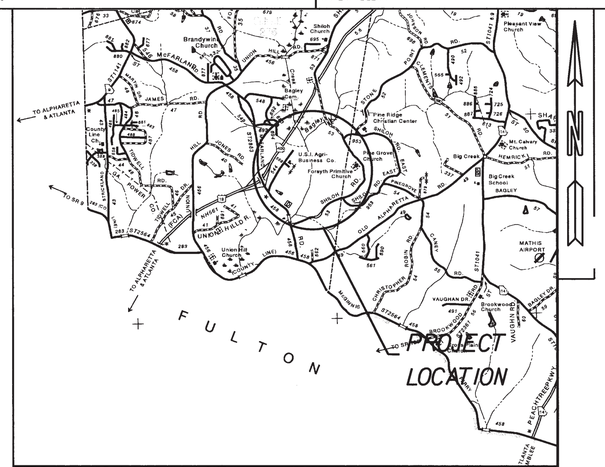
FORSYTH COUNTY ENGINEERING DEPARTMENT

CONSTRUCTION PLANS OF PROPOSED
CR 53/SHILOH;CR 458/MCFARLAND

FORSYTH COUNTY
PI NO: 0010678



LOCATION SKETCH

FEDERAL AID PROJECT

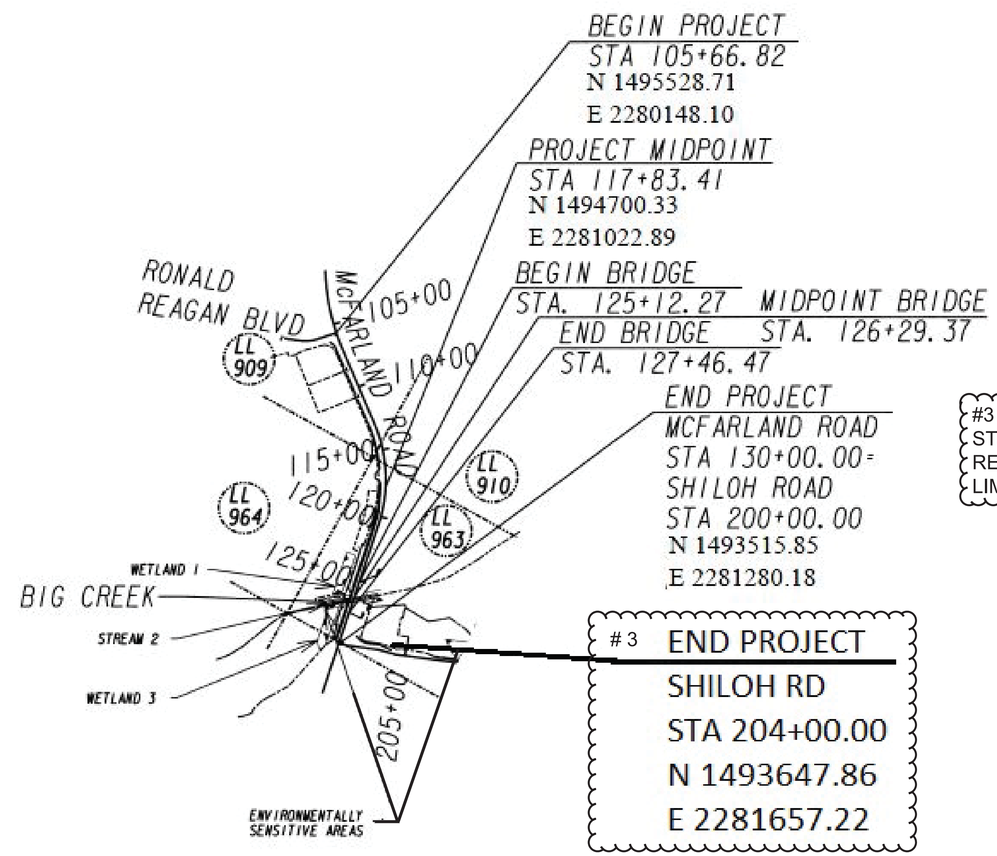
AN NOI IS NOT REQUIRED FOR THIS PROJECT

THIS PROJECT DISTURBS 0.80 ACRES

#3

LOCATION & DESIGN APPROVAL DATE: 12-03-2012

THIS PROJECT IS 100% IN FORSYTH COUNTY AND IS 100% IN CONG. DIST. NO. 9.



#3
STATION 204+00 TO 310+00
REMOVED FROM PROJECT LIMITS

#3 END PROJECT
SHILOH RD
STA 204+00.00
N 1493647.86
E 2281657.22

PREPARED BY:

GRESHAM SMITH AND PARTNERS

2325 LAKEVIEW PARKWAY, SUITE 300
ALPHARETTA, GA 30009-7940
OFFICE: (770) 754-0755
FAX: (877) 275-5854

PREPARED BY:

SARAH E. BLACKBURN, PE

#3

#3
24 HOUR CONTACT
DENISE FARR
PHONE: 770-781-2165

THIS PROJECT HAS BEEN PREPARED USING THE HORIZONTAL GEORGIA COORDINATE SYSTEM OF 1984 (NAD 1983)/94 WEST ZONE, AND THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

MID-POINT COORDINATES

#3
STA. 117+83.41
N 1494700.33
E2281022.89

PROJECT TO BE CONSTRUCTED AS PER GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2013 EDITION, AS APPROVERD BY THE FEDERAL HIGHWAY ADMINISTRATION AND AS MODIFIED BY CONTRACT DOCUMENTS

THE DATA, TOGETHER WITH ALL OTHER INFORMATION SHOWN ON THESE PLANS OR IN ANYWAY INDICATED THEREBY, WHETHER BY DRAWINGS OR NOTES, OR IN ANY OTHER MANNER, ARE BASED UPON FIELD INVESTIGATIONS AND ARE BELIEVED TO BE INDICATIVE OF ACTUAL CONDITIONS. HOWEVER, THE SAME ARE SHOWN AS INFORMATION ONLY, ARE NOT GUARANTEED, AND DO NOT BIND THE DEPARTMENT OF TRANSPORTATION IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

LENGTH OF PROJECT

COUNTY: FORSYTH

COUNTY No. 117
Project No. PEB 09

#3

	MILES
LENGTH OF MAINLINE	0.461
LENGTH OF SIDEROADS	0.076
NET LENGTH OF ROADWAY	0.493
NET LENGTH OF BRIDGES	0.044
NET LENGTH OF PROJECT	0.537
NET LENGTH OF EXCEPTIONS	0.000
GROSS LENGTH OF PROJECT	0.537

SCALE IN FEET
0 500 1000 2000

PLANS COMPLETED 09-07-2017

REVISIONS
#1 4/4/2018: Sheets 1-4, 7, 9, 23, 38, 43-58, 61
#2 1/23/2019: Sheets 50-001, 51-003, 51-005, 53-001, 55-01
#3 9/5/2019: Sheets 1-4, 5, 6, 8, 15-34, 43-62, 80.A, 83-88, 90, 94, 96, 102-121, 127-147, 152-173
#4 11/5/2019: Sheets 1, 3, & 6

DRAWING No. 01-001

INDEX

SHEET NO.	DWG NO.	DESCRIPTION
1	1-001	COVER SHEET
2	2-001	INDEX SHEET
3	3-001	REVISION SUMMARY
4-4a	4-001 to 4-002	GENERAL NOTES
5-6	05-001 TO 05-002	TYPICAL SECTIONS
7-8	06-001 TO 06-002	SUMMARY OF QUANTITIES
9	09-001	DETAILED ESTIMATE (omitted)
10-14	13-001 TO 13-005	MAINLINE ROADWAY PLAN SHEETS
#3 15	14-001	SIDEROAD ROADWAY PLAN SHEETS
35	21-001	DRAINAGE AREA MAP
36	22-001	DRAINAGE PROFILES
#3 37-43	24-000 TO 24-006	UTILITY PLANS
63-72		CONSTRUCTION DETAILS
73-82		GEORGIA STANDARDS
#3		
89-95	52-001 TO 52-007	EROSION CONTROL LEGEND AND UNIFORM CODES
96	53-001	ESPCP DRAINAGE AREA MAP
#3 97-106	54-001 TO 54-006	BMP LOCATION DETAILS
122-127	54-007 TO 54-025	BMP LOCATION DETAILS
147-152	54-032 TO 54-05	BMP LOCATION DETAILS

GEORGIA STANDARDS *

SHEET NO.	DATE	DESCRIPTION
73	08-82	1033D CATCH BASINS
74	09-82	1033DP PRECAST CATCH BASINS
75	08-82	1034D CATCH BASINS
76	09-82	1034DP PRECAST CATCH BASINS
77	06-06	1120 FLARED END SECTION FOR PIPES
78	01-16	4380 "W" BEAM GUARDRAIL 31 INCH GUARDRAIL HEIGHT
79	01-16	4384 TYPE 12 31 INCH GUARDRAIL HEIGHT
80	08-11	4385 "T" BEAM GUARDRAIL CONNECTION TO 31 INCH HEIGHT "W" BEAM
80.A	10-88	9031R PIPE HANDRAIL
81	11-11	9032B CONCRETE CURB AND GUTTER CONCRETE CURBS, CONCRETE MEDIANS
82	03-06	9100 TRAFFIC CONTROL GENERAL NOTES, STANDARD LEGEND, AND MISCELLANEOUS DETAILS

EROSION CONTROL GEORGIA * STANDARDS AND CONSTRUCTION DETAILS

SHEET NO.	DATE	DESCRIPTION
173	01-11	D-24A TEMPORARY SILT FENCE
174	01-11	D-24B SILT FENCE BAIL STRAW
175	01-11	D-24C TEMPORARY SILT FENCE J-HOOKS, INLET SEDIMENT TRAPS
176	04-16	D-41 CONSTRUCTION EXIT
89	03-17	EC-L1 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 1 OF 7)
90	#3 11/28/2018	EC-L2 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 2 OF 7)
91	03-17	EC-L3 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 3 OF 7)
92	03-17	EC-L4 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 4 OF 7)
93	03-17	EC-L5 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 5 OF 7)
94	#3 11/28/2018	EC-L6 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 6 OF 7)
95	03-17	EC-L7 EROSION CONTROL LEGEND AND UNIFORM CODE SHEET (SHEET 7 OF 7)

GEORGIA DETAILS *

SHEET NO.	DATE	DESCRIPTION
63	07-11	A-1 DRIVEWAYS WITH TAPERED ENTRANCES CONCRETE VALLEY GUTTERS
64	07-11	A-2 CONCRETE VALLEY GUTTER AT STREET INTERSECTION, 6" OR 8" CONCRETE VALLEY GUTTER AT DRIVE, PLACING PAVEMENT ADJACENT TO GUTTER, ADDITIONAL PAVING AT STREET INTERSECTION, 4' CORRUGATED CONCRETE MEDIAN,
65	09-16	A-3 CONCRETE SIDEWALK DETAILS CURB CUT (WHEELCHAIR) RAMPS
66	06-09	A-4 DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT STANDARDS
67	10-83	D-9 CONCRETE FLUMES TYPES "A" AND "B"
68	07-02	T-3A Type 7, 8 and 9 SQUARE TUBE POST INSTALLATION DETAIL
69	09-16	T-11A DETAILS OF PAVEMENT MARKING PLACEMENT NON-LIMITED ACCESS ROADWAY
70	11-08	T-14 DETAIL OF PAVEMENT MARKING AND HATCHING
71	10-08	T-22 TRAFFIC CONTROL PEDESTRIAN ACCESSIBILITY AROUND WORKZONE - MIDBLOCK CROSSING AND SIDEWALK DETOUR
#3		

#1 ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

GEORGIA811 Utilities Protection Center, Inc
Know what's below. Call before you dig.

GRESHAM SMITH AND PARTNERS

REVISION DATES
#1 4/4/18
#3 9/5/2019

#1 ~~STATE OF GEORGIA DEPARTMENT OF TRANSPORTATION~~

INDEX & GENERAL NOTES

PEB 09
FORSYTH COUNTY

DRAWING No. 02-001

4/27/2012 GPUN

DATE	SHEET NO.	REVISION
#1 4/4/2018	1	Added Federal Aid Project
#1 4/4/2018	2	Removed State of Georgia Depart of Transportation and note regarding Standards and Details available for download at www.DOT.GA.GOV
#1 4/4/2018	4	Added Forsyth Co. Sewer , AGL to Utility Owner List, removed ZAYO from Utility Owner List
#1 4/4/2018	4	Removed State of Georgia Department of Transportation and replaced with Forsyth County Engineering Department
#1 4/4/2018	4a	Added General Notes Sign
#1 4/4/2018	7	Revised pay item number from 150-0001 to 150-1000
#1 4/4/2018	9	Removed sheet
#1 4/4/2018	23	Added note: Contractor not to disturb water vault on parcel 8
#1 4/4/2018	43	Added note: Water valve stems to be adjusted by county to grade
#1 4/4/2018	44	Added note: Water valve stems to be adjusted by county to grade and SS manhole label at Sta. 211+50 Lt
#1 4/4/2018	45-58	Added note: Water valve stems to be adjusted by county to grade
#1 4/4/2018	61	Added note: SS manhole label at Sta. 302-75 Lt
#2 1/23/2019	50-001	Addressed EPD comment
#2 1/23/2019	51-003	Addressed EPD comment
#2 1/23/2019	51-005	Addressed EPD comment
#2 1/23/2019	53-001	Addressed EPD comment
#2 1/23/2019	55-001	Addressed EPD comment
#3 9/5/2019	1	Revised location map, project length, area disturbed, NOI requirement, and 24 hour contact
#3 9/5/2019	2-4	Revised page numbers
#3 9/5/2019	5	Revised station number
#3 9/5/2019	6	Removed a typical section STA. 287+41.97 to STA. 295+70.46 and 301+00 to STA. 309+78.33
#3 9/5/2019	8	Revised quantities
#3 9/5/2019	15	Added Note: Project End: Station 204+00; Station 204+01 to 310+00 to be done by others
#3 9/5/2019	16-34	Removed sheets
#3 9/5/2019	43	Added Note: Project End: Station 204+00; Station 204+01 to 310+00 to be done by others
#3 9/5/2019	44-62	Removed sheets
#3 9/5/2019	80.A	Added GDOT Standard 9031R for Pipe Handrail
#3 9/5/2019	83-88	Removed sheets
#3 9/5/2019	90	Replaced with 52-002 revised 11/20/2018
#3 9/5/2019	94	Replaced with 52-006 revised 11/20/2018
#3 9/5/2019	96	Removed sheets
#3 9/5/2019	102	Added Note: Project End: Station 204+00; Station 204+01 to 310+00 to be done by others
#3 9/5/2019	103-121	Removed sheets
#3 9/5/2019	127	Added Note: Project End: Station 204+00; Station 204+01 to 310+00 to be done by others
#3 9/5/2019	128-146	Removed sheets
#3 9/5/2019	152	Added Note: Project End: Station 204+00; Station 204+01 to 310+00 to be done by others
#3 9/5/2019	153-172	Removed sheets
#4 11/5/2019	1, 3, & 6	Removed unneeded pay items

DATE	SHEET NO.	REVISION

GRESHAM SMITH AND PARTNERS

REVISION DATES		
#1 4/4/2018		
#2 1/23/2019		
#3 9/5/2019		
#4 11/5/2019		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

REVISION SUMMARY

PEB 09
FORSYTH COUNTY

DRAWING No.
03-001

1. ALL CONSTRUCTION WILL BE ACCOMPLISHED UNDER TRAFFIC

2. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING OR REPLACING IN KIND ANY RESULTING BROKEN WATER PIPE, SANITARY SEWER PIPE, OR OTHER UTILITY, INFRASTRUCTURE, OR PROPERTY DAMAGE DURING CONSTRUCTION

3. ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND THE GEORGIA STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISION.

4. GRASS ALL DISTURBED AREAS UNLESS OTHERWISE DIRECTED BY EROSION CONTROL PLANS OR INSPECTOR

5. ALL EXISTING DRAINAGE STRUCTURE TO BE RETAINED UNLESS OTHERWISE NOTED

6. REVIEW LENGTH OF MAINTENANCE REQUIREMENTS - TWO GROWING SEASONS - IN THE 702 SPECIFICATIONS

7. ALL DRIVES THAT ARE TO BE RECONSTRUCTED SHALL BE REPLACED IN KIND. i.e. ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND ASPHALT FOR EARTH. WHERE REQUIRED, DRIVES DRIVES SHALL BE CONSTRUCTED AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE DRIVEWAY SUMMARY:

ASPHALT DRIVE ---- RESIDENTIAL: 165LBS./SQ YD. ASPH. CONC., 12.5 mm SUPERPAVE +6" GRADED AGGREGATE BASE

COMMERCIAL: 165 LBS./SQ. YD. ASPH. CONC., 12.5 mm SUPERPAVE 220 LBS./SQ. YD. ASPH. CONC., 19 mm SUPERPAVE +6" GRADED AGGREGATE BASE

CONCRETE DRIVES -- RESIDENTIAL: 6" DRIVEWAY CONCRETE
COMMERCIAL: 8" DRIVEWAY CONCRETE

ALL DRIVEWAYS SHALL BE PAVED TO R/W OR TIE-IN POINT (WHICHEVER IS FURTHER)

8. ALL SIGNING, MARKING, AND TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION

9. THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING A TRAFFIC CONTROL PLAN SHOWING THE PROPOSED MEASURE TO MANAGE TRAFFIC DURING CONSTRUCTION ACTIVITIES. THE PLAN SHALL CONFORM TO THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE GEORGIA DOT SPECIFICATION 150. ANY LANE CLOSURE MUST BE APPROVED BY AND COORDINATED WITH THE GEORGIA DOT AREA ENGINEER. LANE CLOSURES WILL REQUIRE PROPER LANE TAPERS AND ADVANCE WARNINGS PER GEORGIA DOT STANDARDS.

10. ALL EXISTING STOP BARS AND CROSSWALKS THAT ARE NOT REMOVED OR RELOCATED SHALL BE IN ACCORDANCE WITH THE CURRENT DOT STANDARDS

11. SAWCUTS AND REMOVAL OF ALL CONCRETE ASSOCIATED WITH CURB CUT RAMPS SHALL BE INCLUDED IN THE SIDEWALK PAY ITEM

12. ANY TRAFFIC MARKING, SYMBOLS OR STRIPING TO BE REMOVED SHALL BE PAID FOR IN THE TRAFFIC CONTROL LUMP SUM ITEM.

13. THE CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC SIGNALS DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC SIGNAL AND/OR CONTROL SYSTEM ADJUSTMENTS. INCLUDING TEMPORARY SUPPORT POLL LOCATION(S) REQUIRED BY THE PROJECT DURING THE INTERIM PERIOD THROUGH INSTALLATION OF ANY NEW SIGNAL EQUIPMENT. AT NO TIME SHALL THE CONTRACTOR CAUSE ANY PART OF THE SIGNAL OPERATION TO BE INOPERABLE

14. THE CONTRACTOR SHALL REPLACE IN KIND AND SIZE, AT NO SEPARATE EXPENSE TO THE DEPARTMENT, ANY BARRIER WALL, FENCE, DITCH, PAVING, CURBING, SIDEWALK, GUTTER, SLOPE PAVEMENT, SIGNS, GUARDRAILS, LANDSCAPING, GRASSINGS, UTILITY SERVICE LINES, STORM DRAIN PIPES, MASONRY WALLS AND PAVING THAT IS REMOVED, DAMAGED OR DESTROYED, AS A RESULT OF CONTRACTOR NEGLIGENCE

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERTINENT EROSION CONTROL. THESE MEASURES SHALL BE IMPLEMENTED AND MAINTAINED FOR THE DURATION OF THE WORK.

16. POSITIVE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES. IF UNFORESEEN DRAINAGE FEATURES ARE DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE DESIGNER IN ORDER TO ADDRESS THE ISSUE. IF ROOF DRAINS ARE UNCOVERED, CONTRACTOR TO USE GDOT DETAIL 9031R REVISION 10/1988 FOR ROOF DRAIN UNDER SIDEWALK.

17. THE PROPOSED DRIVEWAYS SHOULD BE CENTERED AND MATCH OR EXCEED THE WIDTH OF EXISTING DRIVEWAY.

18. ALL PEDESTRIAN ROUTES SHALL MEET THE ADA VERTICAL CLEARANCE OF 80", AND SHALL PROVIDE THAT CROSSWALKS CROSS SLOPE DO NOT EXCEED 2% FOR A MINIMUM 4' OF THE WALK. PAYMENT FOR THIS WORK WILL BE INCLUDED IN THE GRADING COMPLETE.

19. AT ALL LOCATIONS WHERE CONCRETE IS PLACED ADJACENT TO AN EXISTING OR PROPOSED SIGN POSTS, UTILITY POLES, ETC., THE CONTRACTOR SHALL COMPLETE THE WORK TO ALLOW THE OWNER TO MAINTAIN/REMOVE/REPLACE THE SIGN POSTS, UTILITY POLES, ETC. FOR FUTURE MAINTENANCE WITHOUT SIGNIFICANT DAMAGE TO SURROUNDING AREA. PER DETAIL A3, 1/2" EXPANSION JOINT SHALL BE PLACED WHERE SIDEWALKS TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS. THIS COST OF THIS WORK IS INCLUDED IN THE UNIT PRICE OF THE CONCRETE CONSTRUCTION ITEM (SIDEWALK, CURB AND GUTTER, ETC.).

20. SURVEY PROVIDED BY FORSYTH COUNTY GIS, EXCEPT R/W AND DRAINAGE.

ENVIRONMENTAL RESOURCES IMPACT TABLE

RESOURCE NAME/TYPE	LOCATION BEGINNING STA	LOCATION ENDING STA	SIDE	CONSTRUCTION ACTIVITY	PERMITTED ACTIVITY	CONTROLLING CRITERIA	SPECIAL PROVISION?	COMMENTS INCLUDING ANY PERMIT EXPIRATION DATES
BIG CREEK GREENWAY	117+11	126+47	R	GENERAL ACTIVITIES ASSOCIATED WITH ROADWAY CONSTRUCTION INCLUDING GRADING, INSTALLATION OF DRAINAGE STRUCTURES, AND ROADWAY PAVING.	TEMPORARY EASEMENTS FOR THE GRADING OF SLOPES, CONSTRUCTION OF THE DRIVEWAY, CONSTRUCTION OF TWO DRAINAGE STRUCTURES, AND CONSTRUCTION OF SIDEWALKS AND A SIDEWALK TIE-IN TO THE GREENWAY.	SECTION 4(F) DE MINIMIS COMMITMENT	N/A	IMPACTS TO THE GREENWAY ARE LIMITED TO THE PARKING AREA TO TIE-IN THE DRIVEWAY ACCESS AND SIDEWALK. DISRUPTION TO PARKING AND ACCESS MUST BE TEMPORARY AND NOT LONGER THAN THAT REQUIRED TO CONSTRUCT IMPROVEMENTS. CONTRACTOR SHALL DIRECT ANY QUESTIONS TO THE ENGINEER, AND THE ENGINEER SHALL CONTACT ENVIRONMENTAL SERVICES IF NECESSARY FOR RESOLUTION.
WETLAND 1	123+28	125+53	R	NONE	NO IMPACTS	SECTION 404 OF THE CWA		ANY ADDITIONAL FILL OTHER THAN WHAT IS SHOWN ON THE PLANS WILL REQUIRE PERMIT MODIFICATION OR A NEW PERMIT PRIOR TO COMMENCEMENT OF THE ACTIVITY.
PERENNIAL STREAM 2	125+63	127+37	L/R	NONE	NO IMPACTS	SECTION 404 OF THE CWA	N/A	ANY ADDITIONAL FILL OTHER THAN WHAT IS SHOWN ON THE PLANS WILL REQUIRE PERMIT MODIFICATION OR A NEW PERMIT PRIOR TO COMMENCEMENT OF THE ACTIVITY.
WETLAND 3	127+15	130+81	R	NONE	NO IMPACTS	SECTION 404 OF THE CWA	N/A	ANY ADDITIONAL FILL OTHER THAN WHAT IS SHOWN ON THE PLANS WILL REQUIRE PERMIT MODIFICATION OR A NEW PERMIT PRIOR TO COMMENCEMENT OF THE ACTIVITY.
PERENNIAL STREAM 2 BUFFER	125+17	127+85	L/R	NONE	NO IMPACTS	SECTION 404 OF THE CWA	N/A	ANY WORK WITHIN THE 25-FOOT MANDATED BUFFER WOULD REQUIRE EVALUATION FOR A BUFFER VARIANCE OR WRITTEN PERMISSION FROM EPD PRIOR TO COMMENCEMENT OF THE ACTIVITY

#3

#3

GEORGIA811 Utilities Protection Center, Inc
Know what's below. Call before you dig.

UTILITY OWNER	SERVICE	PHONE NUMBER
ATT	PHONE	(877) 737-2478
AGL	GAS	(404) 291-0622
FORSYTH COUNTY	WATER	(770) 781-2160
FORSYTH COUNTY	SEWER	(770) 781-2160
GEORGIA POWER	POWER	(888) 655-5888
SAWNEE EMC	POWER	(770) 887-2363
XXXXX	XXXXX	XXXXXXXXXXXX

#1

GRESHAM SMITH AND PARTNERS

REVISION DATES

#1 4/4/2018		
#3 9/5/2019		

#1 Forsyth County Engineering Department

GENERAL NOTES

PEB 09
FORSYTH COUNTY

DRAWING No. 04-001

4/27/2012 GPLN

GENERAL NOTES - STANDARD SIGNS

1. ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND THE GEORGIA SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.

2. SIGN ERECTION STATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS WHERE NECESSARY, BUT SHALL BE WITHIN THE LIMITATIONS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION. NO SIGN LOCATION SHALL BE CHANGED BY THE CONTRACTOR OR BY THE PROJECT ENGINEER WITHOUT PRIOR APPROVAL FROM THE OFFICE OF TRAFFIC OPERATIONS.

3. ALL STANDARD HIGHWAY SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN OR ASSEMBLY.

4a. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON INTERSTATE HIGHWAYS SHALL BE 32 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), UNLESS SPECIFIED OTHERWISE IN THE PLANS. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON RAMPS SHALL BE 2 FEET FROM THE NORMAL EDGE OF PAVED SHOULDER, OR EDGE OF GRADED SHOULDER WHEN PRESENT.

4b. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON ALL OTHER ROADWAYS SHALL BE 6 FEET FROM THE EDGE OF THE PAVED SHOULDER OR 12 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEARER EDGE OF THE SIGN(S), WHICHEVER IS GREATER. THE HORIZONTAL CLEARANCE IN NON-MOUNTABLE CURB SECTIONS SHALL BE AT LEAST 2 FEET FROM THE CURB FACE TO THE NEARER EDGE OF THE SIGN(S).

4c. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS MOUNTED BEHIND GUARD RAIL SHALL BE 6 FEET FROM THE FACE OF THE GUARD RAIL TO THE NEARER EDGE OF THE SIGN(S).

5. SINGLE PLATE, HORIZONTAL RECTANGULAR SIGNS OVER 48 INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2 INCH x $^1/_2$ INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAPS. THE STRAPS SHALL BE FLUSH WITH THE BACK OF THE SIGN WITH ONE EACH ACROSS THE TOP AND BOTTOM OF THE SIGN. THE CENTERLINE OF EACH POST SHALL BE INSET 1/6TH OF THE SIGN WIDTH FROM THE EDGE OF THE SIGN. SIGN PLATE BOLT HOLES SHALL BE $^3/_8$ INCH DIAMETER, DRILLED OR PUNCHED, AS SHOWN ON THE SIGN PLATE DETAILS.

6. EACH 42 OR 48 INCH WIDE x 18 OR 24 INCH HIGH SIGN REQUIRES ONE 2 INCH x $^1/_2$ INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAP LOCATED IN THE CENTER OF THE SIGN AND FLUSH WITH THE BACK OF THE SIGN.

7. SIGN ASSEMBLIES SHALL BE MOUNTED ON ALUMINUM OR GALVANIZED STEEL STRAP FRAMES. FOR DETAILS AND STRAP SPECIFICATIONS REFER TO SIGN ASSEMBLY-TYPICAL FRAMING DETAILS.

8. TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL STANDARD HIGHWAY SIGNS REQUIRING REFLECTORIZED BACKGROUNDS EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE PLANS. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.

9. TYPE 11 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3P, R5-1, R5-1A, R5-1B).

10. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW REFLECTIVE SHEETING SHALL BE USED FOR ALL WARNING SIGNS.

11. TYPE 11 (VERY HIGH INTENSITY) FLUORESCENT YELLOW GREEN REFLECTIVE SHEETING SHALL BE USED FOR SCHOOL ZONE (S1-1, S2-1, S3-1, S4-3, AND THE TOP PORTION OF THE S5-1) SIGNS. ALL REGULATORY SIGNS WITHIN THE SCHOOL ZONE SHALL HAVE TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING.

12. A $^1/_2$ INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN AN ASSEMBLY.

13. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL $^3/_8$ INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.

14. INTERSTATE SHIELDS SHALL CONTAIN THE WORD GEORGIA. ALL INTERSTATE, U.S., AND GEORGIA SHIELDS REQUIRING ALT, BUS, CONN, LOOP, OR SPUR SHALL USE 4 INCH SERIES "D" LETTERS. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, FOR DETAILS.

15. FOR DETAILS OF SPECIAL DESIGN HIGHWAY SIGNS, SEE DETAILS OF MISCELLANEOUS SIGNS.

16. REFER TO PLAN SHEETS FOR LOCATION OF THE DISTRICT ENGINEERS OFFICE TO BE SHOWN ON ALL R552-1 (LIMITED ACCESS) SIGNS IN THIS PROJECT, IF ANY.

17. THE CONTRACTOR WILL, AS REQUESTED BY THE DISTRICT TRAFFIC OPERATIONS ENGINEER, BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR ARE CONTRARY TO THESE SIGN PLANS.

Moreland Altobelli Associates, Inc.
2450 Commerce Av
Suite 100
Duluth, Georgia 30096
Telephone (770) 263-5945

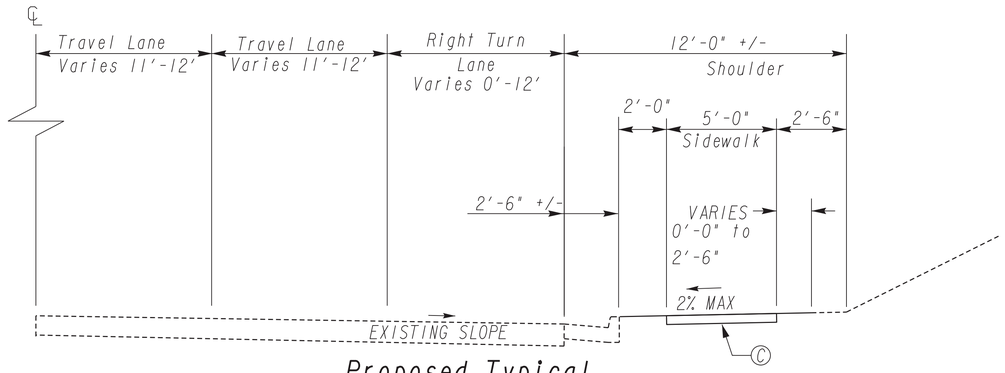
REVISION DATES
#1 4/4/2018

#1 STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF PROGRAM DELIVERY

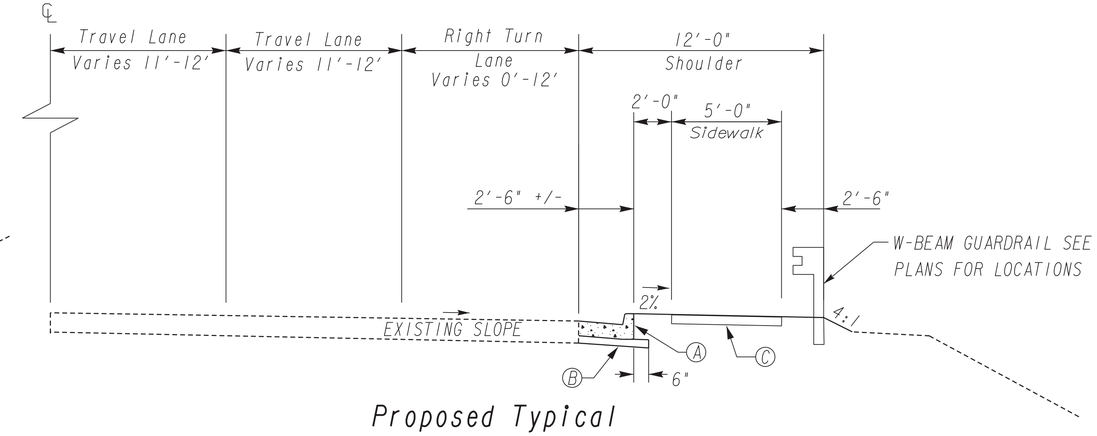
STANDARD SIGNS GENERAL NOTES

I-16/I-75 INTERCHANGE IMPROVEMENTS PHASE 2

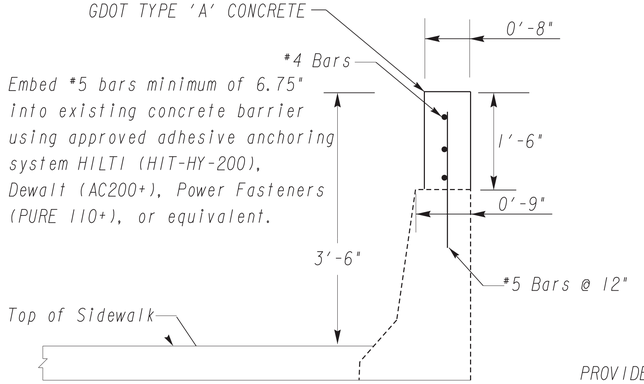
DRAWING No.
4-002
XXXXX
XXXXX



Proposed Typical
McFarland Road
Ronald Regan Parkway to Greenway Access
Sta. 106+15.77 to Sta. 117+10.00



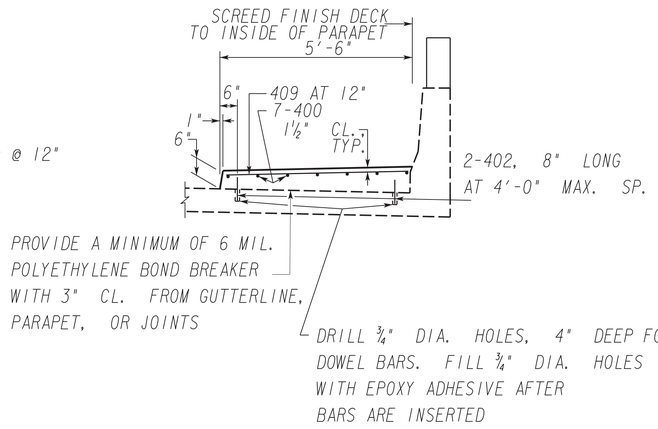
Proposed Typical
McFarland Road
Greenway Access to Shiloh Road
Sta. 117+10.00 to Sta. 125+25.00
Sta. 127+75.00 to Sta. 129+65.06



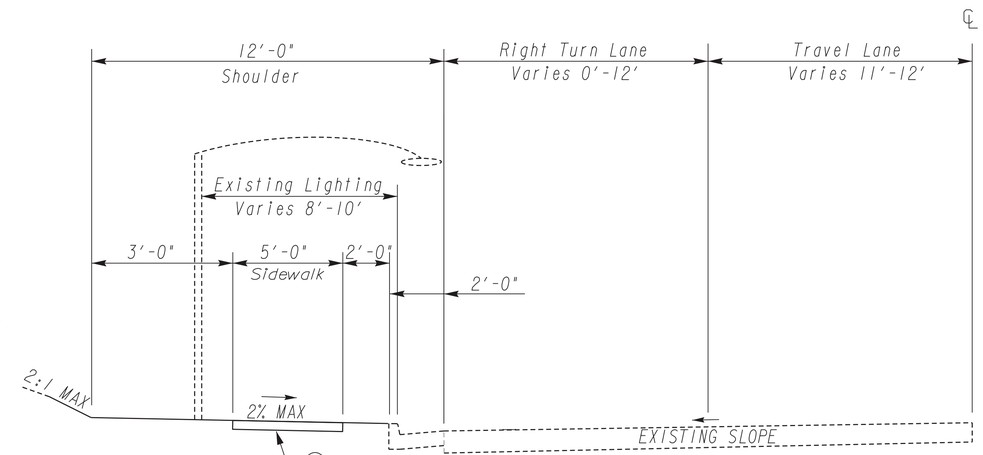
Bridge Extension Detail

PLACE TRANSVERSE SIDEWALK MARKINGS ON SIDEWALK SPACED AT 5'-0"+/-.

INCLUDE COST OF BOND BREAKER AND EPOXY ADHESIVE IN PRICE BID FOR SUPERSTRUCTURE ITEMS. BRIDGE SIDEWALK ITEMS PAID WITH SUPERSTR REINF STEEL AND SUPERSTR CONCRETE, CL AA



Bridge Sidewalk Detail



Proposed Typical
Shiloh Road

#3 Shiloh Road East
Sta. 201+21.99 to Sta 204+00.00

Ⓐ 8"X30" CONC. CURB & GUTTER, GA. STD. 9032-B, TYPE 2
Ⓑ 10" GRADED AGGREGATE BASE
Ⓒ CONCRETE SIDEWALK, 4", GA DET A3

GRESHAM SMITH AND PARTNERS

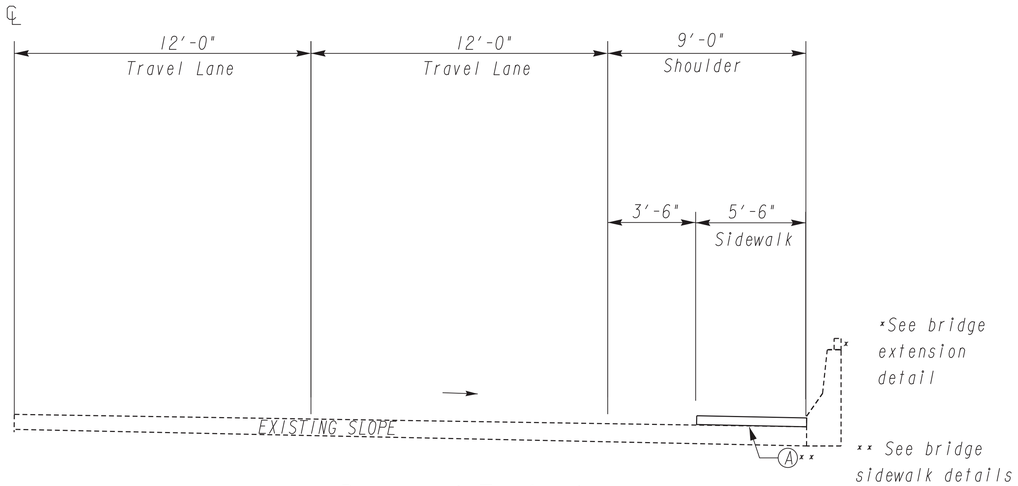
REVISION DATES		
#3 9/5/2019		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

TYPICAL SECTIONS

PEB 09
FORSYTH COUNTY

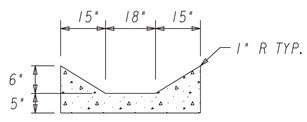
DRAWING No.
05-001



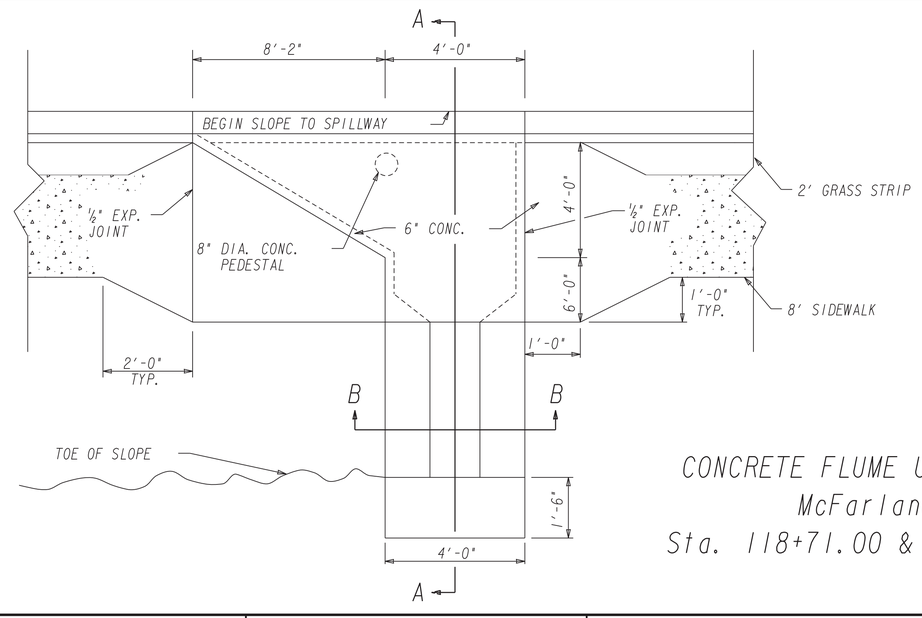
Proposed Typical
McFarland Road - Bridge
Sta. 125+25.00 to Sta. 127+75.00

Ⓐ CONCRETE SIDEWALK, 6"
Ⓑ CONCRETE SIDEWALK, 4", GA DET A3

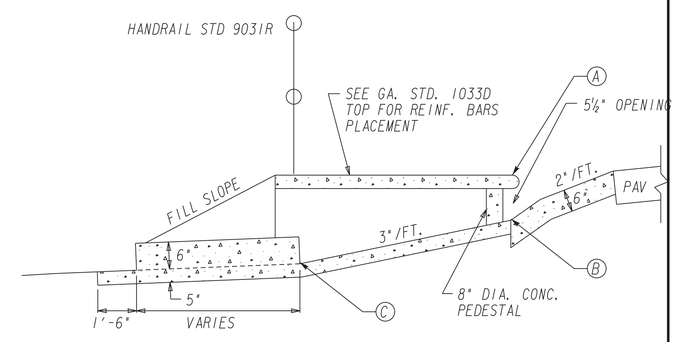
#3



SECTION B-B



CONCRETE FLUME UNDER SIDEWALK
McFarland Road
Sta. 118+71.00 & Sta. 127+69.00



SECTION A-A

REVISION DATES		
#3 9/5/2019		

GRESHAM SMITH AND PARTNERS

FORSYTH COUNTY
ENGINEERING DEPARTMENT

TYPICAL SECTIONS

PEB 09
FORSYTH COUNTY

DRAWING No.
05-002

#3

SUMMARY OF QUANTITIES

TRAFFIC CONTROL PEB 09	(150-0001)
TOTAL	LUMP SUM

GRADING COMPLETE PEB 09	(210-0100)
TOTAL	LUMP SUM

CONCRETE CURB & GUTTER 8"X 30"TYPE 2, STD. 9032-B	(441-6222)
TOTAL	980 LF

#4

#4

GRADED AGGREGATE BASE (310-1101)	
TOTAL	50 TONS

TEMPORARY EROSION CONTROL			
ITEM		UNIT	TOTAL
TEMPORARY SILT FENCE, TYPE A	171-0010	LIN FT	3806
TEMPORARY SILT FENCE, TYPE C	171-0030	LIN FT	1018
CONSTRUCT AND REMOVE TEMPORARY SEDIMENT BARRIER OR BALED STRAW CHECK DAM	163-0529	LIN FT	200
CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	163-0550	EACH	5
CONSTRUCTION EXIT	163-0300	EACH	3
SOD	700-9300	SY	500

GALV STEEL PIPE HANDRAIL, 2 IN, ROUND (515-2020)		
LOCATION	SIDE	LIN. FT.
118+52 TO 118+92	RT	38
127+65 TO 127+85	RT	25
AS DIRECTED		2
TOTAL		65

TRAFFIC STRIPE					
DESCRIPTION		UNIT	QUANTITY		
			PAINT	THERMOPLASTIC	PREFORMED
5" SOLID WHITE	653-1501	LIN FEET		500	
24" SOLID WHITE	653-1704	LIN FEET		50	
8" SOLID WHITE	653-1804	LIN FEET		1000	93
WHITE TRAFFIC STRIPING	653-6004	SQUARE YARD		100	

GRASSING			AGRICULTURAL LIME 700-7000	MULCH 163-0240	FERTILIZER MIXED GRADE 700-8000	FERTILIZER NITROGEN CONTENT 700-8100
ITEM	UNIT	QUANTITY	TON	TON	TON	LB
PERMANENT GRASSING	AC	0.5	0.5	2.5	0.25	25
TEMPORARY GRASSING	AC	0.5		2.5	0.25	
DISTURBED	----	----	----	----	----	----
TOTAL			0.5	5.0	0.5	25

CONCRETE SIDEWALK		UNIT	TOTAL
CONC SIDEWALK, 4 IN	441-0104	SY	1385
SUPERSTR REINF STEEL, BR NO -1 (2993.0 LB)	511-3000	LUMP	LUMP
SUPERSTR CONCRETE, CL AA, BR NO - 1 (29.0 CY)	500-1006	LUMP	LUMP

MAINTENANCE OF SEDIMENT BARRIER - BALED STRAW	(165-0071)
TOTAL	100 LIN FT.

MAINTENANCE OF TEMPORARY SILT FENCE - TP A	(165-0010)
TOTAL	1903 LIN FT.

MAINTENANCE OF TEMPORARY SILT FENCE - TP C	(165-0030)
TOTAL	509 LIN FT.

CLASS A CONCRETE, INCL REINF STEEL	(500-3800)
TOTAL	8 CY

MAINTENANCE OF CONSTRUCTION EXITS	(165-0101)
TOTAL	3 EACH

MAINTENANCE OF INLET SEDIMENT TRAPS	(165-0105)
TOTAL	5 EACH

GUARDRAIL QUANTITIES GA. STDS. 4270				(641-1100)
GUARDRAIL "T" BEAM		ANCHORAGES		
LOCATION & SIDE	LIN FT	TP 12	TP 1*	TP 9+
125+32 - 125+62 RT	30			
127+39 - 127+65 RT	26			
AS DIRECTED	6.5			
TOTALS	62.5			

NOTE: THE ACTUAL BEGINNING AND ENDING OF GUARDRAIL MAY BE ADJUSTED TO MEET FIELD CONDITION. AS DIRECTED BY THE ENGINEER.

GUARDRAIL QUANTITIES GA. STDS. 4010				(641-1200)
GUARDRAIL "W" BEAM		ANCHORAGES		
LOCATION & SIDE	LIN FT	TP 12	TP 1*	TP 9+
120+03 - 125+32 RT	513	1		
127+65 - 129+72 RT	201			
AS DIRECTED				
TOTALS	714	1		

NOTE: THE ACTUAL BEGINNING AND ENDING OF GUARDRAIL MAY BE ADJUSTED TO MEET FIELD CONDITION. AS DIRECTED BY THE ENGINEER.

SUMMARY OF QUANTITIES-STANDARD SIGNS

STATION	INSTL. NO.	CODE	SIGNS (SQUARE FEET)							POST (LINEAR FEET)					
			TYPE 1 (0.08)				TYPE 2 (0.10)			TYPE 7			TYPE 8		
			SIZE	QUANTITY	TYPE 9 SHEETING SF	TYPE 11 SHEETING SF	SIZE	QUANTITY	SQUARE FEET	LENGTH	QUANTITY	LINEAR FEET	LENGTH	QUANTITY	LINEAR FEET
COURTLAND ST															
106+80		R2-1	24 x 30	1	5.00					13	1	13			
108+71		R560-5	24 x 30	1	5.00					13	1	13			
110+80		R560-5	24 x 30	1	5.00					13	1	13			
117+39		R560-5	24 x 30	1	5.00					13	1	13			
128+73		R1-2	36 TRI	1		4.00				13	1	13			
129+19		R560-5	24 x 30	1	5.00					13	1	13			

GRESHAM SMITH AND PARTNERS

REVISION DATES
#3 9/5/2019
#4 11/5/2019

FORSYTH COUNTY
ENGINEERING DEPARTMENT

SUMMARY OF QUANTITIES

PEB 09
FORSYTH COUNTY

DRAWING No. 06-001

SUMMARY OF QUANTITIES

SUMMARY OF DRAINAGE QUANTITIES

STRUCTURE NUMBER	LOCATION	PIPE CULVERTS LINEAR FEET 18" 1-10'	18" 10-15'	24" 1-10'	24" 10-15'	30" 1-10'	30" 10-15'	36" 1-10'	36" 10-15'	42" 1-10'	42" 10-15'	APPROXIMATE GRADE OF PIPE %	MAXIMUM HEIGHT OF FILL OVER PIPE FEET	ADJUST DROP INLET TO GRADE EA	FOUNDATION BACK FILL MAT'L CY YDS TYPE II	TYPE III	CATCH BASINS GP 1 GA. STD. 1033-D 6' 0" OR LESS EA	ADDITL DEPTH LF	GA. STD. 1034-D 6' 0" OR LESS EA	ADDITL DEPTH LF	GA. STD. 1013-A 6' 0" OR LESS EA	ADDITL DEPTH LF	DROP INLETS GA. STD 1019A 6' 0" OR LESS TYPE 1 EA	ADDITL DEPTH TYPE 1 LF	6' 0" OR LESS TYPE 2 EA	ADDITL DEPTH TYPE 2 LF	DROP INLETS GA. STD 1019B 6' 0" OR LESS TYPE 1 EA	ADDITL DEPTH TYPE 1 LF	6' 0" OR LESS TYPE 2 EA	ADDITL DEPTH TYPE 2 LF	MANHOLES GA. STD 1011-A 6' 0" OR LESS TYPE 1 EA	ADDITL DEPTH TYPE 1 LF	6' 0" OR LESS TYPE 2 EA	ADDITL DEPTH TYPE 2 LF	FLARED END SECTION GA. STD. 1120 18" F.E.S. EA	24" F.E.S. EA	30" F.E.S. EA	36" F.E.S.	42" F.E.S. EA	CLASS A CONC. COLLAR (903IU) EA	RECONSTRUCT JUNCTION BOX EA	RECONSTRUCT DROP INLET EA	RECONSTRUCT CATCH BASIN EA	CLASS A CONCRETE INCL. REINF. STEEL CONCRETE HEADWALLS CY	PROFILE DRAINAGE DRAWING NUMBER	CONCRETE SPILLWAY, TPI EA	STONE DUMPED RIP-RAP TP 3, 18 IN SY	STONE DUMPED RIP-RAP TP 1, 12 IN SY	PLASTIC FILTER FABRIC SY
C-1	118+71																1																												1	19		19
A-3	120+77																1																									22-01				
A-2	122+13	160																	1	0.7																						22-01				
A-1	122+43	27															1	0.5																								22-01				
A-4	122+72	27															1	0.5																								22-01				
B-1	125+18	26																															1									22-01				
B-2	125+17																1																									22-01		9		9
D-1	127+68																1	6.2																									1	48		48
	SUBTOTAL	240															6	7.2	1	0.7													1										2	76		76
	AS DIRECTED	8															0	0.2	0	0.1													0										0	2		2
	TOTAL	248															6	8	1	1													1										2	78		78

GRESHAM SMITH AND PARTNERS

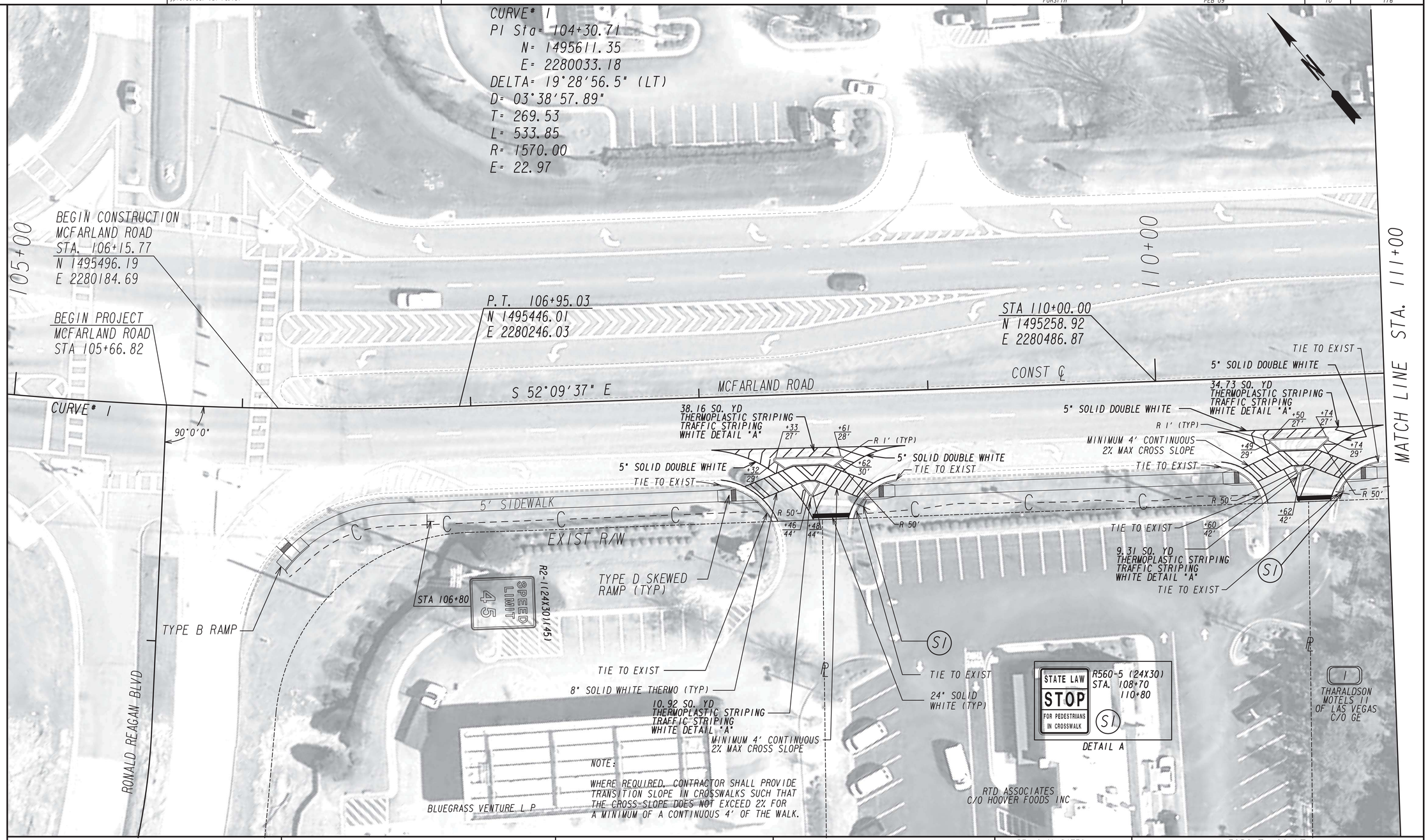
REVISION DATES
#1 4/4/2018

FORSYTH COUNTY
ENGINEERING DEPARTMENT

SUMMARY OF QUANTITIES

PEB 09
FORSYTH COUNTY

DRAWING No. 06-002



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

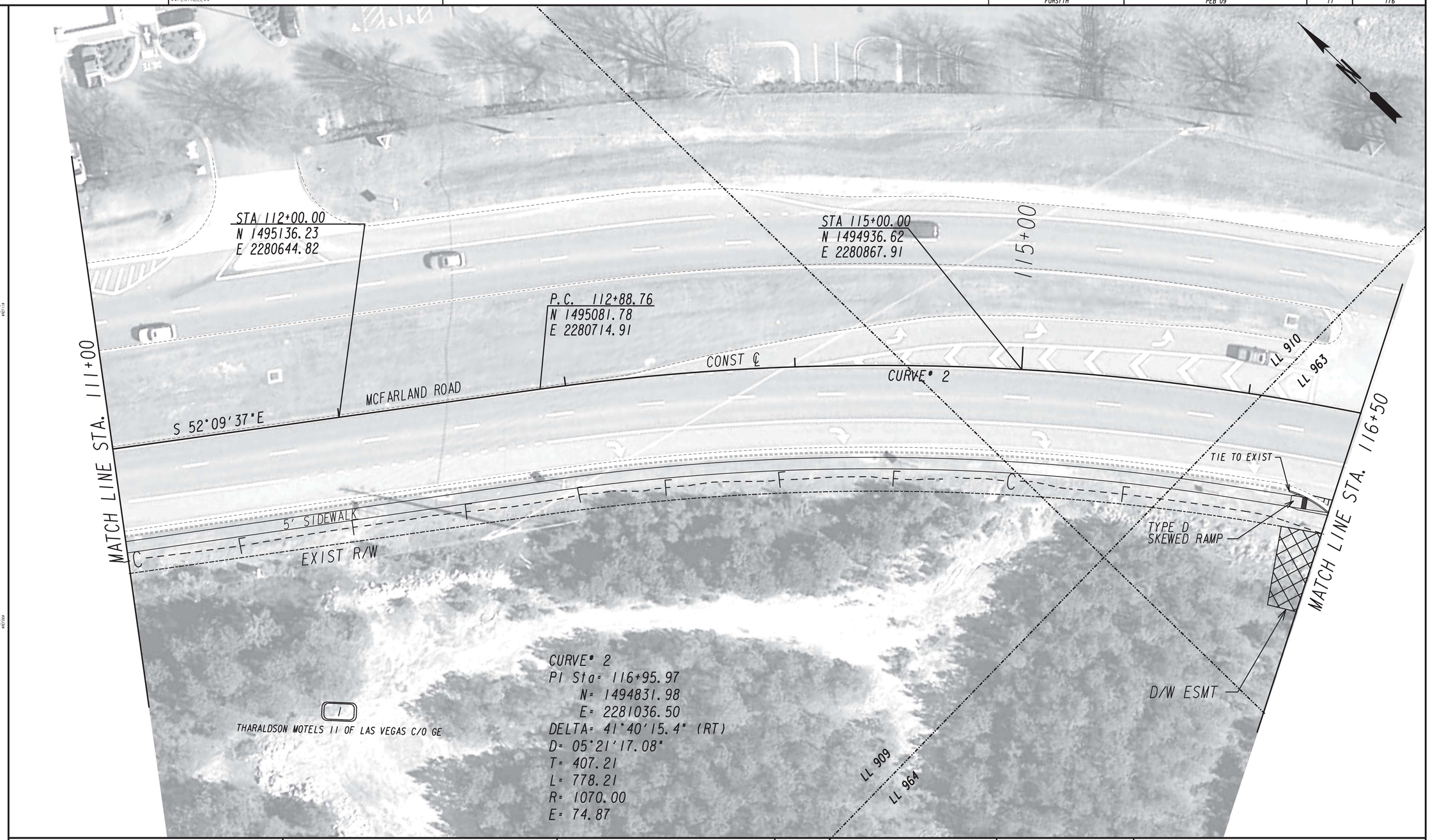
MAINLINE PLAN
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
13-001

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	11	176



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LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

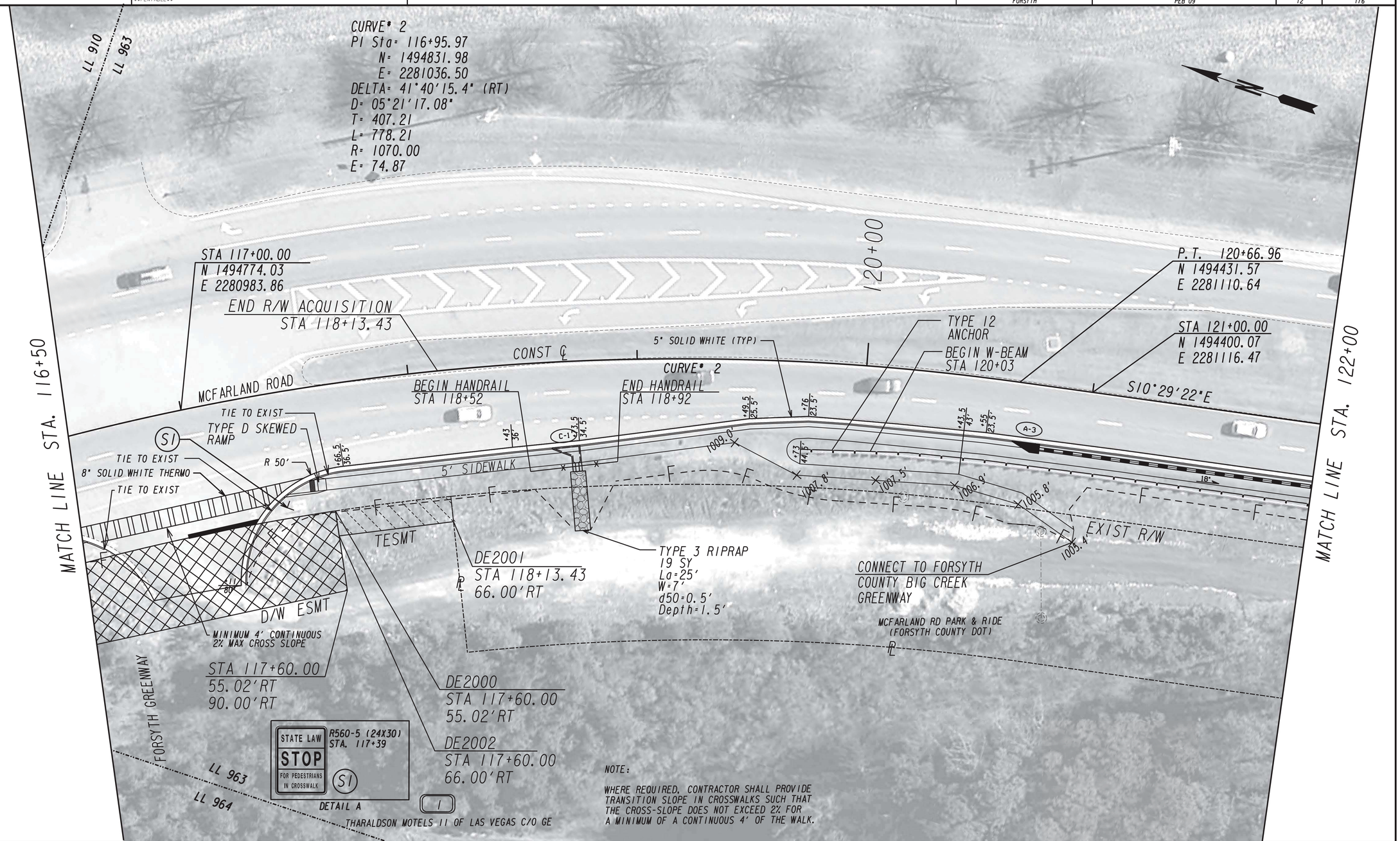
MAINLINE PLAN
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
13-002

4/27/2012 GPUN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	12	176



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LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

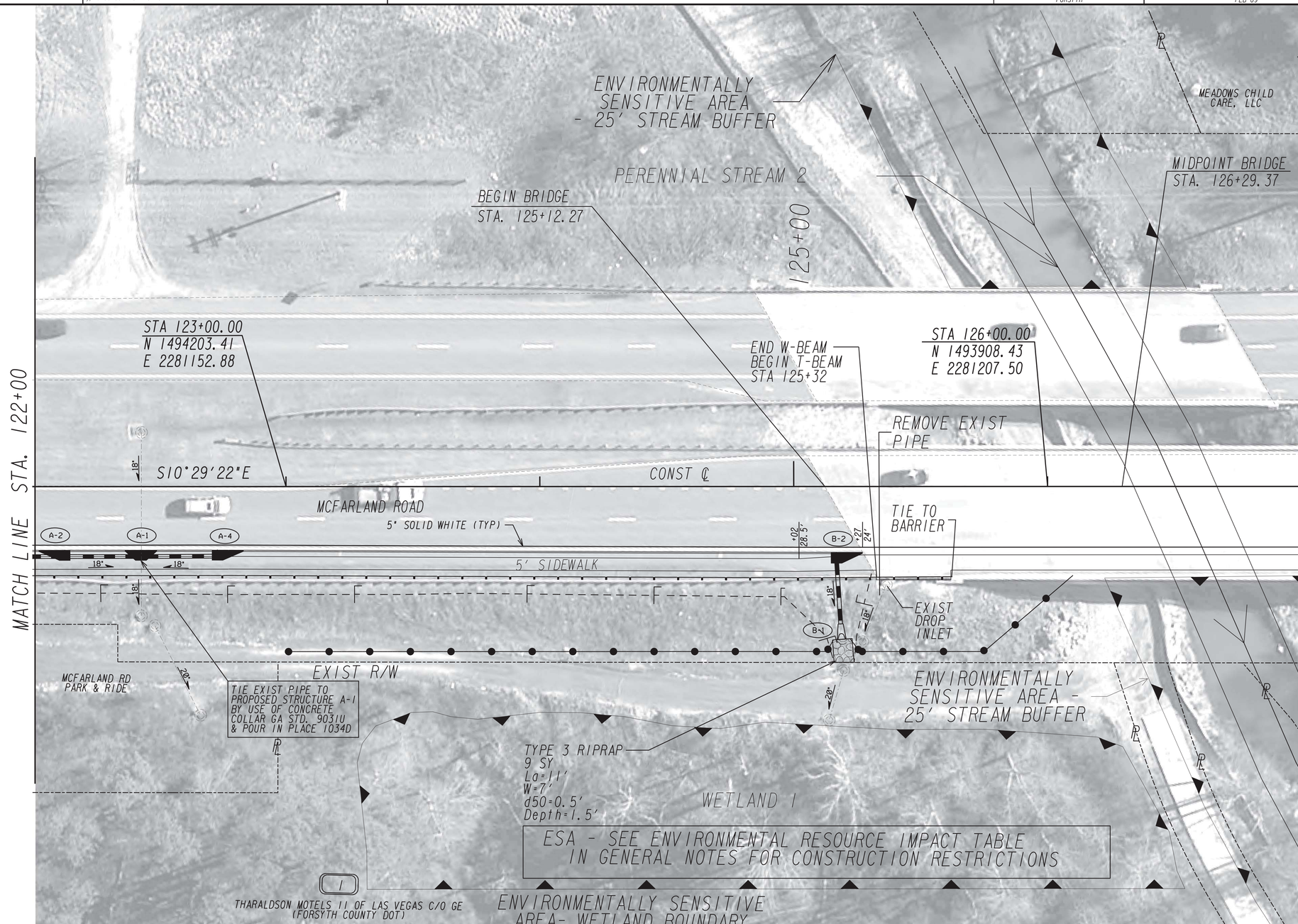
FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
13-003

4/27/2012 GPLN



PROPERTY AND EXISTING R/W LINE
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EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

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END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY ENGINEERING DEPARTMENT

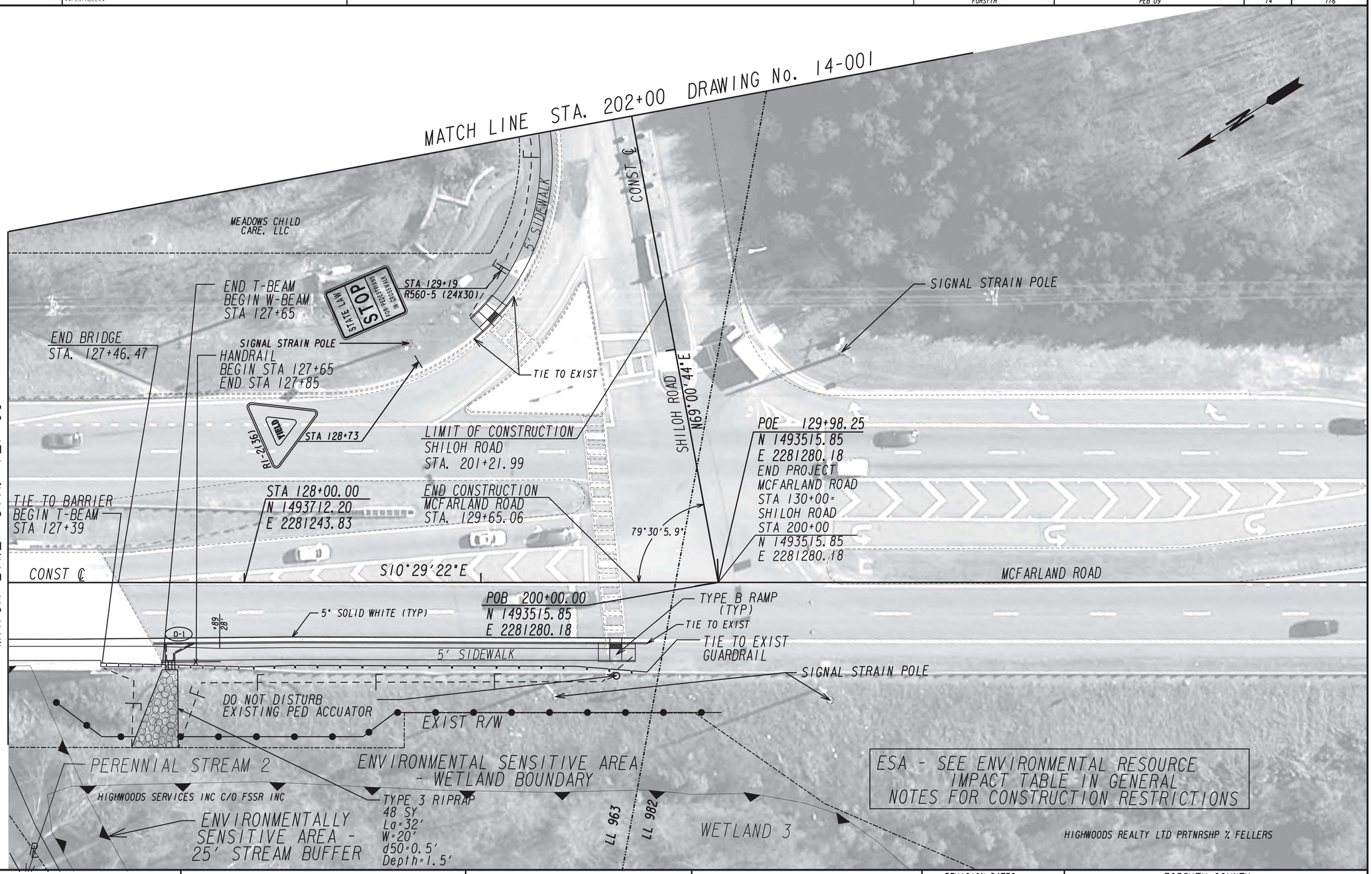
MAINLINE PLAN
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No. 13-004

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	14	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
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EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REO'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

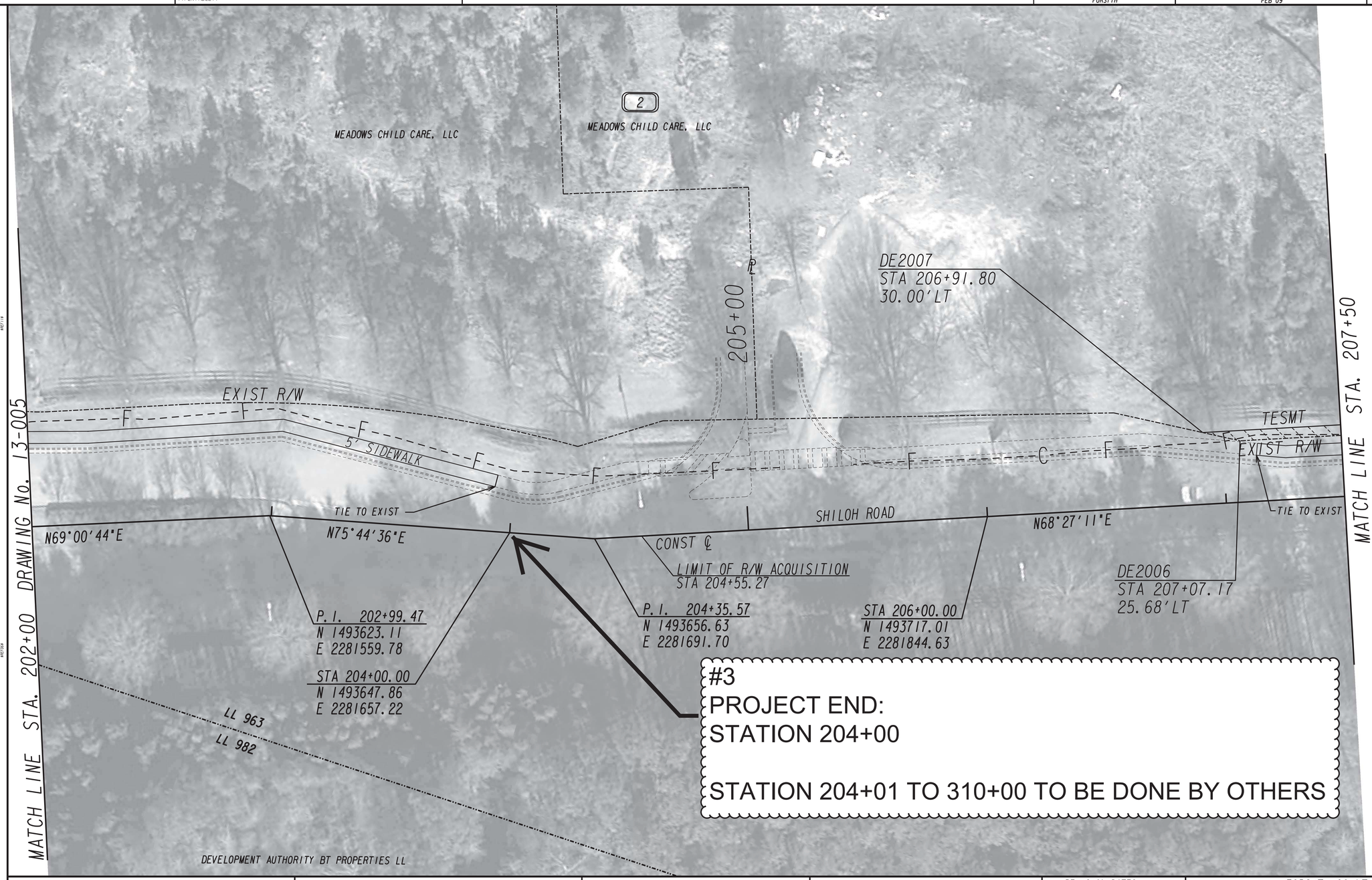
MAINLINE PLAN
MCFARLAND ROAD/SHILOH ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
13-005

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	15	176



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REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES		
#3 9/5/2019		

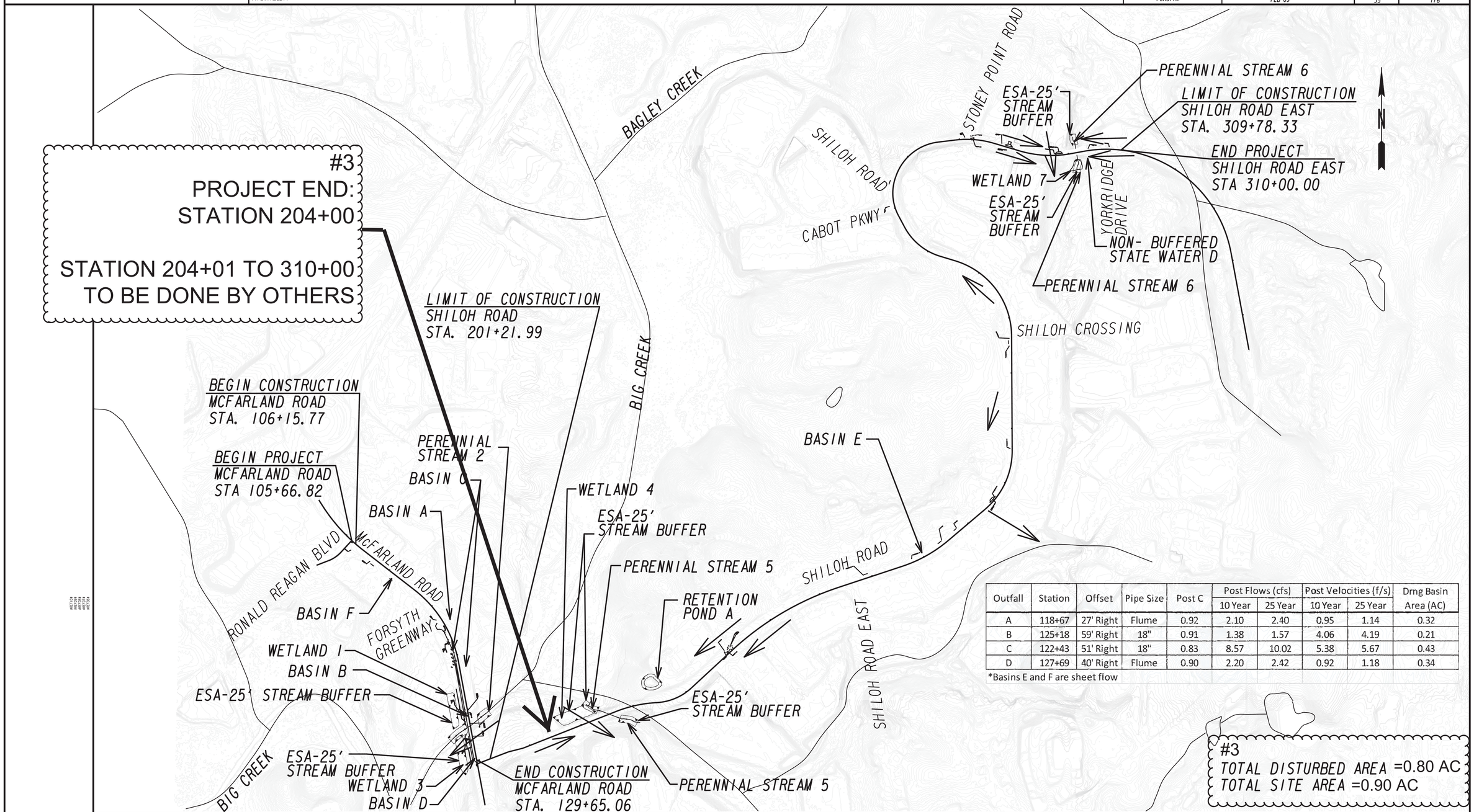
FORSYTH COUNTY
ENGINEERING DEPARTMENT

CROSSROAD PLAN
SHILOH ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
14-001

4/27/2012 GPLN



Outfall	Station	Offset	Pipe Size	Post C	Post Flows (cfs)		Post Velocities (f/s)		Drng Basin
					10 Year	25 Year	10 Year	25 Year	Area (AC)
A	118+67	27' Right	Flume	0.92	2.10	2.40	0.95	1.14	0.32
B	125+18	59' Right	18"	0.91	1.38	1.57	4.06	4.19	0.21
C	122+43	51' Right	18"	0.83	8.57	10.02	5.38	5.67	0.43
D	127+69	40' Right	Flume	0.90	2.20	2.42	0.92	1.18	0.34

*Basins E and F are sheet flow

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 300 600 1200

REVISION DATES
#3 9/5/2019

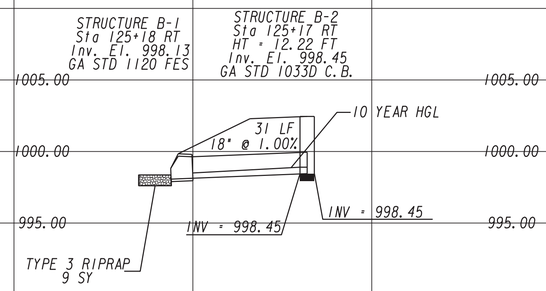
FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRAINAGE AREA MAP

PEB 09
FORSYTH COUNTY

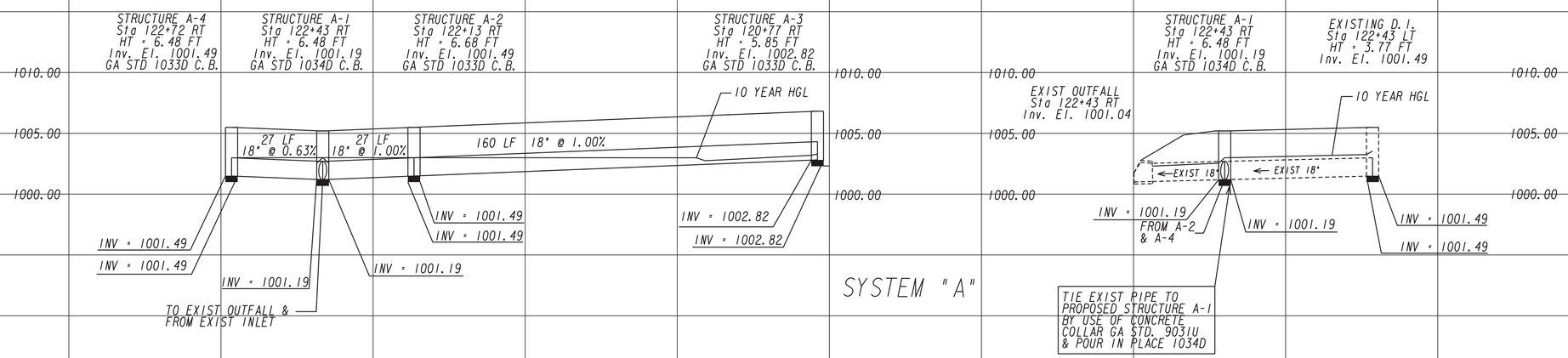
DRAWING No.
21-001

12/14/2012 GPLN



SYSTEM "B"

NOTE: ALL STRUCTURE HEIGHTS ARE APPROXIMATED. ACTUAL CONSTRUCTION HEIGHT MAY VARY. FIELD VERIFY ALL ELEVATIONS. ALL ADDITIONAL WORK AND QUANTITIES SHALL BE INCLUDED IN THE CONSTRUCTION COST FOR THE DRAINAGE ITEMS



SYSTEM "A"

GRESHAM SMITH AND PARTNERS

VERTICAL SCALE IN FEET
0 5 10 20

HORIZONTAL SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRAINAGE PROFILES

PEB 09
FORSYTH COUNTY

DRAWING No.
22-001

UTILITY LEGEND

EXISTING OVERHEAD	OVERHEAD TO BE REMOVED	PROPOSED OVERHEAD	TYPE OF UTILITY
E	E	E	ELECTRIC
E-T	E-T	E-T	ELECTRIC/TELECOMMUNICATIONS
E-TV	E-TV	E-TV	ELECTRIC/CABLE TV
E-TC	E-TC	E-TC	ELECTRIC/TRAFFIC CONTROL
E-T-TV	E-T-TV	E-T-TV	ELECTRIC/TELECOMMUNICATIONS/CABLE TV
E-T-TV-TC	E-T-TV-T	E-T-TV-TC	ELECTRIC/TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
E-TV-TC	E-TV-TC	E-TV-TC	ELECTRIC/CABLE TV/TRAFFIC CONTROL
E-T-TC	E-T-TC	E-T-TC	ELECTRIC/TELECOMMUNICATIONS/TRAFFIC CONTROL
GW	GW	GW	GUY WIRE
T	T	T	TELECOMMUNICATIONS
T-TC	T-TC	T-TC	TELECOMMUNICATIONS/TRAFFIC CONTROL
T-TV-TC	T-TV-TC	T-TV-TC	TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
T-TV	T-TV	T-TV	TELECOMUNICATIONS/CABLE TV
TV	TV	TV	CABLE TV
TV-TC	TV-TC	TV-TC	CABLE TV/TRAFFIC CONTROL
TC	TC	TC	TRAFFIC CONTROL

EXISTING UNDERGROUND	UNDERGROUND TO BE REMOVED	PROPOSED UNDERGROUND	TYPE OF UTILITY
E	E	E	ELECTRIC
T	T	T	TELECOMMUNICATIONS
TV	TV	TV	CABLE TV
W	W	W	WATER
W	W	W	WATER FOR LABELED PIPE SIZES
NW	NW	NW	NON-POTABLE WATER
NW	NW	NW	NON-POTABLE WATER FOR LABELED PIPE SIZES
STM	STM	STM	STEAM
STM	STM	STM	STEAM FOR LABELED PIPE SIZES
SS	SS	SS	SANITARY SEWER WITH FLOW DIRECTION
SS	SS	SS	SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES
SFM	SFM	SFM	SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION
G	G	G	GAS
G	G	G	GAS FOR LABELED PIPE SIZES
P	P	P	PETROLEUM
P	P	P	PETROLEUM FOR LABELED PIPE SIZES
TC	TC	TC	TRAFFIC CONTROL

UTILITY CELLS

EXISTING	PROPOSED	TEMPORARY	
E	E	E	ELECTRIC MANHOLE
H	H	H	HAND HOLE
E	E	E	TRANSFORMER
E	E	E	ELECTRIC METER
			UTILITY POLE/GUY POLE
			LIGHT POLE
			GUY ANCHOR
E	E	E	ELECTRIC BOX
M	M	M	MARKER
T	T	T	TELECOMMUNICATIONS MANHOLE
T	T	T	TELECOMMUNICATIONS PEDESTAL
X	X	X	SPLICE BOX
SLC	SLC	SLC	SUBCRIBER LOOP CARRIER (aka "SLICK")
			CABINET
			PHONE BOOTH
			CABLE TV PEDESTAL
TV	TV	TV	CABLE TV MANHOLE
W	W	W	WATER VALVE
W	W	W	WATER METER
W	W	W	WATER MANHOLE
			FIRE HYDRANT ASSEMBLY (INCLUDES ASSOCIATED VALVE)
BFP	BFP	BFP	BACKFLOW PREVENTER
PIV	PIV	PIV	PRESSURE INDICATOR VALVE
ARV	ARV	ARV	AIR RELEASE VALVE

EXISTING	PROPOSED	TEMPORARY	
W	W	W	WELL
W	W	W	WATER VAULT
W	W	W	WATER VALVE MARKER
			STAND PIPE
			CLEANOUT
SS	SS	SS	SANITARY SEWER MANHOLE
ARV	ARV	ARV	AIR RELEASE VALVE
GT	GT	GT	GREASE TRAP
S	S	S	SANITARY SEWER FORCE MAIN VALVE
			VENT
G	G	G	GAS VALVE
G	G	G	GAS METER
G	G	G	GAS MANHOLE
GPR	GPR	GPR	GAS PRESSURE REGULATOR
G	G	G	GAS VAULT
GTS	GTS	GTS	GAS TEST STATION
P	P	P	PETROLEUM VALVE

MISC.

	LIMITS OF OVERHEAD AND SUBSURFACE UTILITY INVESTIGATION
TH	TEST HOLE
EOI	END OF INFORMATION
	QUALITY LEVEL (QL) DELINEATION
123	POLE ID
A01	SANITARY SEWER MANHOLE (SSMH) ID

TELEPHONE PAIR SIZE	TELEPHONE CABLE DIAMETER
5 - 100	0.50 TO 2.00 IN
101 - 2400	UP TO 3.50 IN

GRESHAM SMITH AND PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

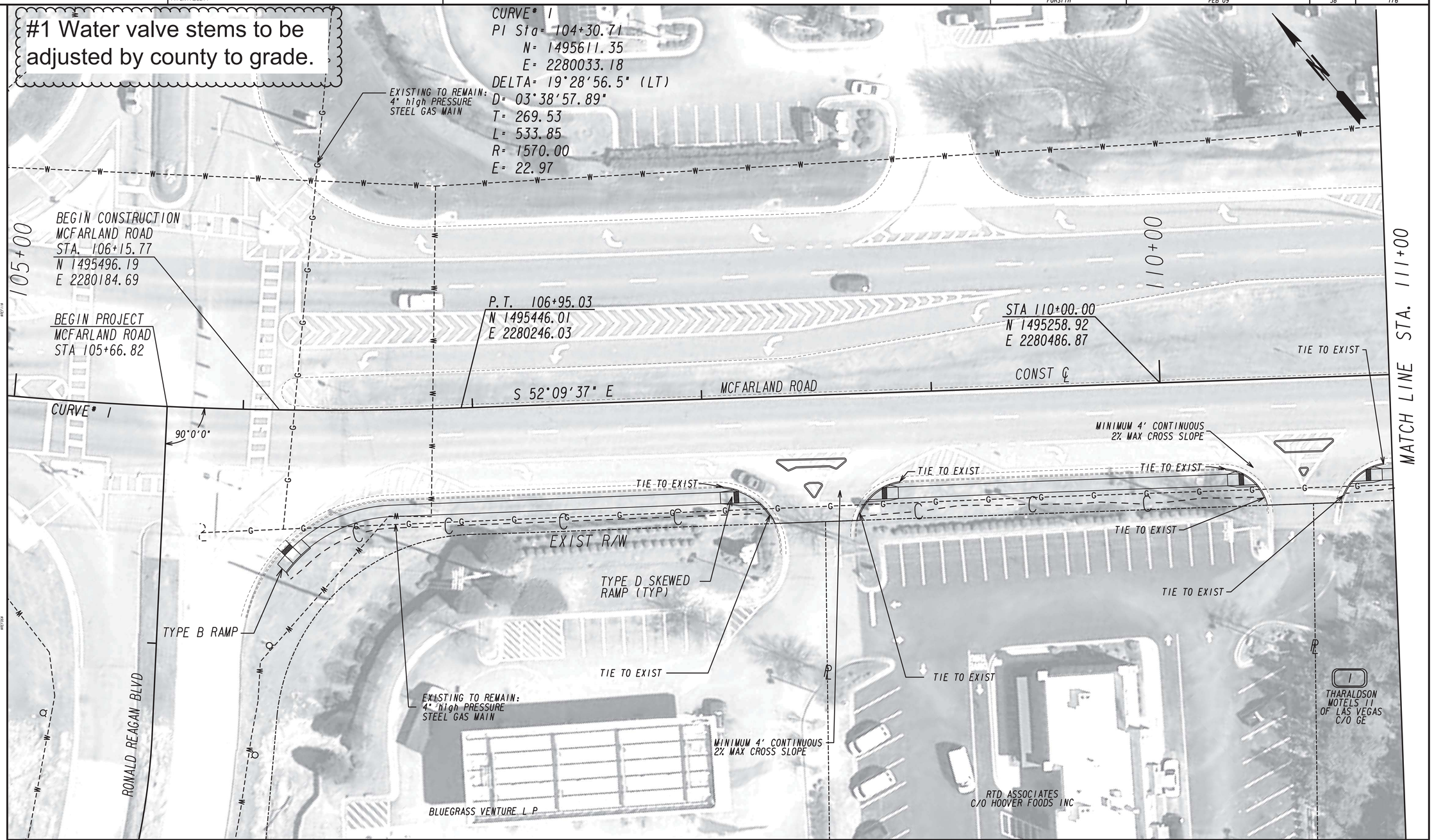
UTILITY PLANS

PEB 09
FORSYTH COUNTY

DRAWING No.
24-000

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	38	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES		
#1 4/4/2018		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

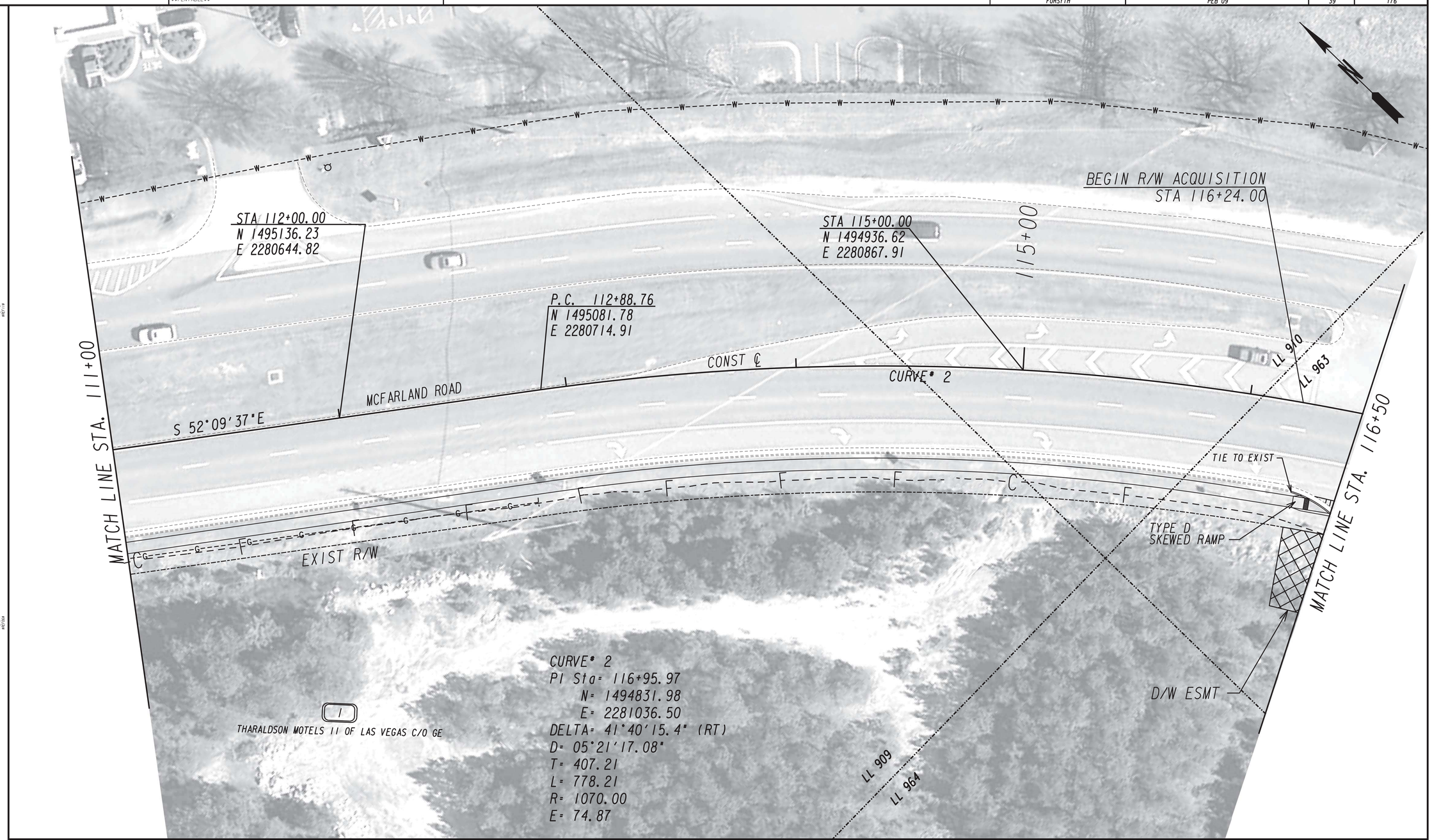
UTILITY PLANS
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
24-001

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	39	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

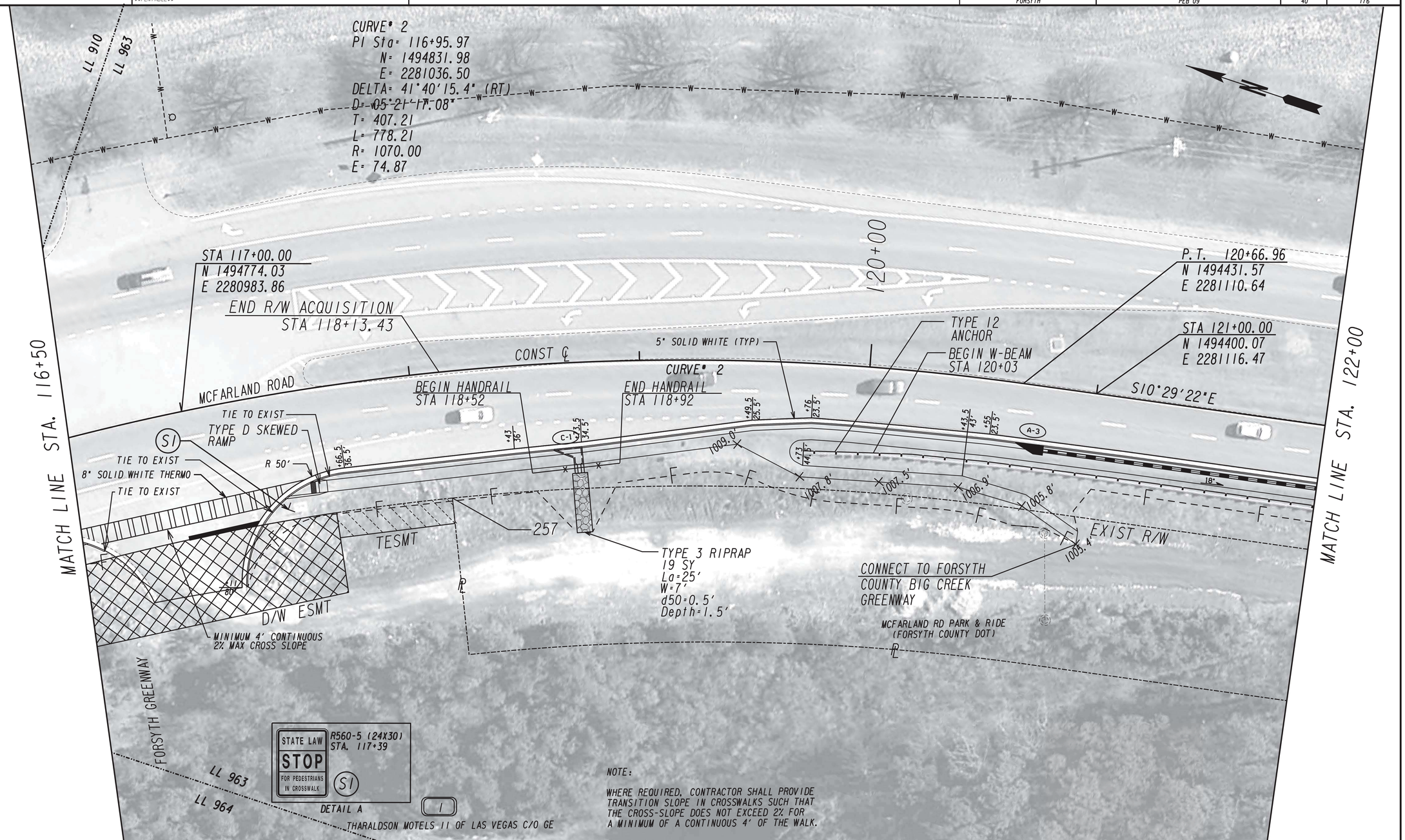
UTILITY PLANS
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
24-002

4/27/2012 GPUN

DATE$$$	TIME$$$	PRF	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	40	176



NOTE:

WHERE REQUIRED, CONTRACTOR SHALL PROVIDE TRANSITION SLOPE IN CROSSWALKS SUCH THAT THE CROSS-SLOPE DOES NOT EXCEED 2% FOR A MINIMUM OF A CONTINUOUS 4' OF THE WALK.

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

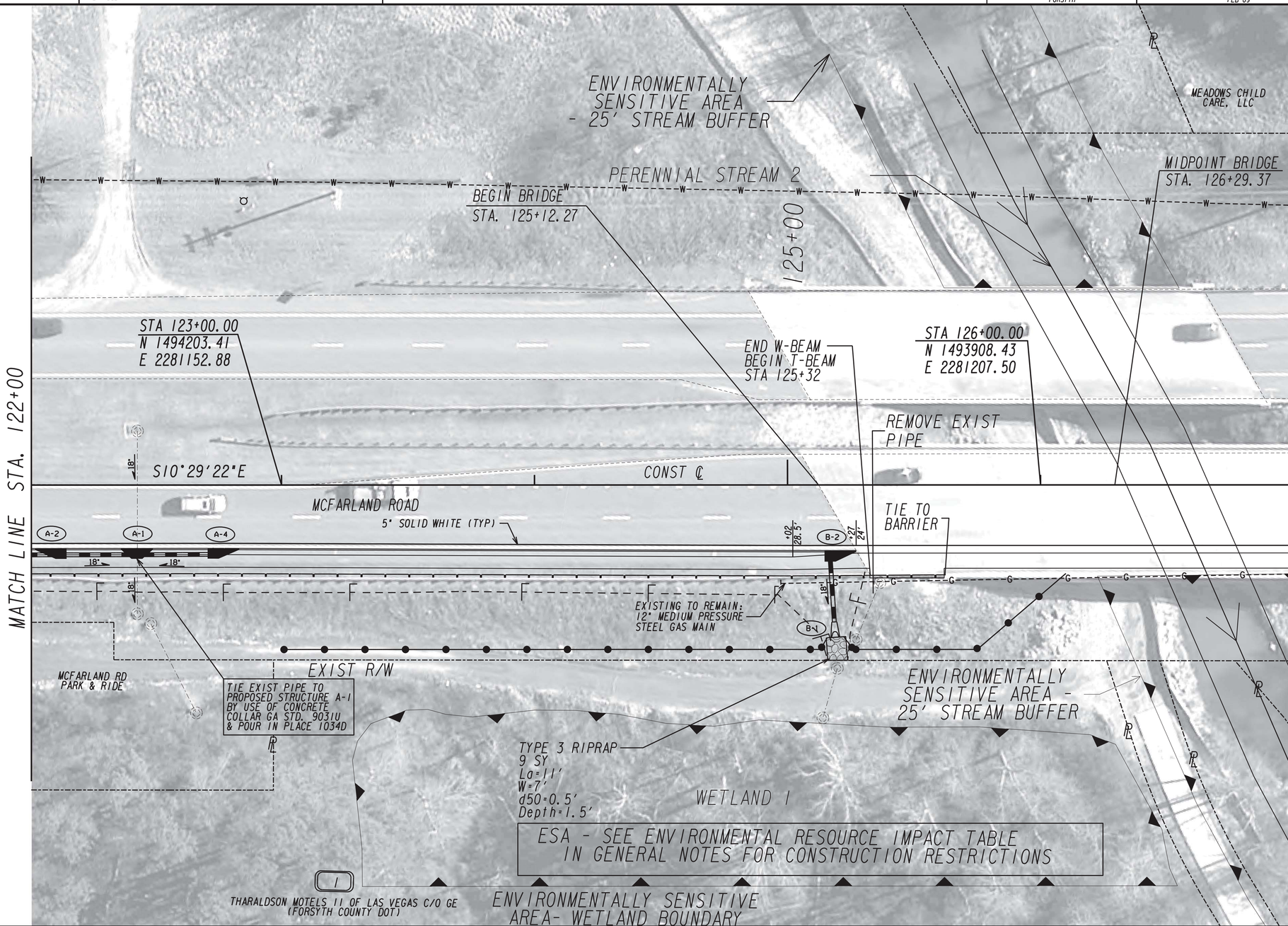
UTILITY PLANS
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
24-003

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	41	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

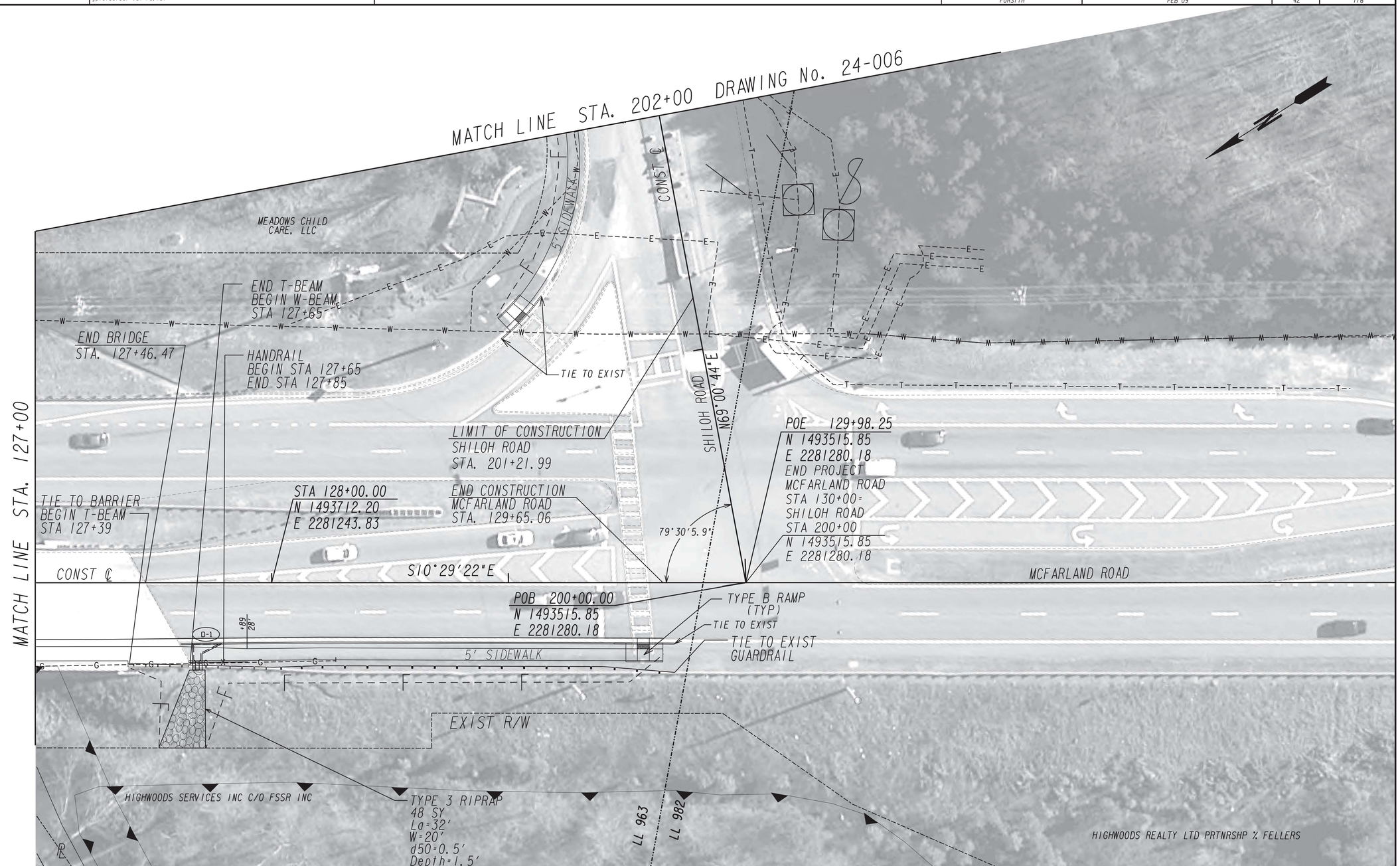
FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS
MCFARLAND ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
24-004

4/27/2012 GPLN



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

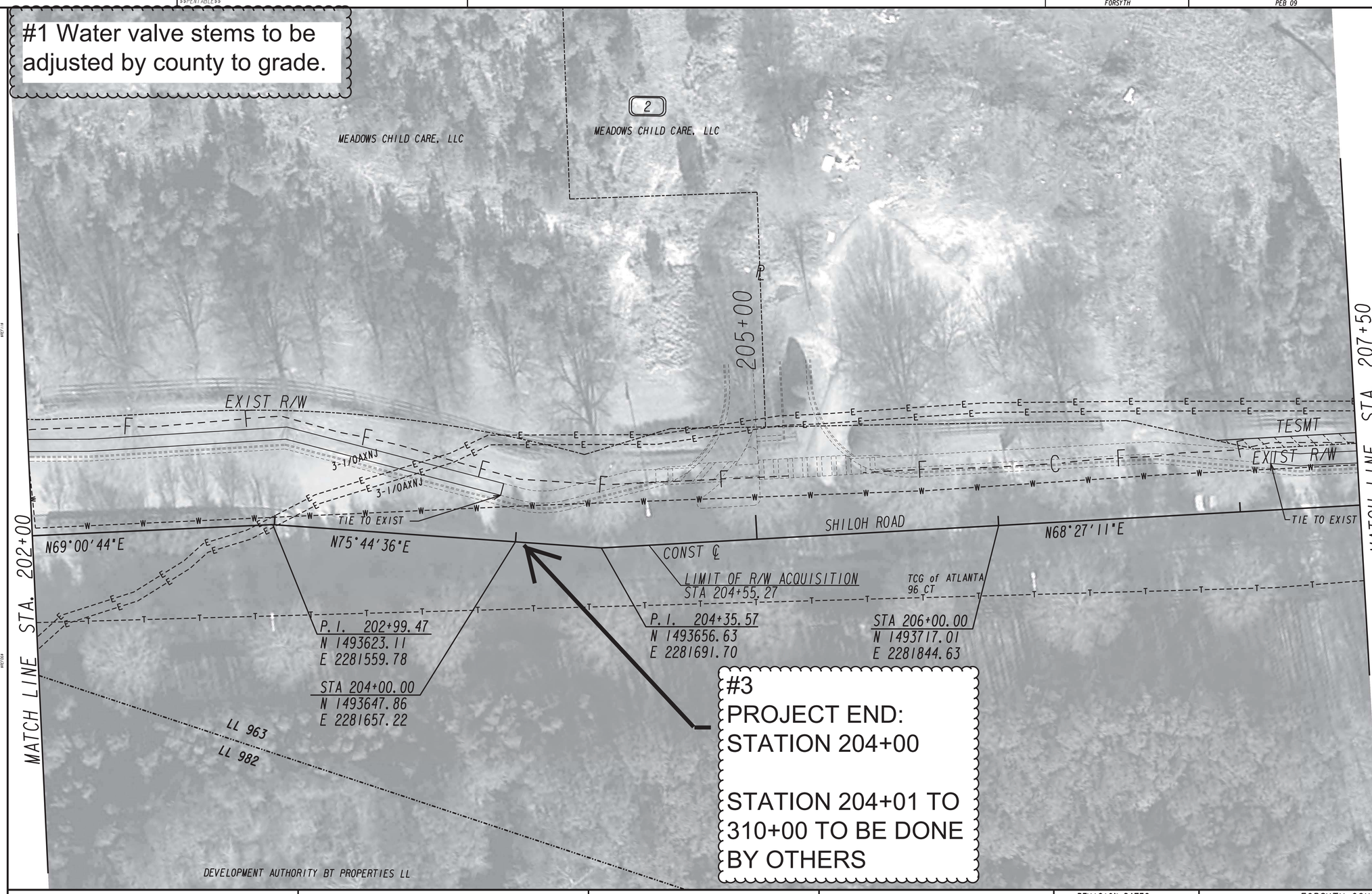
UTILITY PLANS
MCFARLAND ROAD/SHILOH ROAD

PEB 09
FORSYTH COUNTY

DRAWING No.
24-005

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	43	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES		
#1 4/4/2018		
#3 9/5/2019		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS
SHILOH ROAD

PEB 09
FORSYTH COUNTY

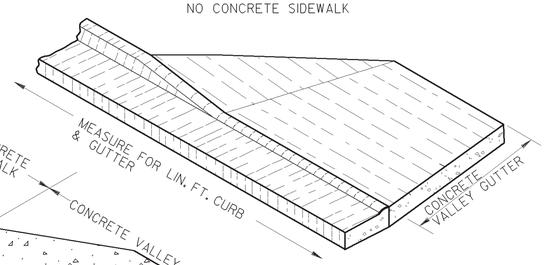
DRAWING No.
24-006

4/27/2012 GPLN

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	63	176

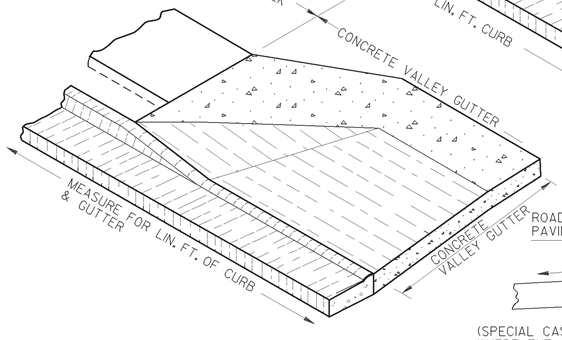
PICTORIAL SECTION

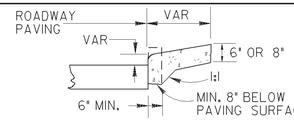
NO CONCRETE SIDEWALK



PICTORIAL SECTION

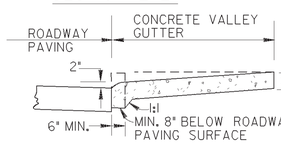
DRIVEWAY & CONRETE SIDEWALK



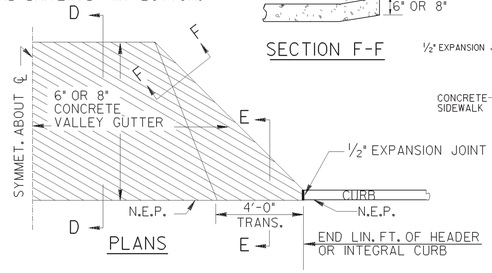


SECTION E-E

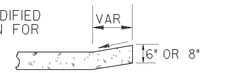
NOTE:
PLAN VIEW DETAILS NOT SHOWN FOR MODIFIED DRIVES WILL BE SIMILAR TO THAT SHOWN FOR STANDARD DRIVEWYS AT BOTTOM.



SECTION D-D

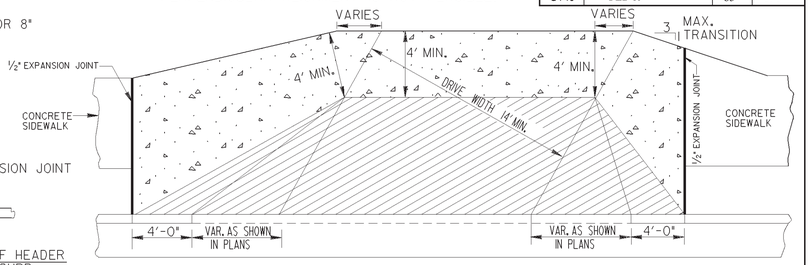


PLANS



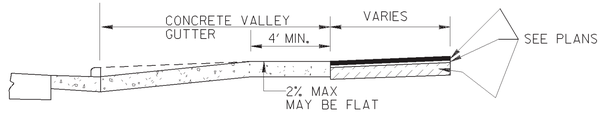
SECTION F-F

NOTE: DRIVEWAYS WILL NOT BE SKEWED EXCEPT WHERE PERPENDICULAR ALIGNMENT IS NOT FEASIBLE.

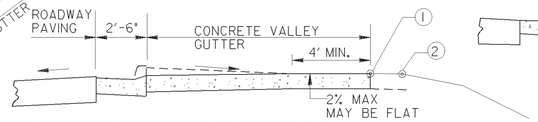


DRIVE ENTRANCE MODIFIED FOR SKEW

DRIVE MODIFIED FOR HEADER OR INTEGRAL CURB ALONG ROADWAY



SECTION WITH ASPHALT PAVING

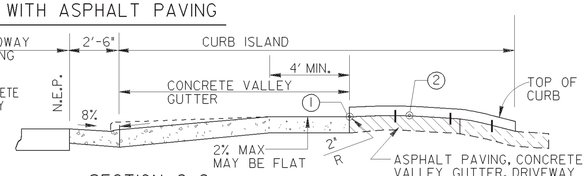


(SPECIAL CASE FOR SECTION B-B OR SECTION C-C: WHERE THE SHOULDER OR SIDEWALK IS SLOPED AWAY FROM THE ROAD)

(1) IS THE BACK OF SIDEWALK SURFACE GRADE OR THE SHOULDER SURFACE GRADE 10'-0" BACK OF THE CURB, SLOPE OF THE CONCRETE VALLEY GUTTER WILL BE SUCH THAT THE BACK OF THE DRIVEWAY TAPER WILL BE THE SAME ELEVATION.

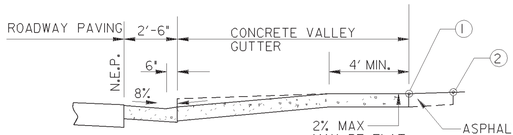
(2) IS BEGINNING OF DRIVEWAY TIE-IN.

NOTE: (1) AND (2) MAY COINCIDE



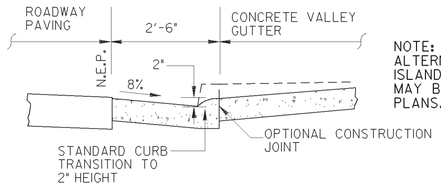
SECTION C-C

ASPHALT PAVING, CONCRETE VALLEY GUTTER, DRIVEWAY CONCRETE, OR EXISTING PAVEMENT, AS SPECIFIED IN THE PLANS. ALL DRIVEWAYS WITHIN THE RIGHT OF WAY SHALL BE PAVED.

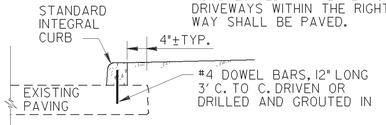


SECTION B-B

ASPHALT PAVING, DRIVEWAY CONCRETE, OR EXISTING PAVEMENT, AS SPECIFIED IN THE PLANS. ALL DRIVEWAYS WITHIN THE RIGHT OF WAY SHALL BE PAVED.



NOTE:
ALTERNATES TO THE CURB ISLAND DESIGN SHOWN HERE MAY BE SPECIFIED IN THE PLANS.



DOWELED CURB DETAIL

GENERAL NOTES:

1. QUANTITIES SHALL BE MEASURED AS FOLLOWS:
   (A) CONCRETE CURB & GUTTER ALONG ROADWAY---
   LIN. FT. OF CURB & GUTTER SHALL BE MEASURED FOR PAYMENT CONTINUOUS THRU THE DRIVE ENTRANCES. PAYMENT FOR CURB & GUTTER SHALL INCLUDE DAPPING DOWN THE TOP PORTION OF THE CURB. SQ. YDS. OF CONCRETE VALLEY GUTTER SHALL BE MEASURED FOR PAYMENT TO THE BACK OF THE CURB LINE.
   (B) HEADER (OR INTEGRAL) CURB ALONG ROADWAY---
   LIN. FT. OF CURB SHALL BE MEASURED FOR PAYMENT TO THE BEGINNING OF DRIVE WAY. SQ. YDS. OF CONCRETE VALLEY GUTTER SHALL BE MEASURED FOR PAYMENT TO THE EDGE OF THE ROADWAY PAVING.
2. N.E.P. IS DEFINED AS THE POINT WHERE THE ROADWAY PAVING MEETS THE CURB & GUTTER, OR HEADER CURB, OR FACE OR THE INTEGRAL CURB.
3. DRIVES RECONSTRUCTED SHALL BE REPLACED IN KIND, I.E, ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE, AND PAVED TO THE RIGHT OF WAY LINE.
4. SEE STANDARD 9032-B FOR DETAILS OF CONCRETE CURB & GUTTER, HEADER CURBS AND DOWELED INTEGRAL CURBS.
5. WIDTHS OF COMMERCIAL DRIVEWAYS SHALL COMPLY WITH CURRENT "RULES AND REGULATIONS FOR DRIVEWAY AND ENCROACHMENT CONTROL". WIDTHS OF RESIDENTIAL NON-COMMERCIAL DRIVEWAYS SHALL BE AS SPECIFIED IN THE PLANS.
6. THE SLOPE OF THE "TRANSITION AREA" OF THE CONCRETE VALLEY GUTTER SHALL NOT BE STEEPER THAN 8% (12:1) WHERE SIDEWALKS ARE LOCATED.
7. MAXIMUM DRIVEWAY GRADES SHOWN BELOW ARE INTENDED FOR RESIDENTIAL DRIVEWAYS WHERE FLATTER GRADES ARE NOT FEASIBLE. GRADES FOR COMMERCIAL DRIVEWAYS OR FOR TRUCKS SHALL NOT BE GREATER THAN 11% UNLESS SPECIFIED OTHERWISE.

Guidelines For Usage On Metric Projects

When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" =25mm, 4"=100mm, and 12" or 1' =300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

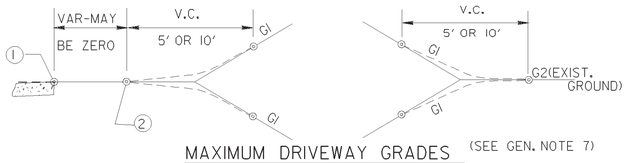
(1) IS THE BACK OF SIDEWALK SURFACE GRADE OR THE SHOULDER SURFACE GRADE 10'-0" BACK OF THE CURB, SLOPE OF THE CONCRETE VALLEY GUTTER WILL BE SUCH THAT THE BACK OF THE DRIVEWAY TAPER WILL BE THE SAME ELEVATION.

(2) IS BEGINNING OF DRIVEWAY TIE-IN.

NOTE: (1) AND (2) MAY COINCIDE

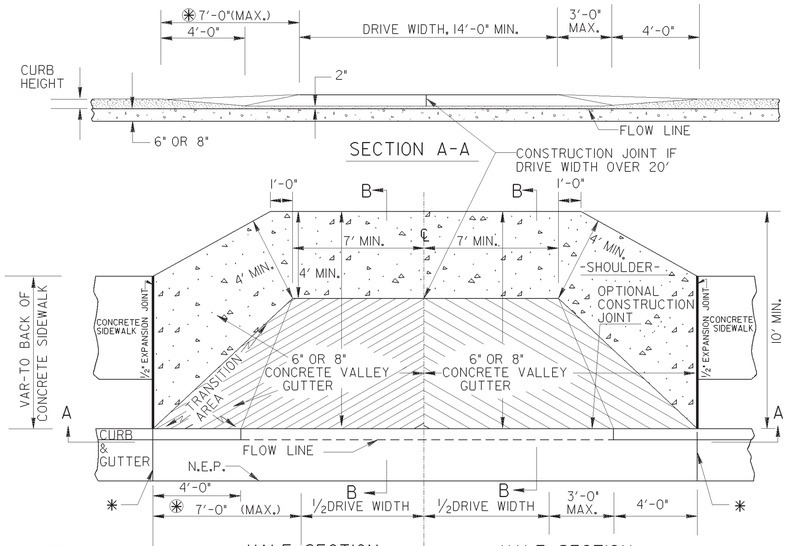
V.C.	MAXIMUM GI	
	CUT	FILL
5'	27%	16.67%
10'	28%	27%

V.C.	GI-G2 (MAX. ALGEBRAIC GRADE CHANGE)	
	SAG	CREST
5'	21%	25%
10'	25%	36%



MAXIMUM DRIVEWAY GRADES (SEE GEN. NOTE 7)

This Detail Replaces Ga Standard 6050



SECTION A-A

HALF SECTION

SYMMETRICAL ABOUT THIS SIDE OF CENTERLINE WHERE CONCRETE SIDEWALK OCCURS.

PLAN

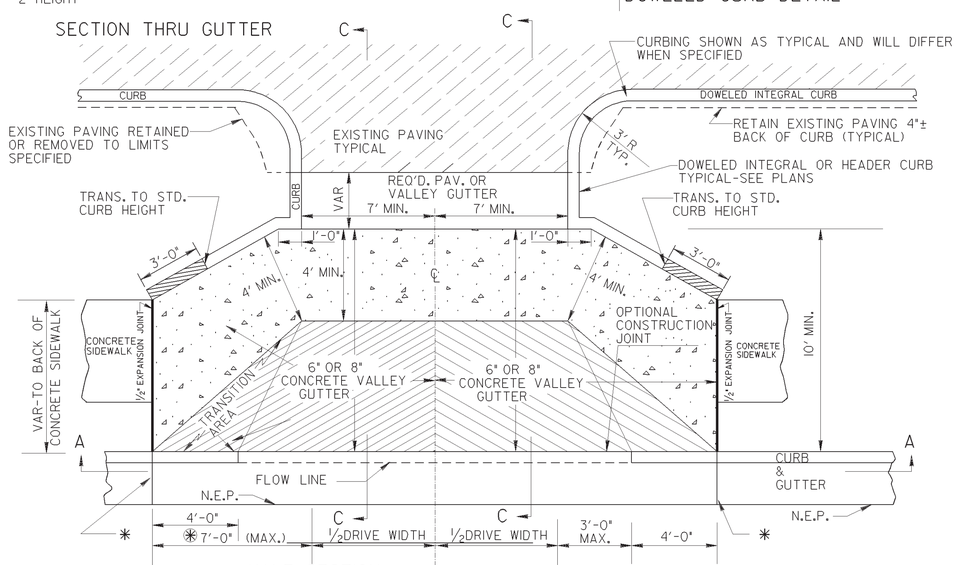
HALF SECTION

PLAN

RESIDENTIAL, COMMERCIAL OR NON-COMMERCIAL DRIVE

* CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED AT BACK OF THE CURB.

* 7'-0" OR DISTANCE EQUAL TO THAT FROM BACK OF CURB TO BACK OF SIDEWALK, WHICHEVER IS LESSER



HALF SECTION

SYMMETRICAL ABOUT THIS SIDE OF CENTERLINE WHERE CONCRETE SIDEWALK OCCURS.

PLAN

HALF SECTION

PLAN

(SHOWN ADJACENT TO EXISTING PAVED PARKING AREA)

DRIVEWAY WITH CURB ISLAND

* CONSTRUCTION JOINT NOT REQUIRED IF THE OPTIONAL CONSTRUCTION JOINT IS PROVIDED BACK OF CURB.

BY	REVISION	DATE
GLO	REV. PAVEMENT NOTES, REV. 12' TO 14' MIN., REV. SWALK	7-21-11
	REVISED	4-11-02
	REVISED	4-3-02

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

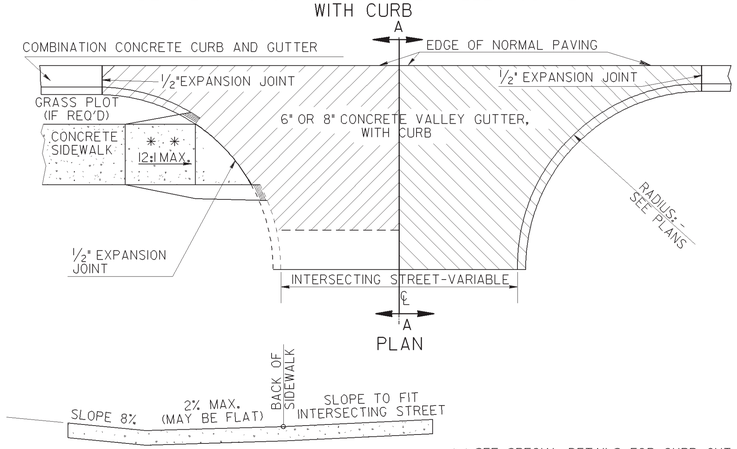
CONSTRUCTION DETAIL
DRIVEWAYS WITH TAPERED ENTRANCES
CONCRETE VALLEY GUTTERS

NO SCALE — MARCH 12, 2002

NUMBER A1

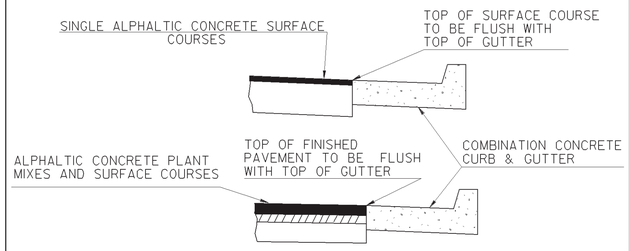
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	64	176

DETAIL OF 6" OR 8" CONCRETE VALLEY GUTTER WITH CURB

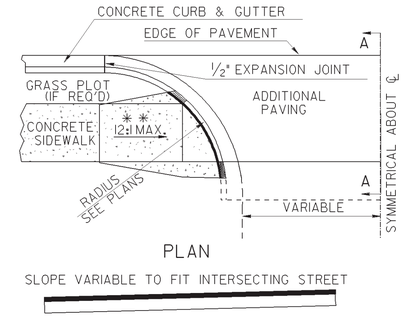


**SEE SPECIAL DETAILS FOR CURB CUT RAMP REQUIREMENTS.

DETAIL OF PLACING PAVEMENT ADJACENT TO GUTTER



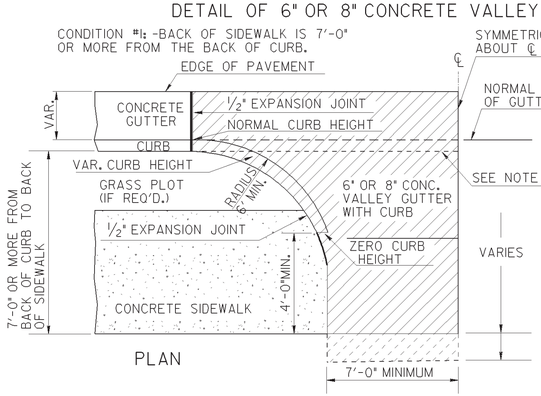
DETAIL OF ADDITIONAL PAVING AT STREET INTERSECTION



NOTE:
ADDITIONAL PAVING TO EXTEND TO END OF RETURN WHEN NO CONCRETE SIDEWALK IS SET UP.

**SEE SPECIAL DETAILS FOR CURB CUT RAMP REQUIREMENTS.

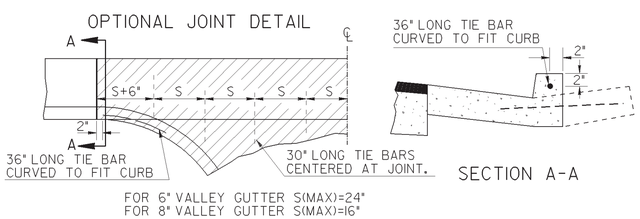
DETAIL OF 6" OR 8" CONCRETE VALLEY GUTTER WITHOUT CURB



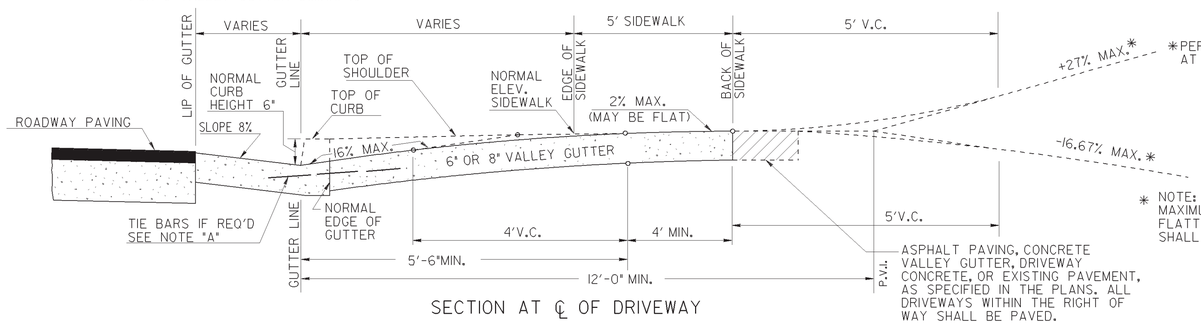
CONDITION #1-BACK OF SIDEWALK IS 7'-0" OR MORE FROM BACK OF CURB.

ZERO CURB HT. TO BE A MINIMUM OF 3'-2" FROM GUTTER LINE. IF CURB TRANSITION EXTENDS PAST EDGE OF SIDEWALK. THE TOP OF THE VARIABLE HEIGHT CURB IS TO REMAIN FLUSH WITH THE TOP OF THE SIDEWALK THROUGHT OUT TRANSITION. ZERO CURB HEIGHT WILL BE A MINIMUM OF 4'-0" FROM BACK OF SIDEWALK.

NOTE: "A"
CONSTRUCTION JOINT OPTIONAL: -WHEN IMPLEMENTED #4 TIE BARS WILL BE REQUIRED AS SHOWN BELOW TO BE INCLUDED IN UNIT PRICE FOR VALLEY GUTTER. IF CURB IS POURED THROUGH VALLEY GUTTER, THE TOP PORTION WILL BE REMOVED BEFORE SETTING TO MATCH GRADE OF VALLEY GUTTER.



FOR 6" VALLEY GUTTER S(MAX)=24"
FOR 8" VALLEY GUTTER S(MAX)=16"



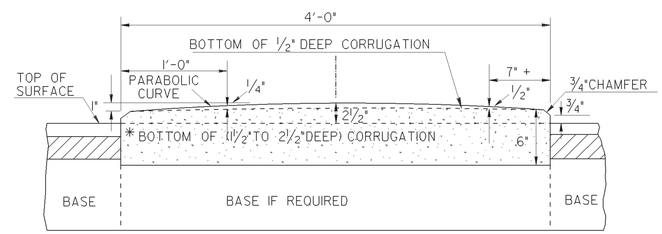
*PERCENTAGE OF ASCENDING GRADE MAY BE INCREASED AT A DISTANCE OF 23' FROM THE GUTTER LINE.

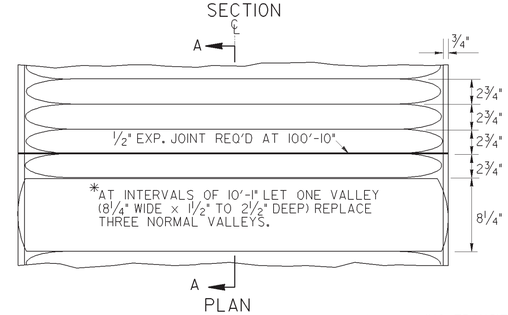
*PERCENTAGE DESCENDING GRADE MAY BE INCREASED AT A DISTANCE 18' FROM THE GUTTER LINE.

* NOTE:
MAXIMUM DRIVEWAY GRADES SHOWN ABOVE ARE INTENDED FOR RESIDENTIAL DRIVEWAYS WHERE FLATTER GRADES ARE NOT FEASIBLE. GRADES FOR COMMERCIAL DRIVEWAYS OR FOR TRUCKS SHALL NOT BE GREATER THAN 11% UNLESS SPECIFIED OTHERWISE.

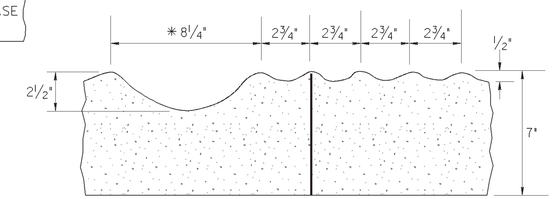
ASPHALT PAVING, CONCRETE VALLEY GUTTER, DRIVEWAY CONCRETE, OR EXISTING PAVEMENT, AS SPECIFIED IN THE PLANS. ALL DRIVEWAYS WITHIN THE RIGHT OF WAY SHALL BE PAVED.

DETAIL OF 4' CORRUGATED CONCRETE MEDIAN





*APPLIES ONLY TO SUPERELEVATED CURVES, INCLUDING TRANSITIONS.



SEE SPECIAL DETAILS FOR DETAILS OF CONCRETE SIDEWALK.

This Detail Replaces Ga Standard 9031J

Guidelines For Usage On Metric Projects

When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" =25mm, 4"=100mm, and 12" or 1' =300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

BY	REVISION	DATE
GLO	ADDED PAVEMENT NOTE, REV. DRIVEWAY SECTION	7-21-11
GLO	REV. PAVEMENT NOTES	2-21-03
	REVISED	4-11-02
	REVISED	4-3-02

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL

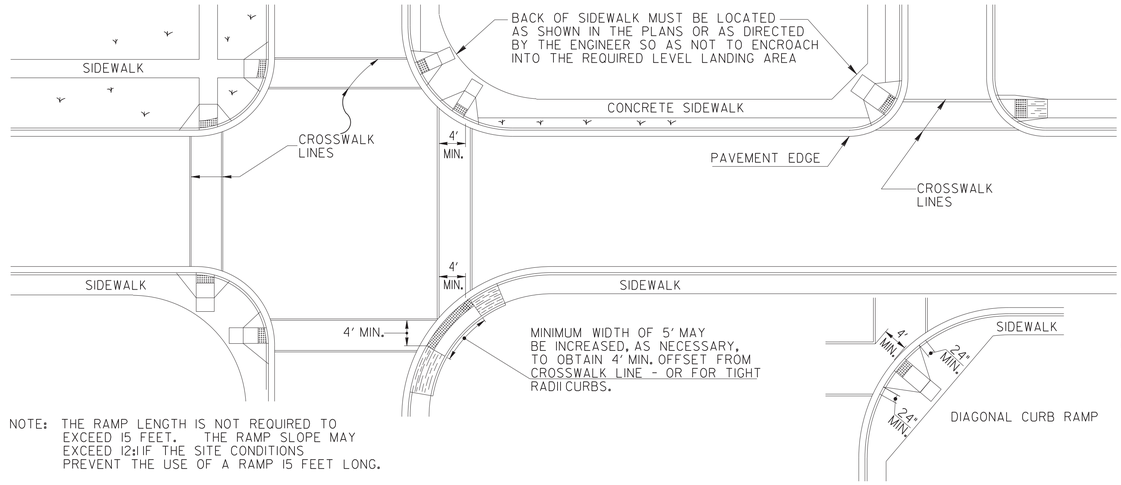
CONCRETE VALLEY GUTTER AT STREET INTERSECTION
6" OR 8" CONCRETE VALLEY GUTTER AT DRIVE
PLACING PAVEMENT ADJACENT TO GUTTER
ADDITIONAL PAVING AT STREET INTERSECTION
4' CORRUGATED CONCRETE MEDIAN

NO SCALE — MARCH 12, 2002

NUMBER A2

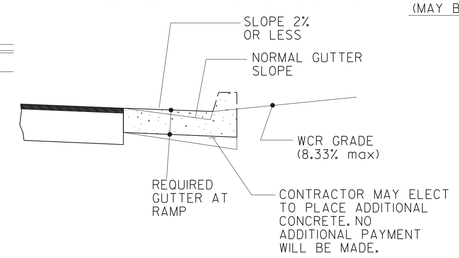
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	65	176

TYPICAL LOCATIONS FOR CURB CUT RAMPS - PLAN VIEW

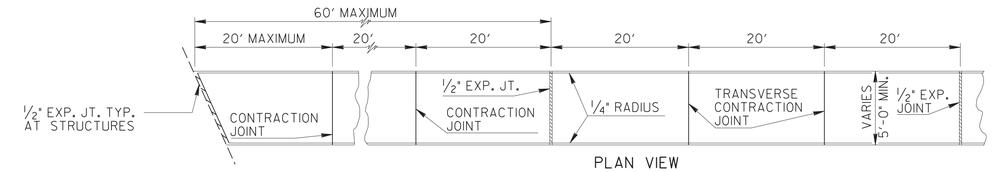


NOTE: THE RAMP LENGTH IS NOT REQUIRED TO EXCEED 15 FEET. THE RAMP SLOPE MAY EXCEED 12:1 IF THE SITE CONDITIONS PREVENT THE USE OF A RAMP 15 FEET LONG.

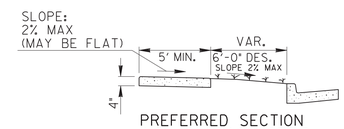
GUTTER TRANSITION DETAIL



CONCRETE SIDEWALK DETAILS

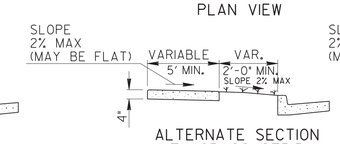


PLAN VIEW

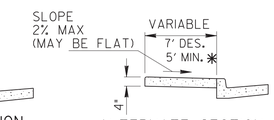


PREFERRED SECTION WITH 6' GRASS STRIP

✱16' SHOULDER RECOMMENDED WITH THIS INSTALLATION



ALTERNATE SECTION WITH GRASS STRIP



ALTERNATE SECTION WITHOUT GRASS STRIP

✱5' MIN WIDTH WITH NO OBSTRUCTIONS (MAILBOXS, SIGNS, ETC)

7' PREFERRED WIDTH WITH A 2' AREA OF CONTRASTING COLOR & TEXTURE ADJACENT TO THE CURB. (COST OF TEXTURE, COLORING & HOLES REQUIRED FOR MAILBOX AND SIGN POST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK)

NOTES FOR CONCRETE SIDEWALK:

A. CONCRETE TO BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BROOMS.
B. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT. INTERVALS. ALL EDGES TO BE ROUNDED TO 1/4" RADIUS.
C. 1/2" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS.

NOTES FOR CURB CUT RAMPS:

1. CURB CUT RAMPS WILL BE LOCATED AS FOLLOWS UNLESS PLANS OR CONTRACT SPECIFY OTHERWISE.
   a) AT ALL PEDESTRIAN CROSSWALKS WHERE CURB IS CONSTRUCTED OR REPLACED.
   b) WHERE THE SIDEWALK, CONCRETE OR UNPAVED, IS INTERRUPTED BY THE CURB AT TURNOUTS OR AT INTERSECTIONS.
   c) AT OTHER LOCATIONS SUCH AS HOSPITALS, NURSING HOMES, REST AREAS, ETC.. WHERE THE CURB WOULD OTHERWISE BE AN OBSTRUCTION TO THE PHYSICALLY DISABLED.
2. RAMPS WILL BE CONSTRUCTED FROM CONCRETE. SPECIFICATIONS FOR RAMPS WILL BE THE SAME AS FOR CONCRETE SIDEWALK. RAMPS SHALL HAVE EITHER A ROUGH OR A TEXTURED FINISH.
3. DROP INLETS ARE NOT TO BE LOCATED DIRECTLY IN FRONT OF RAMPS. CATCH BASINS SHOULD BE LOCATED AT LEAST 10 FT. FROM RAMPS WHEN FEASIBLE.
4. WHERE RAMPS ARE LOCATED IN RADII, THE DIMENSIONS SHOWN FOR RAMP WIDTHS AND TAPERS ARE MEASURED PERPENDICULAR TO THE RAMP AND NOT ALONG THE CURVE.
5. WHERE UTILITY STRUCTURES CONFLICT, WHERE SIDEWALK GEOMETRY VARIES, AT SKEWED INTERSECTIONS, OR IN OTHER SPECIAL CASES, THE RAMP DESIGNS MAY BE MODIFIED BY THE DESIGNER OR ENGINEER, PROVIDED THAT THE WIDTH REMAINS A MINIMUM OF 48 INCHES, AND NO SLOPE ON THE ACCESSIBLE PART OF THE RAMP IS STEEPER THAN 12:1.
6. LIN. FT. OF CURB AND GUTTER WILL INCLUDE THE TRANSITIONED CURB IN FRONT OF RAMPS. SQ. YDS. OF CONCRETE SIDEWALK AND CONCRETE MEDIAN PAVING WILL INCLUDE RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR CURB RAMPS. NO ADDITIONAL PAYMENT WILL BE MADE FOR SAWING AND REMOVING EXISTING SIDEWALK OR CURB WHERE NECESSARY FOR RAMP CONSTRUCTION.
7. WHEN A CURB RAMP IS PLACED ON EXISTING PAVEMENT. THE PAVEMENT SHALL BE REMOVED TO PROVIDE A MINIMUM THICKNESS OF 3 INCHES OF CONCRETE AT ALL LOCATIONS. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL OF THE PAVEMENT.
8. DETECTABLE WARNING SURFACES ARE REQUIRED ON ALL INTERSECTIONS WITH PUBLIC STREETS, SIGNALIZED COMMERCIAL DRIVEWAYS, AND COMMERCIAL DRIVEWAYS WITH AN AADT OF 25 VPD.

This Detail Replaces Ga Standard 9031W

Guidelines For Usage On Metric Projects

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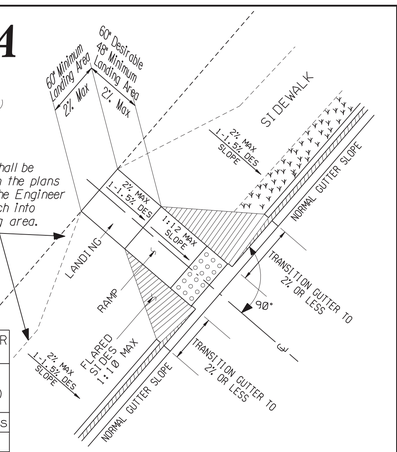
Type A

(Perpendicular)

(The Preferred Ramp)

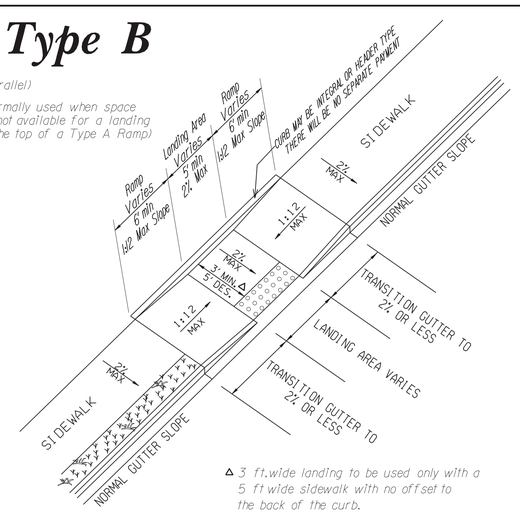


LENGHT REQUIRED FOR A 1:10 SLOPE	
DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	10 inches
2 inches	1'-8"
3 inches	2'-6"
4 inches	3'-4"
5 inches	4'-2"
6 inches	5 feet

Type B

(Parallel)

(Normally used when space is not available for a landing at the top of a Type A Ramp)

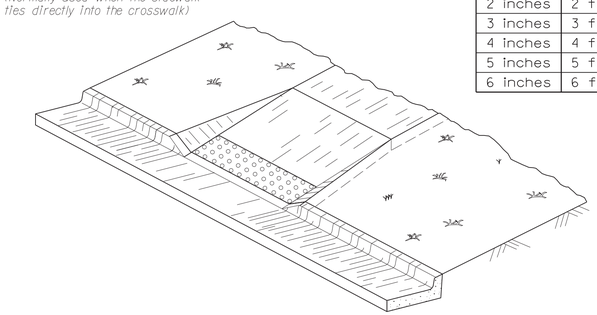


Δ 3 ft. wide landing to be used only with a 5 ft wide sidewalk with no offset to the back of the curb.

Type D

(Perpendicular)

(Normally used when the sidewalk ties directly into the crosswalk)

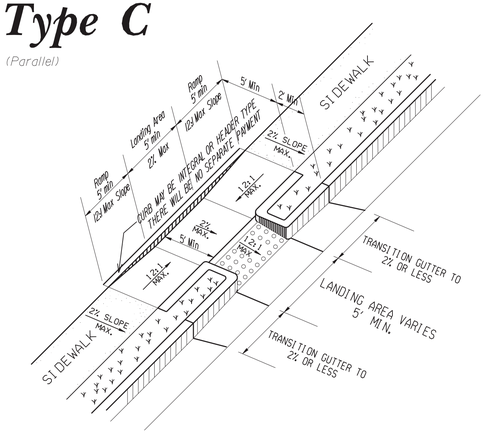


IN AREAS WHERE THE GUTTER HAS A SLOPE 1" IN 1' END NORMAL GUTTER SLOPE AT A DISTANCE OF 6 TO 10 FEET FROM THE RAMP AND BEGIN TRANSITION TO A FLAT GUTTER SLOPE. NORMAL GUTTER SLOPE SHALL BE RESUMED AT A SIMILAR DISTANCE BEYOND THE RAMP.

LENGHT REQUIRED FOR A 1:12 SLOPE	
DIFFERENCE IN HEIGHT	LENGTH REQUIRED
1 inch	1 foot
2 inches	2 feet
3 inches	3 feet
4 inches	4 feet
5 inches	5 feet
6 inches	6 feet

Type C

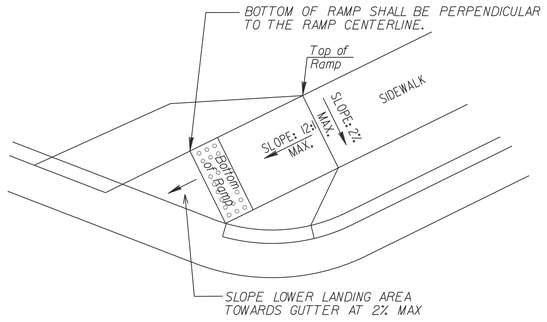
(Parallel)

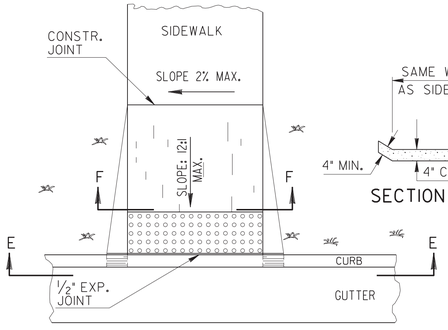


Skewed Ramp Details

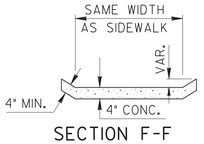
(Applies to Type A Type D Ramps Only)

WHEN THE RAMP CENTERLINE IS NOT PERPENDICULAR TO THE CURB A LEVEL LANDING AREA WITH SLOPES LESS THAN 2% MUST BE PROVIDED AT THE BOTTOM OF THE RAMP.

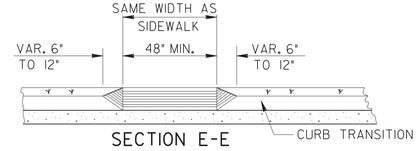




PLAN VIEW



SECTION F-F



SECTION E-E

DATE	REVISION
9-15-16	ADDED PERP. OR PARALLEL
6-18-09	REV. SLOPES TO PERCENT AND ADDED 12:1 & 10:1 CHART.
5-10-06	ADDED GEN. NOTE NO. 8.
2-21-03	REV. TRUNCATED DOMES
2-10-03	REVISED
7-29-02	REVISED
5-29-02	REVISED
5-23-02	REVISED
5-13-02	REVISED
4-29-02	REVISED
4-11-02	REVISED
4-3-02	REVISED
3-28-02	REVISED

C.JB GLO GLO

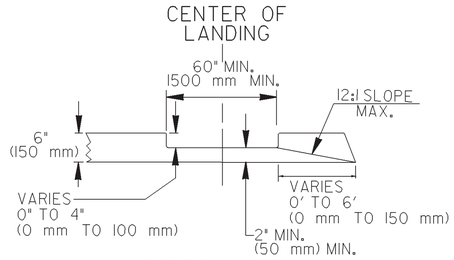
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DETAIL
CONCRETE SIDEWALK DETAILS
CURB CUT (WHEELCHAIR) RAMPS

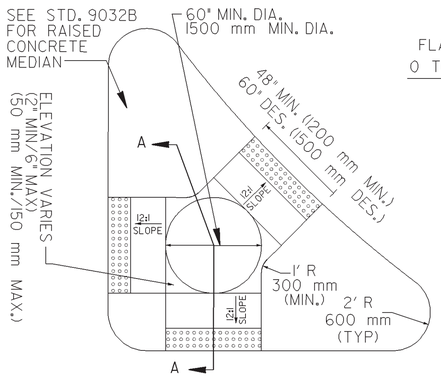
NO SCALE MARCH 12, 2002

NUMBER
A3

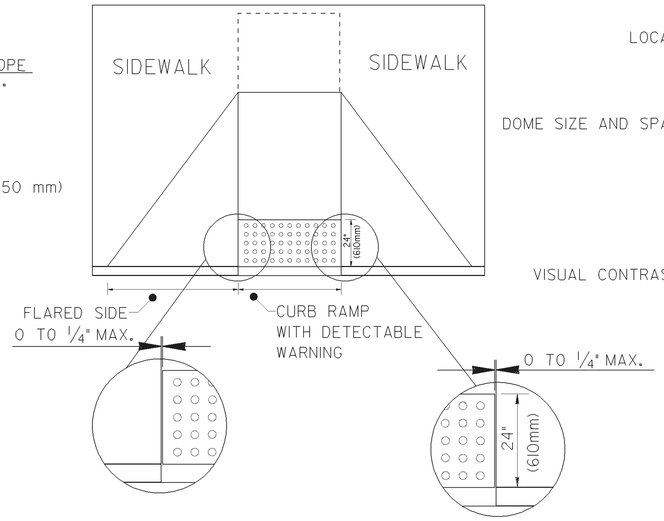
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	66	176



SECTION A-A



CONCRETE ISLAND WITH ELEVATED CUT THROUGH



SIZE: DETECTABLE WARNINGS SHALL BE 24 INCHES (610 mm) IN THE DIRECTION OF PEDESTRAIN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.

LOCATION: THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES (150 mm to 180mm) FROM THE CURB LINE OR OTHER POTENTIAL HAZARD, SUSH AS A REFLECTIVE POOL EDGE OR THE DYNAMIC ENVELOPE OF RAIL OPERATIONS.

DOME SIZE AND SPACING: TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 INCH TO 1.4 INCH (23mm-36mm) AT THE BOTTOM, A DIAMETER OF 0.45 INCH TO 0.91 INCH (11mm-23mm) AT THE TOP, THE TOP DIAMETER SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMENTER, A HEIGHT OF 0.2 INCH (5.1mm) AND A CENTER-TO-CENTER SPACING OF 2.40 INCHES (61mm) DESIRABLE 1.60 INCHES (41mm) MINIMUM MEASURED ALONG ONE SIDE OF A SQUARE ARRANGEMENT. DOMES SHALL HAVE A SQUARE ARRANGEMENT. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

VISUAL CONTRAST: DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH THE ADJACENT WALKING SURFACE EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE VISUAL CONTRACT SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.

MATERIALS:

NEW CONSTRUCTION

THE DETECTABLE WARNINGS SHALL BE MADE OF MATERIALS SPECIFIED ON QPL 87.

RETROFIT OF EXISTING RAMPS

SURFACED APPLIED MATERIALS WILL ONLY BE APPROVED TO BE USED ON EXISTING WHEELCHAIR RAMPS.

INSTALLATION:

BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF 4" THICK.

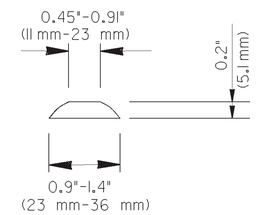
CERAMIC TILE SHALL BE EPOXIED IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMEND ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

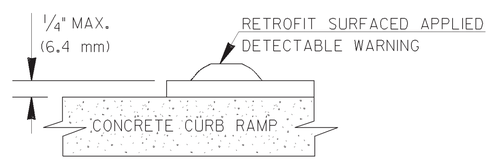
ALL OTHER MATERIALS SHALL BE INSTALLED ACCORDING TO MANUFACTURES DETAILS OR INSTRUCTION.

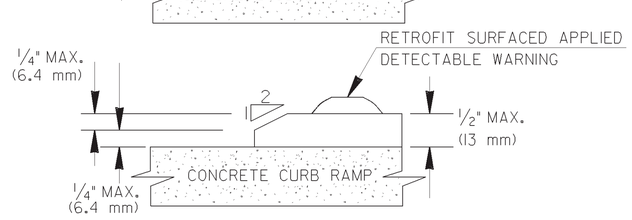
GENERAL NOTES:

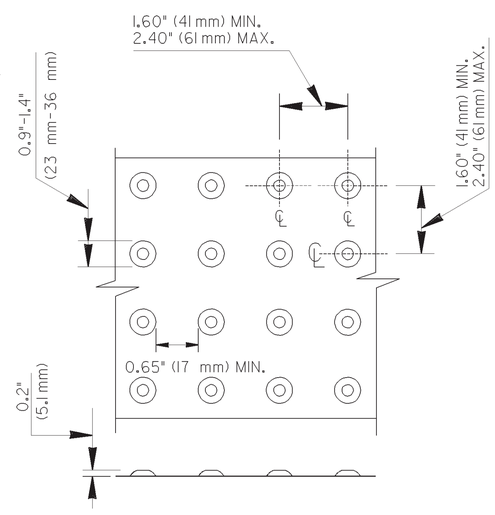
RETROFIT SURFACED APPLIED MATERIALS ONLY:

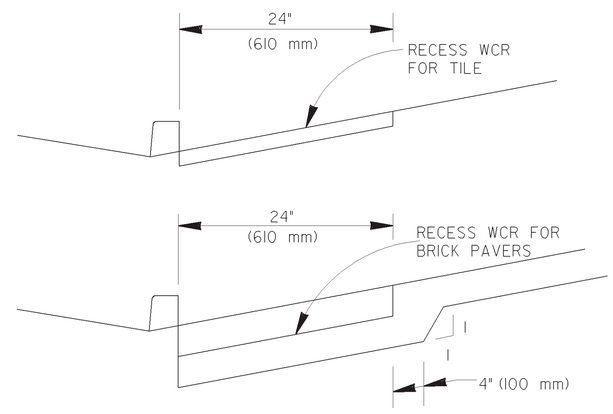
1. CHANGES IN LEVEL OF 1/4" (6.4 mm) HIGH MAXIMUM SHALL BE PERMITTED VERTICALLY ON SURFACED APPLIED MATERIALS.
2. CHANGES IN LEVEL BETWEEN 1/4" (6.4 mm) HIGH MINIMUM AND 1/2" (13mm) HIGH MAXIMUM SHALL BE BELEVELED WITH A SLOPE NOT STEEPER THAN 2:1.



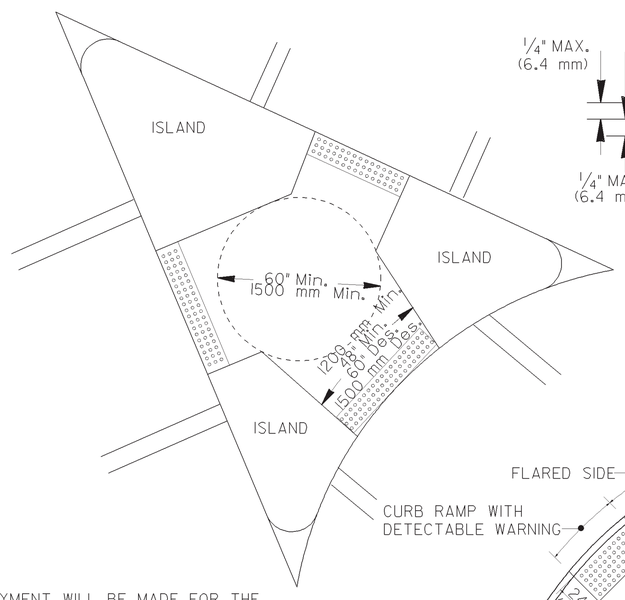


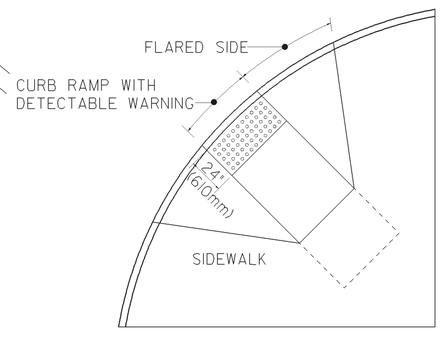




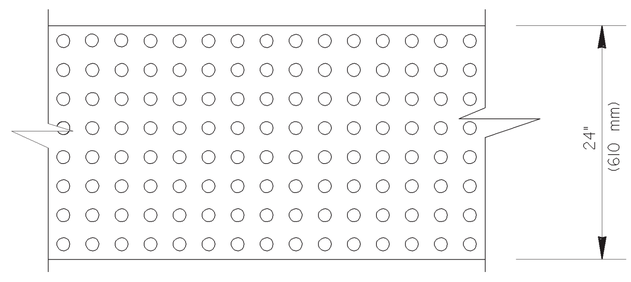


FOR TILE OR BRICK PAVERS NO VERTICAL LIP OVER 1/8" (3 mm) IS ALLOWED





DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND



NO SEPARATE PAYMENT WILL BE MADE FOR THE DETECTABLE WARNINGS. THE COST SHALL BE INCLUDED IN THE PRICE BID FOR SIDEWALK (OR CURB CUT RAMP IF THE ITEM IS INCLUDED IN THE PROPOSAL).

FOR CUT-THRU ISLANDS AND EXISTING RAMPS, WHERE NO SIDEWALK OR CURB CUT RAMPS ARE IN THE PROPOSAL. THE COST OF THE DETECTABLE WARINGS SHALL BE INCLUDED IN THE OVERALL BID PRICE SUBMITTED.

BY	REVISION	DATE
GLO	ADDED RETROFIT DETAIL AND ADDED ALT. RAMP DETAIL AND GEN. NOTES	6-18-09
GLO	ADDED TOLERANCE TO DTL.	10-2-06
GLO	REVISED TRUNCATED DOMES AND NOTES.	5-10-06
	REVISED	11-14-02
	REVISED	7-29-02

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

SPECIAL DETAIL

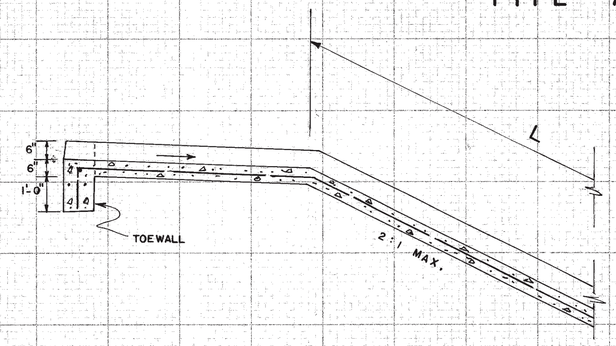
DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT REQUIREMENTS

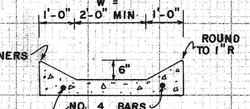
NO SCALE — MARCH 12, 2002

NUMBER A4

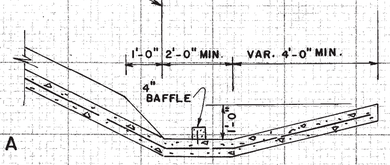
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	67	176

TYPE "A"

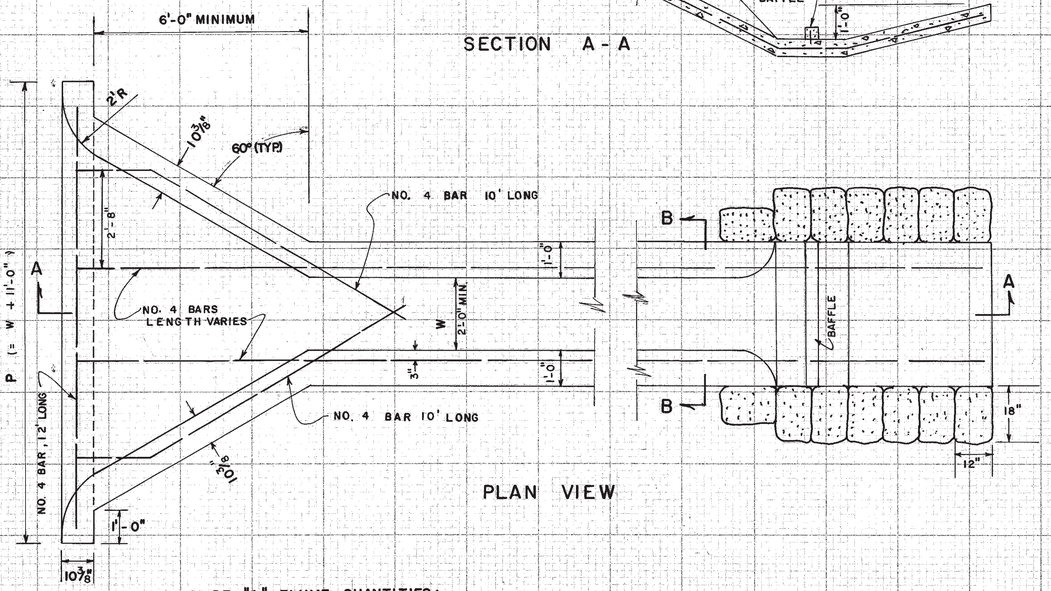




SECTION B-B

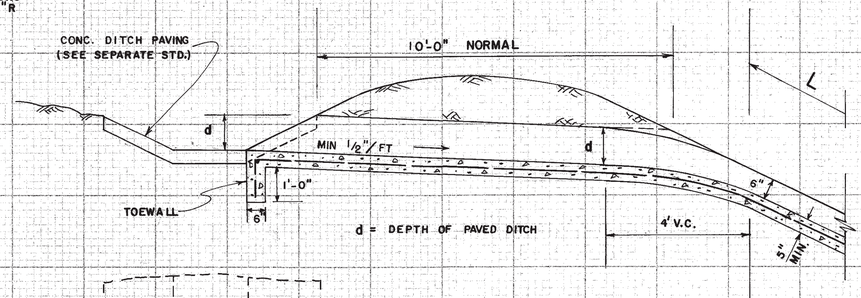


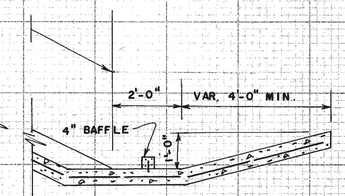
SECTION A-A



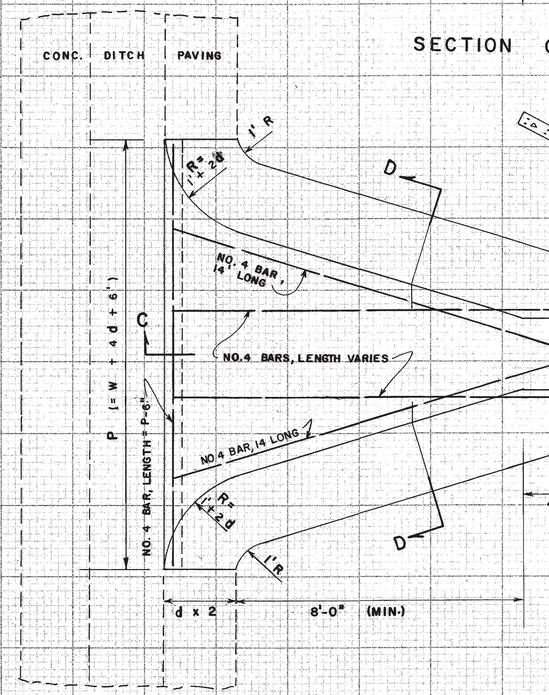
PLAN VIEW

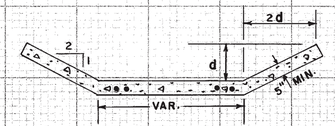
TYPE "B"



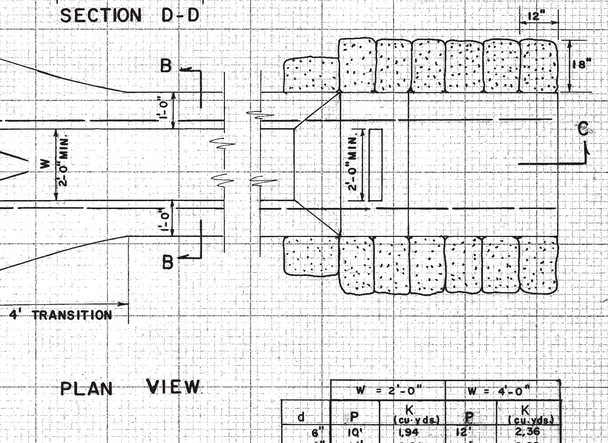


SECTION C-C





SECTION D-D



PLAN VIEW

d	W = 2'-0" P	W = 2'-0" K (cu. yds)	W = 4'-0" P	W = 4'-0" K (cu. yds)
6"	10'	1.94	12'	2.36
9"	11'	2.24	13"	2.68
1'-0"	12'	2.58	14"	3.05
1'-3"	13'	2.98	15'	3.43
1'-6"	14'	3.36	16'	3.84
1'-9"	15'	3.84	17'	4.32
2'-0"	16'	4.35	18'	4.86
2'-3"	17'	4.92	19'	5.45
2'-6"	18'	5.56	20'	6.10

NOTE: P = FLUME OPENING
K = CONCRETE CONSTANT (SEE FORMULAS)

TYPE "A" FLUME QUANTITIES:

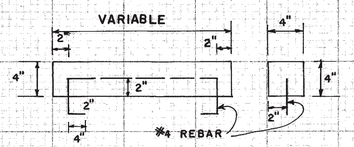
(FOR W = 2'-0") CU. YDS. CONCRETE = 2.41 + 0.0926 (L)
(FOR W = 4'-0") CU. YDS. CONCRETE = 2.59 + 0.1306 (L)
(FOR EITHER W) LBS. STEEL = 41 LBS. + (1.336)(L)
SAND CEMENT BAG RIP RAP: 14 BAGS x 0.1667 SQ. YDS/BAG = 2.333 SQ. YDS.

TYPE "B" FLUME QUANTITIES:

(FOR W = 2'-0") CU. YDS. CONC. = K + 0.0926 (L)
(FOR W = 4'-0") CU. YDS. CONC. = K + 0.1306 (L)
(FOR EITHER W) LBS. STEEL = 55 + 0.667 (P) + 1.336 (L)
SAND CEMENT BAG RIP RAP: 14 BAGS x 0.1667 SQ. YDS./BAG = 2.333 SQ. YDS.

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. SIZE AND DIMENSIONS OF TYPE A OR TYPE B FLUMES MAY BE ADJUSTED FOR AN INDIVIDUAL SITE WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
3. AT LOCATIONS WHERE FLUME OUTLETS INTO AN INLET STRUCTURE, OMIT BAFFLE AND DOWNTURN END AND CONNECT FLUME TO THE INLET STRUCTURE.
4. SAND CEMENT BAG RIP RAP SHALL BE OMITTED IN PAVED DITCHES OR WHERE OTHER APPROVED EROSION CONTROL MATERIALS ARE USED.
5. POURED IN PLACE CONCRETE SHALL BE CLASS B MINIMUM. CLASS A CONCRETE SHALL BE USED FOR BAFFLES IF PRECAST.
6. BASIS OF PAYMENT:
   CLASS B CONCRETE ——— CU.YD.
   BAR REINFORCEMENT STEEL ——— LB.
   SAND CEMENT BAG RIP RAP, 6 IN. OR 8 IN. ——— SQ.YDS.



DETAILS OF 4" CONCRETE BAFFLE

CONCRETE FLUMES TYPES "A" & "B"

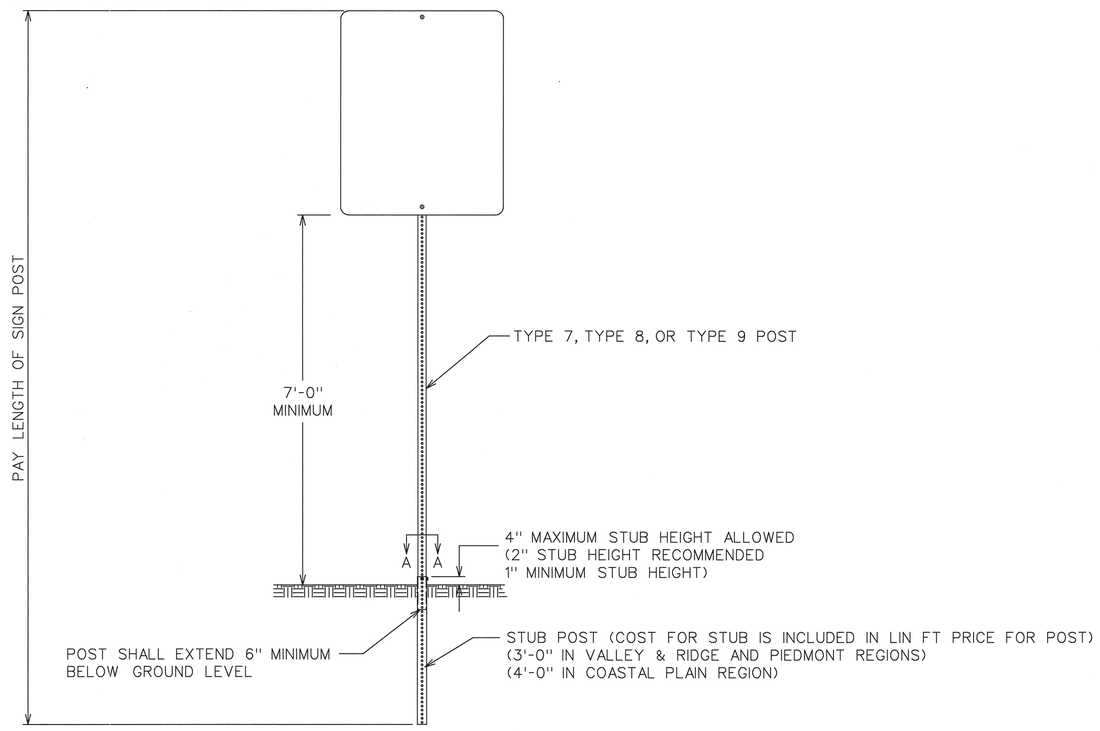
NO SCALE

REV. & REDR. OCT. 1983

D-9

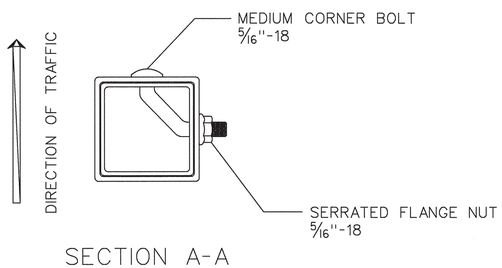
FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	68	176



FRONT VIEW

POST	STUB SIZE
TYPE 7	2¼" x 2¼"
TYPE 8	2¾" x 2¾"
TYPE 9	2½" x 2½"



SECTION A-A

SIGN POST SELECTION CHART

70 MPH Wind Load Chart + 15% Gust Factor

	SLIP BASE NOT REQUIRED				GROUND MOUNTED BREAKAWAY SIGN SUPPORT REQUIRED				
	TYPE 7 2" 14 ga.		TYPE 9 2-1/4" 14 ga	TYPE 8 2-1/2" 12 ga.	TYPE 8 2-1/2" 12 ga.		TYPE 8 w/TYPE 9 Insert* 2-1/2" 12 ga. W/2-1/4" 14 ga.		
Sign Centroid	1 Post	2 Post	1 Post	1 Post	2 Post	3 Post	1 Post	2 Post	3 Post
	SQUARE FOOTAGE				SQUARE FOOTAGE				
6'	13.50	27.00	19.25	30.00	60.00	90.00	49.25	98.50	147.75
7'	11.60	23.20	16.50	25.75	51.50	77.25	42.25	84.50	126.75
8'	10.15	20.30	14.45	22.55	45.10	67.65	37.00	74.00	111.00
9'	9.00	18.00	12.85	20.00	40.00	60.00	32.85	65.70	98.55
10'	8.10	16.20	11.55	18.00	36.00	54.00	29.55	59.10	88.65
11'	7.40	14.80	10.50	16.40	32.80	49.20	26.90	53.80	80.70
12'	6.80	13.60	9.65	15.00	30.00	45.00	24.65	49.30	73.95
13'	6.25	12.50	8.90	13.85	27.70	41.55	22.75	45.50	68.25
14'	5.80	11.60	8.25	12.90	25.80	38.70	21.15	42.30	63.45
15'	5.00	10.00	6.45	10.10	20.20	30.30	16.55	33.10	49.65
16'	4.70	9.40	6.05	9.45	18.90	28.35	15.50	31.00	46.50
17'	4.40	8.80	5.70	8.90	17.80	26.70	14.60	29.20	43.80
18'	4.15	8.30	5.40	8.40	16.80	25.20	13.80	27.60	41.40
19'	3.95	7.90	5.10	7.95	15.90	23.85	13.05	26.10	39.15
20'	3.75	7.50	4.85	7.55	15.10	22.65	12.40	24.80	37.20

SIGN CENTROID IS DISTANCE FROM GROUND LEVEL TO BOTTOM OF SIGN *PLUS* HALF THE HEIGHT OF SIGN.
EXAMPLE: 24" X 48" SIGN THAT IS 7 FEET FROM GROUND TO BOTTOM OF SIGN. ADD HALF OF 48" (24" OR 2 FT) *PLUS* 7 FT. = 9' CENTROID.

SIGN PLATE SHALL NOT EXCEED 48" IN WIDTH ON A SINGLE POST.

* TYPE 9 INSERT SHALL BE A CONTINOUS POST INSERTED INTO THE TYPE 8 POST WHERE REQUIRED. THE INSERT POST SHALL EXTEND FROM THE BOTTOM OF THE SLIP BASE UPPER ASSEMBLY TO 4" BELOW THE BOTTOM OF THE SIGN. THE INSERT POST SHALL NOT EXTEND ABOVE THE BOTTOM OF THE SIGN. PAYMENT FOR THE INSERT POST SHALL BE PER LINEAR FOOT OF TYPE 9 POST.

GROUND MOUNTED BREAKAWAY SIGN SUPPORT WILL BE MEASURED AND PAID FOR SEPARATELY. THE COST FOR THIS WORK SHALL INCLUDE THE UPPER AND LOWER ASSEMBLY, STUB POST, CLASS "A" CONCRETE, ALL HARDWARE NECESSARY TO COMPLETE THE INSTALLATION, AND BE INCLUDED IN THE BID PRICE SUBMITTED FOR ITEM 636-3010.

DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF TRAFFIC SAFETY & DESIGN

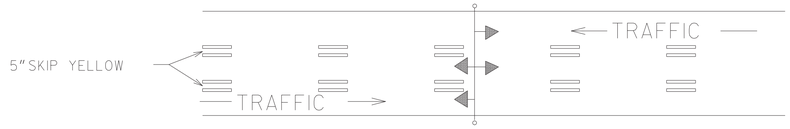
TYPE 7, 8, AND 9
SQUARE TUBE POST
INSTALLATION DETAIL

NO SCALE JULY 2002

PCB0T.B

...\T03pb09\T-03.dgn Jul 03, 2002 16:10:11

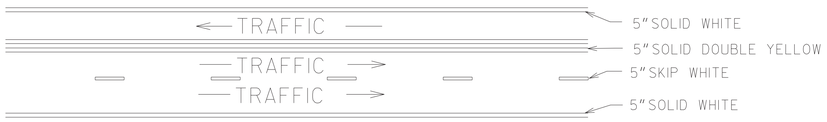
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	69	176



REVERSIBLE LANE SIGN OR SIGNAL SYSTEM REQUIRED

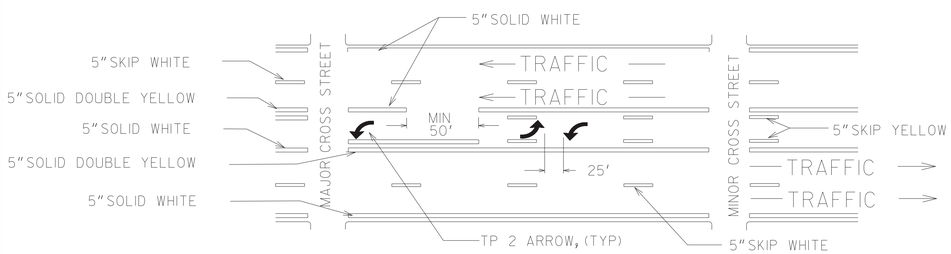
TWO-WAY TRAFFIC WITH A REVERSIBLE CENTER LANE

TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE PERMITTED TO PASS

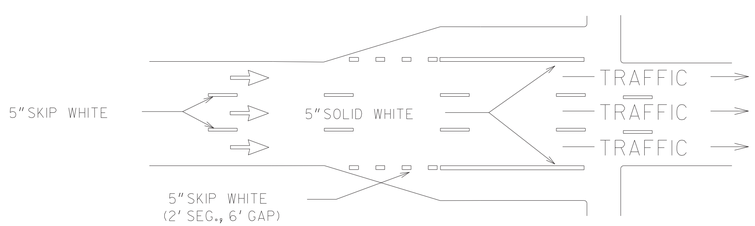


TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE NOT PERMITTED TO PASS

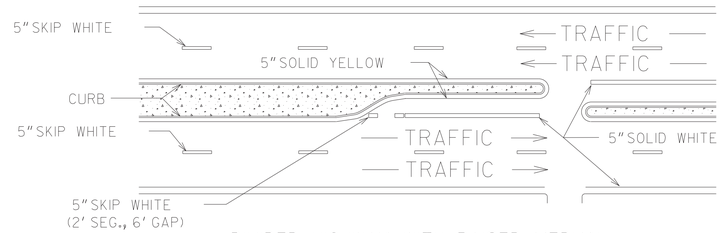
TWO-LANE, TWO-WAY TRAFFIC WITH PASSING PERMITTED



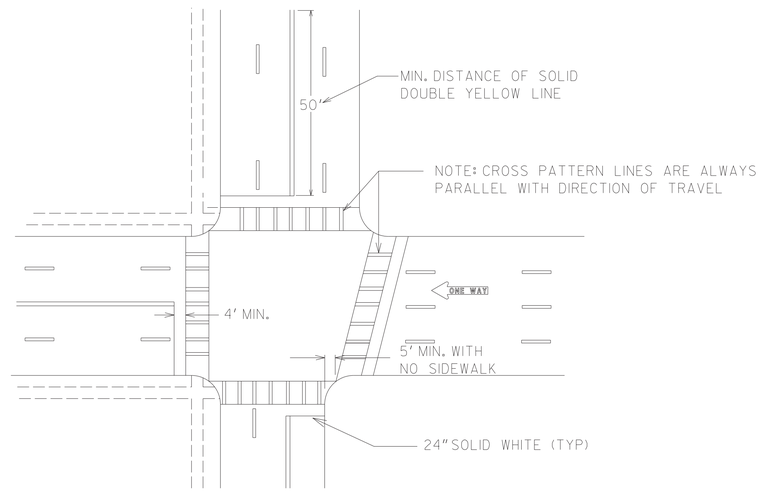
MULTI-LANE, TWO-WAY TRAFFIC WITH SINGLE LANE, TWO-WAY LEFT TURN CHANNELIZATION



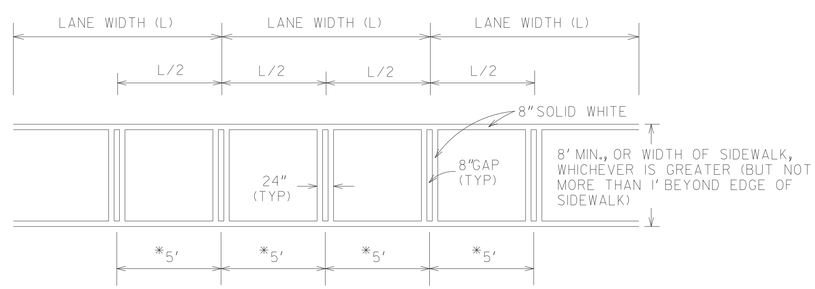
ONE-WAY TRAFFIC WITH ADDED TURN LANES



DIVIDED HIGHWAY WITH RAISED MEDIAN



TYPICAL LOCATION OF CROSSWALKS AND STOP BARS



*USE WHERE THE LANE WIDTH EXCEEDS 12' OR WHERE LANE LINES HAVE BEEN OMITTED

CROSSWALK DETAIL

GENERAL NOTES:

1. SPACING BETWEEEN DOUBLE LINES SHALL BE EQUAL TO THE LINE WIDTH.
2. EDGE LINES SHALL BE PLACED A MINIMUM OF 4 INCHES FROM THE NORMAL EDGE OF PAVEMENT.
3. CONTRAST MARKINGS FOR SKIP STRIPING SHALL BE AS SHOWN IN DETAIL T-11B.

CDR	BY	REVISION	DATE
		ADDED GENERAL NOTE 3	9-15-16

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

PAVEMENT MARKING PLACEMENT
NON-LIMITED ACCESS ROADWAY

NO SCALE

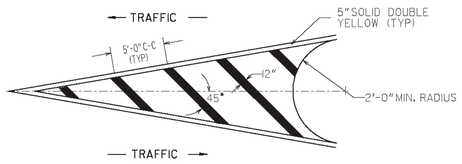
JANUARY 2000

DESIGNED
DRAWN
TRACED
CHECKED

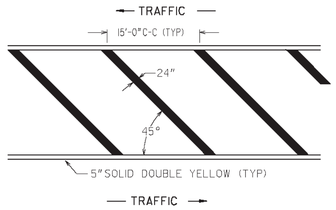
NUMBER
T-11A

COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	PEB 09	70	176

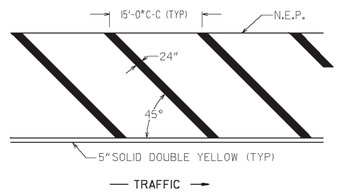
DETAIL "A"(YELLOW)



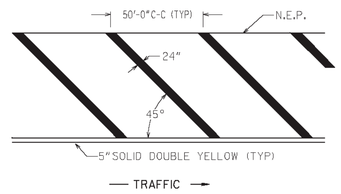
DETAIL "B"(YELLOW)



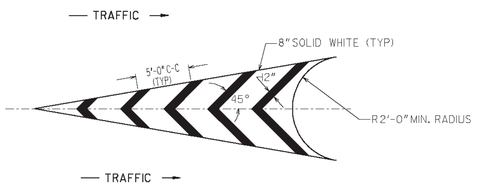
DETAIL "C"(YELLOW)



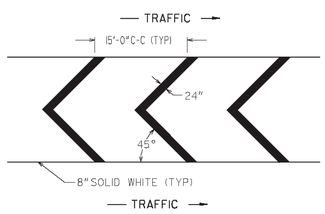
DETAIL "D"(YELLOW)



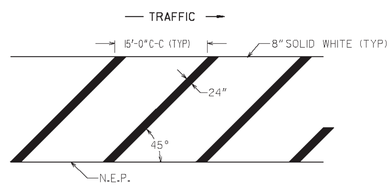
DETAIL "A"(WHITE)



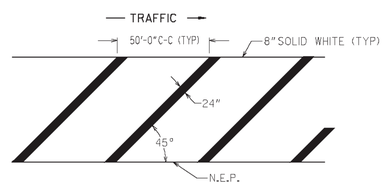
DETAIL "B"(WHITE)



DETAIL "C"(WHITE)



DETAIL "D"(WHITE)



GENERAL NOTES:

1. FOR YELLOW STRIPING, THE SQUARE YARDS SHOWN ON PLAN, SUMMARY AND DETAILED ESTIMATE SHEETS INCLUDE THE AREA WITHIN THE BORDERS AND THE 5" SOLID DOUBLE YELLOW BORDER.
2. FOR WHITE STRIPING, THE SQUARE YARDS SHOWN ON PLAN, SUMMARY AND DETAILED ESTIMATE SHEETS INCLUDES THE AREA WITHIN THE BORDERS AS WELL AS THE 8" SOLID WHITE BORDER.

GEORGIA
DEPARTMENT OF TRANSPORTATION

- NO SCALE -

DATE	REVISIONS
6/25/04	Modified general note 1
1/18/05	CHANGED BORDER
11/21/08	Modified general note 1

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: TRAFFIC OPERATIONS
SIGNING AND MARKING PLANS

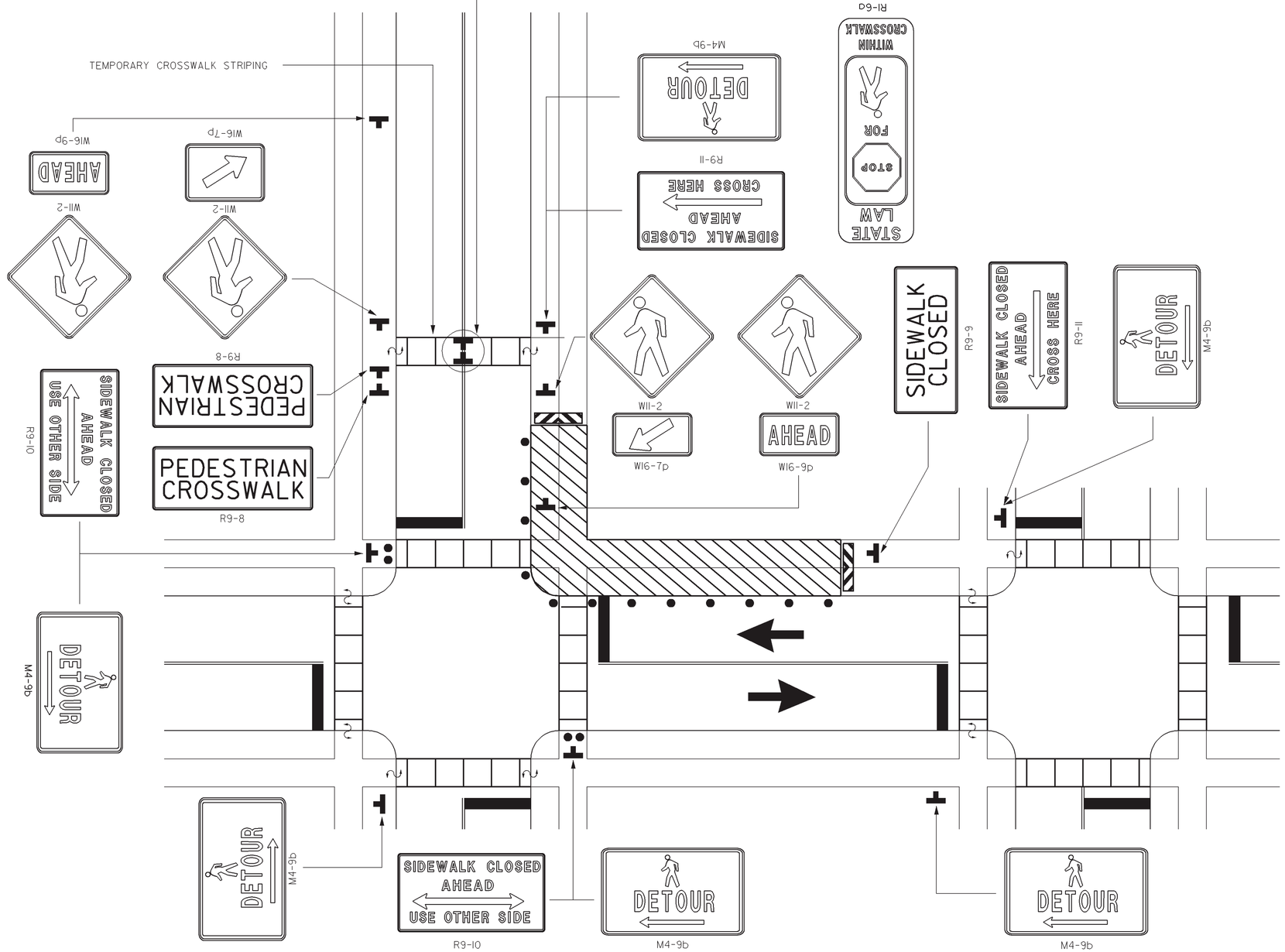
T-14

DETAIL OF PAVEMENT MARKING HATCHING
JANUARY 2000

NUMBER T -14

..\T14HATCHING.DGN 12/11/2008 1:21:18 PM pealen

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	71	176



MIDBLOCK CROSSING AND SIDEWALK DETOUR

GENERAL NOTES:

1. CLOSURES OF EXISTING PEDESTRIAN FACILITIES SHALL HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER.

2. ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS, THE MUTCD, THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150) DETECTABLE EDGING AND DETECTABLE BARRIERS SHALL BE IN COMPLIANCE WITH THE MUTCD AND ADA REGULATIONS.

3. SIGNS AND OTHER DEVICES SHALL BE PLACED SUCH THAT THEY DO NOT NARROW OR RESTRICT ANY PEDESTRIAN PASSAGE TO LESS THAN 48 INCHES (4 FT) IN WIDTH. SIGNS AND OTHER DEVICES MOUNTED LOWER THAN SEVEN (7) FEET ABOVE THE TEMPORARY PEDESTRIAN WALKWAY SHALL NOT PROJECT MORE THAN FOUR (4) INCHES INTO THE ACCESSIBLE PEDESTRIAN FACILITIES.

4. NO PAYMENT WILL BE MADE FOR TEMPORARY WALKWAYS WITH DETECTABLE EDGING WHERE EXISTING PAVEMENTS OR EXISTING EDGING (THAT MEETS THE REQUIREMENTS OF MUTCD) ARE UTILIZED FOR THE TEMPORARY WALKWAY. PAYMENT FOR TEMPORARY DETECTABLE EDGING, INCLUDING APPROVED BARRIERS AND CHANNELIZING DEVICES, THAT ARE INSTALLED ON EXISTING PAVEMENTS SHALL BE INCLUDED IN TRAFFIC CONTROL-LUMP SUM.

5. REGARDLESS OF THE MATERIALS USED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY WALKWAYS (WITH DETECTABLE EDGING) OF SUFFICIENT THICKNESS AND DURABILITY TO WITHSTAND THE INTENDED USE FOR THE DURATION OF THE CONSTRUCTION PROJECT (SEE SECTION 150 FOR MINIMUM DESIGN PARAMETERS). THE USE OF COMPACTED SOILS, SANDS, CRUSHED STONE, OR ASPHALTIC PAVEMENT MILLINGS SHALL NOT BE USED AS A SURFACE COURSE FOR TEMPORARY PEDESTRIAN WALKWAYS.

6. A 60-INCH MINIMUM WIDTH PEDESTRIAN FACILITY SHOULD BE MAINTAINED WHEN POSSIBLE. WHEN A 60-INCH MINIMUM WIDTH CANNOT BE ACHIEVED, A MINIMUM WIDTH OF 48 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 INCHES BY 60 INCHES) AT LEAST EVERY 200 FEET.

7. TEMPORARY AUDIBLE INFORMATION DEVICES SHOULD BE USED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.

8. CURB PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MIDBLOCK CROSSWALK.

9. PLACEMENT AND REMOVAL OF TEMPORARY CROSSWALK STRIPING SHALL BE INCLUDED IN LUMP SUM TRAFFIC CONTROL.

10. WHEN CURB CUT RAMP IS NOT PRESENT, TEMPORARY OR PERMANENT CURB CUT RAMP WILL BE PROVIDED BY CONTRACTOR.

STANDARD LEGEND

DETECTABLE BARRIER	CURB CUT RAMP WITH DETECTABLE SURFACE WARNING
DETECTABLE EDGING	SIGN
WORK SITE	DIRECTION OF TRAFFIC LANE(S)
STRIPED DRUM	

BY	REVISED TITLE BLOCK REVISION	DATE
GLO		10-16-08

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAIL
TRAFFIC CONTROL
PEDESTRIAN ACCESSIBILITY
AROUND WORKZONE -
MIDBLOCK CROSSING AND SIDEWALK DETOUR

NO SCALE — SEPTEMBER 2008

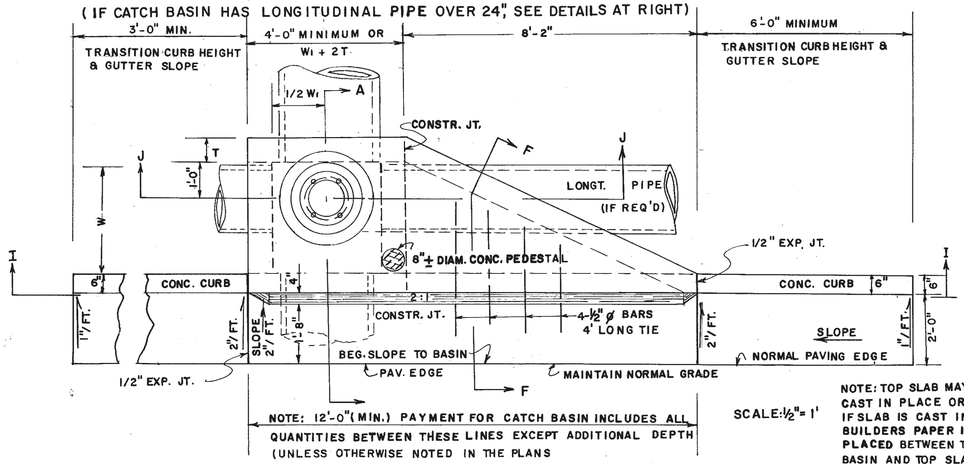
T-22

AF 21868

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	73	176

CATCH BASIN

(IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)

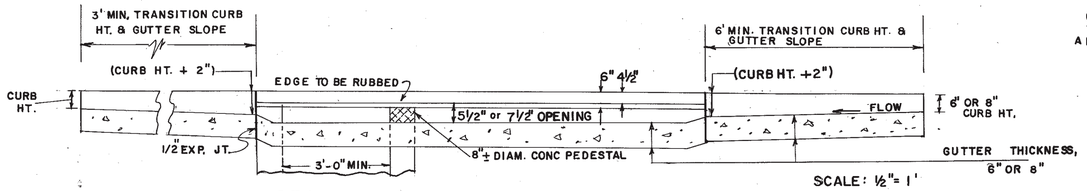


NOTE: 12'-0" (MIN.) PAYMENT FOR CATCH BASIN INCLUDES ALL QUANTITIES BETWEEN THESE LINES EXCEPT ADDITIONAL DEPTH (UNLESS OTHERWISE NOTED IN THE PLANS

SCALE: 1/2" = 1'

NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.

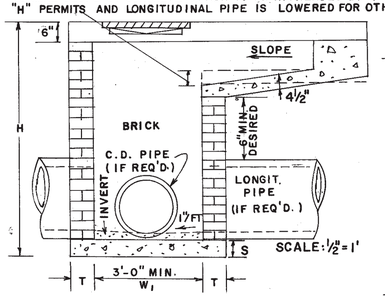
PLAN



SCALE: 1/2" = 1'

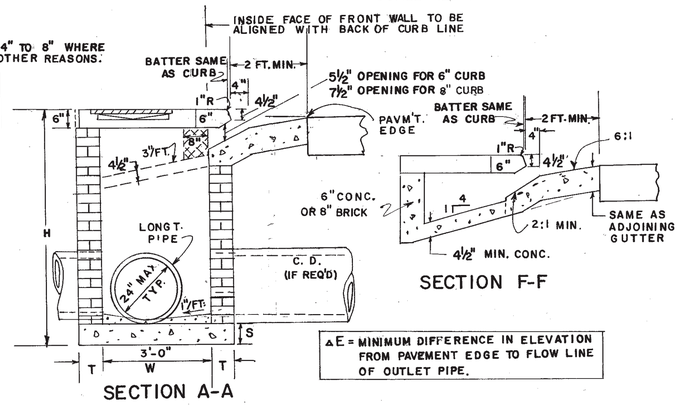
SECTION I-I

NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED BY 4" TO 8" WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.



SCALE: 1/2" = 1'

SECTION J-J

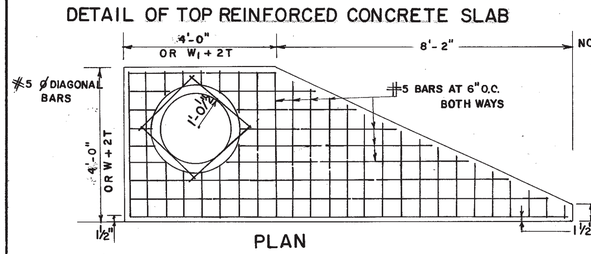


SECTION A-A

SECTION F-F

ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

DETAIL OF TOP REINFORCED CONCRETE SLAB

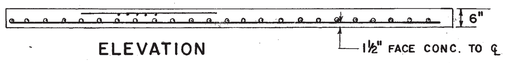


NOTE: ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS, NUMBER & LOCATION TO BE AS DIRECTED BY THE ENGINEER.

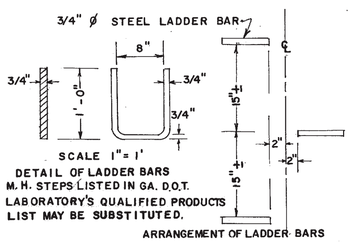
PLAN

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.

NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB, SEE PART PLAN AT TOP RIGHT.



ELEVATION



SCALE 1" = 1'

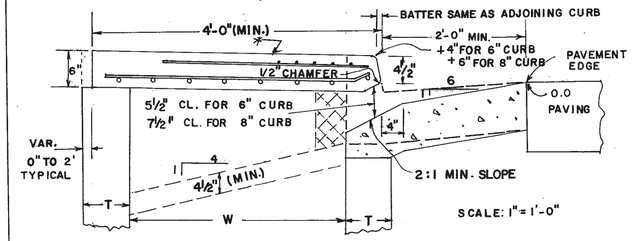
DETAIL OF LADDER BARS

NOTE: M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

ARRANGEMENT OF LADDER BARS

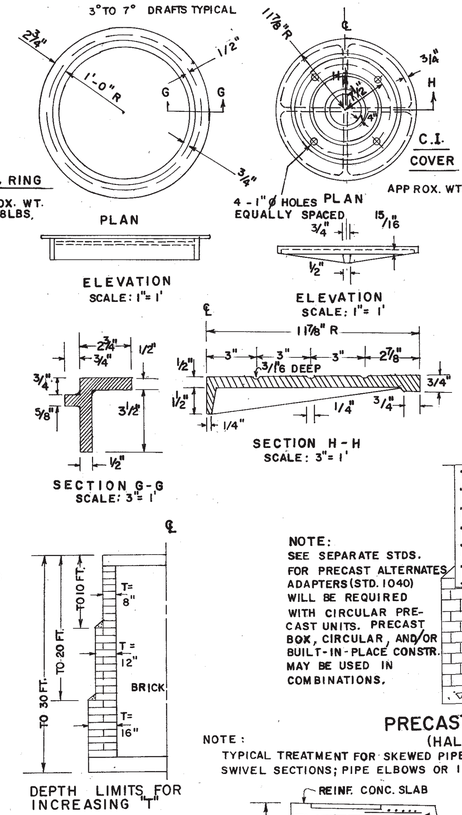
W OR W1 (MAX.)	BOTTOM SLAB MATERIALS	S
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W1 #4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"

DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQ'D.



CASTING DETAILS

3° TO 7° DRAFTS TYPICAL



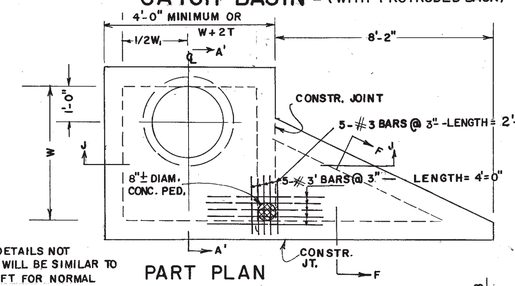
DEPTH LIMITS FOR INCREASING T

TYPICAL MIN. DIMENSIONS			
PIPE DIA.	H (MIN.)	W or W1	ΔE (MIN)
12	4'- 4"	3'-0"	3'-3"
15	4'- 7"	3'-0"	3'-6"
18	4'- 10"	3'-0"	3'-9"
24	5'- 6"	3'-0"	4'-4"
30	6'- 2"	3'-7"	5'-0"
36	6'- 10"	4'-6"	5'-7"
42	7'- 4"	5'-3"	5'-11"
48	8'- 0"	6'-0"	6'-6"
54	8'- 6"	6'-8"	7'-0"
60	9'- 2"	7'-4"	7'-7"

NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W. & W. DIMENSIONS DO NOT HAVE TO BE EQUAL.

(TYPICAL FOR CATCH BASIN WITH LARGE LONGITUDINAL PIPE OR RECESSED BOX)

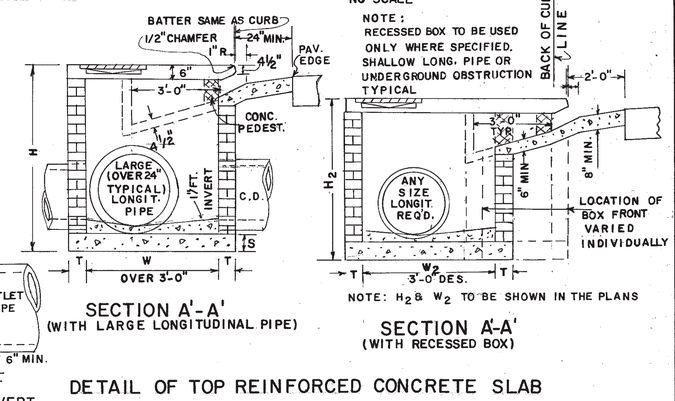
CATCH BASIN - (WITH PROTRUDED BACK)



PART PLAN

NO SCALE

NOTE: CATCH BASIN DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT LEFT FOR NORMAL CATCH BASIN.

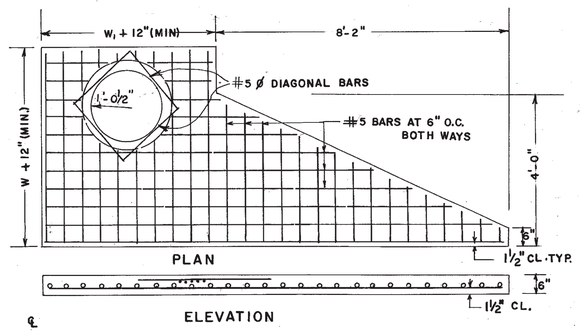


NOTE: H_2 & W_2 TO BE SHOWN IN THE PLANS

SECTION A'-A' (WITH LARGE LONGITUDINAL PIPE)

SECTION A'-A' (WITH RECESSED BOX)

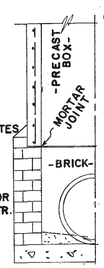
DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

ELEVATION

NOTE: PIPE SIZES, NUMBER, ALIGNMENT, AND INVERT SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONCRETE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE PLANS.

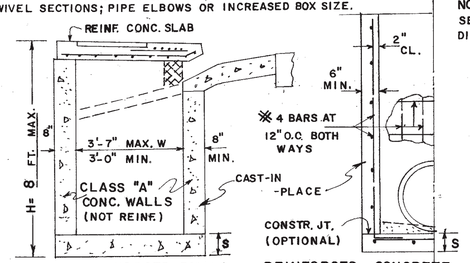


NOTE: SEE SEPARATE STDS. FOR PRECAST ALTERNATES ADAPTERS (STD. 1040) WILL BE REQUIRED WITH CIRCULAR PRECAST UNITS. PRECAST BOX, CIRCULAR, AND/OR BUILT-IN-PLACE CONSTR. MAY BE USED IN COMBINATIONS.

PRECAST BOX ON BRICK

(HALF-SECTION)

NOTE: TYPICAL TREATMENT FOR SKEWED PIPE ARE: CIRCULAR PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZE.



NON-REINFORCED SMALL BASIN (W1 NOT OVER 3'-7")

REINFORCED CONCRETE (HALF-SECTION)

CONSTRUCTION ALTERNATES

NOTE: DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS.

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD CATCH BASINS

FOR USE WITH CURB (6" HT. OR 8" HT.) & GUTTER

SCALE AS SHOWN

RED. & REDR. AUGUST, 1982

REV. & REDR. R.M.U.
TRA. G.M.E.
CHK. RKC

(SUBMITTED) Floyd E. Harris
STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Thomas D. Wilson Jr.
STATE HIGHWAY ENGINEER

NUMBER 1033 D

FORM EF3

AF 21868

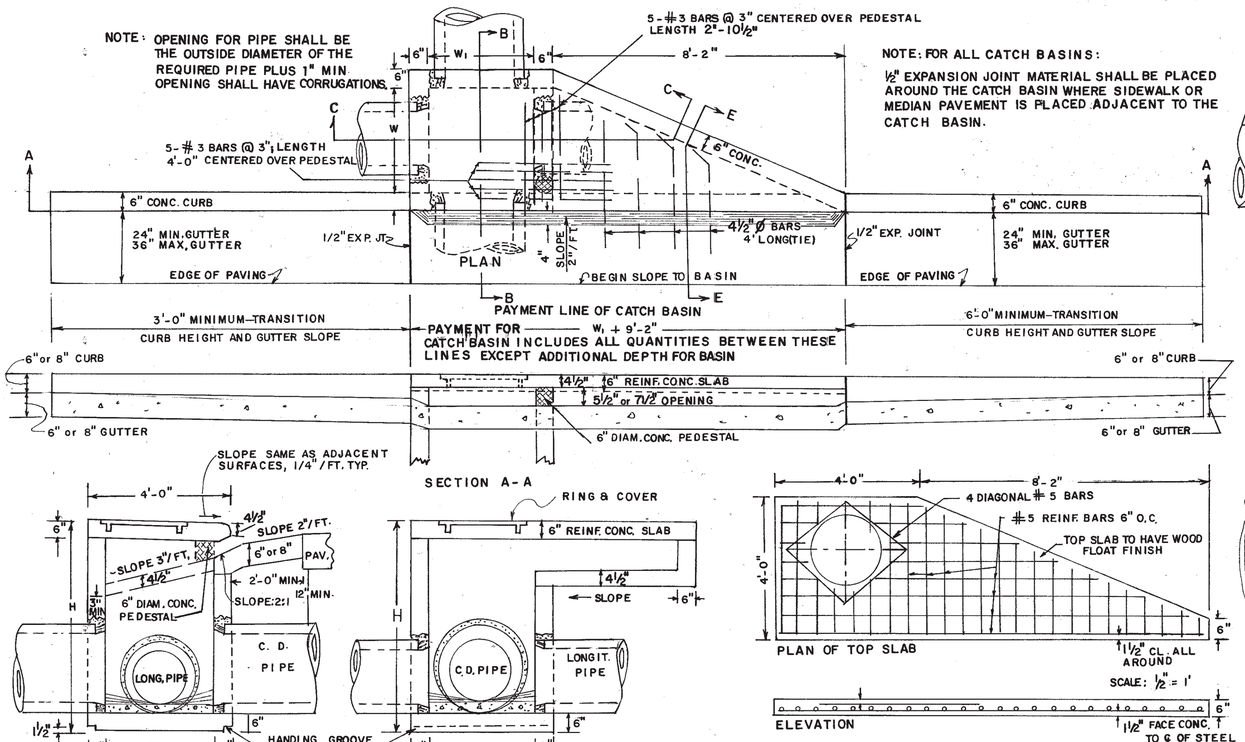
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	74	176

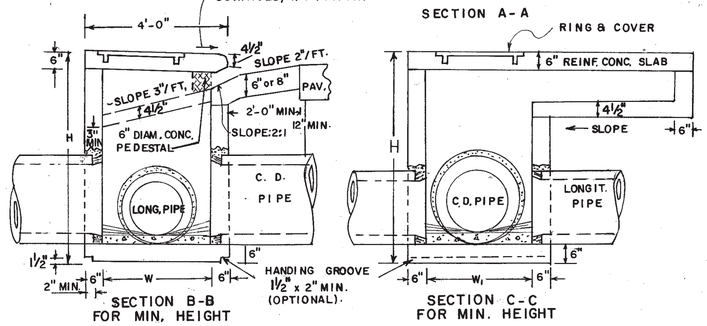
CATCH BASIN (IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT.)

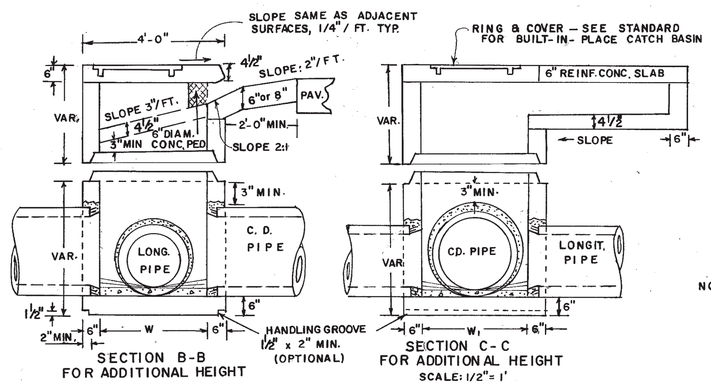
NOTE: OPENING FOR PIPE SHALL BE THE OUTSIDE DIAMETER OF THE REQUIRED PIPE PLUS 1" MIN. OPENING SHALL HAVE CORRUGATIONS.

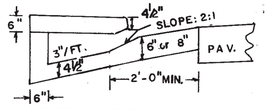
NOTE: FOR ALL CATCH BASINS:

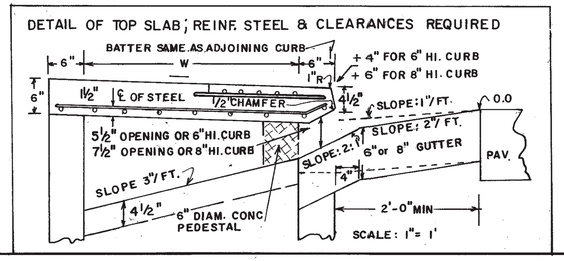
½" EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE CATCH BASIN WHERE SIDEWALK OR MEDIAN PAVEMENT IS PLACED ADJACENT TO THE CATCH BASIN.



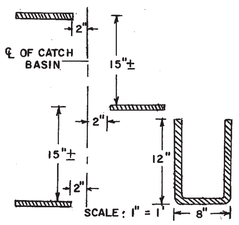






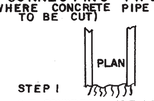


DETAIL AND ARRANGEMENT OF LADDER BARS

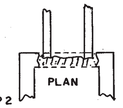


NOTE:
NUMBER AND LOCATION OF LADDER BARS IN CATCH BASIN TO BE AS DIRECTED BY THE ENGINEER.
M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

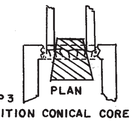
METHOD OF CONNECTING PIPE (WHERE CONCRETE PIPE HAS TO BE CUT)



STEP 1
CUT CONCRETE PIPE LEAVING APPROXIMATELY 3" OF REINFORCING MESH EXPOSED

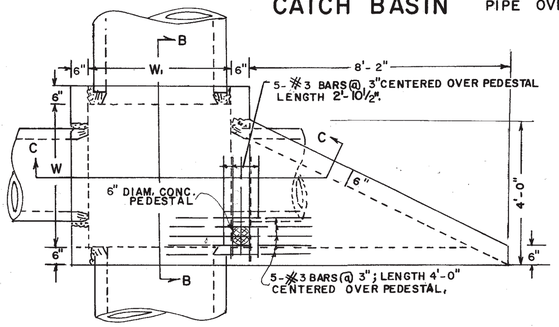


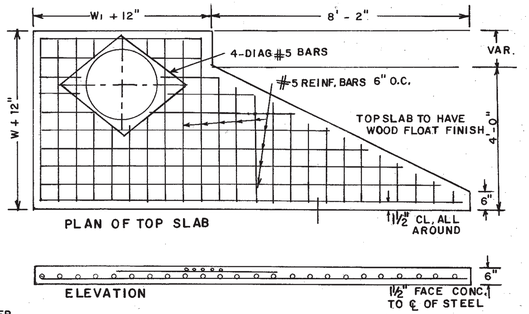
STEP 2
POSITION PIPE APPROXIMATELY 3" INTO OPENING OF WALL

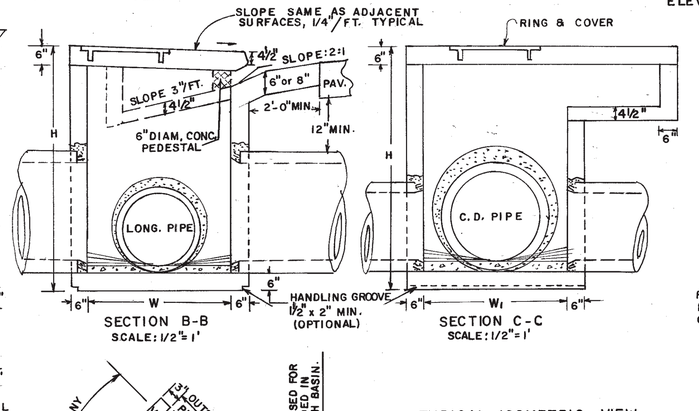


STEP 3
POSITION CONICAL CORE INSIDE OF PIPE AND SEAL WITH GROUT (1/2" MIN. THICKNESS OF GROUT) REMOVE CORE WHEN SET AND RUB GROUT TO SEAL JOINTS
NO SCALE

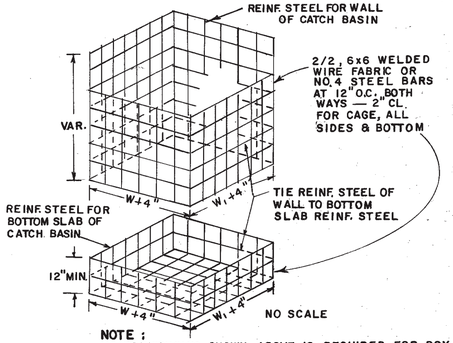
CATCH BASIN (TYPICAL FOR CATCH BASIN WITH LONGITUDINAL PIPE OVER 24".)





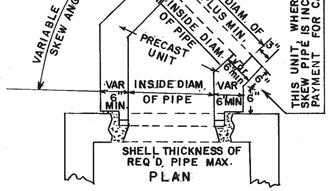


REINFORCING - ISOMETRIC VIEW



NOTE:
REINFORCING SHOWN ABOVE IS REQUIRED FOR BOX SHAPED BASIN. REINFORCING FOR CIRCULAR PRECAST ALTERNATE SHALL BE ACCORDING TO STD. 1040.

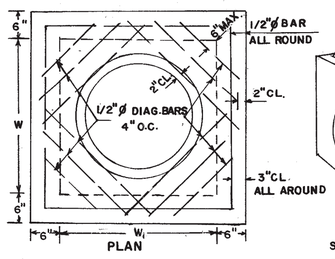
ALL JOINTS BETWEEN PRECAST RISERS OR BETWEEN PRECAST BASE AND RISER WILL BE KEYED, KEYED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.



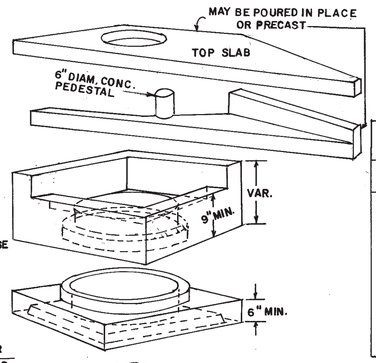
A METHOD OF CONNECTING SKEWED PIPE

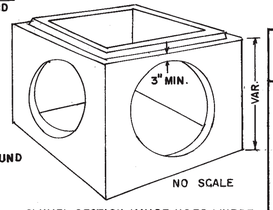
IF THIS SWIVEL SECTION SLAB IS USED TO REDUCE THE W AND W_1 DIMENSIONS, INCREASE THE MIN. THICKNESS TO 9" AND USE REINF. STEEL. SEE DETAIL BELOW.

DETAIL FOR REINFORCED STEEL



TYPICAL ISOMETRIC VIEW





SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.
THE ABOVE VIEW DEPICTS PRECAST BOX. SEE SEPARATE STANDARDS FOR CIRCULAR ALTERNATE OR BUILT-IN-PLACE BOX.

DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NORMAL W OR W_1	MIN H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-4"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

NOTE:
DIMENSIONS FOR CATCH BASINS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES AND MAY BE VARIED IF CONDITIONS PERMIT AND THE ENGINEER APPROVES. W & W_1 DIMENSIONS DO NOT HAVE TO BE EQUAL.

ALTERNATE:
BUILT-IN-PLACE, PRECAST BOX, AND/OR PRECAST CIRCULAR UNITS WITH THE REQUIRED ADAPTERS, REDUCERS, FITTINGS, CONNECTIONS, ETC. MAY BE USED IN COMBINATIONS.

NOTE:
FOR RING & COVER DETAILS AND OTHER DETAILS NOT SHOWN, SEE STANDARD 1033D FOR BUILT-IN-PLACE CATCH BASIN.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD PRECAST CATCH BASINS

FOR USE WITH CURB (6" OR 8" HT.) & GUTTER

SCALE AS SHOWN — REV. & REDR., SEPT., 1982

REV. & REDR. RMU
TRA GME
CHK RKC

(SUBMITTED) Floyd E. Hardy
STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Thomas D. Morgan
STATE HIGHWAY ENGINEER

NUMBER 1033D PRECAST

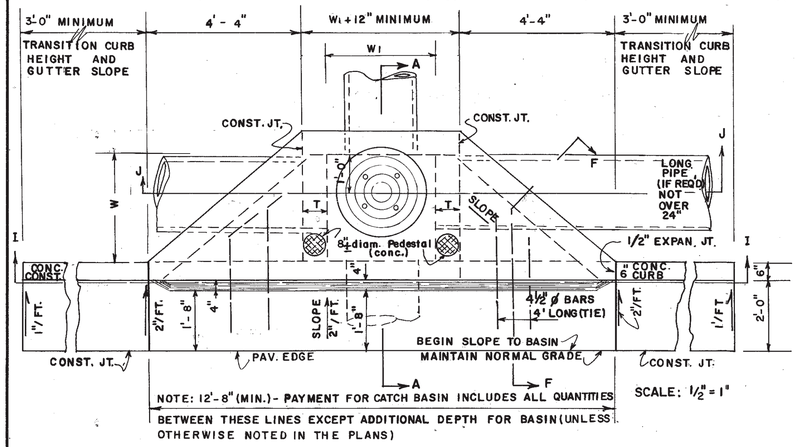
FORM EF3

AF 21868

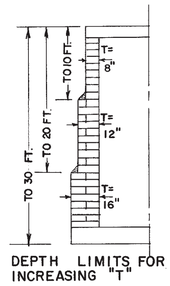
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	75	176

CATCH BASIN

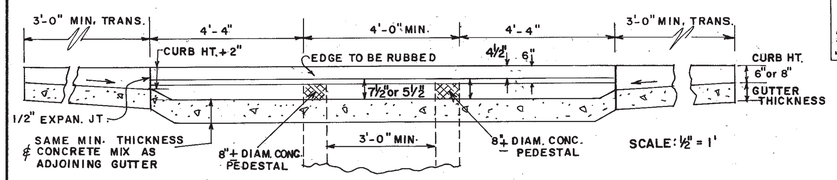
(FOR CATCH BASIN WITH LONGIT. PIPE OVER 24", SEE DETAILS AT RIGHT.)



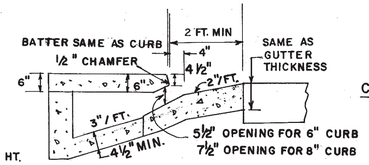
NOTE: 12'-8" (MIN.) - PAYMENT FOR CATCH BASIN INCLUDES ALL QUANTITIES BETWEEN THESE LINES EXCEPT ADDITIONAL DEPTH FOR BASIN (UNLESS OTHERWISE NOTED IN THE PLANS)



DEPTH LIMITS FOR INCREASING "T"

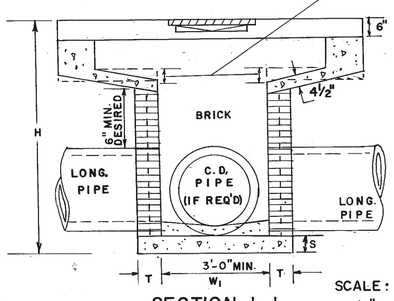


SECTION I-I



SECTION F-F

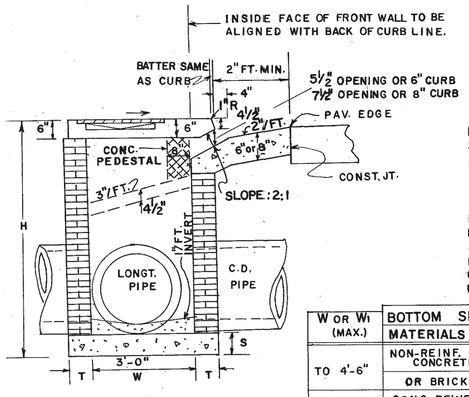
NOTE: NORMAL SLOPE OF CONCRETE APRON TO BE INCREASED UP TO 8" TOTAL WHERE "H" PERMITS AND LONGITUDINAL PIPE IS LOWERED FOR OTHER REASONS.



SECTION J-J

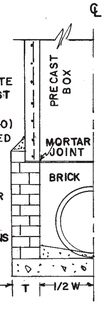
SCALE: 1/2" = 1'

NOTE: PIPE SIZES, NUMBER, ALIGNMENT AND INVERTS SHOWN ARE ILLUSTRATIVE. SEE PLANS FOR SPECIFICS. INVERTS TO BE FORMED WITH GROUT OR CONC. AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



SECTION A-A

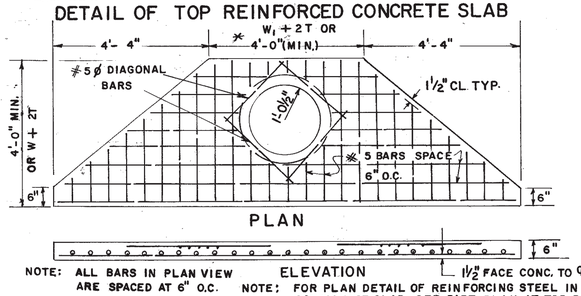
W OR W1 (MAX.)	BOTTOM SLAB MATERIALS	"S"
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W1 4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"



NOTE: SEE SEPARATE STDS. FOR PRECAST ALTERNATES. ADAPTERS (STD. 1040) WILL BE REQUIRED WITH CIRCULAR PRECAST UNITS. PRECAST BOX, CIRCULAR, AND/OR BUILT-IN-PLACE CONSTR. MAY BE USED IN COMBINATIONS

PRECAST BOX ON BRICK (HALF-SECTION)

DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

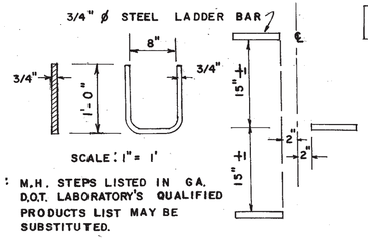
ELEVATION

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C.

1½" FACE CONC. TO ℄ REINF.

NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB. SEE PART PLAN AT TOP RIGHT.

NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST. IF CAST IN PLACE, BUILDER'S PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.



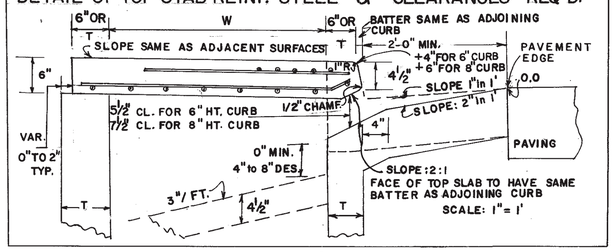
SCALE: 1" = 1'

NOTE: M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

ALL CATCH BASINS WILL HAVE STEPS OR LADDER BARS. NUMBER & LOCATION TO BE AS DIRECTED BY THE ENGINEER.

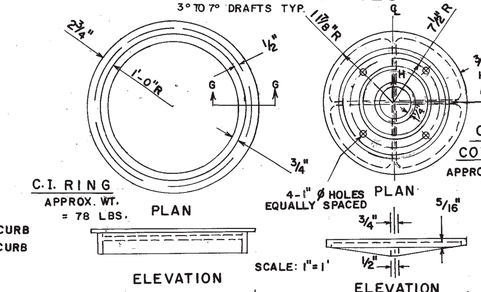
DETAIL OF LADDER BARS

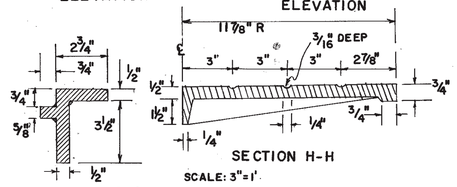
DETAIL OF TOP STAB REINF. STEEL & CLEARANCES REQ'D.



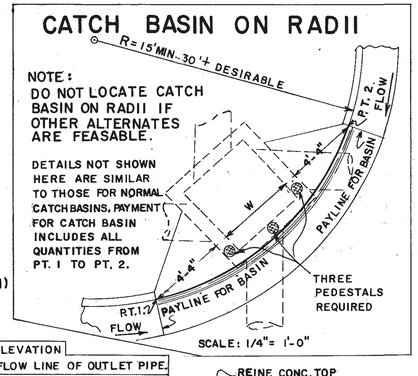
CASTING DETAILS

3° TO 7° DRAFTS TYP.





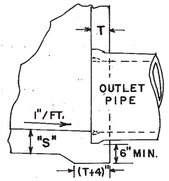
CATCH BASIN ON RADII



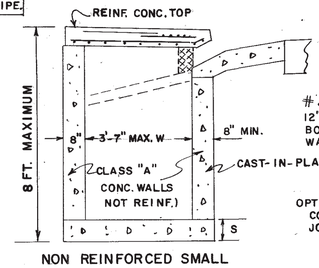
TYPICAL MIN. DIMENSIONS			
PIPE DIA.	H (MIN.)	W or W1	MIN. ΔE
12	4'-4"	3'-0"	3'-3"
15	4'-7"	3'-0"	3'-6"
18	4'-10"	3'-0"	3'-9"
24	5'-6"	3'-0"	4'-4"
30	6'-2"	3'-7"	5'-0"
36	6'-10"	4'-6"	5'-7"
42	7'-4"	5'-3"	5'-11"
48	8'-0"	6'-0"	6'-6"
54	8'-6"	6'-8"	7'-0"
60	9'-2"	7'-4"	7'-7"

ΔE = MINIMUM DIFFERENCE IN ELEVATION FROM PAVEMENT EDGE TO FLOW LINE OF OUTLET PIPE.

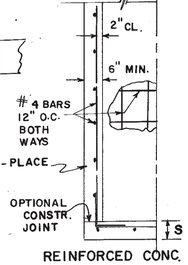
NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED, IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W & W1 DIMENSIONS DO NOT HAVE TO BE EQUAL.



ALTERNATE TO INVERT



NON REINFORCED SMALL BASIN (W1 NOT OVER 3'-7")



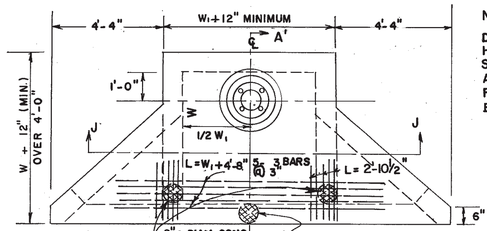
REINFORCED CONC. HALF-SECTION.

NOTE: DETAILS NOT SHOWN ABOVE FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO BRICK CATCH BASIN DETAILS.

CONSTRUCTION ALTERNATES

CATCH BASIN (WITH PROTUDED BACK)

FOR USE WITH LONGITUDINAL PIPE OVER 24" OR FOR USE WITH RECESSED BOX

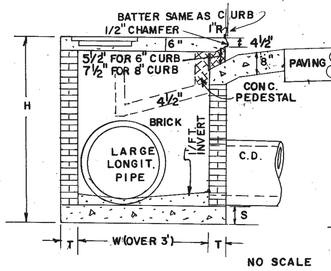


NO SCALE

NOTE: DETAILS NOT SHOWN HERE WILL BE SIMILAR TO THOSE AT FAR LEFT FOR NORMAL CATCH BASINS.

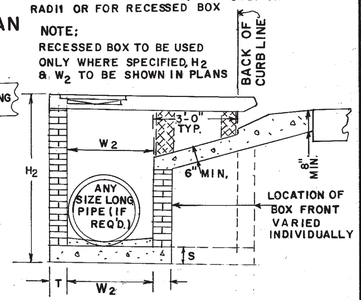
PART PLAN

NOTE: RECESSED BOX TO BE USED ONLY WHERE SPECIFIED. H2 & W2 TO BE SHOWN IN PLANS



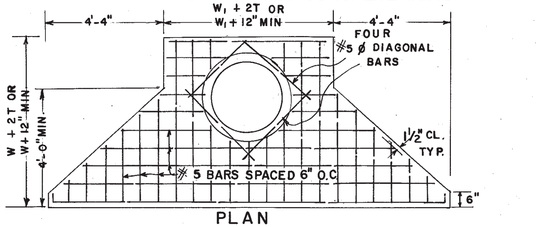
NO SCALE

SECTION A'-A' (FOR LONGIT. PIPE OVER 24")



SECTION A'-A' (FOR RECESSED BOX)

DETAIL OF TOP REINFORCED CONCRETE SLAB



PLAN

ELEVATION

1½" FACE CONC. TO ℄ REINF.

NOTE: TYPICAL TREATMENT FOR SKEWED PIPES ARE: CIRCULAR PRECAST UNITS; PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZES TO ACCOMODATE THE SKEWS.

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD

CATCH BASINS

FOR USE WITH CURB (6" OR 8" HT.) & GUTTER (IN SAGS OR LOW POINTS)

SCALE AS SHOWN — REV. & RED. AUGUST, 1982

REV. & REDR. R.M.U. — TRA. G.M.E. — CHK. R.K.C.

(SUBMITTED) Floyd E. Hardy — STATE ROAD & AIRPORT DESIGN ENGR.

(APPROVED) Thomas D. Wilson — STATE HIGHWAY ENGINEER

NUMBER 1034D

FORM EF3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	76	176

CATCH BASIN (IF CATCH BASIN HAS LONGITUDINAL PIPE OVER 24", SEE DETAILS AT RIGHT)

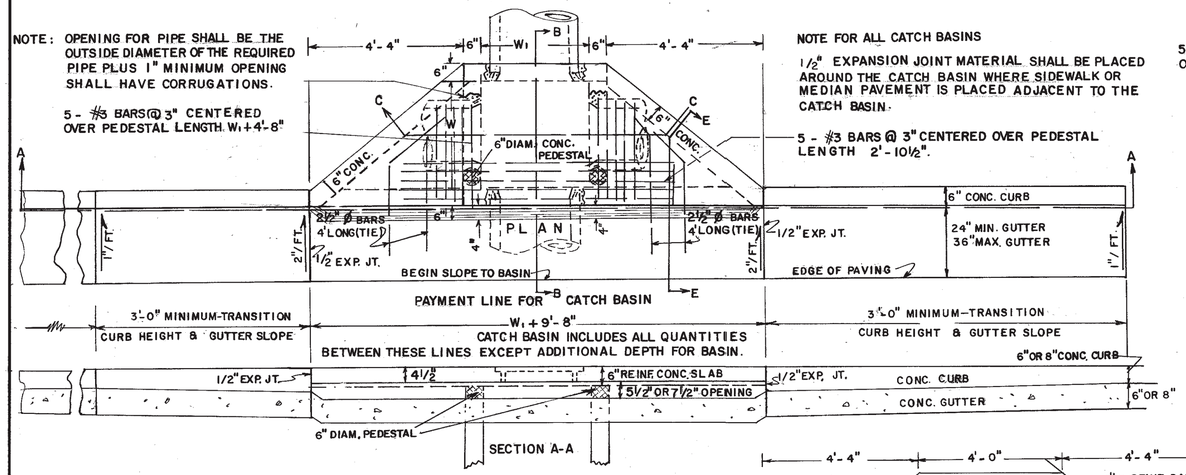
NOTE: OPENING FOR PIPE SHALL BE THE OUTSIDE DIAMETER OF THE REQUIRED PIPE PLUS 1" MINIMUM OPENING SHALL HAVE CORRUGATIONS.

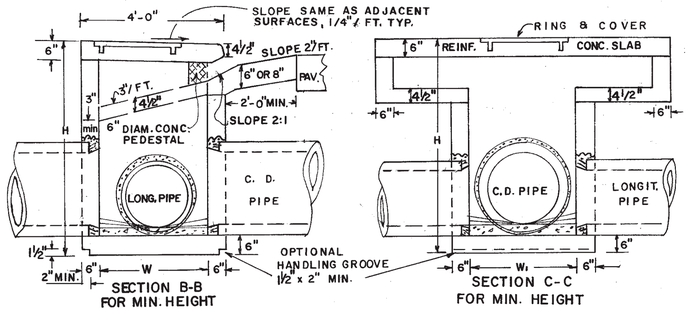
5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH W_1+4'-8"

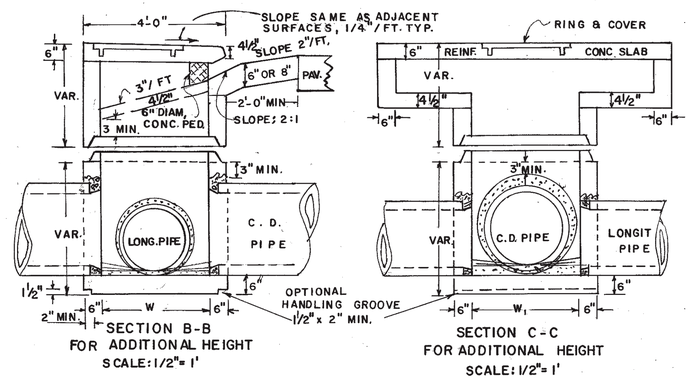
NOTE FOR ALL CATCH BASINS

1/2" EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND THE CATCH BASIN WHERE SIDEWALK OR MEDIAN PAVEMENT IS PLACED ADJACENT TO THE CATCH BASIN.

5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH 2'-10½".





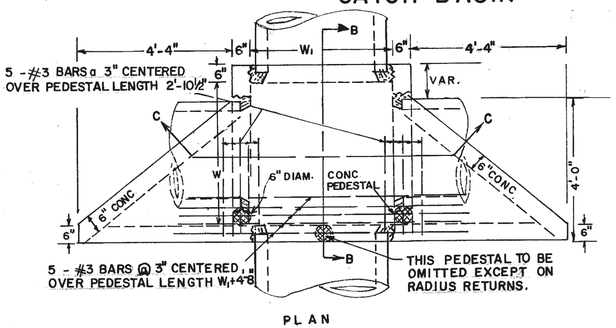


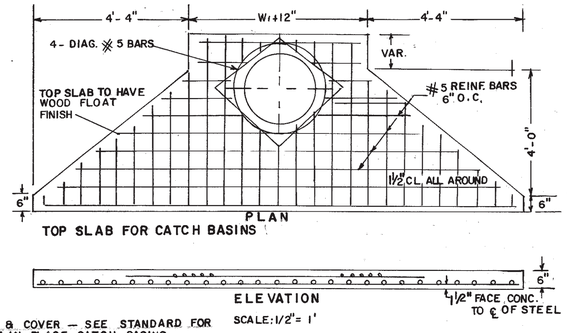
CATCH BASIN (TYPICAL FOR CATCH BASIN WITH LONGITUDINAL PIPE OVER 24".)

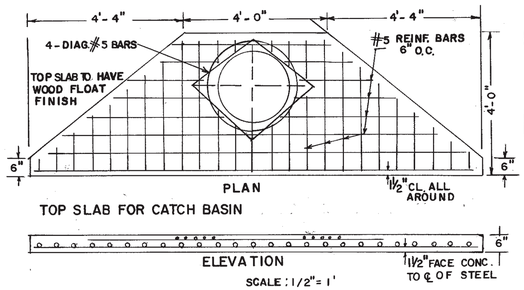
5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH 2'-10½"

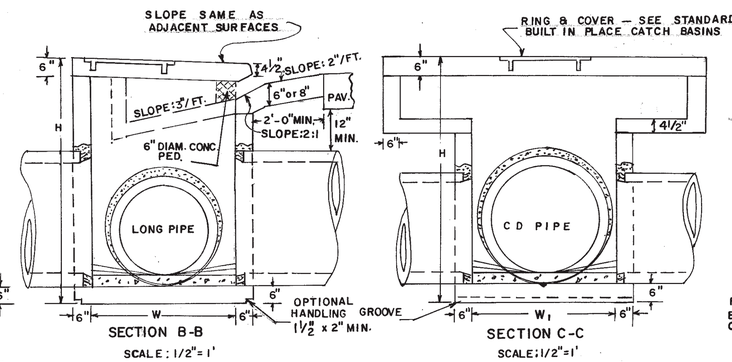
5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH W_1+4'-8"

THIS PEDESTAL TO BE OMITTED EXCEPT ON RADIUS RETURNS.

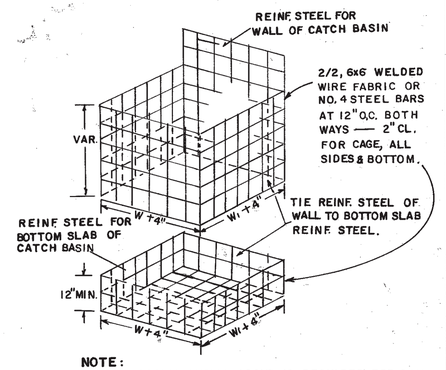








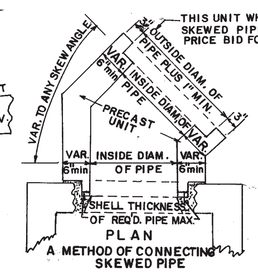
REINFORCING - ISOMETRIC VIEW



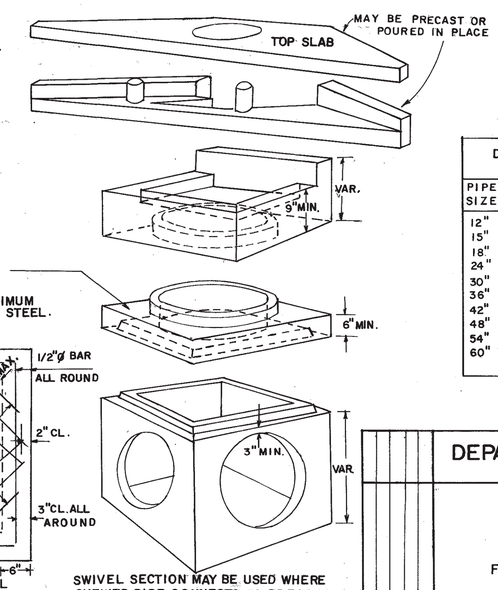
NOTE:
REINFORCING SHOWN ABOVE IS REQUIRED FOR BOX SHAPED BASIN. REINFORCING FOR CIRCULAR PRECAST ALTERNATE SHALL BE ACCORDING TO STD. 1040.

ALL JOINTS BETWEEN PRECAST RISERS OR BETWEEN PRECAST BASE AND RISER WILL BE KEYED. KEYED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.

THIS UNIT WHERE REQ'D. FOR SKEWED PIPE IS INCLUDED IN PRICE BID FOR CATCH BASIN.



TYPICAL ISOMETRIC VIEW



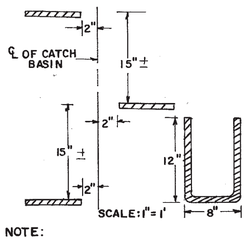
DIMENSIONS FOR CATCH BASINS		
PIPE SIZE	NORMAL W or W_1	MIN. H
12"	3'-0"	4'-4"
15"	3'-0"	4'-7"
18"	3'-0"	4'-10"
24"	3'-0"	5'-6"
30"	3'-6"	6'-2"
36"	4'-0"	6'-10"
42"	5'-0"	7'-4"
48"	5'-0"	8'-0"
54"	6'-0"	8'-6"
60"	6'-0"	9'-2"

NOTE:
DIMENSIONS FOR CATCH BASINS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES AND MAY BE VARIED IF CONDITIONS PERMIT AND THE ENGINEER APPROVES. W & W_1 DIMENSIONS DO NOT HAVE TO BE EQUAL.

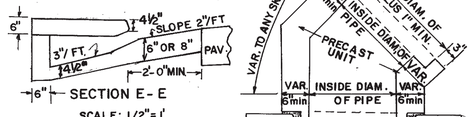
ALTERNATE:
BUILT-IN-PLACE, PRECAST BOX, AND/OR PRECAST CIRCULAR UNITS WITH THE REQUIRED ADAPTERS, REDUCERS, FITTINGS, CONNECTIONS, ETC. MAY BE USED IN COMBINATIONS.

NOTE:
FOR RING & COVER DETAILS AND OTHER DETAILS NOT SHOWN, SEE STANDARD 1034 D FOR BUILT-IN-PLACE CATCH BASIN.

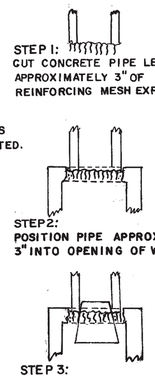
DETAIL AND ARRANGEMENT OF LADDER BARS



NOTE:
NUMBER AND LOCATION OF LADDER BARS IN CATCH BASIN TO BE AS DIRECTED BY THE ENGINEER.
M.H. STEPS LISTED IN GA. D.O.T. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.



METHOD OF CONNECTING PIPE
(WHERE CONC. PIPE HAS TO BE CUT)



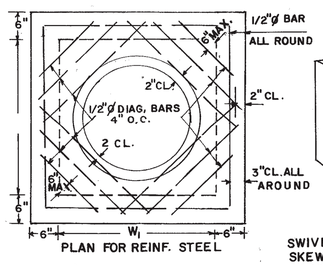
STEP 1: CUT CONCRETE PIPE LEAVING APPROXIMATELY 3" OF REINFORCING MESH EXPOSED

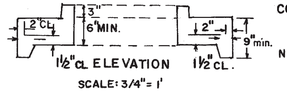
STEP 2: POSITION PIPE APPROXIMATELY 3" INTO OPENING OF WALL.

STEP 3: POSITION CONICAL CONE INSIDE OF PIPE AND SEAL WITH GROUT. (1/2" MIN. THICKNESS OF GROUT). REMOVE CORE WHEN SET AND RUB GROUT TO SEAL JOINTS.

NO SCALE

IF THIS SWIVEL SECTION SLAB IS USED TO REDUCE THE W AND W_1 DIMENSIONS, INCREASE THE MINIMUM THICKNESS TO 9" AND USE REINF. STEEL. SEE DETAIL BELOW.



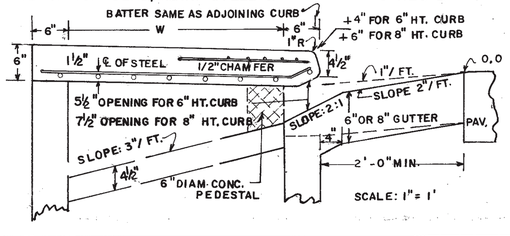


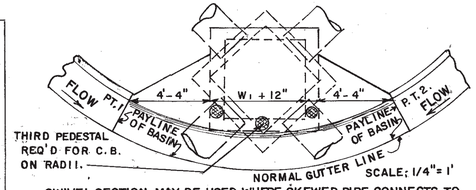
SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.

NO SCALE

NOTE:
THE ABOVE VIEW DEPICTS PRECAST BOX. SEE SEPARATE STANDARDS FOR CIRCULAR ALTERNATE OR BUILT-IN-PLACE BOX.

DETAIL OF TOP SLAB, REINF. STEEL & CLEARANCES REQ'D.





SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.
ALL DIMENSIONS ARE THE SAME AS SHOWN ON DETAILS FOR CATCH BASIN, DIMENSIONS FROM PT. 1 TO PT. 2 ARE MEASURED ALONG THE CHORD, UNIT PRICE BID FOR CATCH BASIN INCLUDES ALL CURB AND GUTTER FROM PT. 1 TO PT. 2.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD PRECAST CATCH BASINS

FOR USE WITH CURB (6" OR 8" HT.) & GUTTER
(IN SAGS OR LOW POINTS)

SCALE AS SHOWN — REV. & REDR., SEPT. 1982

REV. & REDR. R.M.U.
TRA. G.M.E.
CHK. R.K.C.

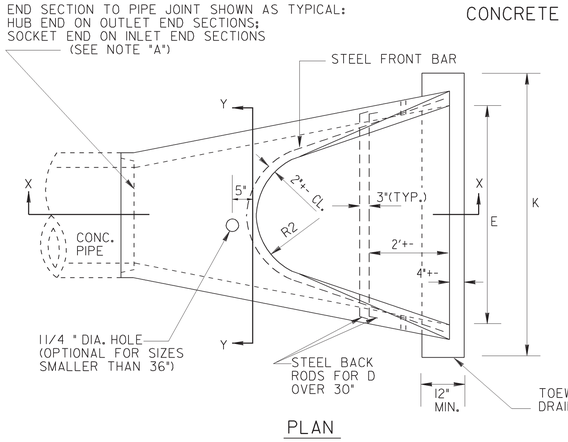
(SUBMITTED) Floyd E. Hardy — STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) Thomas D. Moreland — STATE HIGHWAY ENGINEER

NUMBER 1034D PRECAST

FORM EF3

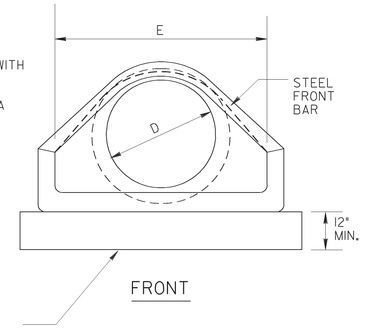
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	77	176

CONCRETE FLARED END SECTION



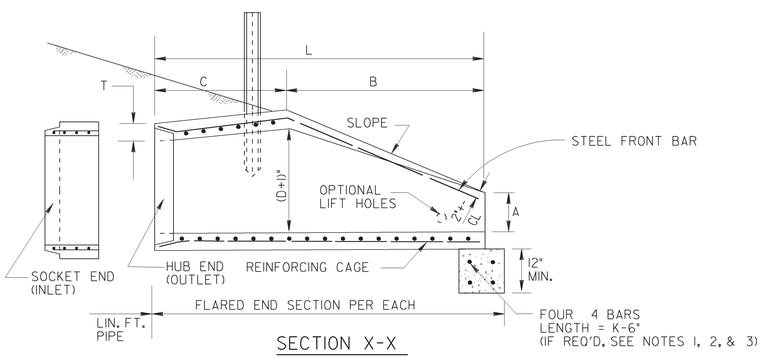
PLAN

INSTALLATION: (D OVER 30") CABLE, CHAIN, OR LIFTING PIN WILL EXTEND THRU 1 1/4 " HOLE WITH A PLATE OR REBAR CONNECTED INSIDE THE CONC. SECTION TO PROVIDE ADEQUATE BEARING AREA OR A LIFTING ASSEMBLY DEVICE MAY BE USED TO GIVE 3 LIFT POINTS. HOOKS CONNECTED DIRECTLY TO CONCRETE IS NOT PERMITTED. DAMAGE FROM IMPROPER HANDLING SHALL BE CAUSE FOR REJECTION.

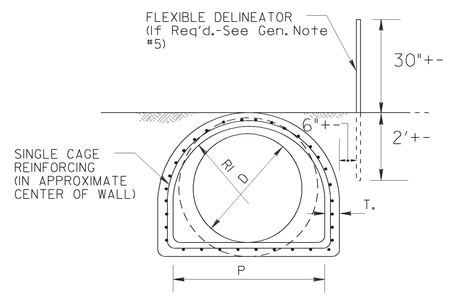


FRONT

NOTE: DO NOT CUT CONCRETE PIPE. USE FULL LENGTH SECTIONS ONLY. WARP SLOPE TO CONFORM WITH PIPE LENGTH AND END SECTION.



SECTION X-X



SECTION Y-Y

REINFORCING CAGE:

(1.) WIRE FABRIC HAVING EQUAL STEEL AREA AS INNER CAGE FOR CLASS II PIPE, AASHTO M-170.
(2.) ALTERNATE: # 3 BARS SPACED 12"+- LONGITUDINALLY WITH # 2 BARS TRANVERSELY AT 6' O.C. MAX. SPACING, SPOT WELDED OR TIED TO FORM CAGE. (BACK RODS MAY BE OMITTED.)

NOTE "A":

CONTRACTOR WILL INFORM PRODUCER IF CONCRETE FLARED END SECTION IS FOR INLET OR FOR OUTLET END. SOCKET (TONGUE OR SPIGOT) END IS REQUIRED FOR INLETS. HUB (GROOVE OR BELL) END IS REQUIRED FOR OUTLETS. SOCKET TO SOCKET OR HUB TO HUB JOINT WILL NOT BE ACCEPTED UNLESS A REINFORCED CONCRETE COLLAR IS BUILT AROUND THE JOINT WITH NO PAYMENT BEING MADE FOR THE COLLAR.

FLARED END SECTIONS SHALL BE JOINTED TO PIPE WITH ALL SPACE IN THE JOINT FILLED WITH EITHER BITUMINOUS PLASTIC CEMENT OR PREFORMED PLASTIC GASKET (SEC. 848).

WALL THICKNESS (T) IS SHOWN AS NOMINAL AND MAY BE INCREASED AT PRODUCER'S OPTION FOR DESIRED JOINT DESIGN OR TO ALLOW A FLAT OUTSIDE BOTTOM ON THE FLARE, WITH INSIDE DIMENSIONS OF FLARE RETAINED AS SHOWN.

T = PIPE WALL THICKNESS (0.0833D + 1"+- TYPICAL)

DIMENSIONS AND REINFORCING FOR CONCRETE FLARED END SECTIONS (+- 1" TOLERANCE)

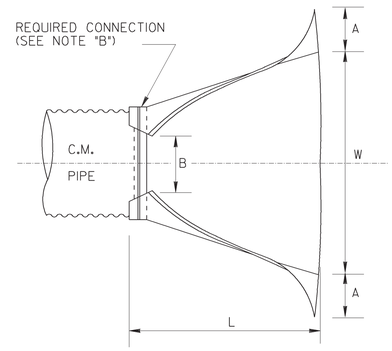
PIPE DIA	FRONT BAR	BACK RODS	SLOPE +-	A	B	C *	L *	E	P	R1	R2	OUTLET TOEWALL (IF REQ'D) K= E + 2'	CU.YDS. CONC.
12"	1-#3 x 5' 4"	NOT REQ'D.	2.2:1	4"	2'0"	4' 1"	6'1"	2'0"	1'8"	10"	9"	4'-0"	.148
15"	1-#3 x 6' 0"	NOT REQ'D.	2.2:1	6"	2'3"	3'10"	6'1"	2'6"	2'0"	1'0"	11"	4'-6"	.167
18"	1-#3 x 7' 2"	NOT REQ'D.	2.2:1	9"	2'3"	3'10"	6'1"	3'0"	2'5"	1'4"	1'0"	5'-0"	.185
24"	1-#3 x 9' 10"	NOT REQ'D.	2.4:1	10"	3'8"	2' 6"	6'2"	4'0"	2'9"	1'5"	1'2"	6'-0"	.222
30"	1-#4 x 11' 8"	NOT REQ'D.	2.4:1	12"	4'6"	1' 8"	6'2"	5'0"	3'1"	1'6"	1'3"	7'-0"	.259
36"	1-#4 x 13' 10"	2-#4 x 6'3"	2.4:1	15"	5'3"	2'11"	8'2"	6'0"	4'0"	2'0"	1'8"	8'-0"	.296
42"	1-#4 x 13' 10"	2-#4 x 7'4"	2.4:1	21"	5'3"	2'11"	8'2"	6'6"	4'6"	2'4"	1'10"	8'-6"	.315

NOTE: SPECIFIED REINFORCING IS MINIMAL AND MAY BE INCREASED AT PRODUCERS OPTION TO AID CASTING & HANDLING. ALTERNATE REINFORCEMENT PERMITTED IF APPROVED.

* NOTE: "C" AND "L" DIMENSION MAY BE MEASURED TO EITHER END OF JOINT CONNECTION AT PIPE.

METAL FLARED END SECTION

(USE ONLY WITH COR. METAL PIPE)



PLAN

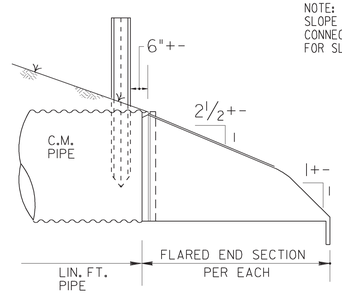
NOTE: GALVANIZED STEEL FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED STEEL PIPE AND ALUMINUM FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED ALUMINUM PIPE UNLESS OTHERWISE APPROVED BY D.O.T. OFFICE OF MATERIALS AND TESTS.

FLARED END SECTION DIMENSIONS

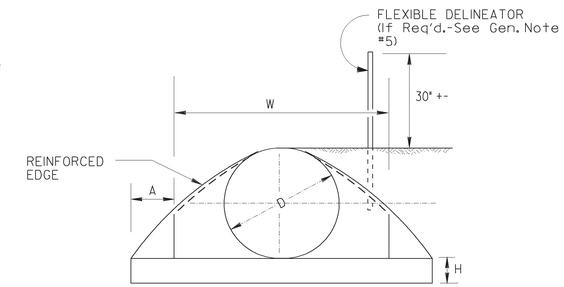
PIPE SIZE "D"	THICKNESS GALV. STEEL	THICKNESS ALUM.	A A= 0.4D +- 1"	B B=0.5 D +- 1"	H H=0.25D +- 1" (MIN.6")	L L=1.67D +- 1 1/2'	W W=2.0D +- 2"
12"	.064"	.060"	5"	6"	6"	1'8"	2'0"
15"	.064"	.060"	6"	7"	6"	2'3"	2'6"
18"	.064"	.060"	7"	9"	6"	2'6"	3'0"
24"	.064"	.060"	9"	1'0"	6"	3'4"	4'0"
30"	.079"	.105"	1'0"	1'3"	7"	4'2"	5'0"
36"	.079"	.105"	1'2"	1'6"	9"	5'0"	6'0"
42"	.109"	.164"	1'5"	1'9"	10"	5'10"	7'0"

NOTE: WHERE METAL FLARED END SECTIONS ARE USED WITH MULTIPLE PIPE LINES, THE STANDARD SPACING BETWEEN PIPES (S=D OR 3 FT.) MAY HAVE TO BE INCREASED (S=1.75 D TYPICAL). TO PREVENT OVER-LAP OF END SECTION WINGTIPS. SEE ALSO STD. 1030D.

NOTE:
SLOPE DRAIN PIPES WILL REQUIRE AN ELBOW FOR CONNECTION TO THE FLARED END SECTION. PAYMENT FOR SLOPE DRAIN PIPE WILL INCLUDE THIS ELBOW.



SIDE



FRONT

NOTE "B":

THE CONNECTION BETWEEN METAL FLARED END SECTION AND C.M. PIPE WILL BE ONE OF THE FOLLOWING:

(a) A STRAP BAND OR THREADED ROD PROVIDED BY THE MANUFACTURER WILL LOCK END SECTION ONTO PIPE. A CORRUGATION AT THE PIPE AND WILL BE NON-SPIRALED (PERPENDICULAR TO CL OF PIPE)

(b) A DIMPLE BAND COLLAR WILL BE SHOP BOLTED TO END SECTION. PIPE WILL BE INSERTED INTO BAND COLLAR TO MEET THE END SECTION.

(c) A STUB PIPE WILL BE RIVITED TO THE END SECTION AND THE MAIN PIPE CONNECTED TO THE STUB WITH A NORMAL CONNECTING BAND.

(d) OTHER TYPE CONNECTION IF RECOMMENDED BY MANUFACTURER AND APPROVED BY THE D.O.T.

SPECIAL NOTE:

FLARED END SECTIONS ARE NORMALLY LIMITED TO USE OUTSIDE THE CLEAR ZONE OR BEHIND BARRIER AND WHERE HYDRAULICS PERMIT. SEE OTHER STANDARDS OR DETAILS FOR TAPERED HEADWALLS, SAFETY SLOPE END SECTIONS OR OTHER PIPE END STRUCTURES.

GENERAL NOTES :

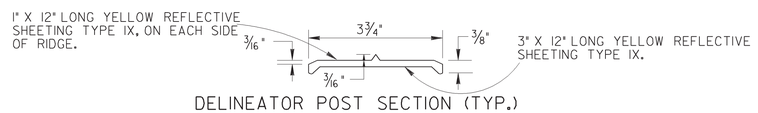
1. TOEWALLS ARE REQ'D. FOR OUTLETS OF CONC. STORM DRAINS, EXCEPT WHERE DITCH PAVING OR OTHER EROSION PROTECTION IS PROVIDED OR WHERE THE OUTLET VELOCITY IS LESS THAN 8 FT/SEC. TOEWALLS ARE NOT REQUIRED FOR SIDE DRAINS, SLOPE DRAINS OR INLETS OF STORM DRAINS THIS CRITERIA MAY BE VARIED WHERE SPECIFIED BY THE DESIGNER OR THE ENGINEER.

2. TOEWALLS WILL BE PAID FOR AS CU. YDS. OF CLASS "A" OR "B" CONCRETE. CONTRACTOR MAY ELECT TO CONSTRUCT TOE WALL WITH SAND CEMENT BAG RIPRAP OR STONE RIPRAP TO SAME MINIMUM DIMENSIONS WITH NO ADDITIONAL PAYMENT.

3. PRECAST TOEWALLS SHALL BE CL. "A" CONCRETE; CAST-IN-PLACE TOEWALLS MAY BE CL "A" OR "B" CONCRETE AND MAY BE TRENCH FORMED. WHERE PLANS ITEMIZE ONE CLASS OF CONCRETE AND CONTRACTOR ELECTS TO USE OTHER CLASS, NO ADDITIONAL PAYMENT IS MADE. NO PAYMENT IS MADE FOR STEEL IN TOEWALL.

4. CENTERLINE OF FLARED END SECTION WILL ALIGN WITH CENTERLINE OF PIPE, IF PIPE IS SKEWED, THE EMBANKMENT SLOPE WILL BE WARPED TO CONFORM WITH END SECTION.

5. FLEXIBLE DELINEATORS SHALL BE REQUIRED AT CROSS DRAIN FLARED END SECTIONS, BOTH INLET AND OUTLET. PAYMENT FOR FLARED END SECTION WILL INCLUDE DELINEATORS, SEE DETAIL AND NOTES BELOW. DELINEATORS NOT REQ'D. FOR SIDE DRAIN, SLOPE DRAIN, OR LONG PIPE.



DELINEATOR POST SECTION (TYP.)

NOTE:
DELINEATOR POST SHALL CONFORM TO SEC. 911 FOR FLEXIBLE DELINEATOR POST EXCEPT REFLECTIVE SHEETING IS NOT REQUIRED AND LENGTH IS 4'-6" FROM TOP TO BOTTOM POINT. ALTERNATES PERMITTED IF APPROVED BY D.O.T. LABORATORY.

SPECIAL NOTE :

PIPE SIZES (D) ARE "NOMINAL-MINIMUM" INSIDE DIAMETERS IN ACCORDANCE WITH GEORGIA STANDARD FOR PIPE CULVERTS. "D" DIMENSION FOR FLARED END SECTION SHALL EQUAL THE "D" DIMENSION FOR CONNECTING PIPE CULVERT.

				6-9-06	DATE
				REV. REFLECTIVE SHEETING	REVISION
				GLO	BY

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
FLARED END SECTIONS
FOR PIPES

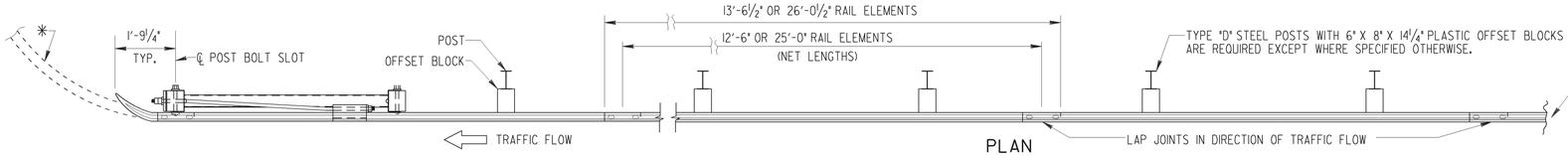
NO SCALE — REV. & REDR. SEPT., 1999

DES. ____ REV. ____ RETR. ____ CHK. ____

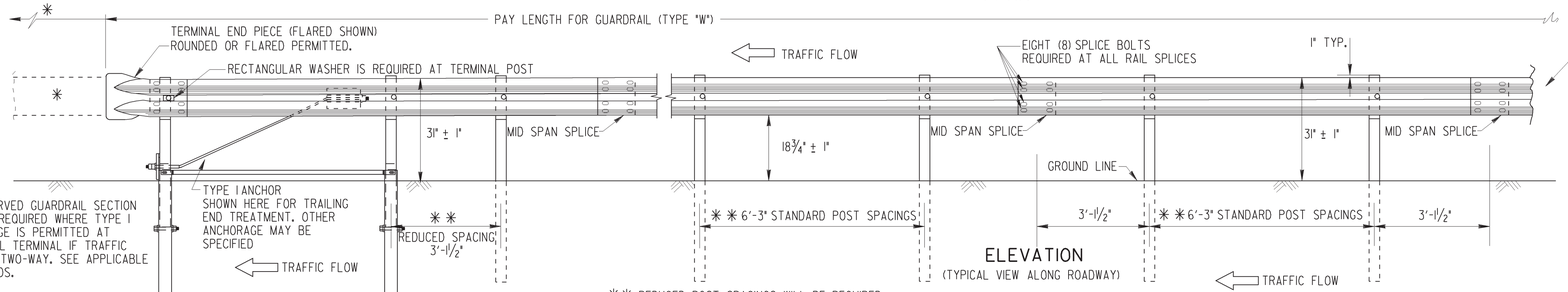
(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER
(APPROVED) CHIEF ENGINEER

NUMBER 1120

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	78	176



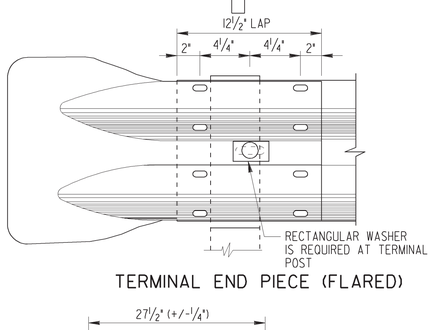
PLAN



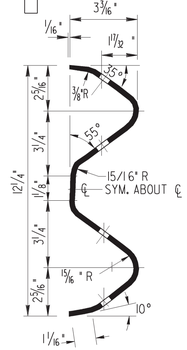
ELEVATION
(TYPICAL VIEW ALONG ROADWAY)

✱ NOTE:
A PRECURVED GUARDRAIL SECTION WILL BE REQUIRED WHERE TYPE I ANCHORAGE IS PERMITTED AT GUARDRAIL TERMINAL IF TRAFFIC FLOW IS TWO-WAY. SEE APPLICABLE STANDARDS.

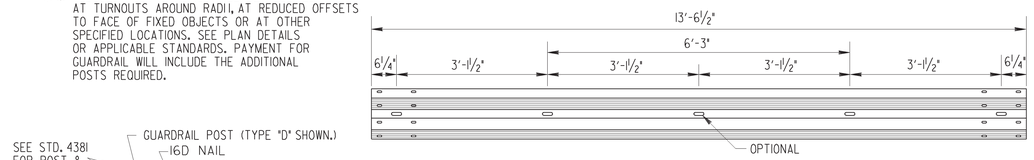
✱✱ REDUCED POST SPACINGS WILL BE REQUIRED AT TURNOUTS AROUND RADII, AT REDUCED OFFSETS TO FACE OF FIXED OBJECTS OR AT OTHER SPECIFIED LOCATIONS. SEE PLAN DETAILS OR APPLICABLE STANDARDS. PAYMENT FOR GUARDRAIL WILL INCLUDE THE ADDITIONAL POSTS REQUIRED.



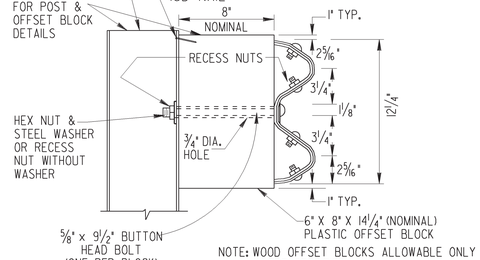
TERMINAL END PIECE (FLARED)



SECTION THROUGH RAIL ELEMENT



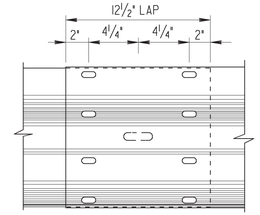
12'-6" W-BEAM SECTION



NOTE: WOOD OFFSET BLOCKS ALLOWABLE ONLY WHERE SPECIFIED

"W" BEAM OFFSET BLOCK DETAIL

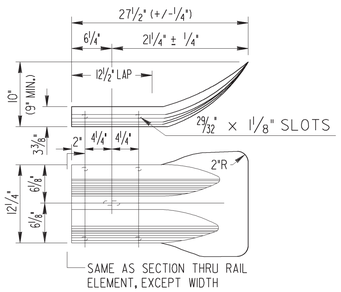
NOTE: OFFSET BLOCKS FOR "W" BEAM GUARDRAIL WILL BE PLASTIC EXCEPT WHERE SPECIFIED OTHERWISE.



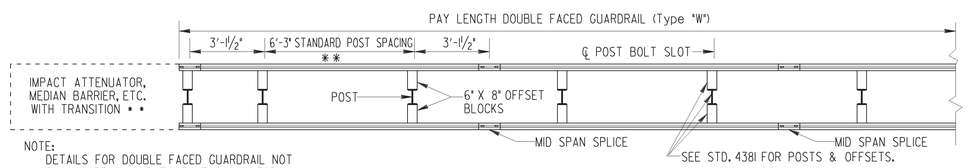
"W" BEAM SPLICE MID SPAN

NOTE:
EIGHT (8) SPLICE BOLTS REQUIRED AT ALL RAIL SPLICES

NOTE:
UNLESS SPECIFIED OTHERWISE, ALL REFERENCES TO GUARDRAIL ON STANDARDS AND/OR CONSTRUCTION DETAILS WILL MEAN "W" BEAM GUARDRAIL AS SHOWN ON THIS STANDARD.

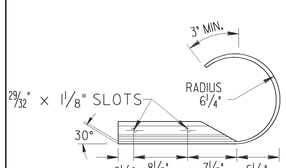


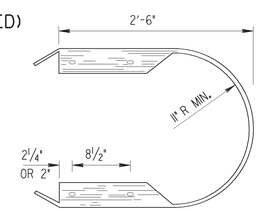
TERMINAL END PIECE (FLARED)



NOTE:
DETAILS FOR DOUBLE FACED GUARDRAIL NOT SHOWN ARE SIMILAR TO THAT SHOWN FOR SINGLE FACED RAIL.

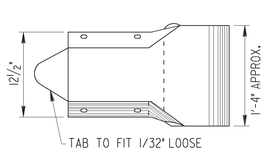
DOUBLE FACED GUARDRAIL (Type "W")



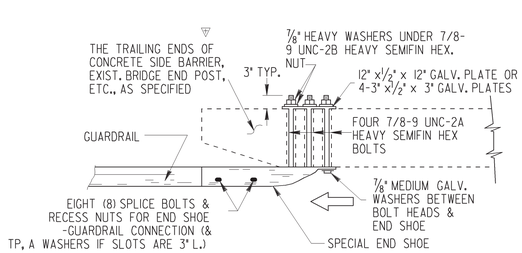


BUFFER END SECTION

(DETAILS NOT SHOWN ARE SIMILAR TO ROUNDED TERMINAL END PIECE.)



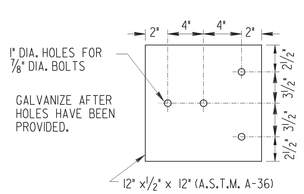
TERMINAL END PIECE (ROUNDED)



TYPICAL END SHOE CONNECTION

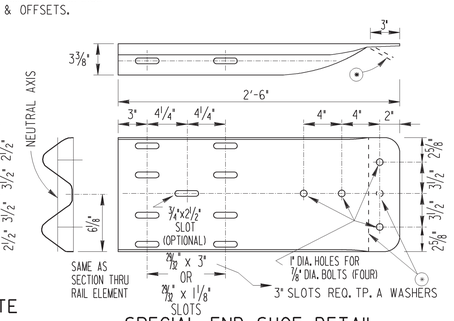
NOTE: THE "W" BEAM RAIL ELEMENT/END SHOE SPLICE SHALL BE LAPPED IN THE DIRECTION OF THE NEAREST TRAFFIC.

▽ "W" BEAM END CONNECTIONS ARE NOT PERMITTED AT APPROACHES TO CONCRETE STRUCTURES. SEE SEPARATE STANDARDS FOR REQUIRED "T" BEAM CONNECTIONS.



1/2" GALVANIZED STEEL PLATE

(TO BE USED WITH SPECIAL END SHOE CONNECTION UNDER NUTS & WASHERS ON BACK OF BRIDGE END POST OR BACK OF CONCRETE SIDE BARRIER) (FOUR 3" x ½" x 3" GALV. PLATES WITH 1" DIA. HOLE CENTERED, MAY BE USED AS AN ALTERNATE)

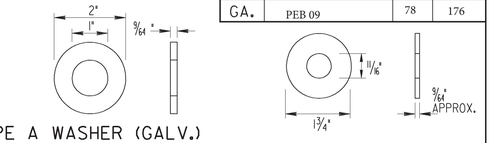


SPECIAL END SHOE DETAIL

(FOR USE IN CONNECTING GUARDRAIL TO BRIDGE END POST, CONCRETE BARRIERS, ETC.)

SPECIAL END SHOE WILL BE 10 GAUGE STEEL GALVANIZED ACCORDING TO A.A.S.H.T.O. M-111

⊙ APPLIES ONLY TO END SHOE WITH BUFFERED END ASSEMBLY OF ANCHORAGE.



TYPE A WASHER (GALV.)

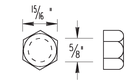
IF SLOTS IN SPECIAL END SHOE ARE 3" LONG TP. A WASHERS ARE REQ'D UNDER SPLICE BOLT HEADS & UNDER NUTS WITH 2" LONG SPLICE BOLTS. IF END SHOE SLOTS ARE 1⅛" LONG, USE NORMAL SPLICE CONNECTIONS

STEEL WASHER (GALV.)

(REQ'D. UNDER ⅝" HEX NUTS AND AS SPECIFIED)

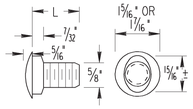
SPECIAL NOTE:
ALL GUARDRAIL SPLICES WILL BE PROPERLY SECURED WITH EIGHT SPLICE BOLT CONNECTIONS. ALL NUTS WILL BE TIGHTENED. LOOSE NUTS, OMITTED BOLTS, OR OMITTED NUTS WILL BE CAUSE FOR REJECTION.

GUARDRAIL NOT ERECTED AT A 31" TOP OF RAIL HEIGHT MAY BE CAUSE FOR REJECTION.



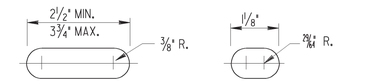
⅝" DIA. HEX NUT

L	THREAD LENGTH
1¼"	FULL LENGTH
2"	1½" MIN.
9½"	1¾" MIN.

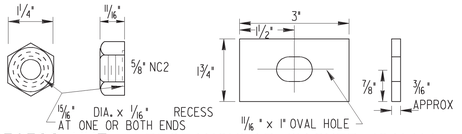


BUTTON HEAD (OR SPLICE) BOLT

(8 REQ'D PER SPLICE)



POST BOLT SLOT SPLICE BOLT SLOT



RECESS NUT RECTANGULAR WASHER (GALV.)

(FOR USE AT TERMINAL POST OR WHERE SPECIFIED)

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. NUTS, BOLTS, WASHERS, RAIL, TERMINAL SECTIONS, END SHOES, BACK-UP PLATES, END SECTIONS AND OTHER GUARDRAIL HARDWARE ARE IN ACCORDANCE WITH THE CURRENT ARTBA TECHNICAL BULLETIN NO. 268 __ UNLESS SPECIFIED OTHERWISE. DIMENSIONS FOR POSTS AND OFFSET BLOCKS WILL BE ACCORDING TO GA. STANDARD 4381.
3. FOR DETAILS OF GUARDRAIL ANCHORAGES, SEE APPLICABLE STANDARDS AND/OR CONSTRUCTION DETAILS.
4. FOR LOCATION OF GUARDRAIL SEE APPLICABLE LOCATION STANDARDS.
5. ALL STEEL HARDWARE COMPONENTS WILL BE GALVANIZED AFTER FABRICATION. GALVANIZING REPAIR COMPOUND (SEC. 645) WILL BE FIELD APPLIED TO ANY COATINGS DAMAGED.
6. WHEN GUARDRAIL IS REQUIRED ON CURVES WITH RADII LESS THAN 150', PRECURVED RAIL WILL BE REQUIRED.
7. PAYMENT FOR GUARDRAIL (Type "W") TO INCLUDE OFFSET BLOCKS, POST, BACK-UP PLATES WHERE REQUIRED, BOLTS, NUTS, WASHERS, TERMINAL SECTIONS, ADDITIONAL POST WHERE REQUIRED, LEAVE-OUTS INCLUDING GROUT WHERE REQUIRED, & REMOVAL AND REPLACEMENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS, OR CATCH BASINS WHERE NECESSARY.
8. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
9. STANDARD NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0". THESE LENGTHS SHALL BE ARRANGED TO PROVIDE AS NEARLY AS POSSIBLE THE REQUIRED LENGTH FOR EACH INSTALLATION.

BY	REVISION	DATE
FBF	REV. W-BM BLOCK TO 8" DEPTH	1-29-16

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
"W" BEAM GUARDRAIL
31 INCH GUARDRAIL HEIGHT

NO SCALE — AUGUST 2011

DES. G.L.O. (SUBMITTED)
DRW. G.L.O.
CHK. B.R.E. (APPROVED)
REVIEW B.A.S.

STATE DESIGN POLICY ENGINEER
CHIEF ENGINEER

NUMBER 4380

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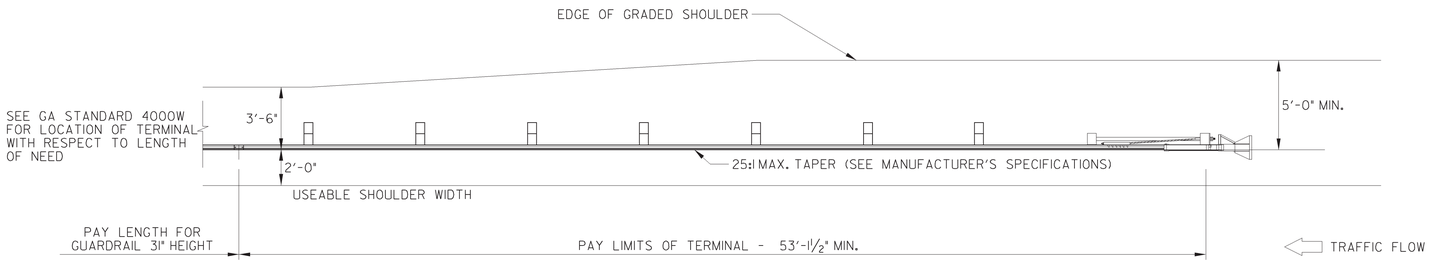
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	79	176

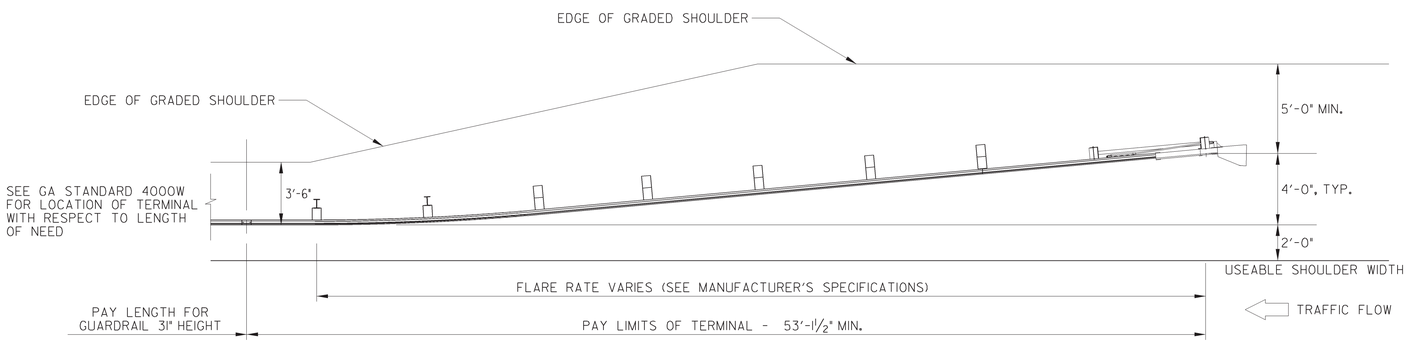


TYPE 12A - 31" GUARDRAIL TERMINAL
(TANGENT, ENERGY-ABSORBING)

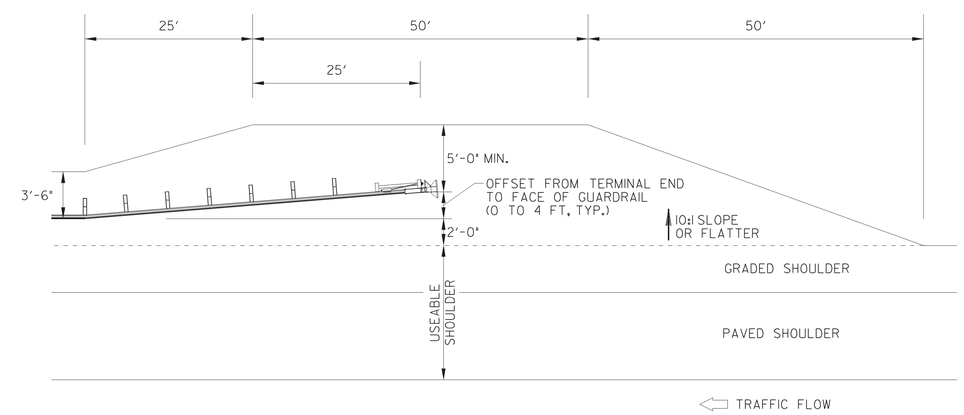
GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. SEE GDOT OPL 64 FOR APPROVED PRODUCTS.
3. THIS SHEET DEPICTS THE PAY LIMITS FOR GUARDRAIL AND TYPE 12 TERMINALS. TYPE 12 TERMINALS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
4. W-BEAM INSTALLATIONS LESS THAN 150 FEET IN ADVANCE OF ANY SHIELDED OBJECT OR TOTAL LENGTH OF W-BEAM INSTALLATION IS LESS THAN ABOUT 150 FEET, AN ENGERGY-ABSORBING TERMINAL SHOULD BE SELECTED.

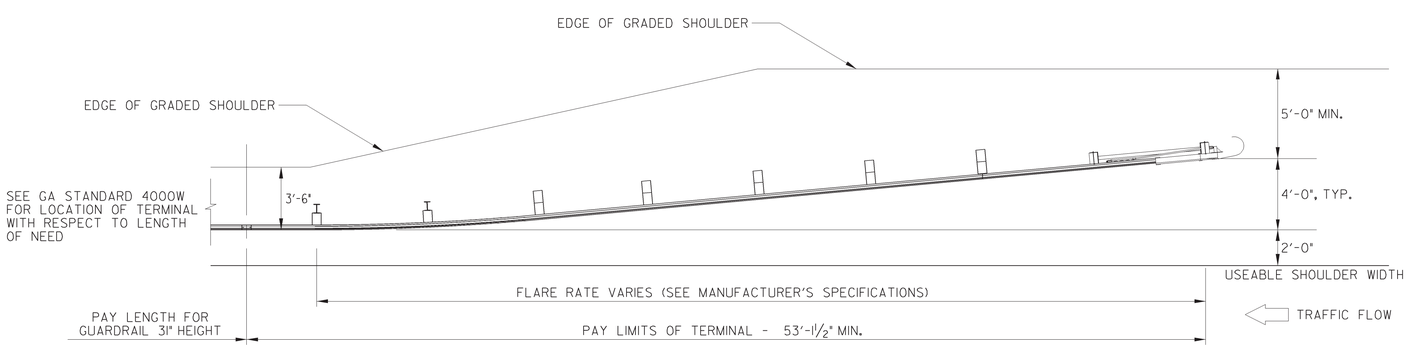
ITEM NO.	UNITS	DESCRIPTION
641-5015	EA	GUARDRAIL TERMINAL, TP 12A - 31", TANGENT, ENERGY-ABSORBING
641-5020	EA	GUARDRAIL TERMINAL, TP 12B - 31", FLARED, ENERGY-ABSORBING
641-5025	EA	GUARDRAIL TERMINAL, TP 12C - 31", FLARED, NON-ENERGY-ABSORBING



TYPE 12B - 31" GUARDRAIL TERMINAL
(FLARED, ENERGY-ABSORBING)



TERMINAL PAD GRADING DETAIL



TYPE 12C - 31" TERMINAL
(FLARED, NON-ENERGY-ABSORBING)

FBF	ADDED 12A, 12B, & 12C; ADDED GRADING DTL	1-29-16	DATE
BY	REVISION		

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
GUARDRAIL TERMINALS,
TYPE 12A, 12B, AND 12C
31 INCH GUARDRAIL HEIGHT

NO SCALE — AUGUST 2011

DES. G.L.O. (SUBMITTED) STATE DESIGN POLICY ENGINEER
DRW. G.L.O.
CHK. B.R.E. (APPROVED) Margaret B. Pickle
REVIEW B.A.S. CHIEF ENGINEER

NUMBER 4384

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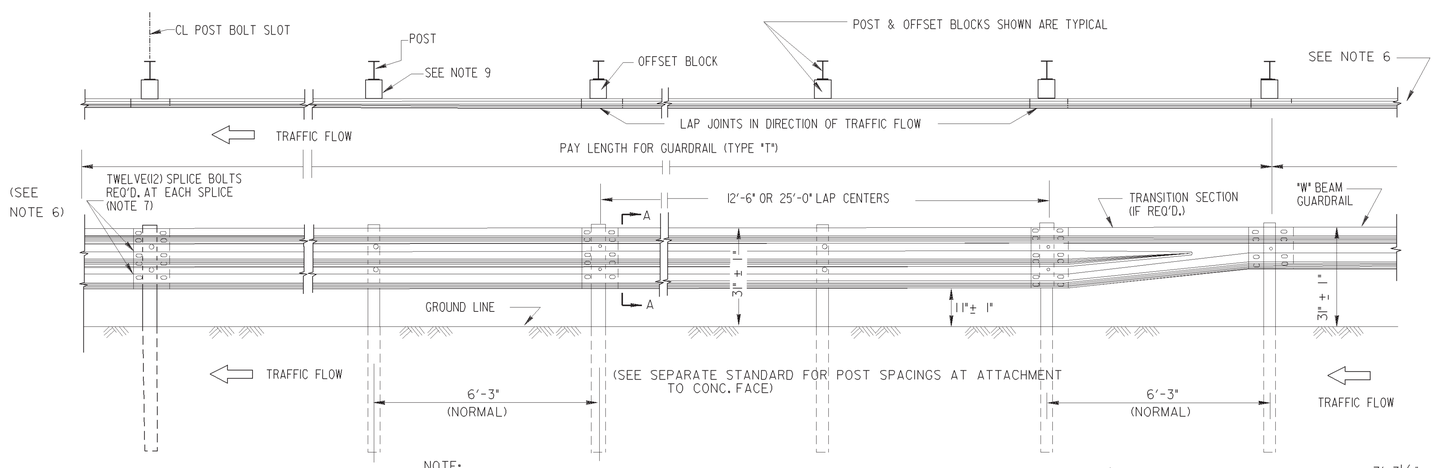
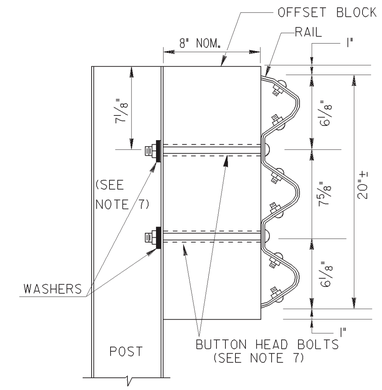
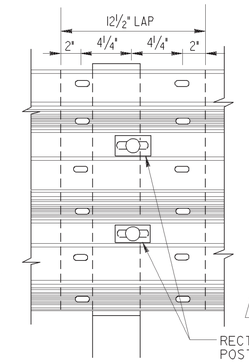
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	80	176



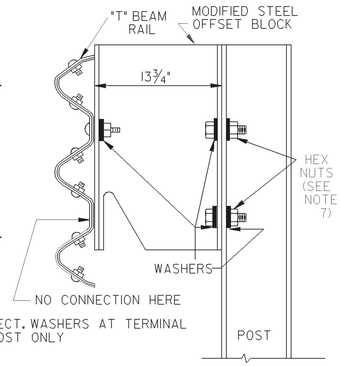
NOTE:
WHERE ATTACHED TO CONCRETE BARRIER, BRIDGE END POST OR OTHER CONCRETE FACE, PAYMENT FOR T BEAM GUARDRAIL SHALL INCLUDE ADDITIONAL POSTS, OFFSET BLOCKS AND DOUBLE THICKNESS (ONE RAIL NESTED INSIDE ANOTHER) SECTION OF T BEAM GUARDRAIL AS SPECIFIED.



SECTIONAL VIEW
(GUARDRAIL TP. T-LIN. FT.)

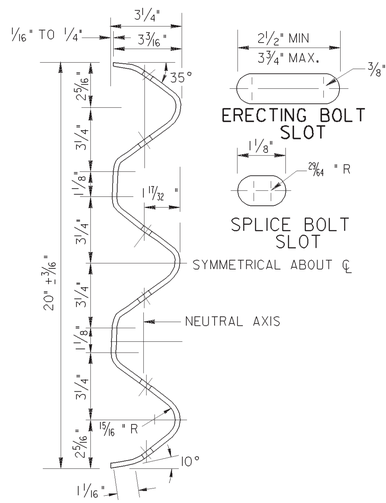


"T" BEAM SPLICE AT POST



SECTIONAL VIEW
(GUARDRAIL TP. T, MODIFIED OFFSET BLOCK)

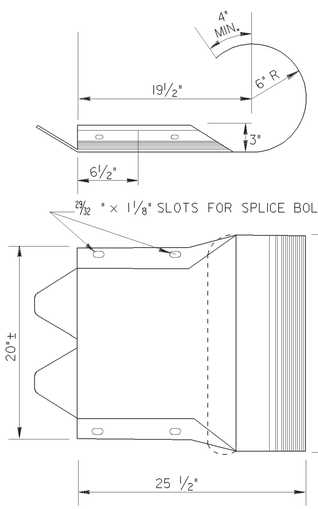
NOTE:
13 3/4" DEPTH MODIFIED STEEL OFFSETS BLOCKS MAY BE SPECIFIED WHERE JUSTIFIED FOR MORE SEVERE CONDITIONS. PAY ITEM IS --GUARDRAIL, TP T, MODIFIED OFFSET BLOCK---PER LIN. FT.



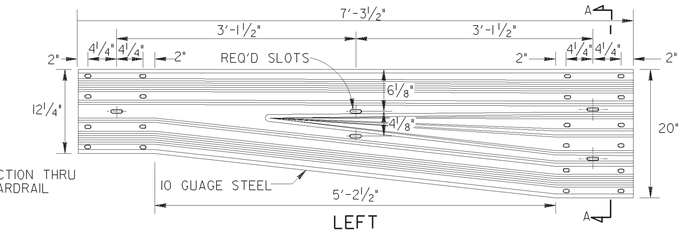
SECTION THROUGH RAIL ELEMENT (SEC. A-A)

ERECTING BOLT SLOT

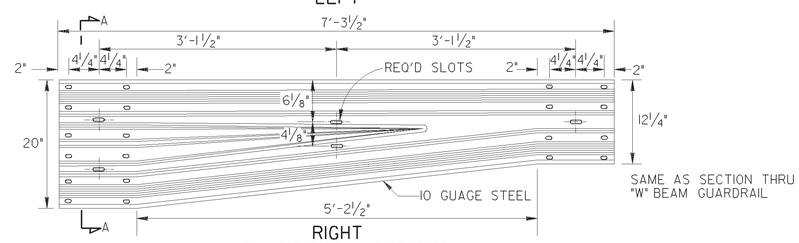
SPLICE BOLT SLOT



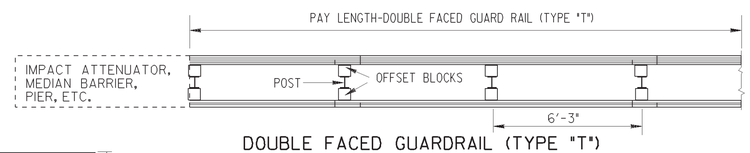
ROUNDED TERMINAL SECTION
TO BE LAPPPED ON TRAFFIC FACE OF RAIL WHERE TYPE I ANCHORAGE IS REQUIRED



LEFT



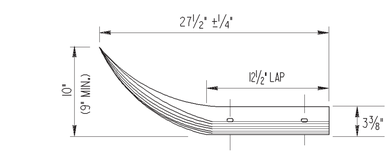
RIGHT
TRANSITION SECTION



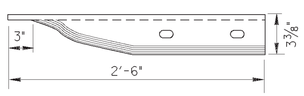
DOUBLE FACED GUARDRAIL (TYPE "T")

GENERAL NOTES:

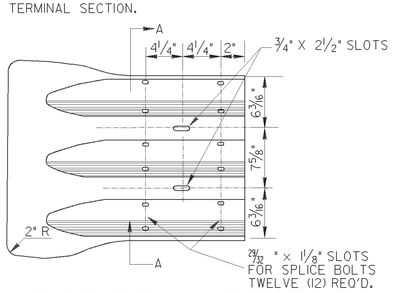
1. SPECIFICATIONS: GA. STANDARD CURRENT EDITION & SUPPLEMENTS THERETO
2. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
3. NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0".
4. RAIL ELEMENTS ON CURVES OF RADII LESS THAN 150' WILL BE PRECURVED.
5. PAYMENT FOR GUARDRAIL (TYPE "T") WILL INCLUDE ALL POSTS, BLOCKS, HARDEWARE ACCESSORIES AND WHERE REQUIRED ALL ADDITIONAL POSTS, END SHOES, TERMINAL SECTIONS, TRANSITION SECTIONS, BACK-UP PLATES AND REMOVAL AND REPLACEMENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS OR CATCH BASINS WHERE NECESSARY.
6. ALL GUARDRAIL TERMINALS SHALL REQUIRE AN APPROVED ANCHORAGE AS SPECIFIED IN IN THE PLANS OR APPROVED BY THE ENGINEER EXCEPT WHERE CONNECTED TO A BRIDGE END OR OTHER CONCRETE FACE.
7. NUTS, BOLTS AND WASHERS WHICH ARE NOT DETAILED ON THIS STANDARD, SHALL BE AS SHOWN FOR W BEAM GUARDRAIL ON STANDARD 4380.
8. SEE SEPARATE STANDARDS AS APPLICABLE FOR ANCHORAGES, POSTS, OFFSET BLOCKS, CONNECTIONS TO CONCRETE FACE, W BEAM GUARDRAIL, ETC.
9. SEE STANDARD 4381 FOR DETAILS AND REQUIREMENTS OF BACK-UP PLATES, WHERE STEEL OFFSET BLOCKS ARE ALLOWED OR SPECIFIED.
10. OFFSET BLOCKS SHALL BE PLASTIC UNLESS OTHERWISE APPROVED OR SPECIFIED.



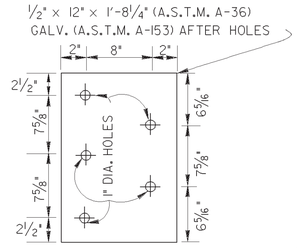
THE FLARED TERMINAL SECTION MAY BE USED AS AN ALTERNATE TO THE ROUND TERMINAL SECTION.



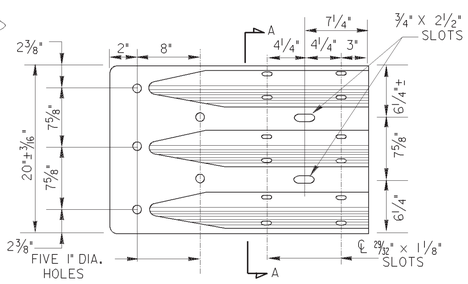
SPECIAL END SHOE WILL BE 10 GUAGE STEEL GALVANIZED ACCORDING TO A.A.S.H.T.O. M-111



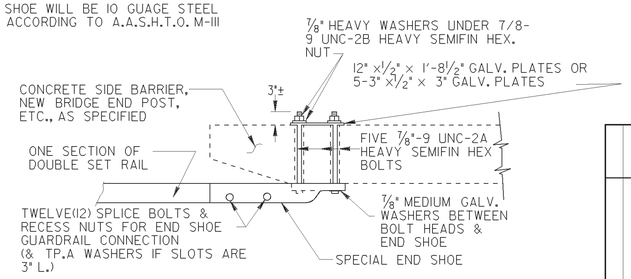
FLARED TERMINAL SECTION



1/2" GALVANIZED STEEL PLATE
(FOR USE WITH END SHOE CONN.)
ALTERNATE: FIVE 3" × 1/2" × 3" GALV. PLATES WITH 1" DIA. HOLE CENTERED, GALV. AFTER HOLES.



"T" BEAM SPECIAL END SHOE



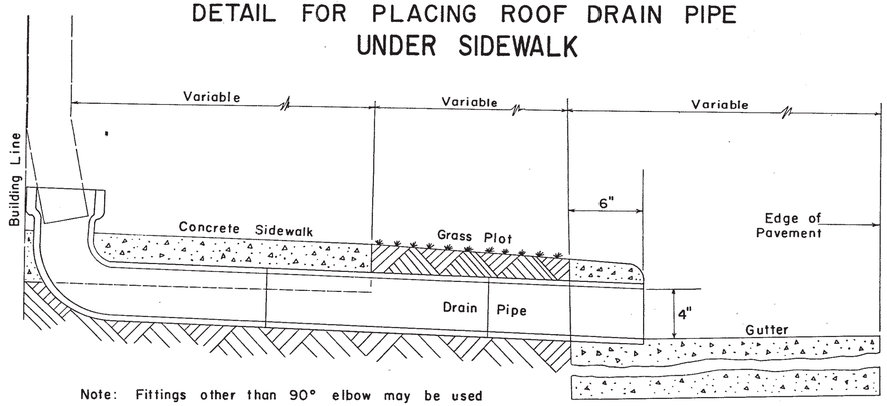
TYPICAL SPECIAL END SHOE CONNECTION
NOTE: THE "T" BEAM RAIL ELEMENT/END SHOE SPLICE SHALL BE LAPPED IN THE DIRECTION OF THE NEAREST TRAFFIC.

DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION	STANDARD "T" BEAM GUARDRAIL CONNECTION TO 31 INCH HEIGHT "W" BEAM	
	NO SCALE	AUGUST 2011
BY	DES. G.L.O. (SUBMITTED) STATE DESIGN POLICY ENGINEER DRW. G.L.O. CHK. B.R.E. (APPROVED) CHIEF ENGINEER REVIEW B.A.S.	NUMBER 4385

12/7/2011 8:05:13 AM \\GDOT-DSN1\GOPLOT\QCF\GO_K1p8000.qcf tcox C:\tpc\31inch guardrail\new 31 inch guardrail files\4385.pdf

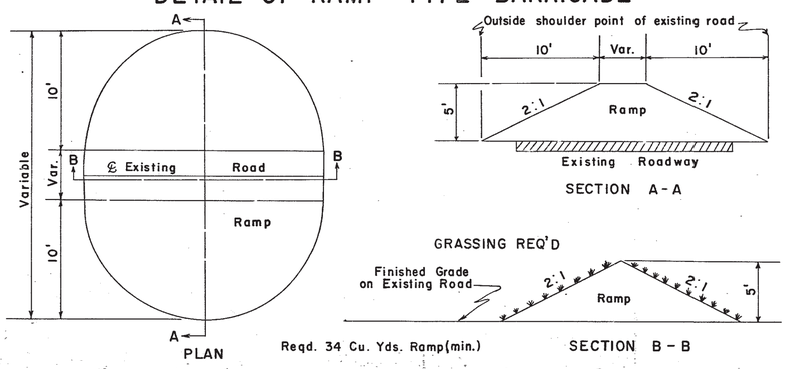
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.		80.A	

DETAIL FOR PLACING ROOF DRAIN PIPE UNDER SIDEWALK



Note: Fittings other than 90° elbow may be used to satisfy other conditions.

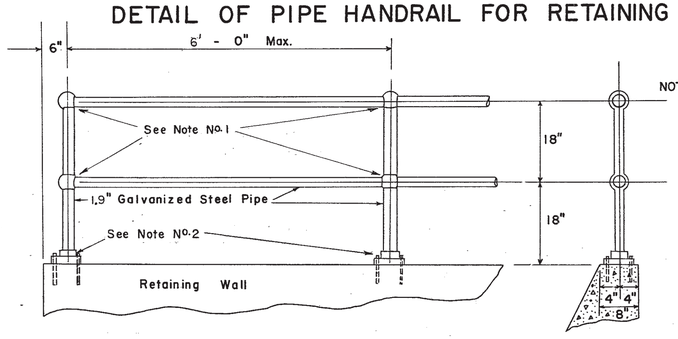
DETAIL OF RAMP TYPE BARRICADE



Reqd. 34 Cu. Yds. Ramp(min.)

NOTE: Materials and construction to be in accordance with Standard Specifications

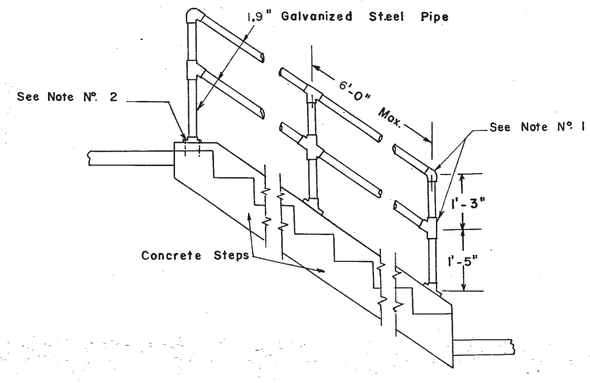
DETAIL OF PIPE HANDRAIL FOR RETAINING WALL



NOTE: If wall is long, and expansion and contraction joints are used in the wall, slip joints are to be provided for in that section of handrailing over the expansion or contraction joint. Stripping the threads in the part of the ball fittings where required to form a slip joint will be permitted.

NOTE: Pipe, pipe fittings, floor flanges and bolts shall be of an approved standard type.

DETAIL OF PIPE HANDRAIL FOR CONCRETE STEPS



NOTE: PIPE, FITTINGS, FLANGES AND BOLTS SHALL BE OF AN APPROVED STANDARD TYPE.

NOTES FOR PIPE HANDRAILING

1. JOINTS —
   a.) Standard or Special galvanized steel or galvanized iron fittings may be used at joints (as shown).
   — OR —
   b.) Joints may be welded. If welded, all exposed joints shall be finished by grinding or filling to give a neat appearance. All damage to galvanizing shall repaired in accordance with the Ga. Standard Specifications.
2. FOOTINGS —
   a.) Post may be anchored with 2½" x 6½" galvanized Floor Flanges with 4-½" x 9" galvanized bolts (as shown).
   — OR —
   b.) Post may be grouted in 6" deep, 3" diam. hole. Total length of post will be 6" greater than that in details to give same useable height as if Floor Flanges were used.
3. 1.9" (galv. steel pipe) denotes O.D. for rail sections. I.D. = 1½".

BY	REVISIONS	DATE
R.M.U.	Designated 1.9" O.D. Handrail	10-11-88
R.M.U.	Add. Conc. Patch. Detail 8	11-25-75
R.M.U.	Handrail for Conc. Steps	2-11-76
R.M.U.	Rev. Handrailing	2-10-78
R.M.U.	Ramp detail - Rem. Sprig.	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD CONSTRUCTION DETAILS

PLACING ROOF DRAIN PIPE UNDER SIDEWALK
RAMP TYPE BARRICADE
PIPE HANDRAIL FOR RETAINING WALL
PIPE HANDRAIL FOR CONCRETE STEPS

NO SCALE — REVISED: FEB., 1966

DESIGNED:
DRAWN: A.V.S.
TRACED: A.V.S.
CHECKED: R.B.S.

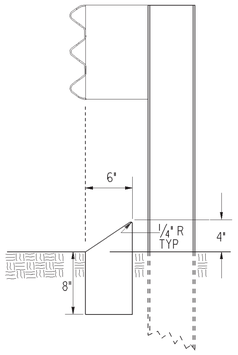
SUBMITTED: STATE ROAD DESIGN ENGINEER
APPROVED: STATE HIGHWAY ENGINEER

NUMBER 9031R

Dietzgen N. O. 135 "Imperial"

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	81	176

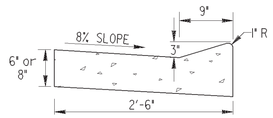
FACE OF CURB MUST ALIGN WITH BACK EDGE OF GUARDRAIL AND THE FACE OF THE OFFSET BLOCK.



TYPE 8

TYPE 8 CURB IS USED IN CONJUNCTION WITH GUARDRAIL CONNECTIONS TO CONCRETE BARRIER AS NOTED ON GA. STD. 4012C.

RAISED EDGE WITH CONCRETE GUTTER



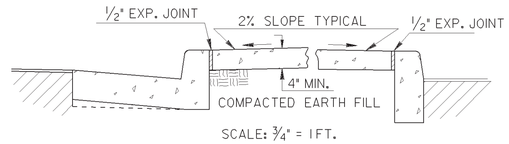
SCALE: 1" = 1FT.

RAISED EDGE TO BE CONSTRUCTED WITH SAME CONCRETE MIX AS THE GUTTER AND SHALL BE FORMED MONOLITHIC WITH GUTTER. JOINTS IN RAISED EDGE SHALL MATCH THOSE IN THE GUTTER.

NOTE:
IF CONCRETE MEDIAN INTERCEPTS PEDESTRIAN CROSSWALKS, WHEELCHAIR RAMPS (CONSTRUCTION DETAIL A-3 AND A-4) WILL BE REQUIRED.

CONCRETE MEDIAN (Between Curbs)

NOTE: CURB TYPES SHOWN ARE TYPICAL. OTHER TYPES MAY BE SPECIFIED.



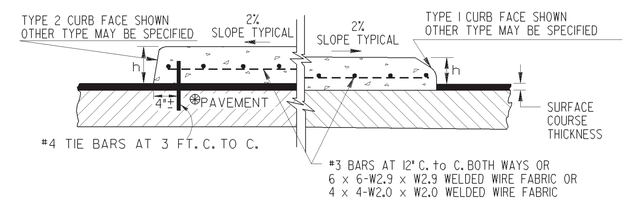
SCALE: 3/4" = 1FT.

NOTE: WIDTH OF CONCRETE MEDIAN WILL BE AS SHOWN IN PLANS

CONCRETE MEDIANS (Integral)

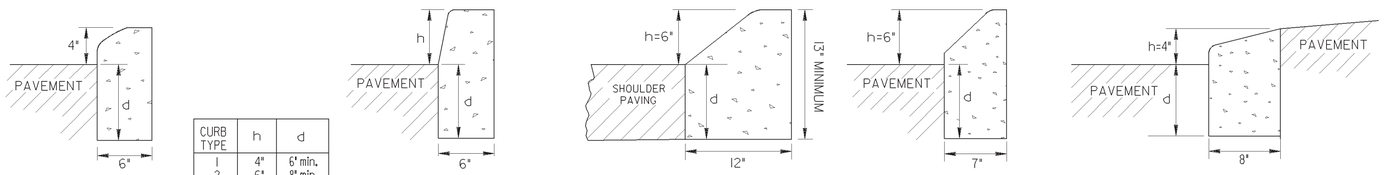
SCALE: 1"=1FT.

-WITH TIE BARS- -WITHOUT TIE BARS-



NOTE:
IF FINAL SURFACE COURSE IN PRESENT OR MUST BE INSTALLED BEFORE THE CONCRETE MEDIAN CAN BE INSTALLED, THEN DOWELED IN CONCRETE MEDIAN IS REQUIRED.

CONCRETE HEADER CURBS



TYPE 1 TYPE 2, 3 OR 4 TYPE 6 TYPE 7 TYPE 9

TRUCK APRON IN ROUNDABOUTS

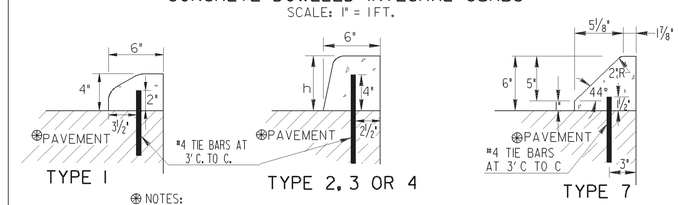
CURB TYPE	h	d
1	4"	6" min.
2	6"	8" min.
3	8"	10" min.
4	10"	12" min.
6	6"	7" min.
7	6"	8" min.
9	4"	8" min.

THE DIMENSION d MAY BE INCREASED AT CONTRACTOR'S OPTION SO BOTTOM OF HEADER CURB WILL ALIGN WITH BOTTOM OF PAVEMENT TYPICAL SECTION.

SCALE: 1 1/2" = 1FT.

CONCRETE DOWELED INTEGRAL CURBS

SCALE: 1" = 1FT.



TYPE 1 TYPE 2, 3 OR 4 TYPE 7

NOTES:
1. CONCRETE CURB CAN BE INSTALLED AFTER INTIAL SET AS LONG AS TIE BARS ARE DRILLED INTO UNDERLAYING CONCRETE PAVEMENT.
2. CONCRETE CURB CAN BE INSTALLED BEFORE INITIAL SET WITH DOWELS THAT ARE DRIVEN INTO UNDERLYING CONCRETE PAVMENT.
3. JOINTS IN CURB AND CONCRETE MEDIAN WILL MATCH THOSE IN THE CONCRETE PAVEMENT.
4. ALL TYPES OF CONCRETE CURB CAN BE PLACED ON ASPHALT PAVEMENTS WHERE TIE BARS MAY BE EITHER DRIVEN OR DRILLED INTO THE UNDERLYING PAVEMENT. CONTRACTION JOINTS SHALL BE CONSTRUCTED IN CURB OR CONCRETE MEDAIN AT 20 FT. SPACING.

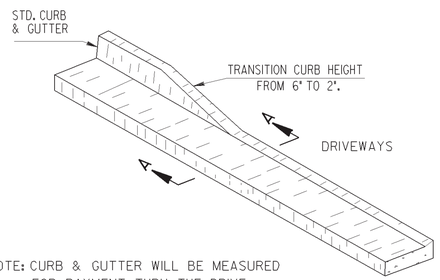
MINIMUM TIE BAR LENGTHS (FOR CONC. DOWELED CURBS OR CONC. MEDIAN)		
CURB TYPE	P.C. CONC. PAV.	ASPHALT PAV.
1	6"	8"
2, 3 or 4	8"	12"
7	6"	8"

NOTE:
TIE BARS FOR DOWELED CURBS MAY BE UNCOATED PLAIN OR DEFORMED BILLET-STEEL BARS (GRADE 40) AS USED FOR CONCRETE REINFORCEMENT. (AASHTO M-31)

DETAILS OF RECESSED CURB FOR DRIVEWAYS

NO SCALE

PICTORIAL VIEW

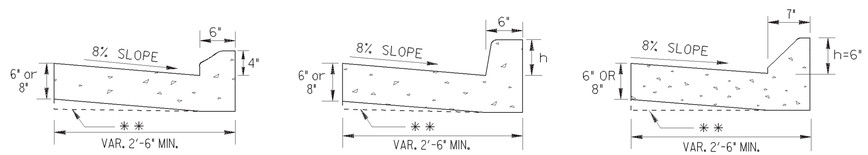


NOTE: CURB & GUTTER WILL BE MEASURED FOR PAYMENT THRU THE DRIVE

SECTIONAL VIEW
SECTION A-A

(SEE SEPARATE CONSTRUCTION DETAILS FOR DRIVEWAYS)

CONCRETE CURB & GUTTER

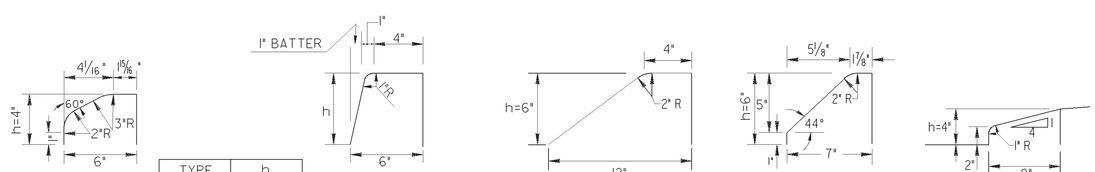


SCALE: 1"= 1FT.

TYPE 1 TYPE 2, 3 OR 4 TYPE 7

** AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE, BUT THE GUTTER THICKNESS MUST NOT BE LESS THAN THE SPECIFIED 6" OR 8" AT ANY POINT.

CURB FACE DESIGN

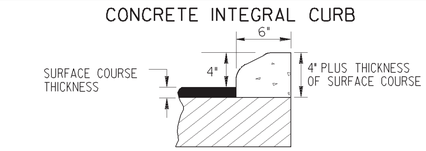


TYPE 1 TYPE 2, 3 OR 4 TYPE 6 TYPE 7 TYPE 9

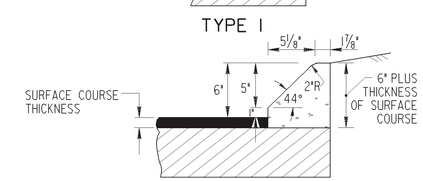
TYPE	h
1	4"
2	6"
3	8"
4	10"
6	6"
7	6"
9	4"

SCALE: 2"=1FT.

CONCRETE INTEGRAL CURB



TYPE 1



TYPE 7

SCALE: 1 1/2" = 1FT.

DATE	REVISION	BY
11-15-11	REV. TYPE 9 CURB DETAIL & REV. OVERALL LAYOUT	TC
1-27-11	REV. MEDIAN NOTE AND ADDED TYPE 9 CURB DETAIL	GLO
3-03	ADDED TYPE 9 DETAIL	

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE CURB & GUTTER
CONCRETE CURBS, CONCRETE MEDIANS

SCALE: AS SHOWN REVISED AND REDRAWN OCT. 2011

DES. ____
DRW. ____
TRA. ____
CHK. ____

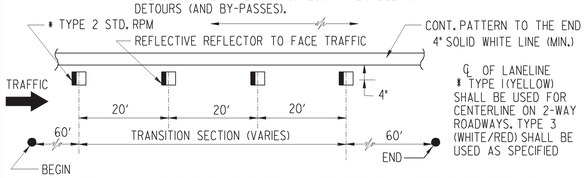
(SUBMITTED) STATE DESIGN POLICY ENGINEER
(APPROVED) Donald M Rios CHIEF ENGINEER

NUMBER 9032B

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	82	176

TEMPORARY RAISED PAVEMENT MARKER DETAIL

INSTALLATION PATTERN FOR LATERAL MAINLINE SHIFTS AND CROSSOVER OPERATIONS. ALSO APPLICABLE FOR DETOURS (AND BY-PASSES).



℄ OF LANELINE
TYPE I (YELLOW)
SHALL BE USED FOR CENTERLINE ON 2-WAY ROADWAYS. TYPE 3 (WHITE/RED) SHALL BE USED AS SPECIFIED

PAVEMENT MARKER INSTALLATION SHALL BEGIN 60 FEET IN ADVANCE OF BEGINNING OF THE SHIFT OR TRANSITION ALIGNMENT, CONTINUE THRU THE TRANSITION AREA, & EXTEND 60 FEET BEYOND THE INTERSECTION WITH THE TEMPORARY ALIGNMENT. TEMPORARY RAISED PAVEMENT MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND THE GA. STD. SPECIFICATIONS.

STANDARD LEGEND

- STRIPED DRUM
- TYPE III BARRICADES
- SPECIAL BARRICADE WITH BI-DIRECTIONAL, TYPE "C" STEADY BURNING LIGHT OR HIGHWAY SIGN AS SPECIFIED (SEE DETAIL)
- SEQUENTIAL OR FLASHING ARROW
- PORTABLE CHANGEABLE MESSAGE SIGN
- PERMANENT TYPE POST MOUNTED SIGN
- TEMPORARY POST MOUNTED SIGN
- PORTABLE MOUNTED SIGN - FLAGS NOT REQUIRED
- WORK AREA
- TRAFFIC CONE - 28" MIN. - (DAYTIME USE ONLY)
- FLAGGER WITH STOP-SLOW PADDLE
- TRAFFIC IMPACT ATTENUATOR (CRASH CUSHION)
- TYPE I CLEAR (WHITE) DELINEATOR - SINGLE FACE
- TYPE I YELLOW DELINEATOR - SINGLE FACE
- TYPE I CLEAR (WHITE) DELINEATOR DOUBLE FACE
- TYPE I YELLOW DELINEATOR DOUBLE FACE

GENERAL NOTES :

1. ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS; THE MUTCD; THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150)
2. ALL TRAFFIC CONTROL DEVICES SHALL BE AS SHOWN, OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DEVICES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
3. ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF 1FOOT ABOVE THE LEVEL OF PAVEMENT EDGE FOR DIRECTIONAL TRAFFIC OF TWO (2) LANES OR LESS AND A MINIMUM OF 7 FEET FOR DIRECTIONAL OF THREE (3) OR MORE LANES. ALL PORTABLE SIGNS AND SIGN MOUNTING DEVICES UTILIZED IN THE WORK SHALL BE NCHRP 350 COMPLIANT. PORTABLE SIGNS MAY BE USED WHEN THE DURATION OF THE WORK IS LESS THAN 3 DAYS.
4. WHEN THE CONSTRUCTION AREA HAS ENTRANCE/EXIT RAMPS OR INTERSECTIONS, WORK WILL BE PERFORMED IN SUCH A MANNER TO PERMIT TRAFFIC TO OPERATE WITH THE LEAST AMOUNT OF INCONVENIENCE AS POSSIBLE. ADDITIONAL CHANNELIZATION AND SIGNING SHALL BE INSTALLED, AS REQUIRED, TO ALLOW TRAFFIC TO REMAIN AS OPERATIONAL AS POSSIBLE. WHEN ENTRANCE RAMPS/INTERSECTIONS ARE INOPERABLE, FLAGGERS WILL BE UTILIZED TO CONTROL AND PROHIBIT MOVEMENT INTO THE PROJECT AT THAT POINT UNTIL CONSTRUCTION HAS CLEARED THE RESTRICTION SUFFICIENT TO RETURN TO OPERATIONAL STATUS.
5. FOR NIGHT TIME OPERATIONS, DRUMS SHALL HAVE, FOR THE LENGTH OF THE TAPER ONLY, A SIX (6") INCH ORANGE REFLECTIZED TOP STRIPE ON EACH DRUM IN THE TAPER AS REQUIRED IN SECTION 150. SPACING OF DEVICES SHALL BE AS SHOWN. DURING DAYLIGHT HOURS, CONES (28" MIN.) MAY BE USED IN ADVANCE OF AND THROUGHOUT WORK AREA.
6. SIGN LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED TO MEET FIELD CONDITIONS BUT MUST BE WITHIN THE LIMITATIONS SET FORTH IN THE MUTCD.
7. A PORTABLE SELF-SUSTAINED SEQUENTIAL OR FLASHING ARROW SIGN SHALL BE USED AT THE BEGINNING OF EACH LANE CLOSURE ON MULTI-LANE HIGHWAYS. ARROW PANELS SHALL NOT BE USED ON TWO-LANE TWO-WAY HIGHWAYS EXCEPT IN CAUTION MODE.
8. WHEN NOT IN USE, PORTABLE SIGNS SHALL BE REMOVED FROM THE TRAVELWAY SO THAT THE MESSAGE IS NOT VISIBLE TO THE MOTORIST. INTERIM SIGNS THAT ARE PERMANENTLY MOUNTED SHALL BE COVERED WHEN NOT APPLICABLE. SEE SECTION 150.
9. PROJECT SIGNS W20-1, G20-1 & G20-2 FOR THIS PROJECT SHALL BE COORDINATED WITH ADJACENT CONSTRUCTION PROJECTS. ONLY ONE SET OF SIGNS IS REQUIRED IN EACH DIRECTION FOR THE TOTAL LENGTH OF ALL PROJECTS- AT THE BEGINNING OF THE FIRST PROJECT AND AT THE ENDING OF THE LAST PROJECT. ADVANCE CONSTRUCTION SIGNS ARE NOT REQUIRED ON INTERMEDIATE PROJECTS, UNLESS CONSTRUCTION ON THE ADJACENT PROJECTS IS COMPLETED BEFOREHAND, THEN PROJECT CONSTRUCTION SIGNS WILL BE ADDED AS NECESSARY.
10. ALL THE COST OF THE MATERIALS, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL SECTION 150, LUMP SUM. WHEN SHOWN AS A PAYMENT ITEM IN THE PROPOSAL. OTHERWISE, ALL THE COST WILL BE INCLUDED IN THE OVER-ALL BID SUBMITTED, EXCEPT ON CERTAIN PROJECTS SOME ITEMS MAY BE PAID FOR SEPARATELY BY THE UNIT WHEN SPECIFIED ON THE PLANS AND IN THE PROPOSAL.
11. FOR FREEWAY CONSTRUCTION THE CONTRACTOR SHALL ARRANGE HIS WORK SO THAT THERE IS AN EXIT GORE SIGN AND AN EXIT DIRECTION SIGN IN PLACE FOR ALL EXIT RAMPS AT ALL TIMES.
12. ALL CROSSROADS, SIDEROADS, RAMPS OR OTHER ENTRANCES TO MAINLINE CONSTRUCTION SHALL REQUIRE W20-1 SIGNS LOCATED AS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
13. MARKINGS AND/OR SIGNS IN CONFLICT WITH INTERIM TRAFFIC CONTROL SHALL BE REMOVED, RELOCATED OR COVERED; APPLICABLE EXISTING AND INTERIM MARKINGS AND/OR SIGNING SHALL BE MAINTAINED PER SECTION 150.
14. ANY CHANNELIZING DEVICES (DRUMS OR BARRICADES) IN CONFLICT WITH CONCRETE BARRIERS SHALL BE OMITTED.
15. CONTRACTOR SHALL PROVIDE THE NECESSARY TRAFFIC CONTROL DURING THE TIE-IN OPERATION.
16. THE TRAFFIC CONTROL DEVICES SHOWN FOR ANY STAGE CONSTRUCTION SHALL REMAIN IN PLACE AND BE UTILIZED SO LONG AS NECESSARY FOR THE FOLLOWING STAGES AND SHALL BE REMOVED IMMEDIATELY WHEN NO LONGER REQUIRED. THE DEVICES MAY OR MAY NOT BE SHOWN ON THE PLANS FOR THESE FOLLOWING STAGES, REFER TO THE PLAN SHEET FOR THE INITIAL STAGE FOR THESE TRAFFIC CONTROLS.
17. EXISTING GUIDE SIGNS SHALL REMAIN IN PLACE SO LONG AS THEY DO NOT CONFLICT WITH THE CONSTRUCTION OF THIS PROJECT. WHEN IN CONFLICT, THEY SHALL BE RELOCATED ON TEMPORARY POSTS AT THE LOCATION AS DIRECTED BY THE ENGINEER. ANY DISTANCE SHOWN ON THE SIGN SHALL BE ADJUSTED ACCORDINGLY. IF THE SIGNS CANNOT BE RELOCATED, THEN THE SIGN SHALL BE REMOVED AND STORED AT A PLACE DESIGNATED BY THE ENGINEER, IF NEITHER OF THE ABOVE CAN BE DONE, THEN THE CONTRACTOR SHALL PROVIDE INTERIM GUIDE SIGNS AS COVERED IN SECTION 150.
18. (a) ON PROJECTS WITH LOW OR SOFT SHOULDERS, THE CONTRACTOR SHALL ERECT IMMEDIATELY AHEAD OF CONSTRUCTION OPERATIONS "LOW/SOFT SHOULDER" WARNING SIGNS AT THE PROJECT TERMINII, AT INTERVALS NOT TO EXCEED 1 MILE AND IMMEDIATELY PAST EACH CROSSROAD.

    (b) WHERE THE CONTRACTOR IS NOT RESPONSIBLE FOR SHOULDER CONSTRUCTION, THE DEPARTMENT WILL FURNISH THESE SIGNS FOR THE CONTRACTOR TO PICK UP, TRANSPORT, AND ERECT. THE DEPARTMENT WILL LATER REMOVE AND RETAIN THE SIGNS.

BY	REVISION	DATE
GLO	REVISED GENERAL NOTES AND LEGEND. DELETED TWO DETAILS.	3-30-06
	SPEC. BAR. SH. SPEC.	4-24-01

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TRAFFIC CONTROL
GENERAL NOTES, STANDARD LEGEND, MISCELLANEOUS DETAILS

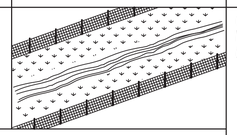
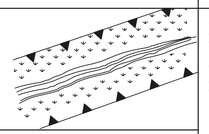
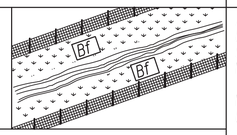
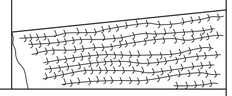
NO SCALE — AUG., 1999

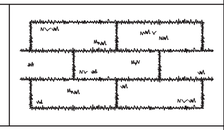
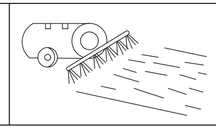
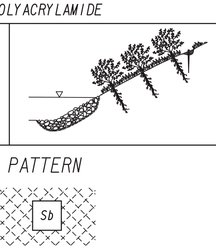
DES. ____ DRW. ____ TRA. ____ CHK. ____

(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGINEER

(APPROVED) CHIEF ENGINEER

NUMBER 9100

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
	ORANGE BARRIER FENCE LINE CODE ORANGE BARRIER FENCE		ORANGE BARRIER FENCE DELINEATES ENVIRONMENTALLY SENSITIVE AREAS WHERE THE CONTRACTOR SHALL NOT CLEAR, GRUB, OR PLACE CONSTRUCTION MATERIALS OR EQUIPMENT WITHIN THIS AREA.
ESA	ENVIRONMENTALLY SENSITIVE AREA LINE CODE ESA-25'(OR 50')STREAM BUFFER, ETC.		AN ENVIRONMENTALLY SENSITIVE AREA (ESA) CONTAINS RESOURCES THAT ARE ENVIRONMENTALLY, CULTURALLY, OR HISTORICALLY SENSITIVE. ESAs INCLUDE, BUT ARE NOT LIMITED TO: STATE WATER BUFFERS, HISTORIC SITES, ARCHAEOLOGICAL SITES, AND PROTECTED ANIMAL AND PLANT SPECIES HABITATS. IF WORK IS AUTHORIZED IN THIS AREA, THE WORK MUST BE PERFORMED IN ACCORDANCE WITH SECTION 107 AND ANY OTHER APPLICABLE SPECIAL PROVISIONS AND APPLICABLE PLAN NOTES.
Bf	BUFFER ZONE SYMBOL Bf		A STRIP OF UNDISTURBED ORIGINAL VEGETATION, ENHANCED OR RESTORED EXISTING VEGETATION, OR THE RE-ESTABLISHMENT OF VEGETATION SURROUNDING AN AREA OF DISTURBANCE OR BORDERING STREAMS, PONDS, WETLANDS, LAKES, AND COASTAL WATERS. WHEN NECESSARY, BUFFER ZONES ARE TO BE PROTECTED BY ORANGE BARRIER FENCE.
Ds1	MULCH SECTION 163 SYMBOL Ds1		THIS IS AN APPLICATION OF STRAW MULCH USED TO REDUCE SOIL EROSION AND STABILIZE THE SOIL. IT IS USED TO CONTROL EROSION IN AREAS WHERE PERMANENT VEGETATION IS OUT OF SEASON OR TO TEMPORARILY STABILIZE AREAS PRIOR TO FINAL GRADING. MULCHING REQUIREMENTS ARE ADDRESSED BY STANDARD SPECIFICATIONS AND/OR THE PROJECT ENGINEER. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
Ds2	TEMPORARY GRASSING SECTION 163,700 SYMBOL Ds2		THE SOWING OF A QUICK GROWING SPECIES OF GRASS SUITABLE TO THE AREA AND SEASON. IT IS TYPICALLY USED TO CONTROL EROSION IN AREAS LONGER THAN MULCHING IS EXPECTED TO LAST. TEMPORARY GRASSING SHOULD BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATIONS. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ds3	PERMANENT GRASSING SECTION 700 SYMBOL Ds3		THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON. PERMANENT VEGETATION SHALL BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATION. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
Ds4	SODDING CONSTRUCTION DETAIL D-54 SECTION 700,890 PATTERN Ds4		THE INSTALLATION OF A SPECIES OF GRASS SODDING SUITABLE TO THE AREA AND SEASON TO PROVIDE IMMEDIATE PERMANENT VEGETATION. SODDING MAY BE SHOWN FOR HIGHLY SENSITIVE AREAS, TO IMPROVE AESTHETICS, OR FOR SPECIAL PLANTING REQUIREMENTS ON THE BASIS OF ENVIRONMENTAL COMMITMENTS OR LANDSCAPING REQUIREMENTS. THE BMP PATTERN FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
Fl-Co	FLOCCULANTS COAGULANTS SECTION 163,700, 895 SYMBOL Fl-Co POLYACRYLAMIDE		FLOCCULANTS AND COAGULANTS ARE USED TO SETTLE SUSPENDED SEDIMENT, HEAVY METALS, AND HYDROCARBONS (TSS) IN SLOW MOVING RUNOFF FROM CONSTRUCTION SITES FOR WATER CLARIFICATION. ANIONIC POLYACRYLAMIDES (PAM) MAY BE USED IN CONJUNCTION WITH BMPs WITHIN CHANNELS UPSTREAM OF A POST-CONSTRUCTION POND, TEMPORARY SEDIMENT BASIN, OR TEMPORARY SEDIMENT TRAP. FLOCCULANTS SHALL NOT BE USED DOWNSTREAM OF AFOREMENTIONED BMPs! FLOCCULANTS/COAGULANTS ARE TO BE SHOWN ON PLANS WITH APPLICABLE BMP IF NEEDED. PAYMENT FOR PAM AS A FLOCCULANT WILL BE INCLUDED IN THE PRICE FOR THE INSTALLATION AND/OR MAINTENANCE OF THE BMP IT IS USED IN CONJUNCTION WITH. NO SEPARATE PAYMENT WILL BE MADE.
Sb	STREAMBANK STABILIZATION SECTION 702 PATTERN Sb		STREAMBANK STABILIZATION IS THE USE OF READILY AVAILABLE NATIVE PLANT MATERIALS TO MAINTAIN AND ENHANCE STREAMBANKS, OR TO PREVENT, OR RESTORE AND REPAIR SMALL STREAMBANK EROSION PROBLEMS. STREAMBANK STABILIZATION AREAS SHOULD BE SHOWN ON THE PLANS WHEN APPLICABLE TO THE PROJECT. REFER TO THE PROJECT'S STREAM AND STREAM BUFFER MITIGATION PLANS FOR PLANT SPECIES, LOCATIONS, AND OTHER PLANTING DETAILS.

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

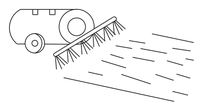
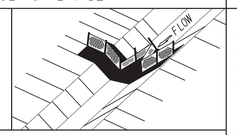
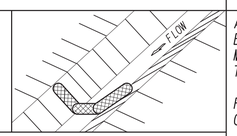
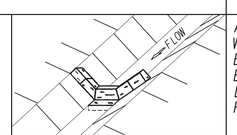
NO SCALE

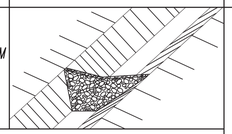
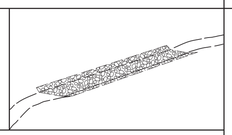
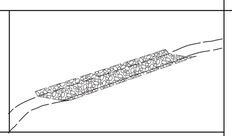
REVISION DATES
3/2/2017

EROSION CONTROL LEGEND
UNIFORM CODE SHEET
SHEET 1 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No. 52-0001

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ss	SLOPE STABILIZATION CONSTRUCTION DETAIL D-35 SECTION 716 PATTERN		SLOPE STABILIZATION (EROSION CONTROL MATTING) IS A PROTECTIVE COVERING USED TO PREVENT EROSION AND ESTABLISH TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, SHORE LINES, OR CHANNELS. SLOPE STABILIZATION MAY BE A ROLLED EROSION CONTROL PRODUCT (RECP) OR A HYDRAULIC EROSION CONTROL PRODUCT (HECP). SLOPE STABILIZATION SHALL BE USED ON ALL CUT OR FILL SLOPES OF 2.5:1 OR STEEPER AND WITHIN 50 FEET OF ALL CROSS DRAINS AND CULVERTS. NOTE: ONLY COCONUT FIBER BLANKET OR WOOD FIBER BLANKET SHALL BE USED AS SLOPE STABILIZATION WITHIN BUFFERED AREAS.
Tac	TACKIFIERS SECTION 163, 700, 895 SYMBOL Tac POLYACRYLAMIDE		TACKIFIERS HYDRATE IN WATER AND READILY BLEND WITH OTHER SLURRY MATERIALS AND ARE USED TO TIE-DOWN FOR SOIL, COMPOST, SEED, STRAW, HAY OR MULCH. TACKIFIERS REQUIREMENTS, SUCH AS ANIONIC POLYACRYLAMIDES (PAM) ARE ADDRESSED BY STANDARD SPECIFICATIONS AND ARE NOT TYPICALLY SHOWN ON THE PLANS. PAM IS TYPICALLY USED BY THE CONTRACTOR FOR TEMPORARY OR PERMANENT GRASSING. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR CRITERIA.
Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL D-24D SECTION 171 SYMBOL Cd-F		A CHECK DAM COMPOSED OF SYNTHETIC FIBER FABRIC, WIRE REINFORCED, POST, OVERFLOW WEIR, AND TURF REINFORCEMENT MATTING (TRM) SPLASHPAD PLACED IN DITCHES IN A SPECIAL CONFIGURATION WHICH CONTROLS ENERGY DISSIPATION AND FILTRATION OF STORM WATER. SEE CONSTRUCTION DETAIL D-24D FOR ADDITIONAL INFORMATION AND SPACING REQUIREMENTS. THIS ITEM IS SUITABLE FOR USE IN ROADSIDE DITCHES THAT ARE PART OF INFRASTRUCTURE CONSTRUCTION PROJECTS AND WITHIN THE CLEAR ZONE. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Cd-Fs	COMPOST FILTER SOCK CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163 SYMBOL Cd-Fs		A COMPOST FILTER SOCK CHECK DAM IS COMPOSED OF A PHOTODEGRADABLE OR BIODEGRADABLE KNITTED MESH MATERIAL CONTAINING A WEED FREE FILLER MATERIAL DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER. THEY SHALL BE PROPERLY STAKED FOR DITCH APPLICATIONS. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR MATERIAL SPECIFICATIONS. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Cd-Hb	BALED STRAW CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163 SYMBOL Cd-Hb		A BALE STRAW CHECK DAM IS COMPOSED OF BALES PREFERABLY BOUND WITH WIRE OR NYLON INSTEAD OF TWINE. BALES SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING ADJACENT BALES. THE DOWNSTREAM ROW OF BALES SHALL BE PLACED IN A TRENCH TO ALLOW THE TOP OF THE BALE'S LONG, WIDE SIDE TO BE LEVEL WITH THE GROUND AS A NON-ERODIBLE SPLASH PAD. PROPER STAKING IS ALSO REQUIRED FOR DITCH APPLICATIONS. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Cd-S	STONE CHECK DAM OR SANDBAG CHECK DAM CONSTRUCTION DETAIL D-56 SECTION 163, 603 SYMBOL Cd-S		STONE CHECK DAMS ARE CONSTRUCTED OF TYPE-3 RIP-RAP WITH GEOTEXTILE UNDERLINER. STONE CHECK DAMS ARE PREFERRED IN ROADWAY DITCHES OUTSIDE THE CLEAR ZONE. CONSIDERATION SHOULD BE GIVEN TO USING OTHER APPROPRIATE CHECK DAMS AND/OR BMPs WITHIN THE CLEAR ZONE. SANDBAG CHECK DAMS ARE RECOMMENDED IN CONCRETE LINED CHANNELS FOR TEMPORARY VELOCITY CONTROL ONLY. ENSURE DISCHARGE POINT IS PROPERLY STABILIZED AND INCLUDE APPROPRIATE BMPs FOR SEDIMENT STORAGE UPSTREAM AND/OR DOWNSTREAM OF CONCRETE LINED CHANNELS. IF THIS ITEM IS USED IN AN AREA WITH FLOWS GREATER THAN 2.0-CFS OR WITHOUT A SEDIMENT BASIN, A MINIMUM OF ONE ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM DISCHARGE POINT.
Ch-1	VEGETATED CHANNEL STABILIZATION SECTION 700 LINE CODE Ch-1		A NEW OR EXISTING CHANNEL MAY BE LINED WITH PERMANENT VEGETATION ONLY FOR VELOCITIES UP TO 5.0 fps. THIS MEASURE SHALL BE DESIGNED IN ACCORDANCE WITH THE GDOT CHANNEL LINING DESIGN PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. TYPICALLY NOT SHOWN IN PLANS.
Ch-2R1	CHANNEL STABILIZATION RIP-RAP, TYPE 1 CONSTRUCTION DETAIL D-49 SECTION 603 LINE CODE Ch-2R1		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 1 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2R3	CHANNEL STABILIZATION RIP-RAP, TYPE 3 CONSTRUCTION DETAIL D-49 SECTION 603 LINE CODE Ch-2R3		THIS ITEM CONSISTS OF LINING A CHANNEL WITH TYPE 3 RIP-RAP 24" THICK (UNLESS SPECIFIED OTHERWISE) PLACED ON TOP OF A GEOTEXTILE UNDERLINER. THE RIP-RAP SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

NO SCALE

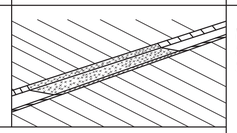
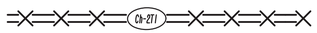
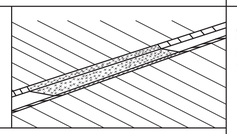
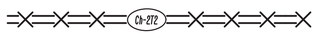
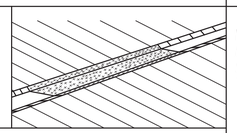
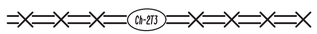
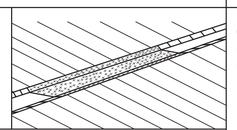
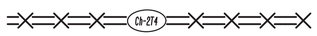
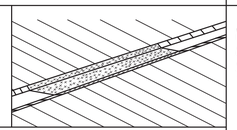
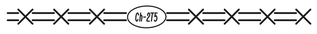
REVISION DATES		
3/2/2017		
11/28/2018		

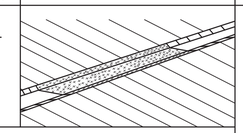
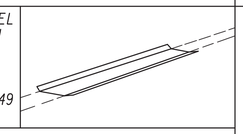
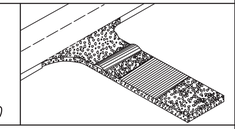
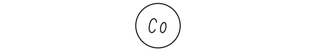
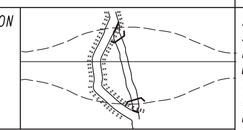
EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 2 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0002
CORRECTED:		DATE:		
VERIFIED:		DATE:		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T1	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711 LINE CODE	 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-2 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T2	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711 LINE CODE	 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-4 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T3	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711 LINE CODE	 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-6 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T4	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711 LINE CODE	 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-8 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-2T5	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711 LINE CODE	 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-10 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T6	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711 LINE CODE	 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-12 psf. THE TRM SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
Ch-3	CONCRETE CHANNEL STABILIZATION CONSTRUCTION DETAIL D-10, D-49 SECTION 441 LINE CODE	 	CHANNELS ARE LINED WITH CONCRETE FOR VELOCITIES >/= 10 fps. THIS ITEM CONSISTS OF CONSTRUCTING A 4" THICK CONCRETE CHANNEL. THE CONCRETE SHALL PROTECT THE CHANNEL FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT CHANNEL LINING PROGRAM. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN. RIP-RAP SHOULD BE USED TO DISSIPATE ENERGY DOWNSTREAM OF CONCRETE LINED CHANNELS.
Co	CONSTRUCTION EXIT CONSTRUCTION DETAIL D-41 SECTION 163, 800 SYMBOL	 	A CONSTRUCTION EXIT IS A STONE STABILIZED PAD THAT REDUCES OR ELIMINATES THE TRANSPORT OF MUD FROM CONSTRUCTION AREAS ONTO PUBLIC ROADS BY EQUIPMENT OR RUNOFF. BEST USED AT ACCESS POINTS, I.e. NEW LOCATION PROJECTS, BORROW PITS, WASTE PITS, ACCESS ROADS, ETC. SHOULD BE MINIMUM 20' WIDE, 50' LONG, 6" THICK, AND REQUIRES A GEOTEXTILE UNDERLINER. ON SITES WHERE THE GRADE TOWARD A PAVED AREA IS GREATER THAN 2%, A FULL WIDTH DIVERSION RIDGE 6" TO 8" HIGH WITH 3:1 SLOPES SHALL BE CONSTRUCTED APPROXIMATELY 15' UPSTREAM OF PAVED AREA. A TIRE WASHING AREA TO REMOVE MUD MAY ALSO BE REQUIRED PRIOR TO ENTRANCE ONTO PUBLIC ROADWAYS. ALL CONSTRUCTION EXIT REQUIREMENTS ARE INCLUDED IN THE PRICE OF THE CONSTRUCTION EXIT.
Dc-A	STREAM DIVERSION CHANNEL GEOTEXTILE, POLYETHYLENE FILM SECTION 163 LINE CODE	 	A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE OR POLYETHYLENE FILM. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 0 - 2.5 fps. THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GDOT

NO SCALE

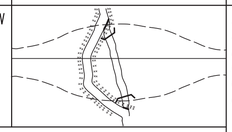
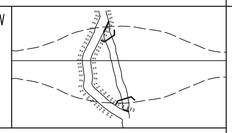
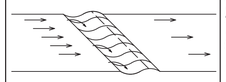
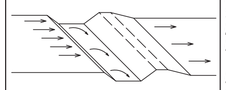
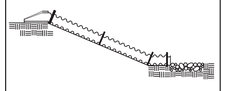
REVISION DATES		
3/2/2017		

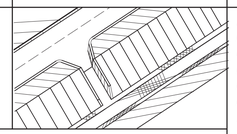
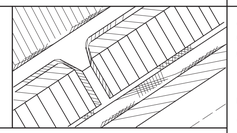
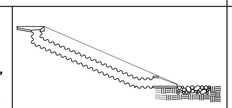
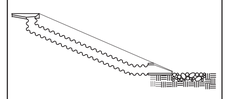
EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 3 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0003
CORRECTED:		DATE:		
VERIFIED:		DATE:		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dc-B	STREAM DIVERSION CHANNEL GEOTEXTILE ONLY SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH GEOTEXTILE ONLY. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 2.5 - 9.0 fps. THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	LINE CODE —D——D——D—(Dc-B)—D——D——D—		
Dc-C	STREAM DIVERSION CHANNEL RIP-RAP & GEOTEXTILE SECTION 163		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS FROM EROSION. LINE THE CHANNEL WITH RIP-RAP AND GEOTEXTILE. INSTALL TWO ROWS OF Sd1-S PARALLEL TO THE CHANNEL TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING THE STREAM. THE SIZE OF THE CHANNEL WILL DEPEND ON THE DISCHARGE, CHANNEL GEOMETRY, CHANNEL SLOPE AND ROUGHNESS. IT IS ACCEPTABLE FOR VELOCITIES BETWEEN 9.0 - 13.0 fps. THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
	LINE CODE —D——D——D—(Dc-C)—D——D——D—		
D1-1	DIVERSION BERM CONSTRUCTION DETAIL D-47 SECTION 205		A NON-DESIGNED TEMPORARY EARTHEN BERM WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO BE USED AT THE EDGE OF EMBANKMENT DURING THE GRADING OPERATION. THE BERMS ARE ALSO CONSTRUCTED ABOVE, ACROSS OR BELOW A SLOPE TO REDUCE THE LENGTH OF A SLOPE. THEY ARE USED TO INTERCEPT RUNOFF, PREVENTING SLOPE EROSION AND TO DIRECT THE RUNOFF TO A STABLE OUTLET, DOWN DRAINS "Dn1"OR CATCHMENT AREAS AND ON ALL GRADING PROJECTS.
	LINE CODE (D1-1)		
D1-2	DIVERSION CHANNEL SECTION 205		A DESIGNED TEMPORARY OR PERMANENT CHANNEL WITH A COMPACTED SUPPORTING RIDGE ON THE LOWER SIDE TO DIVERT OFFSITE RUNOFF AWAY FROM DISTURBED AREAS WITHIN THE PROJECT AREA. CHANNEL FOR OFFSITE RUNOFF SHALL BE STABILIZED WITH APPROPRIATE CHANNEL STABILIZATION. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA. A DIVERSION CHANNEL DETAIL MUST ALSO BE PROVIDED IN THE ESPCP. RUNOFF FROM DISTURBED AREAS WITHIN THE PROJECT AREA SHALL NOT BE ALLOWED TO CONVERGE WITH OFFSITE RUNOFF WITHIN THIS DIVERSION.
	LINE CODE (D1-2)		
Dn1	TEMPORARY DOWNDRAIN STRUCTURE FLEXIBLE CONSTRUCTION DETAIL D-19 SECTION 163		A TEMPORARY PIPE SLOPE DRAIN IS A PLASTIC FLEXIBLE PIPE TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TEMPORARY SLOPE DRAINS SHOULD BE PLACED AT INTERVALS OF 350 FEET ON 0% - 2% GRADES, 200 FEET ON STEEPER GRADES AND MORE FREQUENTLY AS DICTATED BY FIELD CONDITIONS. THE TYPICAL PIPE SIZE IS A CORRUGATED 10". THE PIPE WILL BE ANCHORED WITH STAKES AT INTERVALS NOT TO EXCEED 10'. THE OUTLET AREA SHALL BE STABILIZED FOR VELOCITY DISSIPATION AND EROSION CONTROL.
	LINE CODE —T——T——T—(Dn1)—T——T——T—		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dn2-A	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441		A CONCRETE FLUME TYPE "A" IS USED TO DIRECT SURFACE RUNOFF DOWN A ROADWAY SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN ALL DEPRESSED AREAS WHERE WATER WILL FLOW DOWN THE SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OTHER CRITERIA).
	LINE CODE (Dn2-A)		
Dn2-B	PERMANENT DOWNDRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL D-9 SECTION 441		A CONCRETE FLUME TYPE "B" IS USED TO DIRECT SURFACE DITCH RUNOFF DOWN A BACK SLOPE INTO ANOTHER FORM OF CONTROL. IT IS USED IN DEPRESSED AREAS WHERE CONCENTRATED OFFSITE WATER REACHES THE CUT SLOPE. IT IS DESIGNED TO SAFELY CONVEY WATER DOWN THE CUT SLOPE. IT IS DESIGNED FOR A 25-YEAR STORM AND MUST HAVE SOME FORM OF OUTLET PROTECTION. ADDITIONAL LABELING IS NOT REQUIRED IF SHOWN AS A PERMANENT DRAINAGE STRUCTURE ON THE CONSTRUCTION PLANS. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE (Dn2-B)		
Dn2-1	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP1, 9017J TP1, DETAIL D-26 TP1 SECTION 576, 577		CONCRETE DRAIN INLET WITH METAL PIPE IS USED TO DRAIN CURBS, ON A GRADE, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE (Dn2-1)		
Dn2-2	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TP2, 9017J TP2, DETAIL D-26 TP2 SECTION 576, 577		CONCRETE DRAIN INLET AND METAL PIPE IS USED TO DRAIN CURB, IN A SAG, DOWN TO A LOWER ELEVATION. THIS IS A PERMANENT STRUCTURE, REQUIRING OUTLET PROTECTION, TEMPORARY AND PERMANENT. INLETS SHALL BE SPACED ACCORDING TO GDOT GUIDELINES (REGARDING GUTTER SPREAD AND OR OTHER CRITERIA).
	LINE CODE (Dn2-2)		

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GDOT

NO SCALE

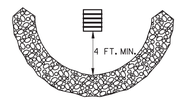
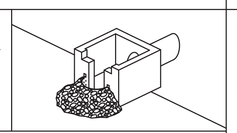
REVISION DATES		
3/2/2017		

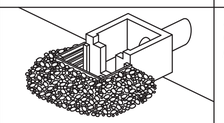
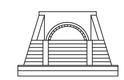
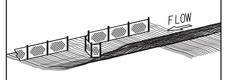
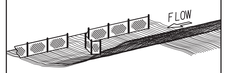
EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 4 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0004
CORRECTED:		DATE:		
VERIFIED:		DATE:		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Fr	FILTER RING CONSTRUCTION DETAIL D-46 SECTION 163	 SYMBOL Fr	A TEMPORARY STONE BARRIER CONSTRUCTED AT DRAINAGE STRUCTURE INLETS AND POST-CONSTRUCTION POND OUTLETS. IT REDUCES RUNOFF VELOCITY AND HELPS PREVENT SEDIMENT FROM LEAVING SITE PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR ADDITIONAL INFORMATION ON USAGE.
Rd	ROCK FILTER DAM CONSTRUCTION DETAIL D-43 SECTION 163, 603	 SYMBOL Rd	ROCK FILTER DAMS ARE CONSTRUCTED OF TYPE 3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. THEY ARE PLACED ACROSS DRAINAGEWAYS WHICH DRAIN 50 ACRES OR LESS. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING ROCK FILTER DAMS. THE DAM SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS. ROCK FILTER DAMS SHOULD BE USED IN DITCHES PRIOR TO DISCHARGING INTO STREAMS, WETLANDS, OPEN-WATERS, OR OTHER ESAs.
Rd-B	STONE FILTER BERM CONSTRUCTION DETAIL D-50 SECTION 163, 603	 LINE CODE Rd-B	STONE FILTER BERMS ARE CONSTRUCTED SIMILAR TO ROCK FILTER DAMS FOR A LINEAR APPLICATION. THEY ARE CONSTRUCTED OF TYPE-3 STONE RIP-RAP FACED WITH #57 STONE ON THE UPSTREAM SIDE. GEOTEXTILE UNDERLINER SHALL BE USED WHEN PLACING STONE FILTER BERMS. STONE FILTER BERMS ARE IDEAL ALONG THE PERIMETER FOR SHEET FLOW AND/OR SHALLOW CONCENTRATED FLOW TO A COMMON LOW AREA WHERE PERIMETER SILT FENCE ALONE MAY BE INSUFFICIENT, THERE IS NO WELL-DEFINED CHANNEL FOR A STANDARD ROCK FILTER DAM, AND/OR CONSTRUCTING A ROCK OUTLET TEMPORARY SEDIMENT TRAP IS NOT APPLICABLE.
Rp	RIP-RAP SECTION 603	 PATTERN Rp	RIP-RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND BRIDGE END ROLLS. RIP-RAP TYPE-I SHOULD BE PLACED ON TOP OF A GEOTEXTILE UNDERLINER AT A MINIMUM 24" THICKNESS OR AS INDICATED ON THE PLANS. RIP-RAP MAY ALSO BE USED AT DRAINAGE STRUCTURE OUTLETS WITHIN THE RIGHT-OF-WAY. HOWEVER, APPROPRIATE OUTLET PROTECTION SHOULD BE PROVIDED AT OUTFALLS. REFER TO STORM DRAIN OUTLET PROTECTION FOR ADDITIONAL INFORMATION ON USING RIP-RAP AT OUTFALLS.
Rt-P	RETROFITTING PERFORATED HALF-ROUND PIPE CONSTRUCTION DETAIL D-44 SECTION 163	 SYMBOL Rt-P	A PERFORATED HALF-ROUND PIPE WITH STONE FILTER PLACED IN FRONT OF A PERMANENT STORMWATER DETENTION POND OUTLET STRUCTURE TO SERVE AS A TEMPORARY SEDIMENT FILTER. SHOULD BE USED ONLY IN DETENTION PONDS WITH LESS THAN 30 ACRES TOTAL DRAINAGE AREA. SHALL ONLY BE USED IN DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Rt-B	RETROFITTING SLOTTED BOARD DAM CONSTRUCTION DETAIL D-45 SECTION 163	 SYMBOL Rt-B	A SLOTTED BOARD DAM CONSISTS OF STONE AND/OR FILTER FABRIC AND BOARDS WITH 0.5" - 1.0" SPACING TO SERVE AS A TEMPORARY SEDIMENT FILTER. PERMANENT STORMWATER DETENTION POND OUTLET: -DRAINAGE AREA UP TO 100 ACRES -DETENTION BASINS LARGE ENOUGH TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DISTURBED AREA ROADWAY DRAINAGE STRUCTURE: -OPEN END PIPES, WINGED HEADWALLS, OR CONCRETE WEIR OUTLETS WITH DRAINAGE AREA LESS THAN 30 ACRES REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Rt-Sg1 Rt-Sg2 Rt-Sg3	RETROFITTING SILT CONTROL GATES CONSTRUCTION DETAIL D-20 SECTION 163	 SYMBOL Rt-Sg1 Rt-Sg2 Rt-Sg3	A SILT CONTROL GATE CONSISTS OF BOARDS WITHOUT SPACING AND FILTER FABRIC TO BE USED FOR TEMPORARY SEDIMENT STORAGE ON ROADWAY PROJECTS AT THE INLET OF STRUCTURES WITH A DRAINAGE AREA UP TO 50 ACRES. THE DISTURBED AREA WITHIN THE DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. SILT CONTROL GATES SHOULD NOT BE USED ALONE, BUT WITH ANOTHER BMP DOWNSTREAM PRIOR TO DISCHARGE LEAVING PROJECT AREA. DO NOT USE SILT GATES IN STATE WATERS. Rt-Sg1=TYPE 1: USED ON BOX CULVERTS Rt-Sg2=TYPE 2: USED ON STRAIGHT HEADWALLS Rt-Sg3=TYPE 3: USED ON FLARED END SECTIONS AND TAPERED HEADWALLS
Sdi-NS	SEDIMENT BARRIER (NON-SENSITIVE) SILT FENCE TYPE A CONSTRUCTION DETAIL D-24 SECTION 171	 LINE CODE —A——A——A—Sdi-NS—A——A——A—	SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW. TYPE-A SILT FENCE IS TYPICALLY USED IN NON-ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS LESS THAN 10'. IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.
Sdi-S	SEDIMENT BARRIER (SENSITIVE) SILT FENCE TYPE C CONSTRUCTION DETAIL D-24 SECTION 171	 LINE CODE —C——C——C—Sdi-S—C——C——C—	SEDIMENT BARRIERS MINIMIZE AND PREVENT SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE PROJECT AREA BY CAUSING DEPOSITION AND/OR FILTRATION OF SEDIMENT. SILT FENCE USED AS PERIMETER CONTROL SHALL NOT BE INSTALLED ACROSS CONCENTRATED FLOW. TYPE-C SILT FENCE IS TYPICALLY USED IN ENVIRONMENTALLY SENSITIVE AREAS (ESAs) OR IN AREAS WITH FILLS 10' AND GREATER. ALL ENVIRONMENTALLY SENSITIVE AREAS (ESAs) SHALL BE PROTECTED WITH A DOUBLE-ROW OF TYPE-C SILT FENCE REGARDLESS OF FILL HEIGHT. A SINGLE-ROW MAY BE USED FOR OTHER APPLICATIONS. IT SHOULD BE PLACED A MINIMUM OF 10' FROM CONSTRUCTION LIMITS OR ALONG THE RIGHT-OF-WAY LINE.

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

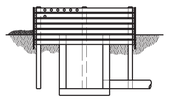
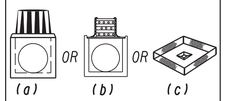
NO SCALE

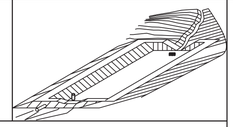
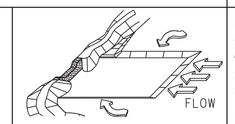
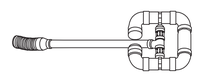
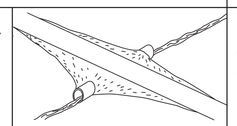
REVISION DATES
3/2/2017

EROSION CONTROL LEGEND
UNIFORM CODE SHEET
SHEET 5 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No. 52-0005

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd1-BB	SEDIMENT BARRIER BRUSH BARRIER CONSTRUCTION DETAIL D-24B SECTION 201 LINE CODE * * * Sd1-BB * * *		THIS ITEM CONSISTS OF INTERMINGLED BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM. CONSTRUCTED AT THE TOE OF FILL SLOPES ONLY DURING THE CLEARING AND GRUBBING OPERATION. THE BARRIER SHOULD BE USED AT THE TOE OF FILL SLOPES ON GRADING PROJECTS IN RURAL AREAS WHERE SUFFICIENT RIGHT OF WAY OR EASEMENT IS AVAILABLE (10 FEET OR MORE). THE BARRIER SHOULD RUN ROUGHLY PERPENDICULAR TO THE FLOW OF WATER WHERE THIS DOES NOT CONFLICT WITH RIGHT-OF-WAY OR EASEMENT LIMITS. THEY WILL NOT BE PLACED IN WETLANDS. TYPICALLY NOT SHOWN ON PLANS. PAYMENT FOR THIS ITEM IS INCLUDED IN THE CLEARING AND GRUBBING COST. NO SEPARATE PAYMENT SHALL BE MADE.
Sd2-B	INLET SEDIMENT TRAP (BAFFLE BOX) CONSTRUCTION DETAIL D-42 SECTION 163 SYMBOL Sd2-B		BAFFLE BOX INLET SEDIMENT TRAP USED FOR INLETS RECEIVING HIGH FLOW RATE AND/OR VELOCITY. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES 7 cfs AND GREATER.
Sd2-Bg	INLET SEDIMENT TRAP (BLOCK & GRAVEL) CONSTRUCTION DETAIL D-42 SECTION 163 SYMBOL Sd2-Bg		BLOCK AND GRAVEL DROP INLET PROTECTION USED FOR WHERE HEAVY FLOWS ARE EXPECTED AND WHERE OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE. CAN BE USED AT CULVERT INLETS. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 5 - 7 cfs.
Sd2-F	INLET SEDIMENT TRAP (FILTER FABRIC) CONSTRUCTION DETAIL D-24C SECTION 163 SYMBOL Sd2-F		(a) A SEDIMENT BARRIER CONSISTING OF A PREFABRICATED FRAME WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (b) A SEDIMENT BARRIER CONSISTING OF A PERFORATED METAL STAND PIPE WITH FILTER FABRIC USED AROUND A DROP INLET OR CATCH BASIN. (c) TYPE C SILT FENCE WITH SUPPORTING FRAME CAN BE USED AS AN ALTERNATE TO INLET SEDIMENT TRAP FOR AREAS WITH SLOPES < 5%. THIS ITEM IS USED TO PREVENT SILT FROM ENTERING THE PIPE SYSTEM. SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS. RECOMMENDED FOR INLET RECEIVING FLOW RATES THAT RANGE FROM 0 - 4 cfs.
Sd2-G	INLET SEDIMENT TRAP (GRAVEL) CONSTRUCTION DETAIL D42 SECTION 163 SYMBOL Sd2-G		GRAVEL DROP INLET PROTECTION USED WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. STONE AND GRAVEL ARE USED TO TRAP SEDIMENT. THE SLOPE TOWARD THE INLET SHALL BE NO MORE THAN 3:1. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING FLOW RATES THAT RANGE FROM 3 - 5 cfs.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd3	TEMPORARY SEDIMENT BASIN CONSTRUCTION DETAIL D-22A, D-22B SECTION 163 SYMBOL Sd3		A BASIN CREATED BY EXCAVATING AN AREA, DAMMING CONCENTRATED FLOW, OR A COMBINATION OF BOTH. THE BASIN IS DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER ACRE OF DRAINAGE AREA. THE DRAINAGE AREA SHOULD NOT EXCEED 150 ACRES. BASINS TYPICALLY CONSISTS OF A DAM, PRINCIPAL SPILLWAY, AND AN EMERGENCY SPILLWAY. A FLOATING SURFACE SKIMMER SHALL BE REQUIRED AS PART OF THE PRINCIPAL SPILLWAY UNLESS INFEASIBLE. SUFFICIENT RIGHT-OF-WAY OR EASEMENT IS NEEDED FOR BASIN CONSTRUCTION AND MAINTENANCE ACCESS. SEDIMENT BASINS SHALL BE CONSIDERED ON ALL PROJECTS, BUT MAY NOT BE PRACTICAL. BASINS SHOULD BE LOCATED TO MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES AND UTILITIES. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Sd4-C	ROCK OUTLET TEMPORARY SEDIMENT TRAP CONSTRUCTION DETAIL D-53 SECTION 163 SYMBOL Sd4-C		TEMPORARY POND WITH ROCK OUTLET DESIGNED TO STORE 67 CUBIC YARDS OF SEDIMENT PER DRAINAGE AREA. DRAINAGE AREA SHALL NOT EXCEED 5 ACRES. DISTINGUISHED FROM TEMPORARY SEDIMENT BASIN BY LACK OF PRINCIPAL SPILLWAY. MAXIMUM POND DEPTH FROM BOTTOM OF POND TO EMERGENCY SPILLWAY IS 4 FEET. A TEMPORARY SEDIMENT BASIN SHALL BE EVALUATED PRIOR TO CONSIDERING A TEMPORARY SEDIMENT TRAP. A TEMPORARY SEDIMENT TRAP IS IDEAL FOR SMALL AREAS WITH NO UNUSUAL DRAINAGE FEATURES AND EFFECTIVE AGAINST COARSE SEDIMENT, BUT NOT AGAINST SILT OR CLAY PARTICLES THAT REMAIN SUSPENDED. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR DESIGN CRITERIA.
Sk	FLOATING SURFACE SKIMMER CONSTRUCTION DETAIL D-22A, D-22B SECTION 163 SYMBOL Sk		A BUOYANT DEVICE THAT DRAINS WATER FROM THE SURFACE OF A TEMPORARY SEDIMENT BASIN AT A CONTROLLED FLOW RATE. THE INLET/ORIFICE SIZE IS DESIGNED TO DRAIN THE BASIN WITHIN 24 - 48 HOURS. THE SKIMMER INFORMATION SHALL BE PROVIDED IN CONJUNCTION WITH THE SEDIMENT BASIN INFORMATION IN PLANS. IF A SKIMMER IS INFEASIBLE, THE DESIGNER SHALL PROVIDE A WRITTEN JUSTIFICATION IN THE PLANS. SKIMMERS ARE ATTACHED TO A RISER WITHOUT PERFORATIONS AND ACTS AS THE PRIMARY SPILLWAY. THE SKIMMER BMP SYMBOL SHALL BE SHOWN IN CONJUNCTION WITH THE TEMPORARY SEDIMENT BASIN BMP SYMBOL WHEN APPLICABLE. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR ADDITIONAL INFORMATION.
Sr	TEMPORARY STREAM CROSSING SECTION 107 SYMBOL Sr		A TEMPORARY STRUCTURE INSTALLED ACROSS A FLOWING STREAM OR WATERCOURSE FOR USE BY CONSTRUCTION EQUIPMENT. THIS BMP PROVIDES A MEANS TO CROSS STREAMS OR WATERCOURSES WITHOUT MOVING SEDIMENT INTO STREAMS, DAMAGING THE STREAM BED OR CHANNEL, OR CAUSING FLOODING. THIS BMP SHOULD NOT BE USED ON STREAMS WITH DRAINAGE AREAS GREATER THAN ONE SQUARE MILE, UNLESS SPECIFICALLY DESIGNED TO ACCOMMODATE THE ADDITIONAL DRAINAGE AREA BY THE DESIGN PROFESSIONAL. A CERTIFICATION STATEMENT AND SIGNATURE SHALL ACCOMPANY THE DESIGN. THIS BMP SHALL BE DESIGNED ACCORDING TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". FOR CONTRACTOR'S USE ONLY!

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GDOT

NO SCALE

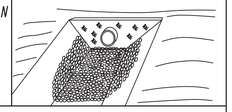
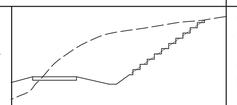
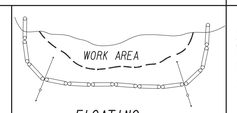
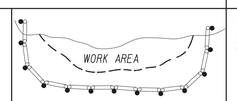
REVISION DATES		
3/2/2017		
11/28/2018		

EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 6 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0006
CORRECTED:		DATE:		
VERIFIED:		DATE:		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
St	STORM DRAIN OUTLET PROTECTION GA. STD. 1125 & 2332	 SYMBOL St	A PIPE OR BOX CULVERT OUTLET HEADWALL WITH AN APRON AND DISSIPATOR BLOCKS IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. IT IS USED ON THE OUTLET OF ALL BOX CULVERTS AND ON 48" AND LARGER PIPES. MAY BE USED ON INLET FOR FLOWING STREAMS. USE ON SMALL PIPES WHEN OUTLET VELOCITY OF THE 25-YEAR STORM IS 12 fps AND GREATER.
St-Rp	STORM DRAIN OUTLET PROTECTION (RIP-RAP) CONSTRUCTION DETAIL D-55 SECTION 603	 PATTERN FLAT AREA St-Rp OR St-Rp WELL-DEFINED CHANNEL	RIP-RAP OUTLET PROTECTION IS USED TO REDUCE VELOCITY AT THE OUTLET OF A PIPE, CHANNEL, OR STRUCTURE PRIOR TO ENTERING AN EXISTING STREAM OR PUBLICLY MAINTAINED DRAINAGE SYSTEM. THE MINIMUM DESIGN OF RIP-RAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM PEAK FLOW, BUT LARGER STORMS ARE RECOMMENDED. TYPE-1 RIP-RAP AT A DEPTH OF 36" AND PLACED ON FILTER FABRIC IS PREFERRED FOR ALL d50 <\/= 1.2 FEET. TYPE-3 RIP-RAP AT A DEPTH OF 18" AND PLACED ON FILTER FABRIC MAY BE USED FOR d50 <\/= 0.7 FEET. REFER TO THE LATEST EDITION OF THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR REQUIRED DESIGN DIMENSIONS AND OTHER INFORMATION TO BE INCLUDED IN THE PLANS.
Su	SURFACE ROUGHENING SERRATED SLOPES CONSTRUCTION DETAIL S-7 SECTION 205	 LINE CODE Su	PROVIDING A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS, BY OPERATING A CLEATED DOZER ON THE SLOPE IN A VERTICAL DIRECTION. CREATING SERRATED SLOPES IN THE GRADING PROCESS TO CONSTRUCT BENCHES WILL REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION OF WATER. IN MOST CASES THIS BMP IS NOT REQUIRED TO BE SHOWN ON THE PLANS, BUT REQUIRED TO BE COMPLETED BY THE CONTRACTOR UNDER ALL PROJECTS. IF SERRATED SLOPES ARE SPECIFIED BY THE SOIL SURVEY, THEN THIS BMP SHALL BE SHOWN ON THE PLANS WHERE SERRATED SLOPES ARE TO BE USED.
Tc-F	TURBIDITY CURTAIN FLOATING CONSTRUCTION DETAIL D-51 SECTION 170	 FLOATING LINE CODE Tc-F	A FLOATING TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED WHERE CONSTRUCTION IS REQUIRED IN A LARGE BODY OF WATER SUCH AS LAKES AND RIVERS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs. IT MAY ALSO BE REFERRED TO AS A FLOATING BOOM, SILT BARRIER, OR SILT CURTAIN.
Tc-S	TURBIDITY CURTAIN STAKED CONSTRUCTION DETAIL D-51 SECTION 170	 STAKED LINE CODE Tc-S	A STAKED TURBIDITY CURTAIN IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY ALLOWING IT TO DROP OUT OF SUSPENSION AND REMAIN WITHIN THE CONSTRUCTION AREA. IT IS TYPICALLY USED IN SHALLOW INUNDATED AREAS. IT MAY BE USED TO PROTECT A SMALL STREAM BEING REALIGNED OR RESTORED. IN THIS CASE, CURTAIN SHOULD EXTEND TO BOTTOM OF STREAMBED. THE HEIGHT SHOULD BE LIMITED TO 5 FEET UNLESS DIRECTED AND EXTEND 2 FEET ABOVE NORMAL WATER ELEVATION. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS BMP IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED PERIMETER BMPs. IT MAY BE REFERRED TO AS A SILT BARRIER OR SILT CURTAIN.

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION

NOTE:

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

GDOT

NO SCALE

REVISION DATES		
3/2/2017		

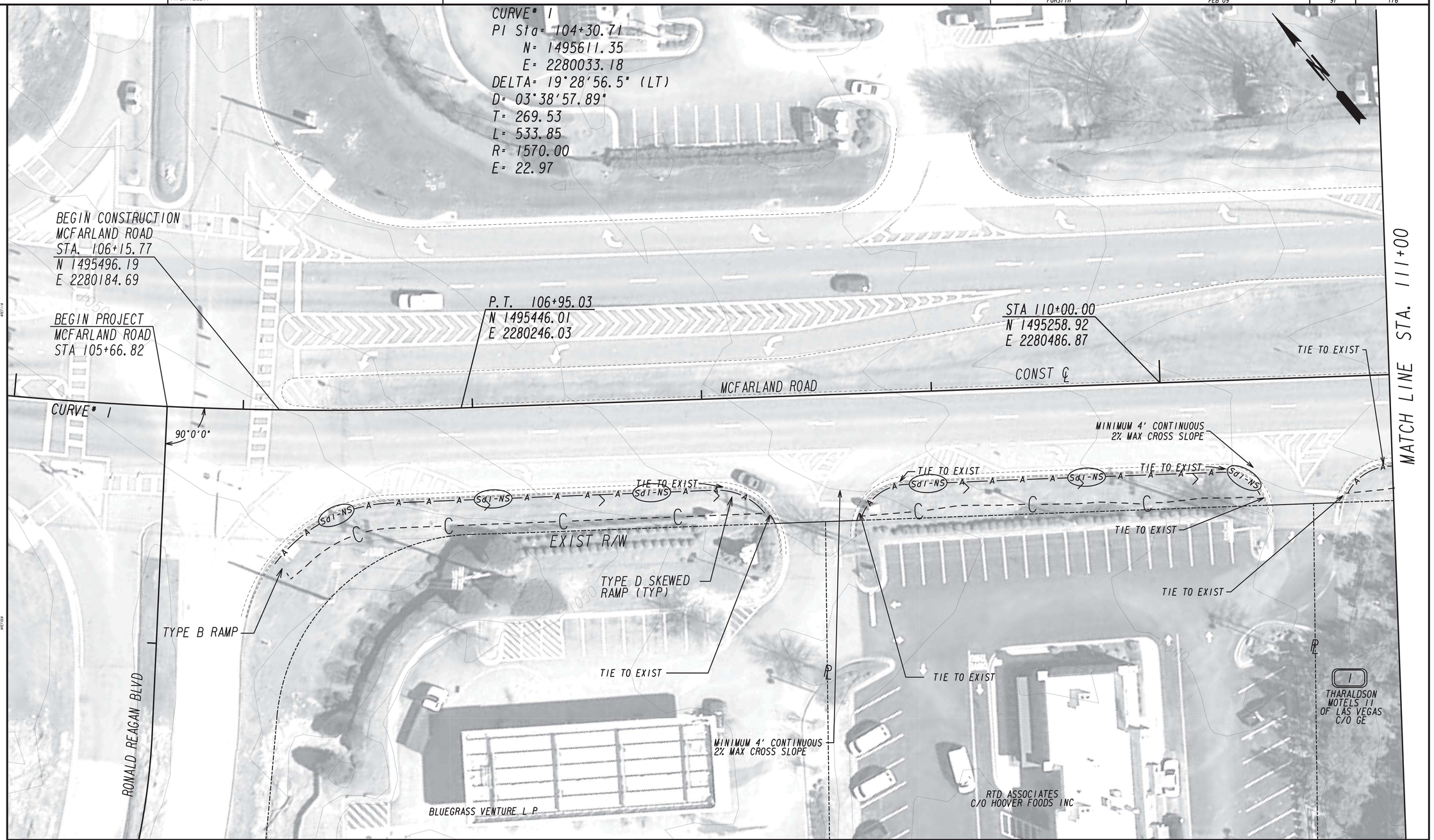
EROSION CONTROL LEGEND

UNIFORM CODE SHEET

SHEET 7 OF 7

CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No.
BACKCHECKED:		DATE:		52-0007
CORRECTED:		DATE:		
VERIFIED:		DATE:		

DATE$$$	TIME$$$	PRF	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	97	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA
END LIMIT OF ACCESS.....ELA
LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

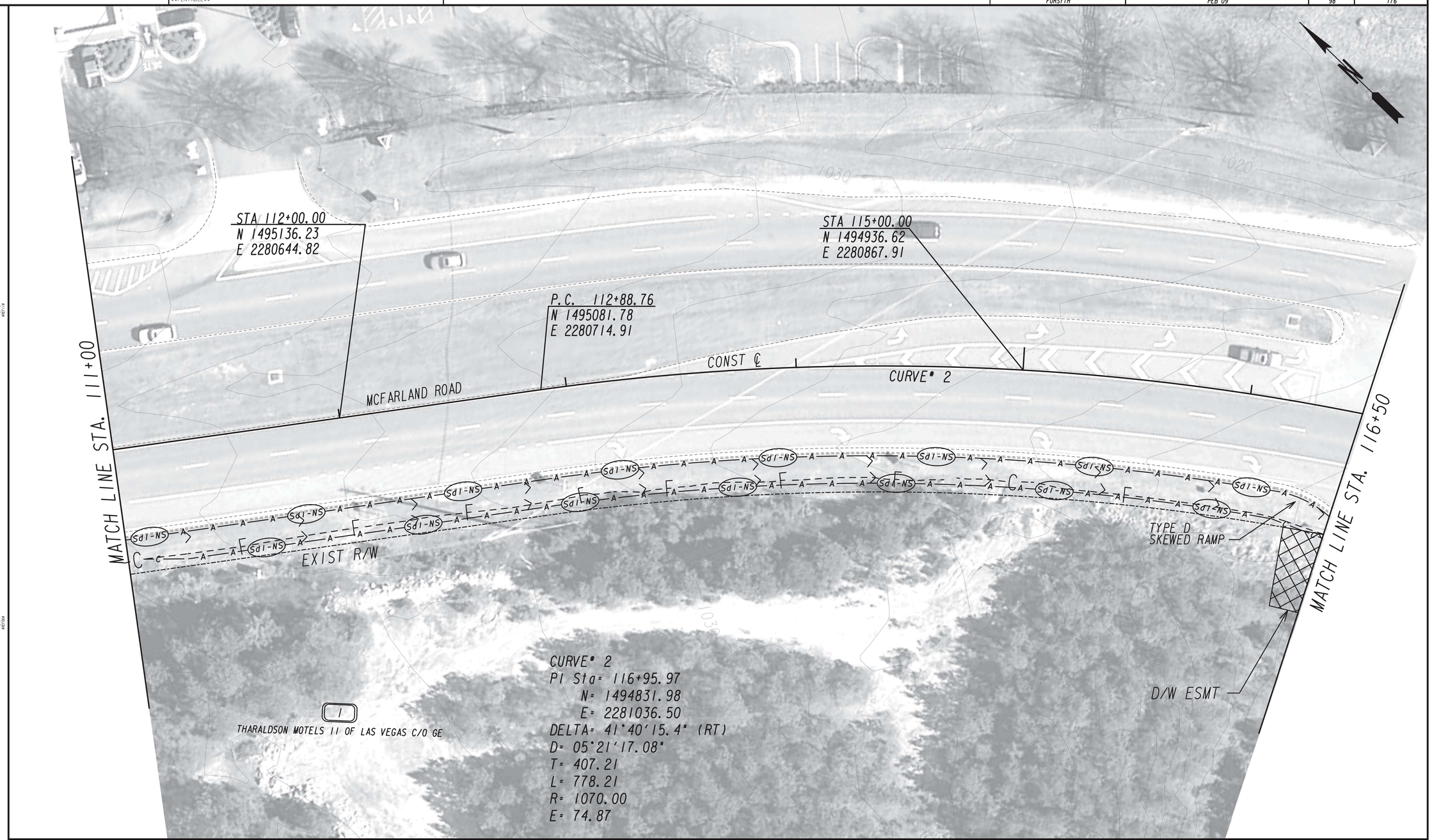
BMP LOCATION DETAILS
STAGE 1

PEB 09
FORSYTH COUNTY

DRAWING No.
54-001

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	98	176



PROPERTY AND EXISTING R/W LINE	
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EASEMENT FOR CONSTR OF SLOPES	
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REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

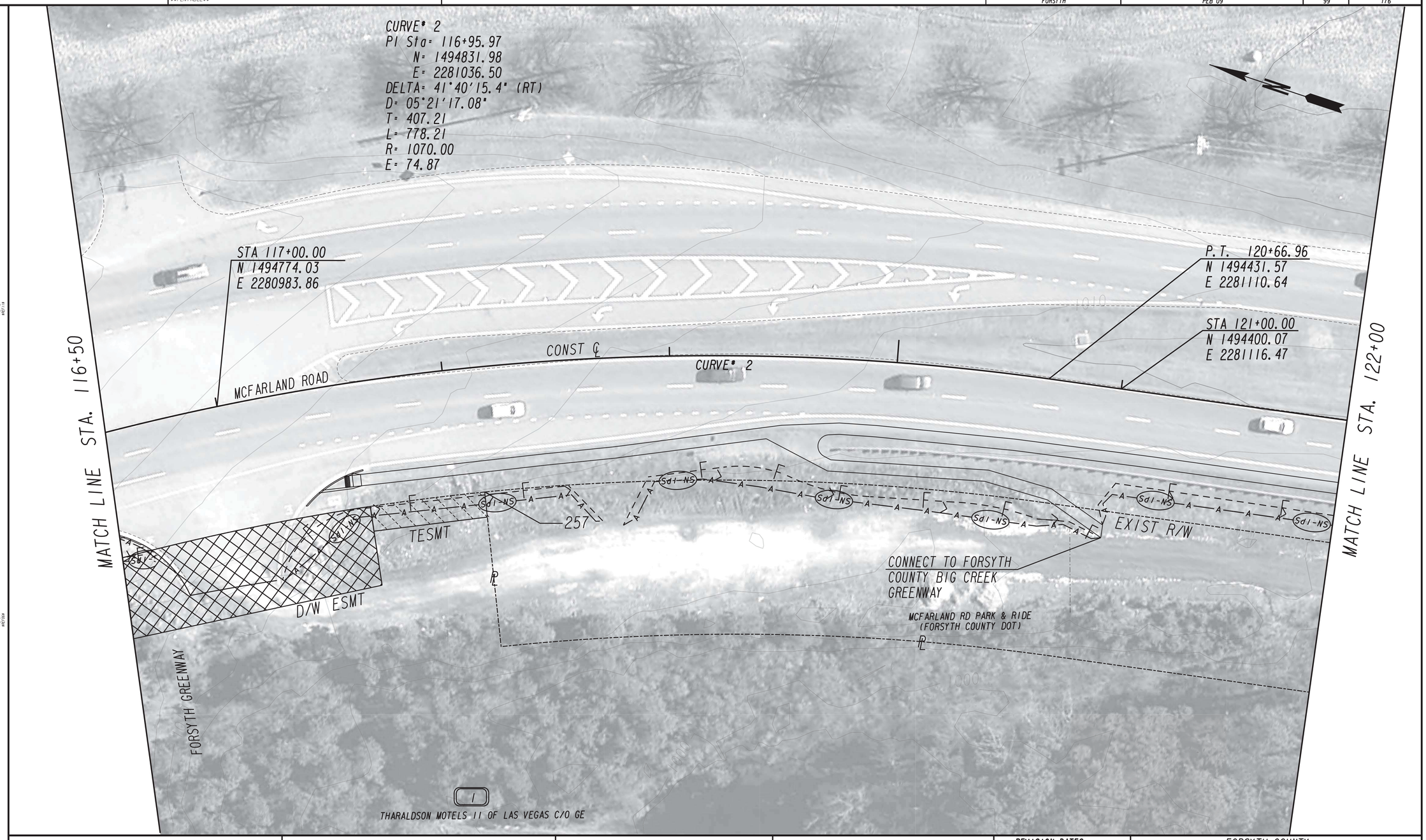
BMP LOCATION DETAILS
STAGE 1

PEB 09
FORSYTH COUNTY

DRAWING No.
54-002

4/27/2012 GPUN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	99	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

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LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1

PEB 09
FORSYTH COUNTY

DRAWING No.
54-003

4/27/2012 GPLW

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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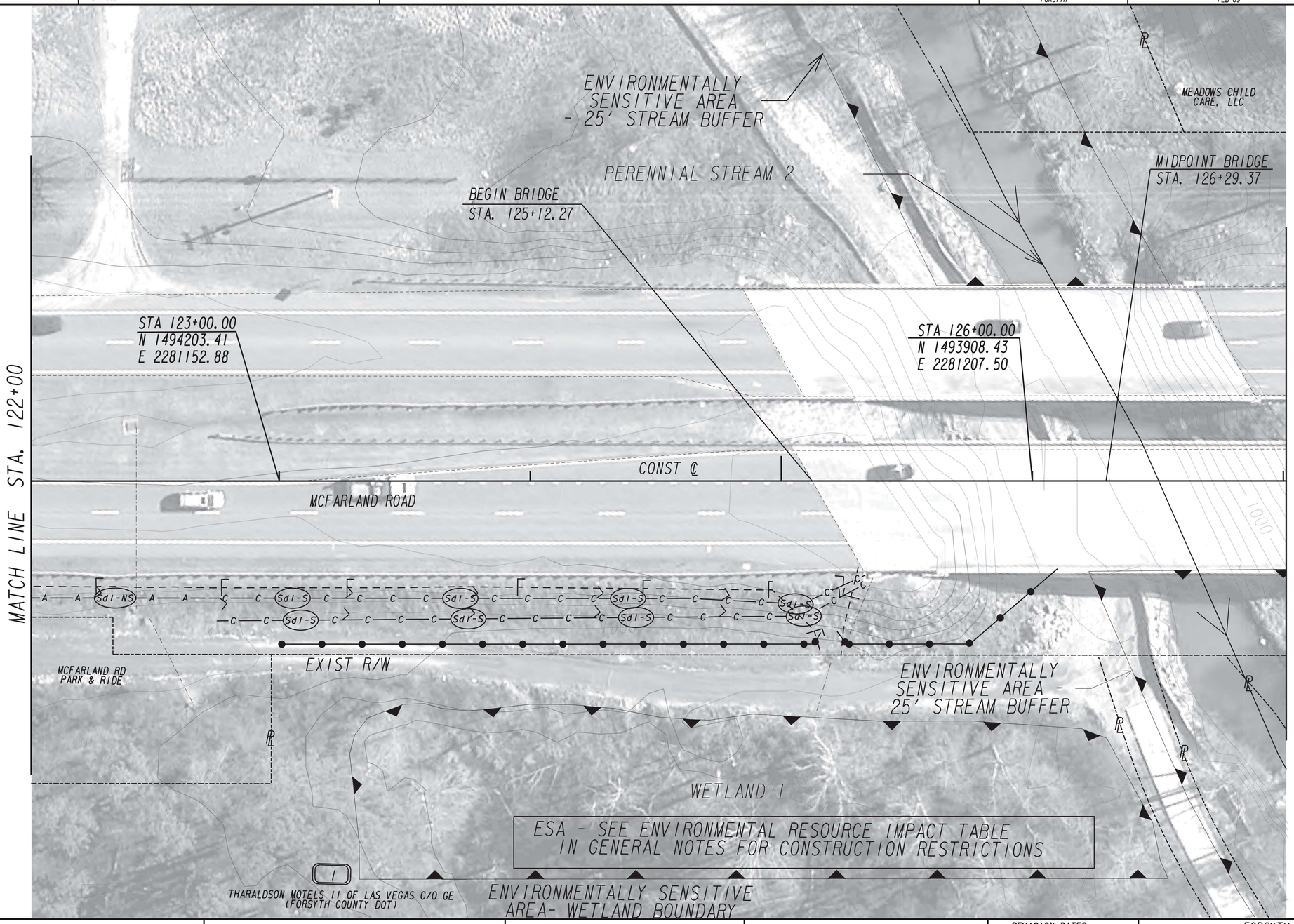

PROPERTY AND EXISTING R/W LINE
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CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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LIMIT OF ACCESS
REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1

PEB 09
FORSYTH COUNTY

DRAWING No.
54-004

4/27/2012 GPLW

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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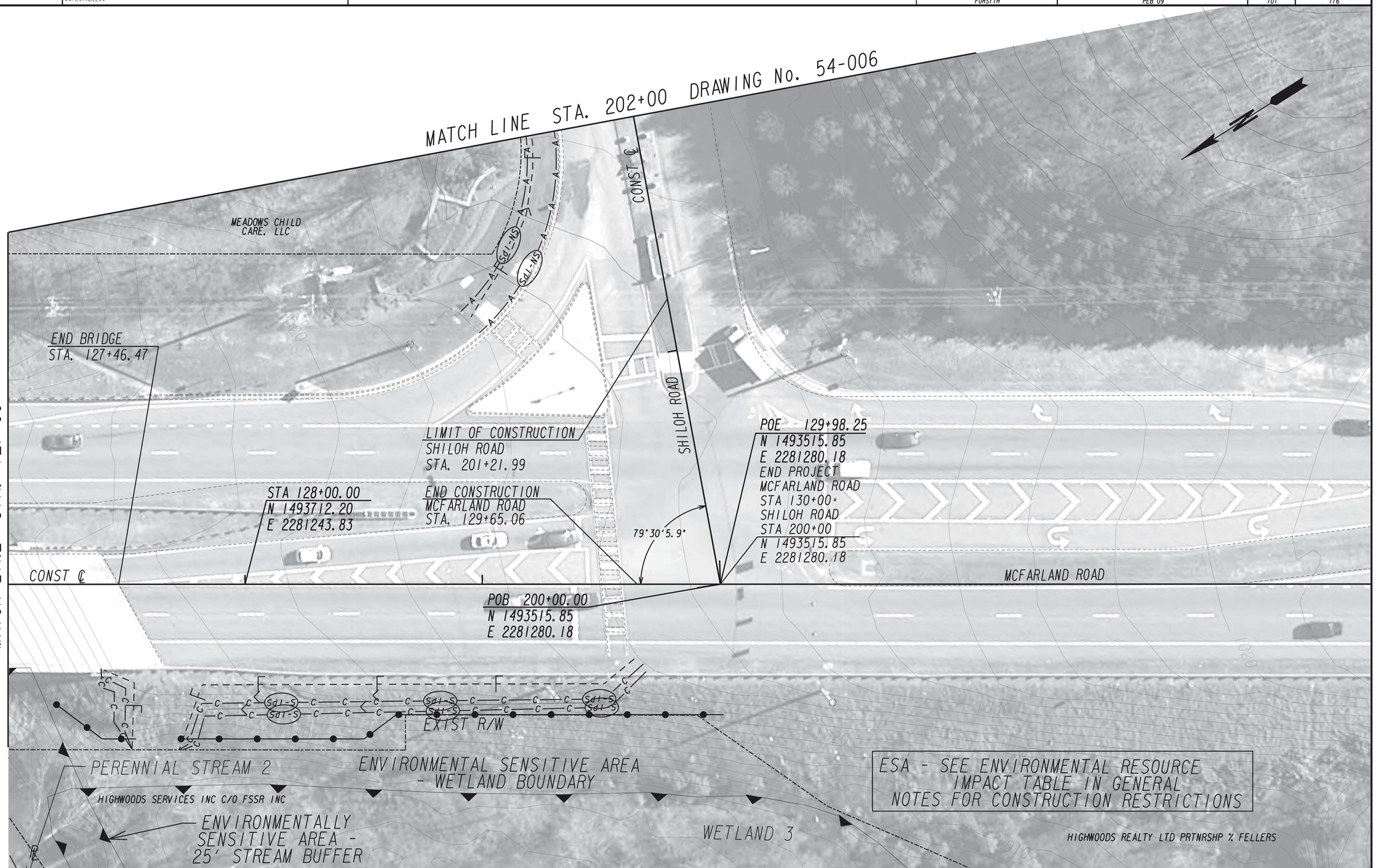

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
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EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1

PEB 09
FORSYTH COUNTY

DRAWING No.
54-005

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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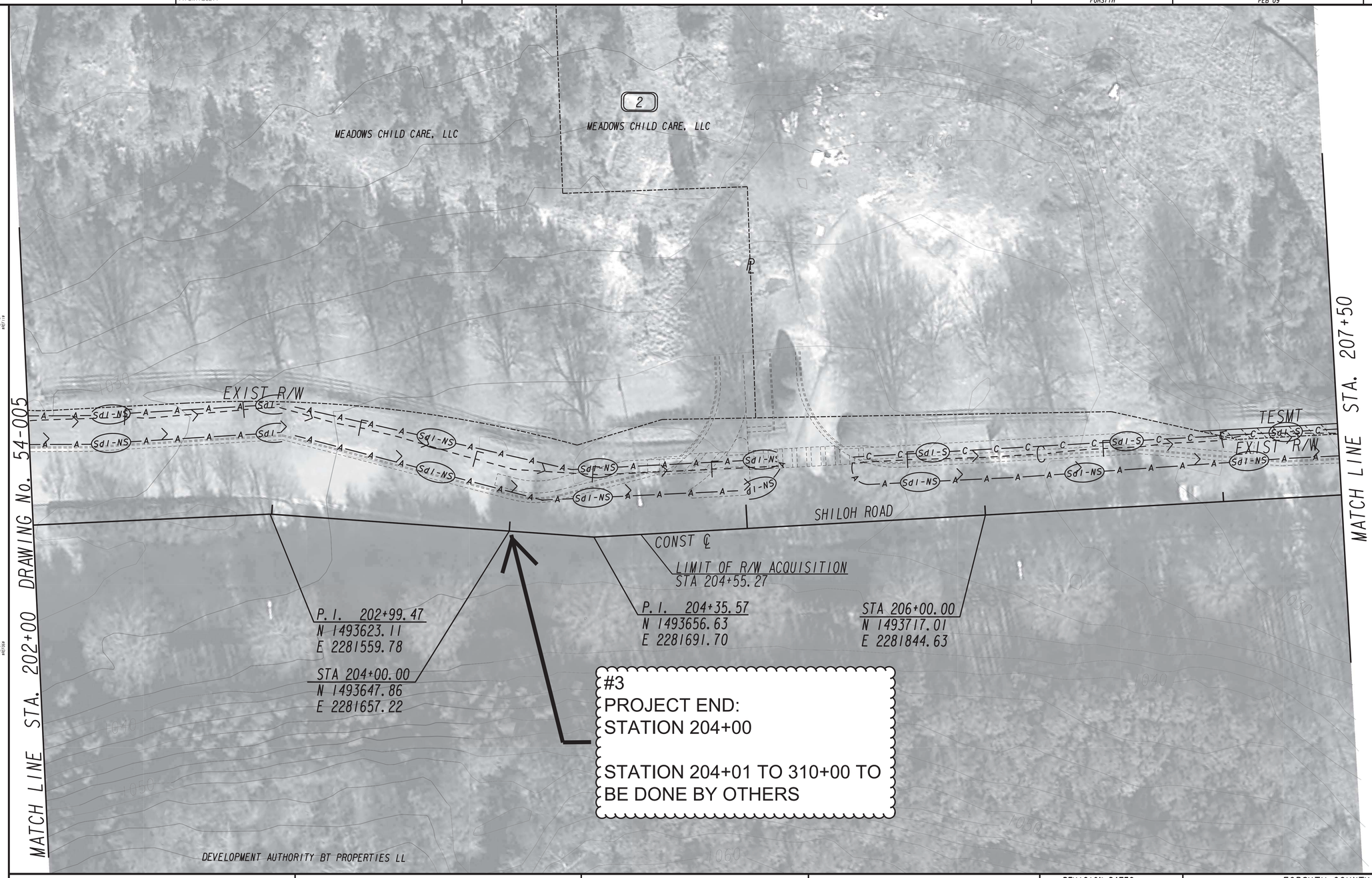

PROPERTY AND EXISTING R/W LINE
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CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES		
#3 9/5/2019		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE I

PEB 09
FORSYTH COUNTY

DRAWING No. 54-006

4/27/2012 GPLN

DATE$$$	TIME$$$	PRF	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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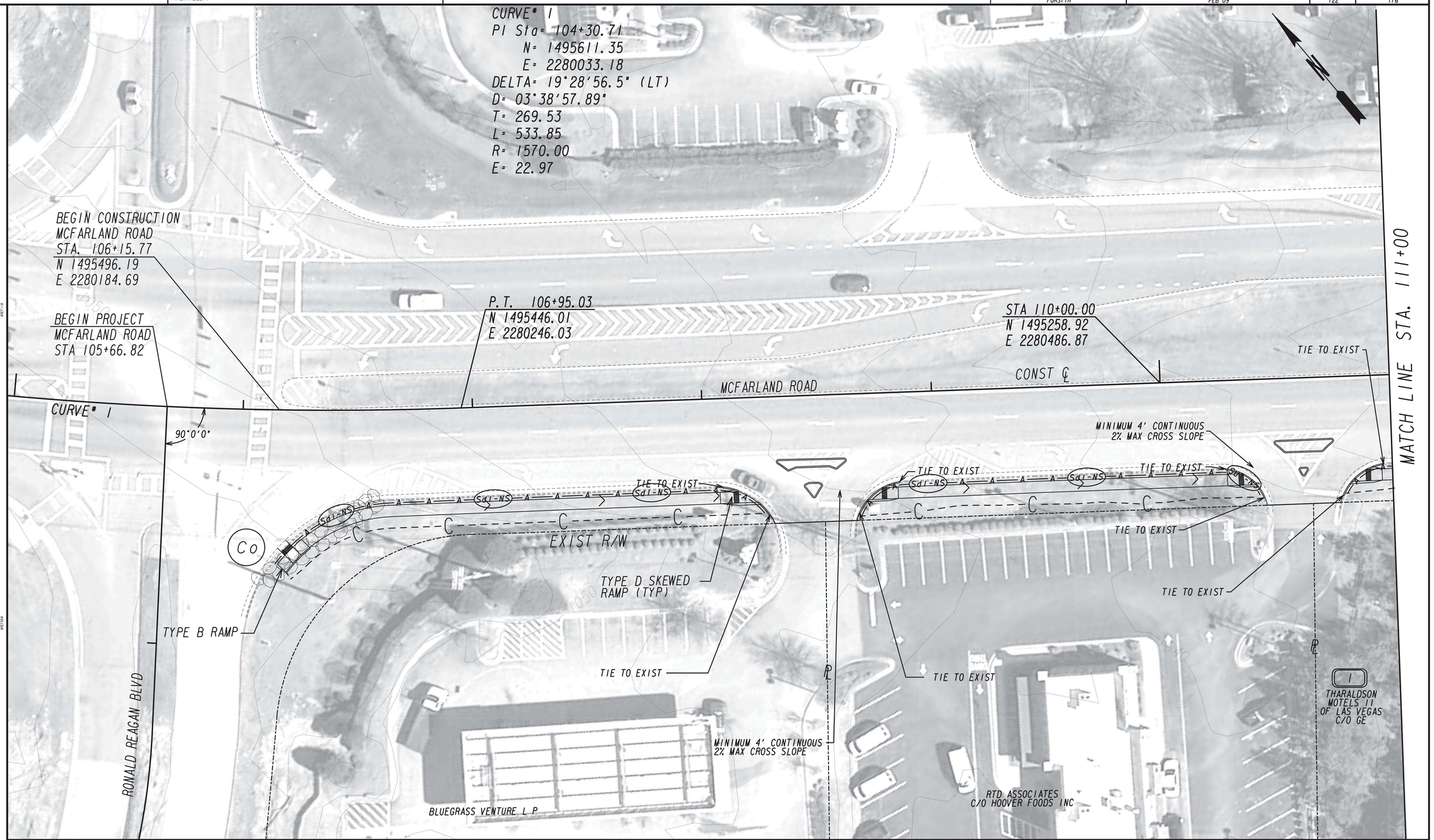

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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EASEMENT FOR CONSTR OF DRIVES

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REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

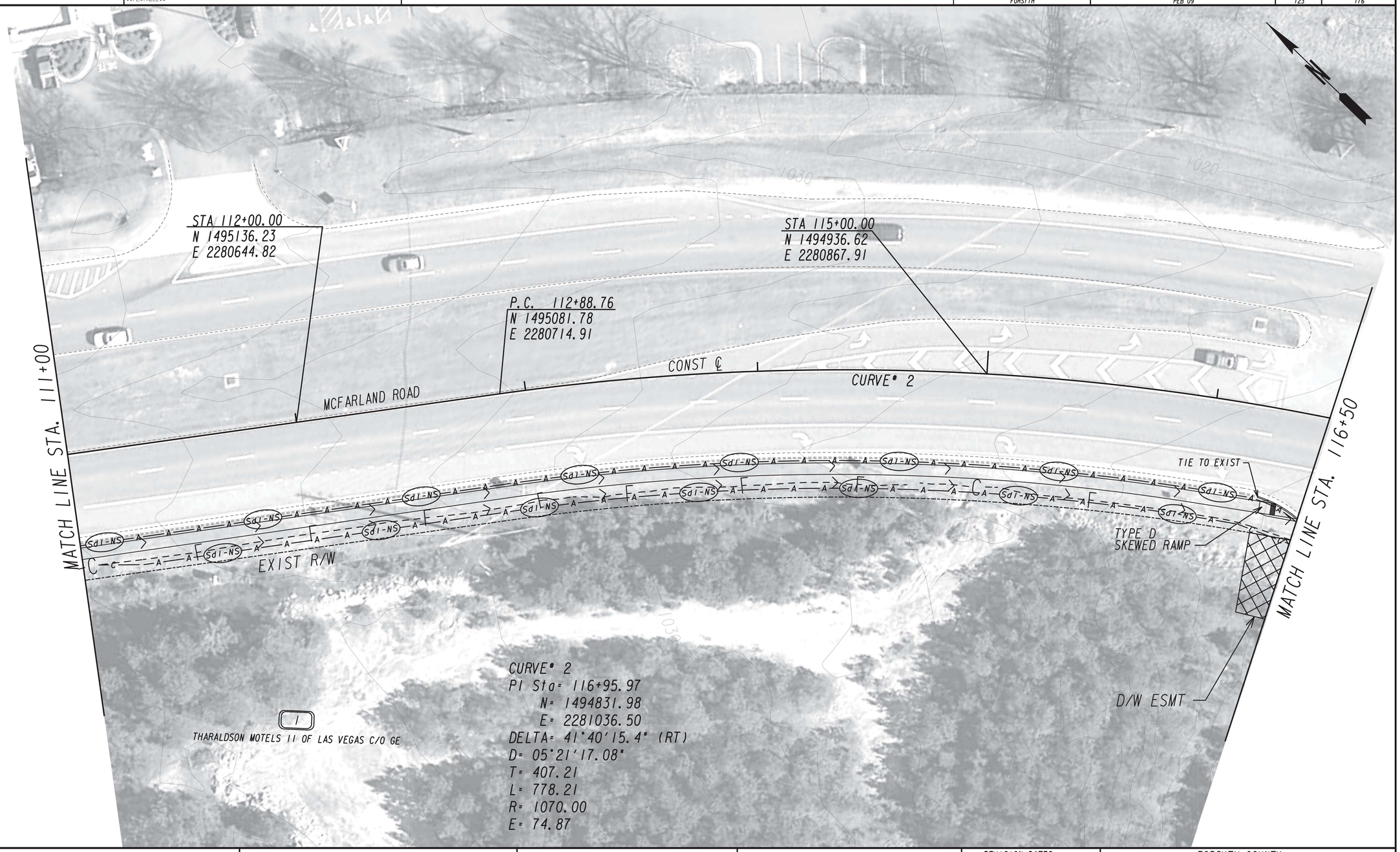
BMP LOCATION DETAILS
STAGE 2

PEB 09
FORSYTH COUNTY

DRAWING No.
54-026

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	123	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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EASEMENT FOR CONSTR OF DRIVES

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REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

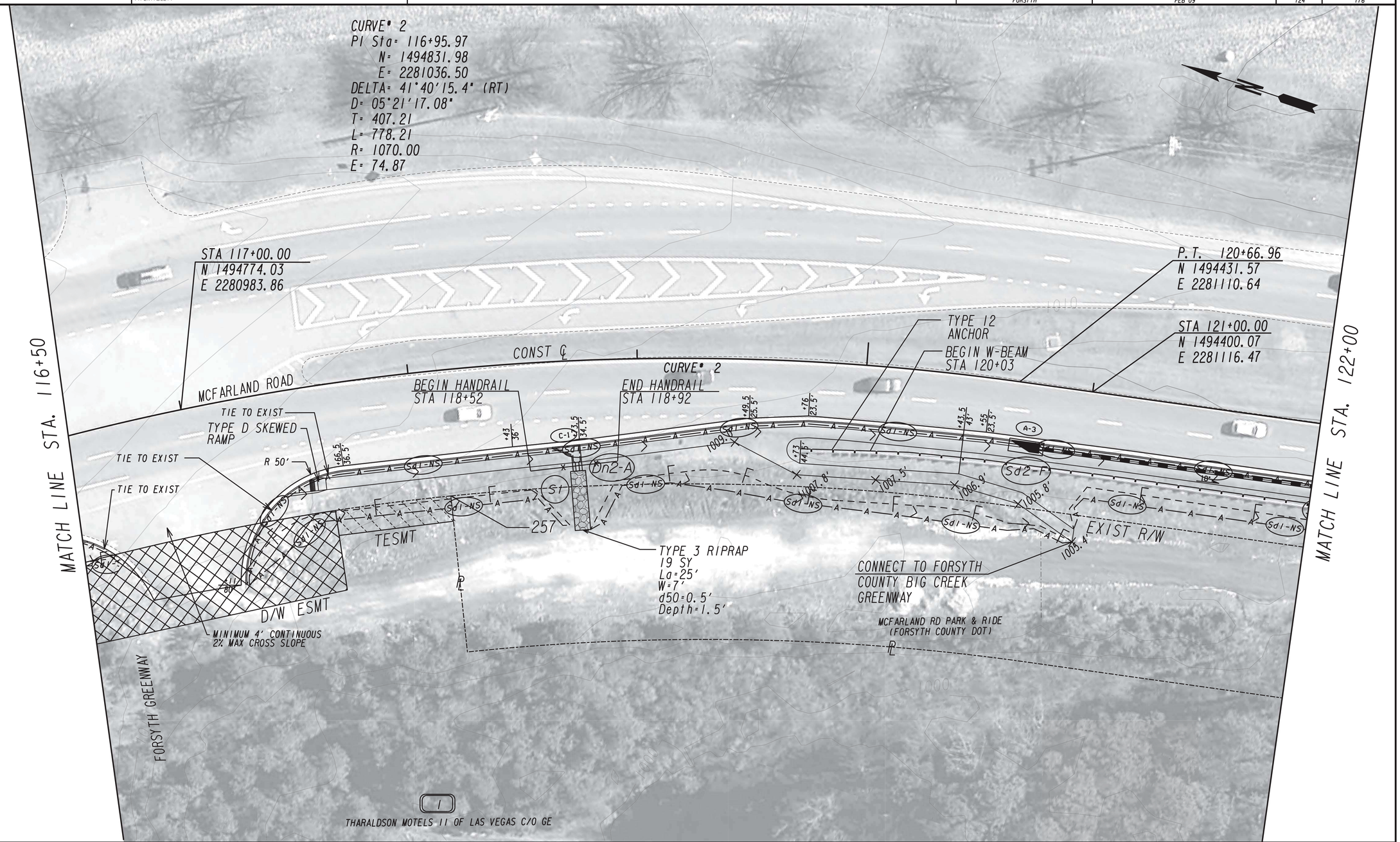
BMP LOCATION DETAILS
STAGE 2

PEB 09
FORSYTH COUNTY

DRAWING No.
54-027

4/27/2012 GPUN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	124	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

PEB 09
FORSYTH COUNTY

DRAWING No.
54-028

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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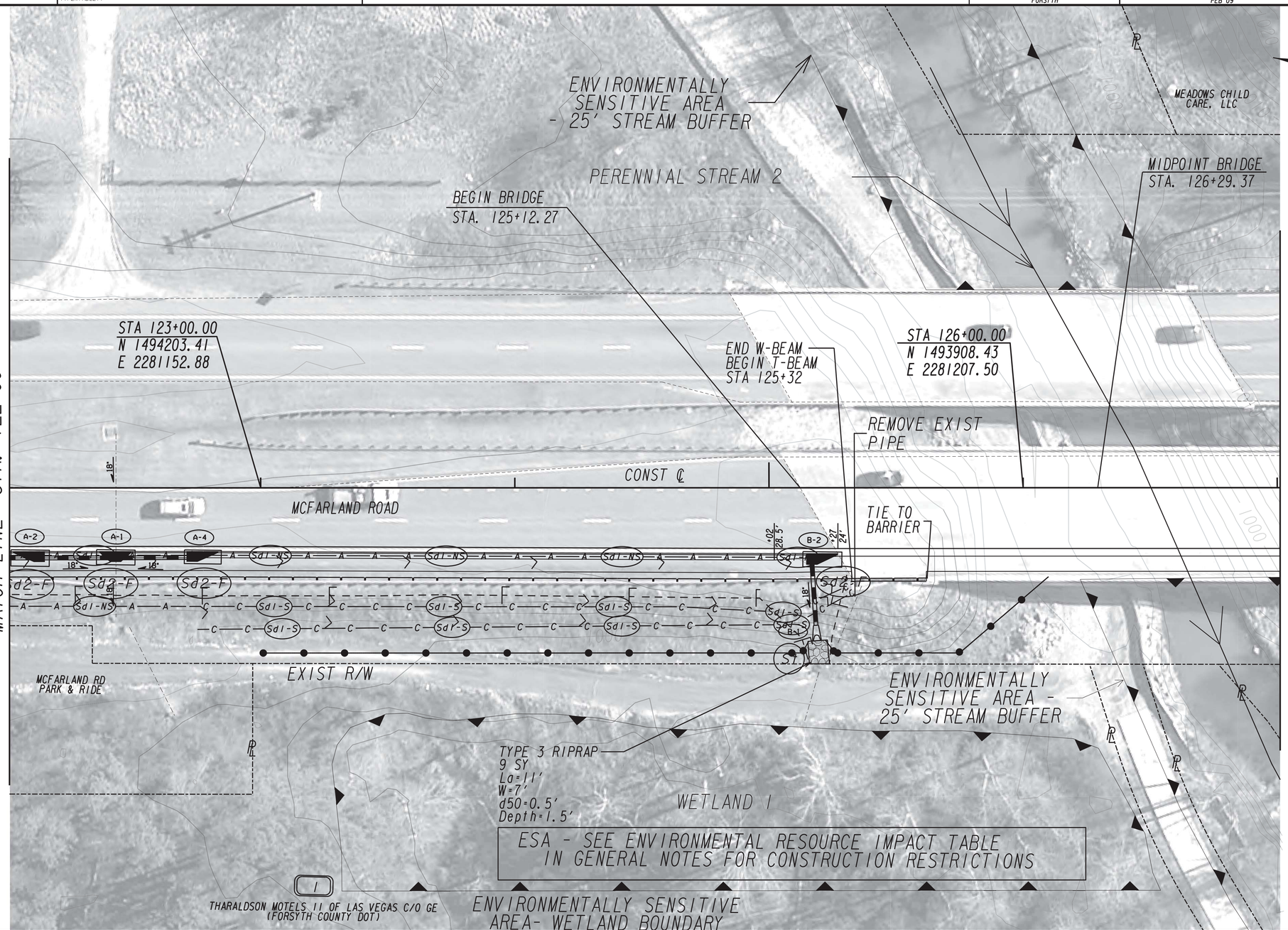

PROPERTY AND EXISTING R/W LINE
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

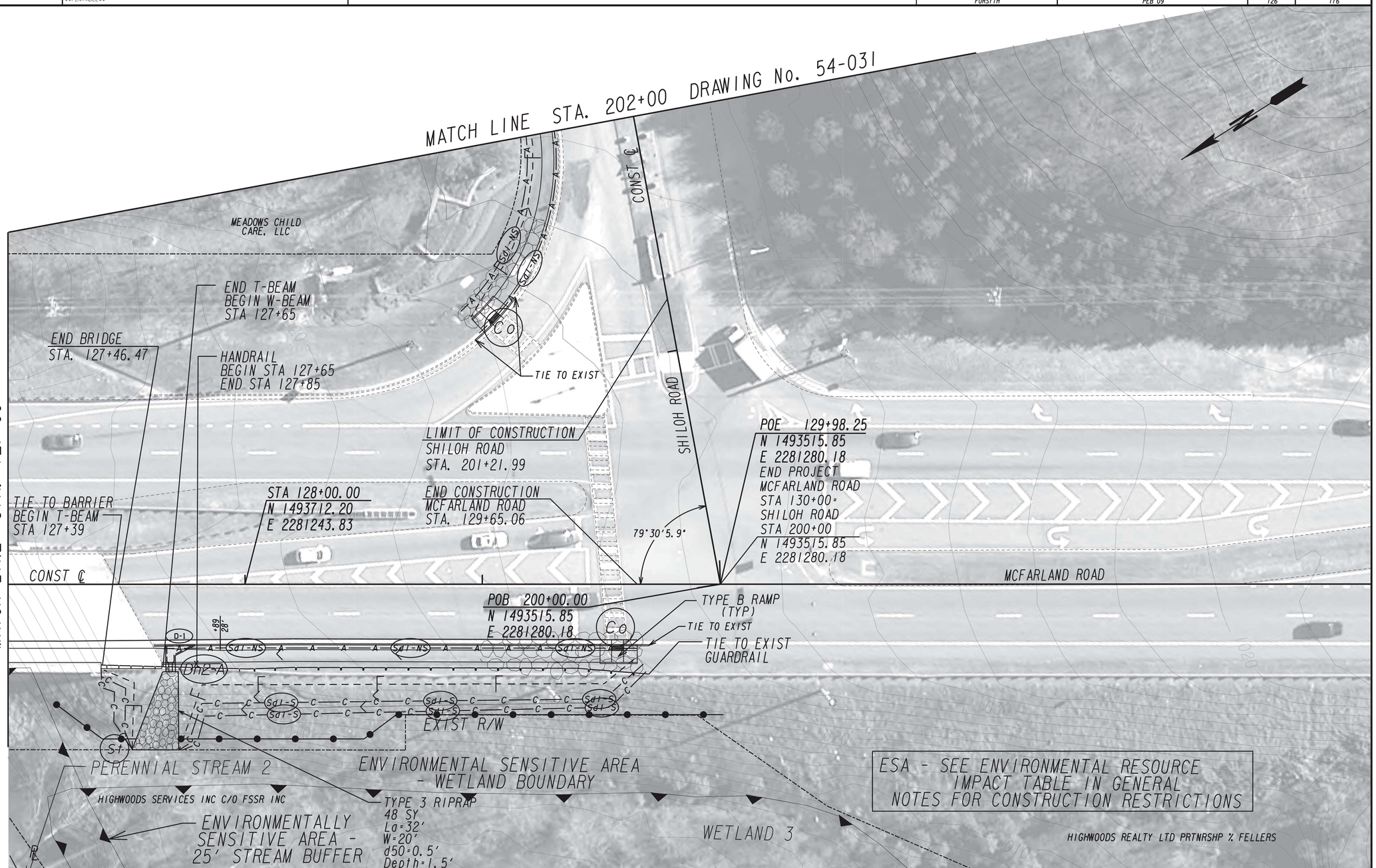
BMP LOCATION DETAILS
STAGE 2

PEB 09
FORSYTH COUNTY

DRAWING No.
54-029

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	126	176



PROPERTY AND EXISTING R/W LINE
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

PEB 09
FORSYTH COUNTY

DRAWING No.
54-030

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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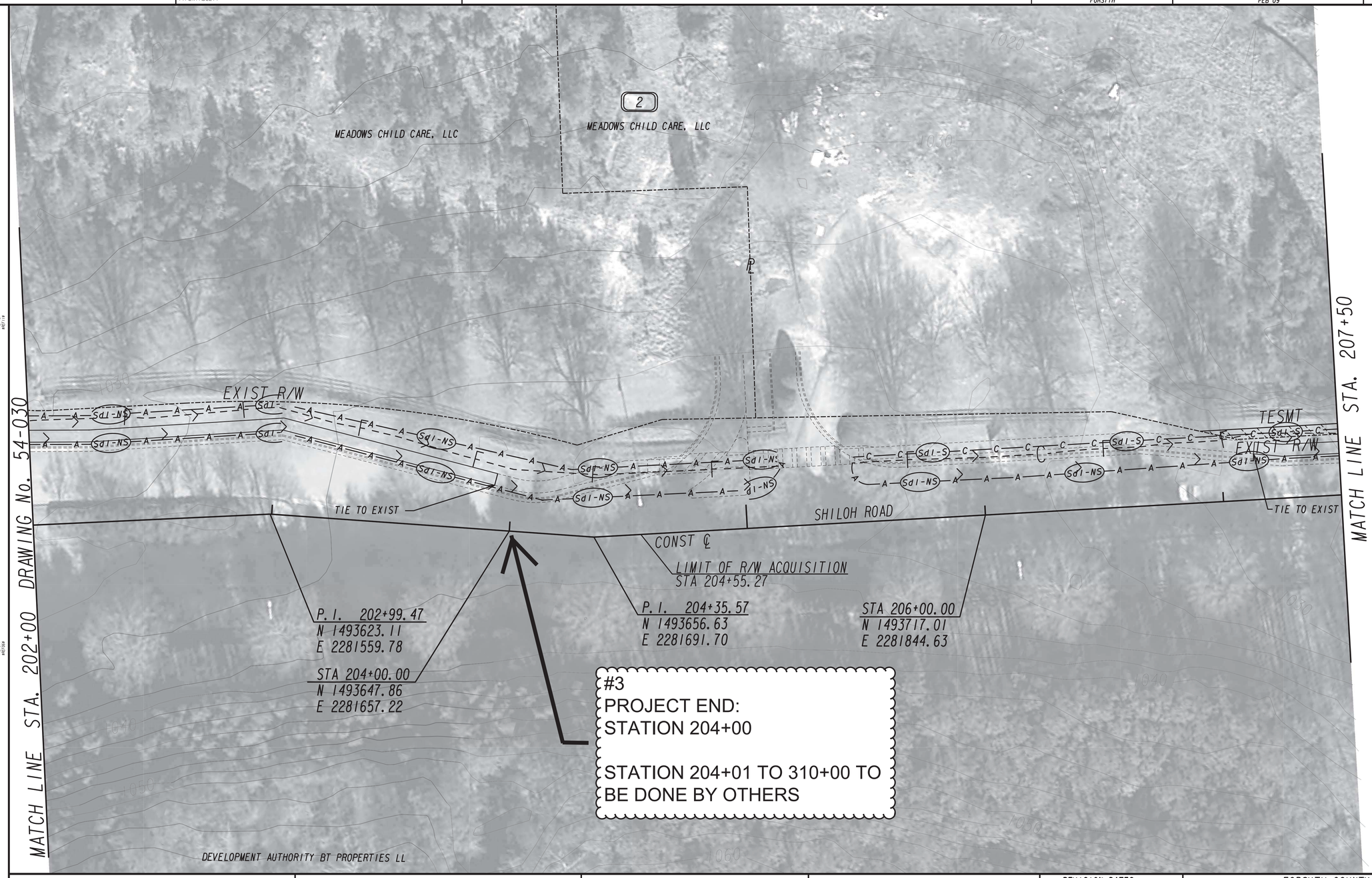

#3
PROJECT END:
STATION 204+00

STATION 204+01 TO 310+00 TO BE DONE BY OTHERS

PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
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EASEMENT FOR CONSTR OF DRIVES	

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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES		
#3 9/5/2019		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

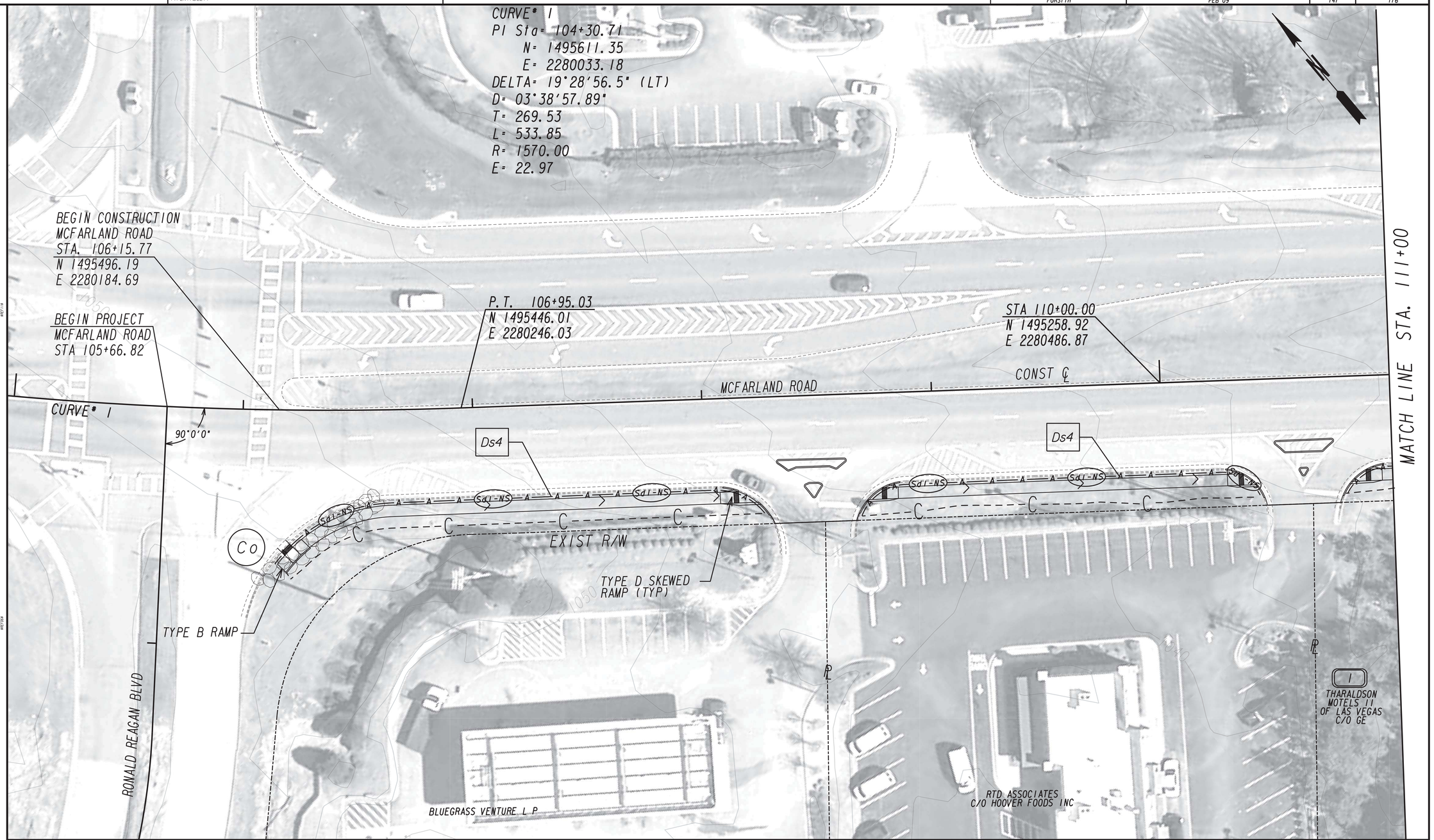
BMP LOCATION DETAILS
STAGE 2

PEB 09
FORSYTH COUNTY

DRAWING No. 54-031

4/27/2012 GPLN

DATE$$$	TIME$$$	PRF	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	147	176



PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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REQ'D R/W & LIMIT OF ACCESS

GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 3

PEB 09
FORSYTH COUNTY

DRAWING No.
54-051

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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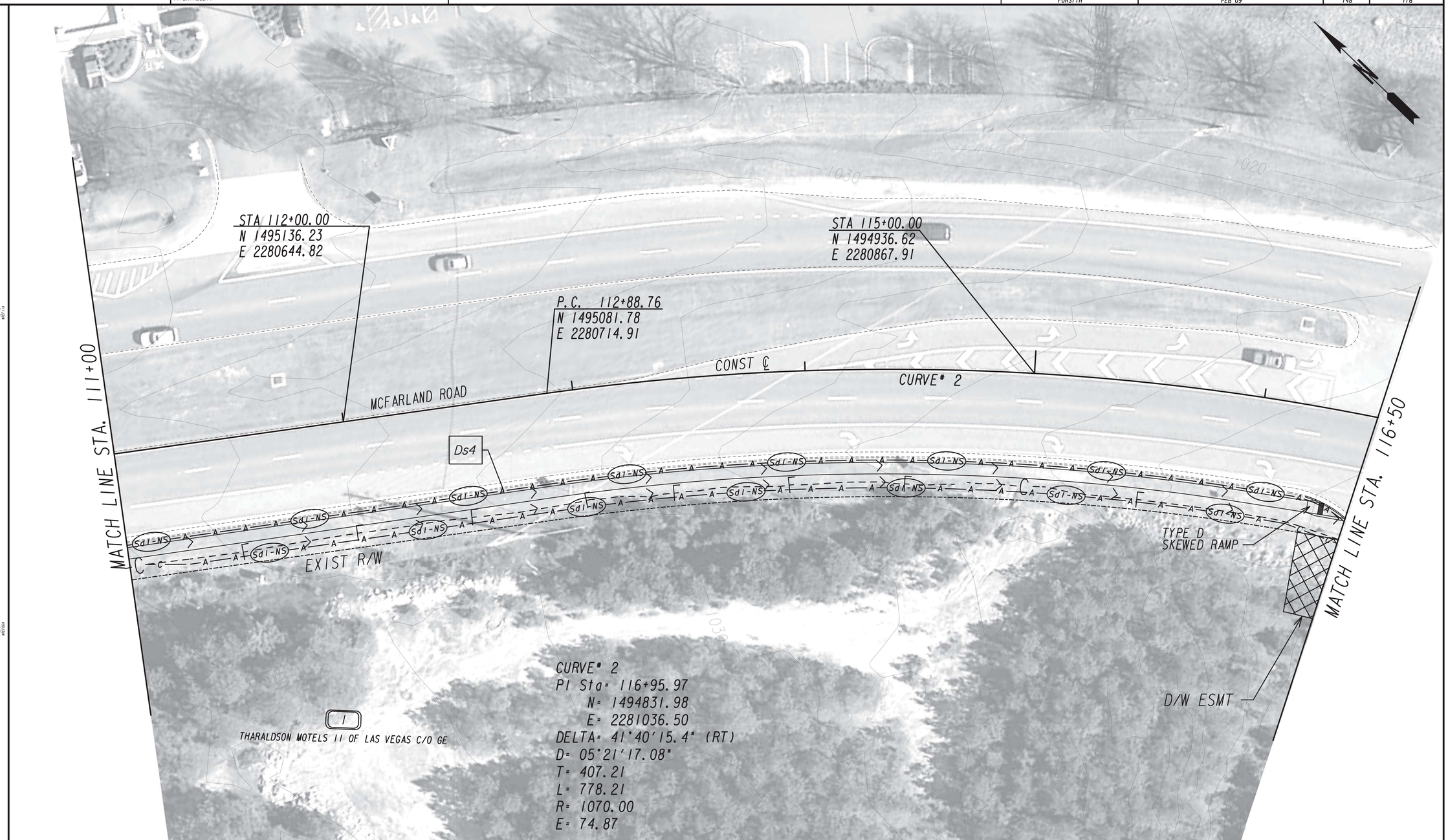

PROPERTY AND EXISTING R/W LINE
REQUIRED R/W LINE
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EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 3

PEB 09
FORSYTH COUNTY

DRAWING No.
54-052

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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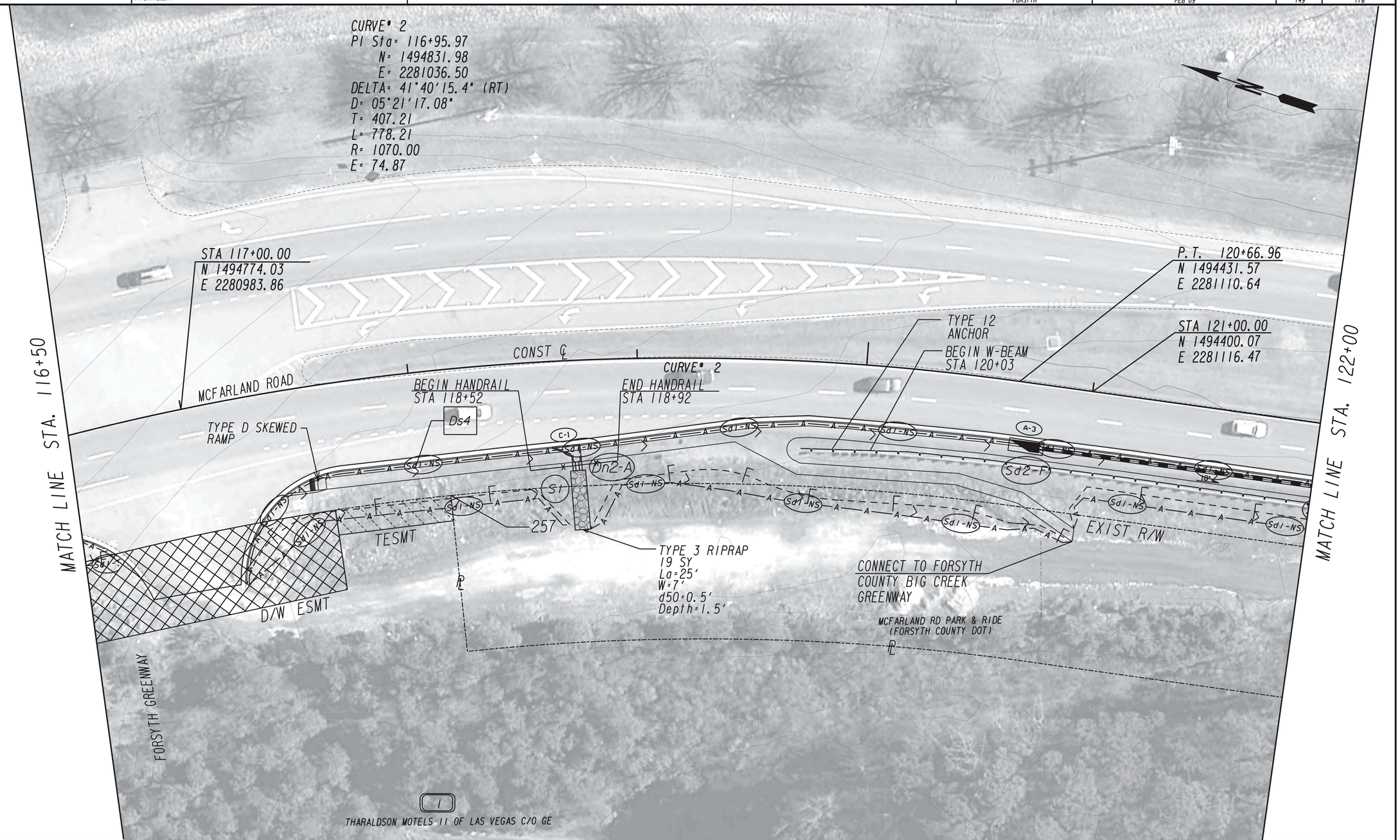

PROPERTY AND EXISTING R/W LINE
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 3

PEB 09
FORSYTH COUNTY

DRAWING No.
54-053

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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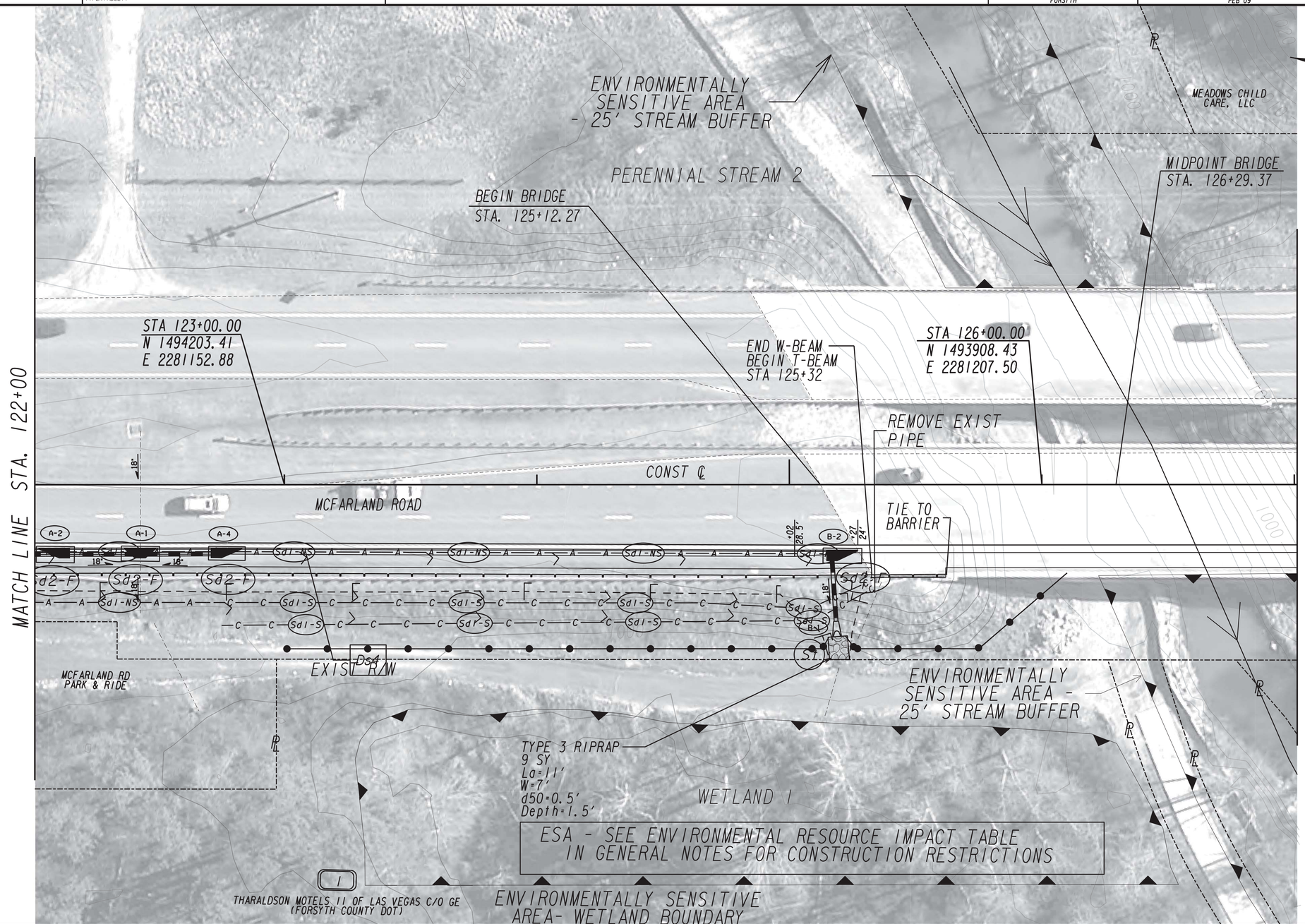

PROPERTY AND EXISTING R/W LINE
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 3

PEB 09
FORSYTH COUNTY

DRAWING No.
54-054

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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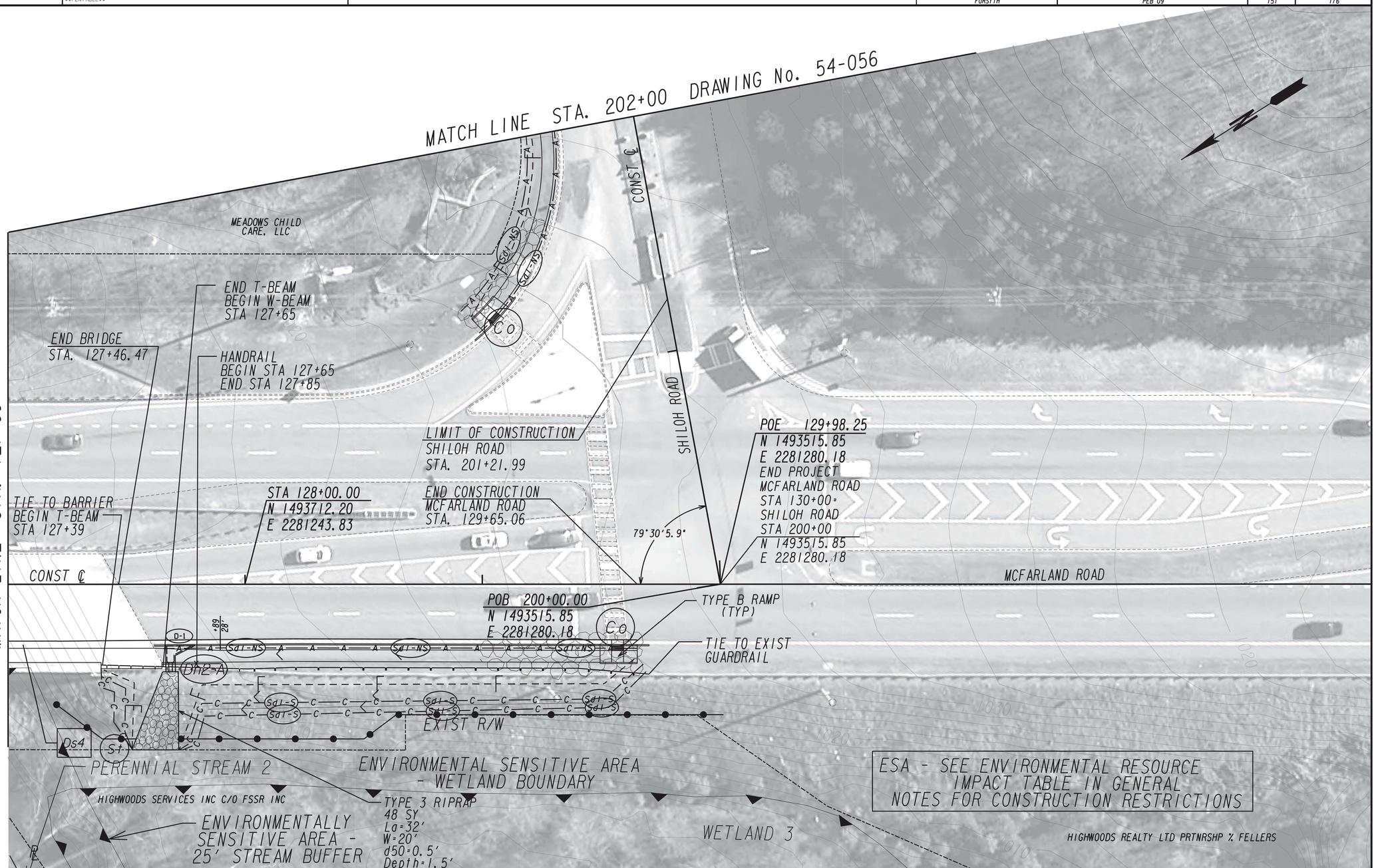

PROPERTY AND EXISTING R/W LINE	
REQUIRED R/W LINE	
CONSTRUCTION LIMITS	C F
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

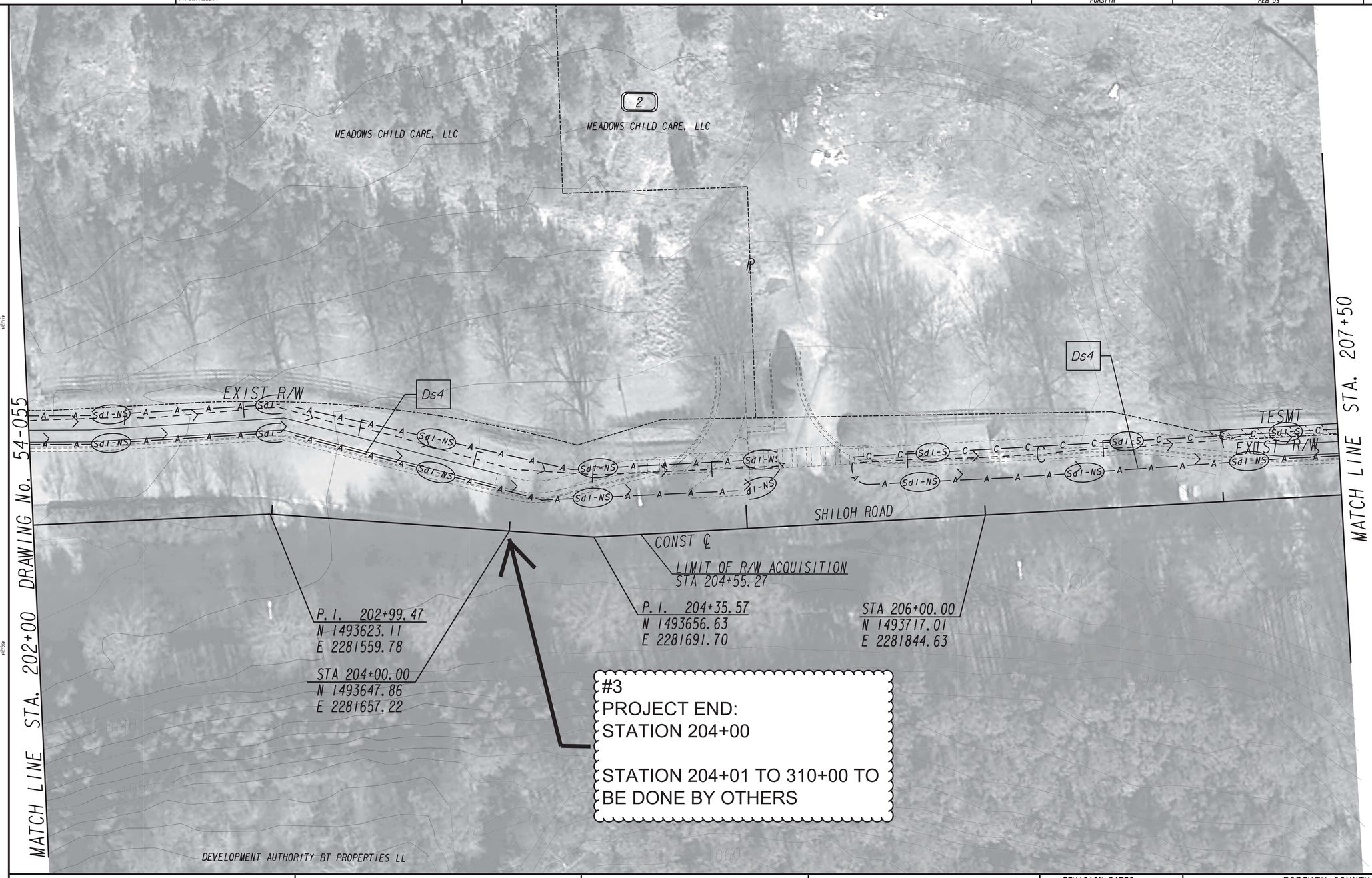
BMP LOCATION DETAILS
STAGE 3

PEB 09
FORSYTH COUNTY

DRAWING No.
54-055

4/27/2012 GPLN

DATE$$$	TIME$$$	$PRF8$	DGN	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
$USER$		$$PENTABLE$$		FORSYTH	PEB 09	152	176



PROPERTY AND EXISTING R/W LINE
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EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES
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GRESHAM SMITH AND PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES		
#3 9/5/2019		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

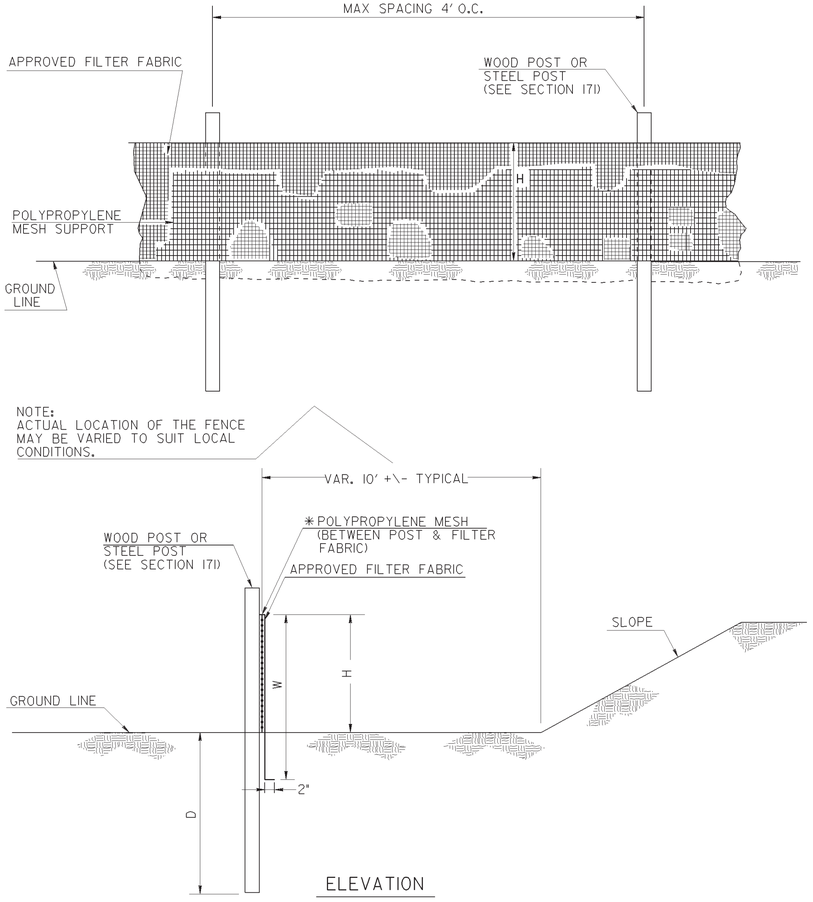
BMP LOCATION DETAILS
STAGE 3

PEB 09
FORSYTH COUNTY

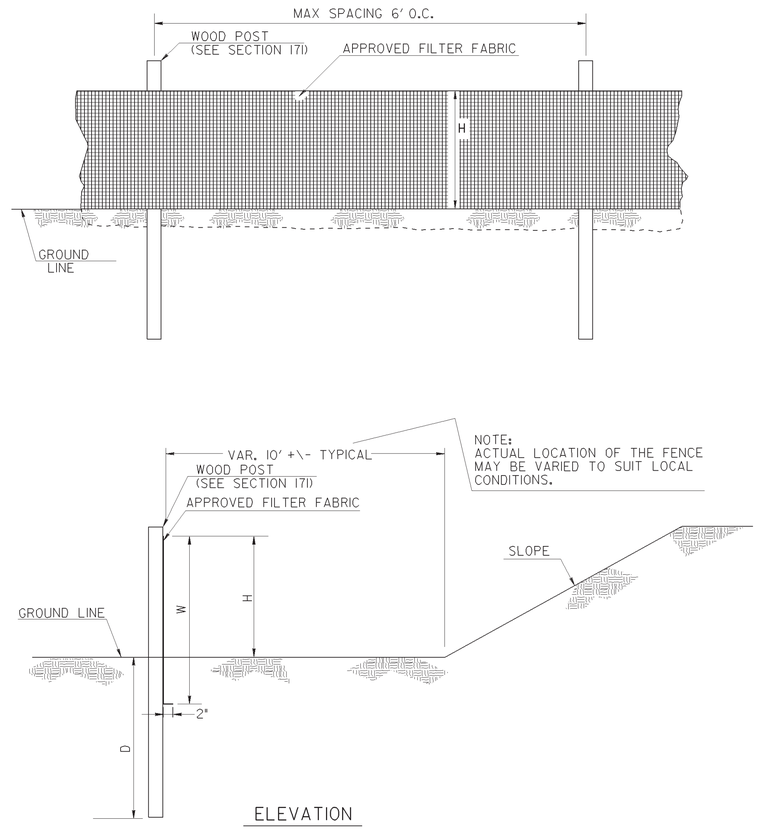
DRAWING No. 54-056

4/27/2012 GPLN

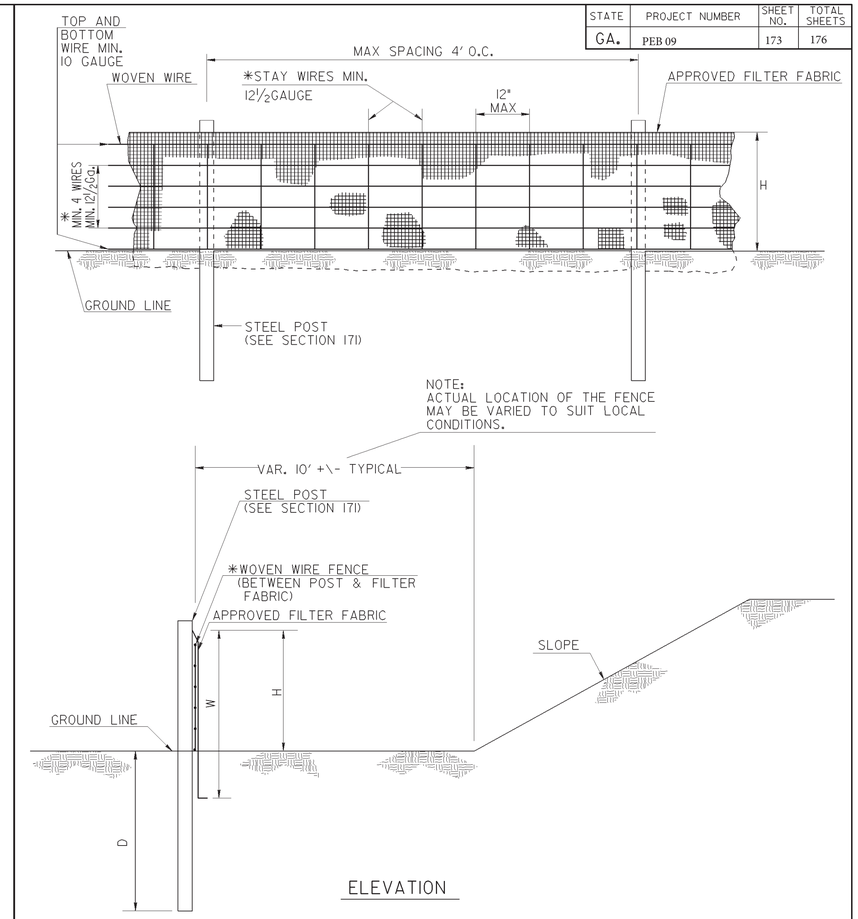
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	173	176



SINGLE ROW TYPE C SILT FENCE WITH POLYPROPYLENE MESH SUPPORT



SINGLE ROW TYPE A SILT FENCE



SINGLE ROW TYPE C SILT FENCE WITH WOVEN WIRE SUPPORT

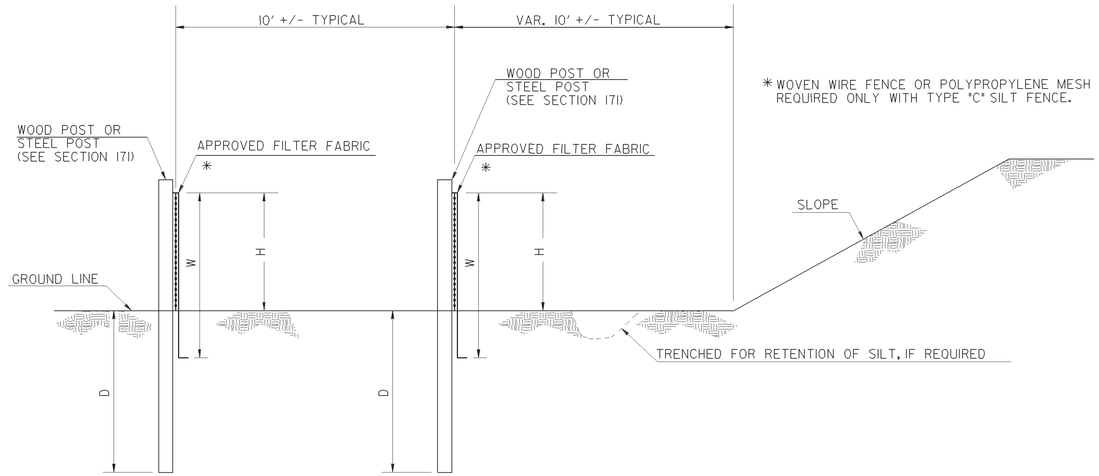
FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

NOTES:

1. WIRE STAPLES SHALL BE AT LEAST 17 GAUGE, WITH LEGS AT LEAST ½ INCHES LONG AND A CROWN AT LEAST ¾INCHES WIDE. NAILS SHALL BE AT LEAST 14 GAUGE, 1INCH LONG , WITH BUTTON HEADS AT LEAST ¾ INCHES WIDE.
2. NAILS OR STAPLES SHALL BE EVENLY PLACED WITH AT LEAST 5 PER POST FOR TYPE A FENCE AND 4 PER POST FOR TYPE C FENCE.
3. THE VERTICAL WIRES FOR THE WOVEN WIRE SUPPORT FENCE SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12½ GAUGE.
4. TEMPORARY SILT FENCE INSTALLATION IS DIFFERENT THAN THE SILT RETENTION BARRIER INSTALLATION.
5. SEE SECTION 171 FOR SILT FENCE SPECIFICATIONS.
6. SEE SECTION 894 FOR FENCING SPECIFICATIONS.
7. SEE QPL-36 FOR A LIST APPROVED SILT FENCE FABRIC.
8. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.

DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE NO SCALE — REV. AND REDRAWN JAN. 2011	
BY		NUMBER D-24A (SHEET 1 OF 4)

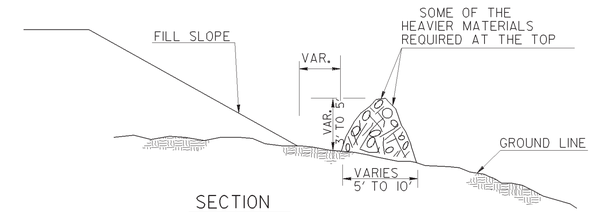
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	PEB 09	174	176



ELEVATION

DOUBLE ROW SILT FENCE

FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.



SECTION

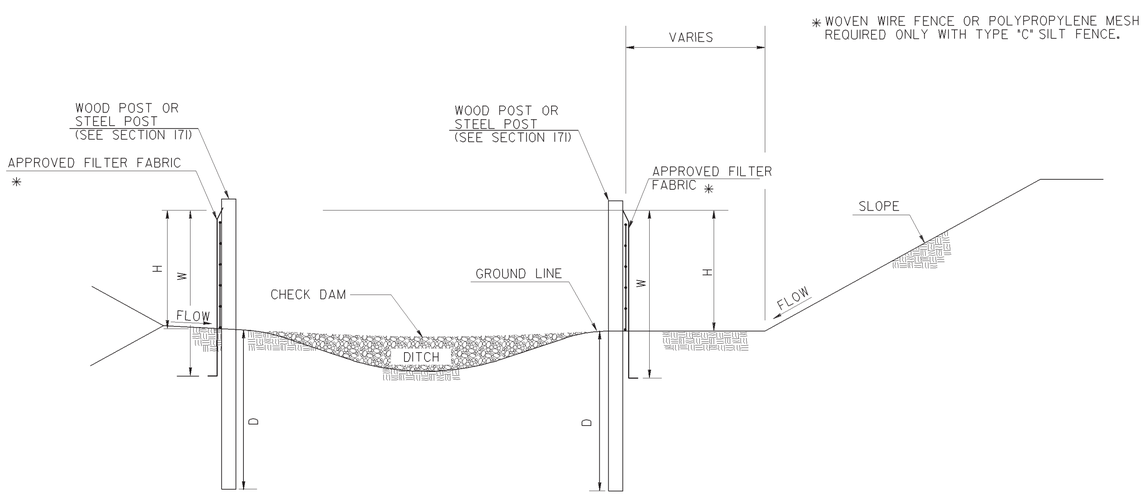
NOTE: INTERMINGLE BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM.

FRONT VIEW

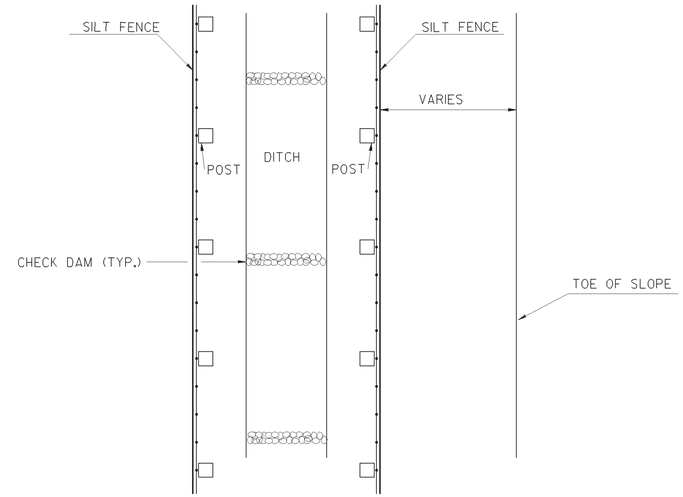
NOTE: BRUSH BARRIER(S) WILL BE INCLUDED IN PAYMENT FOR CLEARING & GRUBBING.

BRUSH BARRIER DETAILS

(FOR USE IN RURAL AREAS)



ELEVATION



PLAN

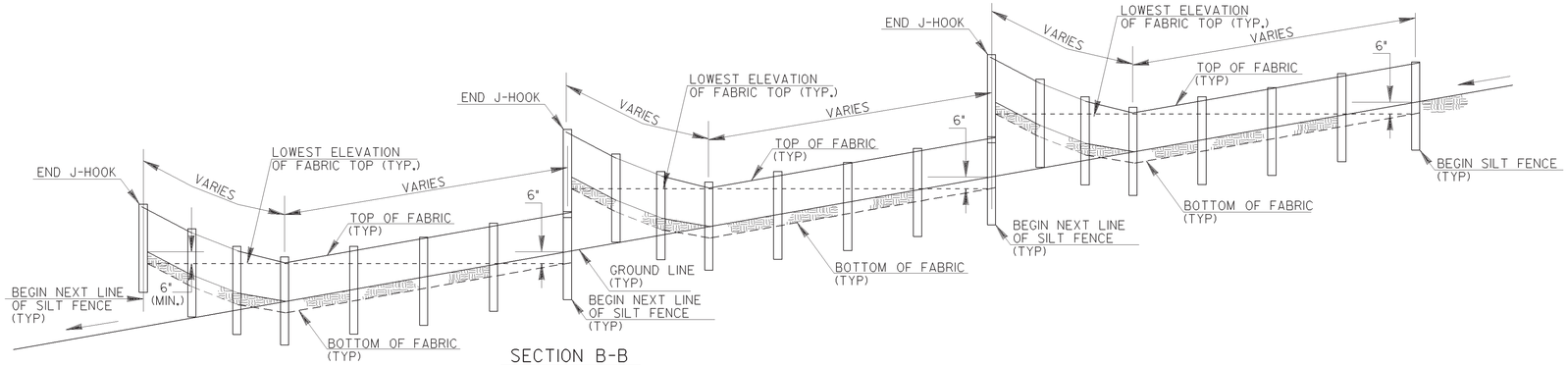
NOTE: TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

SILT FENCE
PERIMETER INSTALLATION ALONG DITCH SECTION

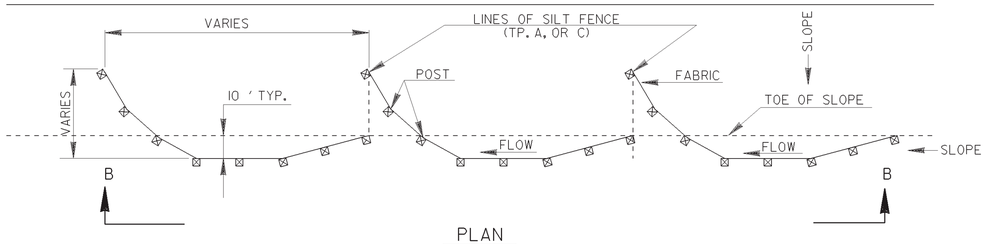
FENCE TYPE	POST LENGTH	H	D	W	TYPICAL USES
TYPE "A"	4 FT.	2'-4"	1'-6"	3'-0"	
TYPE "C"	4 FT.	2'-4"	1'-6"	3'-0"	AT BRIDGE END ROLLS, DOUBLE ROW ALONG STREAMS, WETLANDS AND ENVIRONMENTALLY SENSITIVE AREAS FOR USE OF THIS MATERIAL IN FABRIC CHECKDAMS SEE D-24D.

DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE BERM DITCH, INSTALLATION, BRUSH BARRIER NO SCALE — REV. AND REDRAWN JAN. 2011
BY	NUMBER D-24B (SHEET 2 OF 4)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	175	176



SECTION B-B



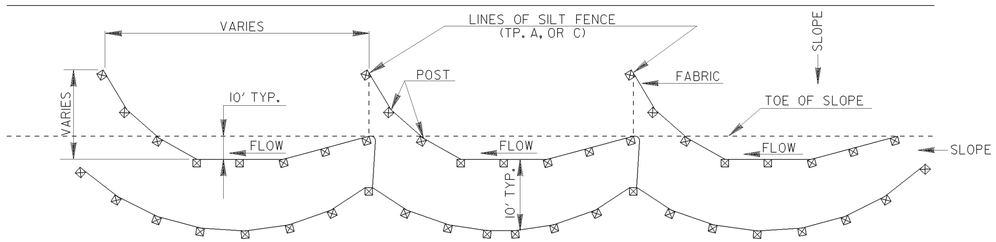
PLAN

SINGLE ROW SILT FENCE

TYPICAL J HOOK SPACING		
SLOPE PERCENT	TYPE OF SILT FENCE	MINIMUM SPACING (FEET)
1% TO 2%	TYPE A	100' ±
2% TO 3%	TYPE A	50' ±
3% TO 4%	TYPE C	50' ±
4% TO 5%	TYPE C	25' ±

NOTE:

1. IF THE GRADE IS BETWEEN 0 TO 1 PERCENT, THE SILT FENCE SHALL BE PLACED ACROSS THE DITCH.
2. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

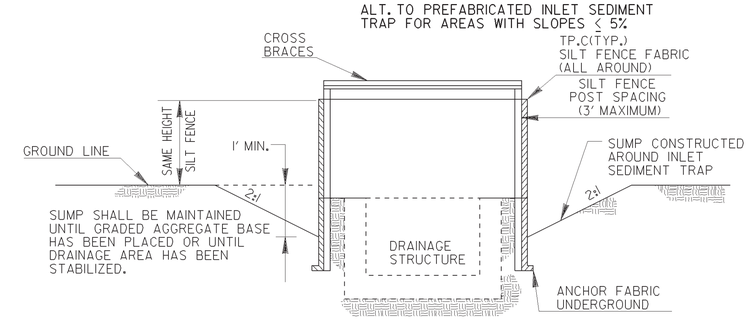


PLAN

DOUBLE ROW SILT FENCE

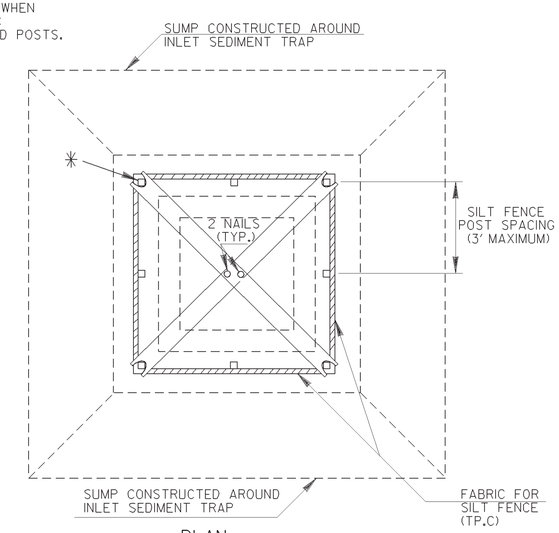
TYPICAL LOCATION AROUND DROP INLETS

ALT. TO PREFABRICATED INLET SEDIMENT TRAP FOR AREAS WITH SLOPES ≤ 5%



ELEVATION

✳ CROSS BRACING REQUIRED WHEN USING "ALTERNATE" TYPE C PRODUCTS WHICH USE WOOD POSTS.



PLAN

CROSS BRACES:

TWO - 2 X 4's WITH ENDS TO FIT POST, PROVIDING STURDY SUPPORT, OR AN APPROVED ALTERNATE

NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH.

NOTE:
SEE SEPARATE SHEET ENTITLED "TEMPORARY SILT FENCE DETAILS" FOR SILT FENCE ERECTION DETAILS.

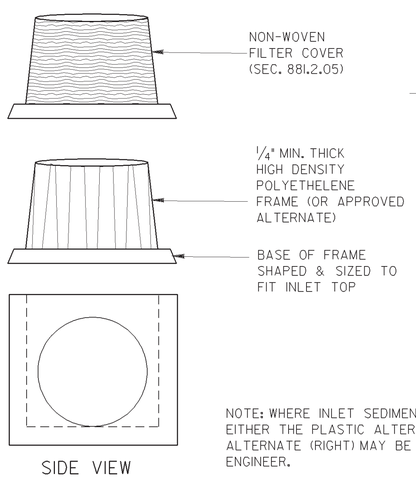
NOTE:
THE DRAINAGE AREA ENTERING THE INLET SEDIMENT TRAP SHALL BE NO GREATER THAN ONE ACRE.

TYPICAL CONSTRUCTION SEQUENCE FOR INLET SEDIMENT TRAP ALTERNATE

1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF FRAME TO STRUCTURE.
3. SLIDE THE FILTER OVER THE FRAME.
4. FILL THE FILTER POCKETS WITH SOIL, #57 GRAVEL OR EQUIVALENT. THE FILTER POCKETS SHOULD BE COMPLETELY FILLED TO ENSURE A GOOD SEAL BETWEEN THE GROUND AND INLET STRUCTURE.
5. BACK FILL AROUND THE FRAME AND FILTER ASSEMBLY IS NOT REQUIRED TO COMPLETE INSTALLATION; HOWEVER, BACK FILLING MAY BE NECESSARY TO COMPLETE EXCAVATION REQUIREMENTS FOR THE SITE.

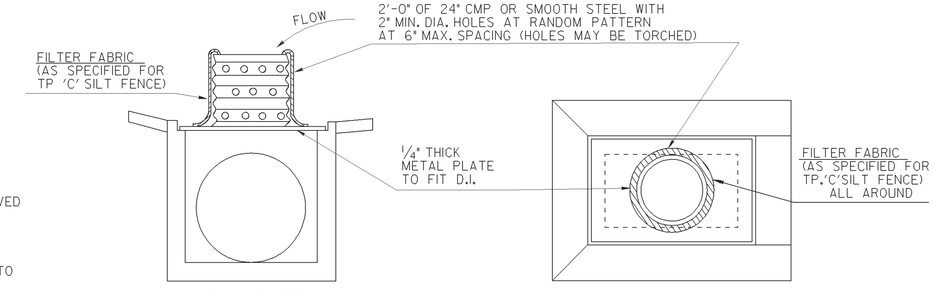
NOTE:
INLET SEDIMENT TRAP ALTERNATE SHALL BE AS APPROVED BY THE GA. D.O.T. OFFICE OF MATERIALS & RESEARCH. DETAILS & SPECIFICATIONS NOT SHOWN ARE PER THE MANUFACTURER'S REQUIREMENTS.

(PLASTIC ALTERNATE)



SIDE VIEW

(METAL ALTERNATE)



SIDE VIEW

TOP VIEW

NOTE: WHERE INLET SEDIMENT TRAPS ARE SPECIFIED, EITHER THE PLASTIC ALTERNATE (LEFT) OR THE METAL ALTERNATE (RIGHT) MAY BE USED AS APPROVED BY THE ENGINEER.

NOTE:
INLET SEDIMENT TRAP AND INLET TO BE BUILT CONTINUOUS WITH PIPE

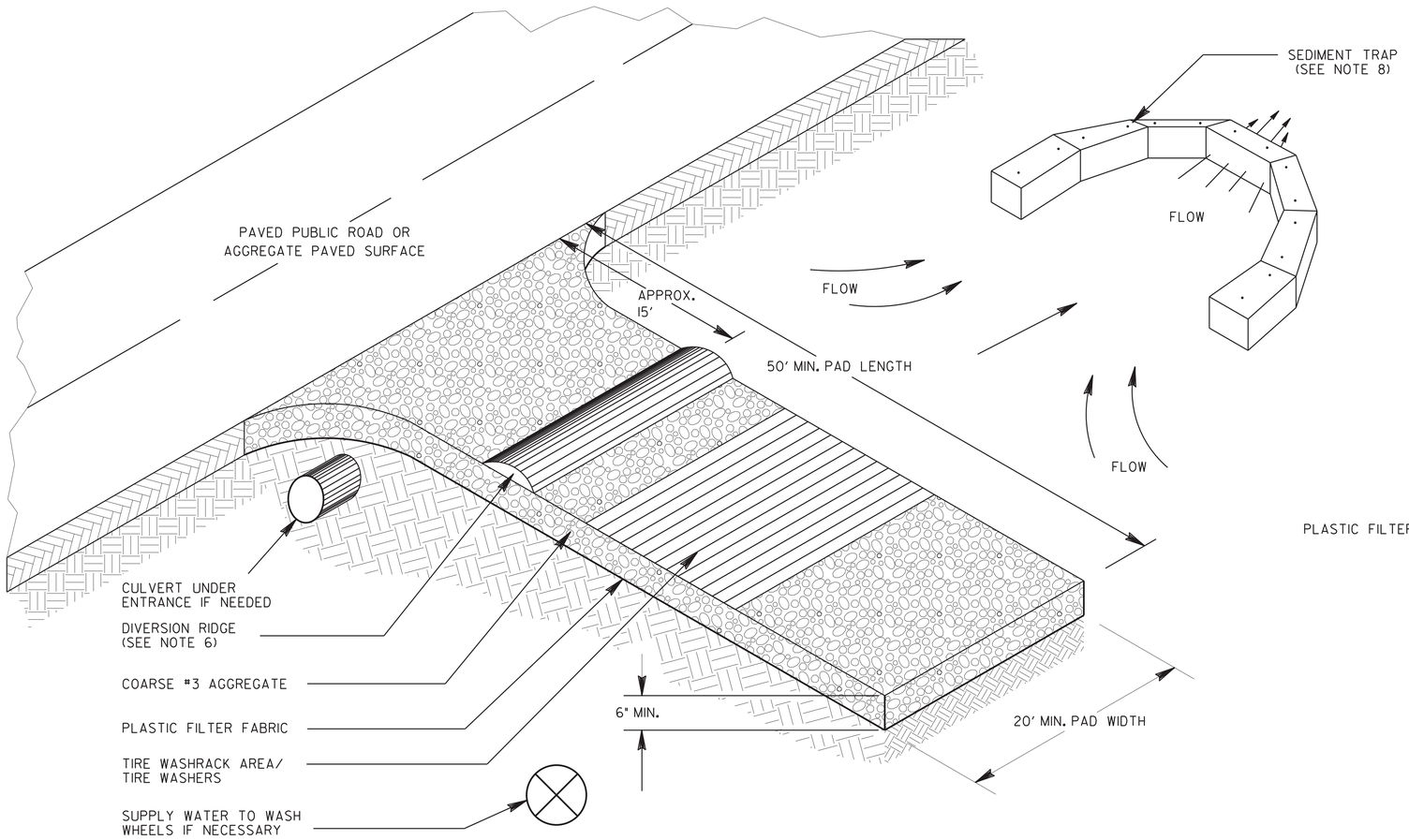
NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH

NOTE: SEE SEPARATE DETAILS FOR SILT FENCE AROUND DROP INLETS.

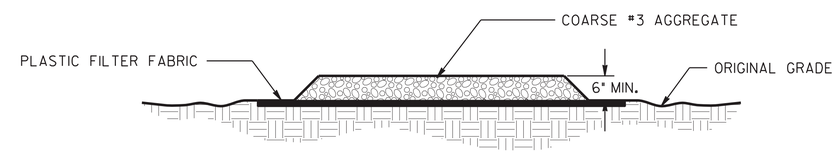
INLET SEDIMENT TRAP - FOR DROP INLETS

DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE J-HOOK, INLET SEDIMENT TRAPS
	NO SCALE — JANUARY 2011
BY	NUMBER D-24C (SHEET 3 OF 4)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	PEB 09	176	176



ENTRANCE ELEVATION



GENERAL NOTES:

1. AVOID LOCATING CONSTRUCTION EXITS ON STEEP SLOPES OR AT SHARP CURVES ON PUBLIC ROADS. CONSTRUCTION EXITS ARE NOT REQUIRED FOR DIRT PUBLIC ROADS.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. AGGREGATE SIZE SHALL BE COARSE #3 AGGREGATE WITH 0.0% PASSING THE 1" U.S. STANDARD SIEVE.
4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
5. GRAVEL PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED 6" TO 8" HIGH WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
8. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD DOES NOT SUFFICIENTLY REMOVE THE MUD, THE TIRES SHALL BE WASHED PRIOR TO ENTERING PUBLIC ROADS. THE WASHING SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
10. AGGREGATE SHALL BE KEPT LOOSE OR SCARIFIED WHEN AGGREGATE BECOMES CONSOLIDATED.
11. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR, AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL MUD AND DEBRIS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

PAY ITEM:

163-0300	CONSTRUCTION EXIT	(EA)
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	(EA)

BY	REVISION	DATE
DLE	REV. GSWCC 2016 MANUAL	4-22-2016
TPC	REV. CONSTR. EXIT LABELS	01-19-11

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS

CONSTRUCTION EXIT

NO SCALE

FEBRUARY 2001

DESIGNED ____
DRAWN DLE
TRACED ____
CHECKED ____

NUMBER
D-41