXCEED "H", IT SHALL BE SHOWN.
6. "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
7. UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
8. WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
9. WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
10. FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRSI' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
11. TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

STANDARD BAR BENDS

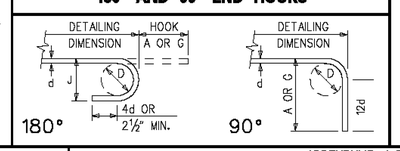


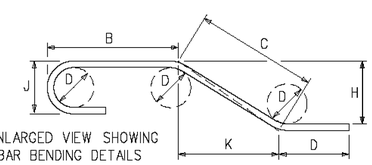
SPECIAL BAR BENDS

STIRRUP AND TIE HOOKS



180° AND 90° END HOOKS





ENLARGED VIEW SHOWING BAR BENDING DETAILS

WW-08

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

BR 1-665 N&S, US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: BJM	
COUNTY		
NEW CASTLE	CHECKED BY: LAA	

REINFORCEMENT BAR SCHEDULE (SHEET 1 OF 2)

SHEET NO.
25
TOTAL SHTS.
62

W:\PROJECTS\MCCR\MCCR1101-DELDOT BRIDGE 1-665\DESIGN\CT\BR01.DGN

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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, MS = MISC. BARS, PA = PARAPET, PR = PIER, SC = SHEETPILE CAP, SL = 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
6	5	21-00	WW500E	STR		21-00									
8	5	18-60	WW501E	STR		18-60									
1X38	5	9-63	WW502E	STR		9-63									
		TO				TO									
		18-51				18-51									
34	5	39-60	WW503E	STR		39-60									
2X10	5	2-83	WW504E	STR		2-83									
		TO				TO									
		37-80				37-80									
120	5	5-32	WW505E	16			2-50	2-102				2-60		1-51	3-101
2	5	37-101	WW506E	STR		37-101									
1X30	5	7-70	WW507E	STR		7-70									
		TO				TO									
		18-43				18-43									
32	5	31-60	WW508E	STR		31-60									
2X12	5	2-82	WW509E	STR		2-82									
		TO				TO									
		30-43				30-43									
2	5	30-93	WW510E	STR		30-93									
1X30	5	7-70	WW511E	STR		7-70									
		TO				TO									
		17-50				17-50									
2X11	5	2-82	WW512E	STR		2-82									
		TO				TO									
		30-31				30-31									
2	5	30-52	WW513E	STR		30-52									
1X38	5	6-70	WW514E	STR		6-70									
		TO				TO									
		17-50				17-50									
2X12	5	2-83	WW515E	STR		2-83									
		TO				TO									
		38-02				38-02									
2	5	38-43	WW516E	STR		38-43									
6	5	20-00	WW517E	STR		20-00									
8	5	17-60	WW518E	STR		17-60									
40	5	5-90	WW519E	20		1-00	4-90								
8	5	24-10	WW520E	STR		24-10									
12	5	23-10	WW521E	STR		23-10									
40	5	5-01	WW522E	16			2-13	2-102				2-60			3-70
40	5	6-50	WW523E	20		1-00	5-50								

SPECIFICATIONS					BENDING DIMENSIONS (FEET-INCHES /QUARTER INCH)										
QTY.	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F/R	G	H	J	K	O
10	7	21-00	WW700E	STR		21-00									
12	7	18-60	WW701E	STR		18-60									
1X74	7	9-63	WW702E	STR		9-63									
		TO				TO									
		18-51				18-51									
1X58	7	7-70	WW703E	STR		7-70									
		TO				TO									
		18-43				18-43									
1X58	7	7-70	WW704E	STR		7-70									
		TO				TO									
		17-50				17-50									
1X74	7	6-70	WW705E	STR		6-70									
		TO				TO									
		17-50				17-50									
10	7	20-00	WW706E	STR		20-00									
12	7	17-60	WW707E	STR		17-60									

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

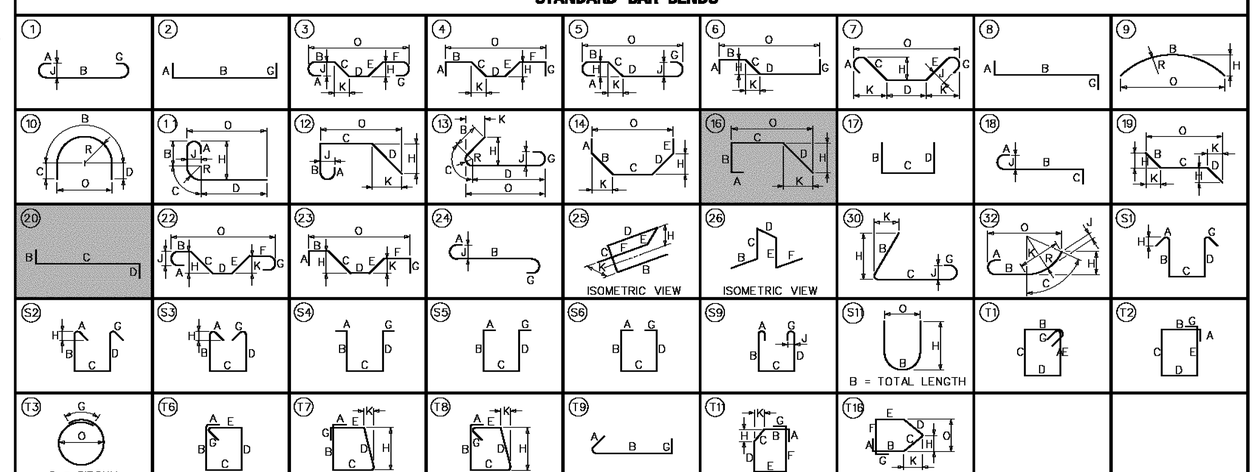
UNOFFICIAL WEBSITE COPY

ASTM STANDARD ENGLISH REINFORCING BARS				RECOMMENDED END HOOKS, APPLICABLE TO ALL GRADES				STIRRUP AND TIE HOOKS, APPLICABLE TO ALL GRADES			
NOMINAL DIMENSIONS				180° HOOKS			90° HOOKS	90° HOOK		135° HOOK	
BAR SIZE	DIAMETER (INCHES)	AREA (INCHES²)	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	2¼"	5"	3"	6"	1½"	4"	4"	2½"
4	0.500	0.200	0.668	3"	6"	4"	8"	2"	4½"	4½"	3"
5	0.625	0.310	1.043	3¾"	7"	5"	10"	2½"	6"	5½"	3¾"
6	0.750	0.440	1.502	4½"	8"	6"	1-0"	4½"	1-0"	8"	4½"
7	0.875	0.600	2.044	5¼"	10"	7"	1-2"	5¼"	1-2"	9"	5¼"
8	1.000	0.790	2.670	6"	11"	8"	1-4"	6"	1-4"	10½"	6"
9	1.128	1.000	3.400	9½"	1-3"	11¾"	1-7"				
10	1.270	1.270	4.303	10¾"	1-5"	1-1¼"	1-10"				
11	1.410	1.560	5.313	1-0"	1-7"	1-2¾"	2-0"				
14	1.693	2.250	7.650	1-6¼"	2-3"	1-9¾"	2-7"				
18	2.257	4.000	13.600	2-0"	3-0"	2-4½"	3-5"				

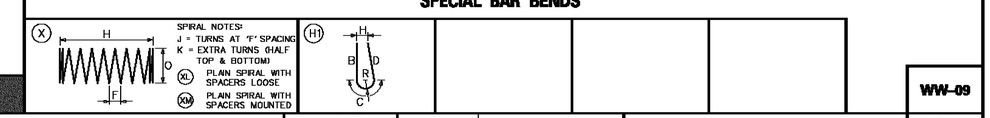
NOTES:

1. FIGURES SHOWN IN CIRCLES REPRESENT BAR BEND TYPES.
2. STANDARD BAR BENDS INCLUDE ONLY THOSE TYPES BELOW, INDICATED AS SUCH.
3. ALL DIMENSIONS OUT-TO-OUT, EXCEPT "A" AND "G" ON STD. 180° AND 135° HOOKS.
4. "J" DIMENSIONS ON 180° HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD 'ACI' HOOKS ARE TO BE USED.
5. WHERE "J" IS NOT SHOWN, "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" ON TYPES 3, 5 AND 22. WHERE "J" CAN EXCEED "H", IT SHALL BE SHOWN.
6. "H" DIMENSIONS OF STIRRUPS TO BE SHOWN AS NEEDED TO FIT WITHIN THE CONCRETE.
7. UNLESS OTHERWISE NOTED, DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR (EXCEPT FOR BEND TYPES 11 AND 13).
8. WHERE SLOPE DIFFERS FROM 45° OFFSET, "H" AND "K" MUST BE SHOWN.
9. WHERE BARS ARE TO BE BENT MORE ACCURATELY THAN STANDARD BENDING TOLERANCES, BENDING DIMENSIONS REQUIRING CLOSER FABRICATION SHOULD HAVE LIMITS INDICATED.
10. FOR RECOMMENDED DIAMETER "D", OF BENDS, HOOKS, ETC., REFER TO TABLE ABOVE, 'CRSI' OR 'ACI' TABLES WHERE APPLICABLE AND REQUIRED.
11. TYPE S1-S6, S11, T1-T3 AND T6-T9 APPLICABLE TO BAR SIZES #3 THROUGH #8.

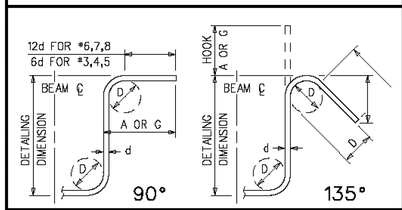
STANDARD BAR BENDS



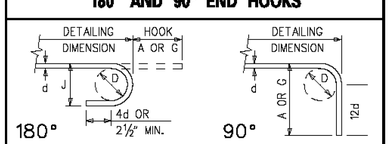
SPECIAL BAR BENDS

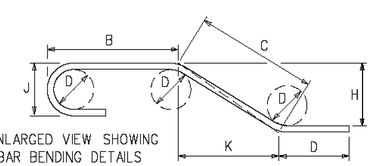


STIRRUP AND TIE HOOKS



180° AND 90° END HOOKS





ENLARGED VIEW SHOWING BAR BENDING DETAILS

ADDENDUMS / REVISIONS	

NOT TO SCALE

BR 1-665 N&S, US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: BJM	
COUNTY		
NEW CASTLE	CHECKED BY: LAA	

REINFORCEMENT BAR SCHEDULE (SHEET 2 OF 2)

WW-09

SHEET NO.
26
TOTAL SHTS.
62

DELAWARE DEPARTMENT OF TRANSPORTATION

W:\PROJECTS\MCCR\MCCR1101-DELDOT BRIDGE 1-665\DESIGN\CT\BR02.DGN

BORING: BR-1 | **DATE DRILLED:**
STATION: | **OFFSET:** | **ELEVATION:** 40.94 | **NORTHING:** 616871.42 | **EASTING:** 610765.82
COMMENTS: N/A

SAMPLE INFORMATION

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0 2.5	15 16 20	MOIST DENSE BROWN SILTY COARSE SAND AND FINE GRAVEL W/SOME FINE SAND AND CLAY.	A-2-4(0)	BOTTOM OF BOX CULVERT ELEVATION: 39.22 DEPTH: 1.72'
3A	2.5 4.0	17 17	MOIST DENSE BROWN COARSE SAND AND FINE GRAVEL W/SOME SILT, FINE SAND AND CLAY.	A-1-B	
3B	4.0 5.0	9 10	MOIST MEDIUM DENSE ORANGE SILTY FINE GRAVELLY COARSE SAND W/TRACE OF FINE SAND.	A-2-4(0)	
4	5.0 6.0	8 7 6 4	MOIST MEDIUM DENSE BROWN SILTY FINE GRAVELLY COARSE SAND W/SOME FINE SAND.	A-1-B	
5	6.0 8.0	8 5 6 6	WET MEDIUM DENSE ORANGE COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
6	8.0 10.0	5 5 5 5	WET LOOSE ORANGE COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
7	10.0 12.0	4 5 6 7	WET MEDIUM DENSE ORANGE COARSE SAND W/SOME FINE GRAVEL, TRACE OF FINE SAND AND SILT.	A-1-B	
8	12.0 14.0	4 4 6 10	WET LOOSE ORANGE COARSE SAND W/TRACE OF FINE GRAVEL, FINE SAND AND SILT.	A-1-B	
9	14.0 16.0	8 10 10 12	WET MEDIUM DENSE ORANGE COARSE SAND W/TRACE OF FINE GRAVEL, FINE SAND AND SILT.	A-1-B	
10	16.0 18.0	15 16 18 20	WET DENSE ORANGE COARSE SANDY FINE GRAVEL W/TRACE OF FINE SAND AND SILT.	A-1-A	
11	18.0 23.0	9 9 9 15	WET VERY STIFF RED CLAY W/TRACE OF FINE SAND AND SILT.	A-7-6(37)	
12	23.0 28.0	10 12 19 26	WET HARD GRAY SILTY CLAY.	A-6(16)	
13	28.0 33.0	16 41 26 29	WET HARD GRAY FINE SANDY SILT.	A-4(0)	
14	33.0 38.0	34 27 34 35	WET VERY DENSE ORANGE FINE SAND W/SOME SILT, TRACE OF COARSE SAND AND FINE GRAVEL.	A-2-4(0)	
15	38.0 43.0	15 16 17 17	WET DENSE RED COARSE TO FINE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-1-B	
16	43.0 48.0	6 13 20 21	WET HARD LIGHT RED CLAY W/TRACE OF FINE TO COARSE SAND AND SILT.	A-7-6(21)	
17	48.0 53.0	8 12 13 13	WET VERY STIFF REDDISH BROWN FINE SANDY SILT.	A-4(0)	
18	53.0 58.0	11 14 23 17	WET HARD GRAY SILTY CLAY W/TRACE OF FINE TO COARSE SAND.	A-6(13)	
19	58.0 63.0	7 14 17 21	WET HARD GRAY CLAYEY SILT W/SOME FINE SAND.	A-4(8)	
20	63.0 68.0	14 14 19 24	WET HARD GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(16)	
21	68.0 73.0	8 14 20 32	WET HARD LIGHT GRAY CLAYEY SILT W/SOME FINE SAND.	A-4(7)	
22	73.0 78.0	11 14 25 27	WET HARD GRAY CLAYEY SILT W/SOME FINE TO COARSE SAND.	A-4(4)	
23	78.0 83.0	12 17 22 39	WET HARD GRAY CLAY W/TRACE OF FINE SAND AND SILT.	A-7-6(26)	
24	83.0 88.0	8 16 27 42	WET HARD GRAY CLAYEY SILT W/TRACE OF FINE SAND.	A-4(5)	
25	88.0 93.0	8 14 17 20	WET HARD GRAY CLAY W/TRACE OF FINE TO COARSE SAND AND SILT.	A-7-6(19)	
26	93.0 98.0	13 17 21 28	WET HARD GRAY SILTY CLAY W/SOME FINE SAND.	A-6(15)	
	98.0 100.0		END BORING		

BORING: BR-2 | **DATE DRILLED:** 12/13/11
STATION: | **OFFSET:** | **ELEVATION:** 40.37 | **NORTHING:** 616905.92 | **EASTING:** 610789.04
COMMENTS: N/A

SAMPLE INFORMATION

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0 2.0	12 12 12 12	MOIST MEDIUM DENSE ORANGE COARSE SANDY FINE GRAVEL W/SOME SILT, TRACE OF FINE SAND.	A-1-B	
2	2.0 4.0	6 10 12 12	MOIST MEDIUM DENSE ORANGE COARSE SANDY FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
3	4.0 6.0	9 12 19 17	MOIST DENSE ORANGE COARSE SAND AND FINE GRAVEL W/TRACE OF FINE SAND AND SILT.	A-1-B	
4	6.0 8.0	4 3 6 5	WET LOOSE ORANGE FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
5	8.0 10.0	6 7 8 7	WET MEDIUM DENSE ORANGE COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	
6	10.0 12.0	4 6 8 7	WET MEDIUM DENSE ORANGE FINE GRAVELLY COARSE SAND W/SOME FINE SAND AND SILT.	A-1-B	
7	12.0 14.0	1 2 4 6	WET LOOSE ORANGE COARSE SAND W/SOME FINE SAND, TRACE OF FINE GRAVEL AND SILT.	A-1-B	
8	14.0 16.0	6 8 8 8	WET MEDIUM DENSE ORANGE FINE SAND W/SOME FINE GRAVEL, TRACE OF FINE SAND AND SILT.	A-1-B	
9	16.0 18.0	8 9 10 10	WET MEDIUM DENSE ORANGE COARSE SANDY FINE GRAVEL W/TRACE OF FINE SAND AND SILT.	A-1-A	
10	18.0 24.0	4 5 5 5	NO SIEVE ANALYSIS - INDICATION OF WET LOOSE ORANGE SAND W/TRACE OF SILT AND FINE GRAVEL.		
11	24.0 29.0	4 7 8 10	WET STIFF GRAY SILTY CLAY W/TRACE OF FINE TO COARSE SAND AND FINE GRAVEL.	A-6(9)	
12	29.0 34.0	7 8 7 10	WET STIFF GRAY FINE SANDY SILT W/TRACE OF FINE GRAVEL.	A-4(0)	
13	34.0 39.0	13 19 21 24	WET DENSE WHITE FINE TO COARSE SAND W/TRACE OF SILT.	A-3	
14	39.0 44.0	7 10 16 20	WET VERY STIFF REDDISH ORANGE CLAY W/SOME FINE GRAVEL, TRACE OF COARSE TO FINE SAND AND SILT.	A-7-6(22)	
15	44.0 49.0	4 8 11 14	WET VERY STIFF REDDISH ORANGE SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND AND FINE GRAVEL.	A-6(9)	
16	49.0 54.0	11 18 20 23	WET HARD GRAY CLAY W/TRACE OF FINE TO COARSE SAND, FINE GRAVEL AND SILT.	A-7-6(22)	
17	54.0 59.0	11 19 24 24	WET HARD GRAY CLAYEY SILT W/TRACE OF FINE SAND AND FINE GRAVEL.	A-4(4)	
18	59.0 64.0	17 19 20 24	WET HARD GRAY CLAYEY FINE SANDY SILT.	A-4(3)	
19	64.0 69.0	24 34 39 49	WET HARD GRAY FINE SANDY SILT W/SOME FINE GRAVEL, TRACE OF CLAY.	A-4(0)	
20	69.0 74.0	16 21 25 31	WET HARD GRAY CLAY W/SOME FINE GRAVEL, TRACE OF FINE SAND AND SILT.	A-7-6(19)	
21	74.0 79.0	14 22 28 33	WET HARD GRAY SILTY CLAY W/SOME FINE GRAVEL, TRACE OF FINE TO COARSE SAND.	A-6(12)	
22	79.0 84.0	5 15 20 22	WET HARD GRAY FINE GRAVELLY SILT W/SOME FINE SAND, TRACE OF CLAY.	A-4(0)	
23	84.0 89.0	18 22 24 30	WET HARD GRAY SILTY CLAY W/SOME FINE SAND AND FINE GRAVEL, TRACE OF COARSE SAND.	A-6(11)	
24	89.0 94.0	9 13 24 26	WET HARD RED SILT W/SOME FINE SAND AND CLAY, TRACE OF FINE GRAVEL.	A-4(1)	
25	94.0 98.0	20 11 29 29	WET HARD RED CLAYEY SILT W/TRACE OF FINE SAND AND FINE GRAVEL.	A-4(7)	
	98.0 100.0		END BORING.		

BORING: BR-3 | **DATE DRILLED:** 12/15/11
STATION: | **OFFSET:** | **ELEVATION:** 41.96 | **NORTHING:** 616971.57 | **EASTING:** 610718.72
COMMENTS: N/A

SAMPLE INFORMATION

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
	0.0 0.0				
1	0.0 2.0	11 29 39 37	MOIST VERY DENSE BLACK SILTY FINE GRAVEL W/SOME COARSE TO FINE SAND.	A-1-B	
2	2.0 4.0	10 15 19 20	MOIST DENSE BLACK FINE GRAVEL W/TRACE OF FINE TO COARSE SAND AND SILT.	A-1-A	BOTTOM OF BOX CULVERT ELEVATION: 39.77 DEPTH: 2.19'
3	4.0 6.0	19 20 4 22	MOIST DENSE ORANGE COARSE SANDY FINE GRAVEL W/SOME FINE SAND, TRACE OF SILT.	A-1-A	
4	6.0 8.0	6 7 8 8	WET MEDIUM DENSE ORANGE COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.	A-1-B	
5	8.0 10.0	5 8 8 7	WET MEDIUM DENSE ORANGE CLAYEY COARSE SAND W/SOME FINE GRAVEL, FINE SAND AND SILT.	A-2-4(0)	
6	10.0 12.0	7 4 4 2	WET LOOSE ORANGE COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
7	12.0 14.0	3 4 7 6	WET MEDIUM DENSE ORANGE FINE GRAVELLY COARSE SAND W/SOME SILT, TRACE OF FINE SAND.	A-1-B	
8	14.0 16.0	3 5 7 7	WET MEDIUM DENSE ORANGE FINE GRAVELLY COARSE SAND W/TRACE OF FINE SAND AND SILT.	A-1-B	
9	16.0 18.0	16 15 13 10	WET MEDIUM DENSE ORANGE FINE GRAVEL AND COARSE SAND W/TRACE OF FINE SAND AND SILT.	A-1-B	
10	18.0 23.0	6 7 10 13	NO SIEVE ANALYSIS - INDICATION OF WET MEDIUM DENSE BROWN SAND W/SOME SILT.		
11	23.0 28.0	4 7 8 12	WET STIFF GRAY CLAY.	A-7-6(24)	
12	28.0 33.0	12 15 17 19	WET HARD GRAY CLAYEY SILT W/TRACE OF FINE SAND.	A-4(6)	
13	33.0 38.0	42 33 41 42	WET VERY DENSE ORANGE FINE TO COARSE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-3	
14	38.0 43.0	18 30 32 13	WET VERY DENSE ORANGE COARSE SAND W/SOME FINE SAND, TRACE OF FINE GRAVEL AND SILT.	A-1-B	
15	43.0 48.0	6 12 17 18	WET VERY STIFF GRAY SILTY CLAY W/SOME FINE SAND.	A-6(18)	
16	48.0 53.0	7 12 13 14	WET VERY STIFF GRAY FINE SANDY SILT W/SOME CLAY, TRACE OF COARSE SAND.	A-4(2)	
17	53.0 58.0	6 20 22 19	WET HARD GRAY FINE SANDY SILT W/TRACE OF CLAY.	A-4(0)	
18	58.0 63.0	8 34 50	WET HARD GRAY FINE SANDY SILT W/TRACE OF CLAY.	A-4(0)	
19	63.0 68.0	13 13 13 13	WET VERY STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND.	A-4(0)	
20	68.0 73.0	6 9 17 17	WET VERY STIFF GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(21)	
21	73.0 78.0	9 19 36 34	WET HARD GRAY CLAY W/TRACE OF FINE SAND AND SILT.	A-7-6(23)	
22	78.0 83.0	9 10 19 17	WET VERY STIFF GRAY SILTY CLAY W/TRACE OF COARSE TO FINE SAND.	A-6(16)	
23	83.0 88.0	10 18 21 22	WET HARD GRAY SILTY CLAY W/TRACE OF FINE TO COARSE SAND.	A-6(12)	
24	88.0 93.0	18 20 25 29	WET HARD GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(11)	
25	93.0 98.0	8 20 29 42	WET HARD GRAY FINE SANDY SILT.	A-4(0)	
	98.0 100.0		END BORING.		

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4/8/2013
...\PSF Plans\B0001 BR 1-665.dgn

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NTS

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT: T201107401
COUNTY: NEW CASTLE
BRIDGE NO. 1-665
DESIGNED BY: TM
CHECKED BY: MAA

BORING LOG

BO-01
SHEET NO. 27
TOTAL SHTS. 62

BORING: BR-4 | **DATE DRILLED:** 12/27/11
STATION: | **OFFSET:** | **ELEVATION:** 42.08 | **NORTHING:** 617088.42 | **EASTING:** 610645.74
COMMENTS: N/A

SAMPLE INFORMATION

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0 2.0	6 11 14 13	MOIST MEDIUM DENSE GRAY COARSE SAND AND FINE GRAVEL W/SOME FINE SAND AND SILT, TRACE OF CLAY.	A-1-B	BOTTOM OF BOX CULVERT ELEVATION: 40.45 DEPTH: 1.63'
2	2.0 4.0	9 11 11 15	MOIST MEDIUM DENSE GRAYISH BROWN FINE GRAVEL AND COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
3	4.0 6.0	4 13 15 3	MOIST MEDIUM DENSE GRAYISH BROWN COARSE SAND AND FINE GRAVEL W/SOME SILT, TRACE OF FINE SAND.	A-1-B	
4	6.0 8.0	4 6 8 7	WET MEDIUM DENSE BROWN COARSE SAND W/TRACE OF FINE GRAVEL, FINE SAND AND SILT.	A-1-B	
5	8.0 10.0	8 11 11 6	WET MEDIUM DENSE BROWN COARSE SAND AND FINE GRAVEL W/SOME SILT, TRACE OF FINE SAND.	A-1-B	
6	10.0 12.0	3 6 8 5	WET MEDIUM DENSE BROWN COARSE SAND AND FINE GRAVEL W/SOME SILT, TRACE OF FINE SAND.	A-1-B	
7	12.0 14.0	4 6 5 5	WET MEDIUM DENSE BROWN CLAYEY COARSE SAND W/SOME FINE GRAVEL, FINE SAND AND SILT.	A-2-4(0)	
8	14.0 16.0	9 9 11 9	WET MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/TRACE OF FINE SAND AND SILT.	A-1-B	
9	16.0 18.0	5 7 10 16	WET MEDIUM DENSE BROWN FINE GRAVEL AND COARSE SAND W/TRACE OF FINE SAND AND SILT.	A-1-B	
10	18.0 23.0	9 11 14 20	WET VERY STIFF BROWN CLAY W/TRACE OF COARSE TO FINE SAND, FINE GRAVEL AND SILT.	A-7-6(30)	
11	23.0 28.0	4 6 7 9	WET STIFF BROWN SILTY CLAY W/TRACE OF COARSE SAND.	A-6(12)	
12	28.0 33.0	24 28 41 48	WET VERY DENSE TAN FINE SAND W/TRACE OF COARSE SAND AND SILT.	A-3	
13	33.0 38.0	15 24 40 37	WET VERY DENSE TAN COARSE SAND W/TRACE OF FINE , FINE SAND AND SILT.	A-1-B	
14	38.0 43.0	6 9 12 11	WET VERY STIFF GRAYISH TAN CLAYEY SILT W/TRACE OF FINE TO COARSE SAND.	A-4(5)	
15	43.0 48.0	11 14 21 31	WET HARD GRAY SILTY CLAY W/SOME FINE SAND.	A-6(9)	
16	48.0 53.0	13 16 17 23	WET HARD GRAY FINE SANDY SILT.	A-4(0)	
17	53.0 58.0	18 23 33 28	WET HARD GRAY FINE SANDY SILT.	A-4(0)	
18	58.0 63.0	21 22 20 20	WET HARD GRAY FINE SANDY SILT W/TRACE OF CLAY.	A-4(0)	
19	63.0 68.0	7 14 36 25	WET HARD GRAY CLAYEY SILT W/SOME FINE SAND.	A-4(3)	
20	68.0 73.0	10 13 16 12	WET VERY STIFF GRAY FINE SANDY SILT.	A-4(0)	
21	73.0 78.0	9 14 24 28	WET HARD GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(10)	
22	78.0 83.0	4 9 16 26	WET VERY STIFF GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(13)	
23	83.0 88.0	12 12 17 18	WET VERY STIFF GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(16)	
24	88.0 93.0	9 16 22 33	WET HARD GRAY SILTY CLAY W/SOME FINE SAND.	A-6(13)	
25	93.0 98.0	8 11 15 21	WET VERY STIFF RED CLAY W/TRACE OF FINE SAND AND SILT.	A-7-6(24)	
	98.0 100.0		END BORING.		

BORING: BR-5 | **DATE DRILLED:** 12/27/11
STATION: | **OFFSET:** | **ELEVATION:** 41.13 | **NORTHING:** 617129.62 | **EASTING:** 610666.21
COMMENTS: N/A

SAMPLE INFORMATION

NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0 0.0	8 14 25 21	MOIST DENSE GRAYISH BROWN FINE GRAVEL W/SOME COARSE TO FINE SAND AND SILT, TRACE OF CLAY.	A-1-B	
2	0.0 2.0	29 29 21 27	MOIST DENSE GRAYISH BROWN COARSE SAND AND FINE GRAVEL W/SOME FINE SAND AND SILT.	A-1-B	
3	2.0 4.0	16 15 12 10	MOIST MEDIUM DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND, TRACE OF SILT.	A-1-A	
4	4.0 6.0	12 9 8 8	MOIST MEDIUM DENSE BROWN COARSE SANDY FINE GRAVEL W/SOME FINE SAND, TRACE OF SILT.	A-1-A	
5	6.0 8.0	6 6 7 7	MOIST MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
6	8.0 10.0	7 6 7 7	WET MEDIUM DENSE BROWN COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.	A-1-B	
7	10.0 12.0	9 8 8 5	WET MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
8	12.0 14.0	16 6 4 6	WET LOOSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
9	14.0 16.0	4 6 7 8	WET MEDIUM DENSE BROWN COARSE SAND W/SOME FINE GRAVEL AND FINE SAND, TRACE OF SILT.	A-1-B	
10	16.0 18.0	4 5 9 8	WET MEDIUM DENSE BROWN COARSE SAND W/SOME FINE GRAVEL AND FINE SAND, TRACE OF SILT.	A-1-B	
11	18.0 23.0	3 4 12 13	WET VERY STIFF BROWN CLAY W/TRACE OF COARSE TO FINE SAND AND SILT.	A-7-6(21)	
12	23.0 28.0	4 7 9 13	WET STIFF BROWN SILTY CLAY W/TRACE OF FINE TO COARSE SAND.	A-6(8)	
13	28.0 33.0	9 12 15 10	WET MEDIUM DENSE TAN SILTY FINE SAND W/TRACE OF COARSE SAND AND FINE GRAVEL.	A-2-4(0)	
14	33.0 38.0	2 6 9 7	WET STIFF TAN CLAYEY FINE SANDY SILT W/TRACE OF COARSE SAND AND FINE GRAVEL.	A-4(4)	
15	38.0 43.0	1 5 5 5	SATURATED STIFF RED CLAY W/TRACE OF FINE TO COARSE SAND AND SILT.	A-7-5(38)	
16	43.0 48.0	7 13 13 20	SATURATED VERY STIFF WHITE SILTY CLAY W/TRACE OF FINE SAND.	A-6(14)	
17	48.0 53.0	6 14 19 25	SATURATED HARD GRAYISH RED SILTY CLAY W/TRACE OF FINE SAND.	A-6(10)	
18	53.0 58.0	13 19 23 27	SATURATED HARD GRAY CLAYEY SILT W/SOME FINE SAND.	A-4(6)	
19	58.0 63.0	16 23 23 27	NO RECOVERY		
20	63.0 68.0	6 11 38 50	SATURATED DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND.	A-2-4(0)	
21	68.0 73.0	7 10 12 15	SATURATED MEDIUM DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND.	A-2-4(0)	
22	73.0 78.0	4 14 19 23	SATURATED HARD GRAY CLAY W/TRACE OF FINE SAND AND SILT.	A-7-6(22)	
23	78.0 83.0	7 15 35 20	SATURATED HARD GRAY SILTY CLAY W/TRACE OF COARSE TO FINE SAND.	A-6(12)	
24	83.0 88.0	8 13 22 25	SATURATED HARD GRAY SILTY CLAY W/TRACE OF FINE SAND.	A-6(18)	
25	88.0 93.0	18 29 50	SATURATED HARD GRAY SILT W/SOME FINE SAND AND CLAY.	A-4(3)	
26	93.0 98.0	50	SATURATED HARD GRAY FINE SANDY SILT.	A-4(0)	
	98.0 100.0		END BORING.		

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BO-02

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NTS

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

BORING LOG

SHEET NO. 28
TOTAL SHTS. 62

4/8/2013
...\PSE Plans\BD002_BR 1-665.dgn

GENERAL MOT NOTES:

1. MAINTENANCE OF TRAFFIC DURING LANE CLOSURES SHALL CONFORM TO TYPICAL APPLICATION TA-33, TA-34 OR TA-37 OF THE DELAWARE MUTCD, AND DURING TRAFFIC CONTROL SET-UP BETWEEN PHASES SHALL CONFORM TO TYPICAL APPLICATIONS TA-3A, TA-5B, TA-33, TA-37, AND TA-42.

2. THIS PROJECT IS CONSIDERED A SIGNIFICANT PROJECT AS DEFINED BY DELDOT'S WORK ZONE MOBILITY PROCEDURES AND GUIDELINES. A TYPE B TRANSPORTATION MANAGEMENT PLAN (TMP) HAS BEEN PREPARED AND IS AVAILABLE FOR VIEWING BY CONTACTING THE DEPARTMENT'S SAFETY PROGRAMS MANAGER AT (302)659-4060. ALL MONITORING REQUIREMENTS OF THE TMP SHALL BE CONDUCTED BY DELDOT FORCES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. MODIFICATIONS TO THE TMP SHALL BE COMPLETED BY THE CONTRACTOR IF CHANGES TO THE TIME RESTRICTIONS OR THE TRAFFIC CONTROL PLAN ARE DESIRED. THE MODIFIED TMP SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF DELAWARE.

3. A TYPE II TRUCK MOUNTED ATTENUATOR (TMA) SHALL BE REQUIRED ON THIS PROJECT DURING THE FOLLOWING OPERATIONS: TEMPORARY/PERMANENT PAVEMENT MARKINGS, ROADSIDE SPRAYING, PATCHING, MILLING, SWEEPING, TEMPORARY TRAFFIC BARRIER PLACEMENT OR AS DIRECTED BY THE ENGINEER. THE ROLL AHEAD DISTANCE SHALL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE TMA SHALL CONFORM TO THE REQUIREMENTS OF SECTION 6F OF THE DELAWARE MUTCD.

4. LONGITUDINAL EDGE DROP-OFFS SHALL BE CORRECTED IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.

   A) WHERE PLACEMENT OF A WEDGE/FILLET BETWEEN TRAVEL LANES AND A PAVEMENT BOX IS REQUIRED, APPROVED BASE COURSE MATERIAL SHALL BE USED FOR THE FILLET MATERIAL. THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN TABLE 6G-1 AND SHALL BE COMPACTED. EXCESS BASE COURSE MATERIAL SHALL BE PUSHED AHEAD AND USED IN THE NEXT SEGMENT AND SHALL BE INCIDENTAL TO THE PARTICULAR BASE COURSE ITEM.

   B) WHERE PLACEMENT OF A WEDGE/FILLET AT THE EDGE OF THE ROADWAY IS REQUIRED, PAVEMENT MILLINGS SHALL BE USED FOR THE FILLET MATERIAL. PAYMENT FOR PAVEMENT MILLINGS SHALL BE INCIDENTAL TO ITEM 743000. NO SEPARATE PAYMENT SHALL BE MADE FOR PAVEMENT MILLINGS TO CORRECT PAVEMENT EDGE DROP-OFFS, UNLESS THE MATERIAL IS EVENTUALLY USED AS PART OF A PERMANENT ROADWAY, AT WHICH TIME THE MATERIAL WOULD BE PAID FOR UNDER THE RESPECTIVE CONTRACT BID ITEM.

5. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ALL ROAD USERS, INCLUDING VEHICULAR, PEDESTRIAN AND BYCYCLE TRAFFIC, AND SHALL CONFORM TO THE REQUIREMENTS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART 6, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT FOR BIDS.

6. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOSURE OF A DRIVEWAY OR ENTRANCE FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND/OR PROPERTY OWNER IN ADVANCE OF THE CLOSURE. THE CONTRACTOR SHALL PROVIDE ALL PROPERTY OWNERS AND RESIDENTS WHO LIVE ADJACENT TO THE WORK ZONE WRITTEN NOTICE 48 HOURS IN ADVANCED OF THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES, A SUMMARY OF CONSTRUCTION ACTIVITIES WHICH MAY INTERFERE WITH ACCESS TO THE PROPERTY INCLUDING A SCHEDULE AND ACCESS COORDINATION PLAN, CONTRACTORS NAME AND ADDRESS, AND A DELDOT CONTACT PHONE NUMBER. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED.

7. TEMPORARY PAVEMENT SECTION:

   2" WMA SUPERPAVE, TYPE C, 160 GYRATIONS PG 64-22 (CARBONATE STONE) - ITEM 401801
   3" WMA SUPERPAVE, TYPE B, 160 GYRATIONS PG 64-22 - ITEM 401810
   8" GRADED AGGREGATE BASE COURSE, TYPE B - ITEM 302007

8. NIGHT WORK HOURS FOR GENERAL WORK ACTIVITIES ARE DEFINED AS 10:00PM TO 5:00AM.

9. MULTIPLE LANE CLOSURES SHALL OCCUR DURING NIGHT WORK HOURS.

10. TEMPORARY TRAFFIC CONTROL SET-UPS DURING CONSTRUCTION PHASE CHANGES (EXCEPT PHASE 3 AND 5) SHALL OCCUR DURING NIGHT WORK HOURS.

11. 15 MINUTE STOPPAGES OF TRAFFIC AND BRIDGE DECK/BEAM REMOVAL DURING PHASE 2 AND PHASE 4 ARE PERMITTED ONLY DURING THE HOURS OF 12:00 AM TO 5:00 AM.

12. PHASE 3 SHALL OCCUR OVER 1 WEEKEND BETWEEN THE HOURS OF 3:00 PM FRIDAY UNTIL 5:00 AM MONDAY.

13. PHASE 5 SHALL OCCUR OVER 1 WEEKEND BETWEEN THE HOURS OF 8:00 PM FRIDAY UNTIL 12:00 NOON MONDAY.

14. FLARE RATE FOR TEMPORARY AND PINNED TEMPORARY P.C.C. BARRIER SHALL BE 16:1.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. EROSION AND SEDIMENT CONTROL DEVICES WILL BE MAINTAINED IN PLACE AND WILL ONLY BE REMOVED WHEN IT IS NO LONGER NECESSARY TO PROVIDE FOR THEIR DESIGNATED FUNCTIONS AS APPROVED BY THE ENGINEER.

2. A STABILIZED CONSTRUCTION ENTRANCE TO BE PLACED ON EITHER SIDE OF BR 1-665 WITHIN THE MEDIAN AT THE DIRECTION ON THE ENGINEER.

SUGGESTED CONSTRUCTION SEQUENCE

PHASE 1
1. PLACE PHASE 1 TEMPORARY TRAFFIC CONTROL MEASURES ON BAYLOR BOULEVARD
2. PLACE PHASE 1 EROSION AND SEDIMENT CONTROLS
3. CLEAR AND GRUB WITHIN THE LIMITS OF PHASE 1 CONSTRUCTION
4. CONSTRUCT BOX CULVERT AND WING WALLS
5. PLACE BACKFILL TO WITHIN 7' OF THE BOTTOM FLANGE OF THE BRIDGE BEAMS UNDER EACH BRIDGE DECK SECTION
6. PLACE PHASE 1 TEMPORARY TRAFFIC CONTROL MEASURES ON US 13
7. USE TA-33 TO CLOSE A LANE WHEN REMOVING GUARDRAIL AND PLACING BARRIER AS NEEDED
8. CONSTRUCT TEMPORARY CROSSOVER/CONSTRUCTION ACCESS AT STA.111+50
9. REMOVE CONCRETE WALL BETWEEN BRIDGES AS NOTED IN THE PLANS
10. PLACE BACKFILL IN THE MEDIAN BETWEEN BRIDGE SPANS TO FINAL ELEVATIONS
11. RELOCATE EXISITNG DP&L GAS AND ARTESIAN WATER UTILITIES (BY OTHERS)
12. REMOVE EXISTING HEADWALL AND CONSTRUCT DI-1, DI-2 AND P-1 WITHIN THE MEDIAN
13. GRADE MEDIAN AND SWALE AND PLACE TEMPORARY SEED AND MULCH
14. REMOVE ALL TEMPORARY TRAFFIC CONTROL AND E&S MEASURES NOT NEEDED FOR NEXT PHASE

PHASE 2
1. PLACE PHASE 2 TEMPORARY TRAFFIC CONTROL MEASURES
2. USE TA-33 TO CLOSE A LANE WHEN PLACING PINNED TEMPORARY PCC BARRIER
3. PLACE PHASE 2 EROSION AND SEDIMENT CONTROLS
4. REMOVE THE OUTSIDE PORTION OF NB US 13 BRIDGE DECK LOCATED BEHIND THE BARRIER
5. PLACE BACKFILL TO FINAL GRADE FOR OUTSIDE PORTION OF NB US 13
6. CONSTRUCT PAVEMENT BOX TO THE TOP OF WMA TYPE B AND PLACE CURB AND GUARDRAIL WITHIN THE LIMITS OF THIS PHASE
7. PLACE PREMANENT SEED AND MULCH ON EMBANKMNET SLOPES
8. PLACE FLOWABLE FILL UNDER REMAINING SECTION OF SB BRIDGE 1-665 TO 1 FOOT FROM BOTTOM OF EXISTING BEAMS
9. REMOVE ALL TRAFFIC CONTROL AND E&S MEASURES NOT NEEDED FOR NEXT PHASE

PHASE 3
1. PLACE PHASE 3 TEMPORARY TRAFFIC CONTROL MEASURES AND DETOURS
2. REMOVE REMAINDER OF NB BRIDGE 1-665
3. PLACE BACKFILL AND CONSTRUCT NB US 13 ROADWAY TO FINAL CONDITIONS
4. REMOVE ALL DETOURS, TRAFFIC CONTROL AND E&S MEASURES NOT NEEDED FOR NEXT PHASE

PHASE 4A
1. PLACE PHASE 4 TEMPORARY TRAFFIC CONTROL MEASURES AND DETOURS
2. USE TA-33 TO CLOSE A LANE WHEN PLACING PINNED TEMPORARY PCC BARRIER
3. PLACE PHASE 4 EROSION AND SEDIMENT CONTROLS
4. RELOCATE VERIZON CONDUIT
5. CONSTRUCT TEMPORARY PEDESTRIAN FACILITY ALONG THE OUTSIDE OF SB US 13

PHASE 4B
1. REMOVE THE OUTSIDE PORTION OF SB US 13 BRIDGE DECK LOCATED BEHIND THE BARRIER
2. CONSTRUCT PAVEMENT BOX TO THE TOP OF WMA TYPE B AND PLACE CURB, SIDEWALK AND GUARDRAIL WITHIN THE LIMITS OF THIS PHASE
3. REMOVE THE TEMPORARY PEDESTRIAN FACILITY AND GRADE TO FINAL CONDITIONS
4. PLACE FLOWABLE FILL UNDER REMAINING SECTION OF SB BRIDGE 1-665 TO 1 FOOT FROM BOTTOM OF EXISTING BEAMS
5. REMOVE ALL TRAFFIC CONTROL AND E&S MEASURES NOT NEEDED FOR NEXT PHASE

PHASE 5
1. PLACE PHASE 5 TEMPORARY TRAFFIC CONTROL MEASURES AND DETOURS
2. REMOVE REMAINDER OF SB BRIDGE 1-665
3. PLACE BACKFILL AND CONSTRUCT SB US 13 ROADWAY TO FINAL CONDITIONS
4. REMOVE ALL DETOURS, TRAFFIC CONTROL AND E&S MEASURES NOT NEEDED FOR NEXT PHASE

PHASE 6
1. PLACE PHASE 6 TEMPORARY TRAFFIC CONTROL MEASURES
2. REMOVE TEMPORARY CROSSOVER, GRADE TO FINAL CONDITIONS AND PLACE PERMANENT SEED AND MULCH
3. GRADE MEDIAN TO LIMITS OF THE PROJECT TO FINAL CONDTIONS AND PLACE PERMANENT SEED AND MULCH
4. REMOVE ALL TRAFFIC CONTROL AND E&S MEASURES

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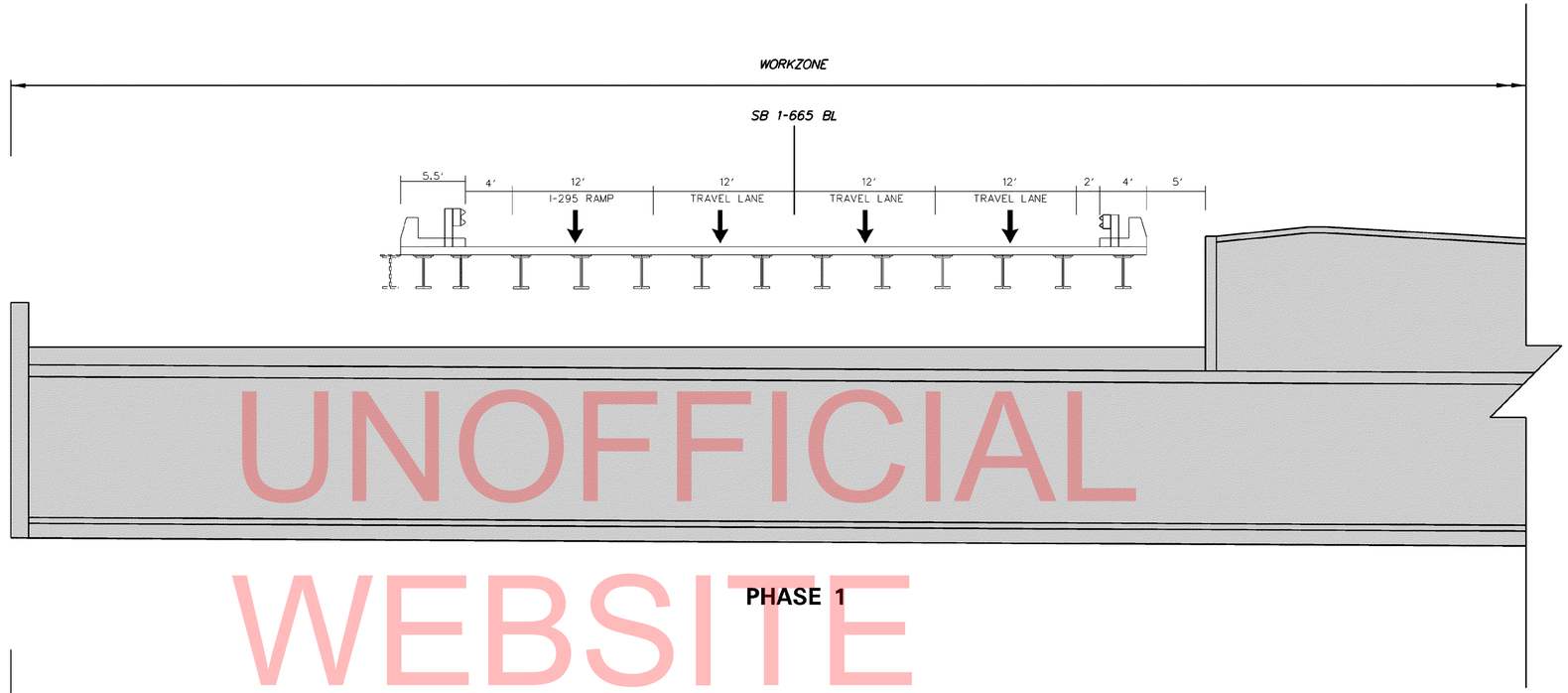
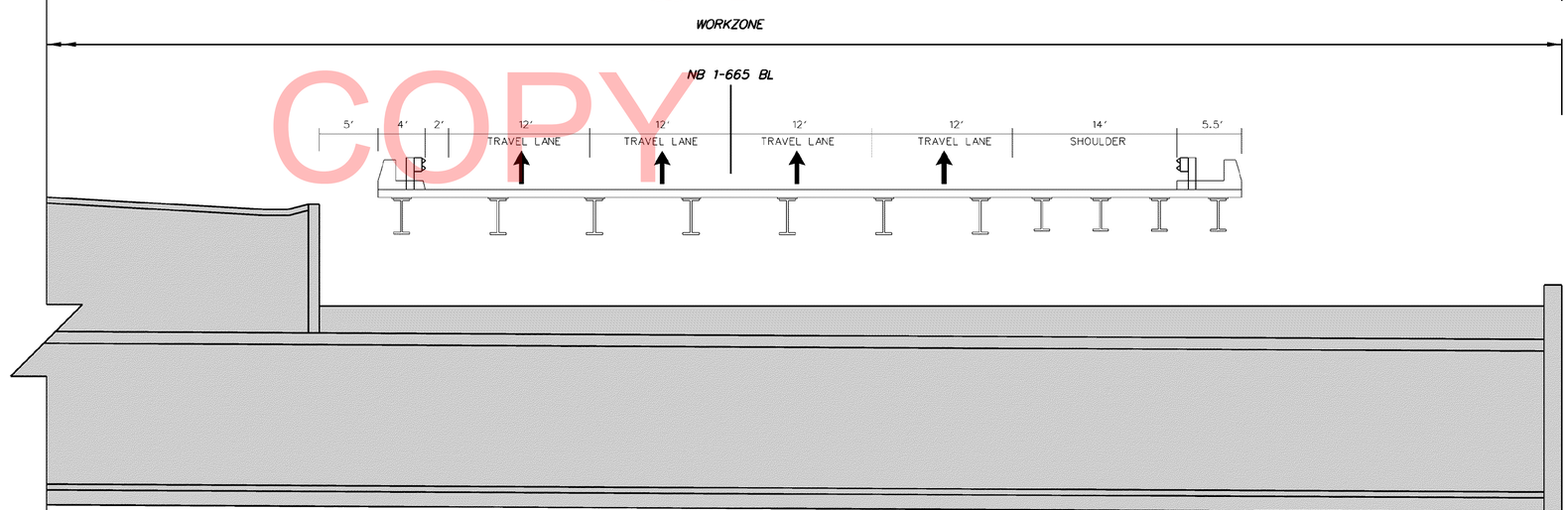


PHASE 1



PHASE 1

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2/28/2013
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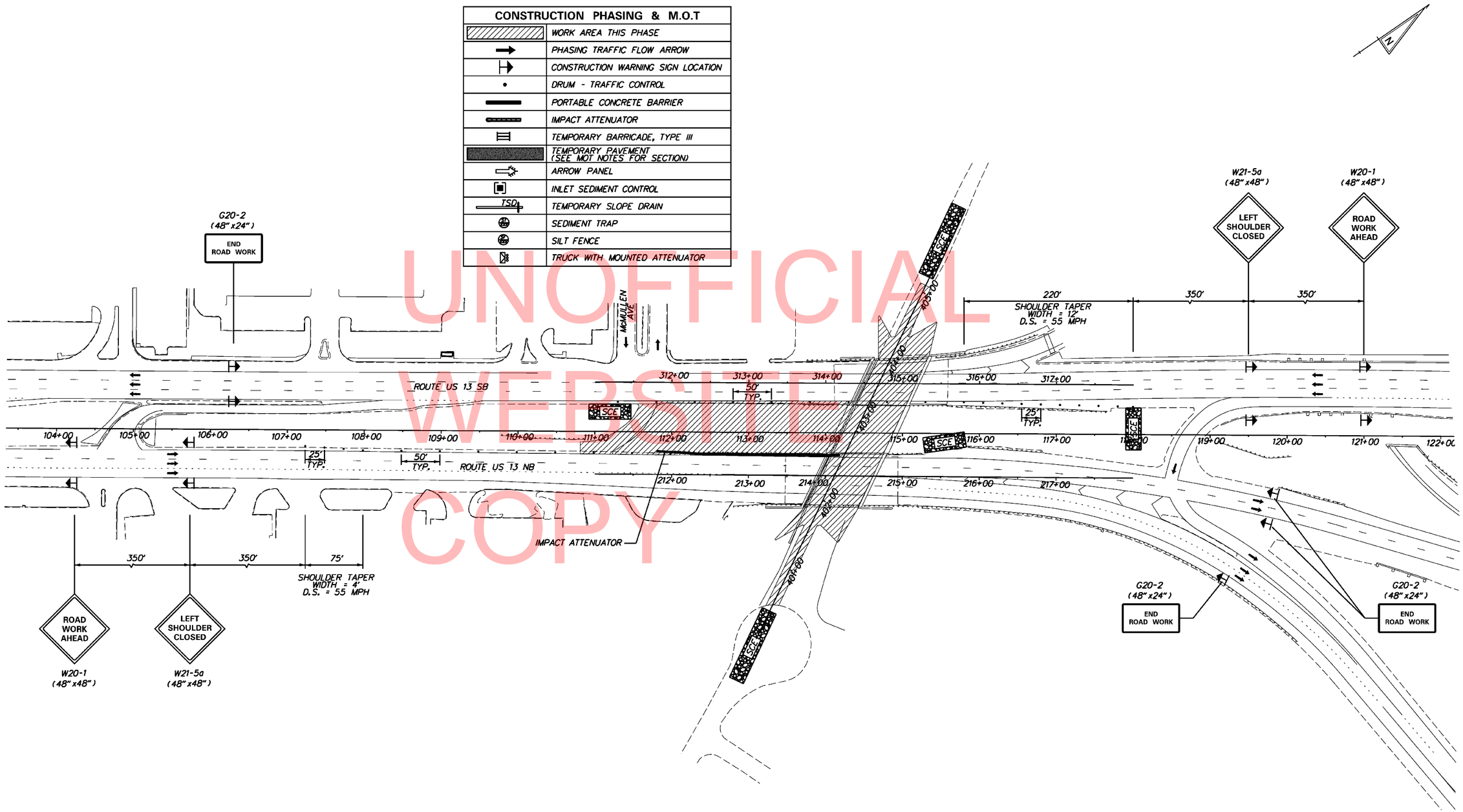
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1	CS-02	
				COUNTY NEW CASTLE	DESIGNED BY: TM		SHEET NO. 30	
					CHECKED BY: MAA		TOTAL SHTS. 62	

CONSTRUCTION PHASING & M.O.T
WORK AREA THIS PHASE
PHASING TRAFFIC FLOW ARROW
CONSTRUCTION WARNING SIGN LOCATION
DRUM - TRAFFIC CONTROL
PORTABLE CONCRETE BARRIER
IMPACT ATTENUATOR
TEMPORARY BARRICADE, TYPE III
TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
ARROW PANEL
INLET SEDIMENT CONTROL
TSD TEMPORARY SLOPE DRAIN
SEDIMENT TRAP
SILT FENCE
TRUCK WITH MOUNTED ATTENUATOR



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4/8/2013
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

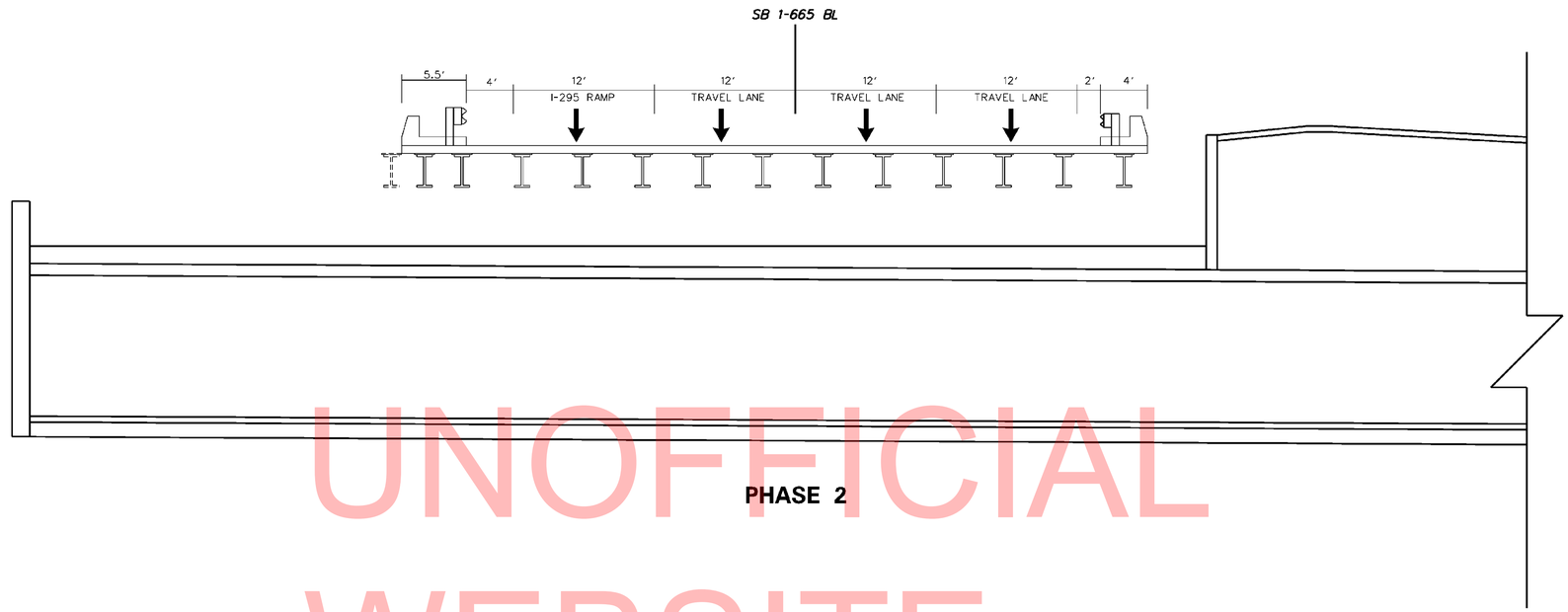
SCALE
0 60 120 180
FEET

BR 1-665N AND 1-665S
CARRYING US 13 OVER
BAYLOR BOULEVARD

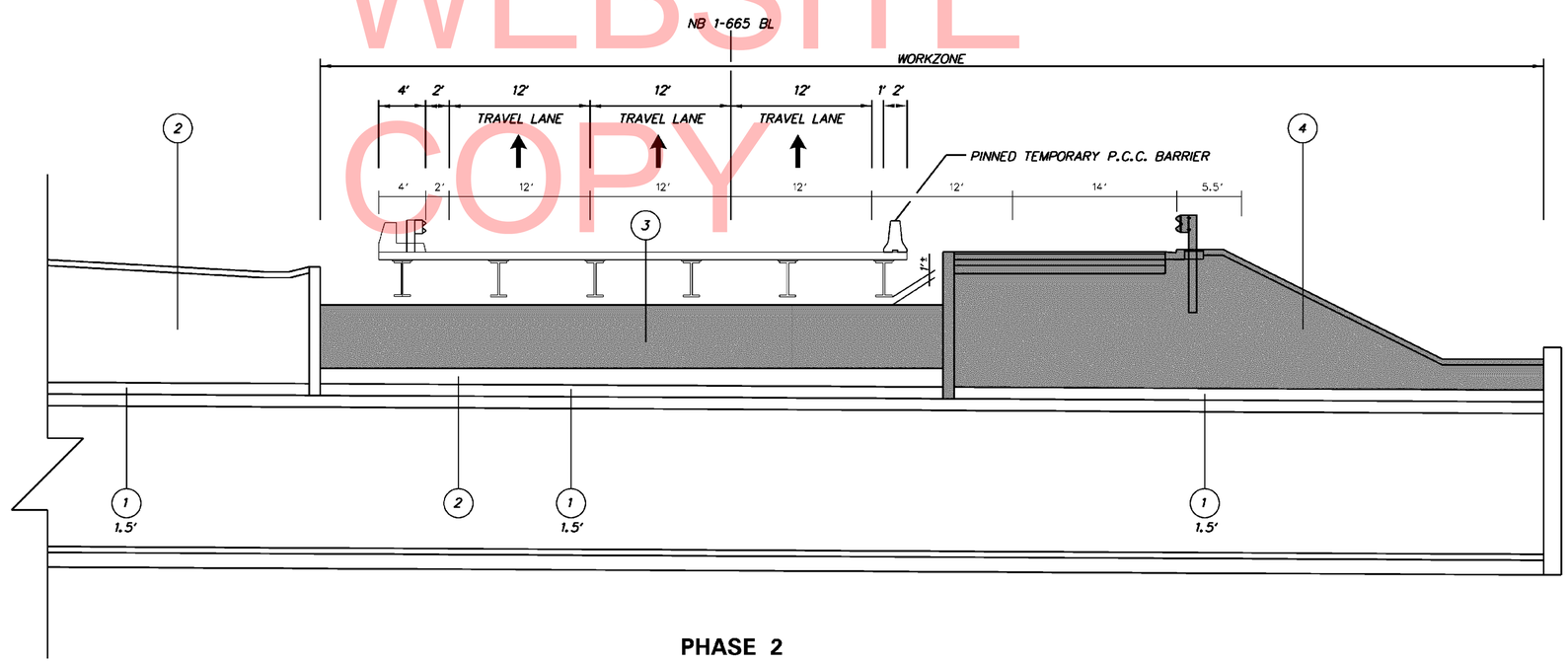
CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 1

CS-03
SHEET NO.
31
TOTAL SHTS.
62



PHASE 2



PHASE 2

1. BORROW, TYPE C (ITEM 209003) OR FURNISHING BORROW, TYPE C (ITEM 210000)
   - BORROW PLACED WITH CULVERT INSTALLATION DURING PHASE 1 CONSTRUCTION.
2. BORROW, TYPE F (ITEM 209006)
   - BORROW TYPE F PLACED DURING PHASE 1 CONSTRUCTION.
3. FLOWABLE FILL (ITEM 208001)
   - PLACE FLOWABLE FILL TO APPROXIMATELY 1' BELOW EXISTING BEAMS.
   - CONTAIN FLOWABLE FILL USING TEMPORARY FORMWORK.
   - SEE SHEET ST-05 FOR LIMITS OF FLOWABLE FILL.
4. BORROW, TYPE F (ITEM 209006)
   - PLACE BORROW TYPE F TO BOTTOM OF ROADWAY SUBBASE AND BOTTOM OF TOPSOIL.

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2	CS-04	SHEET NO. 32
				COUNTY NEW CASTLE	DESIGNED BY: TM			TOTAL SHTS. 62
					CHECKED BY: MAA			

2/28/2013
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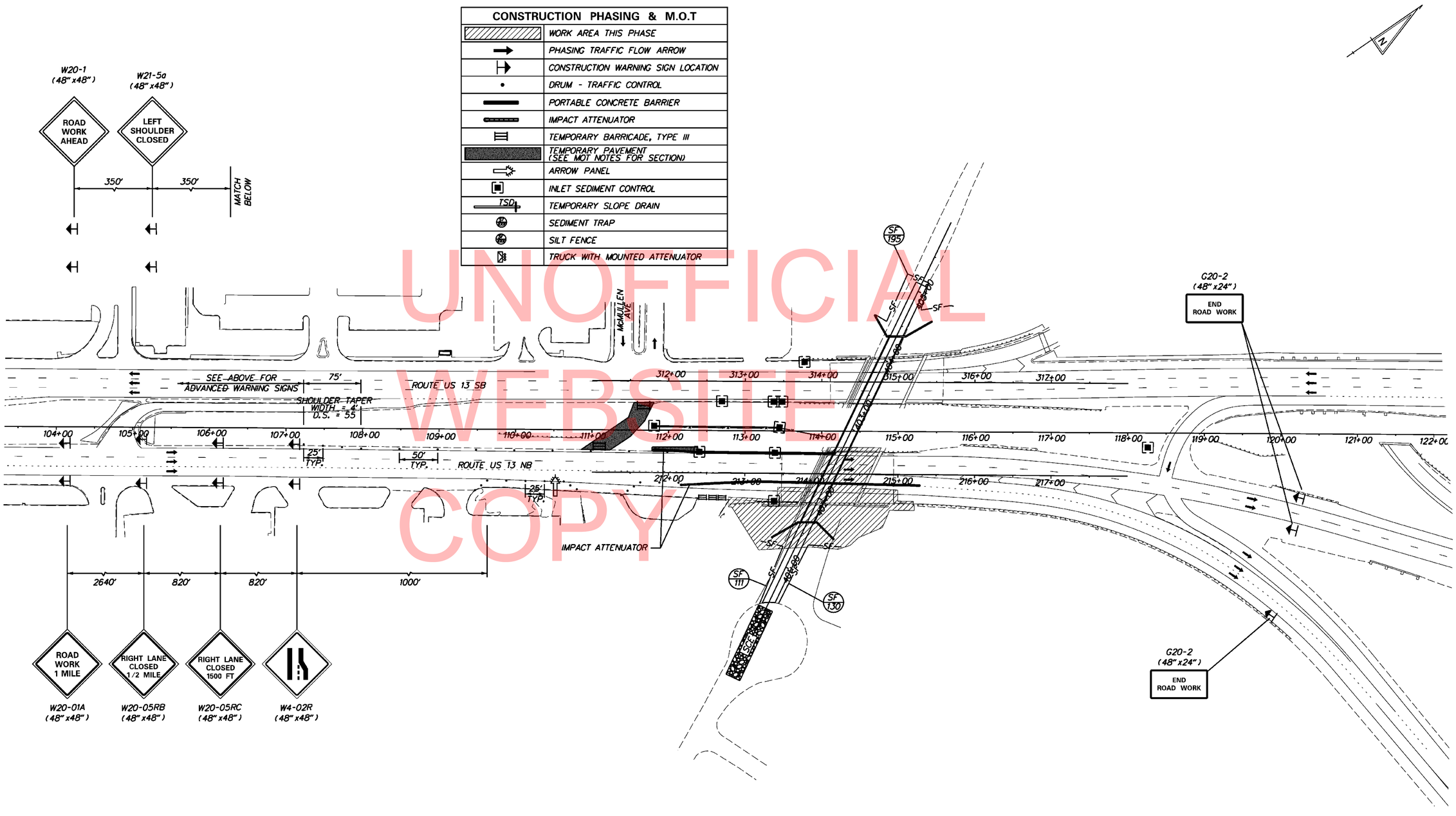
CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 2

CS-05
SHEET NO. 33
TOTAL SHTS. 62

2/28/2013
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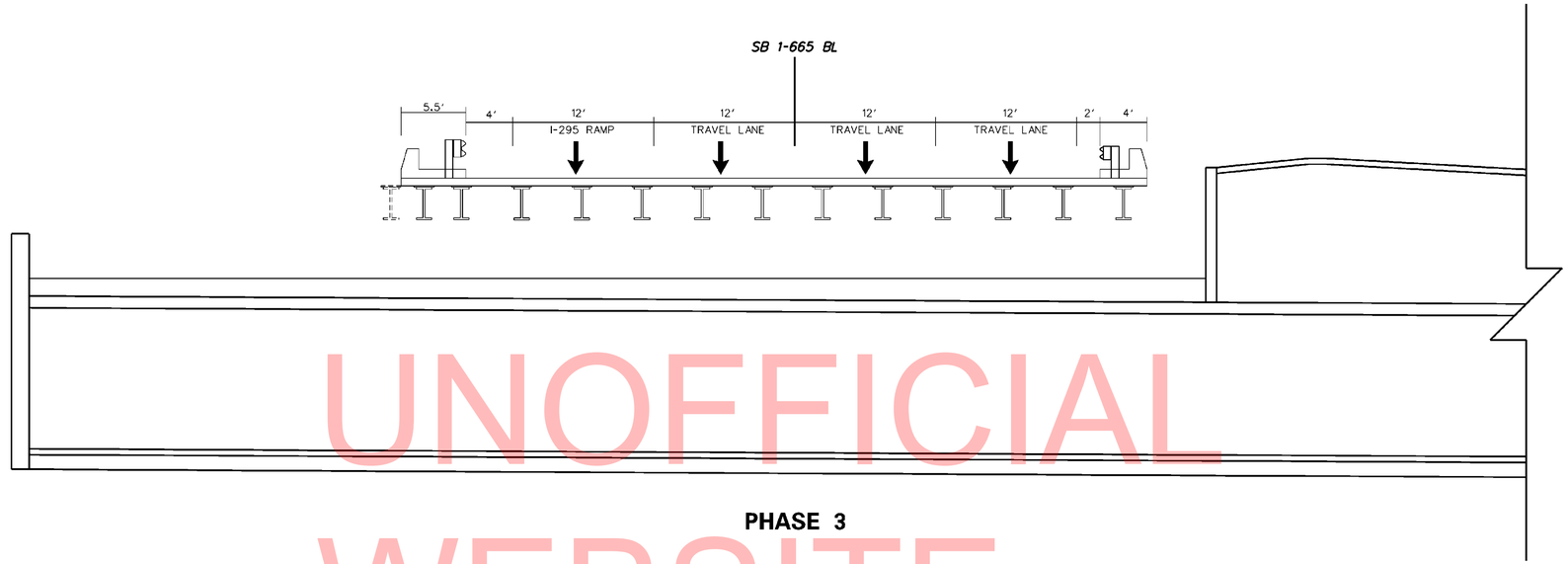
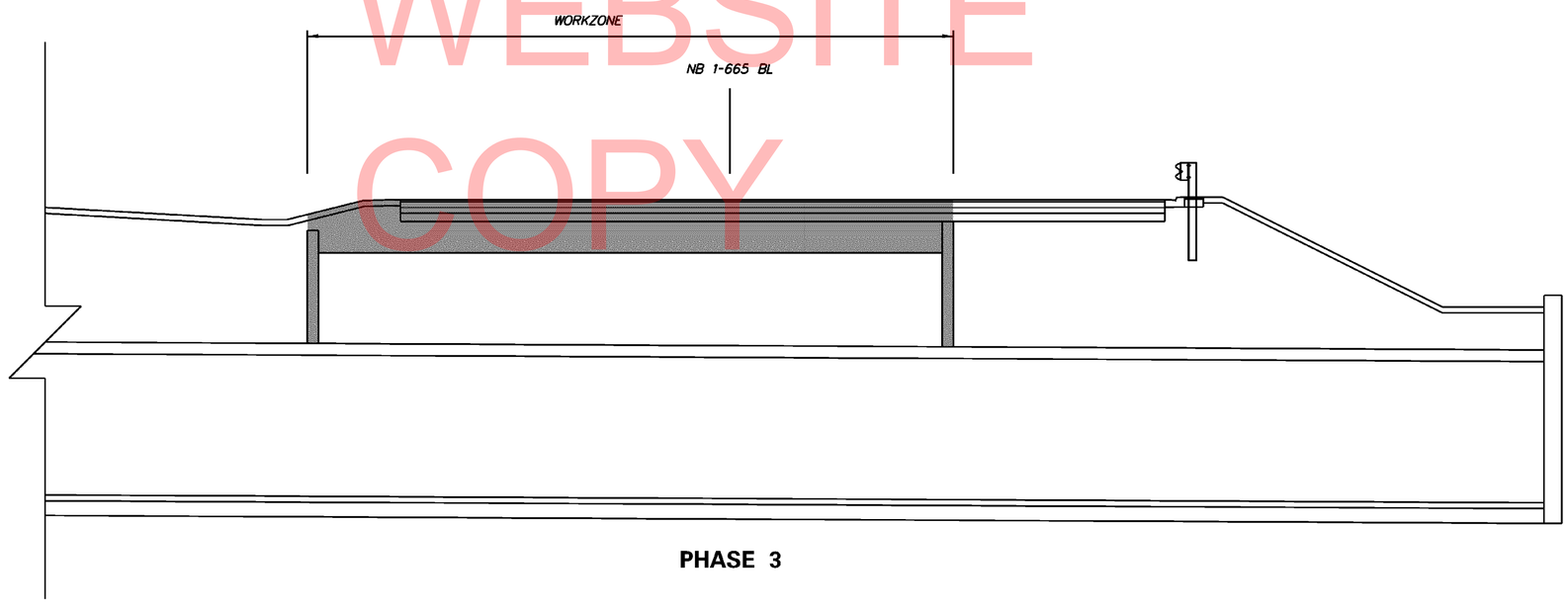


PHASE 3



PHASE 3

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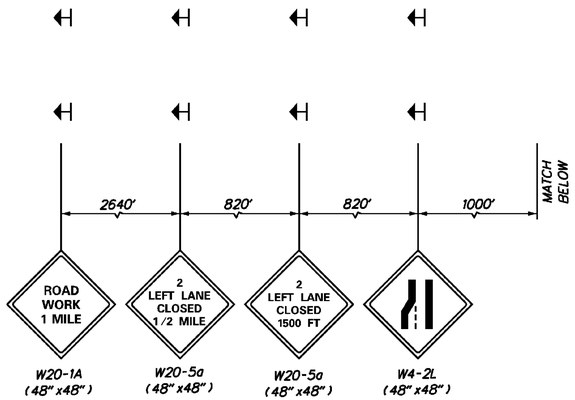
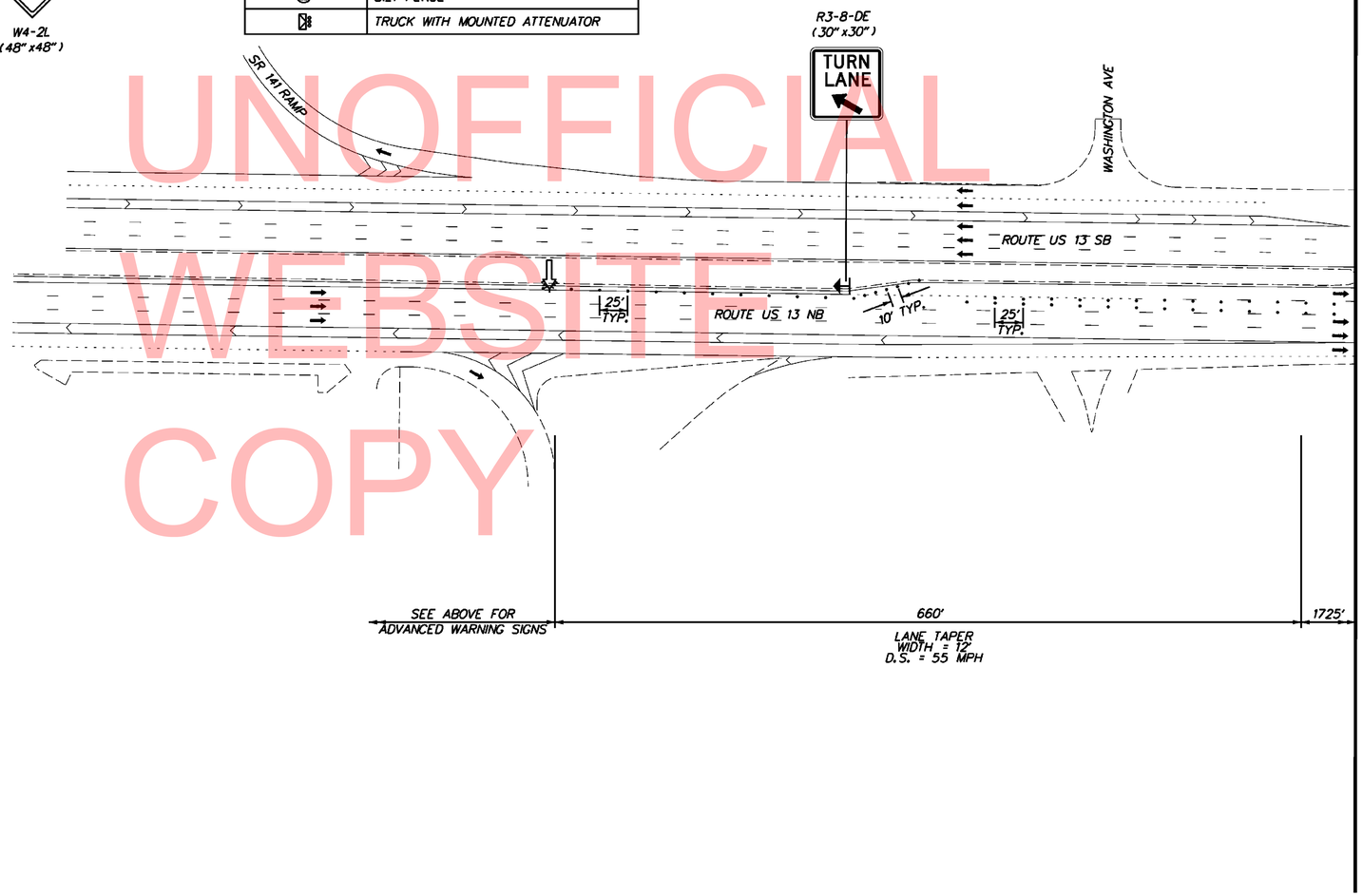
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 3	CS-06	SHEET NO. 34
				COUNTY NEW CASTLE	DESIGNED BY: TM			TOTAL SHTS. 62
					CHECKED BY: MAA			



ADVANCED WARNING SIGNS

CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 3

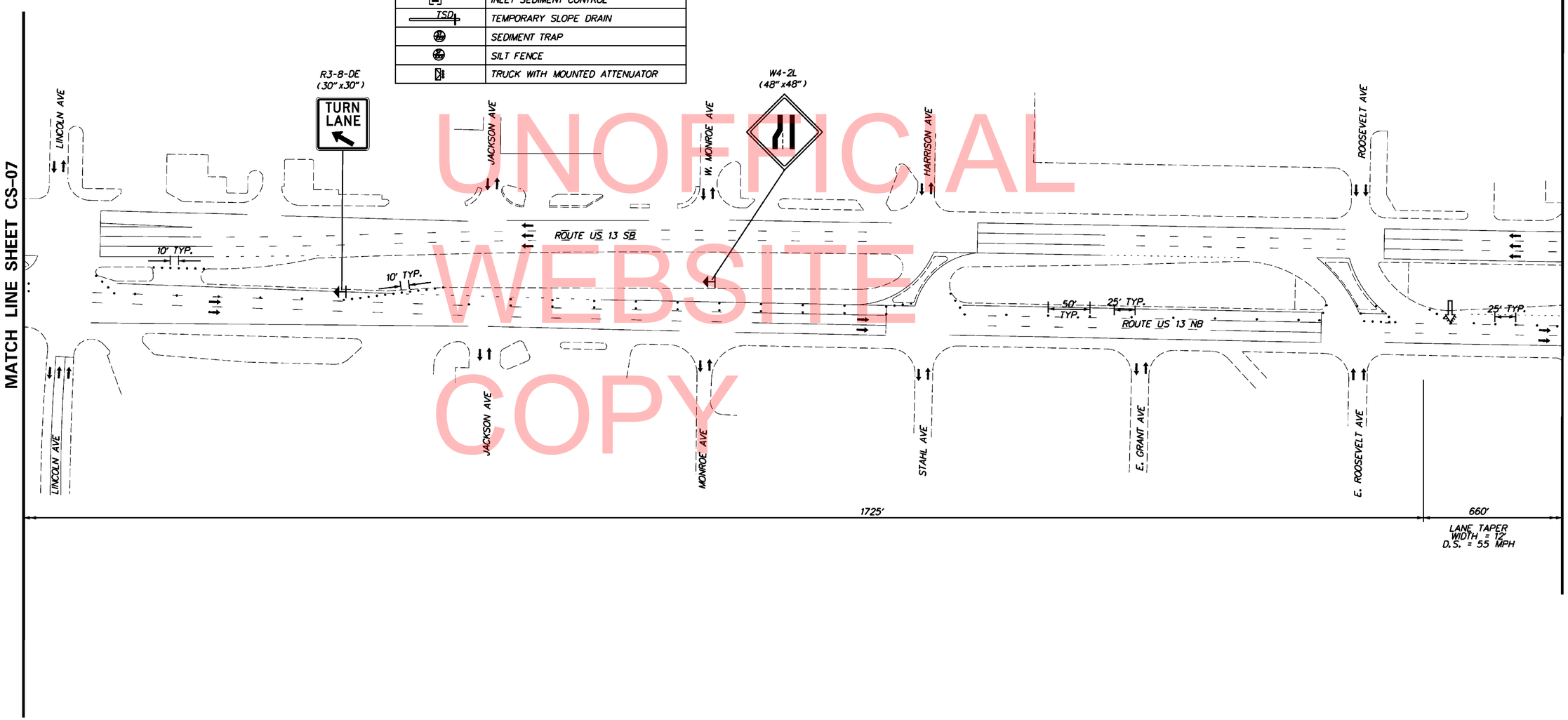
CS-07

SHEET NO. 35

TOTAL SHTS. 62

2/28/2013
...\PSF Plans\CS005a_BR 1-665.dgn

CONSTRUCTION PHASING & M.O.T
WORK AREA THIS PHASE
PHASING TRAFFIC FLOW ARROW
CONSTRUCTION WARNING SIGN LOCATION
DRUM - TRAFFIC CONTROL
PORTABLE CONCRETE BARRIER
IMPACT ATTENUATOR
TEMPORARY BARRICADE, TYPE III
TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
ARROW PANEL
INLET SEDIMENT CONTROL
TSD TEMPORARY SLOPE DRAIN
SEDIMENT TRAP
SILT FENCE
TRUCK WITH MOUNTED ATTENUATOR



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 3

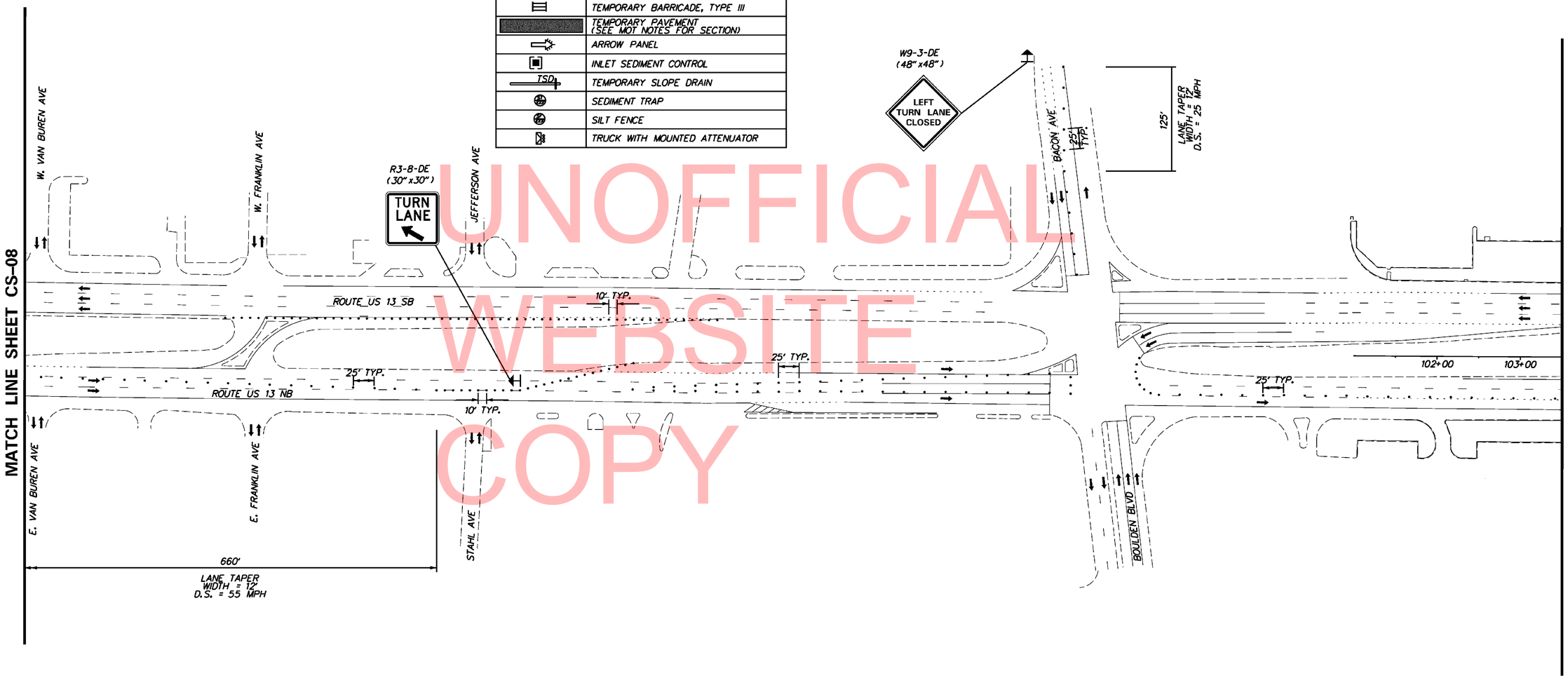
CS-08

SHEET NO. 36

TOTAL SHTS. 62

2/28/2013
...\PSE Plans\CS006_BR 1-665.dgn

CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

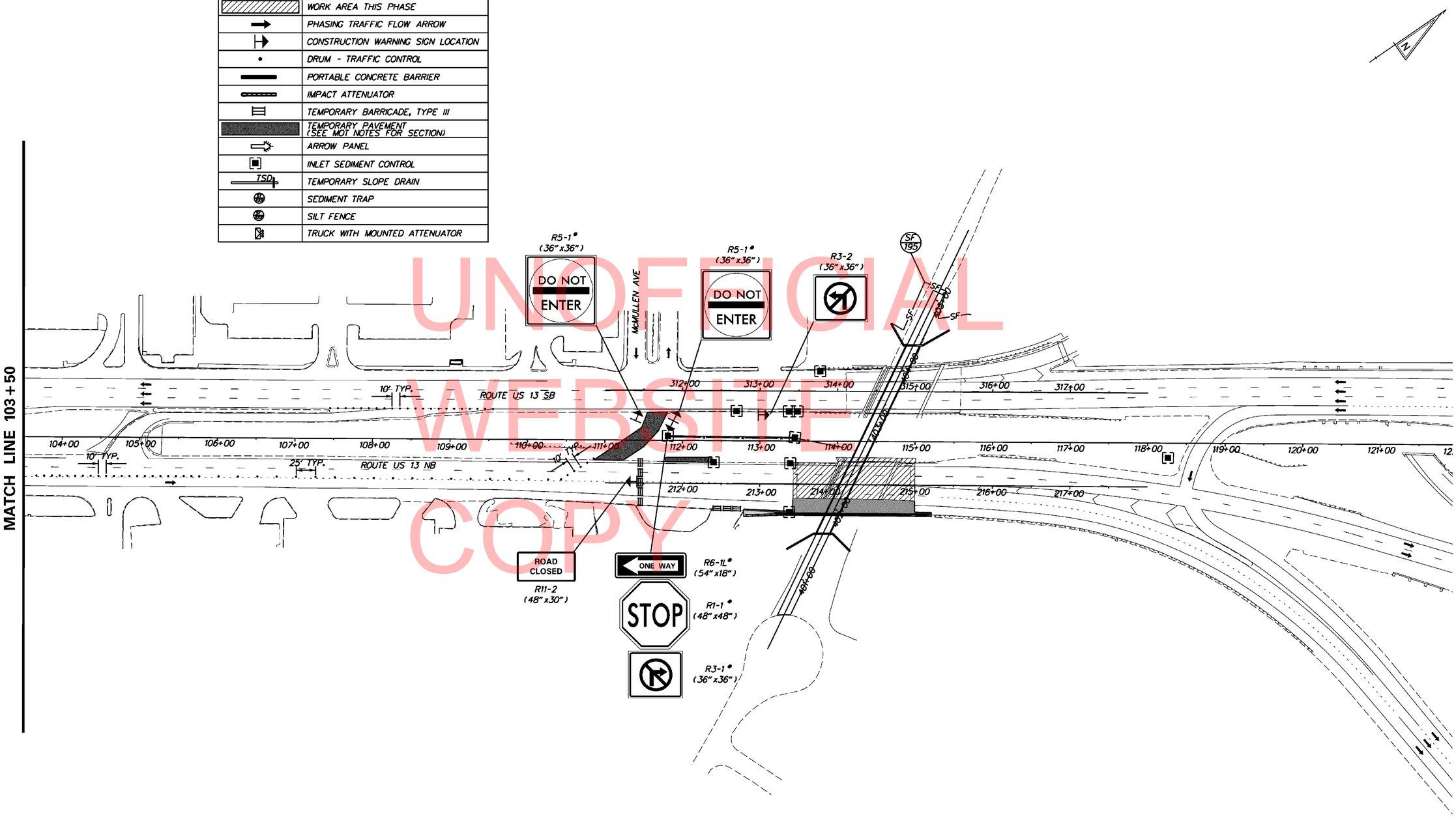
CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 3

CS-09
SHEET NO. 37
TOTAL SHTS. 62

2/28/2013
...\PSF Plans\CS007_BR 1-665.dgn

CONSTRUCTION PHASING & M.O.T
WORK AREA THIS PHASE
PHASING TRAFFIC FLOW ARROW
CONSTRUCTION WARNING SIGN LOCATION
DRUM - TRAFFIC CONTROL
PORTABLE CONCRETE BARRIER
IMPACT ATTENUATOR
TEMPORARY BARRICADE, TYPE III
TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
ARROW PANEL
INLET SEDIMENT CONTROL
TSD TEMPORARY SLOPE DRAIN
SEDIMENT TRAP
SILT FENCE
TRUCK WITH MOUNTED ATTENUATOR



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* CONTRACTOR SHALL COVER OR REMOVE SIGNS DURING PHASE 4 CONSTRUCTION

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 60 120 180 FEET	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 3	CS-10	
				COUNTY NEW CASTLE	DESIGNED BY: TM		SHEET NO. 38	
					CHECKED BY: MAA		TOTAL SHTS. 62	

2/28/2013
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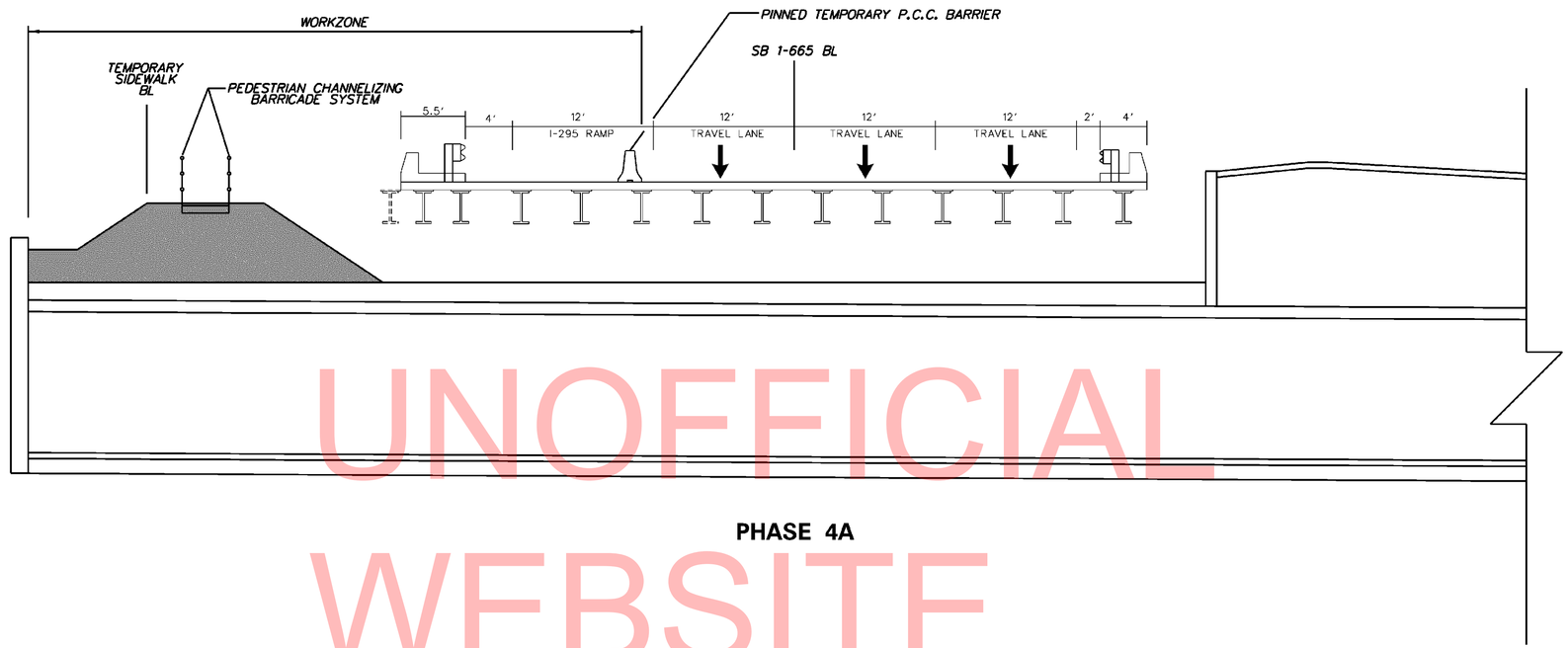
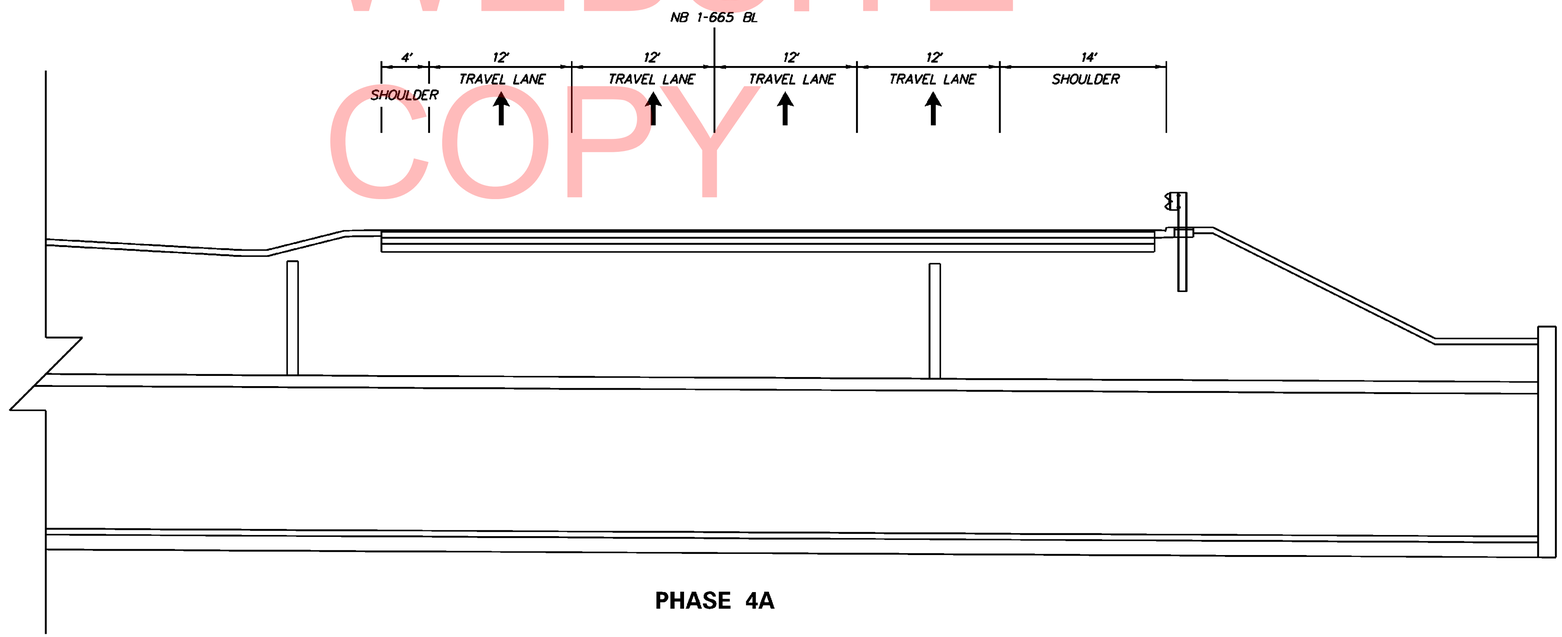


PHASE 4A



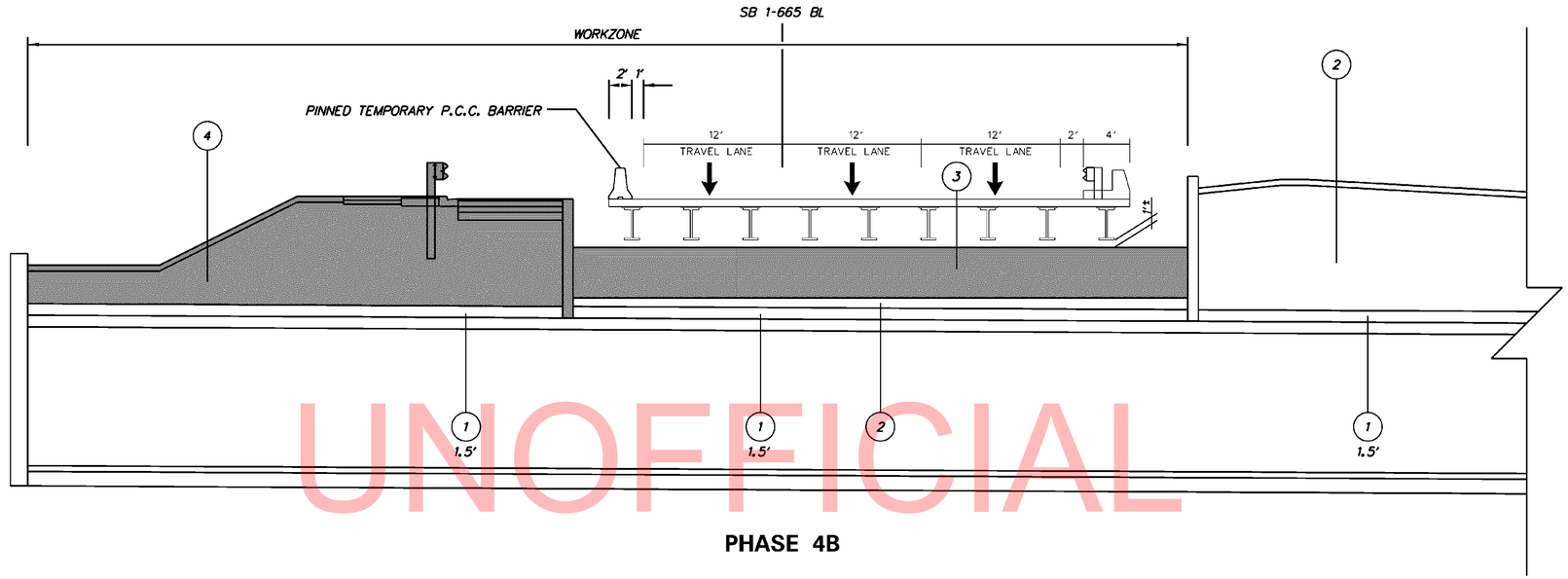
PHASE 4A

UNOFFICIAL WEBSITE COPY

CS-11

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 4	SHEET NO. 39
				COUNTY NEW CASTLE	DESIGNED BY: TM		TOTAL SHTS. 62
					CHECKED BY: MAA		

4/9/2013
...\PSE Plans\CS008a_BR 1-665.dgn



PHASE 4B

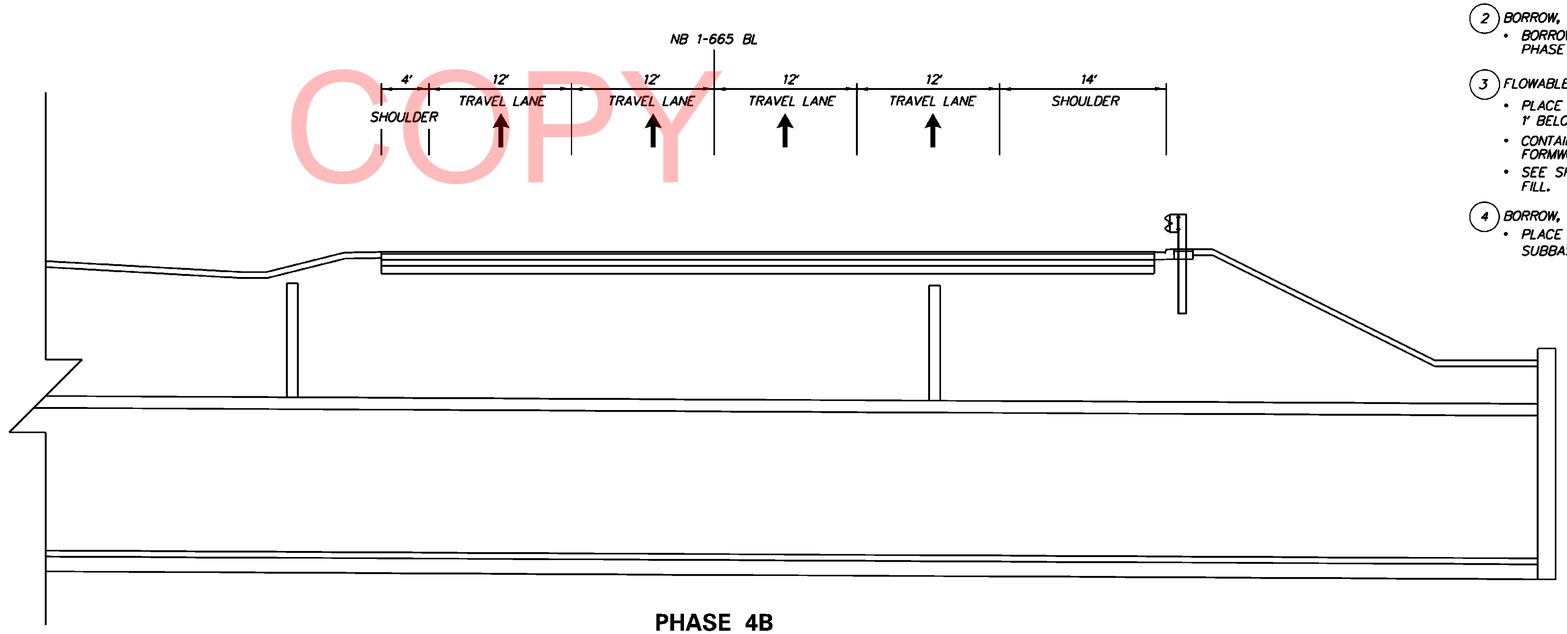
UNOFFICIAL WEBSITE COPY

(1) BORROW, TYPE C (ITEM 209003) OR FURNISHING BORROW, TYPE C (ITEM 210000)
- BORROW PLACED WITH CULVERT INSTALLATION DURING PHASE 1 CONSTRUCTION.

(2) BORROW, TYPE F (ITEM 209006)
- BORROW TYPE F PLACED DURING PHASE 1 CONSTRUCTION.

(3) FLOWABLE FILL (ITEM 208001)
- PLACE FLOWABLE FILL TO APPROXIMATELY 1' BELOW EXISTING BEAMS.
- CONTAIN FLOWABLE FILL USING TEMPORARY FORMWORK.
- SEE SHEET ST-05 FOR LIMITS OF FLOWABLE FILL.

(4) BORROW, TYPE F (ITEM 209006)
- PLACE BORROW TYPE F TO BOTTOM OF ROADWAY SUBBASE AND BOTTOM OF TOPSOIL.



PHASE 4B

NOTE: SEE UTILITY STATEMENT FOR LIMITATIONS ON BRIDGE REMOVAL

CS-12

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 4	SHEET NO. 40
				COUNTY NEW CASTLE	DESIGNED BY: TM		TOTAL SHTS. 62
					CHECKED BY: MAA		

4/8/2013
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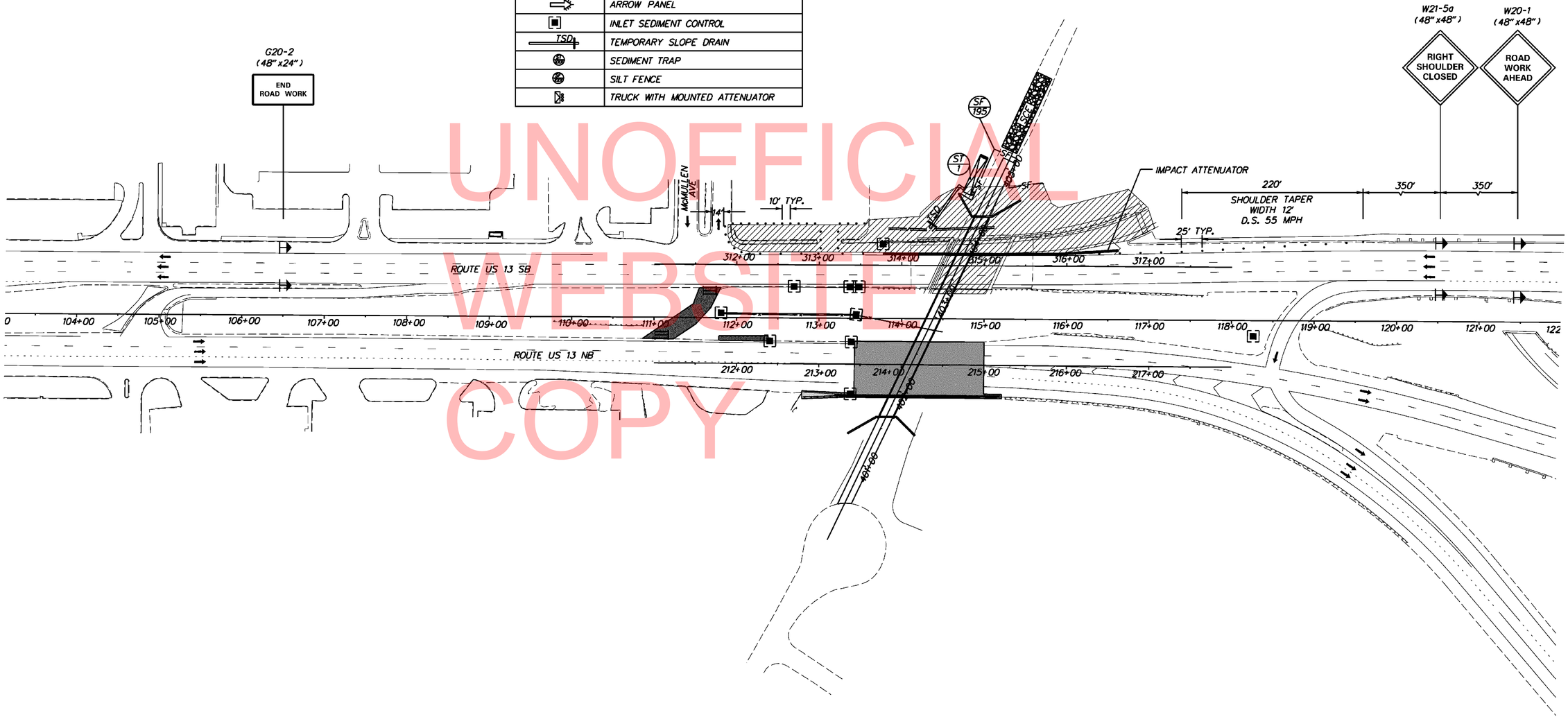
SEDIMENT TRAP SCHEDULE

NO.	D. AREA	LENGTH	WIDTH	DEPTH	OUT. TYPE	OUT. EL.	CLEAN EL.
1	2.50	30.00'	15.00'	4.00'	STONE	43.00'	41.00'

NOTE: DUE TO SIZE RESTRICTIONS FROM EXISTING TOPOGRAPHY, SEDIMENT TRAP WILL REQUIRE ADDITIONAL CLEANING

CONSTRUCTION PHASING & M.O.T

	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

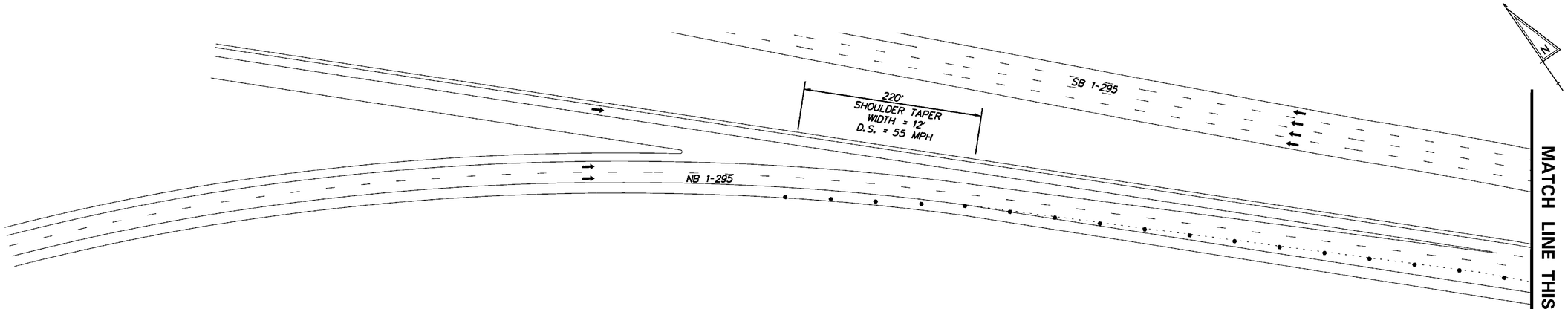
BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 4

	CS-13
SHEET NO.	41
TOTAL SHTS.	62

2/28/2013
...\PSF Plans\CS010_BR 1-665.dgn



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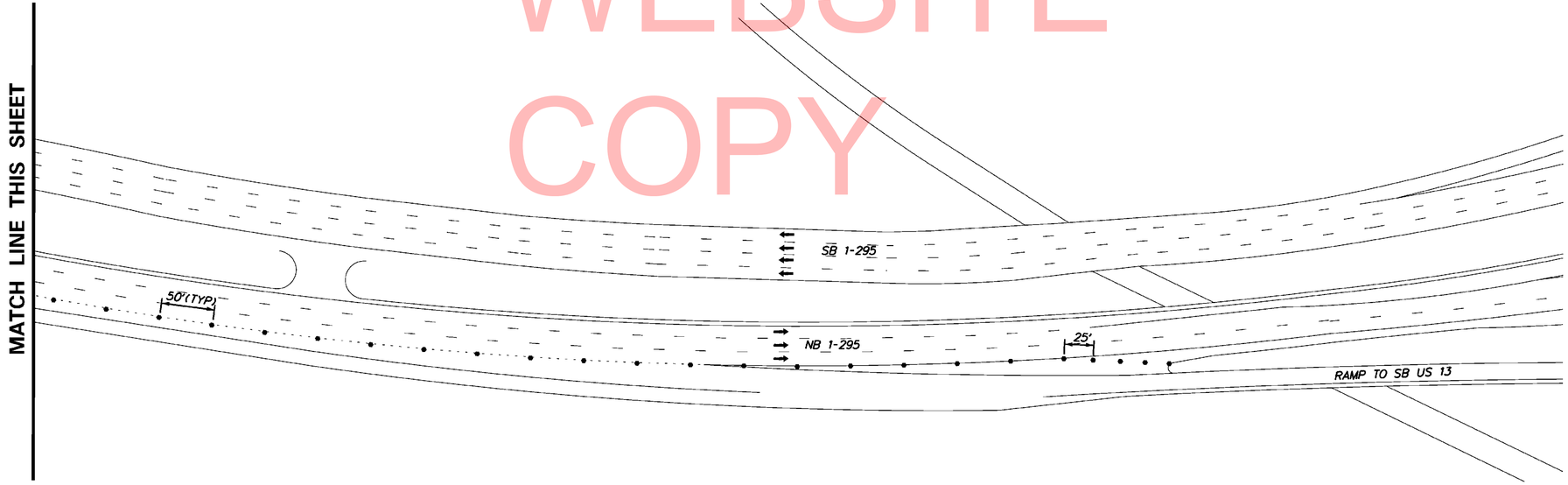

CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR

CS–14

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

BR 1–665N AND 1–665S
CARRYING US 13 OVER
BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1–665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 4

SHEET NO.	TOTAL SHTS.
42	62

2/28/2013
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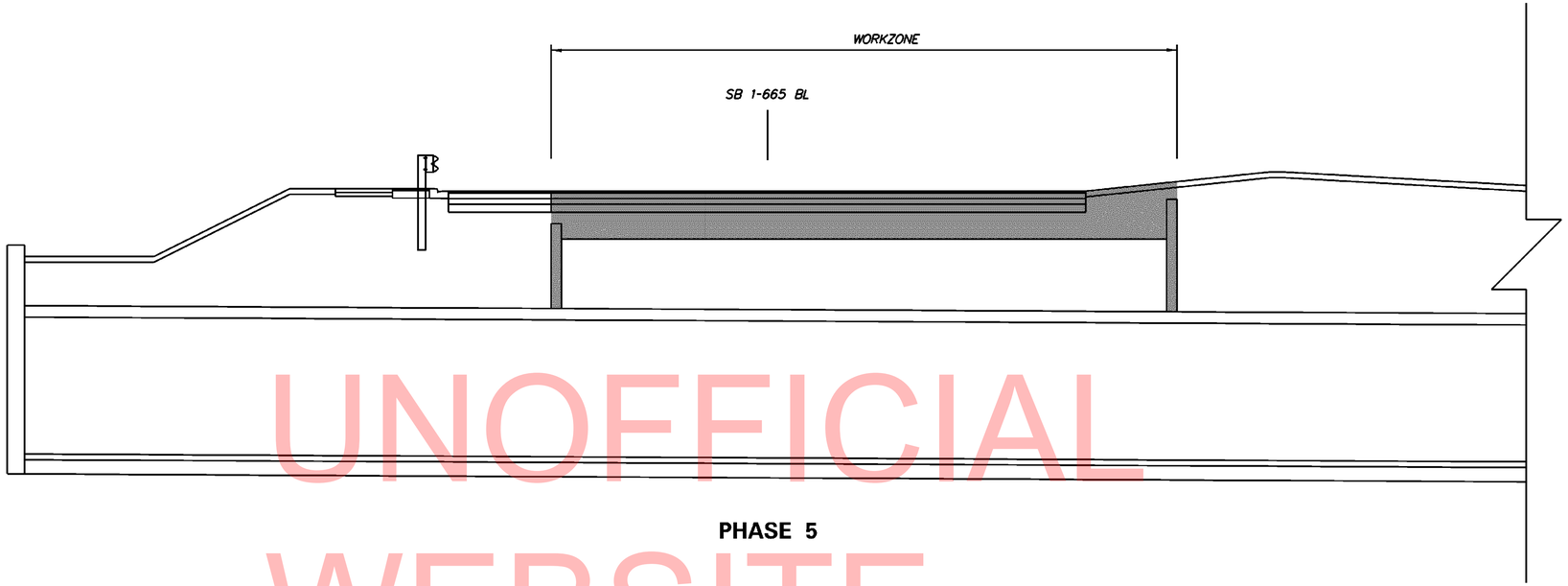
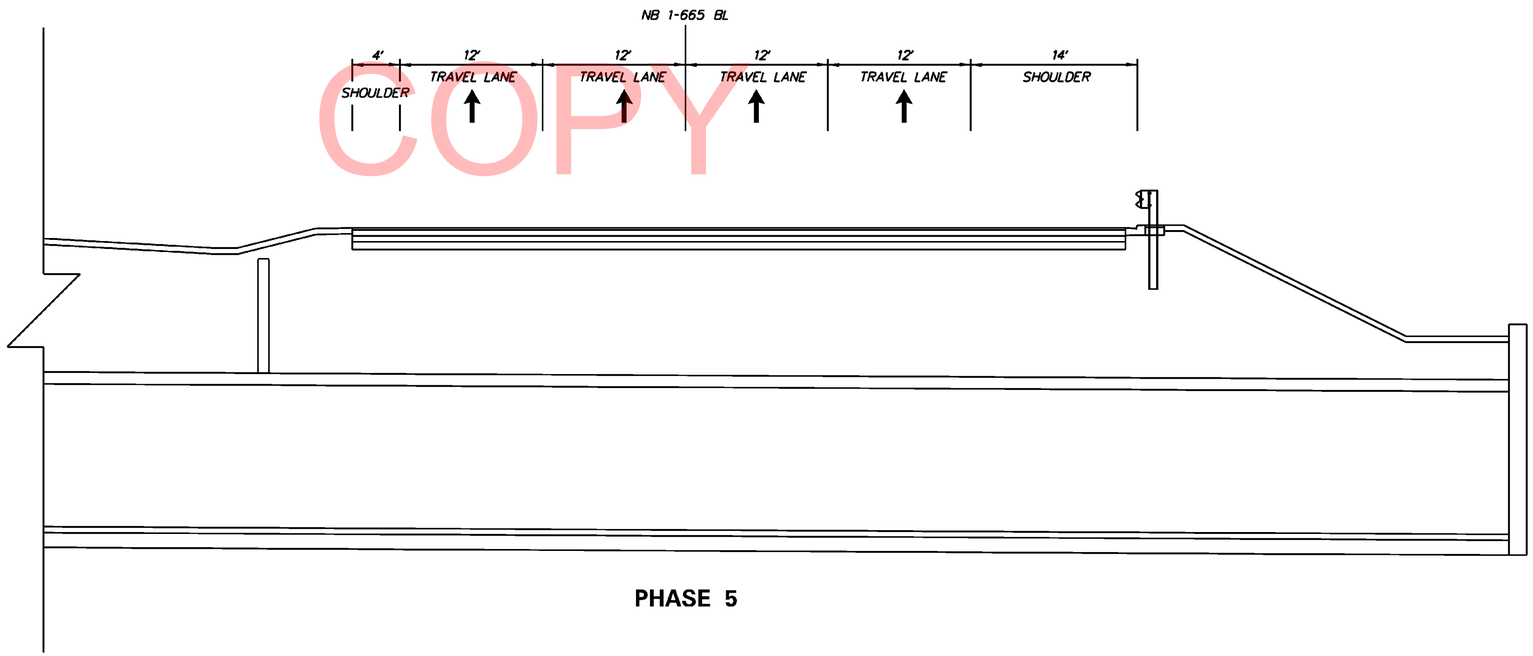


PHASE 5



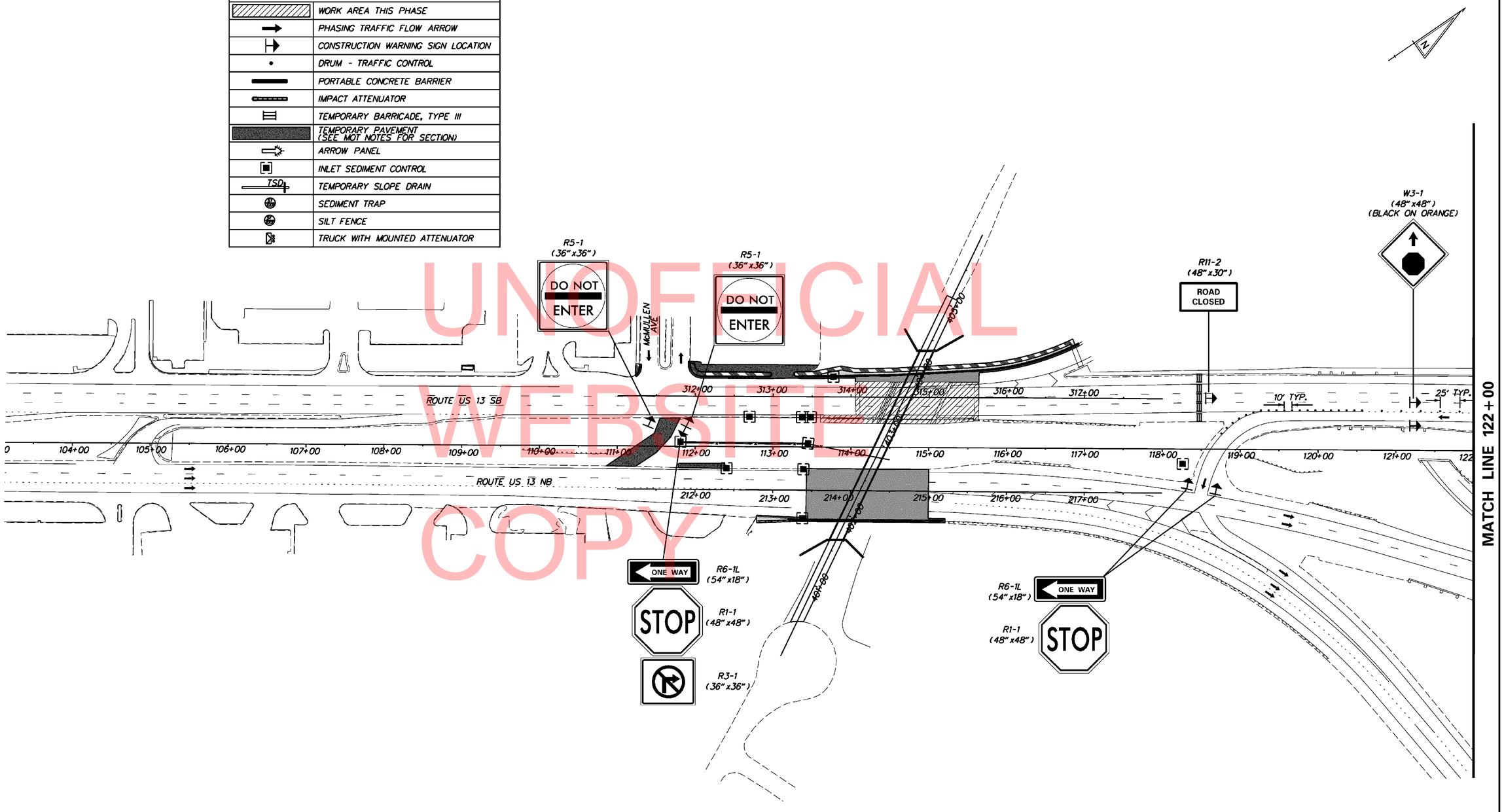
PHASE 5

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401	BRIDGE NO. 1-665	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 5	CS-15	
				COUNTY NEW CASTLE	DESIGNED BY: TM		SHEET NO. 43	
					CHECKED BY: MAA		TOTAL SHTS. 62	

2/28/2013
...\PSF Plans\CS011 BR 1-665.dgn

CONSTRUCTION PHASING & M.O.T
WORK AREA THIS PHASE
PHASING TRAFFIC FLOW ARROW
CONSTRUCTION WARNING SIGN LOCATION
DRUM - TRAFFIC CONTROL
PORTABLE CONCRETE BARRIER
IMPACT ATTENUATOR
TEMPORARY BARRICADE, TYPE III
TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
ARROW PANEL
INLET SEDIMENT CONTROL
TSD TEMPORARY SLOPE DRAIN
SEDIMENT TRAP
SILT FENCE
TRUCK WITH MOUNTED ATTENUATOR



UNOFFICIAL WEBSITE COPY

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

BR 1-665N AND 1-665S
CARRYING US 13 OVER
BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 5

CS-16
SHEET NO. 44
TOTAL SHTS. 62

2/28/2013
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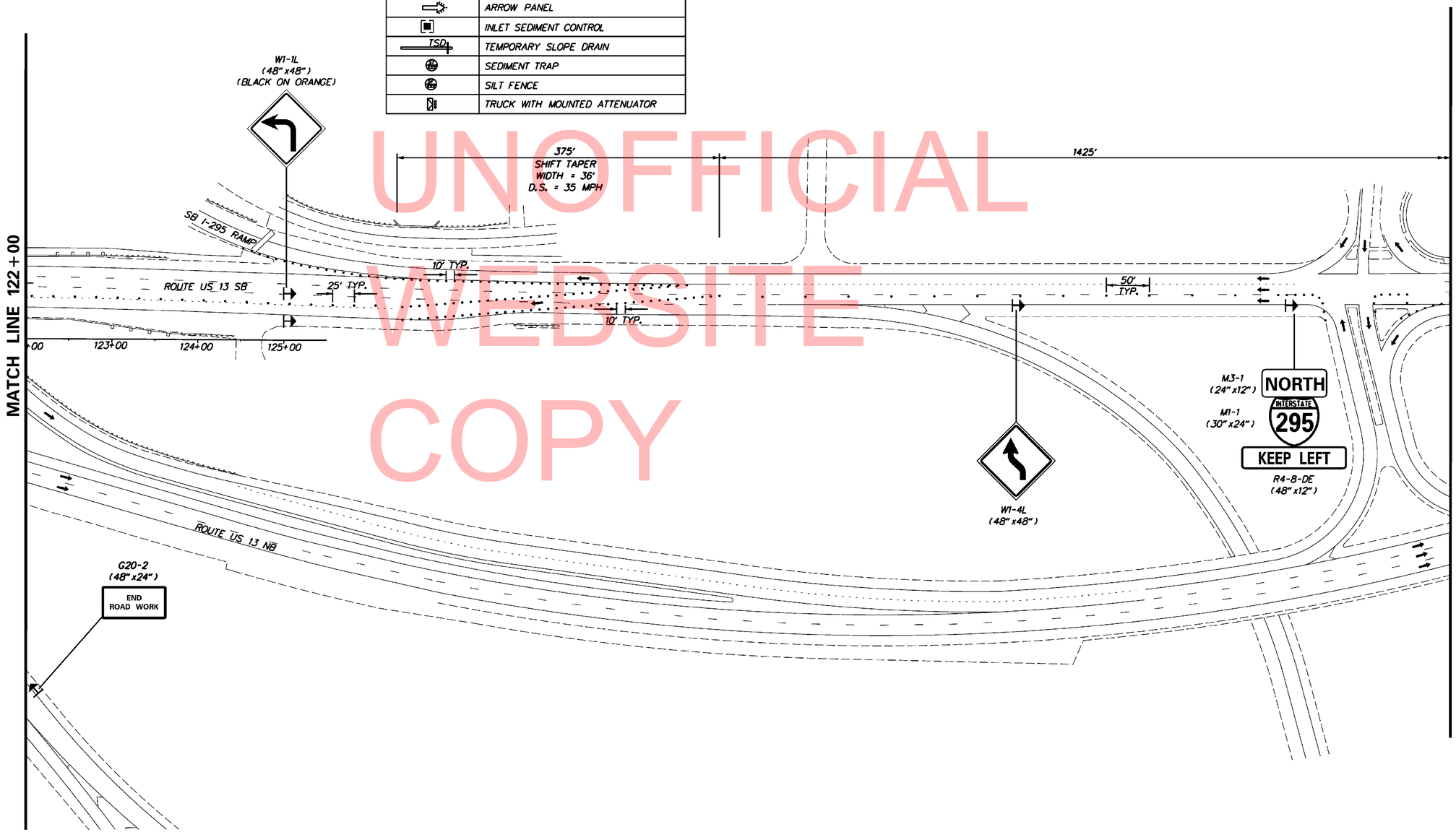
CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



UNOFFICIAL WEBSITE COPY

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

BR 1-665N AND 1-665S
CARRYING US 13 OVER
BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 5

CS-17
SHEET NO.
45
TOTAL SHTS.
62

2/28/2013
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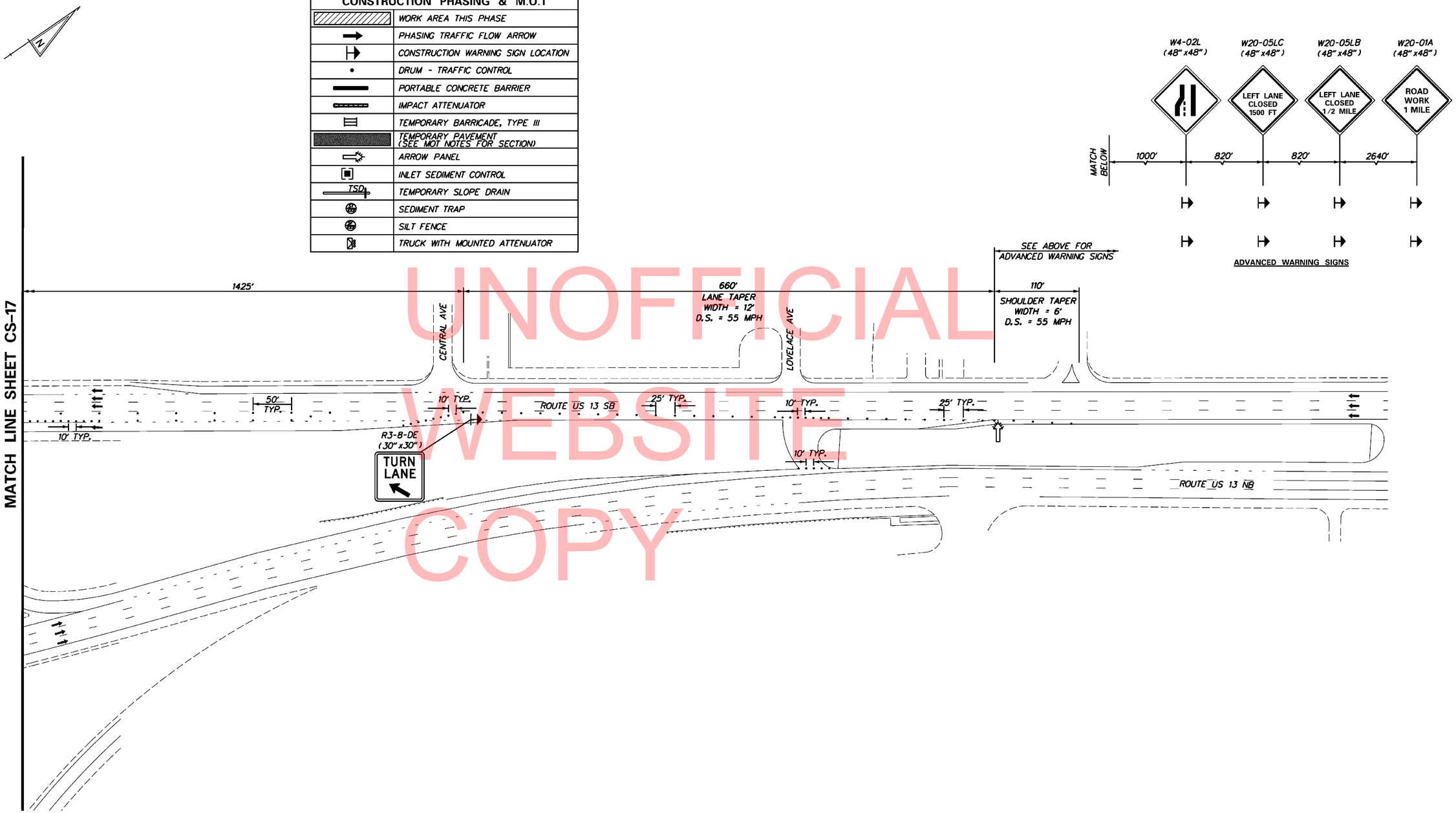
CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



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CS-18

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 5

SHEET NO. 46

TOTAL SHTS. 62

2/28/2013
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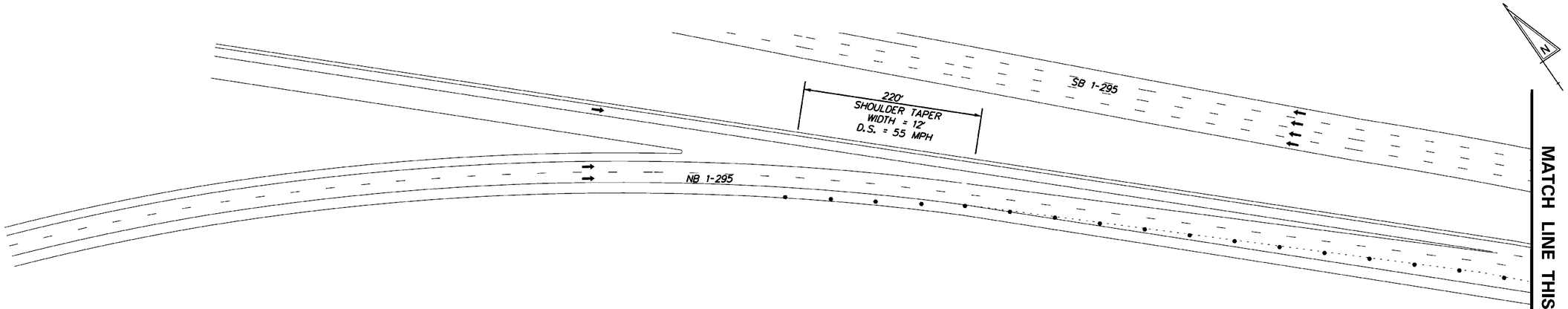

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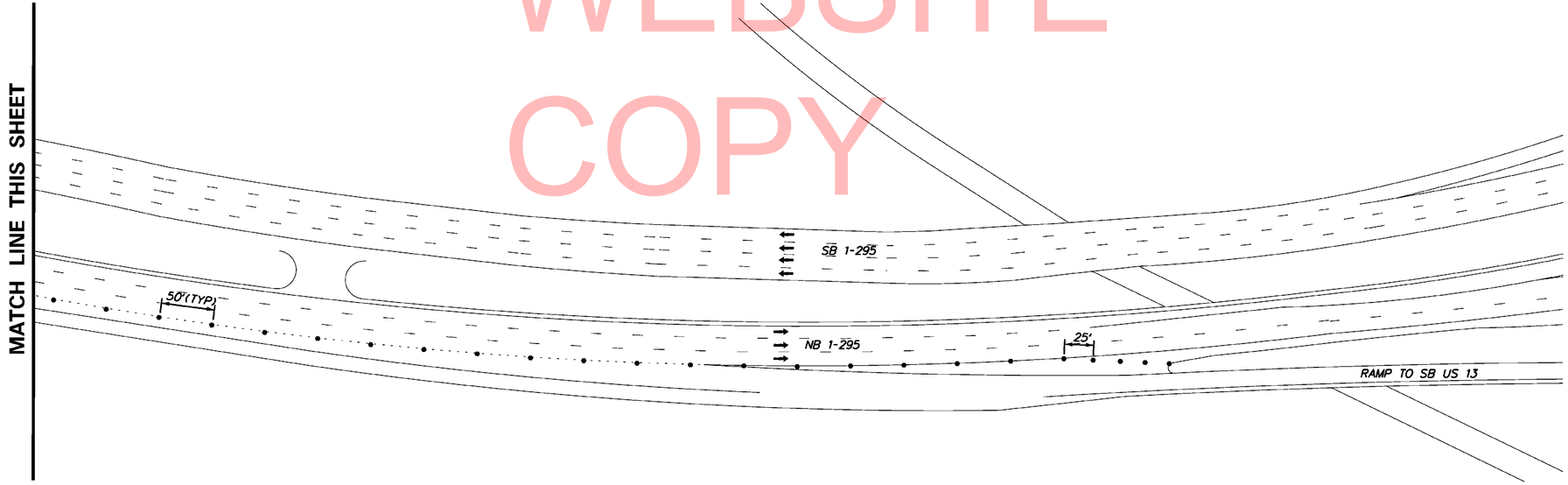

CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR

DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE
0 60 120 180
FEET

BR 1-665N AND 1-665S
CARRYING US 13 OVER
BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 5

CS-19
SHEET NO. 47
TOTAL SHTS. 62

2/28/2013
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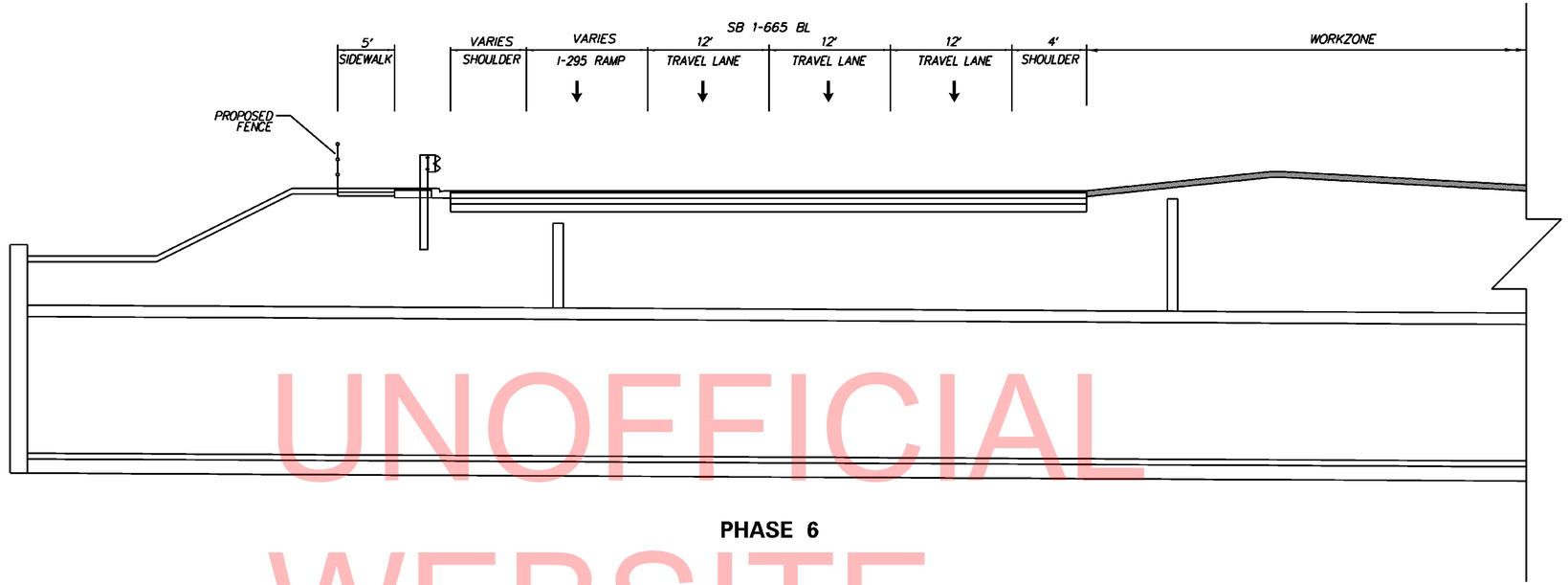
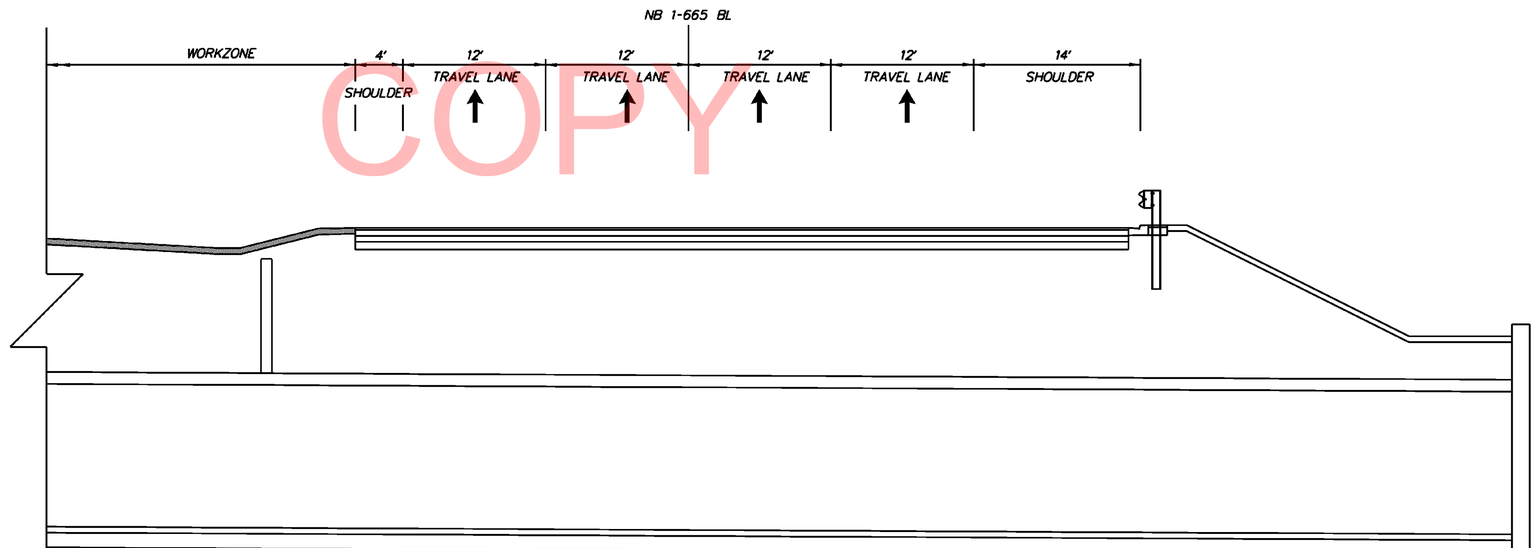


PHASE 6



PHASE 6

UNOFFICIAL WEBSITE COPY

CS-20

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NTS	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401 / COUNTY NEW CASTLE	BRIDGE NO. 1-665 / DESIGNED BY: TM / CHECKED BY: MAA	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 6	SHEET NO. 48 / TOTAL SHTS. 62

2/28/2013
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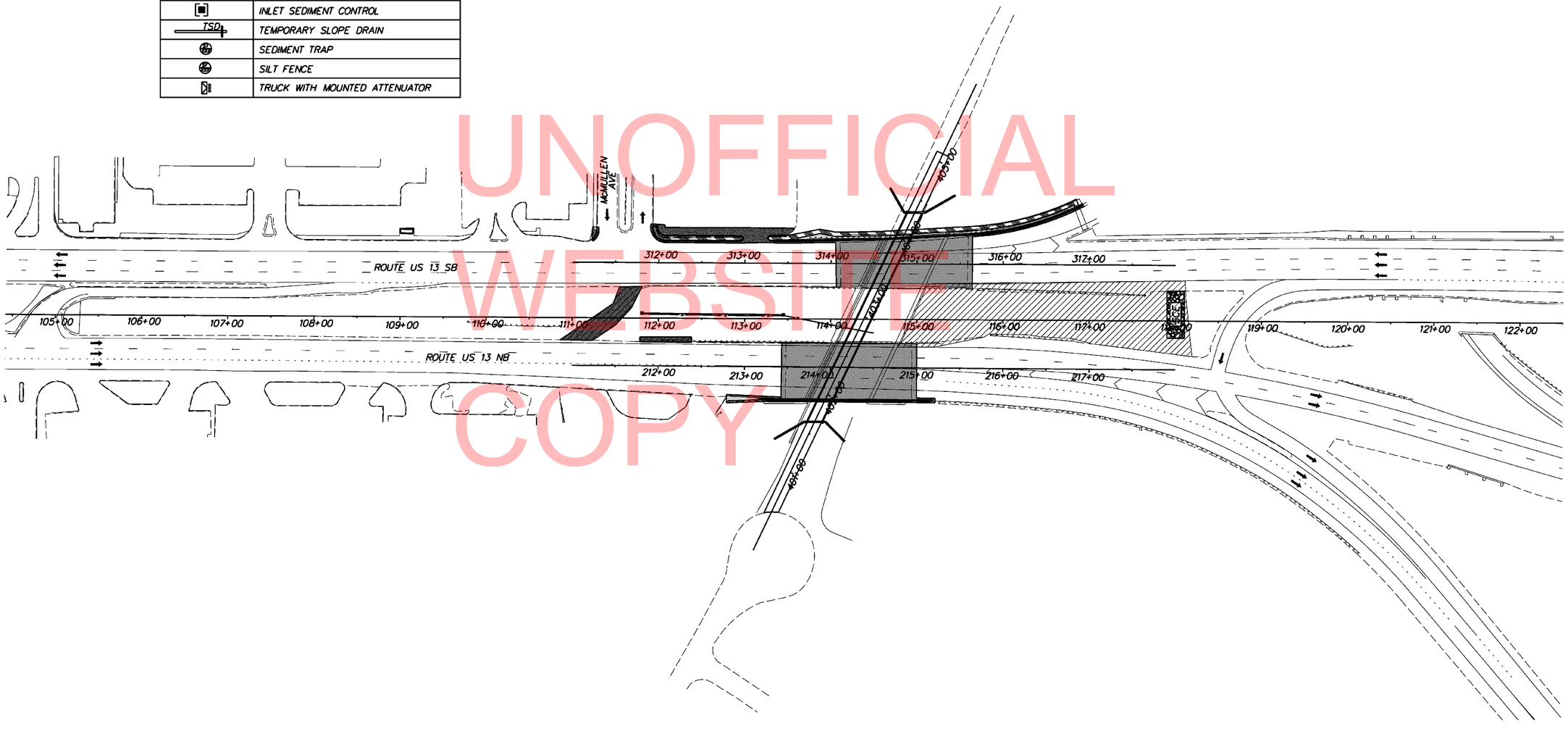
CONSTRUCTION PHASING & M.O.T	
	WORK AREA THIS PHASE
	PHASING TRAFFIC FLOW ARROW
	CONSTRUCTION WARNING SIGN LOCATION
	DRUM - TRAFFIC CONTROL
	PORTABLE CONCRETE BARRIER
	IMPACT ATTENUATOR
	TEMPORARY BARRICADE, TYPE III
	TEMPORARY PAVEMENT (SEE MOT NOTES FOR SECTION)
	ARROW PANEL
	INLET SEDIMENT CONTROL
TSD	TEMPORARY SLOPE DRAIN
	SEDIMENT TRAP
	SILT FENCE
	TRUCK WITH MOUNTED ATTENUATOR



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 60 120 180 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN – PHASE 6

CS-21
SHEET NO. 49
TOTAL SHTS. 62

2/28/2013
...\PSF Plans\CS015_BR 1-665.dgn

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

US 13 NB CLOSING SOUTH OF	I-295 STARTING MM/DD/YY

DURING DETOUR
(DISPLAY DURING WEEKEND DETOUR)

PCMS-1

US 13 NB CLOSED SOUTH OF	I-295 FOLLOW DETOUR

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-2

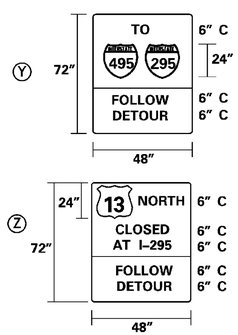
US 13 NB CLOSING SOUTH OF	I-295 STARTING MM/DD/YY

DURING DETOUR
(DISPLAY DURING WEEKEND DETOUR)

PCMS-2

NB US13 TO I-295 TO I-495	FOLLOW DETOUR

SPECIAL SIGNS



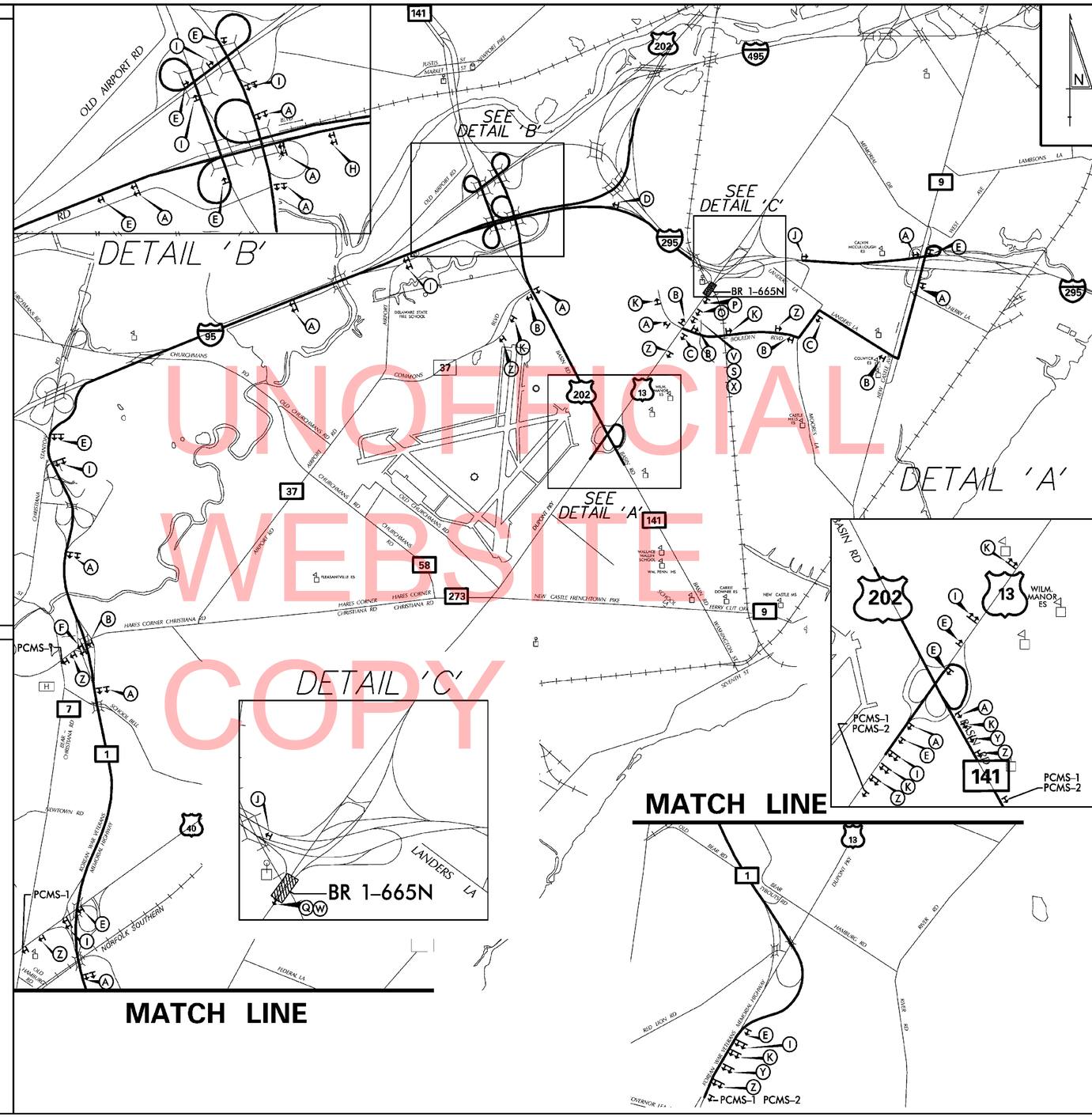
NOTES:

PCMS-1 AND PCMS-2 ON SR 1 SHALL BE SPACED 2,000 FEET APART.

SEE MOT SHEETS FOR MORE DETAILED SIGNAGE AT THE CONSTRUCTION SITE

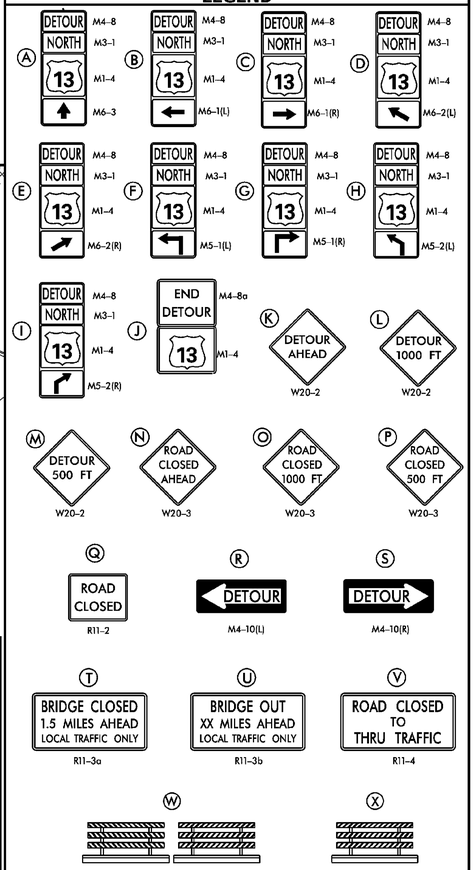
ALL SIGNS BLACK ON RETROFLECTIVE FLUORESECENT ORANGE.

ROUTE SHIELD SIZE AND COLORS TO CONFORM TO SECTION 2D.11 OF THE DE MUTCD.



UNOFFICIAL WEBSITE COPY

LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD).
2. 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.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. THE COLORS, DIMENSIONS, AND CHARACTERISTICS OF ALL INTERSTATE, U.S. ROUTE, AND STATE ROUTE SHIELD SIGNS SHALL BE IN ACCORDANCE WITH SECTION 2D.11 OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
6. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
7. 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.
8. SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
9. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
10. "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
11. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | APPROVED CHIEF SAFETY OFFICER _____ DATE: _____ | APPROVED TRAFFIC ENGINEER _____ DATE: _____

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	PERMIT NO.	X
T201107401	DESIGNED BY: LB	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

VEHICULAR DETOUR PLAN
US 13 NB I-295

SHEET NO. 50
TOTAL SHTS. 61

P:\1559 BRIDGE DESIGN\WO 2 - BR 1-665 W&S\PSE PLANS\DP01_BR 1-665_NB.DGN

PORTABLE CHANGEABLE MESSAGE SIGNS

DURING DETOUR
(DISPLAY DURING DETOUR)

PCMS-1

US 13 SB RAMP CLOSED	FOLLOW DETOUR

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-2

US 13 SB RAMP CLOSING	STARTING MM/DD/YY

DURING DETOUR
(DISPLAY DURING DETOUR)

PCMS-2

US 13 SB RAMP CLOSED	FOLLOW DETOUR

DURING DETOUR
(DISPLAY DURING DETOUR)

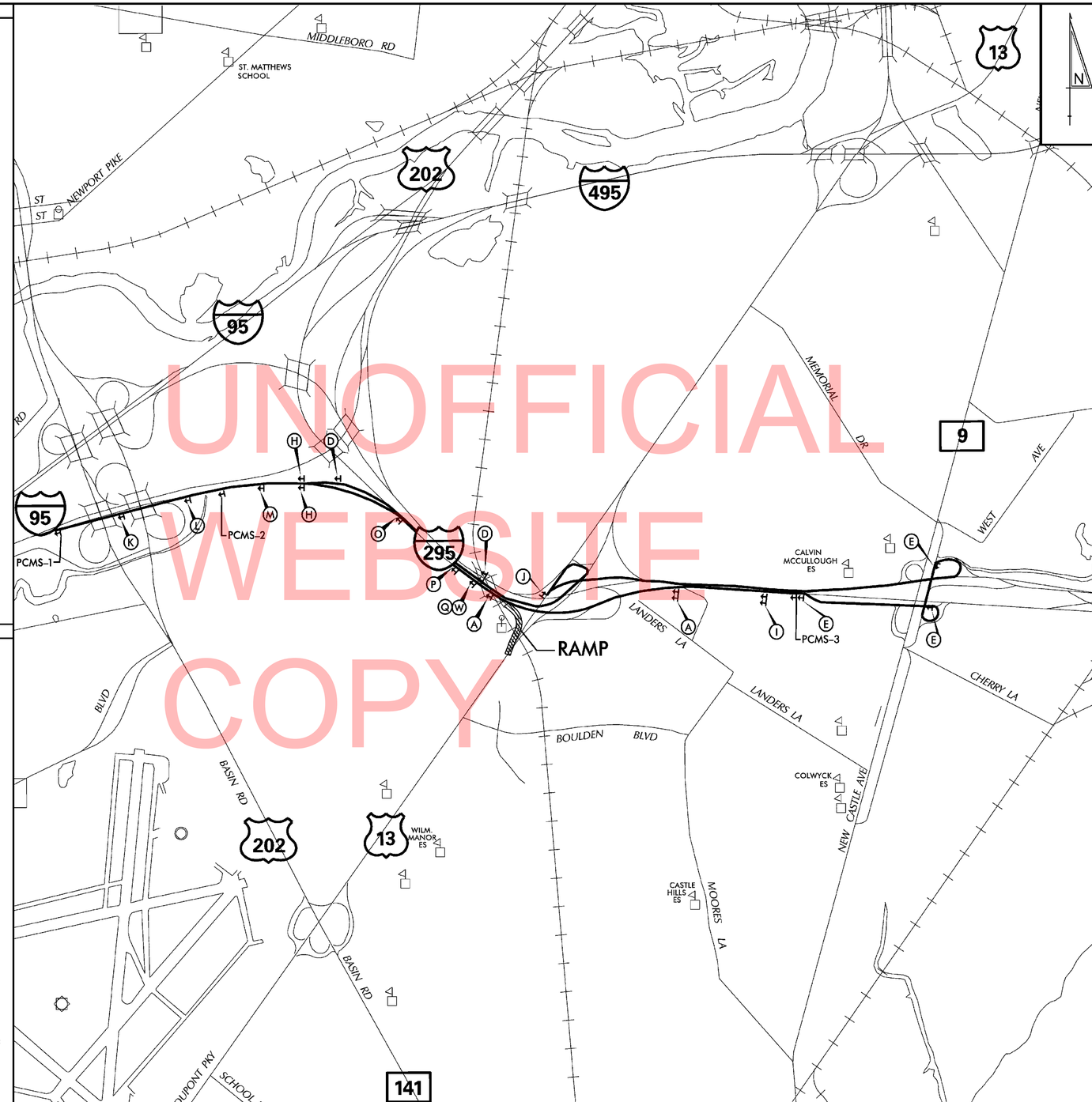
PCMS-3

US 13 SB DETOUR	TAKE EXIT FOR RT 9 NB

SPECIAL SIGNS

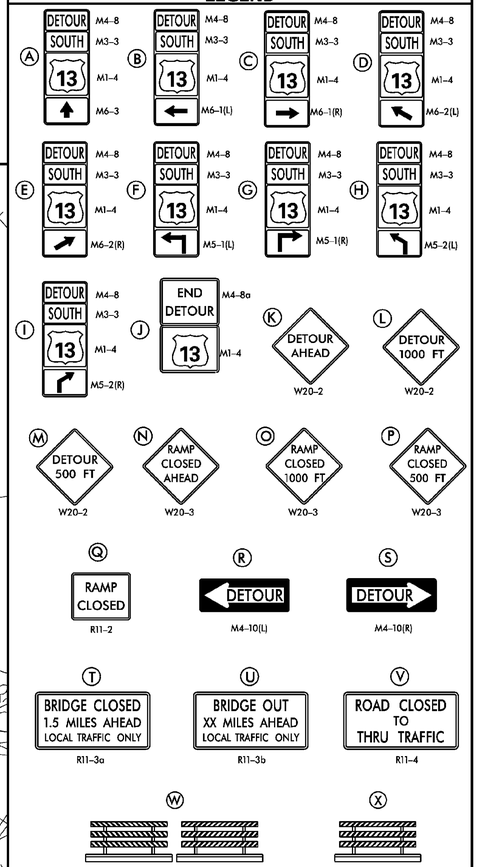
SPECIAL NOTES:

1. ALL SIGNS SHOWN ON THE DETOUR PLANS WILL BE PAID FOR UNDER ITEM 743024: TEMPORARY WARNING SIGNS AND PLAQUES. ALL TYPE III BARRICADES WILL BE PAID FOR UNDER ITEM 743023: TYPE III BARRICADES ALL PLASTIC DRUMS WILL BE PAID FOR UNDER ITEM 743006: PLASTIC DRUMS.
2. THE EXISTING MAJOR GUIDE SIGNS ON ALL ROADS ALONG THE DETOUR ROUTES WILL BE UTILIZED TO DIRECT TRAFFIC INSTEAD OF DETOUR TRAILBLAZER SIGNS WHERE APPLICABLE.
3. DURING I-295 NB TO SB US 13 DETOUR DRUMS SHALL BE PLACED THE LENGTH OF THE AUXILIARY LANE ALONG NB I-295 AT 25' SPACING.



UNOFFICIAL WEBSITE COPY

LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD).
2. 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.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. THE COLORS, DIMENSIONS, AND CHARACTERISTICS OF ALL INTERSTATE, U.S. ROUTE, AND STATE ROUTE SHIELD SIGNS SHALL BE IN ACCORDANCE WITH SECTION 2D.11 OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
6. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
7. 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.
8. SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
9. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
10. "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
11. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

RECOMMENDED _____ DATE:	RECOMMENDED _____ DATE:	RECOMMENDED _____ DATE:	APPROVED CHIEF SAFETY OFFICER _____ DATE:	APPROVED TRAFFIC ENGINEER _____ DATE:

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	PERMIT NO.	X
T201107401	DESIGNED BY: LB	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

VEHICULAR DETOUR PLAN
I-295 NB TO US 13 SB
(PHASE 4)

SHEET NO. 51
TOTAL SHTS. 61

P:\1559 BRIDGE DESIGN\WO 2 BR 1-665 N&S\PSE PLANS\DP01_BR 1-665_SB_RAMP.DGN

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

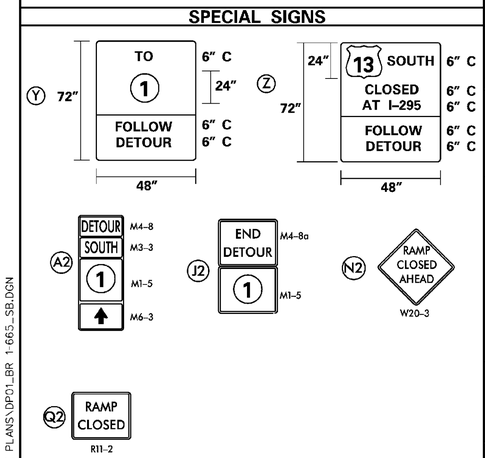
US 13 SB CLOSING AT I-295	STARTING MM/DD/YY

DURING DETOUR
(DISPLAY DURING WEEKEND DETOUR)

PCMS-1

US 13 SB CLOSED AT I-295	FOLLOW DETOUR

SPECIAL SIGNS

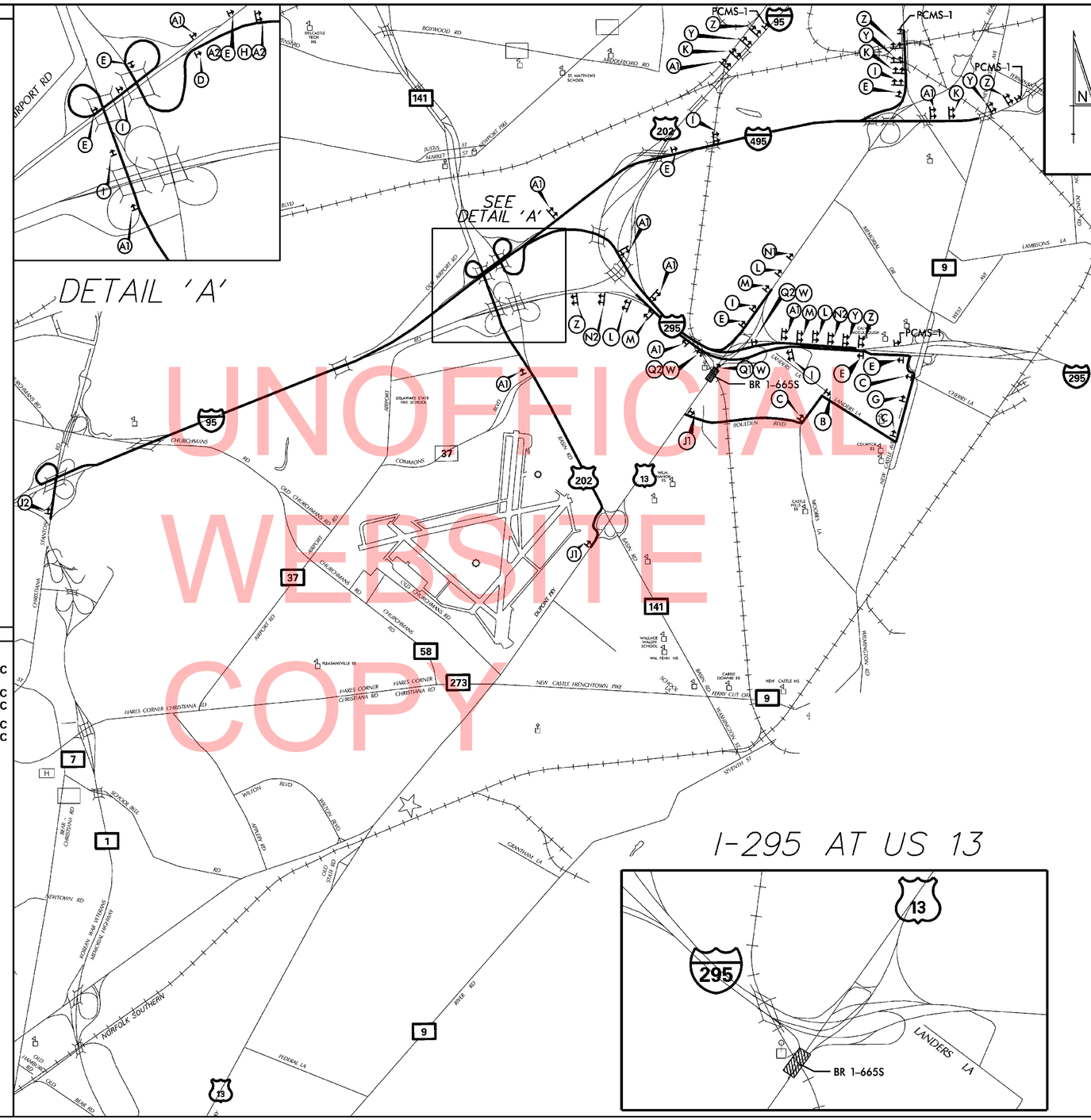


NOTES:

NOTES: SEE MOT SHEETS FOR MORE DETAILED SIGNAGE AT THE CONSTRUCTION SITE

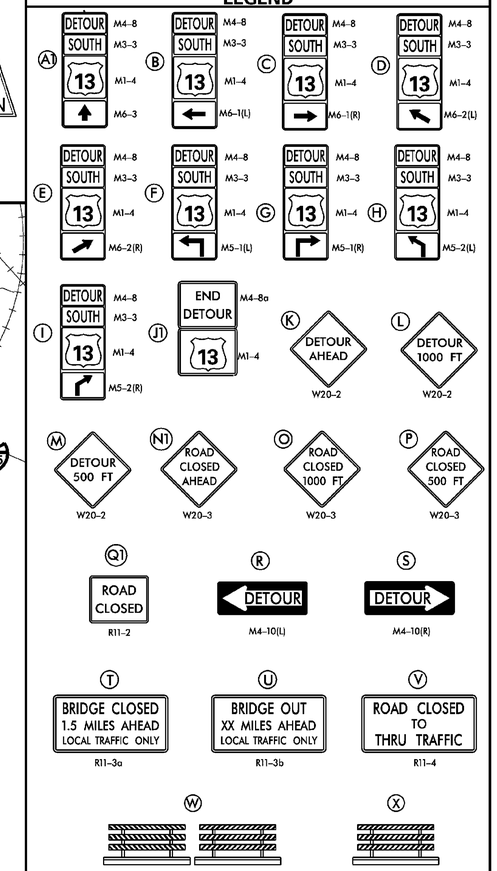
ALL SIGNS BLACK ON RETROFLECTIVE FLUORESECENT ORANGE.

ROUTE SHIELD SIZE AND COLORS TO CONFORM TO SECTION 2D.11 OF THE DE MUTCD.



UNOFFICIAL WEBSITE COPY

LEGEND



GENERAL NOTES

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11. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | APPROVED CHIEF SAFETY OFFICER _____ DATE: _____ | APPROVED TRAFFIC ENGINEER _____ DATE: _____

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

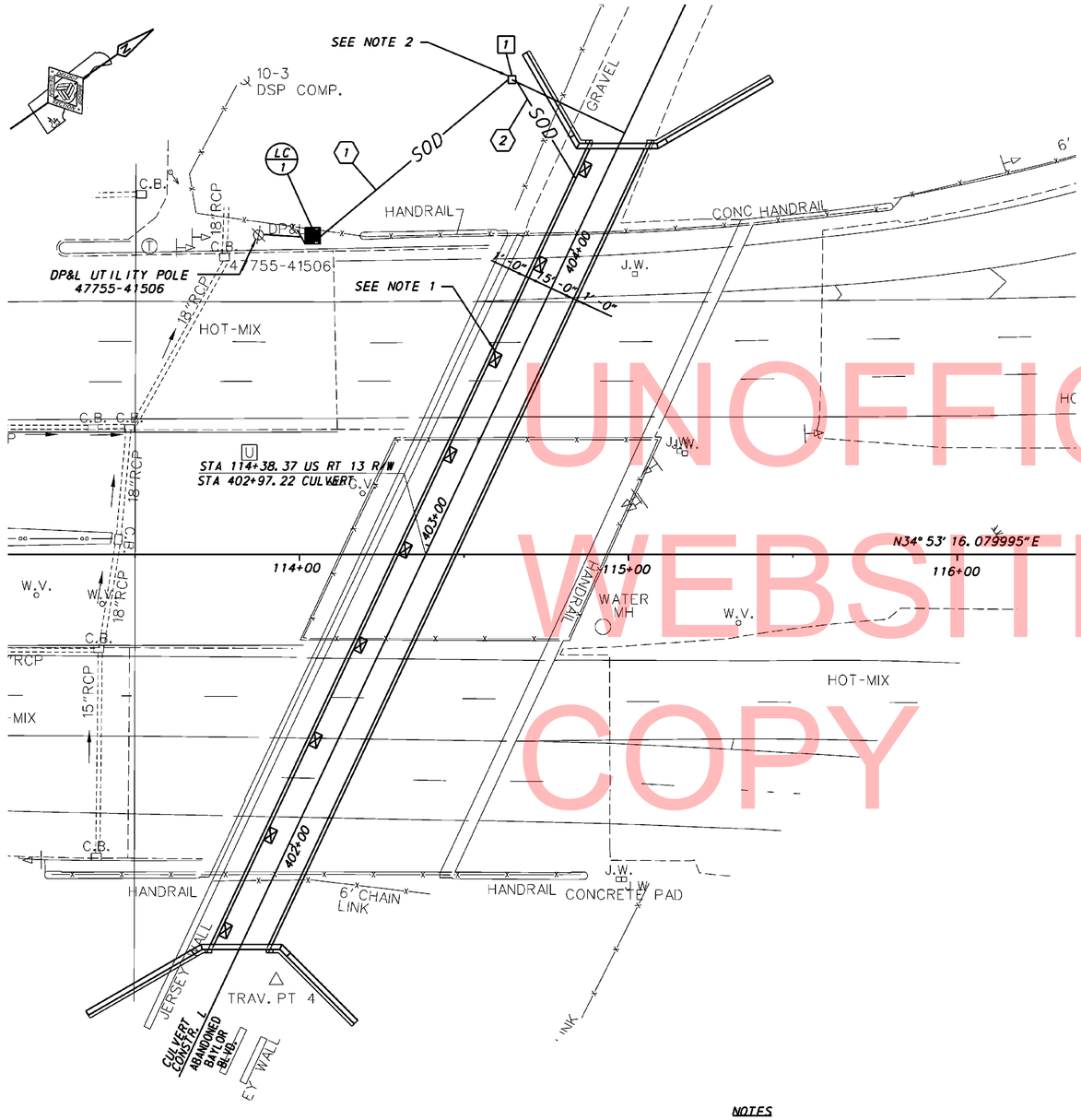
BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	PERMIT NO.	X
T201107401	DESIGNED BY: LB	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

VEHICULAR DETOUR PLAN
US 13 SB I-295

SHEET NO. 52
TOTAL SHTS. 61

P:\1559 BRIDGE DESIGN\WO 2 - BR 1-665 N&S\PSE PLANS\DP01_BR 1-665_SB.DGN



PLAN

SCALE: 1" = 20'

LIGHTING LEGEND	
SYMBOL	ITEM
SOD	GALVANIZED CONDUIT UNDER NEW PAVEMENT OR IN SODDED TRENCH
	GALVANIZED CONDUIT, STRUCTURE MOUNTED
□	CONDUIT JUNCTION WELL, TYPE 1
■	JUNCTION BOX ON STRUCTURE
⊠	WALL MOUNTED LUMINAIRE
	LIGHTING CONTROL CENTER - 60A
2	PROPOSED CONDUIT JUNCTION WELL/BOX IDENTIFIER
LS #	PROPOSED LUMINAIRE IDENTIFIER (LUMINAIRE #)
6	PROPOSED LIGHTING CONDUIT RUN IDENTIFIER (LIGHTING CONDUIT RUN #)
LC #	PROPOSED LIGHTING CONTROL CENTER - 60A (LIGHTING CONTROL CENTER #)

CONDUIT JUNCTION WELL /BOX SCHEDULE

STATION	OFFSET	TYPE	DIMENSION
404+39	37.8', LT.	1	20"x20" PRECAST CONCRETE
404+08	7.5', LT.	NEMA 4	6"x6"x4" CAST IRON
403+44			
402+80			
402+16			

WALL MOUNTED LUMINAIRE SCHEDULE

NO.	CKT ID	STATION	OFFSET	WATTS / TYPE
LS-1	A1	404+24	7.5', LT.	70W / HPS
LS-2	B1	403+92		
LS-3	A2	403+60		
LS-4	B2	403+28		
LS-5	A3	402+95		
LS-6	B3	402+64		
LS-7	A4	402+32		
LS-8	B4	402+00		
LS-9	A5	401+68		

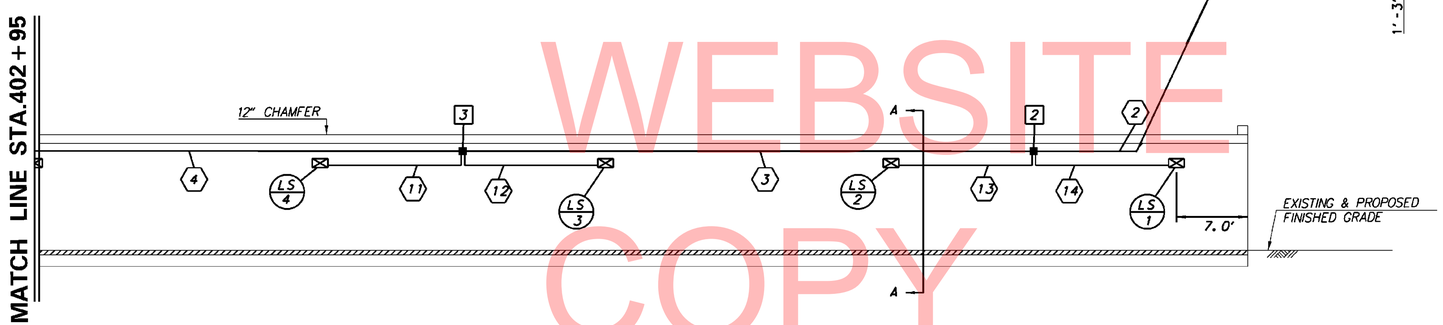
NOTES

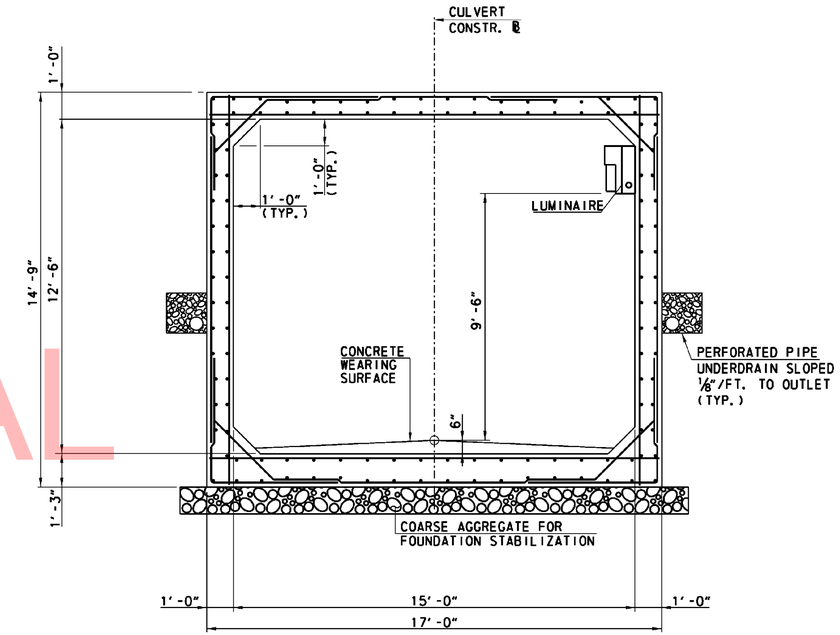
1. SEE SHEET 2 FOR CONDUIT AND LUMINAIRE LAYOUT ON WALL.
2. CONDUITS TO BE SLOPED TO DRAIN TO JUNCTION WELL.

UNOFFICIAL WEBSITE COPY

CONDUIT & CONDUCTOR RUN SCHEDULE

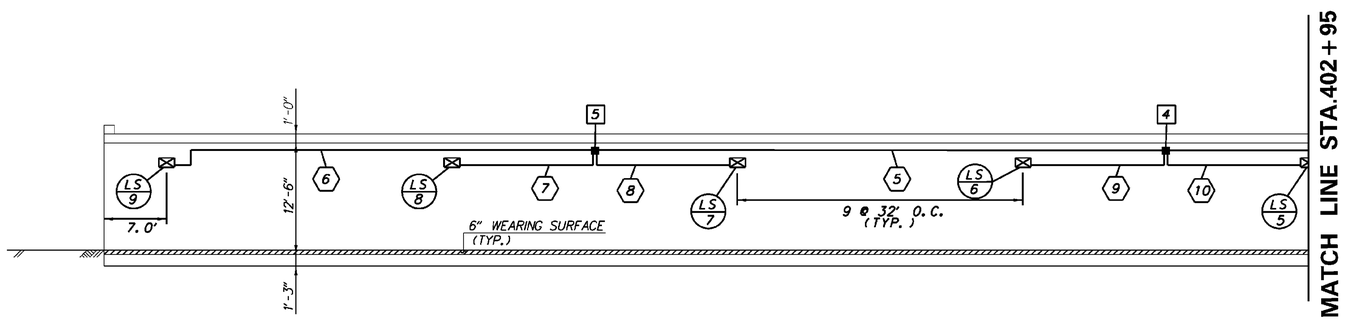
CONDUIT RUN #	FROM	TO	3/4" GALV. CONDUIT (FT)	1" GALV. CONDUIT (FT)	2" GALV. CONDUIT (FT)	#8 AWG CONDUCTOR (FT)	#10 AWG CONDUCTOR (FT)	#10 AWG GROUNDING CONDUCTOR (FT)
1	LC 1	JB 1			80	300		100
2	JB 1	JB 2		50		210		70
3	JB 2	JB 3		64		252		84
4	JB 3	JB 4		64		252		84
5	JB 4	JB 5		64		252		84
6	JB 2	LS 1	16				72	36
7	JB 2	LS 2	16				72	36
8	JB 3	LS 3	16				72	36
9	JB 3	LS 4	16				72	36
10	JB 4	LS 5	16				72	36
11	JB 4	LS 6	16				72	36
12	JB 5	LS 7	16				72	36
13	JB 5	LS 8	16				72	36
14	JB 5	LS 9	48				136	68
TOTAL			176	242	80	1,266	712	778





SECTION A-A
NOT TO SCALE

LUMINAIRE FRONT VIEW
NOT TO SCALE



CULVERT WALL ELEVATION (LOOKING SOUTH)
NTS

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	N.T.S.	BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD	CONTRACT T201107401 / COUNTY NEW CASTLE	BRIDGE NO. 1-665 / DESIGNED BY: KOC / CHECKED BY: CAG	LIGHTING PLAN

LI-02
SHEET NO. 54
TOTAL SHTS. 62

4/8/2013
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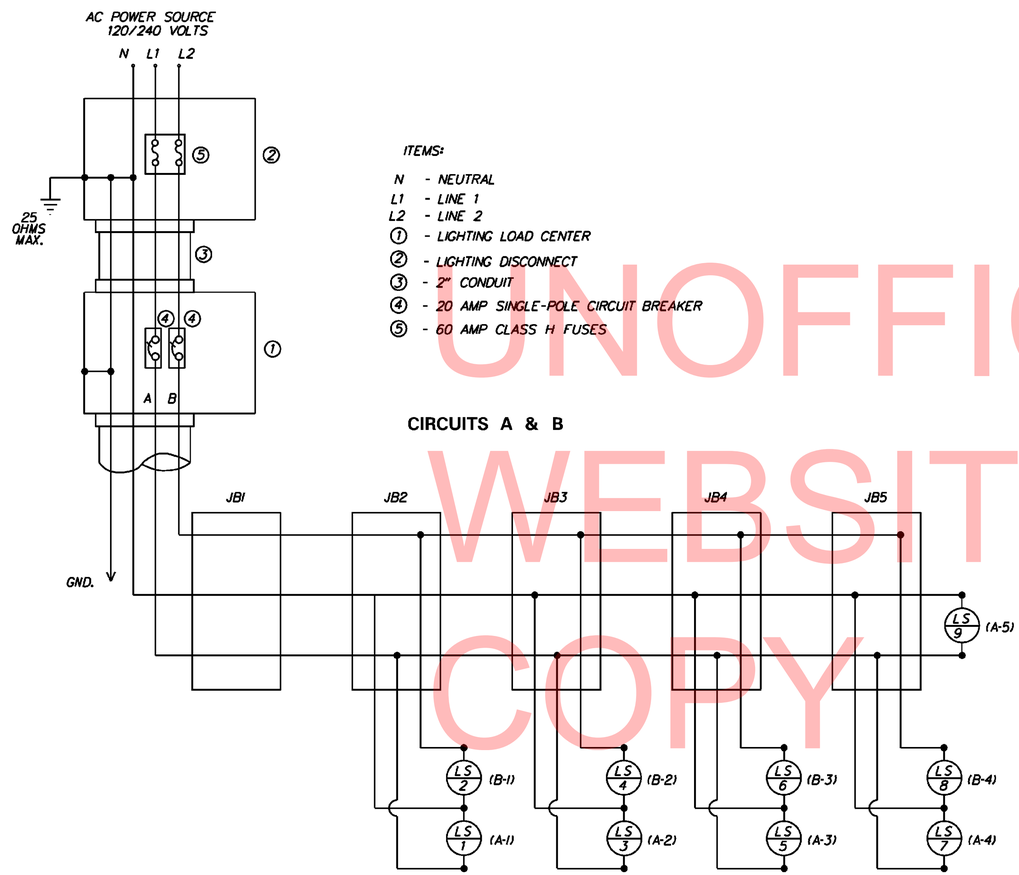


CIRCUITS A & B

ITEMS:

N - NEUTRAL
L1 - LINE 1
L2 - LINE 2
① - LIGHTING LOAD CENTER
② - LIGHTING DISCONNECT
③ - 2" CONDUIT
④ - 20 AMP SINGLE-POLE CIRCUIT BREAKER
⑤ - 60 AMP CLASS H FUSES

NOTES:

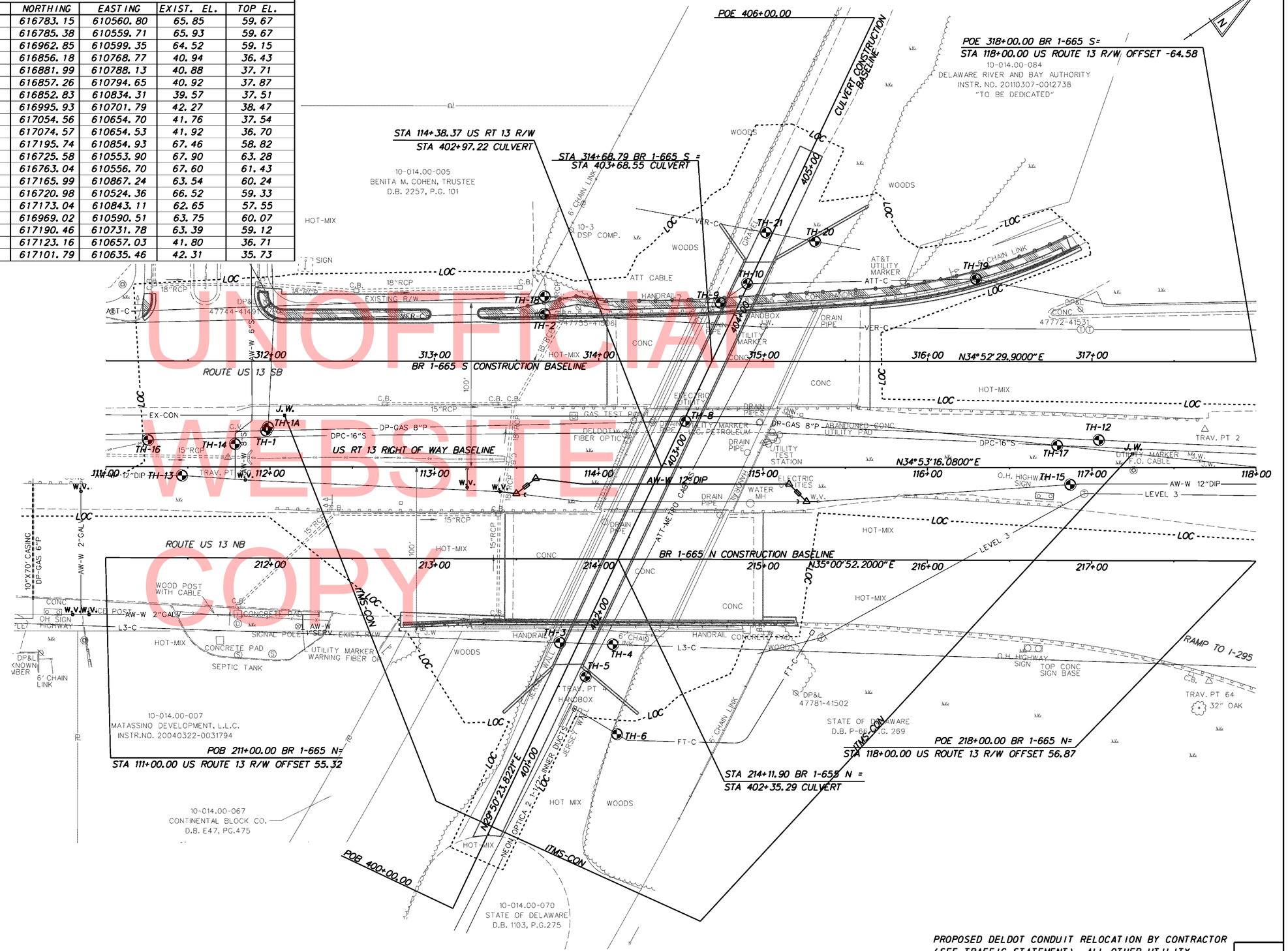
1. CONSTRUCTION DETAILS NOT SHOWN ON THE DRAWINGS ARE TO CONFORM TO THE DELDOT STANDARDS.
2. THE STANDARD SPECIFICATIONS FOR THIS PROJECT ARE DELDOT SPECIFICATIONS.
3. PROVIDE SERVICE DISCONNECT AND CONDUIT RISER IN ACCORDANCE WITH DELMARVA POWER'S REQUIREMENTS.
4. PROVIDE WATERTIGHT, SUBMERSIBLE, PREMOLDED, DISCONNECTABLE, CONNECTOR KITS FOR ALL SPLICES.
5. DURING CONSTRUCTION, ALL ELECTRICAL SYSTEMS INCLUDING WIRES AND CONNECTIONS TO BE PROTECTED IN A MANNER THAT ENSURES THE SAFETY OF WORKERS AND THE GENERAL PUBLIC.

ELECTRICAL SCHEMATIC

UNOFFICIAL WEBSITE COPY

UTILITY TEST HOLES

NO.	UTILITY	NORTHING	EASTING	EXIST. EL.	TOP EL.
TH-1	DELMARVA POWER GAS (DP GAS 8")	616783.15	610560.80	65.85	59.67
TH-1A	DELMARVA POWER GAS (DP GAS 8")	616785.38	610559.71	65.93	59.67
TH-2	VERIZON (8" X 10" TERRA COTTA DUCT BANK)	616962.85	610599.35	64.52	59.15
TH-3	LEVEL 3 ((8)1-1/2" PLASTIC CONDUIT FO)	616856.18	610768.77	40.94	36.43
TH-4	LEVEL 3 ((8)1-1/2" PLASTIC CONDUIT FO)	616881.99	610788.13	40.88	37.71
TH-5	ATT-METRO ((1)4"&(2)1" PLASTIC CONDUIT FO)	616857.26	610794.65	40.92	37.87
TH-6	FIBERTECH ((2) 4" PLASTIC CONDUITS FO)	616852.83	610834.31	39.57	37.51
TH-8	DELMARVA POWER GAS (DP-GAS 8")	616995.93	610701.79	42.27	38.47
TH-9	AT&T (4" PLASTIC CONDUIT FO)	617054.56	610654.70	41.76	37.54
TH-10	AT&T (6" STEEL CONDUIT FO)	617074.57	610654.53	41.92	36.70
TH-12	DELMARVA POWER GAS (DP-GAS 8"P)	617195.74	610854.93	67.46	58.82
TH-13	ARTESIAN WATER COMPANY (AW-W 18" DIP)	616725.58	610553.90	67.90	63.28
TH-14	ARTESIAN WATER COMPANY (AW-W 8" S)	616763.04	610556.70	67.60	61.43
TH-15	ARTESIAN WATER COMPANY (AW-W 12" DIP)	617165.99	610867.24	63.54	60.24
TH-16	DELAWARE PIPELINE COMPANY (DPC 16" S)	616720.98	610524.36	66.52	59.33
TH-17	DELAWARE PIPELINE COMPANY (DPC 16" S)	617173.04	610843.11	62.65	57.55
TH-18	AT&T ((6) 2" PLASTIC CONDUIT FO)	616969.02	610590.51	63.75	60.07
TH-19	AT&T (6" STEEL CONDUIT FO)	617190.46	610731.78	63.39	59.12
TH-20	VERIZON (22"x 30" CONCRETE DUCT BANK)	617123.16	610657.03	41.80	36.71
TH-21	VERIZON (26"x 30" CONCRETE DUCT BANK)	617101.79	610635.46	42.31	35.73



UTILITY COMPANY FACILITIES

—AW-W—	ARTESIAN WATER COMPANY
AW-W	PROPOSED ARTESIAN WATER COMPANY
—ATT-C—	AT&T TRANSMISSION
—COM-C—	COMCAST CABLE
—COM-FO—	COMCAST FIBER OPTIC
—DP-E—	DELMARVA POWER ELECTRIC
—DP-G—	DELMARVA POWER GAS
—VER-C—	VERIZON
—DPC—	DELAWARE PIPELINE COMPANY
—G4S—	G4S TECHNOLOGY LLC
—L3-C—	LEVEL 3 COMMUNICATION
—FT-C—	FIBERTECH
—NO-C—	NEON OPTICA
—24/7-C—	24/7 CABLE COMPANY
—EX-CON—	DELDOT CONDUIT
ITMS-CON	PROPOSED DELDOT CONDUIT

NOTE: ALL UTILITY RELOCATIONS TO BE VERIFIED IN THE FIELD

PROPOSED DELDOT CONDUIT RELOCATION BY CONTRACTOR (SEE TRAFFIC STATEMENT). ALL OTHER UTILITY RELOCATION BY OTHERS.

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO. 1-665	UTILITY RELOCATION PLAN	UP-01
T201107401	DESIGNED BY: TM		SHEET NO. 56
COUNTY NEW CASTLE	CHECKED BY: MAA		TOTAL SHTS. 62

4/9/2013
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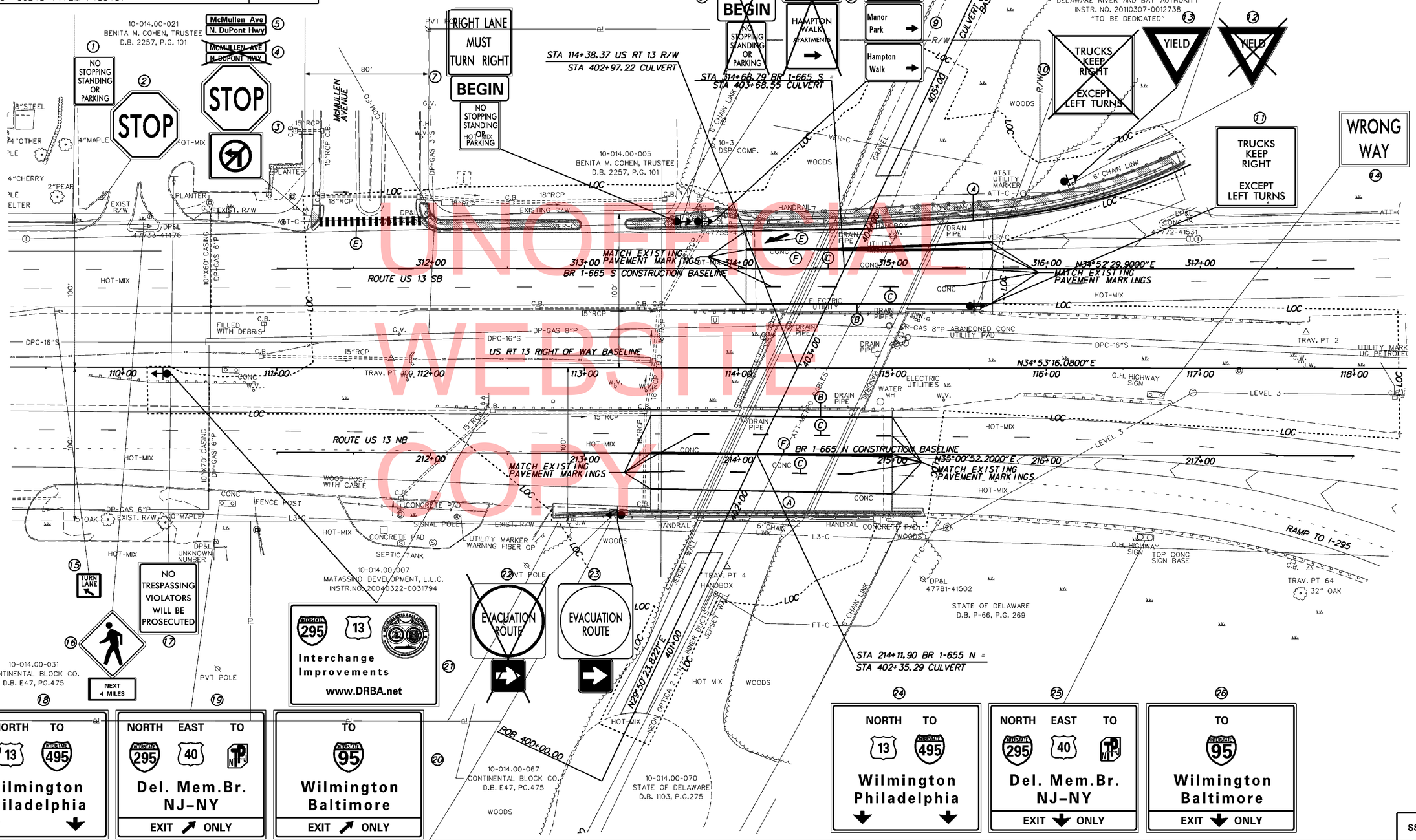
PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(A)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" SOLID (ITEM 748548)	452 LF
(B)	EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 5" SOLID (ITEM 748548)	317 LF
(C)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" BROKEN - 10' LINE & 30' GAP (ITEM 748548)	159 LF
(E)	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 748015)	224 SF
(F)	EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 10" SOLID (ITEM 748549)	462 LF



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T20107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

SIGNING, STRIPING AND CONDUIT PLAN

SS-01

SHEET NO. 57

TOTAL SHTS. 62

4/8/2013
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PERMANENT SIGN SCHEDULE

SHEET NO.	NO.	CODE	DESCRIPTION	ASSEMBLY NO.	SIGN HEIGHT (IN)	SIGN WIDTH (IN)	SIGN AREA (SF)	SIGN DISPOSITION	ITEM 749687 SINGLE POST EACH		ITEM 749690 MULTI-POST (SF)		ITEM 749688 4" HOLE, 0-6" (EACH)	ITEM 749689 4" HOLE, >6" (EACH)	REMARKS
									REMOVE	INSTALL	REMOVE	INSTALL			
SS-01	1	R7-4	"NO STOPPING, STANDING OR PARKING"					EXISTING SIGN TO REMAIN							
	2	R1-1	"STOP"					EXISTING SIGN TO REMAIN							
	3	R1-1	"STOP"					EXISTING SIGN TO REMAIN							
		R3-2	NO LEFT TURN - SYMBOL					EXISTING SIGN TO REMAIN							
	4	D-3-42	STREET BLADE (11-12 LETTERS)					REMOVE	1						MCMULLEN AVE
		D-3-42	STREET BLADE (11-12 LETTERS)					REMOVE	1						N. DUPONT HWY
	5	D-3-42	STREET BLADE (11-12 LETTERS)	5	6.75	42	1.97	NEW		1					McMullen Ave
		D-3-42	STREET BLADE (11-12 LETTERS)	5	6.75	42	1.97	NEW		1					N. DuPont Hwy
	6	R3-7R	"RIGHT TURN MUST TURN RIGHT"					REMOVE	1						
		R7-202a-DE	"BEGIN" (PLATE-RED)					REMOVE	1						
		R7-4	"NO STOPPING, STANDING OR PARKING"					REMOVE	1						
	7	R3-7R	"RIGHT TURN MUST TURN RIGHT"	6	30	30	6.25	NEW		1					
		R7-202a-DE	"BEGIN" (PLATE-RED)	6	12	6	0.50	NEW		1					
		R7-4	"NO STOPPING, STANDING OR PARKING"	6	18	24	3.00	NEW		1					
	8	D3-2-DE1	WELCOME TO (DEVELOPMENT SIGN)					REMOVE	1						WELCOME TO
		D3-2-DE2	DEVELOPMENT NAME					REMOVE	1						MANOR PARK
		N/A	DEVELOPMENT NAME					REMOVE	1						HAMPTON WALK (CUSTOM SIGN)
	9	D3-2-DE1	WELCOME TO (DEVELOPMENT SIGN)	8	32	36	8.00	NEW		1					WELCOME TO
		D3-2-DE2	DEVELOPMENT NAME	8	36	36	9.00	NEW		1					Manor Park (RIGHT ARROW)
		D3-2-DE2	DEVELOPMENT NAME	8	36	36	9.00	NEW		1					Hampton Walk (RIGHT ARROW)
	10	R4-3-DE	"TRUCK KEEP RIGHT EXCEPT LEFT TURNS"					REMOVE	1						
	11	R4-3-DE	"TRUCK KEEP RIGHT EXCEPT LEFT TURNS"	9	30	36	7.50	NEW		1					
	12	R1-2	"YIELD"					REMOVE	1						SIGN MUST BE REMOVED AT START OF CONSTRUCTION PHASE 4 AND REPLACED BY END OF PHASE 4
	13	R1-2	"YIELD"	10	48	48	16.00	NEW		1					
	14	R5-1A	"WRONG WAY"					EXISTING SIGN TO REMAIN							
	15	R3-8-DE	"TURN LANE"					EXISTING SIGN TO REMAIN							
	16	W11-2	PEDESTRIAN SYMBOL					EXISTING SIGN TO REMAIN							
		W7-3a	"NEXT 4 MILES" (PLAQUE)					EXISTING SIGN TO REMAIN							
	17	N/A	"NO TRESPASSING VIOLATORS WILL BE PROSECUTED"					EXISTING SIGN TO REMAIN							
	18	N/A	OH SIGN: "NORTH US 13, TO I-495, WILMINGTON, PHILADELPHIA (2 DOWN ARROWS)"					EXISTING SIGN TO REMAIN							
	19	N/A	OH SIGN: "NORTH I-295, EAST US 40, TO NJ TPKE, DEL. MEM. BR., NJ-NY, EXIT ONLY (45 DEG RIGHT ARROW)					EXISTING SIGN TO REMAIN							
	20	N/A	OH SIGN: "TO I-95, WILMINGTON, BALTIMORE, EXIT ONLY (45 DEG RIGHT ARROW)					EXISTING SIGN TO REMAIN							
	21	N/A	"I-295, US 13, DRBA, INTERCHANGE IMPROVEMENTS www.DRBA.net"					EXISTING SIGN TO BE RELOCATED			24	24			
	22	EM-1-DE	"EVACUATION ROUTE"					REMOVE	1						PHASE 2
		EM-1p-DE	ARROW (PLATE)					REMOVE	1						PHASE 2
	23	EM-1-DE	"EVACUATION ROUTE"	19	24	24	4.00	NEW		1					
		EM-1p-DE	ARROW (PLATE)	19	12	12	1.00	NEW		1					
	24	N/A	OH SIGN: "NORTH US 13, TO I-495, WILMINGTON, PHILADELPHIA (2 DOWN ARROWS)"					EXISTING SIGN TO REMAIN							
	25	N/A	OH SIGN: "NORTH I-295, EAST US 40, TO NJ TPKE DEL. MEM. BR., NJ-NY, EXIT ONLY (DOWN ARROW)"					EXISTING SIGN TO REMAIN							
	26	N/A	OH SIGN: "TO I-95, WILMINGTON, BALTIMORE, EXIT ONLY (DOWN ARROW)					EXISTING SIGN TO REMAIN							
						TOTALS	68.19		12	12	24	24	0	0	

UNOFFICIAL WEBSITE COPY

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NOT TO SCALE

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

SIGNING, STRIPING AND CONDUIT PLAN

SS-02

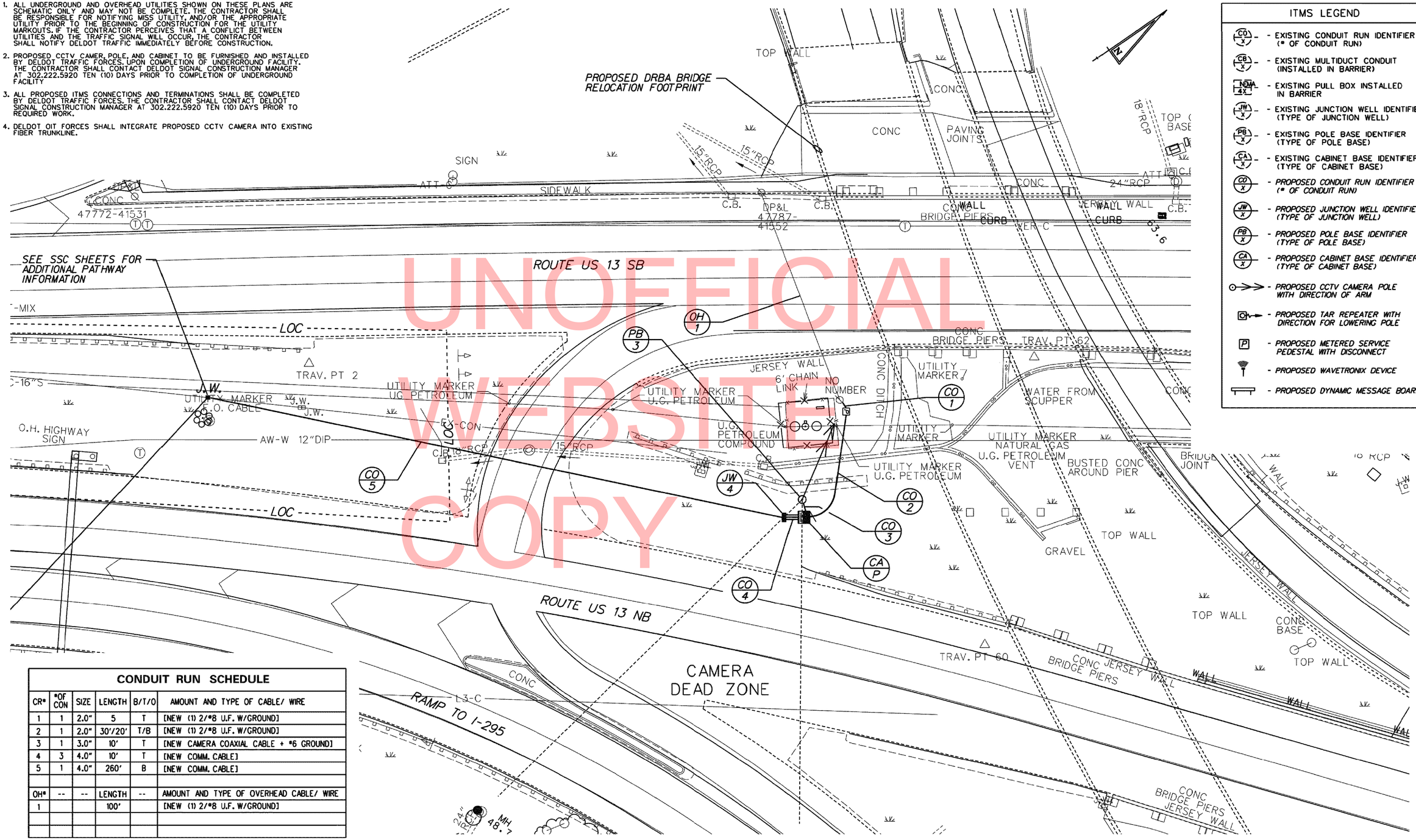
SHEET NO. 58

TOTAL SHTS. 62

4/8/2013
...\PSE Plans\SS002_BR 1-665.dgn

GENERAL CCTV CAMERA NOTES

1. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.
2. PROPOSED CCTV CAMER, POLE, AND CABINET TO BE FURNISHED AND INSTALLED BY DELDOT TRAFFIC FORCES. UPON COMPLETION OF UNDERGROUND FACILITY, THE CONTRACTOR SHALL CONTACT DELDOT SIGNAL CONSTRUCTION MANAGER AT 302.222.5920 TEN (10) DAYS PRIOR TO COMPLETION OF UNDERGROUND FACILITY
3. ALL PROPOSED ITMS CONNECTIONS AND TERMINATIONS SHALL BE COMPLETED BY DELDOT TRAFFIC FORCES. THE CONTRACTOR SHALL CONTACT DELDOT SIGNAL CONSTRUCTION MANAGER AT 302.222.5920 TEN (10) DAYS PRIOR TO REQUIRED WORK.
4. DELDOT OIT FORCES SHALL INTEGRATE PROPOSED CCTV CAMERA INTO EXISTING FIBER TRUNKLINE.



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ITMS LEGEND

- CO X - EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)
- CB X - EXISTING MULTIDUCT CONDUIT (INSTALLED IN BARRIER)
- NEMA 4X - EXISTING PULL BOX INSTALLED IN BARRIER
- JW X - EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)
- PB X - EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
- CA X - EXISTING CABINET BASE IDENTIFIER (TYPE OF CABINET BASE)
- CO X - *PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)*
- JW X - *PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)*
- PB X - *PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)*
- CA X - *PROPOSED CABINET BASE IDENTIFIER (TYPE OF CABINET BASE)*
- *PROPOSED CCTV CAMERA POLE WITH DIRECTION OF ARM*
- *PROPOSED TAR REPEATER WITH DIRECTION FOR LOWERING POLE*
- P - *PROPOSED METERED SERVICE PEDESTAL WITH DISCONNECT*
- *PROPOSED WAVETRONIX DEVICE*
- *PROPOSED DYNAMIC MESSAGE BOARD*

CONDUIT RUN SCHEDULE

CR#	#OF CON	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/ WIRE
1	1	2.0"	5	T	[NEW (1) 2/#8 U.F. W/GROUND]
2	1	2.0"	30'/20'	T/B	[NEW (1) 2/#8 U.F. W/GROUND]
3	1	3.0"	10'	T	[NEW CAMERA COAXIAL CABLE + #6 GROUND]
4	3	4.0"	10'	T	[NEW COMM. CABLE]
5	1	4.0"	260'	B	[NEW COMM. CABLE]
OH#	--	--	LENGTH	--	AMOUNT AND TYPE OF OVERHEAD CABLE/ WIRE
1			100'		[NEW (1) 2/#8 U.F. W/GROUND]

B = BORE, T = TRENCH, O = OPEN CUT.

RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | RECOMMENDED _____ DATE: _____ | APPROVED TRAFFIC ENGINEER _____ DATE: _____ | APPROVED FOR INSTALLATION CHIEF TRAFFIC ENGINEER _____ DATE: _____

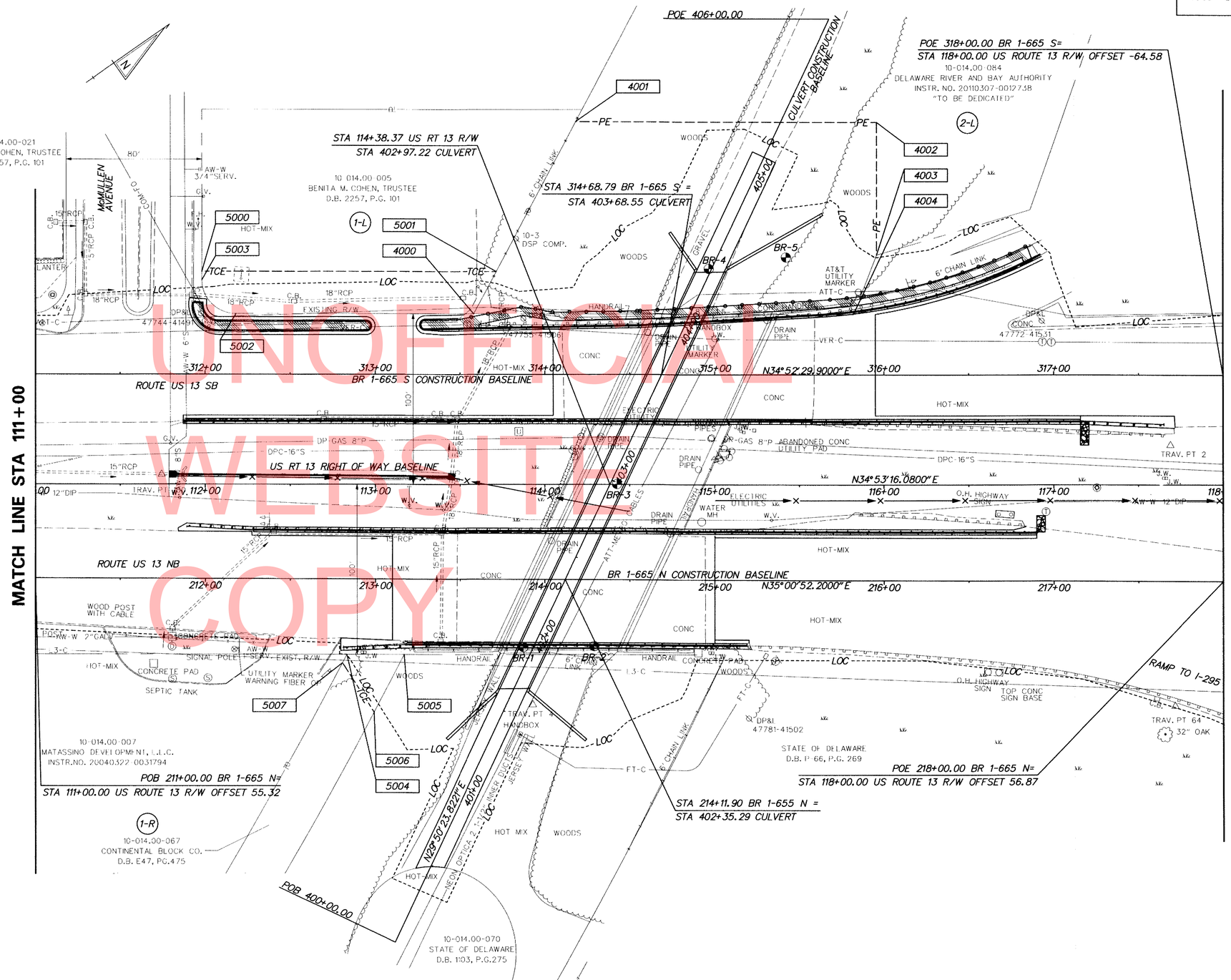
DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 20 40 60 FEET

BR 1-665 N&S, US 13 OVER BAYLOR BOULEVARD

CONTRACT	PERMIT NO.	CCTV PLAN	SHEET NO.
T201107401	DESIGNED BY: JCR		59
COUNTY			TOTAL SHTS.
NEW CASTLE	CHECKED BY: MH		62



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PREPARED BY
THE CONSULTING FIRM OF
McCormick Taylor
Engineers & Planners Since 1946

MICHAEL A. ANGELO REGISTERED NO. 6725 DELAWARE PROFESSIONAL ENGINEER

PROJECT MANAGER — DATE 11/30 2012

RECOMMENDED

TEAM SUPPORT SQUAD MANAGER — DATE 12/3 2012

TEAM SUPPORT ENGINEER — DATE 12-3-2012

ASSISTANT DIRECTOR, DESIGN — DATE 12/3/2012

"AS-ACQUIRED" PLANS

I Certify that all proposed Right-of-Way has been acquired in the name of THE STATE OF DELAWARE and that these plans accurately depict the nature and extent of THE REAL ESTATE SECTION acquisition under this project.

CHIEF, REAL ESTATE — DATE 20

11/29/2012
...\Final Plans\RW02_BR 1-665.dgn

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

SCALE 0 30 60 90 FEET

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT	BRIDGE NO.	1-665
T201107401	DESIGNED BY: TM	
COUNTY		
NEW CASTLE	CHECKED BY: MAA	

RIGHT-OF-WAY PLAN

RW-01
SHEET NO. 60
TOTAL SHTS. 62

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
10-014.00-005	(1-L) BENITA M. COHEN, TRUSTEE	TCE	D.B. 2257, PG. 101	0.560

ALIGNMENT NUMBER & DESCRIPTION: 1000 - US ROUTE 13 R/W

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
5000	1000	111+98.18	-125.00	616842.5631	610476.6355	N 34°53'16.08" E	173.2951				
5001	1000	113+71.48	-125.00	616984.7125	610575.7553	S 27°06'28.92" E	28.3153				
4000	1000	113+58.18	-100.00	616959.5076	610588.6578	S 34°53'16.08" W	140.0000				
5002	1000	112+18.18	-100.00	616844.6693	610508.5818			S 79°53'16.08" W	28.2843	31.4159	20.0000
5003	1000	111+98.18	-120.00	616839.7033	610480.7369	N 55°06'43.92" W	5.0000				
5000	1000	111+98.18	-125.00	616842.5631	610476.6355						

FIGURE 1-L TCE AREA = 4080.3476 SQ. FT. (0.0937 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
10-014.00-084	(2-L) DELAWARE RIVER AND BAY AUTHORITY	FEE	20110307-0012738	2.776

ALIGNMENT NUMBER & DESCRIPTION: 1000 - US ROUTE 13 R/W

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
4000	1000	113+58.18	-100.00	616959.5076	610588.6578	N 27°06'28.92" W	127.9854				
4001	1000	114+18.27	-213.00	617073.4337	610530.3387	N 34°53'16.08" E	177.4534				
4002	1000	115+95.73	-213.00	617218.9940	610631.8369	S 55°06'43.92" E	77.9076				
4003	1000	115+95.73	-135.09	617174.4331	610695.7425	S 33°45'33.79" E	37.6788				
4004	1000	115+82.01	-100.00	617143.1077	610716.6809	S 34°53'16.08" W	223.8278				
4000	1000	113+58.18	-100.00	616959.5076	610588.6578						

FIGURE 2-L FEE AREA = 23206.8032 SQ. FT. (0.5328 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
10-014.00-067	(1-R) CONTINENTAL BLOCK CO.	TCE	D.B. E47, PG. 475	0.100

ALIGNMENT NUMBER & DESCRIPTION: 1000 - US ROUTE 13 R/W

PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
5004	1000	112+83.07	100.00	616783.5047	610709.7552	N 34°53'16.08" E	33.7462				
5005	1000	113+16.82	100.00	616811.1858	610729.0570			S 27°38'48.12" E	38.3171	38.3173	3163.2723
5006	1000	112+99.15	134.00	616777.2435	610746.8369	N 87°53'09.24" W	34.4903				
5007	1000	112+80.48	105.00	616778.5158	610712.3700			N 27°39'37.13" W	5.6326	5.6326	-458.5087
5004	1000	112+83.07	100.00	616783.5047	610709.7552						

FIGURE 1-R TCE AREA = 659.4180 SQ. FT. (0.0151 ACRES)

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RW-02

LEGEND

FEE AREA OF ACQUISITION
R/W AREA OCCUPIED BY EXISTING R/W
P/E PERMANENT EASEMENT
TCE TEMPORARY CONSTRUCTION EASEMENT

* "-" OFFSET IS LEFT OF BASELINE
** "-" CURVE TURNS TO THE LEFT

3/1/2013
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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NTS

BR 1-665N AND 1-665S
CARRYING US 13 OVER
BAYLOR BOULEVARD

CONTRACT T201107401
COUNTY NEW CASTLE
BRIDGE NO. 1-665
DESIGNED BY: TM
CHECKED BY: MAA

RIGHT-OF-WAY
DATA SHEET

SHEET NO. 61
TOTAL SHTS. 62

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED				PROPERTY AREA REMAINING (SQ. FEET /ACRES)	DEED RECORD OF ACQUISTITION	REMARKS
						ACQUISITION (SQ. FEET /ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET /ACRES)	EASEMENT				
								PERMANENT (SQ. FEET /ACRES)	TEMPORARY (SQ. FEET /ACRES)			
10-014.00-005	6	(1-L) BENITA M. COHEN, TRUSTEE	D.B. 2257, PG. 101	A - 0.56	TCE				4080.3476 / 0.09	24380.00 / 0.56		
10-014.00-084	6	(2-L) DELAWARE RIVER AND BAY AUTHORITY	20110307-0012738	D - 2.78	FEE	23206.8032 / 0.53				97727.20 / 2.24		
10-014.00-067	6	(1-R) CONTINENTAL BLOCK CO.	D.B. E47, PG. 475	A - 0.10	TCE				659.418 / 0.02	4356.00 / 0.10		

ACQUISITION CODES

FEE - ACQUISITION
R/W - AREA OCCUPIED BY EXISTING R/W
P/E - PERMANENT EASEMENT
TCE - TEMPORARY EASEMENT

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RW-03

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

NTS

BR 1-665N AND 1-665S CARRYING US 13 OVER BAYLOR BOULEVARD

CONTRACT T201107401
COUNTY NEW CASTLE
BRIDGE NO. 1-665
DESIGNED BY: TM
CHECKED BY: MAA

RIGHT-OF-WAY TABULATION SHEET

SHEET NO. 62
TOTAL SHTS. 62

3/1/2013
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