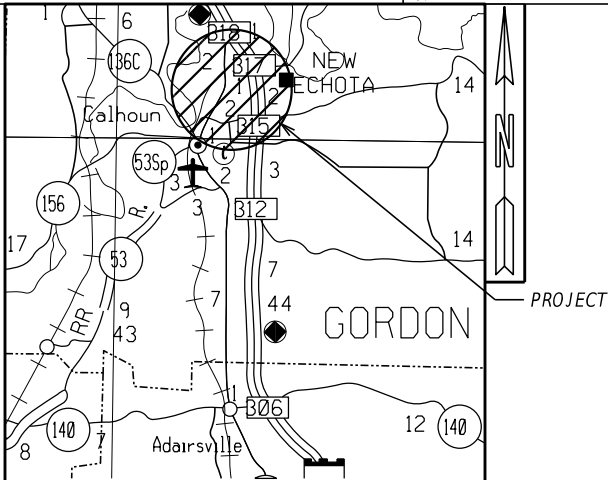


CITY OF CALHOUN

GORDON COUNTY, GEORGIA

PLAN AND PROFILE OF PROPOSED

CURTIS PARKWAY - PHASE II



LOCATION SKETCH

DESIGN DATA:
TRAFFIC A.D.T.: 8,800 (2022)
TRAFFIC A.D.T.: 12,600 (2045)
TRAFFIC D.H.V.: 1,200
DIRECTIONAL DIST: 0.54
% TRUCKS: 2%
24 HR. TRUCKS %: 2%
SPEED DESIGN: 35 MPH

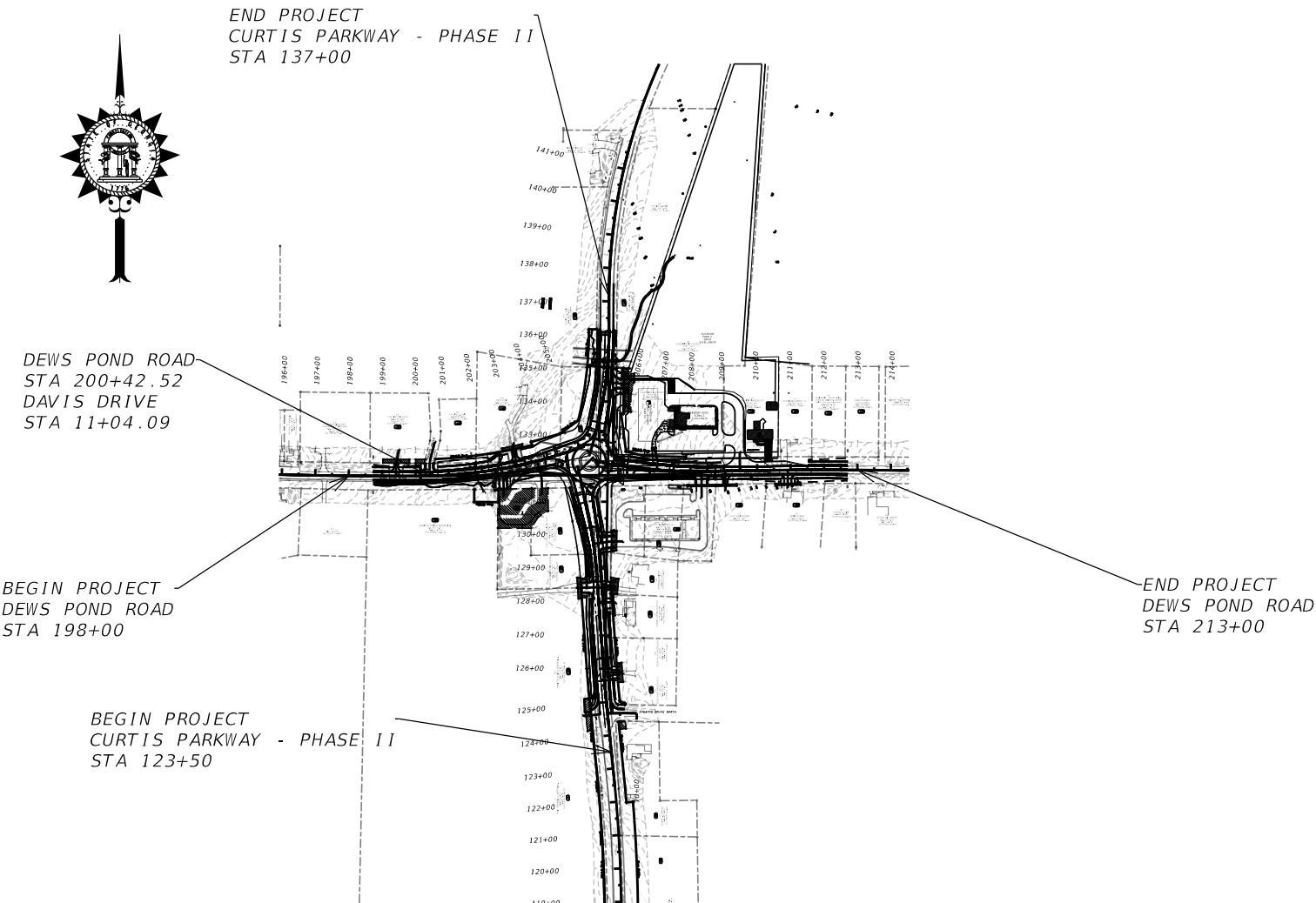
LOCATION & DESIGN

FUNCTIONAL CLASS:
7U-LOCAL(URBAN)

THIS PROJECT IS 100% IN GORDON
COUNTY AND IS 100% IN CONG.
DISTRICT NO. 14.

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.

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 CITY OF CALHOUN IN ANY WAY.



CURTIS D. COMER
GSWCC LEVEL II CERTIFICATION #: 0000042522

LENGTH OF PROJECT	COUNTY No.129 GORDON Project No.
	MILES
NET LENGTH OF ROADWAY	0.2230
NET LENGTH OF BRIDGES	0
NET LENGTH OF PROJECT	0.2230
NET LENGTH OF EXCEPTIONS	0
GROSS LENGTH OF PROJECT	0.2230

PLANS COMPLETED 07-10-2026	
REVISIONS	

DRAWING NO.	DESCRIPTION
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04-0001 TO 04-0003	GENERAL NOTES
05-0001 TO 05-0003	TYPICAL SECTIONS
06-0001 TO 06-0004	SUMMARY OF QUANTITIES
11-0001	CONSTRUCTION LAYOUT / STAKEOUT
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15-0001 TO 15-004	MAINLINE PROFILE
21-0001 TO 21-0004	DRAINAGE AREA MAP
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40-0003	A-4 DETACTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT REQUIREMENTS
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40-0014	T-5A DETAILS OF REGULATORY SIGNS SHEET 1 OF 2
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40-0024	T-15A RAISED PAVEMENT MARKER LOCATION NON-LIMITED ACCESS ROADWAY

DRAWING NO.	DESCRIPTION
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41-0001A	1011A STANDARD BRICK MANHOLE
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41-0003	1019A STANDARD DROP INLETS (BUILT IN PLACE)
41-0004	1019A STANDARD PRECAST DROP INLETS
41-0005	1030D STANDARD CONCRETE & METAL PIPE CULVERTS SHEET 1 OF 3 (TRENCH CONSTRUCTION, BEDDING, BACKFILLING)
41-0006	1030D STANDARD CONCRETE & METAL PIPE CULVERTS SHEET 2 OF 3 (TRENCH CONSTRUCTION, BEDDING, BACKFILLING)
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41-0008	1033D CATCH BASINS FOR USE WITH (6" OR 8" HT.) & GUTTER
41-0009	1033D PRECAST CATCH BASINS FOR USE WITH (6" OR 8" HT.) AND GUTTER
41-0010	1034D CATCH BASINS FOR USE WITH CURB (6' OR 8" HT.) AND GUTTER IN SAGS OR LOW POINTS
41-0011	1034D PRECAST CATCH BASINS FOR USE WITH CURB (6' OR 8" HT.) AND GUTTER IN SAGS OR LOW POINTS
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DRAWING NO.	DESCRIPTION
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56-0012	D-56 STONE RIPRAP & SAND BAG TEMPORARY CHECK DAMS

DRAWING NO.	DESCRIPTION



REVISION DATES

INDEX
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

02-0002

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REVISION DATES		

REVISION SUMMARY
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:	DATE:	DRAWING No. 03-0001
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

1. ALL BORROW AND WASTE SITES FOR THIS PROJECT SHALL BE ENVIRONMENTALLY APPROVED PRIOR TO CONSTRUCTION ACTIVITIES OCCURRING IN THEM. ALL COMMON FILL OR EXCESS MATERIAL DISPOSED OUTSIDE THE PROJECT RIGHT OF WAY SHALL BE PLACED IN EITHER A PERMITTED SOLID WASTE FACILITY, A PERMITTED INERT WASTE LANDFILL, OR IN AN ENGINEERED FILL. SEE SECTION 201 OF THE STANDARD SPECIFICATION AND SUPPLEMENTS THERETO FOR ADDITIONAL INFORMATION.

2. THERE IS NO KNOWN SUITABLE PLACE TO BURY EXISTING BRIDGE/CONSTRUCTION DEBRIS WITHIN THE PROJECT'S LIMITS. THE CONTRACTOR SHALL PROVIDE AN ENVIRONMENTALLY APPROVED SITE AS SHOWN IN GA. SPECIFICATION 201 TO DISPOSE OF EXISTING BRIDGE/CONSTRUCTION DEBRIS AT NO ADDITIONAL COST TO THE DEPARTMENT.

3. AN N.O.I. IS REQUIRED FOR THIS PROJECT.

4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS REQUIRED FOR THIS PROJECT PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

5. A STAGING NARRATIVE SHALL BE SUBMITTED BY THE CONTRACTOR AS PART OF THE BID PACKAGE (INCLUDING SHORT DURATION DETOURS) AS NEEDED THROUGHOUT THE CONSTRUCTION PROCESS. OWNER'S REVIEW AND ACCEPTANCE OF THE PROPOSED STAGING WILL BE WEIGHED AND CONSIDERED AS PART OF THE CONTRACT AWARD. ONCE PROJECT HAS BEEN AWARDED, FORMAL STAGING PLANS WILL NEED TO BE SUBMITTED AND APPROVED BY THE CITY AND ENGINEER OF RECORD.

6. ALL EXISTING DRAINAGE STRUCTURES WITHIN THE LIMITS OF THE PROJECT SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. ANY DEBRIS THAT GOES INTO AN EXISTING DRAINAGE STRUCTURE AS A RESULT OF THE PROJECT WILL BE CLEANED OUT AT NO ADDITIONAL COST TO THE OWNER.

7. ALL EXISTING DRAINAGE STRUCTURES INCLUDING HEADWALLS NO LONGER IN USE SHALL BE REMOVED UNLESS OTHERWISE NOTED ON PLANS OR DIRECTED BY THE ENGINEER. REMOVAL OF PIPE SHALL BE INCLUDED IN THE PRICE BID FOR CLEARING AND GRUBBING. EXISTING PIPE THAT REMAINS IN PLACE UNDER THE ROADWAY SHOULD BE FILLED WITH FLOWABLE FILL.

8. SAW CUTTING MAY BE REQUIRED IN ORDER TO ACHIEVE A NEAT LINE AND COST OF SAW CUTTING TO BE INCLUDED IN THE BID SUBMITTED.

9. THE COST FOR SHEETING OR SHORING, IF REQUIRED, WILL BE INCLUDED IN THE OVERALL BID FOR THE PROJECT.

10. ALL DRIVEWAYS THAT ARE TO BE RECONSTRUCTED WILL BE PAVED BACK TO THE TIE IN POINT OR REQUIRED RIGHT OF WAY, WHICHEVER IS GREATER. ALL DRIVEWAYS OVER 11% IN GRADE SHALL BE PAVED WITH CONCRETE UNLESS OTHERWISE NOTED IN THE PLANS. ALL OTHER DRIVEWAYS SHALL BE REPLACED AS FOLLOWS: ASPHALT FOR ASPHALT, CONCRETE FOR CONCRETE AND ASPHALT FOR EARTH / GRAVEL DRIVES. RESIDENTIAL DRIVES SHALL BE 14 FEET WIDE AT THE THROAT UNLESS NOTED OTHERWISE IN THE PLANS. COMMERCIAL DRIVES SHALL BE 24 FEET WIDE UNLESS NOTED OTHERWISE IN THE PLANS. EXISTING DRIVEWAY LOCATIONS ARE SHOWN FROM THE BEST AVAILABLE DATA; THE CONTRACTOR SHALL CONSTRUCT DRIVEWAYS TO MATCH THE LOCATION OF EXISTING DRIVEWAYS AT THE TIE IN POINT, IF APPLICABLE. THE CONTRACTOR SHALL OBTAIN THE APPROVAL FROM THE ENGINEER PRIOR TO MAKING ANY REVISIONS TO LOCATION, WIDTH, AND/OR NUMBER OF DRIVES TO BE CONSTRUCTED. DRIVES SHALL BE CONSTRUCTED USING:

RESIDENTIAL:
ASPHALT - (SURFACE COURSE FROM THE MAINLINE),
GRADED AGGREGATE BASE, 6".
CONCRETE - DRIVEWAY CONCRETE, 6 IN THICK,
(URBAN SHOULDER) CONC VALLEY GUTTER, 6 IN.

COMMERCIAL:
ASPHALT - (SURFACE COURSE FROM THE MAINLINE),
220 LB/SY RECYCLED ASPHALT CONC, 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME
GRADED AGGREGATE BASE, 6".
CONCRETE - DRIVEWAY CONCRETE, 8 IN THICK
(URBAN SHOULDER) CONC VALLEY GUTTER, 8 IN.

UTILITY OWNER	SERVICE
GEORGIA POWER (SHANNON WILLIAMS) 706-604-7487	ELECTRIC
CITY OF CALHOUN 706-602-6129	ELECTRIC
NORTH GEORGIA EMC (BRIAN TOWERS) 706-581-6167	ELECTRIC
AT&T (TODD BAGLEY) 706-236-3913	TELECOMMUNICATIONS
CALNET-TELECOMMUNICATIONS (BRAD CARRICK) 706-602-6156	TELECOMMUNICATIONS
COMCAST (JODY CHILDRESS) 706-252-5045	TELECOMMUNICATIONS/CABLE TV
ATLANTA GAS LIGHT 470-259-5586	GAS
CITY OF CALHOUN 770-548-0359	WATER
CITY OF CALHOUN 706-602-6101	SEWER



Know what's below.
Call before you dig.

11. ALL ESTABLISHED GRASSED/SODDED COMMERCIAL OR RESIDENTIAL YARDS THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE RE-SODDED BACK TO THE TIE IN POINT OR REQUIRED RIGHT OF WAY, WHICHEVER IS GREATER, AS DIRECTED BY THE CITY'S REPRESENTATIVE.

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. IF SIDEWALK IS PROPOSED OR EXISTING, THE SIGNS SHALL BE ERECTED AT A HEIGHT OF 7 FEET ABOVE THE SIDEWALK.

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. WHEN GUARDRAIL IS PRESENT OR BEING PROPOSED, SIGNS SHALL BE POSTED AN UNSTIPULATED DISTANCE BEHIND GUARDRAIL.

5. SINGLE PLATE, HORIZONTAL RECTANGULAR SIGNS OVER 48 INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2 INCH x ½ 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 ¼ 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 ½ 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 SIGNING SHALL HAVE TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING.

12. A ½ 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 ¼ INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.

14. 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.



REVISION DATES

GENERAL NOTES
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:		DATE:		DRAWING No.
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04-0002

GENERAL NOTES - SPECIAL ROADSIDE SIGNS

1. SPECIAL ROADSIDE SIGNS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND ALL SUPPLEMENTS THERETO, AS WELL AS TO THE GEORGIA STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.

2. SPECIAL ROADSIDE SIGNS SHALL BE FABRICATED USING ALUMINUM BOLTED EXTRUDED PANELS.

3. BACKGROUND FOR SPECIAL ROADSIDE SIGNS SHALL BE STANDARD INTERSTATE GREEN, TYPE 9 (VERY HIGH INTENSITY), REFLECTIVE SHEETING, UNLESS SPECIFIED OTHERWISE IN THE PLANS.

4. LEGENDS FOR SPECIAL ROADSIDE SIGNS SHALL BE WHITE, TYPE 11 (VERY HIGH INTENSITY), REFLECTIVE SHEETING LETTERS, NUMERALS, SYMBOLS, AND BORDERS ON 0.032 INCH ALUMINUM CUTOUTS.

5. SHIELDS SHALL BE 0.08 INCH ALUMINUM OF THE SIZE AND SHAPE SPECIFIED IN THE PLANS. U.S. AND GEORGIA SHIELD LEGENDS SHALL BE BLACK NUMERALS AND LETTERS SILK SCREENED ON WHITE, TYPE 9 (VERY HIGH INTENSITY), REFLECTIVE SHEETING BACKGROUNDS WITH NO BORDERS. INTERSTATE SHIELDS SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

6. FOR DETAILS OF U.S. AND INTERSTATE SHIELDS AND ARROWS, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

7. LEGENDS FOR OVERHEAD HIGHWAY SIGNS SHALL BE APPLIED TO SIGN VIA SILK SCREEN OR DIRECT APPLY

8. SPACING BETWEEN LETTERS OR OTHER CHARACTERS THAT IS NOT SHOWN IN THE PLANS MAY BE RECOMMENDED BY THE MANUFACTURER, BUT SHALL CONFORM TO INTERSTATE SIGNING REQUIREMENTS.

9. FOR ASSEMBLY DETAILS AND ASSEMBLY COMPONENTS DETAILS ON ALUMINUM BOLTED EXTRUDED PANELS, REFER TO GEORGIA STANDARDS 9041 AND 9042.

10. FOR DETAILS OF SPECIAL ROADSIDE SIGNS SEE DETAILS OF SPECIAL ROADSIDE SIGNS.

11. 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 DISTRICT OFFICE OF TRAFFIC OPERATIONS.

12. HORIZONTAL CLEARANCE FOR SPECIAL ROADSIDE SIGNS SHALL BE 32 FEET FROM THE NORMAL EDGE OF PAVEMENT TO THE NEAR EDGE OF THE SIGN UNLESS SPECIFIED OTHERWISE IN THE PLANS.

13. SPECIAL ROADSIDE SIGNS ERECTED ON STEEP CUT SLOPES SHALL HAVE A MINIMUM CLEARANCE OF 1 FOOT ABOVE THE GROUNDLINE AND MAXIMUM HEIGHT OF 10 FEET ABOVE THE NORMAL EDGE OF PAVEMENT TO THE BOTTOM OF THE SIGN.
14. EXIT GORE SIGNS SHALL BE ERECTED WITHIN A RANGE OF 25 FEET MINIMUM TO 100 FEET MAXIMUM FROM THE PHYSICAL NOSE OF THE RAMP. A MINIMUM CLEARANCE OF 2 FEET FROM THE EDGES OF THE RAMP AND MAINLINE PAVED SHOULDERS TO THE RIGHT AND LEFT EDGES OF THE SIGN, RESPECTIVELY SHALL BE MAINTAINED.

15. POST LENGTHS, POST SIZES, AND FOOTING SIZES FOR SPECIAL ROADSIDE SIGNS ARE ESTIMATED, ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE CORRECT LENGTHS AND SIZES ACCORDING TO GEORGIA STANDARDS PRIOR TO ORDERING MATERIALS. FOR ERECTION AND FOUNDATION DETAILS FOR SPECIAL ROADSIDE SIGNS WITH BREAK-AWAY POSTS, REFER TO GEORGIA STANDARDS 9054A, 9054B, AND 9054C.

16. GALVANIZED STEEL I-BEAMS SHALL HAVE ALL IDENTIFICATION NUMBERS RE-ESTABLISHED AFTER COMPLETION OF GALVANIZING.

17. FOR BREAK-AWAY POSTS THE CONTRACT BID PRICE FOR CLASS "A" CONCRETE SHALL INCLUDE THE COST OF FURNISHING AND PLACING REINFORCEMENT STEEL AND STUB POSTS AS SHOWN IN THE FOOTING DETAILS ON GEORGIA STANDARD 9054A.

18. THE NEAR EDGE OF SIGNS ERECTED BEHIND GUARD RAIL SHALL BE 6 FEET BEHIND THE FACE OF THE GUARD RAIL.

19. THE CONTRACTOR SHALL ENSURE THAT ALL SPECIAL ROADSIDE SIGNS INSTALLED BY THIS PROJECT HAVE A MINIMUM SIGHT DISTANCE OF 1000 FEET. CLEARING OF OBSTACLES TO OBTAIN THE MINIMUM SIGHT DISTANCE SHALL BE IN ACCORDANCE WITH SECTION 201 OF THE GEORGIA STANDARD SPECIFICATIONS. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE OVERALL PRICE BID FOR THE PROJECT.

20. BREAK-AWAY POSTS MARKED WITH AN (*) ARE SPECIAL DESIGN. THE CONTRACTOR SHALL NOT CHANGE THESE POSTS IN ANY WAY WITHOUT APPROVAL FROM THE DISTRICT OFFICE OF TRAFFIC OPERATIONS.

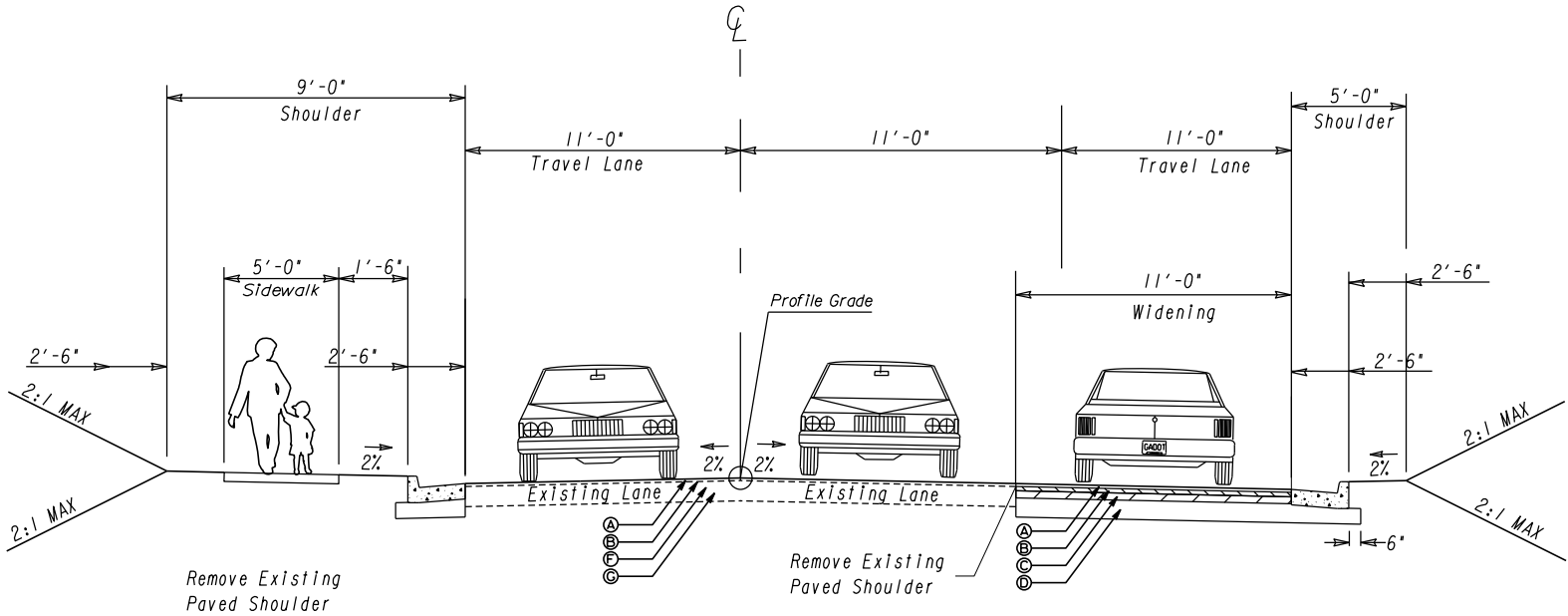


REVISION DATES

GENERAL NOTES
CURTIS PARKWAY - PHASE II
GORDON COUNTY

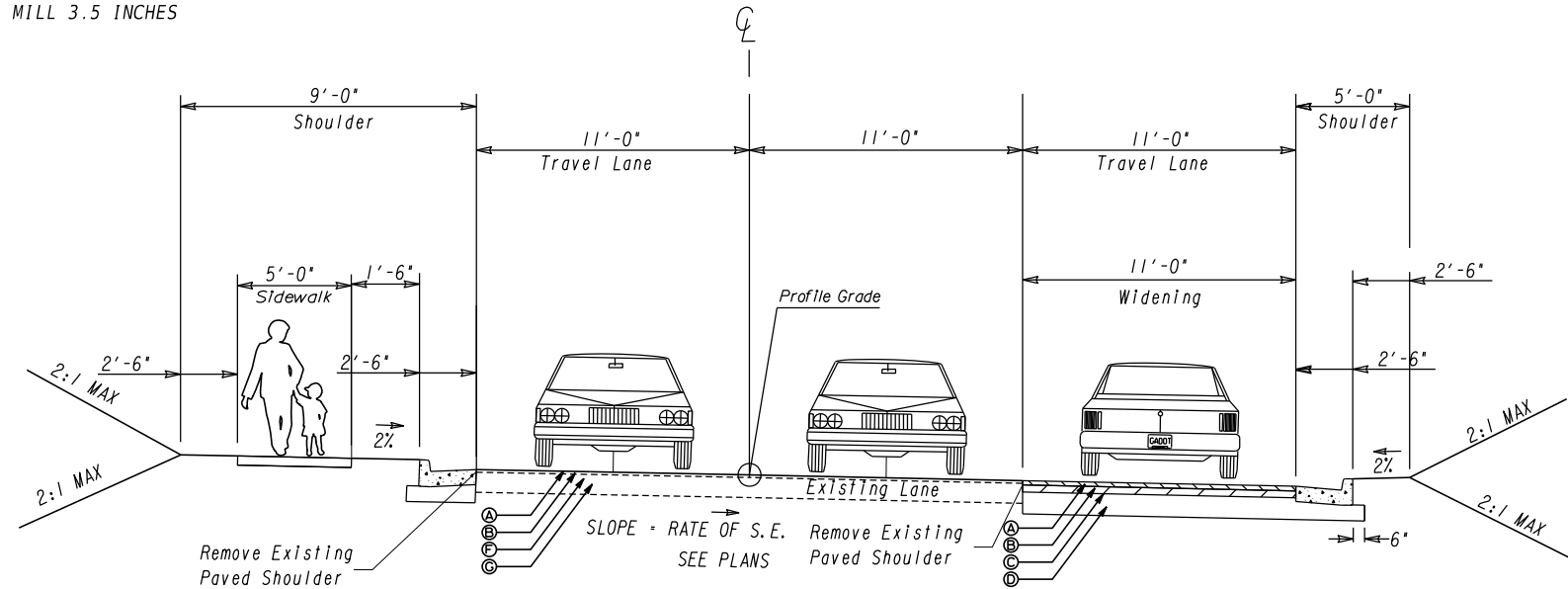
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DRAWING No.
04-0003



TANGENT SECTION

- MAINLINE PAVEMENT:
- A. RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCLUDE BITUM MATL & H LIME 165 LB/SY
 - B. RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCLUDE BITUM MATL & H LIME, 220 LB/SY
 - C. RECYCLED ASPH CONC 25 MM SUPERPAVE, GP1 OR 2, INCLUDE BITUM MATL & H LIME, 330 LB/SY
 - D. GR AGGR BASE CRS, 8 INCH, INCL MATL
- MILL AND OVERLAY SECTION (EXISTING PAVEMENT):
- A. RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCLUDE BITUM MATL & H LIME 165 LB/SY
 - B. RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCLUDE BITUM MATL & H LIME, 220 LB/SY
 - F. RECYCLED ASPH CONC LEVELING, INCL BITUM MATL AND H LIME
 - G. MILL 3.5 INCHES



SUPER ELEVATED SECTION

SLOPE : SEE ROADWAY PLANS FOR SUPERELEVATION RATES AND TRANSITIONS.

NOTE: FOR METHOD OF SUPERELEVATION SEE CONSTR PLAN & PROFILE SHEETS-CURVE DATA. LOCATIONS OF NORMAL CROWN & FULL S.E. NOTED ON CONSTR CENTERLINE.

★ SEE PLAN SHEETS.

SHOULDER MAY BE GRADED AWAY FROM ROADWAY TO FACILITATE THE SLOPE TIE TO EXISTING GROUND.



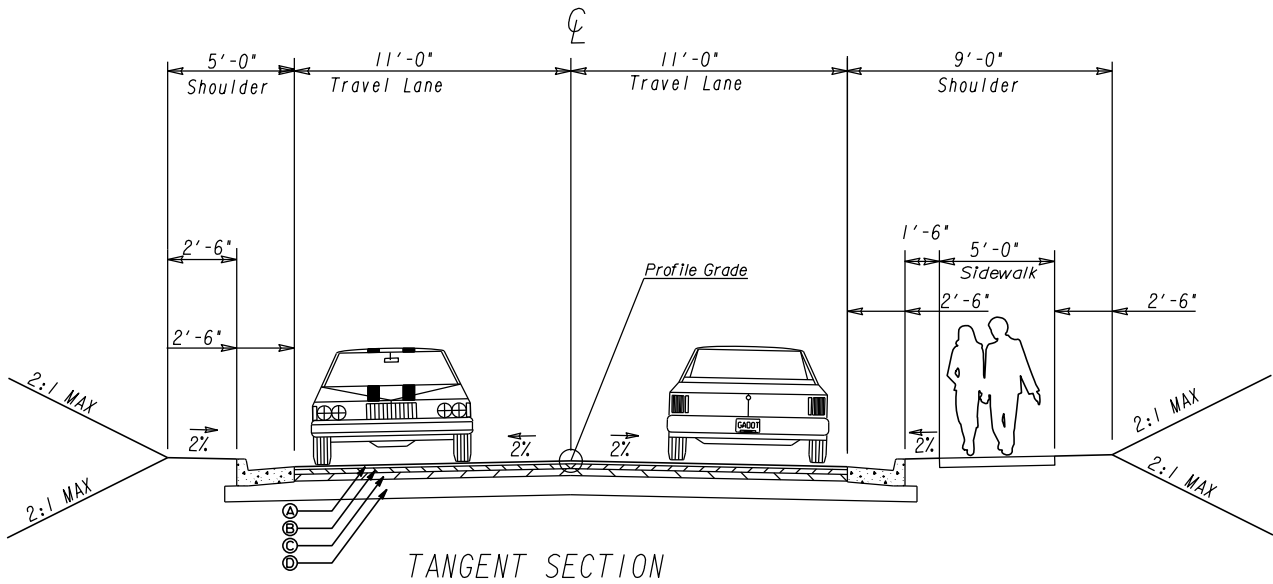
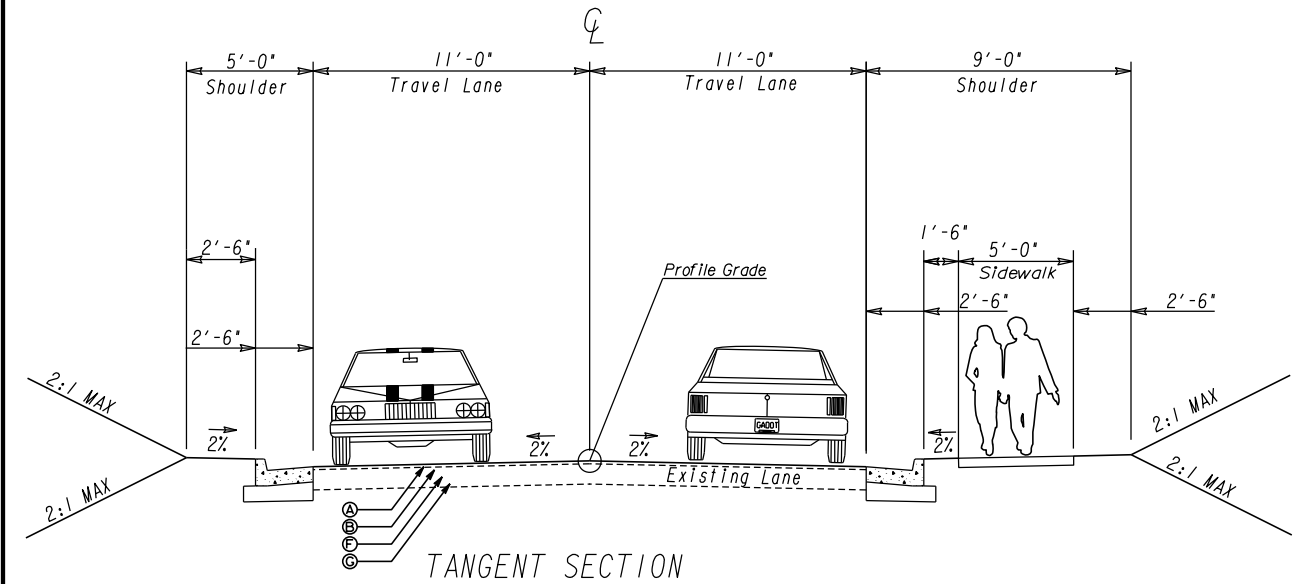
NOT TO SCALE

REVISION DATES

TYPICAL SECTIONS
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

05-0001



- MAINLINE PAVEMENT:
- A. RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCLUDE BITUM MATL & H LIME 165 LB/SY
 - B. RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCLUDE BITUM MATL & H LIME, 220 LB/SY
 - C. RECYCLED ASPH CONC 25 MM SUPERPAVE, GP1 OR 2, INCLUDE BITUM MATL & H LIME, 330 LB/SY
 - D. GR AGGR BASE CRS, 8 INCH, INCL MATL
- MILL AND OVERLAY SECTION (EXISTING PAVEMENT):
- A. RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCLUDE BITUM MATL & H LIME 165 LB/SY
 - B. RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCLUDE BITUM MATL & H LIME, 220 LB/SY
 - F. RECYCLED ASPH CONC LEVELING, INCL BITUM MATL AND H LIME
 - G. MILL 3.5 INCHES

SLOPE : SEE ROADWAY PLANS FOR SUPERELEVATION RATES AND TRANSITIONS.

NOTE: FOR METHOD OF SUPERELEVATION SEE CONSTR PLAN & PROFILE SHEETS-CURVE DATA. LOCATIONS OF NORMAL CROWN & FULL S.E. NOTED ON CONSTR CENTERLINE.
★ SEE PLAN SHEETS.

SHOULDER MAY BE GRADED AWAY FROM ROADWAY TO FACILITATE THE SLOPE TIE TO EXISTING GROUND.



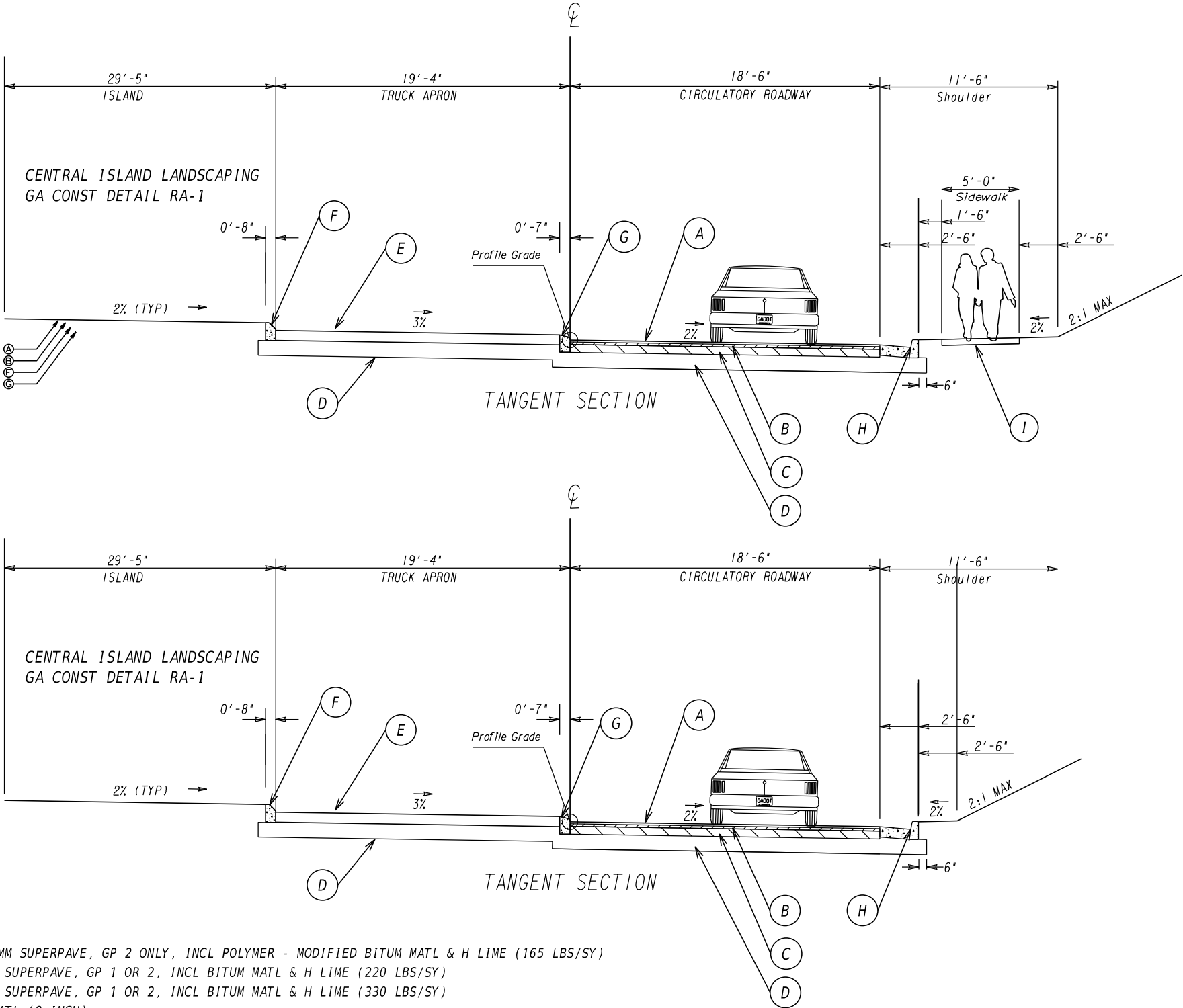
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REVISION DATES

TYPICAL SECTIONS - DEWS POND ROAD
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

05-0002



ROUNDBABOUT :

- (A) RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP 2 ONLY, INCL POLYMER - MODIFIED BITUM MATL & H LIME (165 LBS/SY)
- (B) RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (220 LBS/SY)
- (C) RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME (330 LBS/SY)
- (D) GR AGGR BASE CRS, INCL MATL (8 INCH)
- (E) PLAN PC CONC PVMT, CL 3 CONC, 10 INCH THICK (REINF. STAMPED COLORED BRICK PATTERN (COLOR TILE RED, FEDERAL COLOR CODE: 31136))
- (F) CONCRETE HEADER CURB, 6 INCH, TYPE 7, (TRUCK APRON, GA STD 9032-B)
- (G) CONCRETE HEADER CURB, 4 INCH, TYPE 9, (TRUCK APRON, GA STD 9032-B)
- (H) CONCRETE CURB & GUTTER, 6 INCH X 30 INCH, TYPE 2 - (GA STD 9032-B)
- (I) CONCRETE SIDEWALK, 4"
- (J) MONOLITHIC INTEGRAL CONCRETE MEDIAN, 6 INCH THICK, TP 7 CURB FACE

SLOPE : SEE ROADWAY PLANS FOR SUPERELEVATION RATES AND TRANSITIONS.

NOTE: FOR METHOD OF SUPERELEVATION SEE CONSTR PLAN & PROFILE SHEETS-CURVE DATA. LOCATIONS OF NORMAL CROWN & FULL S.E. NOTED ON CONSTR CENTERLINE.
★ SEE PLAN SHEETS.

SHOULDER MAY BE GRADED AWAY FROM ROADWAY TO FACILITATE THE SLOPE TIE TO EXISTING GROUND.

SUMMARY OF QUANTITIES

TRAFFIC CONTROL
LUMP SUM

FIELD ENGINEER'S OFFICE- TYPE
TOTAL1 EACH

GPS DATA COLLECTION & SUBMITTAL
LUMP SUM

AGGREGATE SURFACE COURSE
TOTAL500 TONS

PVMT REF FAB STRIPS, TP2, 18 IN W
TOTAL7050 LF

GRADING COMPLETE
LUMP SUM

BARRIER FENCE (ORANGE), 4 FT
TOTAL350 LF

RIGHT OF WAY MARKERS
TOTAL40 EACH

ROCK EXCAVATION
TOTAL300 CY

CLASS "B" CONCRETE
TOTAL359 CY

CONCRETE CURB & GUTTER 6" X 30" TYPE 2, STD 9032-B
TOTAL4,961 LF

CONCRETE HEADER CURB 4", TYPE 9, TRUCK APRON STD 9032-B
TOTAL208 LF

CONCRETE HEADER CURB 6", TYPE 7, TRUCK APRON STD 9032-B
TOTAL673 LF

CHANGEABLE MESSAGE SIGN, PORTABLE, TYPE 3
TOTAL4 EACH

SOD
TOTAL17,150 SY

FLOWABLE FILL
TOTAL36 CY

FOUNDATION BACKFILL MAT'L TYPE II
TOTAL250 CY

ROADWAY PAVING ITEMS								
ROADWAY LOCATION	402-3130 RECYCLED ASPH CONC 12.5 MM SUPERPAVE, GP2 ONLY, INCLBITUM MATL & H LIME	402-3190 RECYCLED ASPH CONC 19 MM SUPERPAVE, GP 1OR 2, INCL BITUM MATL & H LIME	402-3121 RECYCLED ASPH CONC 25 MM SUPERPAVE, GP 1OR 2, INCL BITUM MATL & H LIME	402-1812 RECYCLED ASPH CONC LEVELING INCL BITUM MATL & H LIME	413-0750 TACK COAT	432-0214 MILL ASPH CONC PVMT 3 1/2 IN DEPTH	310-5080 GR AGGR BASE CRS 8 INCH, INCL MATL	DEMOLITION ASPHALT PAYEMENT INCL LAYOUT AND SAWCUT
	TON	TON	TON	TON	GAL	SY	SY	SY
CURTIS PARKWAY	285.47	380.61	486.81		340	510	3,494	5,632
DEWS POND ROAD	268.83	358.44	469.20		325.86	415	2,973	4,940
ROUNDAABOUT	238.72	318.30	477.44		289.36	0	2,930	0
DOGWOOD DRIVE NE	5.26	7.02	0		6.38	64	0	0
DAVIS DRIVE	6.15	8.20	12.30		7.46	0	79	89
DR. 1(STA 125+88.02) RT	*	*	*		0	0	65	48
DR. 2(STA 127+97.25) RT	7.25	9.67	14.50		8.80	0	92	12
DR. 3(STA 128+42.93) RT	4.96	6.61	9.91		6.00	0	66	28
DR. 4(STA 129+74.71) RT	14.84	19.79	29.68		17.99	0	187	49
DR. 5(STA 134+43.93) RT	15.72	20.97	30.46		19.06	0	234	258
DR. 6(STA 128+45.38) LT	9.27	12.37	18.55		11.24	0	118	173
DR. 7(STA 202+58.12) RT	9.42	12.56	18.84		11.42	0	120	63
DR. 8(STA 208+33.35) RT	8.97	11.96	17.94		10.87	0	113	89
DR. 9(STA 209+04.15) RT	3.63	4.83	7.25		4.39	0	48	4
DR.10(STA 210+91.55) RT	5.37	7.16	10.74		6.51	0	69	61
DR.11(STA 199+41.58) LT	3.40	4.53	6.80		4.12	0	46	48
DR.12(STA 203+04.80) LT	4.23	5.64	8.46		5.13	0	56	84
BANK TURN AROUND	28.57	38.10	57.15		34.64	0	357	147
SUBTOTAL	921	1,227	1,677	360	1,110	989	11,047	11,725**

* QUANTITY INCLUDED IN CLASS B CONCRETE QUANTITIES

** CONCRETE/ASPHALT DEMOLITION QUANTITIES TO BE INCLUDED IN GRADING COMPLETE LUMP SUM ITEM.

SUMMARY OF QUANTITIES

SUMMARY OF ROADWAY DRAINAGE																
STRUCTURE NUMBER	STATION	OFFSET	550-5180	550-5240	550-5300	550-5420	550-5540	668-1100	668-1110	668-2100	668-2110	668-4300	668-4311	668-4400	668-4411	500-3800
			STORM DRAIN PIPE, 18 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 24 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 30 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 42 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 54 IN. CLASS III (LIN FT)	CATCH BASIN, GP I (EA)	CATCH BASIN, GP I, ADDL DEPTH (LIN FT)	DROP INLET, GP I (EA)	DROP INLET, GP I, ADDL DEPTH (LIN FT)	STORM SEWER MANHOLE, TP 1 (EA)	STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 (LIN FT)	STORM SEWER MANHOLE, TP 2 (EA)	STORM SEWER MANHOLE, TP 2, ADDL DEPTH, CL 1 (LIN FT)	CLASS A CONCRETE, INCL REINF STEEL (CU YD)
C-17	0+20.00	-14.05	87.78													
C-16	125+64.00	-26.00	41.00					/								
C-15	125+64.00	15.00	10.00					/								
C-14	125+64.00	25.00	65.76							/						
C-13.C	126+55.00	-26.00	25.00					/								
C-13.B	126+30.00	-26.00	41.00					/								
C-13.A	126+30.00	15.00	10.00					/								
C-13	126+30.00	25.00	135.04							/						
C-12	127+65.00	25.00	60.27							/						
C-11	128+24.00	12.50	39.53							/	1.31					
C-10.B	17+84.00	14.75	29.51							/						
C-10.A	17+84.00	-14.76	71.73							/						
C-10	32+69.00	18.83	83.39							/						
C-9.A	129+43.00	16.92	10.05					/								
C-9	129+43.56	26.95		63.84						/						
C-8.D	130+00.00	-17.09	24.69					/								
C-8.C	130+25.00	-18.28	39.10					/								
C-8.B	130+25.00	20.82	15.25					/								
C-8.A	130+10.00	20.12	10.62					/								
C-8	130+06.00	29.93		98.24						/						
C-7	131+03.00	34.53		62.43						/	0.19					
C-6	131+56.81	2.87		48.23						/	3.93					
C-5.6	211+18.00	25.00	77.88							/						
C-5.5	210+40.00	25.00	112.83							/						
C-5.4	209+27.00	25.00	51.94							/						
C-5.3.B	208+75.00	-15.00	30.00					/								
C-5.3.A	208+75.00	15.00	9.01					/	1.20							
C-5.3	208+75.00	25.35	127.61									/	0.60			
C-5.2.C	207+49.00	-27.50	9.99							/						
C-5.2.B	207+49.00	-17.51	36.64					/								
C-5.2.A	207+49.00	19.14	5.87					/								
C-5.2	207+49.00	25.00	172.40									/	0.59			
C-5.1.B	206+16.00	28.32	39.25					/								
C-5.1.A	205+79.00	38.81	10.00					/	0.33							
C-5.1	205+82.17	48.26	137.28									/	0.58			
C-5.C.B	00+03.44	-19.32	46.19							/						
C-5.C.A.1	134+05.00	20.45	10.01					/								
C-5.C.A.	134+05.00	30.46	140.85							/						
C-5.E	206+11.00	-30.97	32.64							/						
C-5.D	205+75.50	-24.06	43.41					/	0.68							
C-5.C	132+72.00	59.21	62.26									/	0.58			
C-5.B	132+70.84	-3.04	91.99							/	3.35					
C-5.A	204+58.77	3.56	62.51							/	3.31					
C-5	131+93.32	-28.64			128.26					/	4.39					
C-4.A	203+32.00	-18.50	40.16					/								
C-4	203+32.00				79.92			/	3.13							
C-3	202+65.66				23.28					/						
C-2	202+42.55				10.39					/						
C-1	202+32.63															2.32
SUB-TOTAL			2150.43	272.74	247.85			20	5.34	24	16.48	4	2.35			2.32
AS DIRECTED			161.57	15.2622	14.15			0	2.66	0	3.52	0	1.65			0.68
TOTAL			2312.00	288.00	256.00			20	8.00	24	20.00	4	4.00			3.00

SUMMARY OF ROADWAY DRAINAGE																
STRUCTURE NUMBER	STATION	OFFSET	550-5180	550-5240	550-5300	550-5420	550-5540	668-1100	668-1110	668-2100	668-2110	668-4300	668-4311	668-4400	668-4411	500-3800
			STORM DRAIN PIPE, 18 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 24 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 30 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 42 IN. CLASS III (LIN FT)	STORM DRAIN PIPE, 54 IN. CLASS III (LIN FT)	CATCH BASIN, GP I (EA)	CATCH BASIN, GP I, ADDL DEPTH (LIN FT)	DROP INLET, GP I (EA)	DROP INLET, GP I, ADDL DEPTH (LIN FT)	STORM SEWER MANHOLE, TP 1 (EA)	STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 (LIN FT)	STORM SEWER MANHOLE, TP 2 (EA)	STORM SEWER MANHOLE, TP 2, ADDL DEPTH, CL 1 (LIN FT)	CLASS A CONCRETE, INCL REINF STEEL (CU YD)
D-2	202+58.91	-27.31					73.51									5.63
D-1	202+30.23	40.33														5.83
SUB-TOTAL							73.51									11.46
AS DIRECTED							6.49									0.54
TOTAL							80.00									12.00



REVISION DATES

SUMMARY OF QUANTITIES CURTIS PARKWAY - PHASE II GORDON COUNTY

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

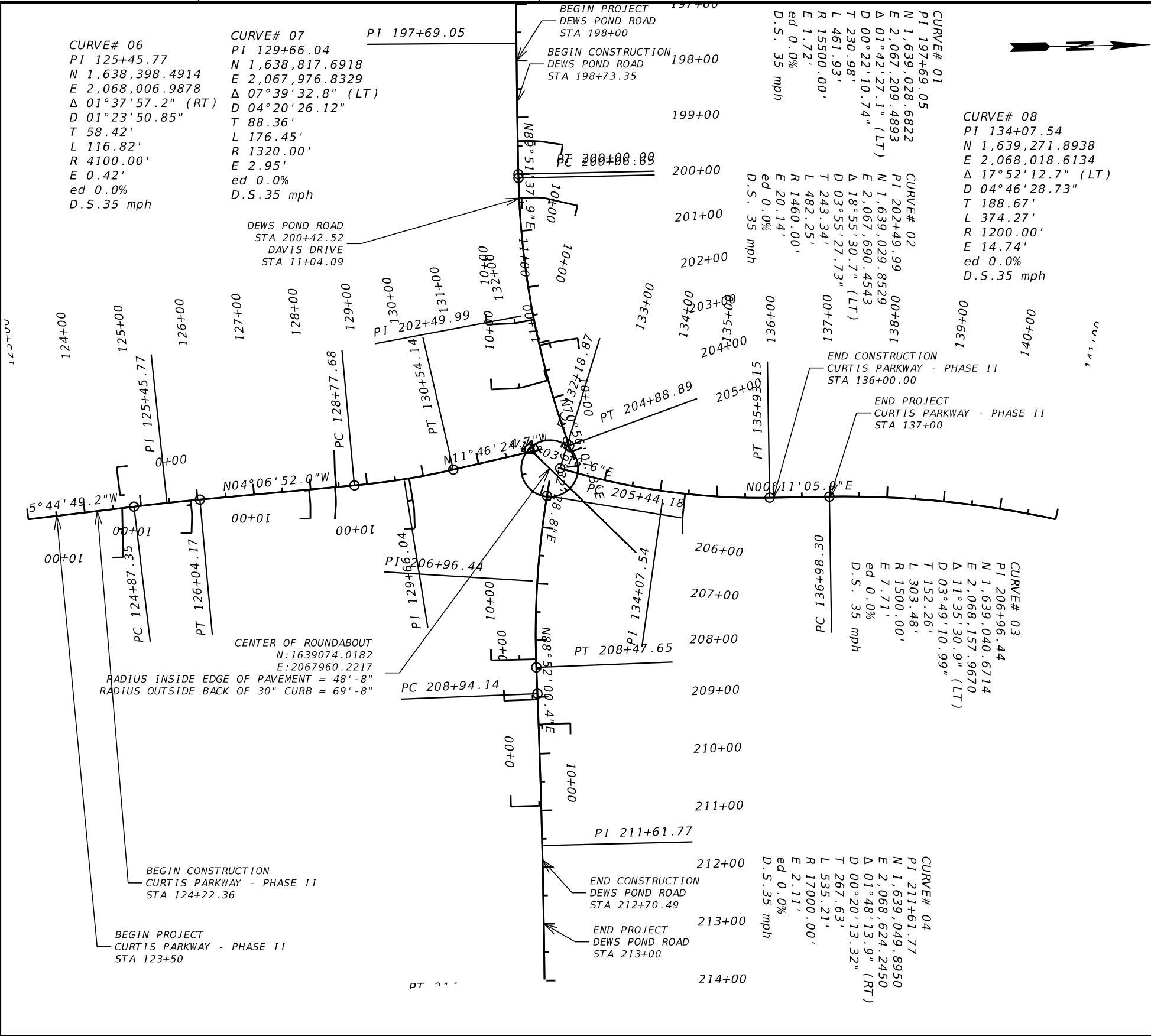
06-0002

SUMMARY OF ROADWAY DRAINAGE																
STRUCTURE NUMBER	STATION	OFFSET	550-5180 STORM DRAIN PIPE, 18 IN, CLASS III (LIN FT)	550-5240 STORM DRAIN PIPE, 24 IN, CLASS III (LIN FT)	550-5300 STORM DRAIN PIPE, 30 IN, CLASS III (LIN FT)	550-5420 STORM DRAIN PIPE, 42 IN, CLASS III (LIN FT)	550-5540 STORM DRAIN PIPE, 54 IN, CLASS III (LIN FT)	668-1100 CATCH BASIN, GP 1 (EA)	668-1110 CATCH BASIN, GP 1, ADDL DEPTH (LIN FT)	668-2100 DROP INLET, GP 1 (EA)	668-2110 DROP INLET, GP 1, ADDL DEPTH (LIN FT)	668-4300 STORM SEWER MANHOLE, TP 1 (EA)	668-4311 STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 (LIN FT)	668-4400 STORM SEWER MANHOLE, TP 2 (EA)	668-4411 STORM SEWER MANHOLE, TP 2, ADDL DEPTH, CL 1 (LIN FT)	500-3800 CLASS A CONCRETE, INCL REINF STEEL (CU YD)
E-7	199+19.00	-27.00	93.74							1						
E-6	200+13.00	-27.00	11.99							1						
E-5	200+13.00	-15.00	30.01					1	0.01							
E-4	200+13.00	15.00	138.35					1	0.32							
E-3	201+50.00	14.99	30.31					1								
E-2,B	201+80.00	-27.00	11.99							1						
E-2,A,1	201+50.00	-15.00	29.70					1								
E-2,A	201+80.00	-15.01	30.00					1	0.01							
E-2	201+80.00	15.00	44.83					1	0.32							
E-1	201+95.51	56.90														1.16
SUB-TOTAL			420.9160					6.0	0.66	3.00						1.16
AS DIRECTED			27.0840					0	3.34	0.00						0.84
TOTAL			448.00					6.0	4.0	3.00						2.00

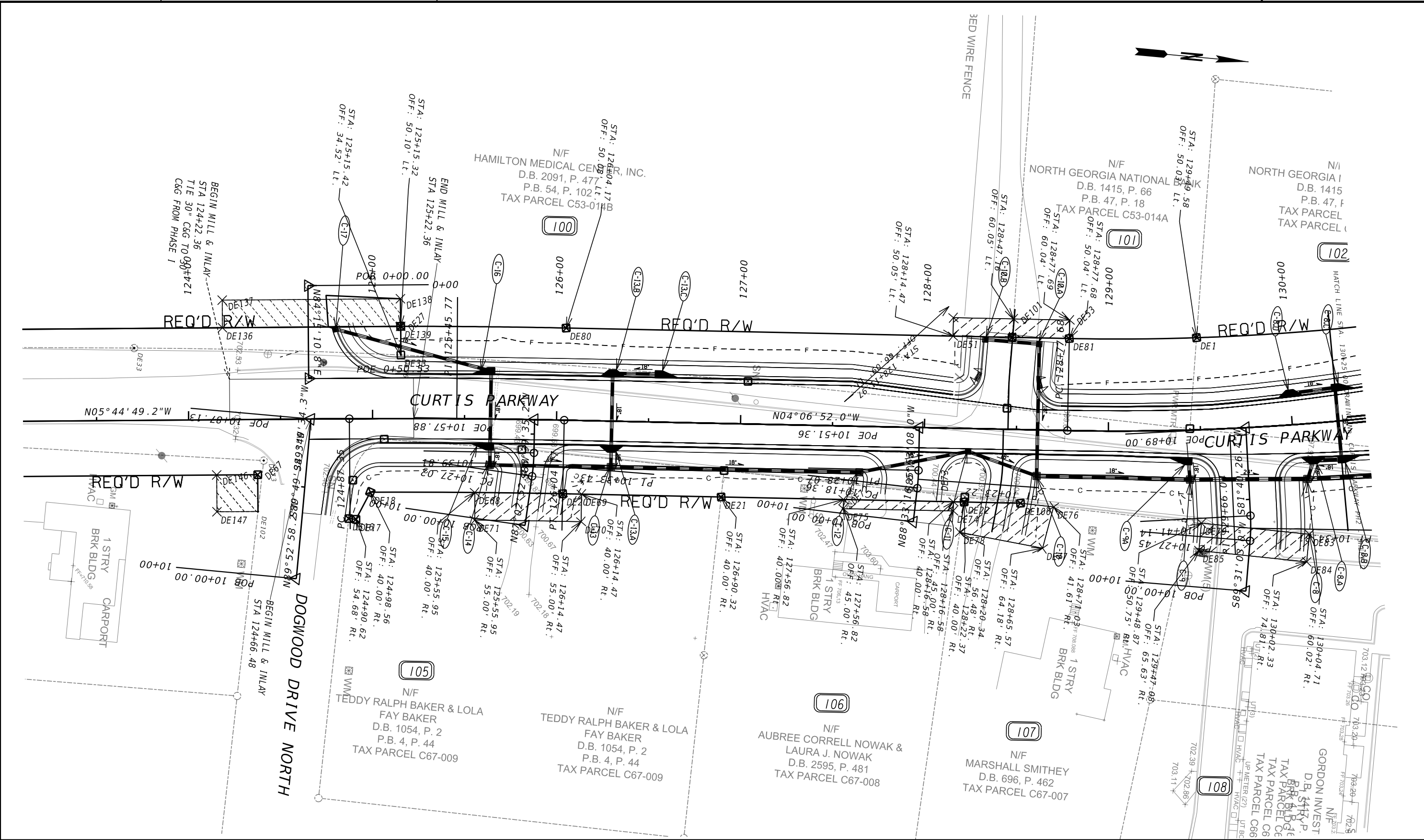
SUMMARY OF ROADWAY DRAINAGE																
STRUCTURE NUMBER	STATION	OFFSET	550-5180 STORM DRAIN PIPE, 18 IN, CLASS III (LIN FT)	550-5240 STORM DRAIN PIPE, 24 IN, CLASS III (LIN FT)	550-5300 STORM DRAIN PIPE, 30 IN, CLASS III (LIN FT)	550-5420 STORM DRAIN PIPE, 42 IN, CLASS III (LIN FT)	550-5540 STORM DRAIN PIPE, 54 IN, CLASS III (LIN FT)	668-1100 CATCH BASIN, GP 1 (EA)	668-1110 CATCH BASIN, GP 1, ADDL DEPTH (LIN FT)	668-2100 DROP INLET, GP 1 (EA)	668-2110 DROP INLET, GP 1, ADDL DEPTH (LIN FT)	668-4300 STORM SEWER MANHOLE, TP 1 (EA)	668-4311 STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 (LIN FT)	668-4400 STORM SEWER MANHOLE, TP 2 (EA)	668-4411 STORM SEWER MANHOLE, TP 2, ADDL DEPTH, CL 1 (LIN FT)	500-3800 CLASS A CONCRETE, INCL REINF STEEL (CU YD)
F-4	135+93.00	15.96	44.17					1								
F-3	135+93.00	-28.22	65.52					1								
F-2	135+26.02	-25.59	17.96					1								
F-1	135+26.02	-43.55														1.16
SUB-TOTAL			127.66					3.0								1.16
AS DIRECTED			16.34					0								0.84
TOTAL			144.00					3.0								2.00

SUMMARY OF ROADWAY DRAINAGE																
STRUCTURE NUMBER	STATION	OFFSET	550-5180 STORM DRAIN PIPE, 18 IN, CLASS III (LIN FT)	550-5240 STORM DRAIN PIPE, 24 IN, CLASS III (LIN FT)	550-5300 STORM DRAIN PIPE, 30 IN, CLASS III (LIN FT)	550-5420 STORM DRAIN PIPE, 42 IN, CLASS III (LIN FT)	550-5540 STORM DRAIN PIPE, 54 IN, CLASS III (LIN FT)	668-1100 CATCH BASIN, GP 1 (EA)	668-1110 CATCH BASIN, GP 1, ADDL DEPTH (LIN FT)	668-2100 DROP INLET, GP 1 (EA)	668-2110 DROP INLET, GP 1, ADDL DEPTH (LIN FT)	668-4300 STORM SEWER MANHOLE, TP 1 (EA)	668-4311 STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 (LIN FT)	668-4400 STORM SEWER MANHOLE, TP 2 (EA)	668-4411 STORM SEWER MANHOLE, TP 2, ADDL DEPTH, CL 1 (LIN FT)	500-3800 CLASS A CONCRETE, INCL REINF STEEL (CU YD)
G-2	135+08.91	22.58				123.14										3.73
G-1	135+03.71	-34.04														3.87
SUB-TOTAL						123.14										7.60
AS DIRECTED						4.86										0.40
TOTAL						128										8.00

SUMMARY OF ROADWAY DRAINAGE																
STRUCTURE NUMBER	STATION	OFFSET	550-5180 STORM DRAIN PIPE, 18 IN, CLASS III (LIN FT)	550-5240 STORM DRAIN PIPE, 24 IN, CLASS III (LIN FT)	550-5300 STORM DRAIN PIPE, 30 IN, CLASS III (LIN FT)	550-5420 STORM DRAIN PIPE, 42 IN, CLASS III (LIN FT)	550-5540 STORM DRAIN PIPE, 54 IN, CLASS III (LIN FT)	668-1100 CATCH BASIN, GP 1 (EA)	668-1110 CATCH BASIN, GP 1, ADDL DEPTH (LIN FT)	668-2100 DROP INLET, GP 1 (EA)	668-2110 DROP INLET, GP 1, ADDL DEPTH (LIN FT)	668-4300 STORM SEWER MANHOLE, TP 1 (EA)	668-4311 STORM SEWER MANHOLE, TP 1, ADDL DEPTH, CL 1 (LIN FT)	668-4400 STORM SEWER MANHOLE, TP 2 (EA)	668-4411 STORM SEWER MANHOLE, TP 2, ADDL DEPTH, CL 1 (LIN FT)	500-3800 CLASS A CONCRETE, INCL REINF STEEL (CU YD)
H-4	134+59.27	78.26	67.88							1						
H-3	134+86.68	16.65	43.56					1								
H-2	134+86.68	-26.91	23.51					1								
H-1	134+86.68	-47.75														1.16
SUB-TOTAL			134.94					2.0		1.0						1.16
AS DIRECTED			9.06					0		0						0.84
TOTAL			144.00					2.0		1.0						2.00



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	-----E-----	BEGIN LIMIT OF ACCESS.....BLA		REVISION DATES			CONSTRUCTION LAYOUT PLAN CURTIS PARKWAY - PHASE II GORDON COUNTY			
	=====	END LIMIT OF ACCESS.....ELA								
	---G---F---	EXISTING LIMIT OF ACCESS		--- ∞ ---						
		REQ'D LIMIT OF ACCESS		--- ∞ ---						
		EXISTING LIMIT OF ACCESS & R/W		-----H-----						
		REQ'D LIMIT OF ACCESS & R/W								
		ORANGE BARRIER FENCE								
		ESA - ENV. SENSITIVE AREA								
							CHECKED:		DATE:	DRAWING No.
							BACKCHECKED:		DATE:	11-0001
							CORRECTED:		DATE:	
							VERIFIED:		DATE:	



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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---C---

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

exp.

SCALE IN FEET

0

25

50

100

REVISION DATES

MAINLINE PLAN

CURTIS PARKWAY - PHASE II

GORDON COUNTY

CHECKED:

BACKCHECKED:

CORRECTED:

VERIFIED:

DATE:

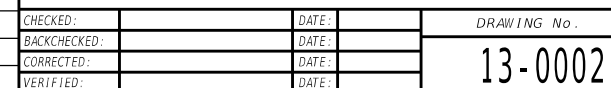
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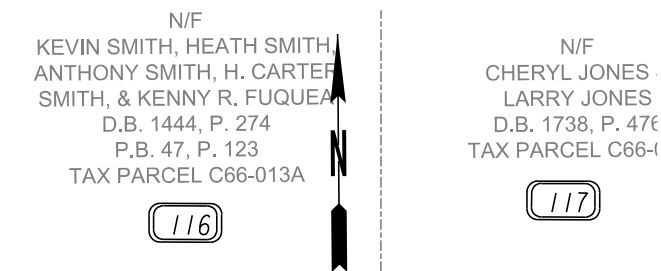
13-0001





CHECKED:	DATE:	DRAWING No. 13-000
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	

13-0003

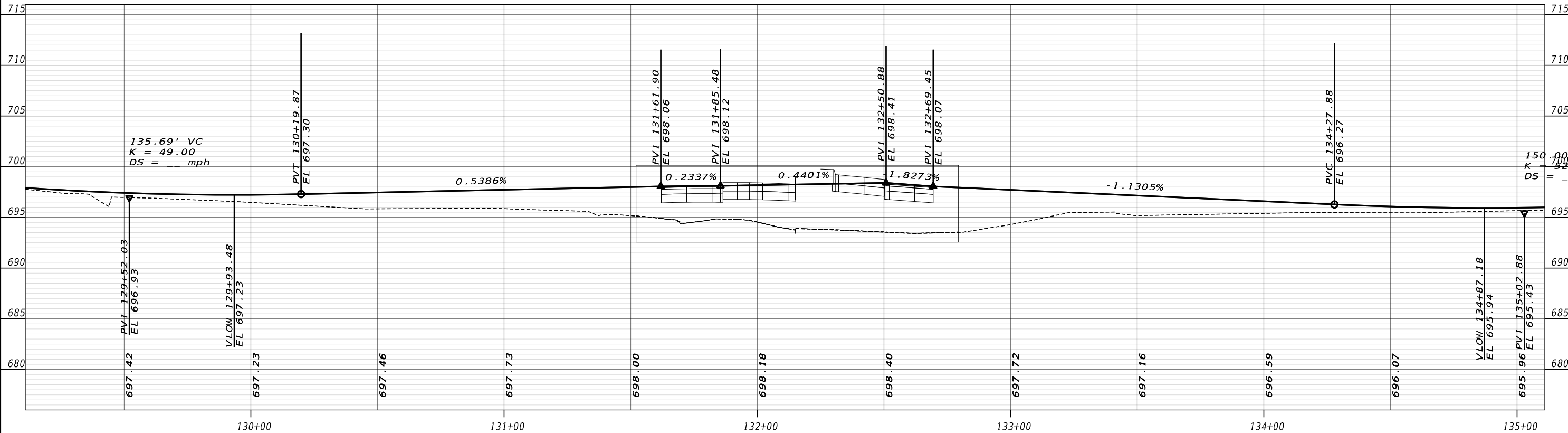
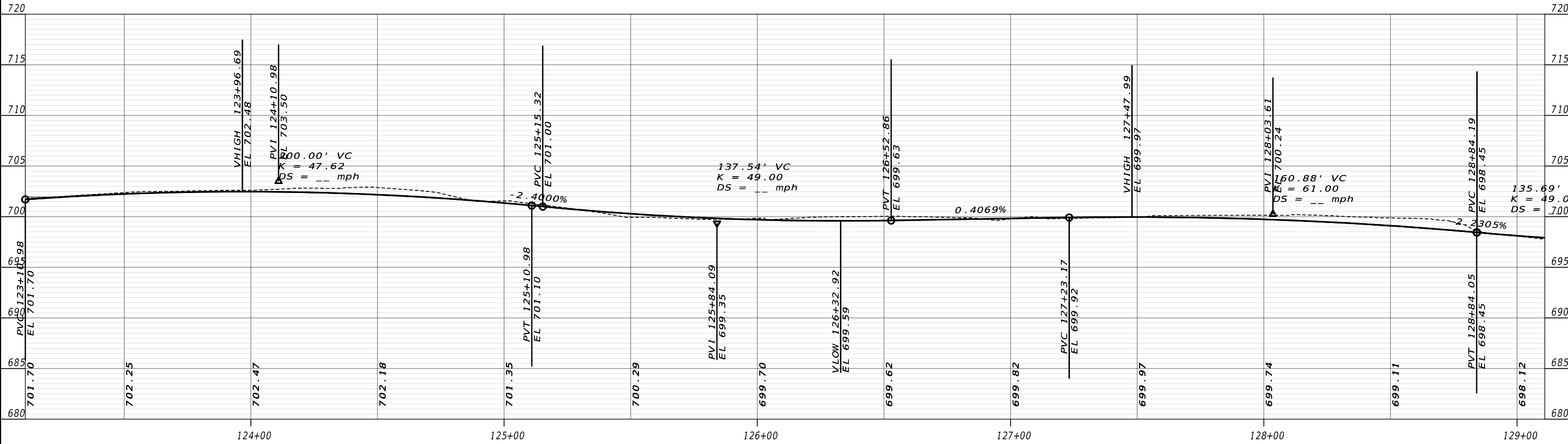


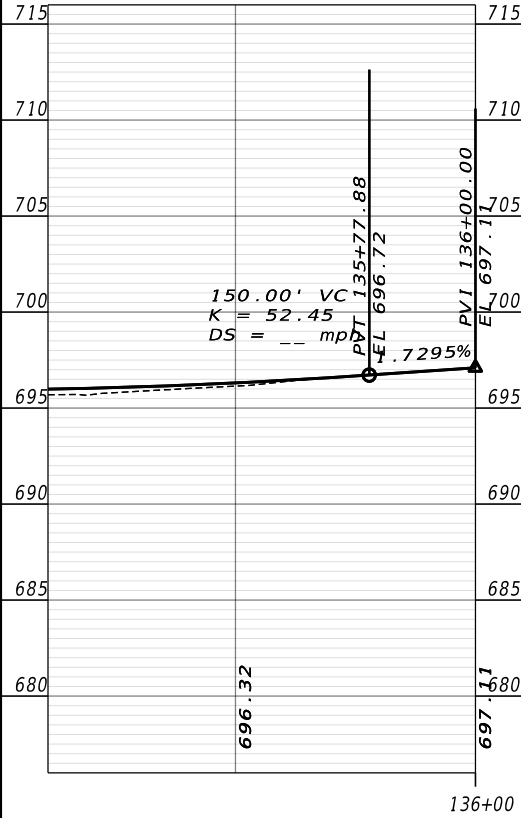
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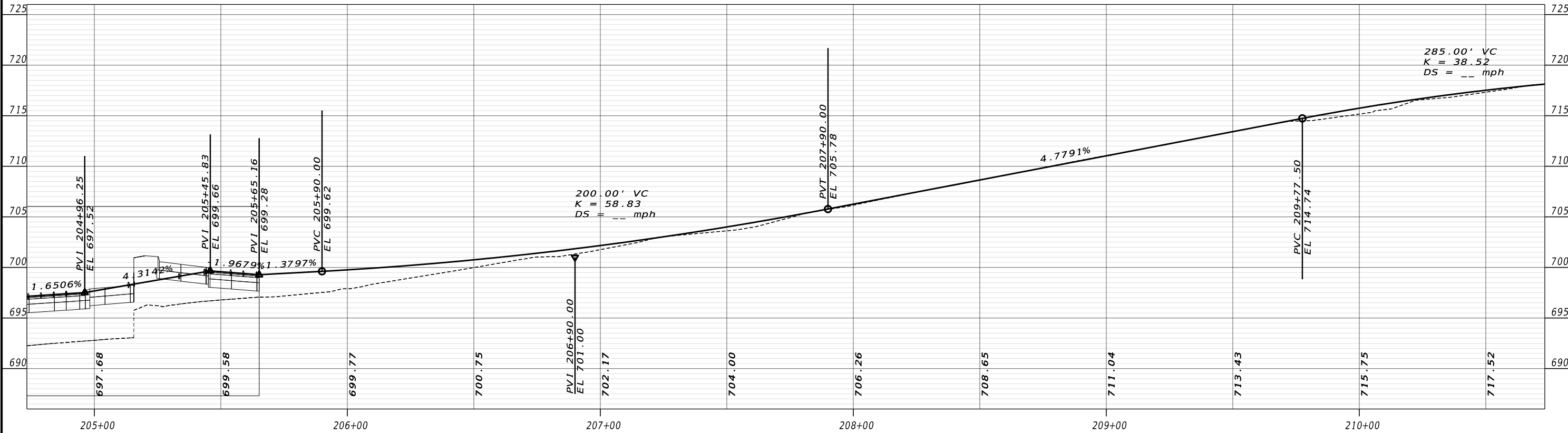
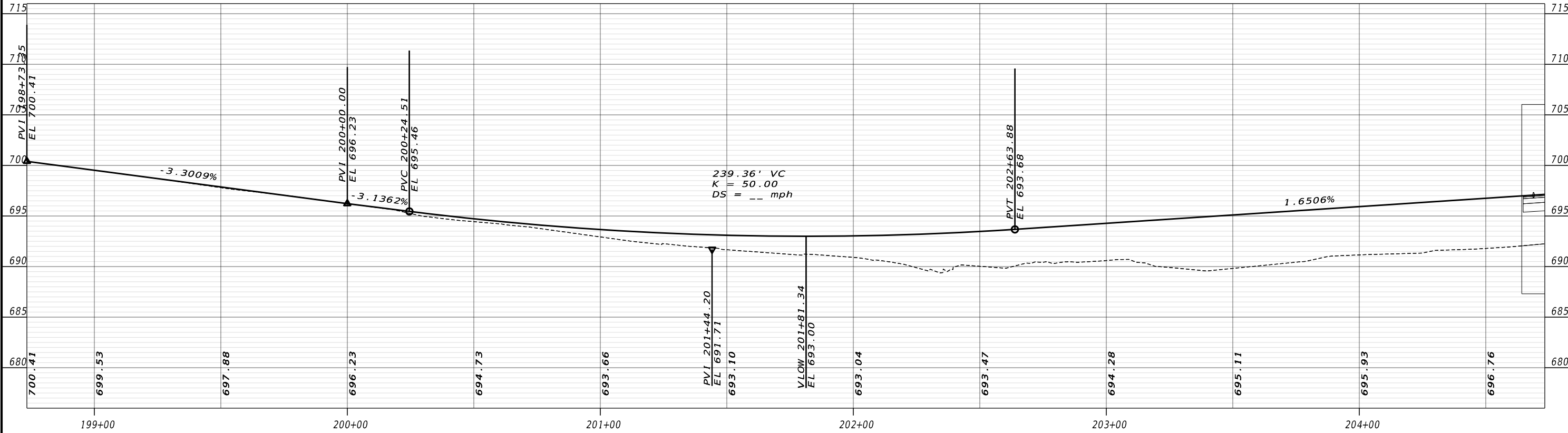
SCALE IN FEET

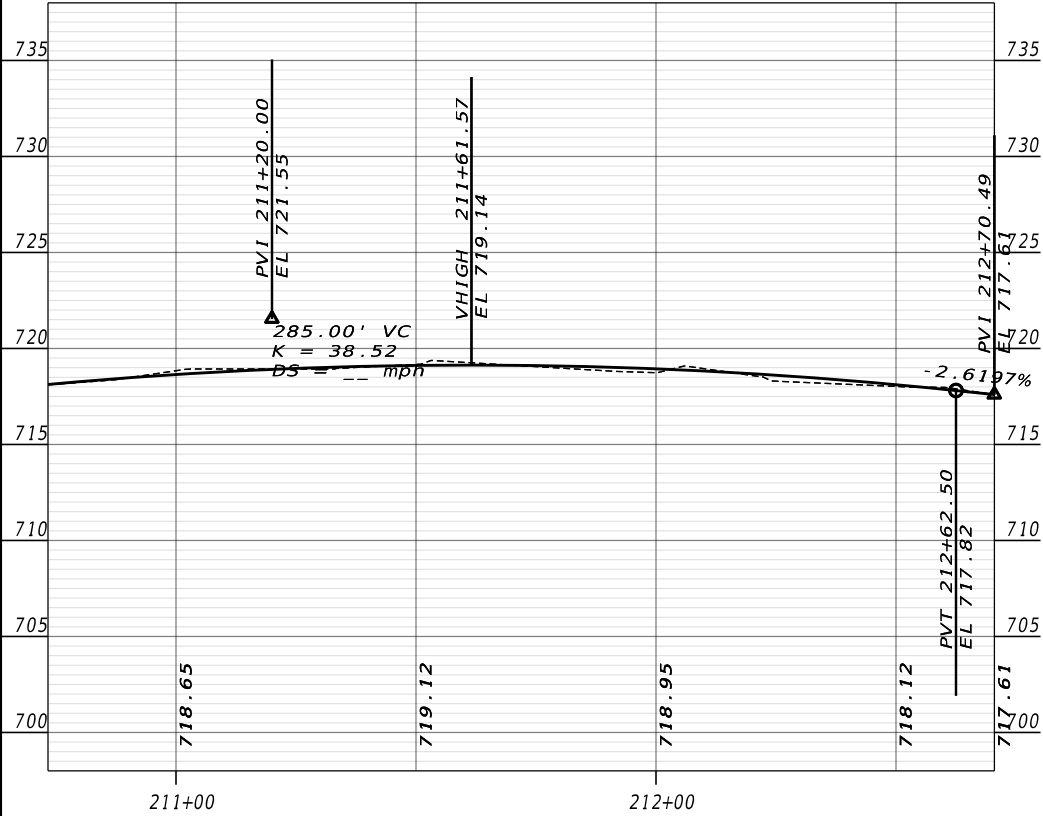
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REVISION DATES			MAINLINE PLAN (DEWS POND ROAD) CURTIS PARKWAY - PHASE II GORDON COUNTY			
			CHECKED:		DATE:	DRAWING No. 13-0004
			BACKCHECKED:		DATE:	
			CORRECTED:		DATE:	
			VERIFIED:		DATE:	











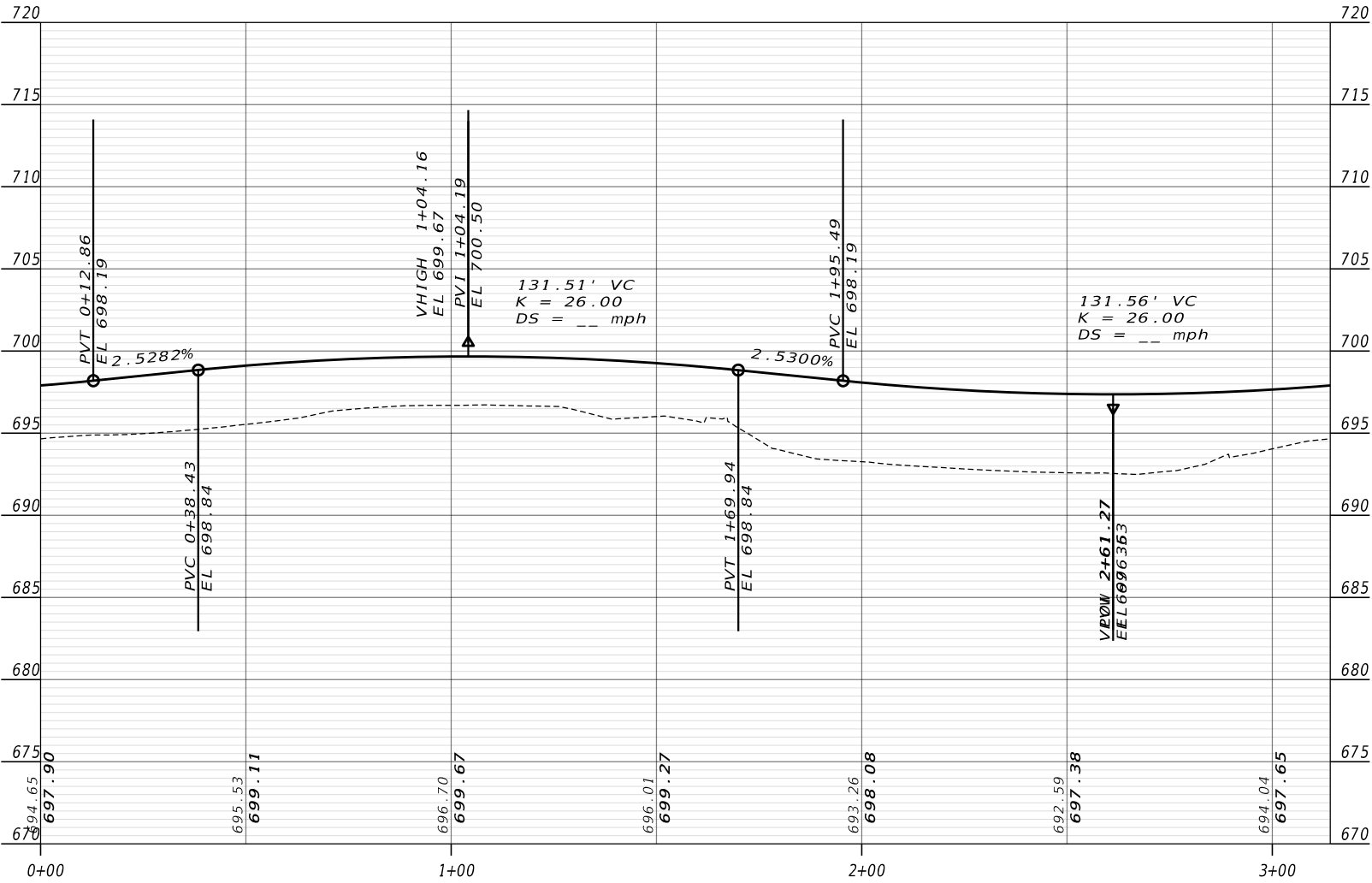
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1" = 10'

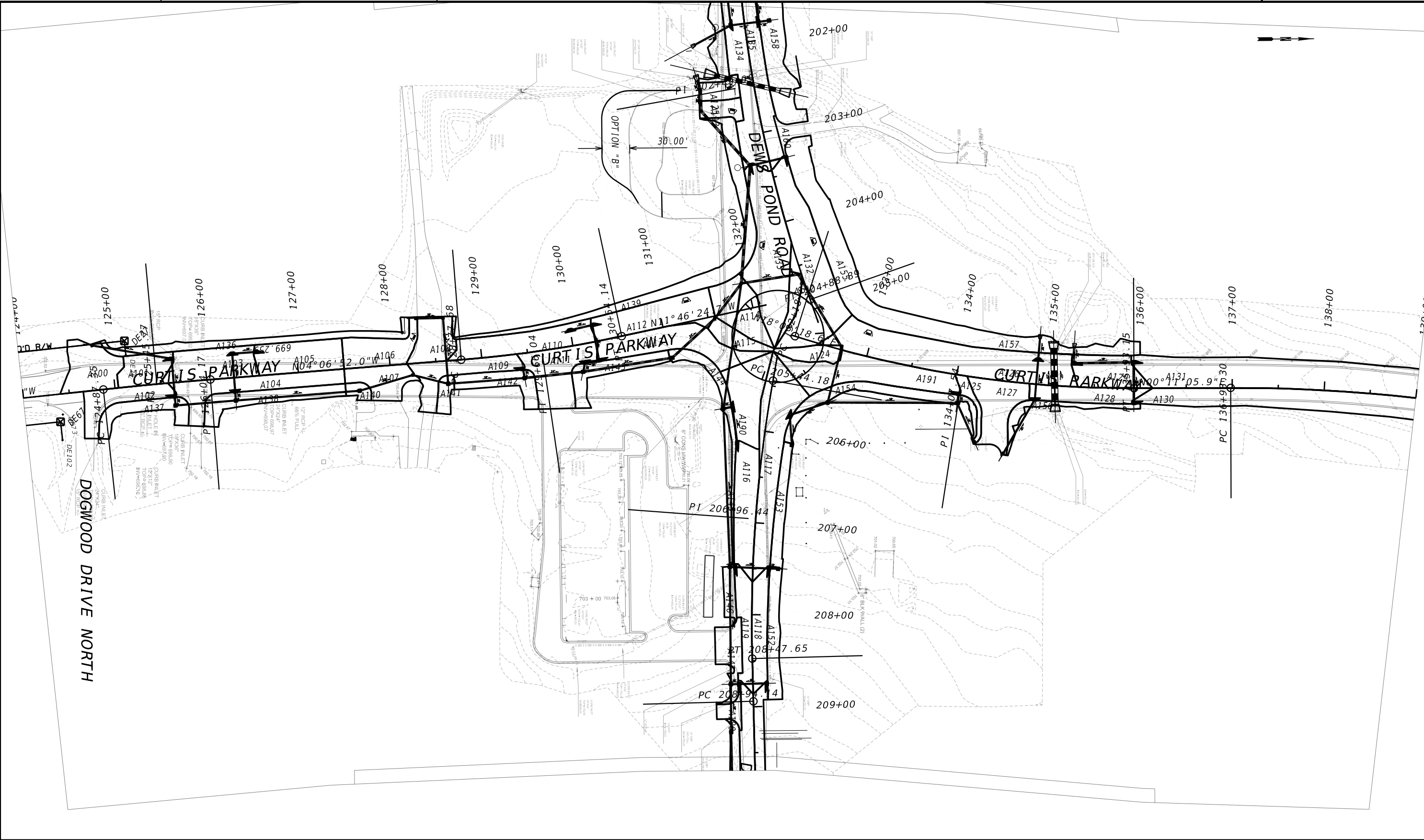
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1" = 50'

REVISION DATES		

MAINLINE PROFILE
DEWS POND ROAD
GORDON COUNTY

CHECKED:	DATE:	DRAWING No.: 15-0004
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	





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

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

exp.

SCALE IN FEET

0

50

100

200

REVISION DATES

DRAINAGE AREA MAP

CURTIS PARKWAY - PHASE II

GORDON COUNTY

CHECKED:

BACKCHECKED:

CORRECTED:

VERIFIED:

DATE:

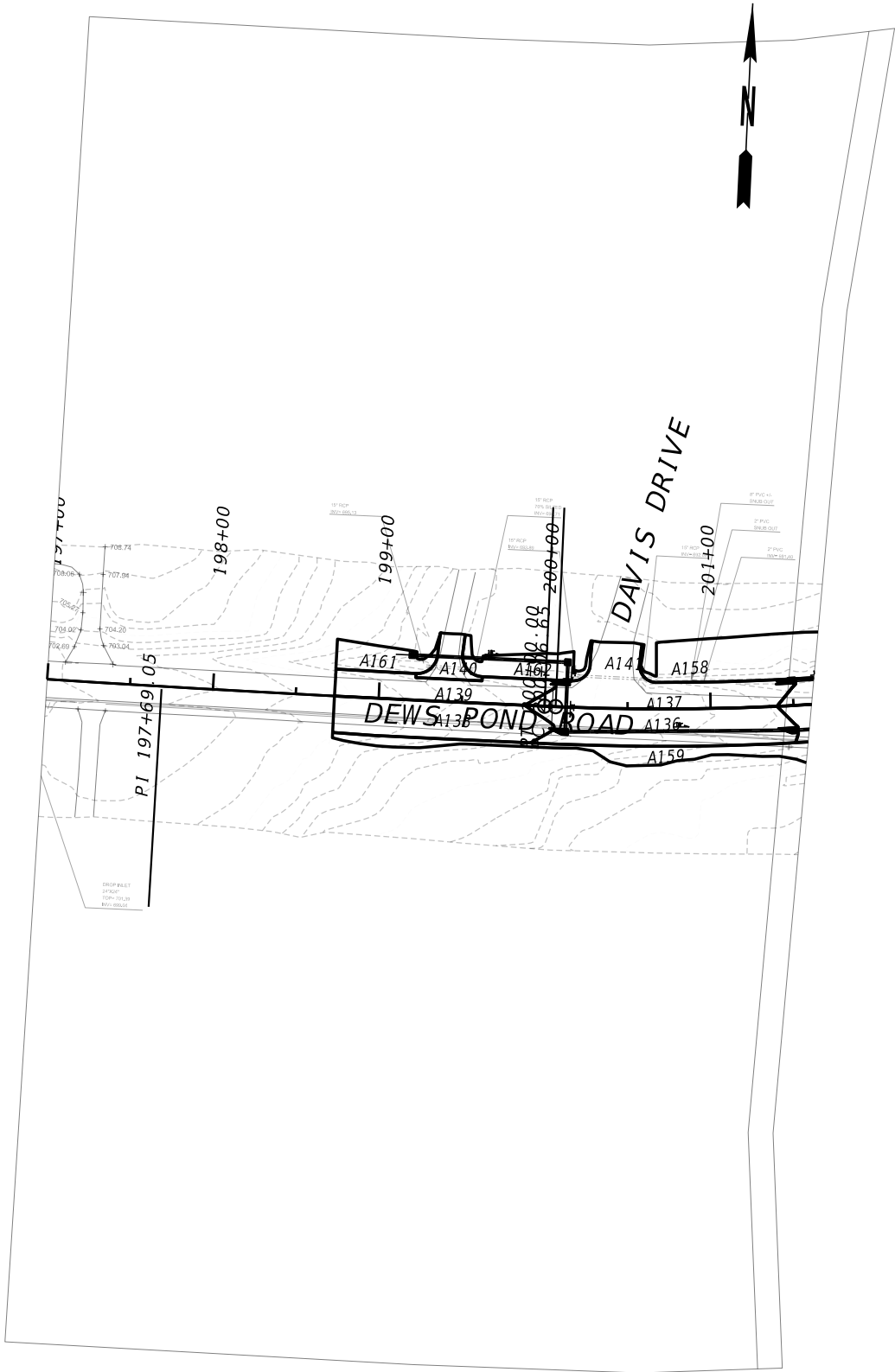
DATE:

DATE:

DATE:

DRAWING No.

21-0001



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

-----#-----

-----C-----F-----

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

---oo---

---oo---

-----HH-----

-----HH-----

exp.

SCALE IN FEET

0

50

100

200

REVISION DATES

DRAINAGE AREA MAP

CURTIS PARKWAY - PHASE II

GORDON COUNTY

CHECKED:

BACKCHECKED:

CORRECTED:

VERIFIED:

DATE:

DATE:

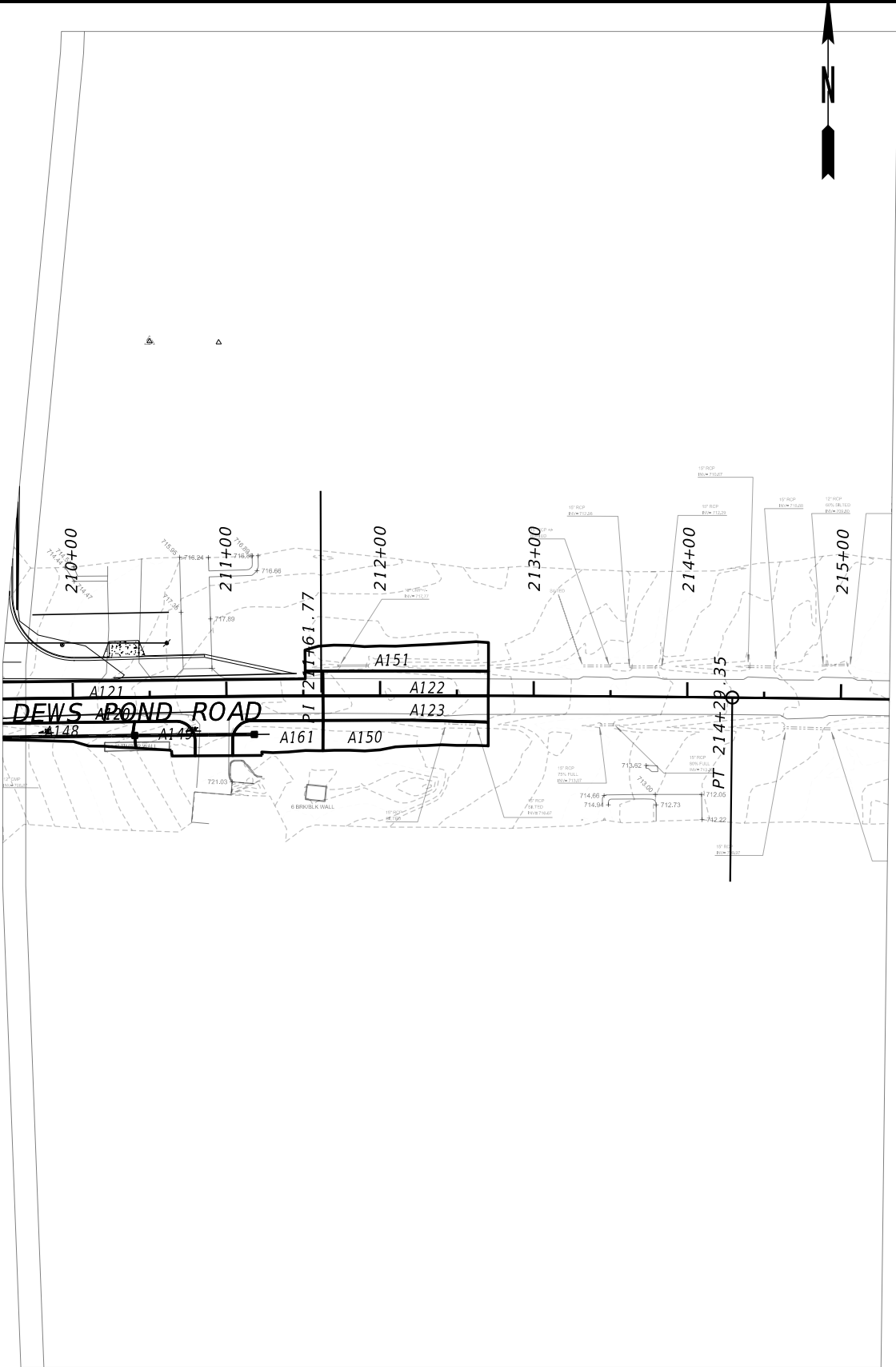
DATE:

DATE:

DRAWING No:

21-0002

GPLAN-CE
11/05/2020



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

-----#-----

---C---F---

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

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exp.

SCALE IN FEET

0

50

100

200

REVISION DATES

DRAINAGE AREA MAP

CURTIS PARKWAY - PHASE II

GORDON COUNTY

CHECKED:

BACKCHECKED:

CORRECTED:

VERIFIED:

DATE:

DATE:

DATE:

DATE:

DRAWING No:

21-0003

GPLN-CE

11/05/2020

Baseline Station (ft)	Baseline Offset (ft)	Label	Node Type	INLET LOCATION	INLET C	Q10 TOTAL RATIONAL INFLOW TO INLET (CFS)	INLET DRAINAGE AREA (ACRES)	INLET DRAINAGE AREA LABEL
+20.00	-14.05	1019A TP E	Inlet Combined	On Grade	0.91	0.47	0.059	A100
125+64.00	-26.00	1033D	Inlet Curb Opening	On Grade	0.94	1.78	0.226	A101
125+64.00	15.00	1033D	Inlet Curb Opening	On Grade	0.9	0.56	0.071	A102
125+64.00	25.00	9031S	Inlet Sloted Drain	In Sag	0.3	0.09	0.012	A137
126+55.00	-26.00	1033D	Inlet Curb Opening	On Grade	0.87	0.50	0.064	A105
126+30.00	-26.00	1034D	Inlet Curb Opening	In Sag	0.88	0.50	0.064	A103
126+30.00	15.00	1034D	Inlet Curb Opening	In Sag	0.87	0.57	0.072	A104
126+30.00	25.00	9031S	Inlet Sloted Drain	In Sag	0.3	0.14	0.018	A138
127+65.00	25.00	9031S	Inlet Sloted Drain	In Sag	0.3	0.02	0.003	A140
128+24.00	12.50	1019A TP E	Inlet Combined	On Grade	0.87	0.32	0.040	A107
+17.84	14.75	1019A TP E	Inlet Combined	On Grade	0.84	0.38	0.049	A106
+17.84	-14.76	1019A TP E	Inlet Combined	On Grade	0.9	0.33	0.042	A108
+32.69	18.83	9031S	Inlet Sloted Drain	In Sag	0.3	0.03	0.004	A141
129+43.00	16.92	1033D	Inlet Curb Opening	On Grade	0.85	0.41	0.052	A109
129+43.56	26.95	9031S	Inlet Sloted Drain	In Sag	0.3	0.10	0.013	A142
130+00.00	-17.09	1034D	Inlet Curb Opening	In Sag	0.84	0.54	0.068	A110
130+25.00	-18.28	1033D	Inlet Curb Opening	On Grade	0.86	0.63	0.080	A112
130+25.00	20.82	1033D	Inlet Curb Opening	On Grade	0.89	0.68	0.087	A113
130+10.00	20.12	1034D	Inlet Curb Opening	In Sag	0.9	0.57	0.073	A111
130+06.00	29.93	9031S	Inlet Sloted Drain	In Sag	0.3	0.11	0.014	A143
131+03.00	34.53	9031S	Inlet Sloted Drain	In Sag	0.3	0.06	0.007	A144
131+56.81	2.87	1019A TP E	Inlet Combined	On Grade	0.73	0.10	0.013	A115
211+18.00	25.00	9031S	Inlet Sloted Drain	In Sag	0.3	0.07	0.008	A161
210+40.00	25.00	9031S	Inlet Sloted Drain	In Sag	0.3	0.04	0.005	A149
209+27.00	25.00	9031S	Inlet Sloted Drain	In Sag	0.3	0.08	0.011	A148
208+75.00	-15.00	1033D	Inlet Curb Opening	On Grade	0.92	0.54	0.069	A121
208+75.00	15.00	1033D	Inlet Curb Opening	On Grade	0.86	0.79	0.100	A120
208+75.00	25.35	1011A	Manhole	NA	N/A	NA	N/A	N/A
207+49.00	-27.50	9031S	Inlet Sloted Drain	In Sag	0.3	0.11	0.014	A152
207+49.00	-17.51	1033D	Inlet Curb Opening	On Grade	0.85	0.32	0.041	A118
207+49.00	19.14	1033D	Inlet Curb Opening	On Grade	0.85	0.27	0.035	A119
207+49.00	25.00	1011A	Manhole	NA	N/A	NA	N/A	N/A
206+16.00	28.32	1033D	Inlet Curb Opening	On Grade	0.83	0.50	0.063	A116
205+79.00	38.81	1034D	Inlet Curb Opening	In Sag	0.9	0.53	0.067	A190
205+82.17	48.26	1011A	Manhole	NA	N/A	NA	N/A	N/A
0+03.44	-19.32	1019A TP E	Inlet Combined	On Grade	0.75	0.08	0.010	A125
134+05.00	20.45	1033D	Inlet Sloted Drain	On Grade	0.89	0.8	0.102	A191
134+05.00	30.46	9031S	Inlet Sloted Drain	In Sag	0.3	0.14	0.018	A154
206+11.00	-30.97	9031S	Inlet Sloted Drain	In Sag	0.3	0.09	0.011	A153
205+75.50	-24.06	1034D	Inlet Sloted Drain	In Sag	0.89	0.97	0.123	A117
132+72.00	59.21	1011A	Manhole	NA	N/A	NA	N/A	N/A
132+70.84	-3.04	1019A TP E	Inlet Combined	On Grade	0.85	0.17	0.021	A124
204+58.77	3.56	1019A TP E	Inlet Combined	On Grade	0.81	0.11	0.014	A192
131+93.32	-28.64	1019A TP E	Inlet Combined	On Grade	0.88	0.45	0.058	A114
203+32.00	-18.50	1033D	Inlet Sloted Drain	On Grade	0.87	1.35	0.171	A132
203+32.00	21.66	1033D	Inlet Sloted Drain	On Grade	0.84	0.97	0.123	A133
202+64.66	61.56	1019A TP E	Inlet Combined	On Grade	0.73	0.12	0.016	A193
202+42.55	58.06	1019A TP E	Inlet Combined	On Grade	0.74	0.12	0.015	A125
202+32.68	59.63	1125	Outlet Headwall	NA	N/A	NA	N/A	N/A

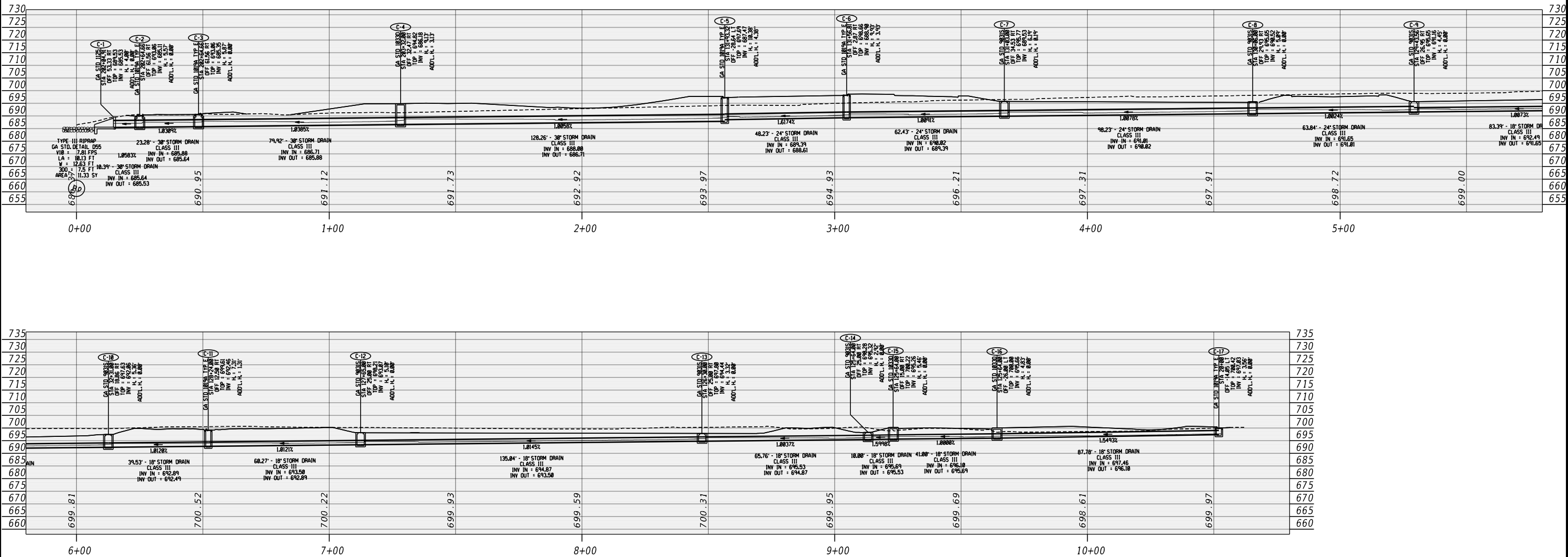
Baseline Station (ft)	Baseline Offset (ft)	Label	Node Type	INLET LOCATION	INLET C	Q10 TOTAL RATIONAL INFLOW TO INLET (CFS)	INLET DRAINAGE AREA (ACRES)	INLET DRAINAGE AREA LABEL
202+58.91	-27.31	1125	Inlet Headwall	N/A	0.42	134.01	34.970	N/A
202+32.29	35.24	1125	Outlet Headwall	N/A				

Baseline Station (ft)	Baseline Offset (ft)	Label	Node Type	INLET LOCATION	INLET C	Q10 TOTAL RATIONAL INFLOW TO INLET (CFS)	INLET DRAINAGE AREA (ACRES)	INLET DRAINAGE AREA LABEL
199+19.00	-27.00	9031S	Inlet Sloted Drain	In Sag	0.30	0.05	0.006	A161
200+13.00	-27.00	9031S	Inlet Sloted Drain	In Sag	0.30	0.06	0.007	A162
200+13.00	-15.00	1033D	Inlet Curb Opening	On Grade	0.86	0.95	0.121	A139
200+13.00	15.00	1033D	Inlet Curb Opening	In Sag	0.84	1.17	0.149	A138
201+50.00	14.99	1033D	Inlet Curb Opening	On Grade	0.82	0.50	0.064	A136
201+80.00	-27.00	9031S	Inlet Sloted Drain	In Sag	0.30	0.32	0.041	A158
201+50.00	-15.00	1033D	Inlet Curb Opening	In Sag	0.84	0.47	0.060	A137
201+80.00	-15.01	1034D	Inlet Curb Opening	In Sag	0.81	0.44	0.056	A135
201+80.00	15.00	1034D	Inlet Curb Opening	In Sag	0.80	0.62	0.078	A134
201+95.51	56.90	1125	Outlet Headwall	N/A	N/A	N/A	N/A	N/A

Baseline Station (ft)	Baseline Offset (ft)	Label	Node Type	INLET LOCATION	INLET C	Q10 TOTAL RATIONAL INFLOW TO INLET (CFS)	INLET DRAINAGE AREA (ACRES)	INLET DRAINAGE AREA LABEL
135+93.00	15.96	1033D	Inlet Curb Opening	On Grade	0.71	1.64	0.208	A130
135+93.00	-28.22	1033D	Inlet Curb Opening	On Grade	0.79	3.00	0.380	A131
135+26.02	-25.59	1033D	Inlet Curb Opening	On Grade	0.87	0.40	0.050	A129
135+26.02	-43.55	1125	Outlet Headwall	N/A	N/A	N/A	N/A	N/A

Baseline Station (ft)	Baseline Offset (ft)	Label	Node Type	INLET LOCATION	INLET C	Q10 TOTAL RATIONAL INFLOW TO INLET (CFS)	INLET DRAINAGE AREA (ACRES)	INLET DRAINAGE AREA LABEL
135+08.91	22.58	1125	Inlet Headwall	N/A	0.43	126.02	30.116	N/A
135+03.71	-34.04	1125	Outlet Headwall	N/A	N/A	N/A	N/A	N/A

Baseline Station (ft)	Baseline Offset (ft)	Label	Node Type	INLET LOCATION	INLET C	Q10 TOTAL RATIONAL INFLOW TO INLET (CFS)	INLET DRAINAGE AREA (ACRES)	INLET DRAINAGE AREA LABEL
134+59.27	78.26	1019A TP E	Inlet Curb Opening	On Grade	0.91	0.49	0.063	A127
134+86.68	16.65	1034D	Inlet Curb Opening	In Sag	0.86	0.32	0.041	A128
134+86.68	-26.91	1034D	Inlet Curb Opening	In Sag	0.87	1.39	0.176	A126
134+86.68	-47.75	1125	Outlet Headwall	N/A	N/A	N/A	N/A	N/A





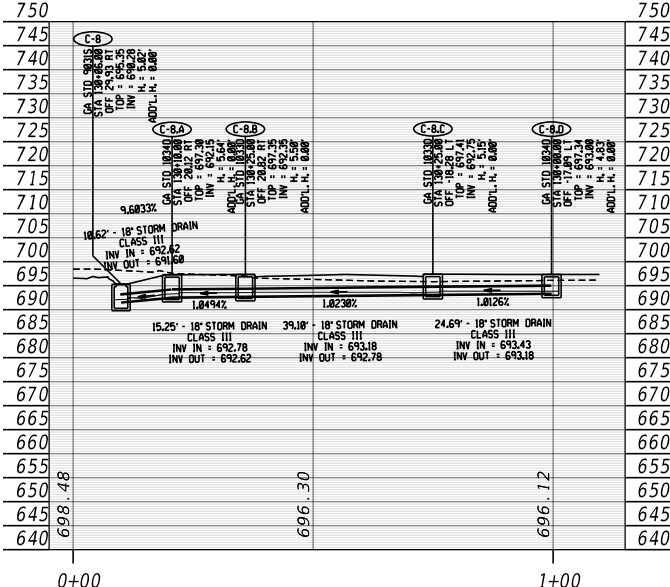
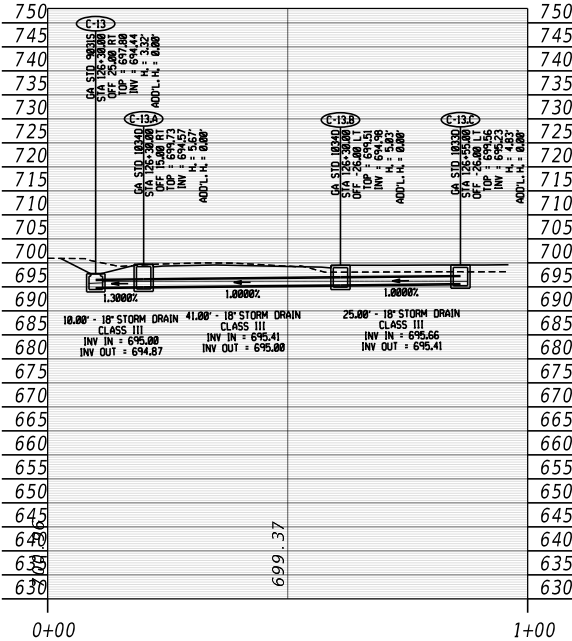
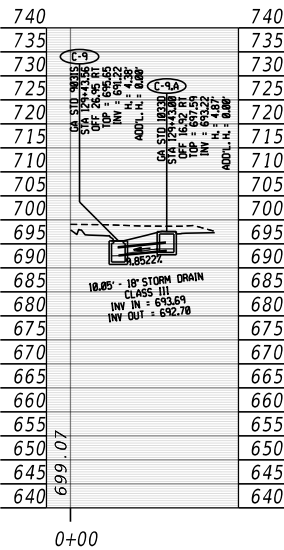
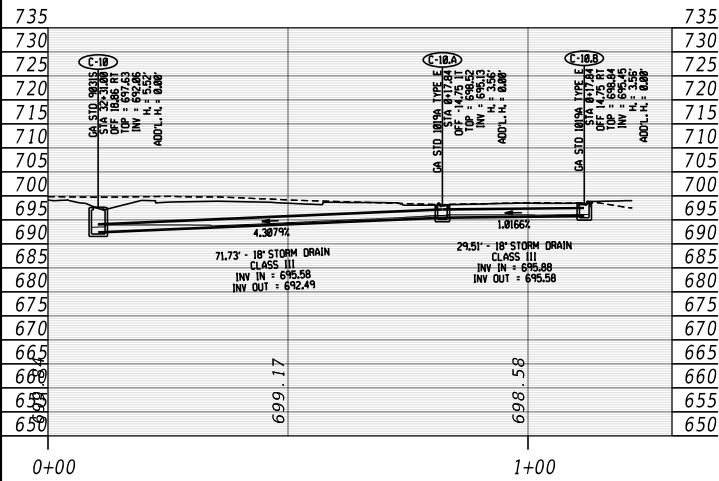
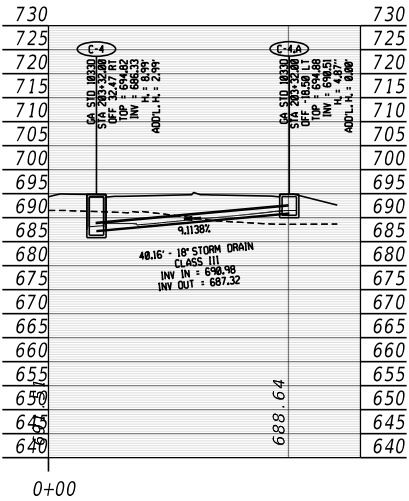
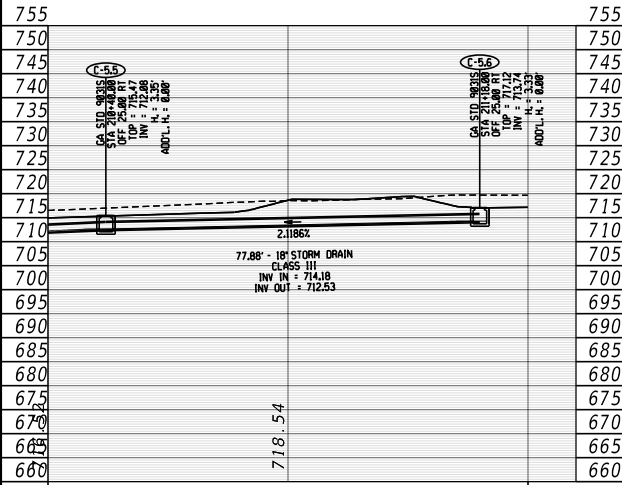
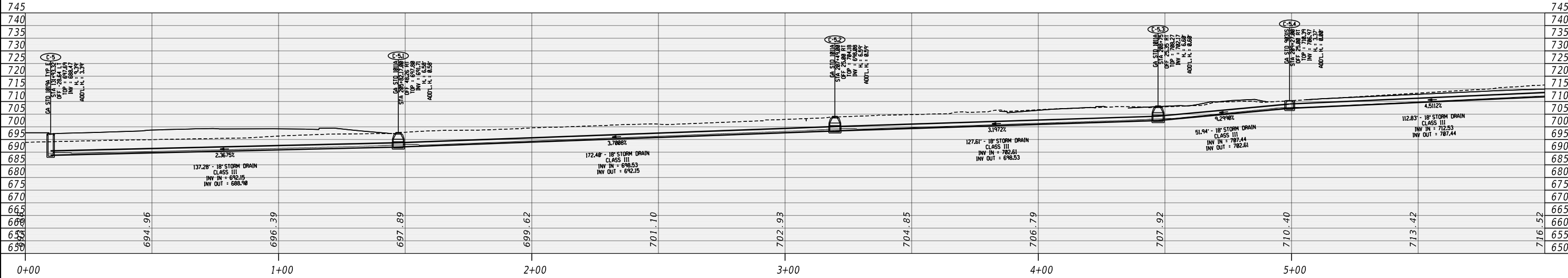
VERTICAL
1" = 10'

HORIZONTAL
1" = 40'

REVISION DATES		

DRAINAGE PROFILES
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:	DATE:	DRAWING No.: 22-0001
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	



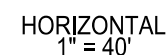
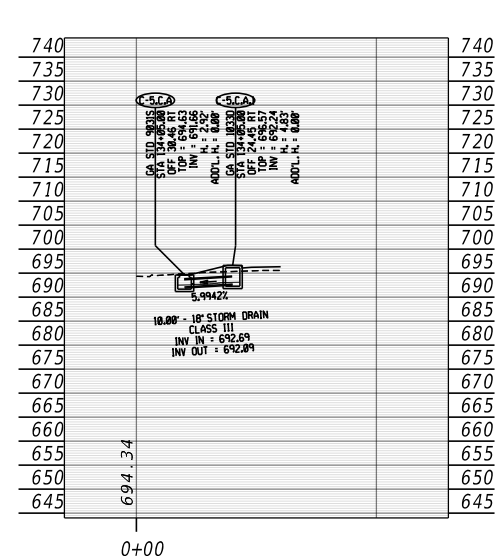
VERTICAL
1" = 10'

HORIZONTAL
1" = 40'

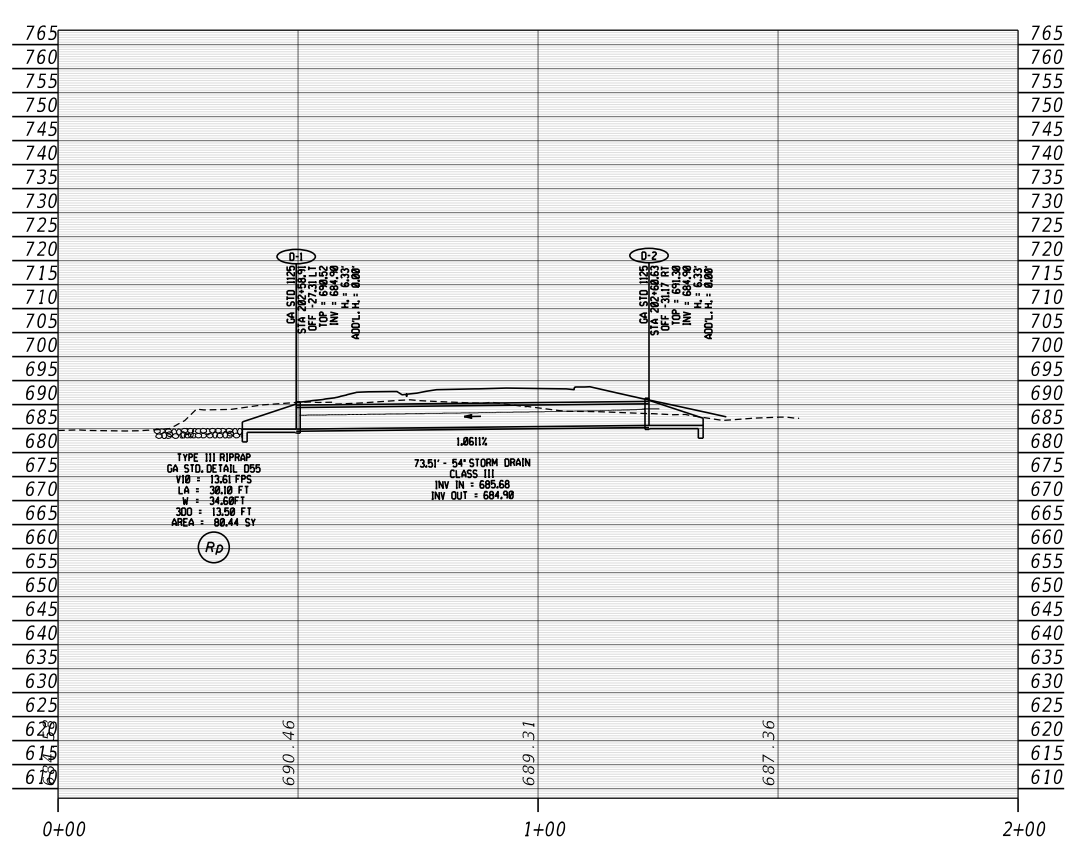
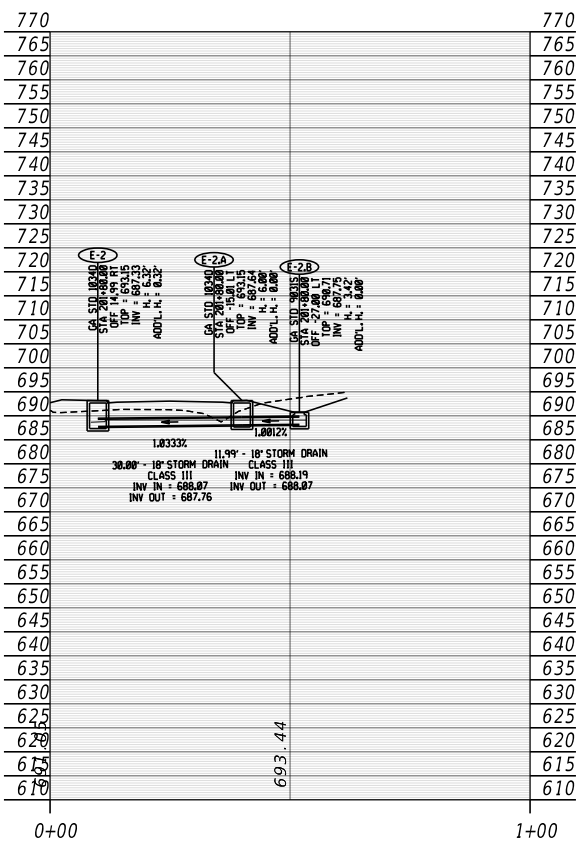
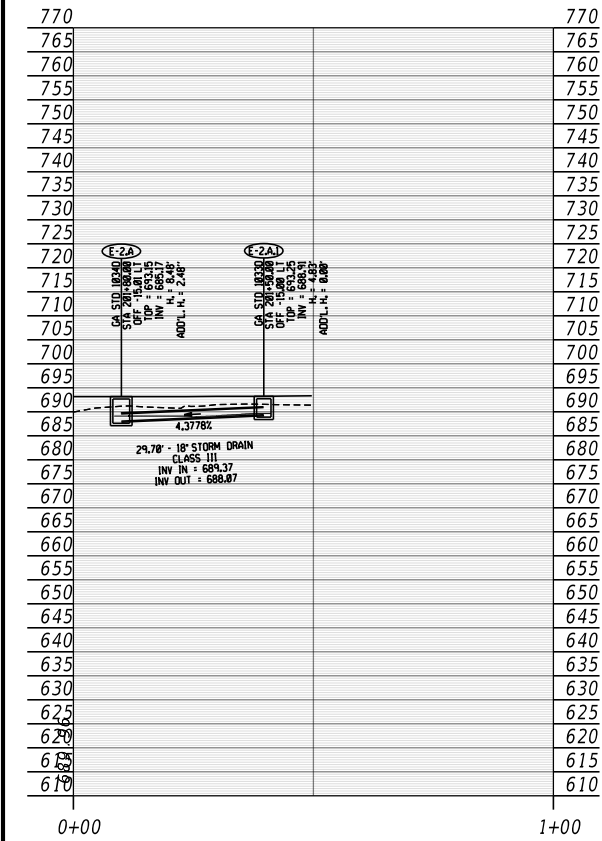
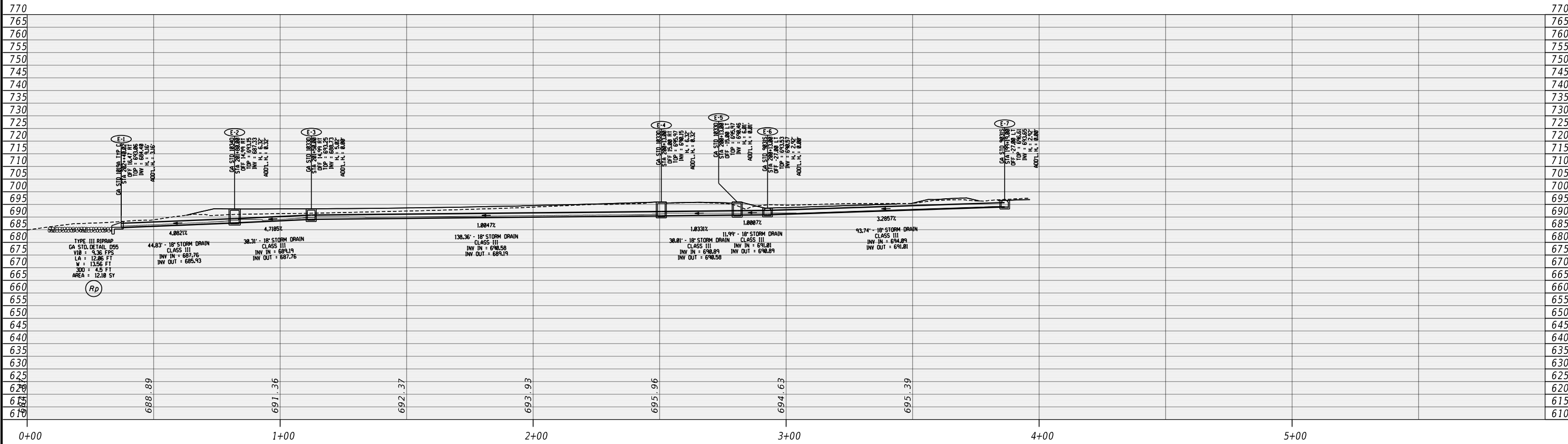
REVISION DATES

DRAINAGE PROFILES
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		22-0002



CHECKED:	DATE:	DRAWING No. 22-0003
BACKCHECKED:	DATE:	
CORRECTED:	DATE:	
VERIFIED:	DATE:	





VERTICAL
1" = 10'

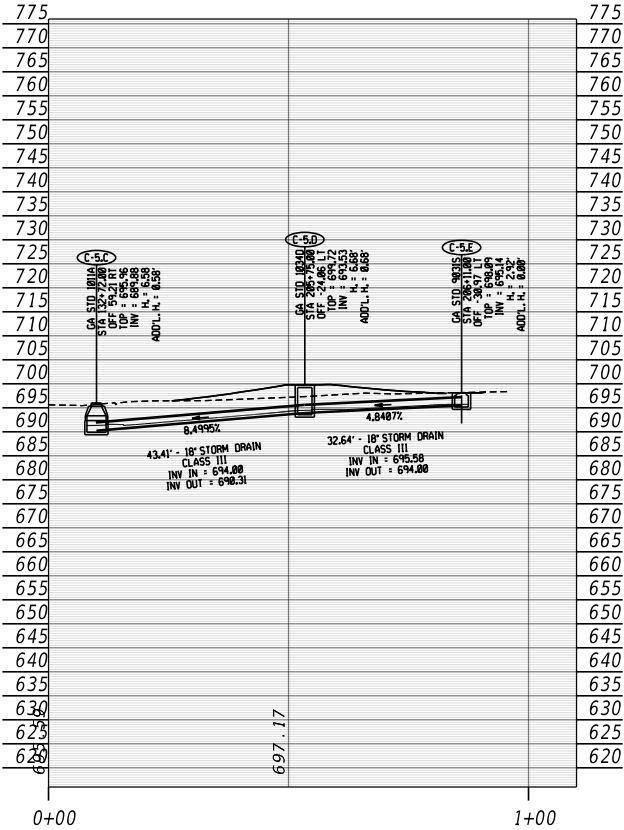
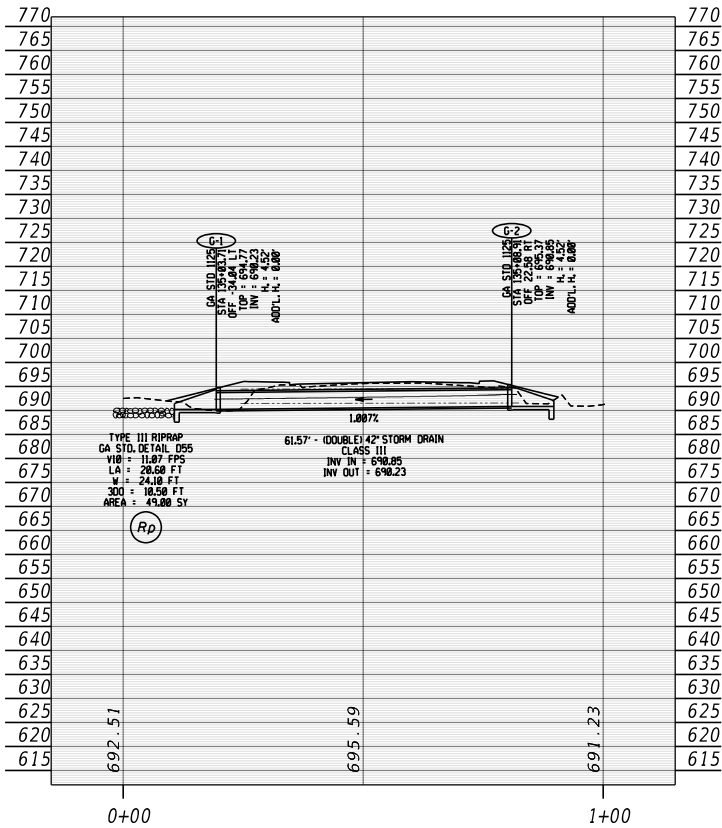
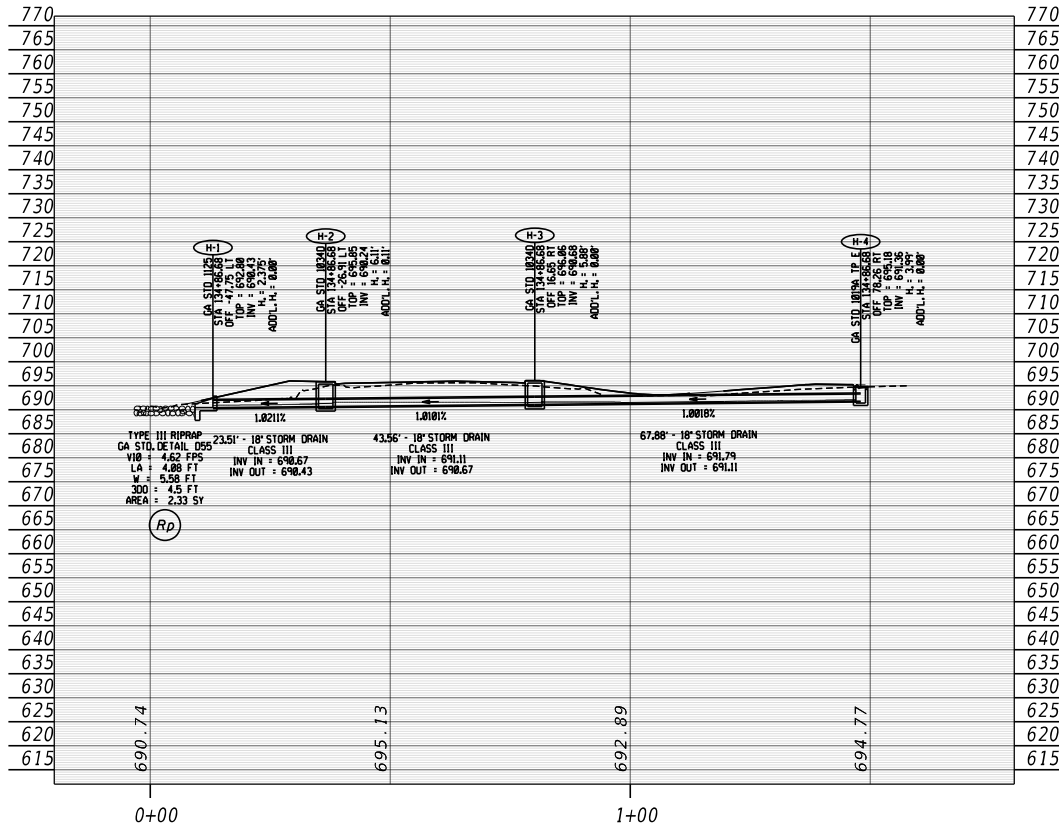
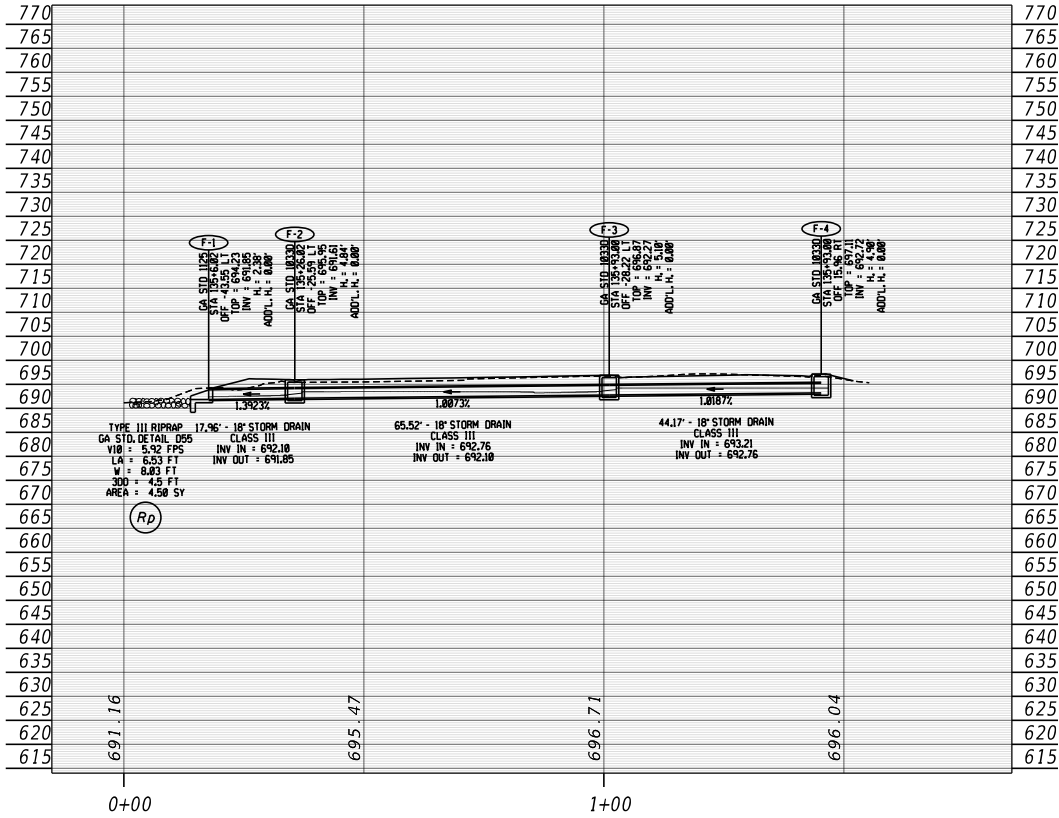
HORIZONTAL
1" = 40'

REVISION DATES		

DRAINAGE PROFILES
CURTIS PARKWAY-PHASE II
GORDON COUNTY

CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No.:
22-0004



VERTICAL
1" = 10'

HORIZONTAL
1" = 40'

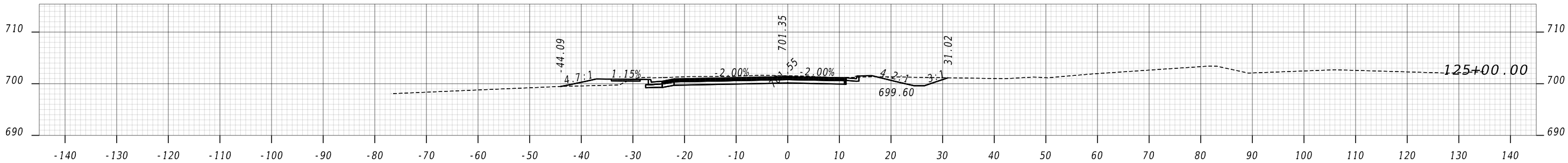
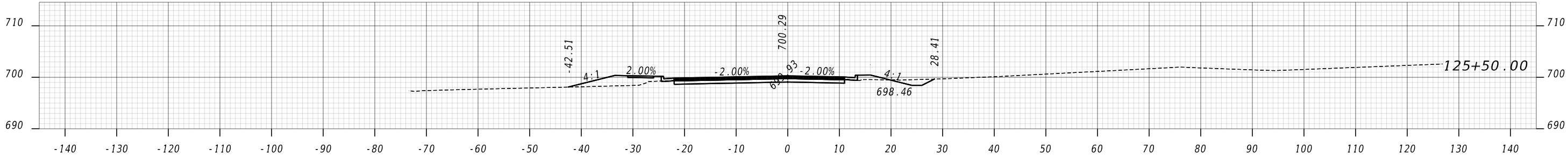
REVISION DATES

DRAINAGE PROFILES
CURTIS PARKWAY-PHASE II
GORDON COUNTY

CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

DRAWING No.

22-0005





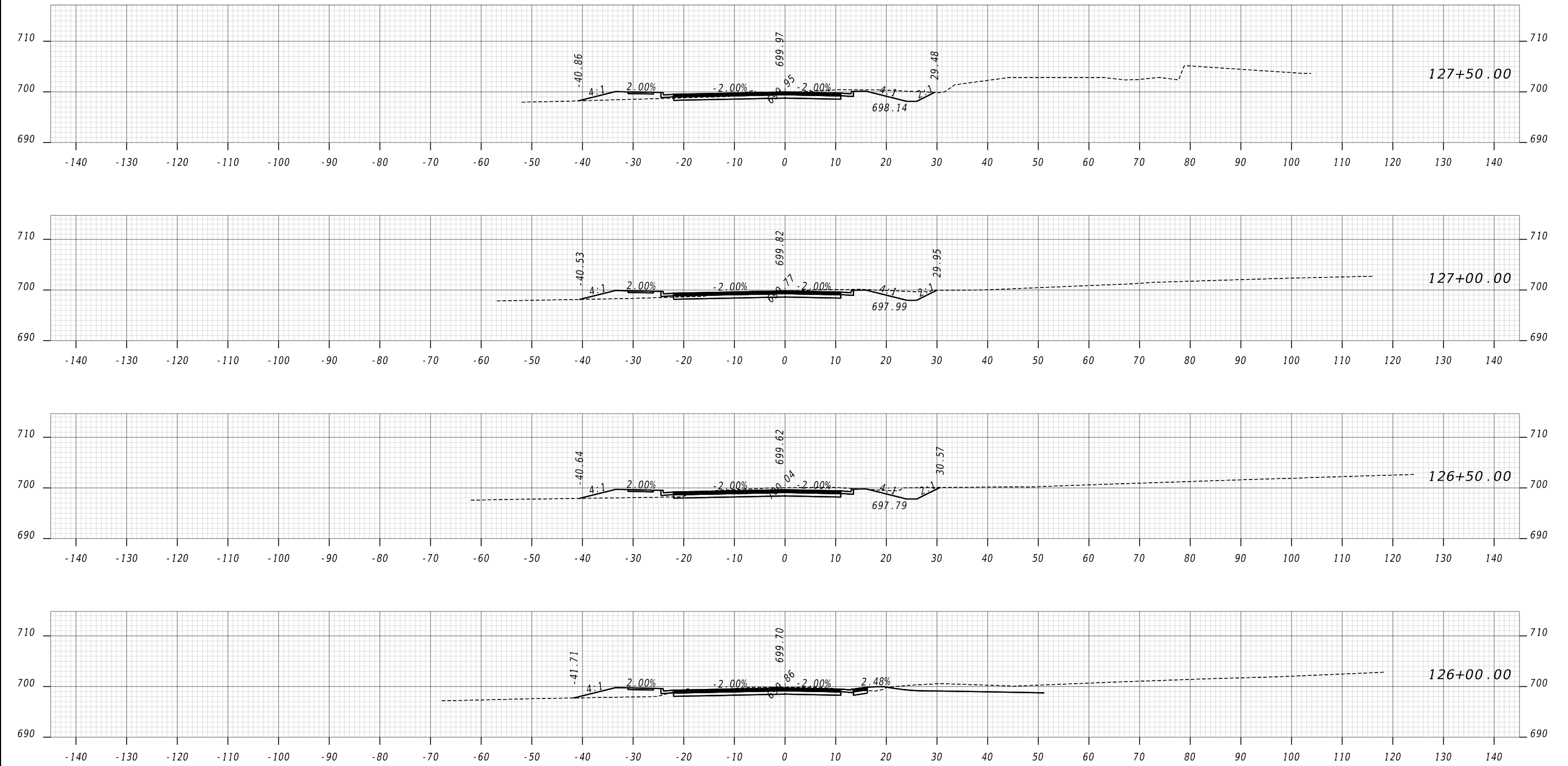
VERTICAL
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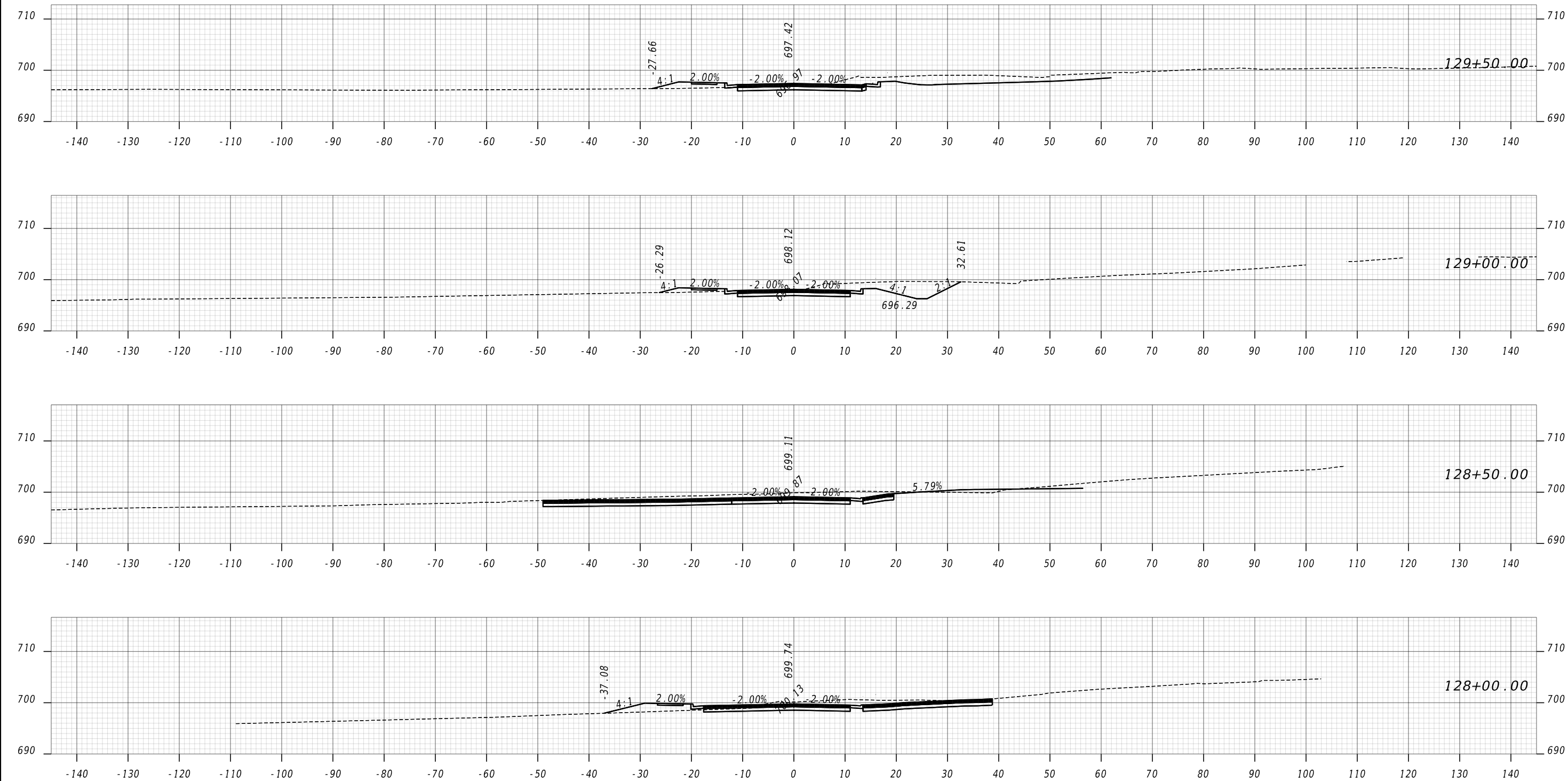
HORIZONTAL
1" = 20'

REVISION DATES		

CROSS SECTIONS
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:		DATE:		DRAWING No.: 23-0001
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		







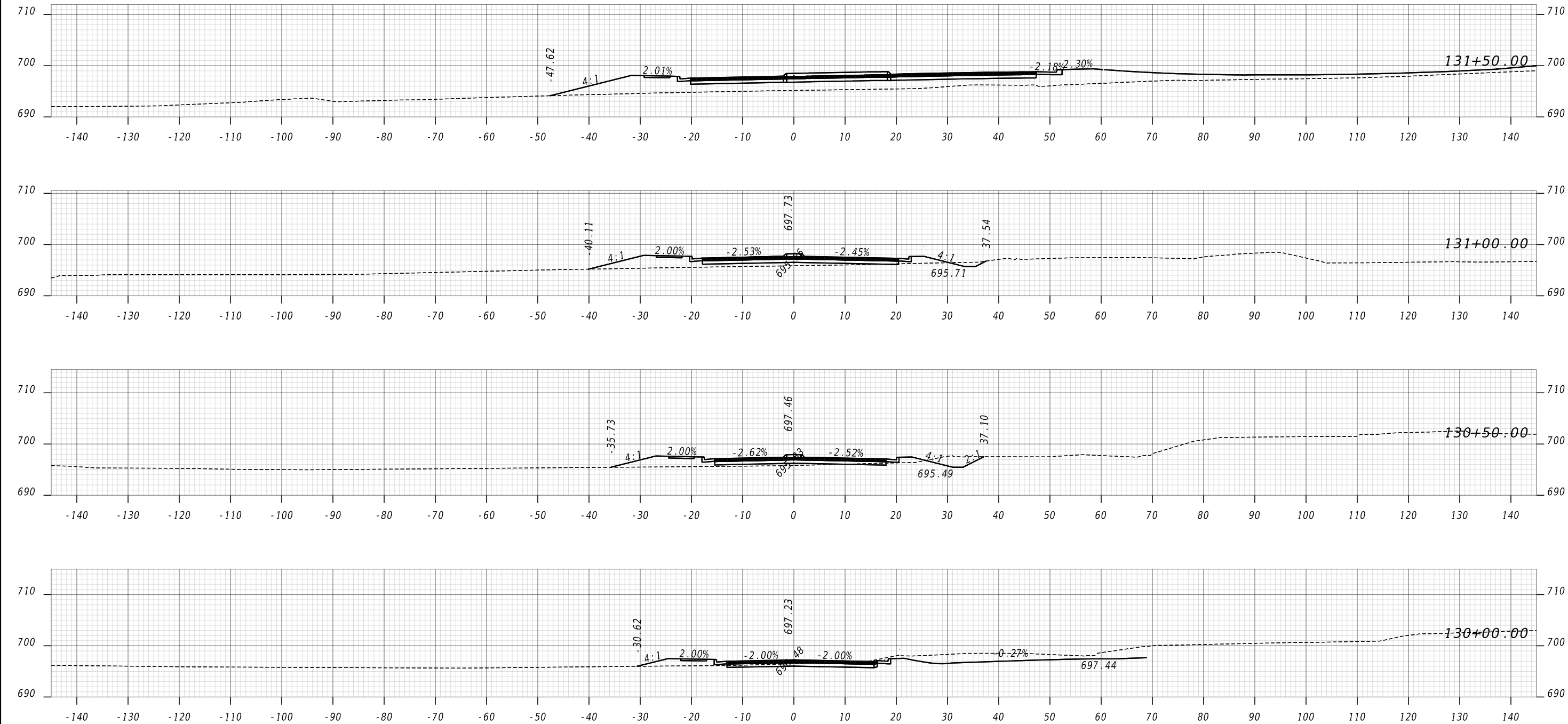
VERTICAL
1" = 20'

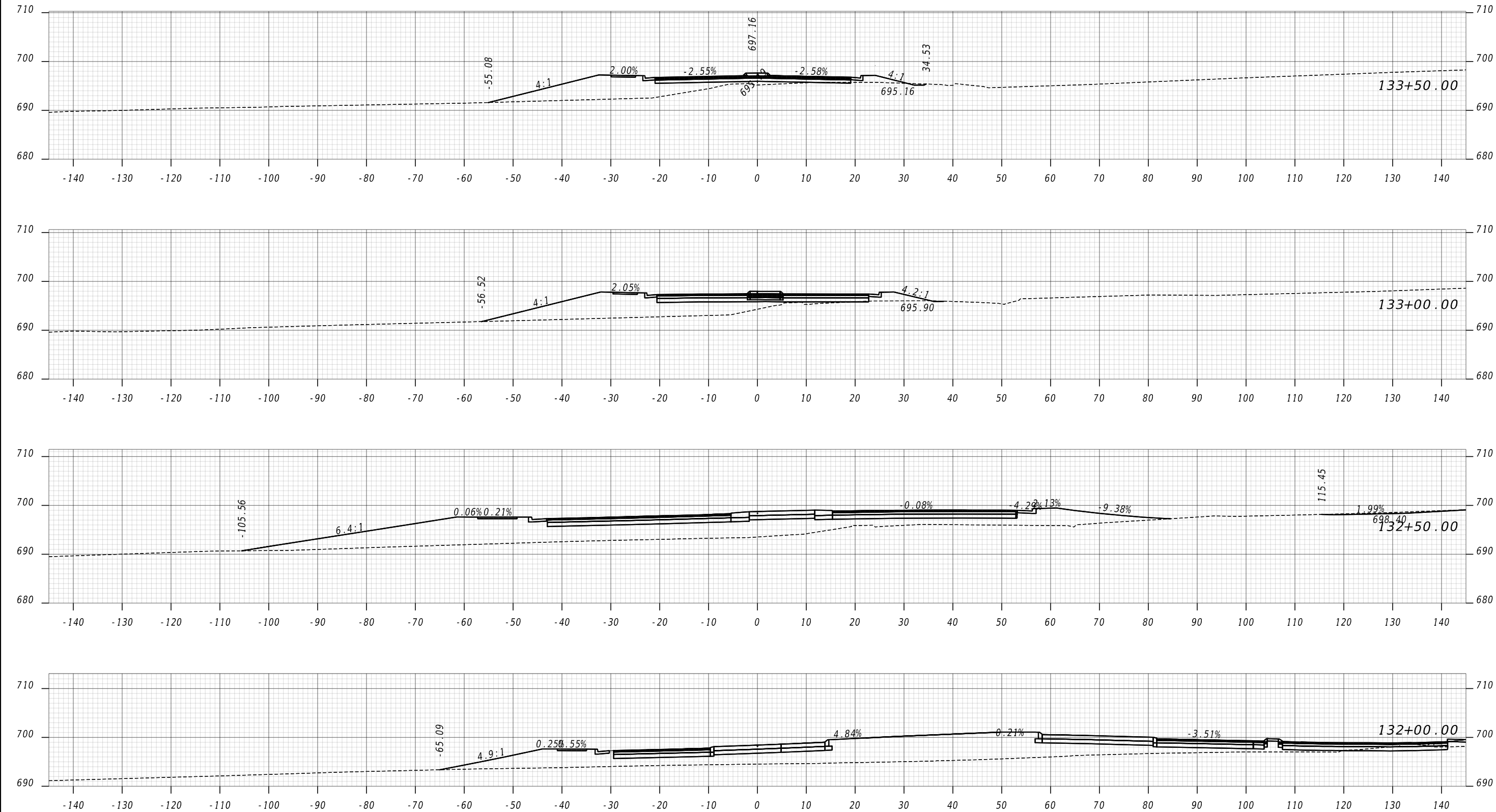
HORIZONTAL
1" = 20'

REVISION DATES		

CROSS SECTIONS
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	23-0003
CORRECTED:	DATE:	
VERIFIED:	DATE:	







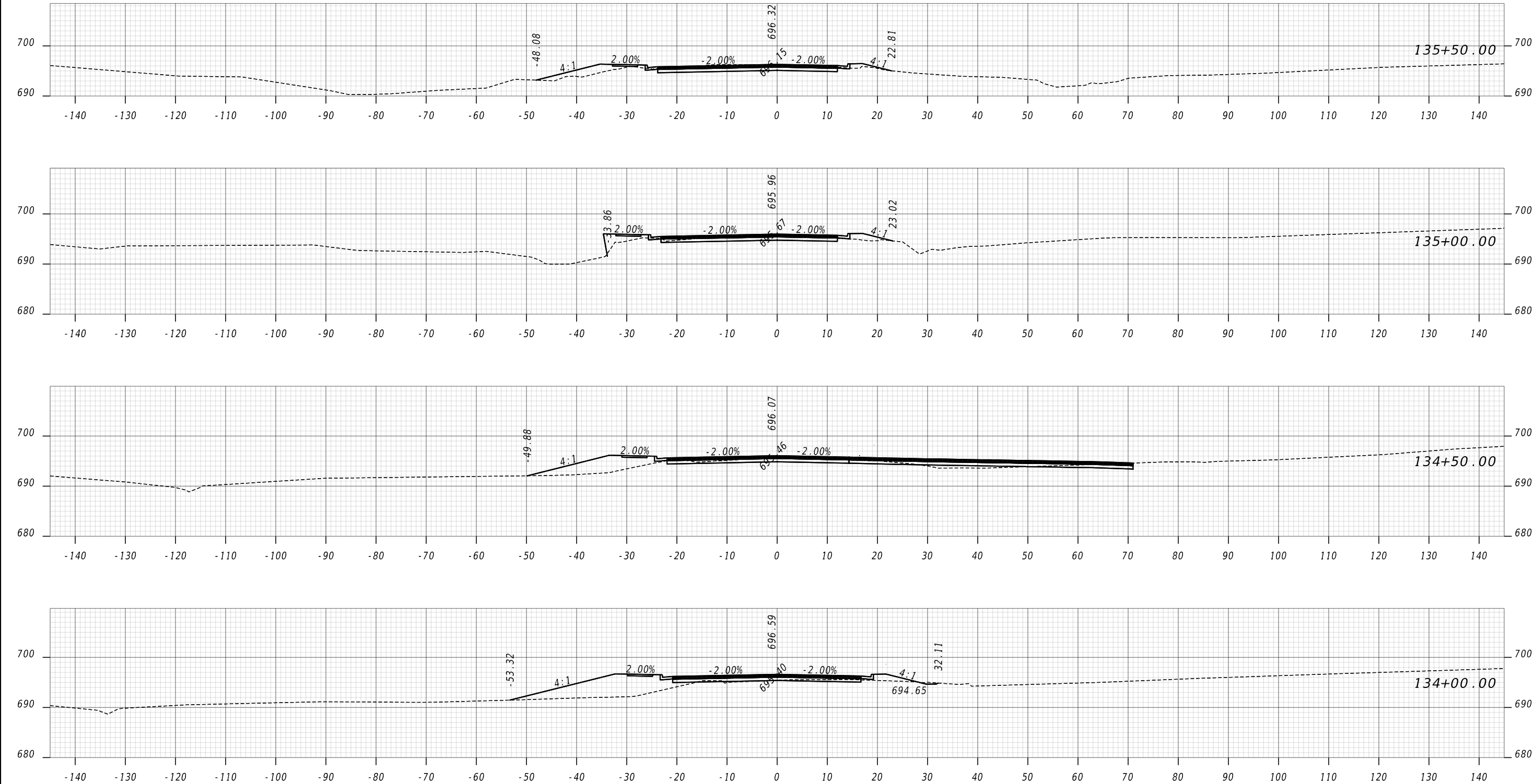
VERTICAL
1" = 20'

HORIZONTAL
1" = 20'

REVISION DATES		

CROSS SECTIONS
CURTIS PARKWAY - PHASE II
GORDON COUNTY

CHECKED:	DATE:	DRAWING No.
BACKCHECKED:	DATE:	23-0005
CORRECTED:	DATE:	
VERIFIED:	DATE:	





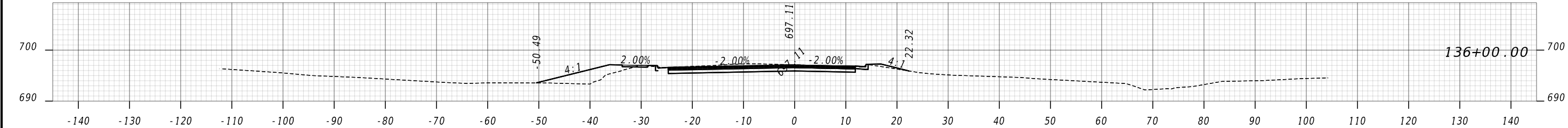
VERTICAL
1" = 20'

HORIZONTAL
1" = 20'

REVISION DATES		

CROSS SECTIONS
CURTIS PARKWAY - PHASE II
GORDON COUNTY

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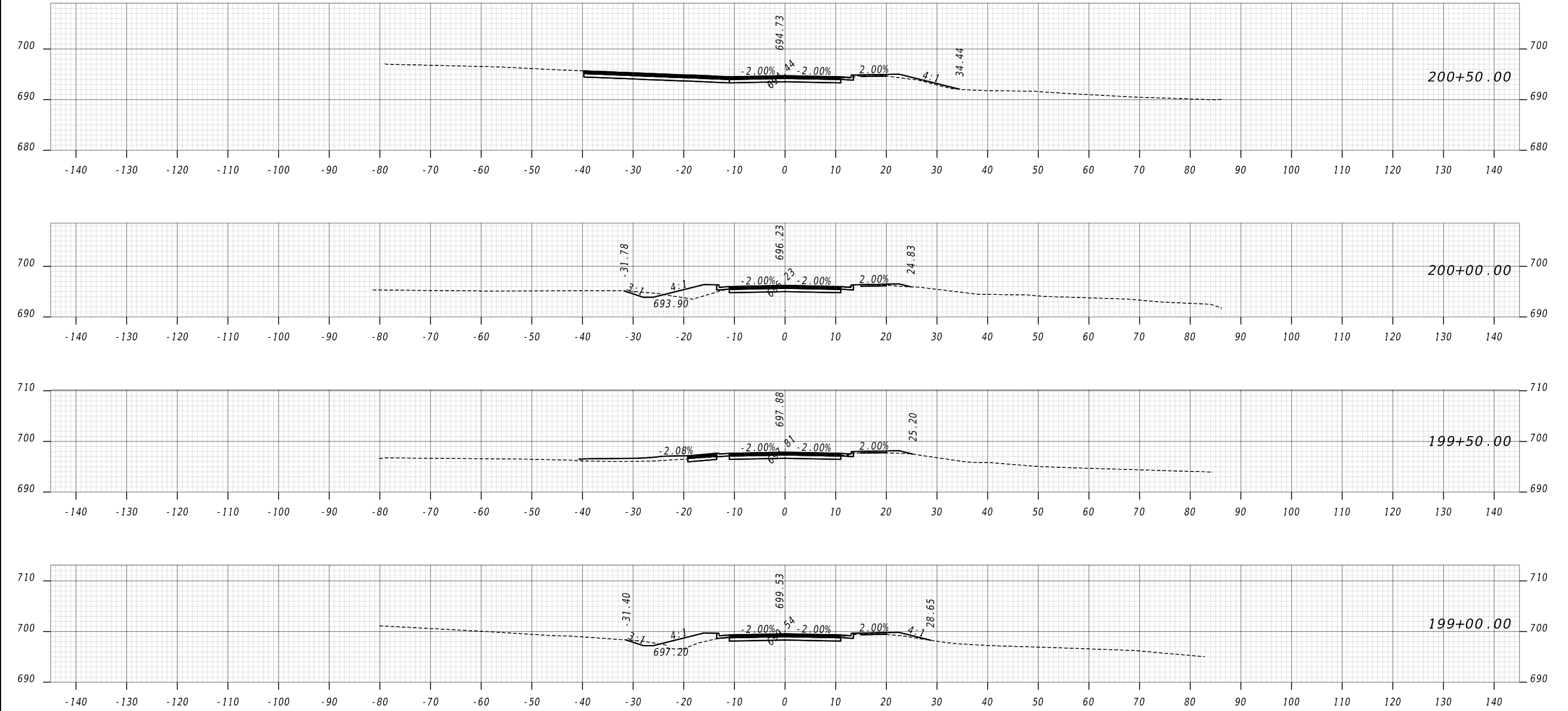
VERTICAL
1" = 20'

HORIZONTAL
1" = 20'

REVISION DATES		

CROSS SECTIONS
CURTIS PARKWAY - PHASE II
GORDON COUNTY

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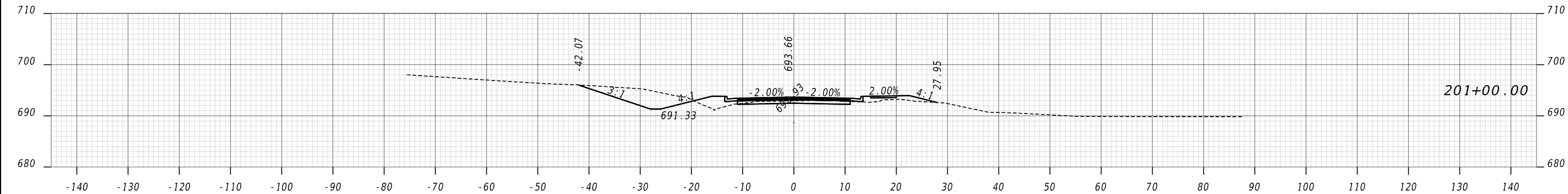
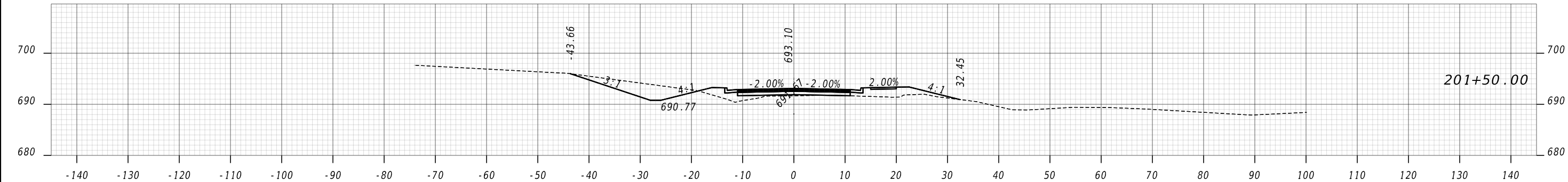
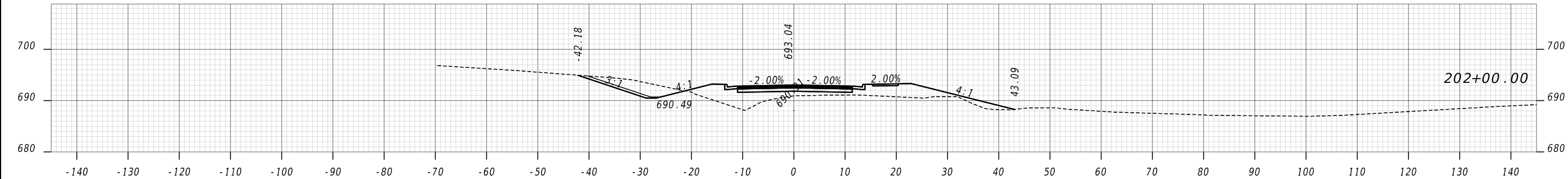
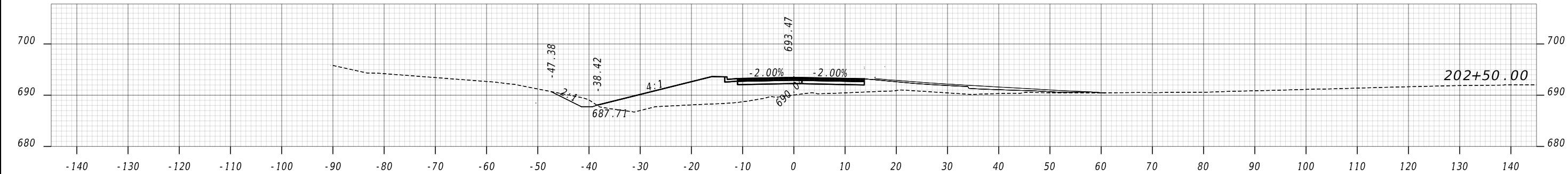
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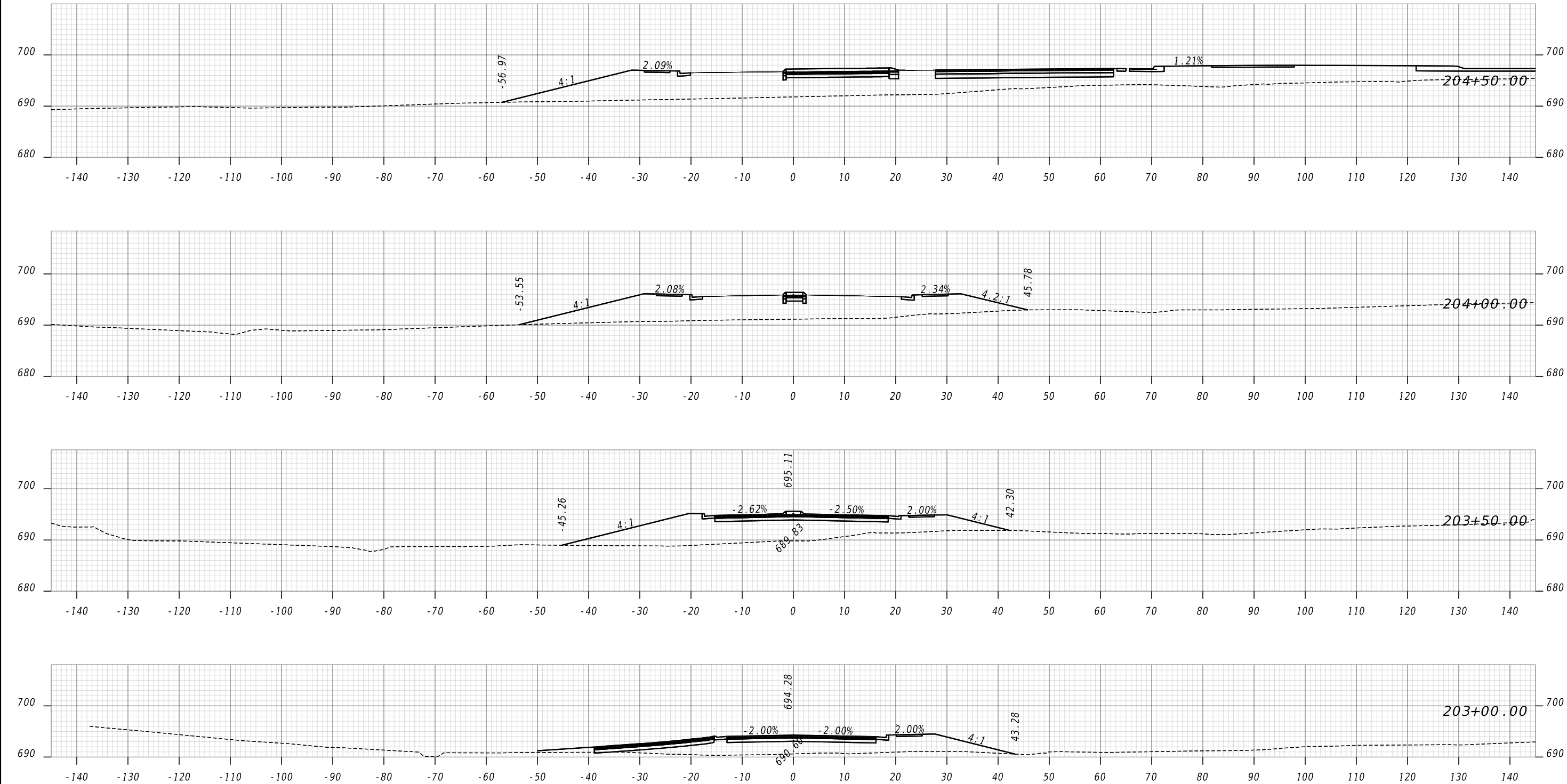
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REVISION DATES		

CROSS SECTIONS
DEWS POND ROAD - PHASE II
GORDON COUNTY

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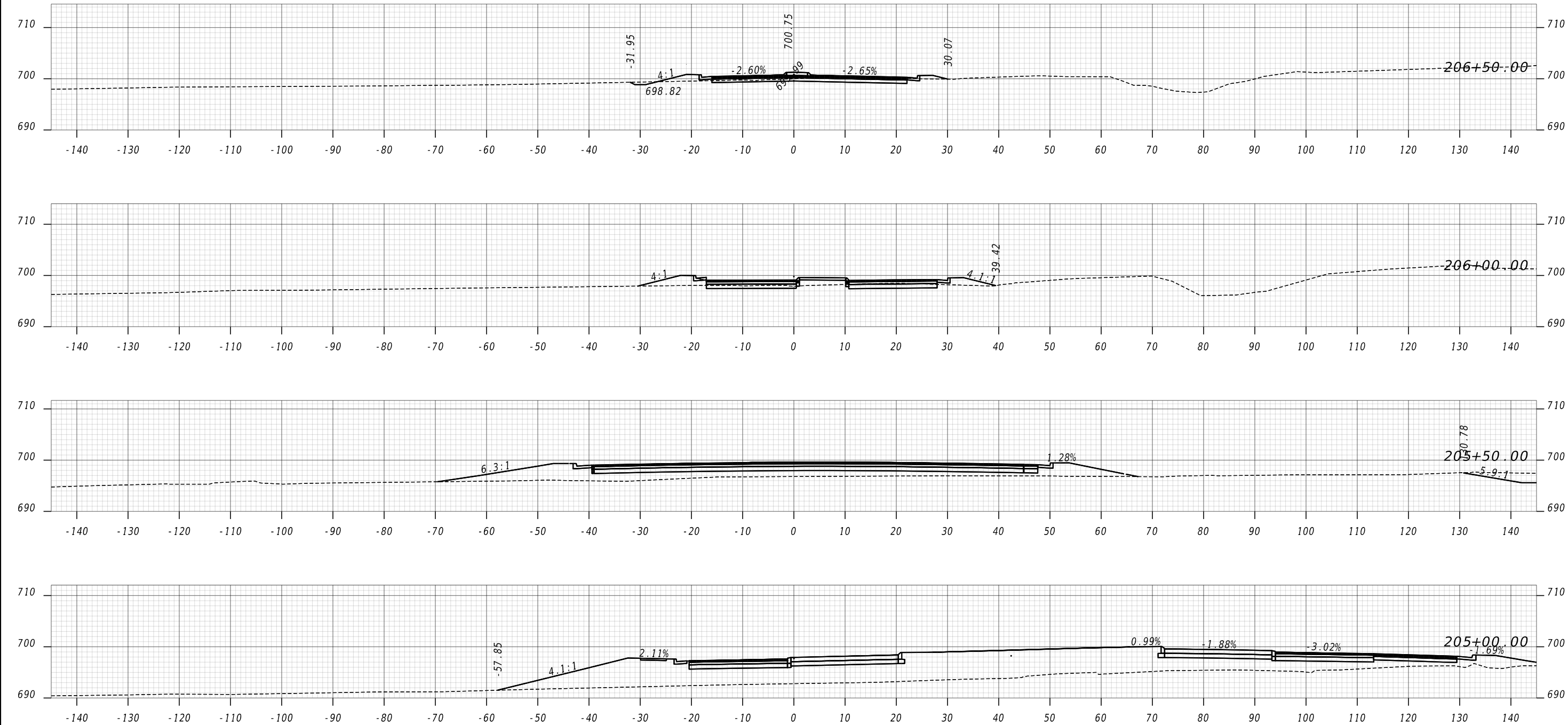
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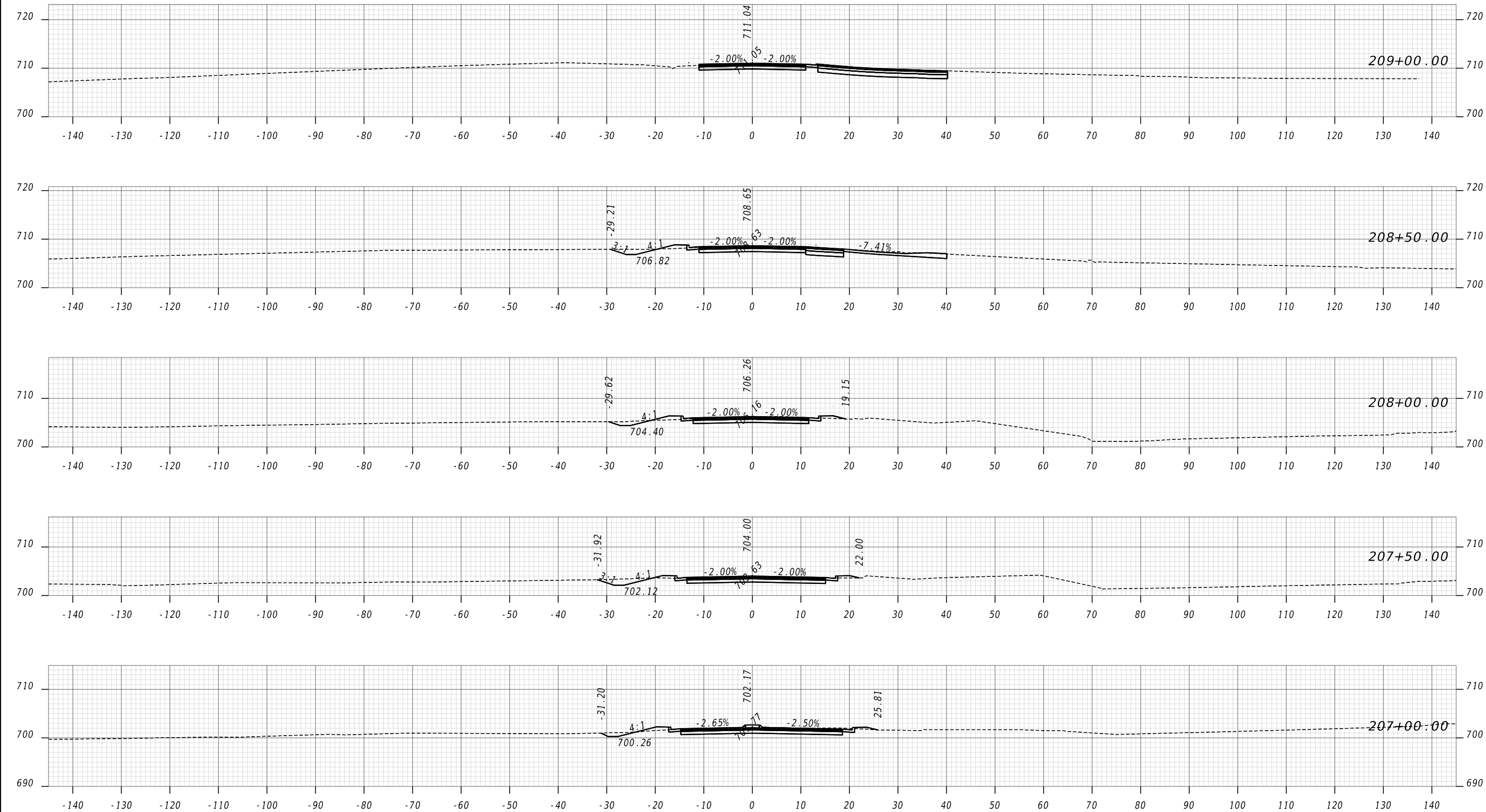
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REVISION DATES		

CROSS SECTIONS
DEWS POND ROAD - PHASE II
GORDON COUNTY

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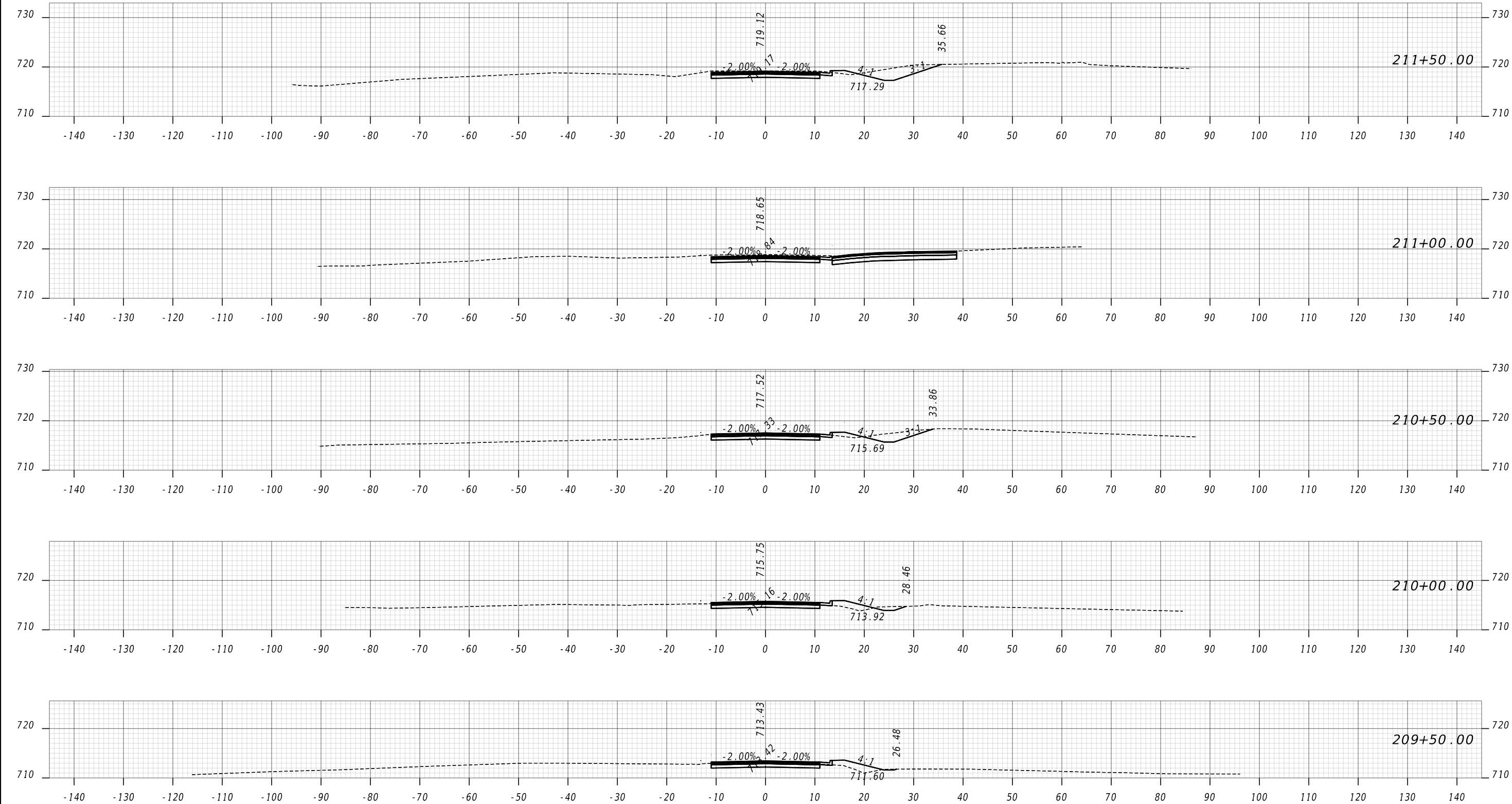
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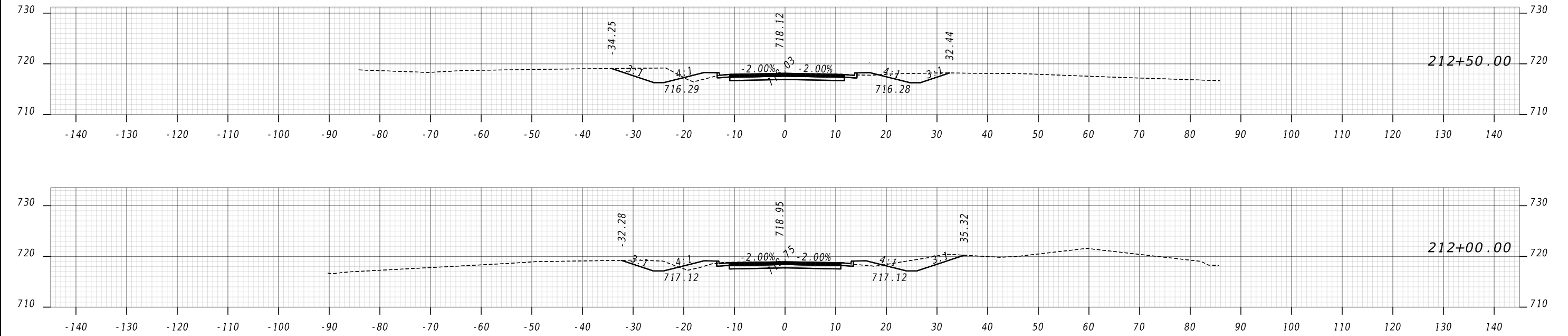
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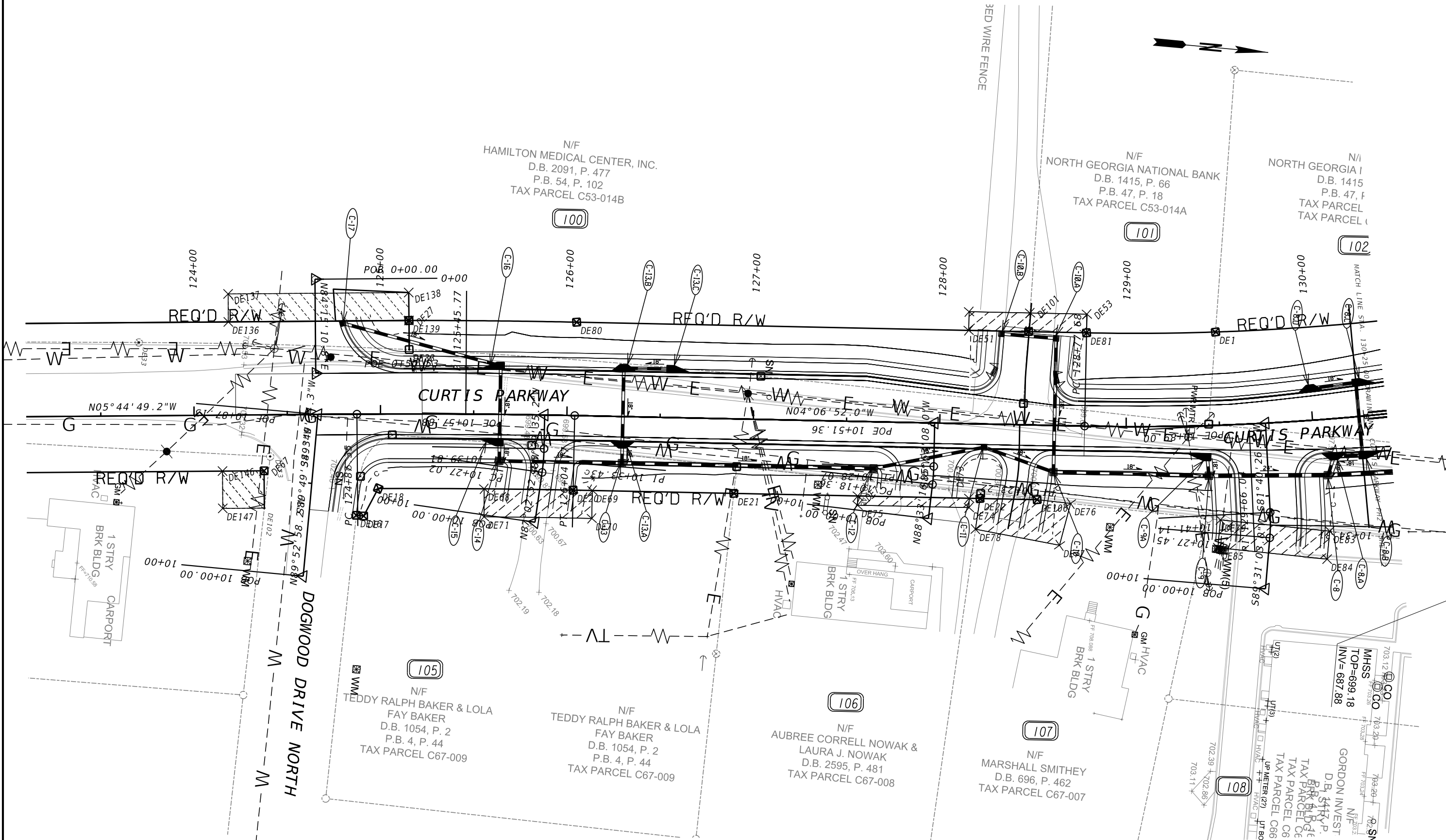
REVISION DATES		

COSS SECTIONS
DEWS POND ROAD - PHASE II
GORDON COUNTY

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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

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

exp.

SCALE IN FEET

0

25

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REVISION DATES

UTILITY PLAN

CURTIS PARKWAY - PHASE II

GORDON COUNTY

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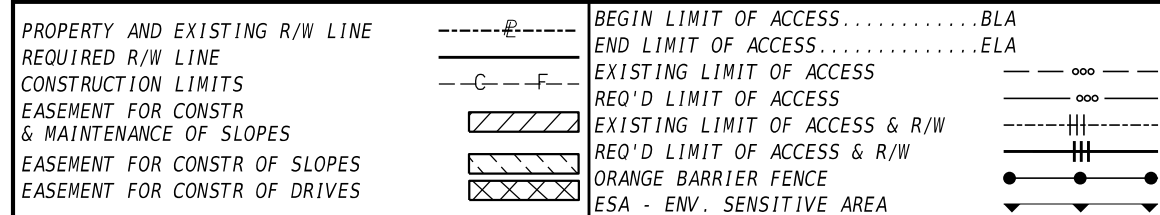
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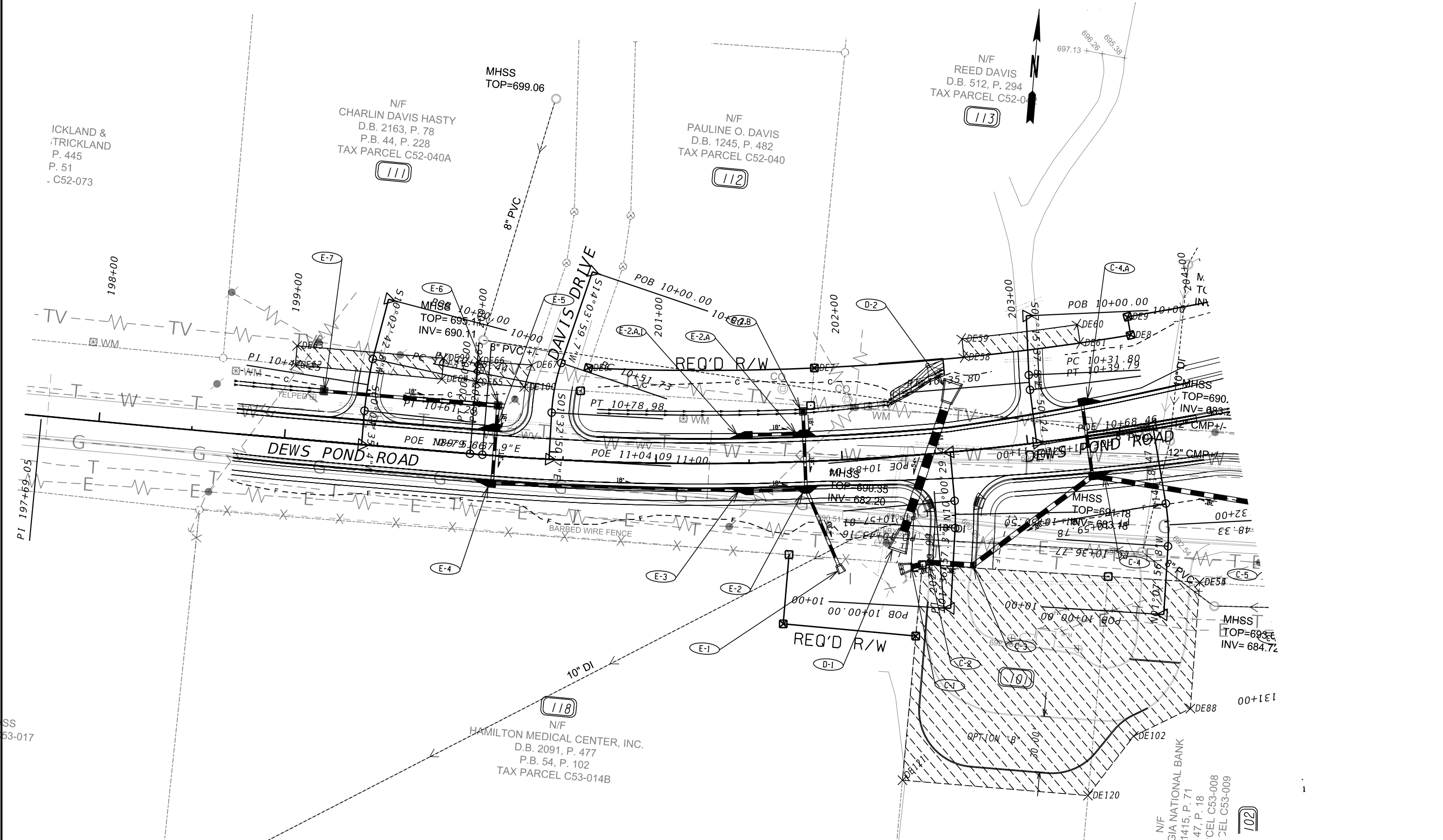
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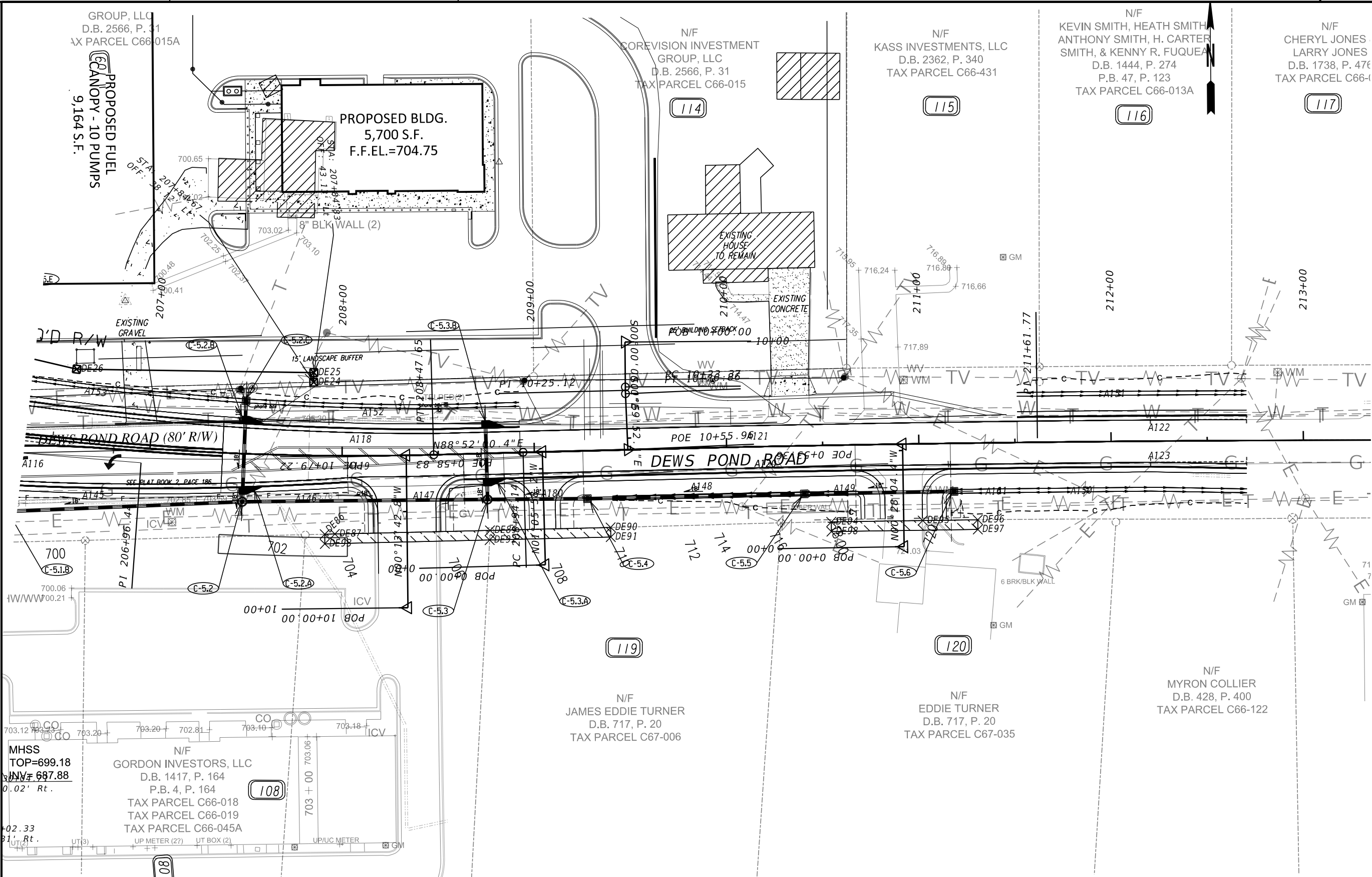


UTILITY PLAN
CURTIS PARKWAY - PHASE II
GORDON COUNTY

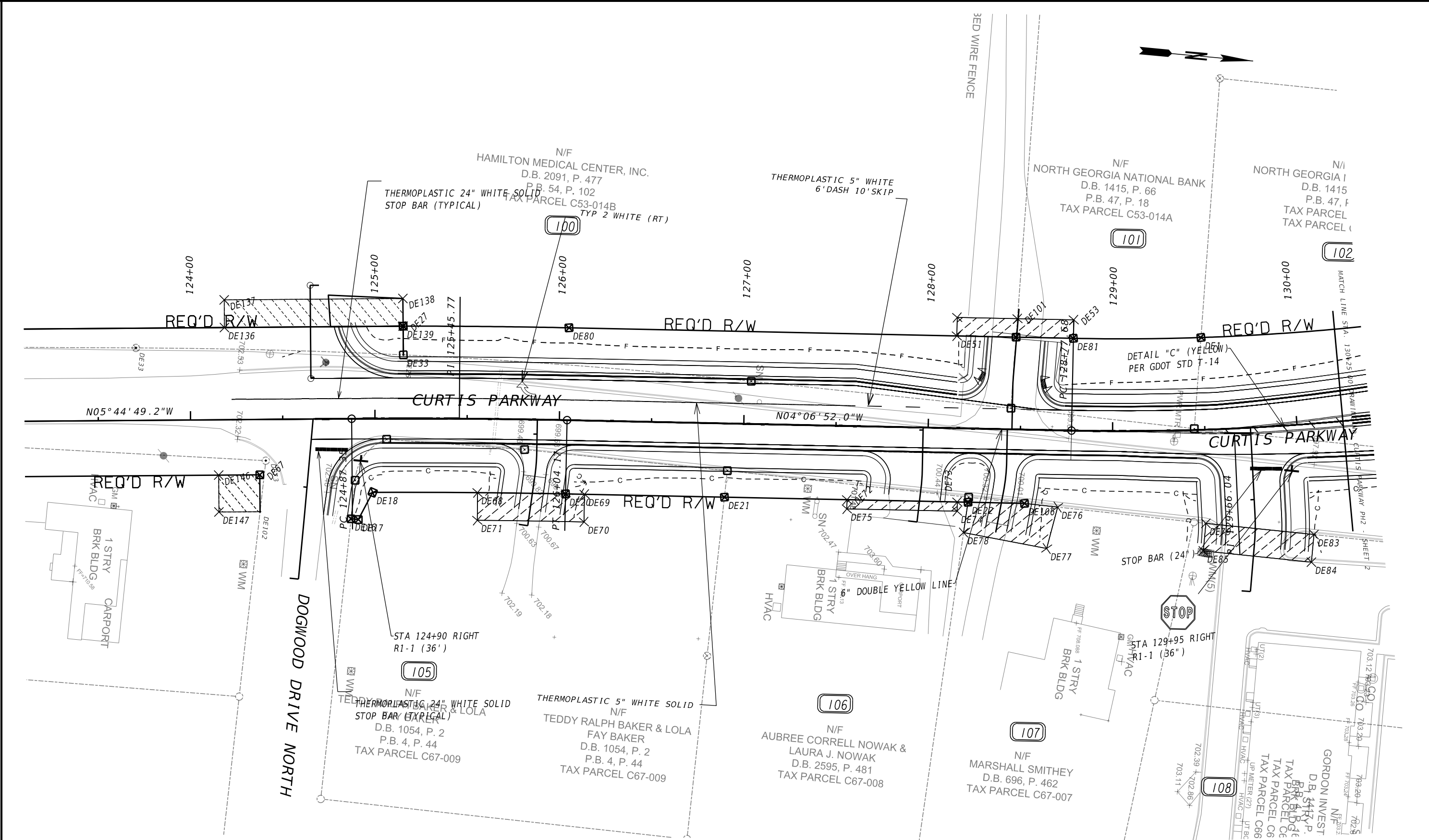
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		END LIMIT OF ACCESS.....ELA							CURTIS PARKWAY - PHASE II						
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		REQ'D LIMIT OF ACCESS													
		EXISTING LIMIT OF ACCESS & R/W													
		REQ'D LIMIT OF ACCESS & R/W													
		ORANGE BARRIER FENCE													
		ESA - ENV. SENSITIVE AREA													
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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	-----P-----	BEGIN LIMIT OF ACCESS.....BLA		REVISION DATES			UTILKITY PLAN (DEWS POND ROAD)				
	-----	END LIMIT OF ACCESS.....ELA					CURTIS PARKWAY - PHASE II				
	---C---F---	EXISTING LIMIT OF ACCESS					GORDON COUNTY				
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	ORANGE BARRIER FENCE				VERIFIED:		DATE:				
		ESA - ENV. SENSITIVE AREA									



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

SCALE IN FEET

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REVISION DATES

NO.	DATE	DESCRIPTION

SIGNING & MARKING PLANS

CURTIS PARKWAY - PHASE II

GORDON COUNTY

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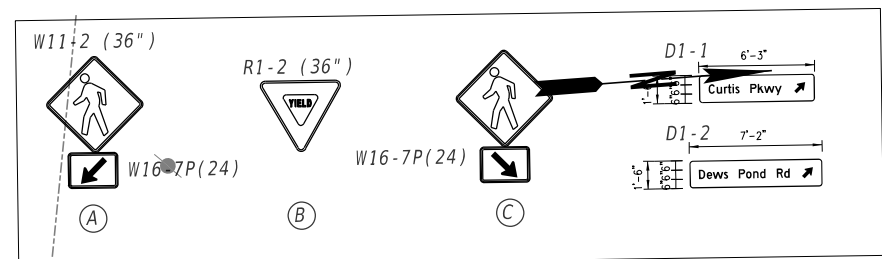
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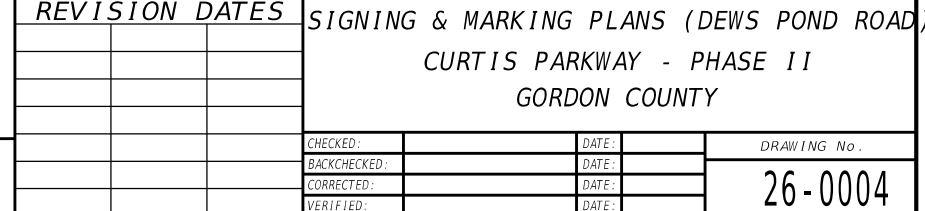
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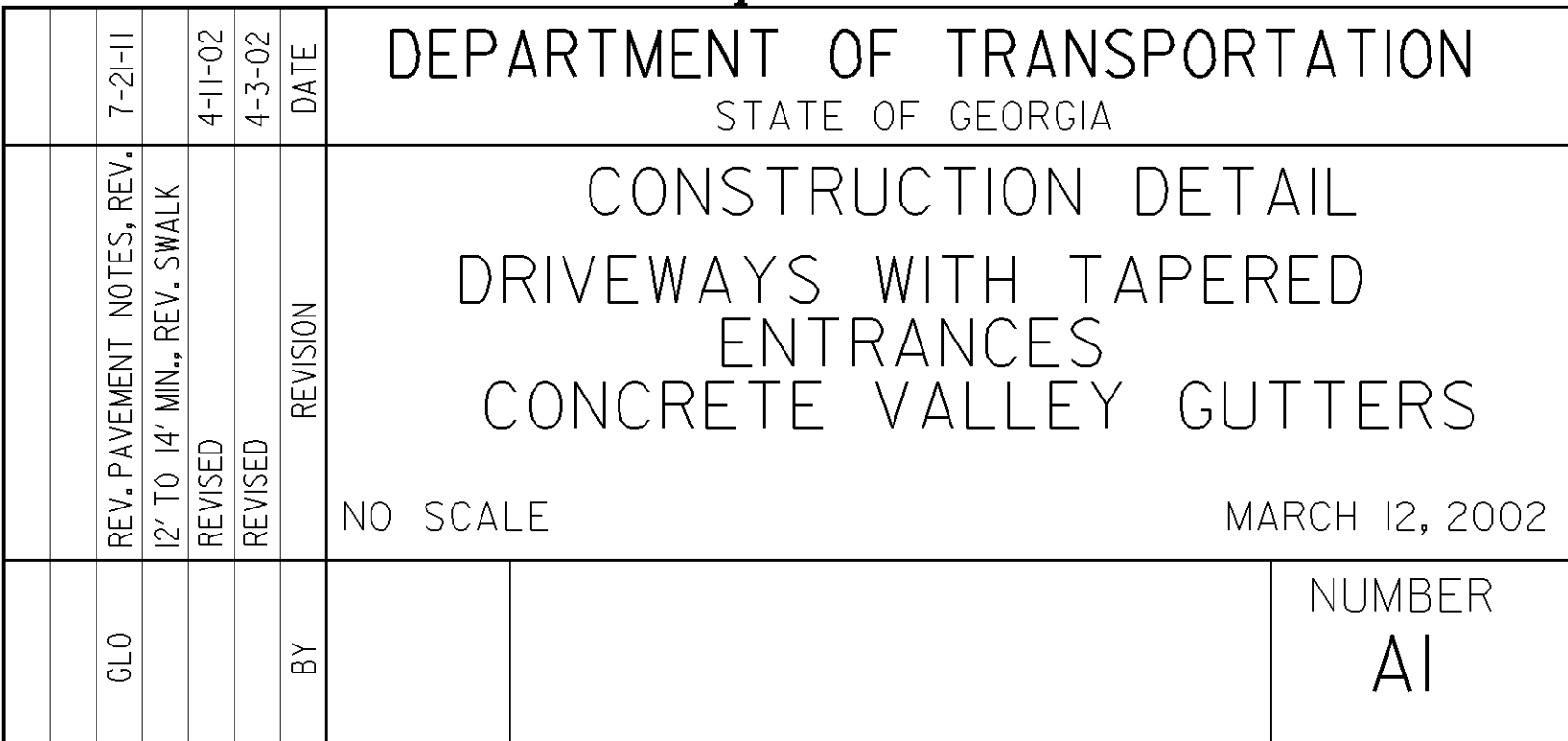
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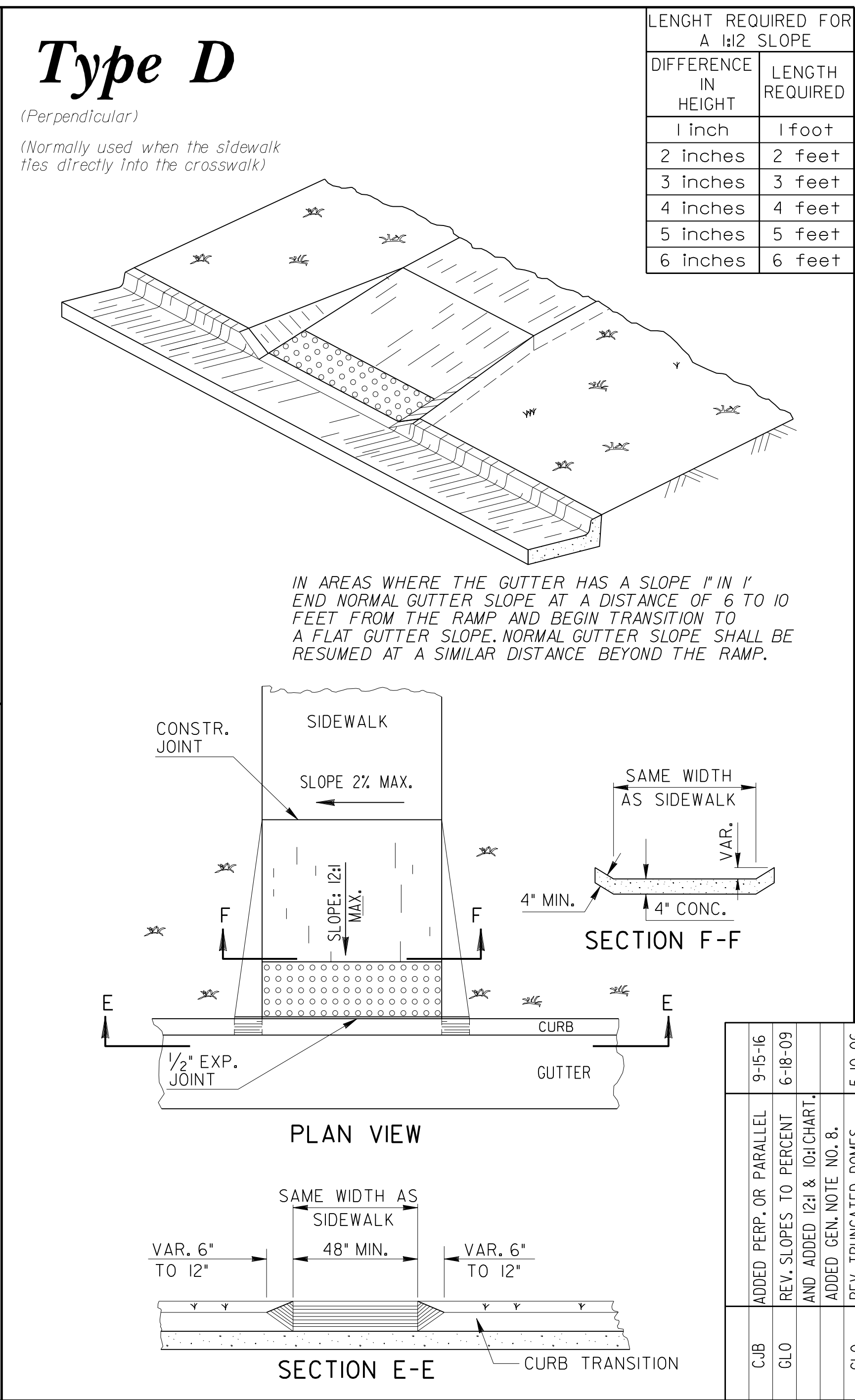
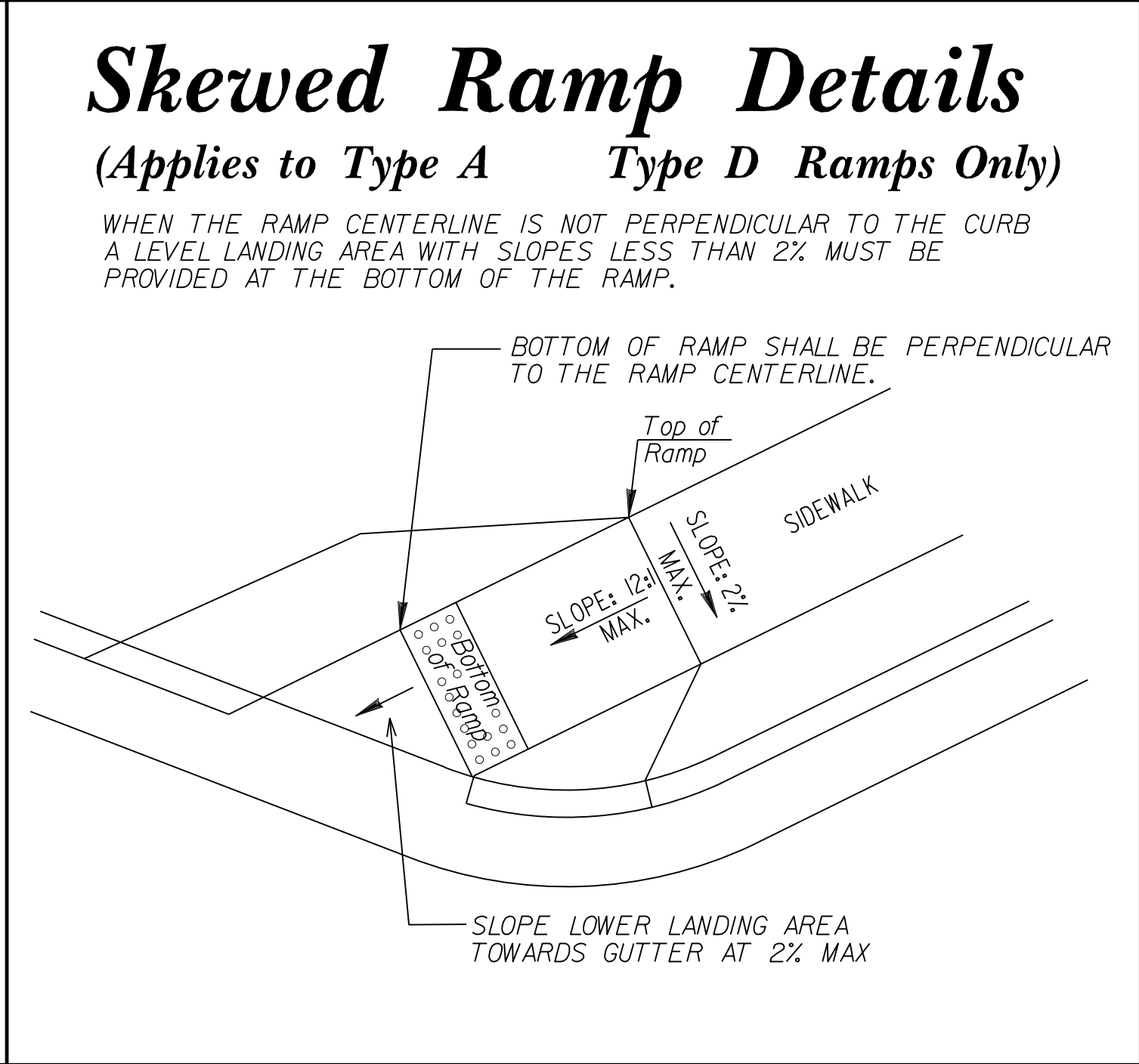
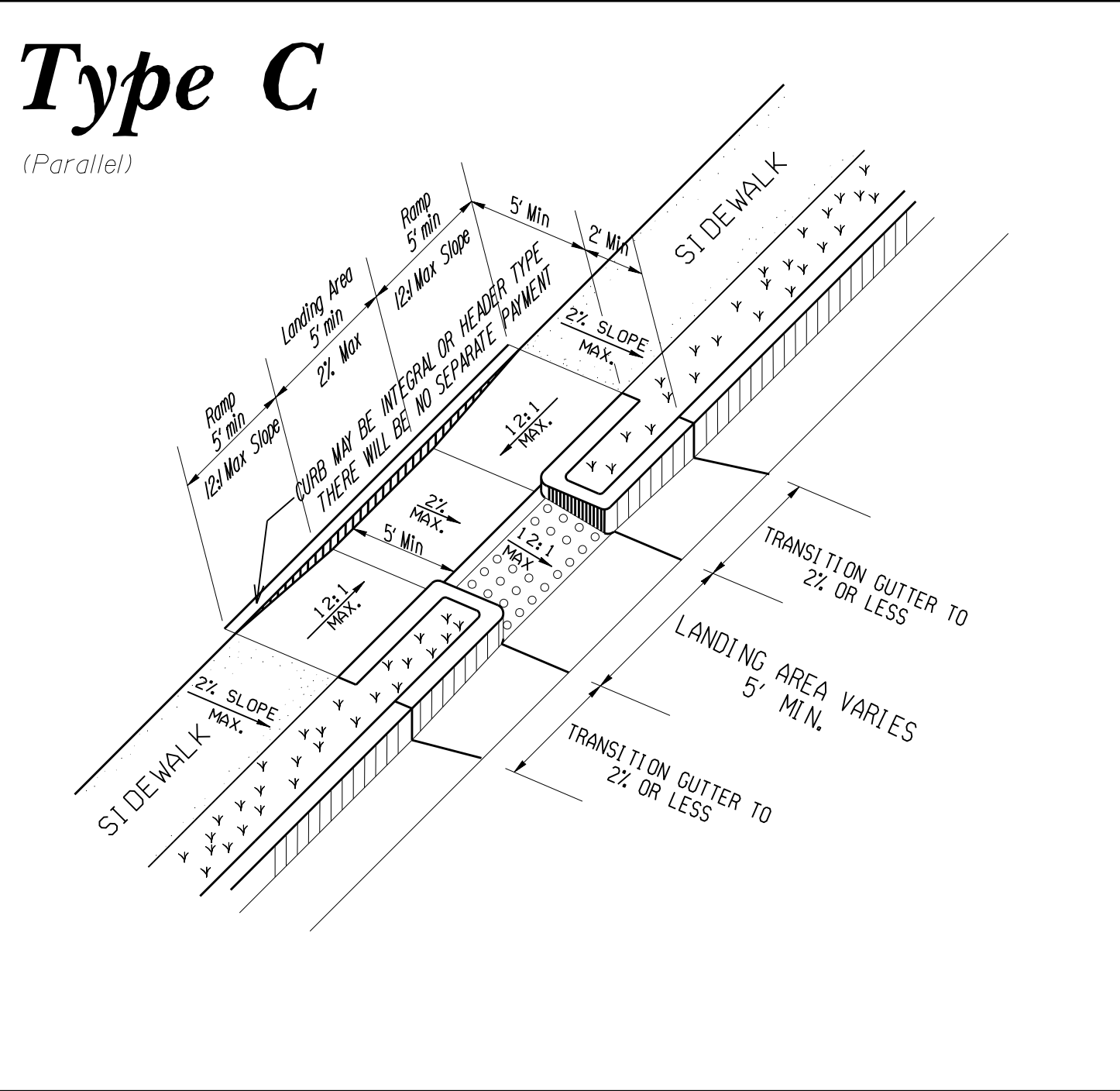
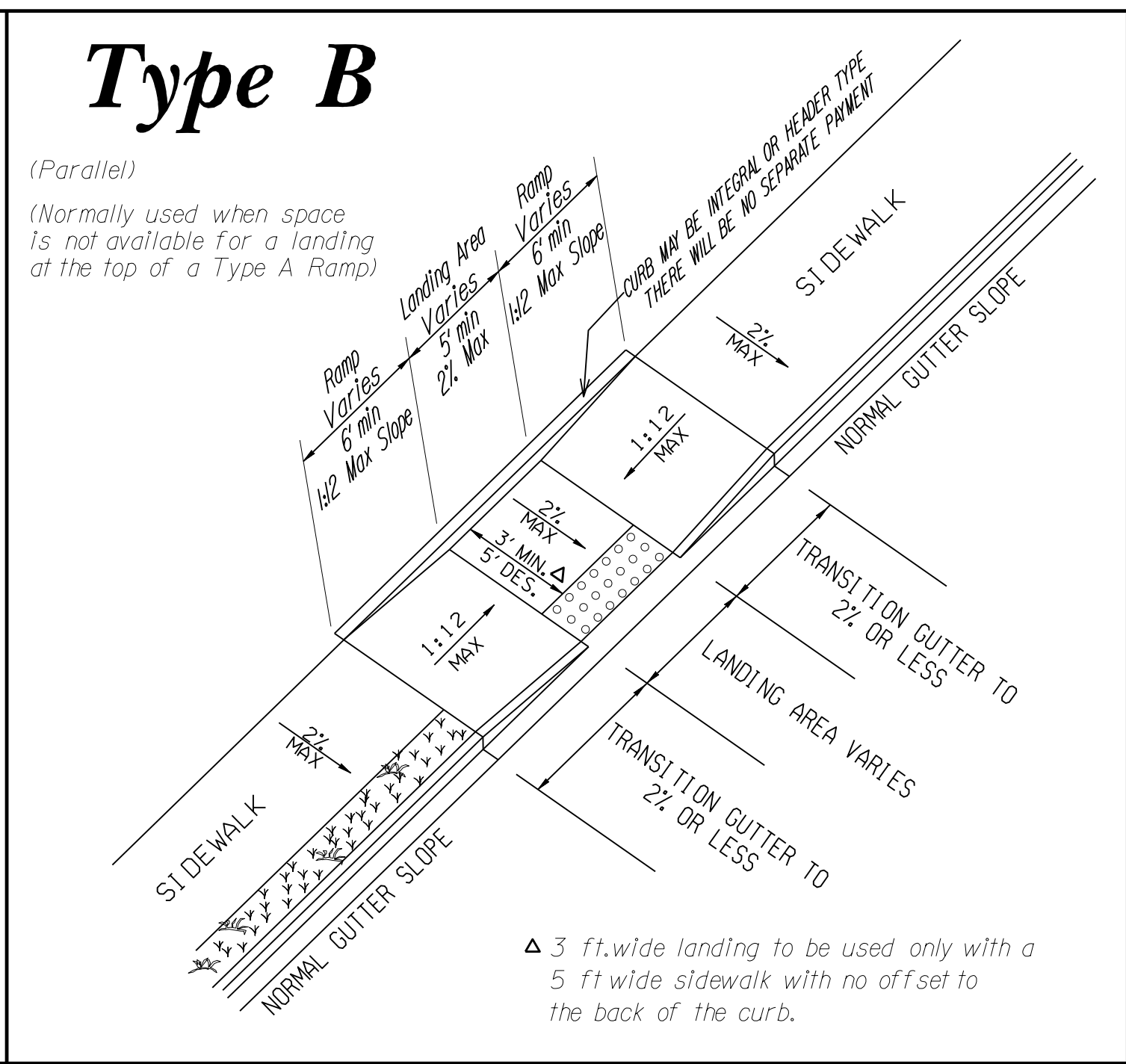
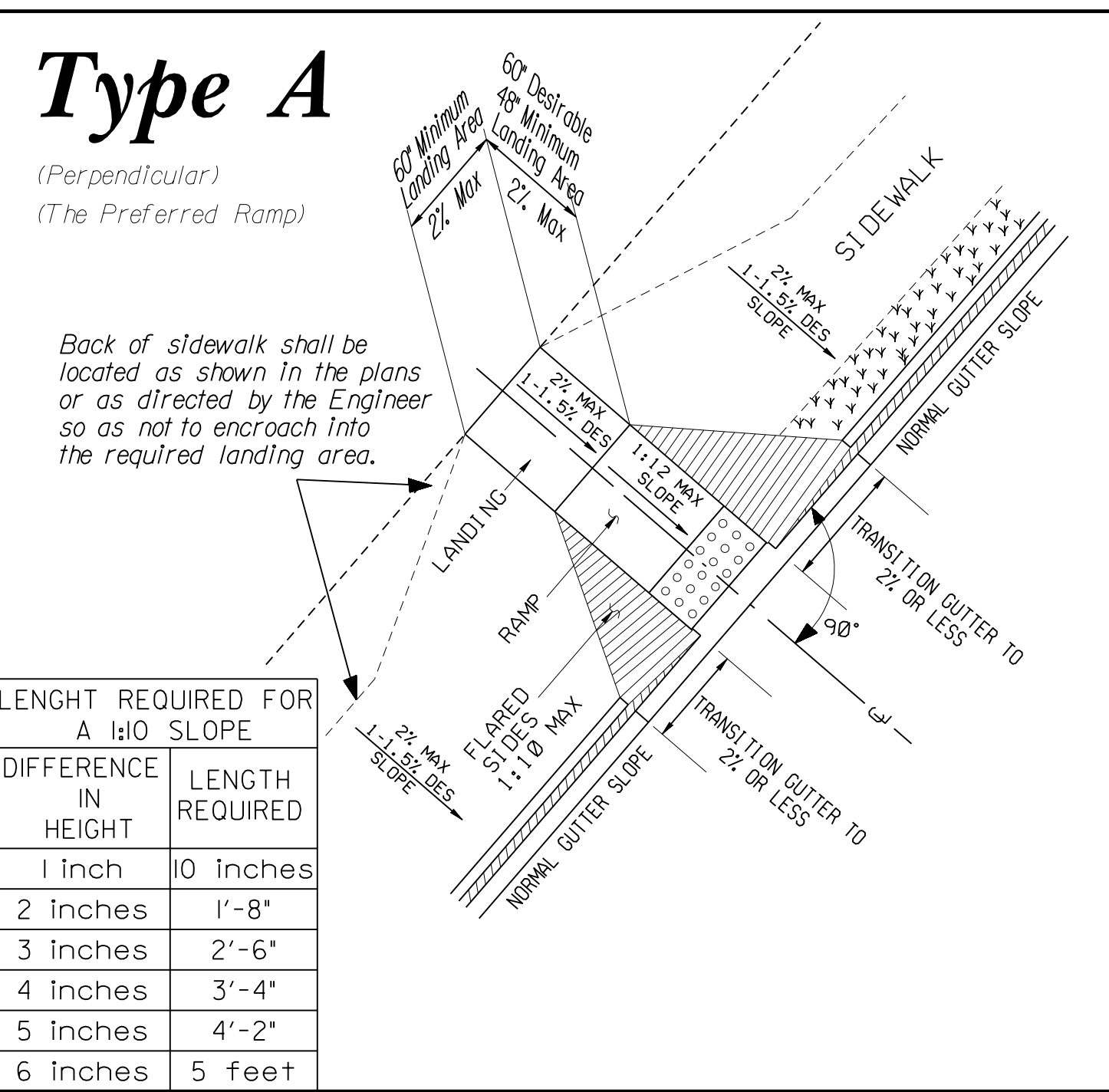
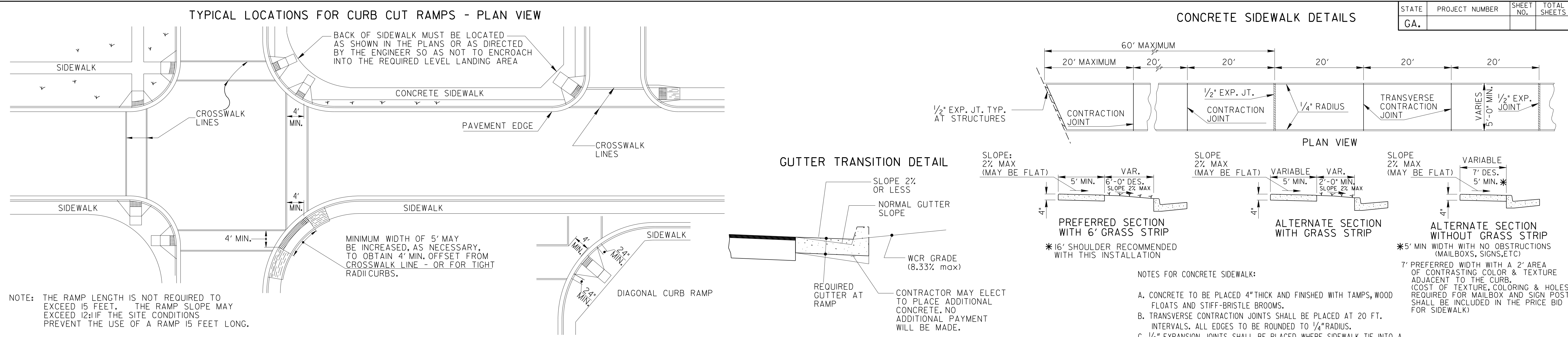


REVISION DATES			SIGNING & MARKING PLANS CURTIS PARKWAY - PHASE II GORDON COUNTY			
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						26-0002



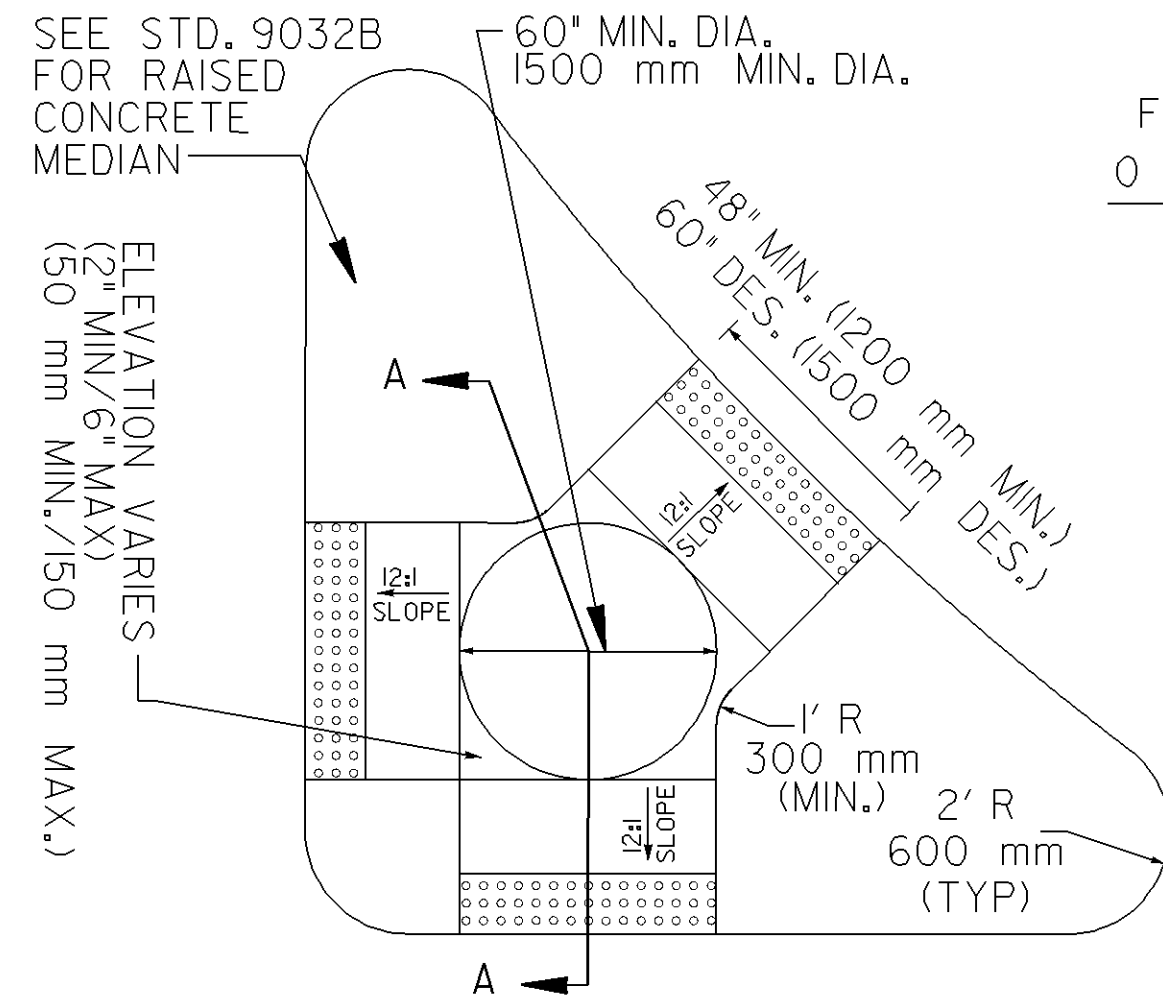
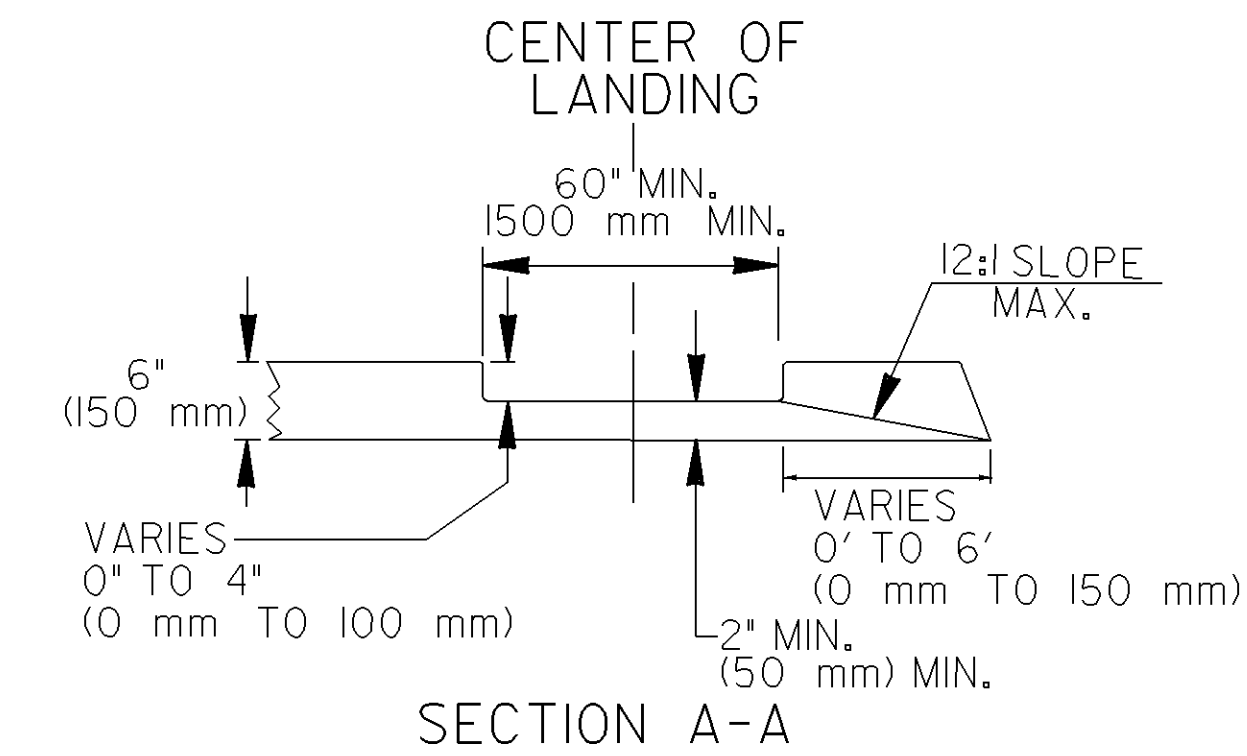




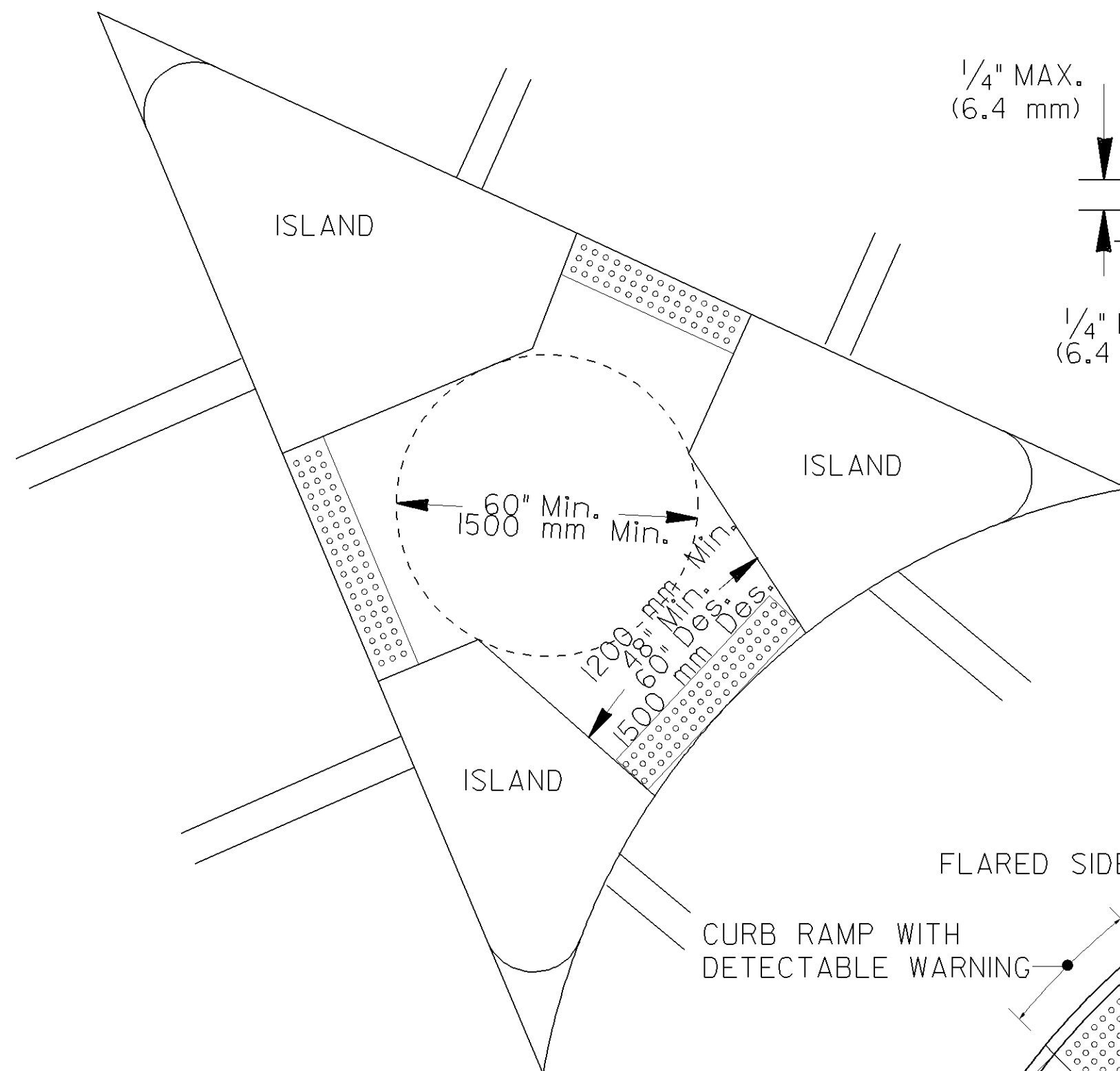


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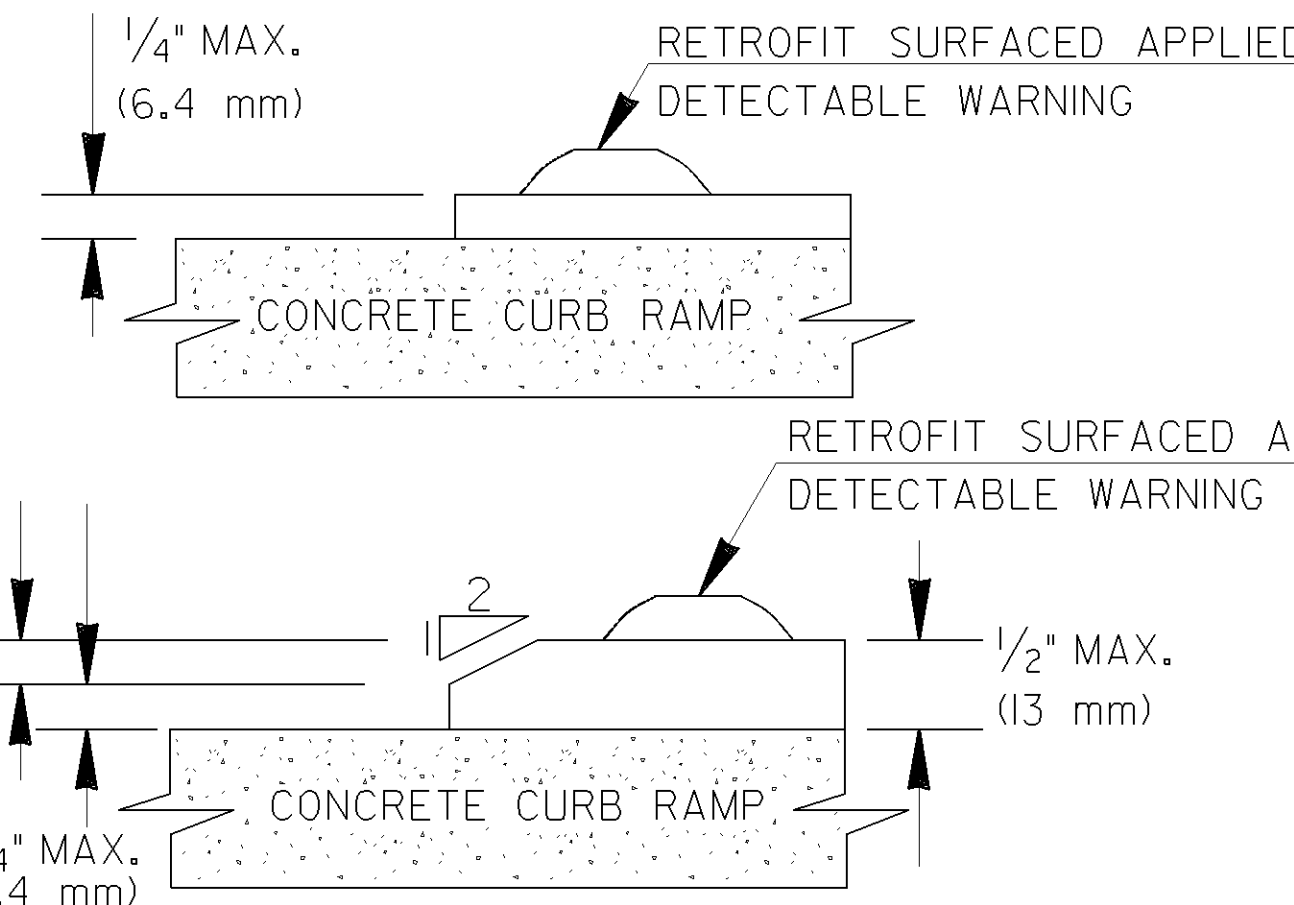
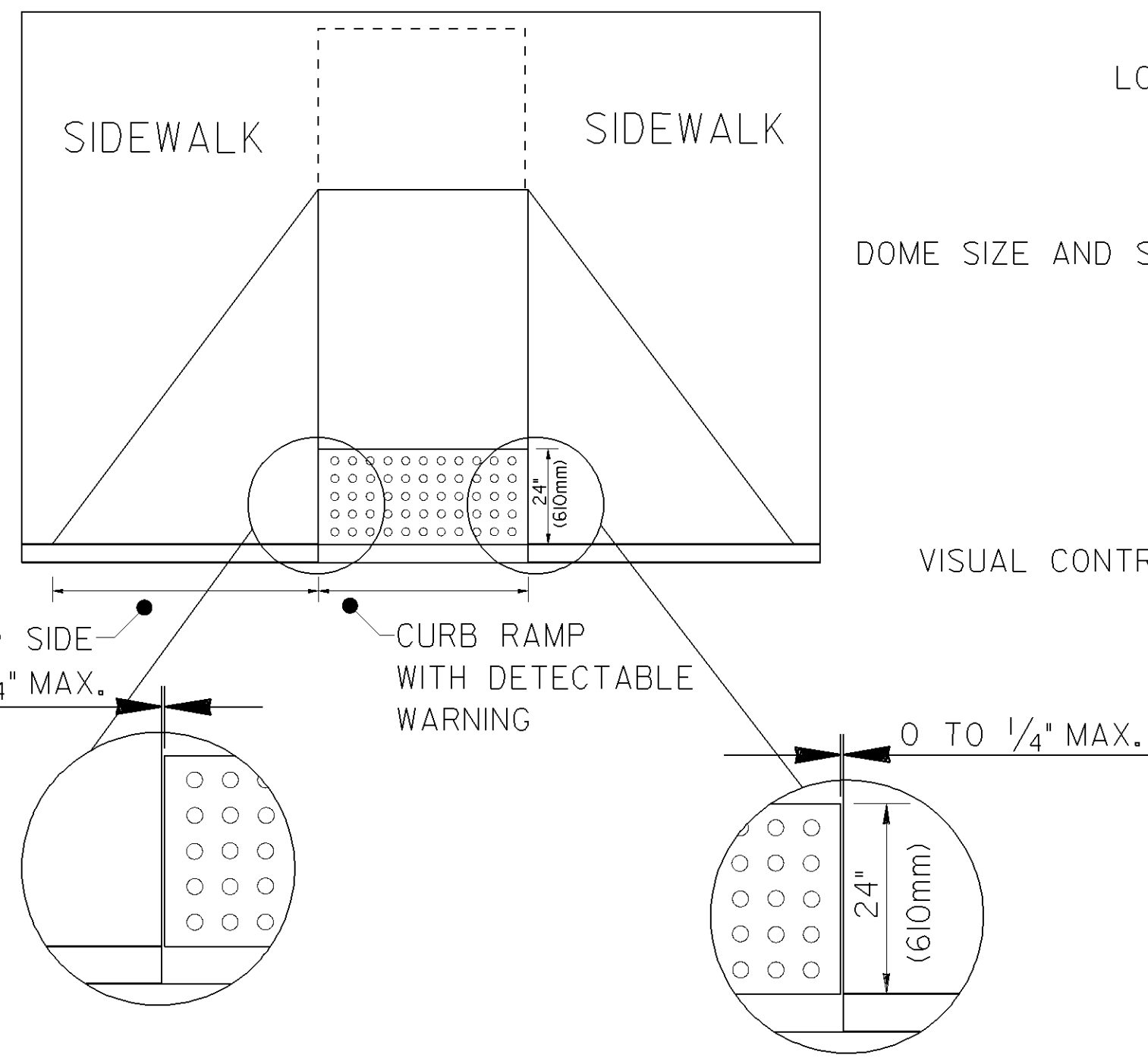


CONCRETE ISLAND WITH ELEVATED CUT THROUGH



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 WARNINGS SHALL BE INCLUDED IN THE OVERALL BID PRICE SUBMITTED.



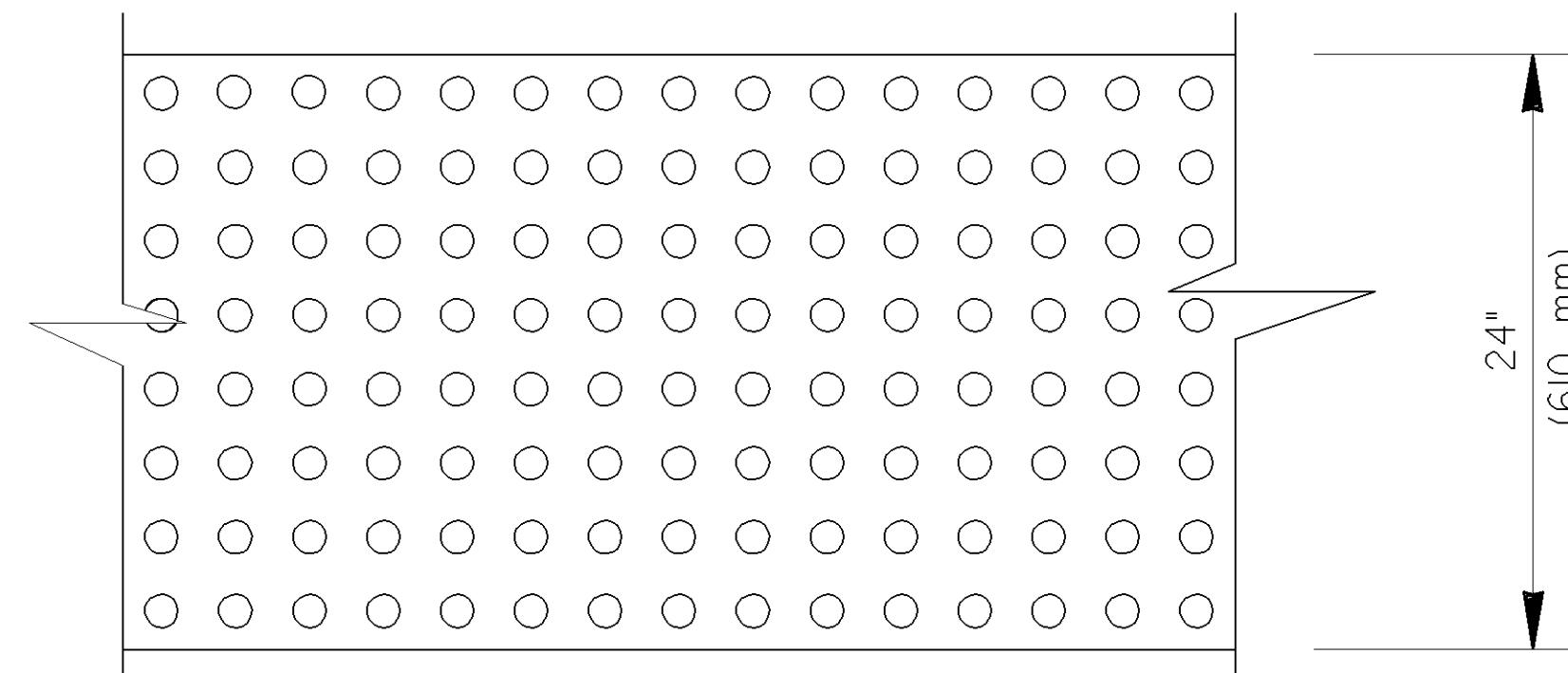
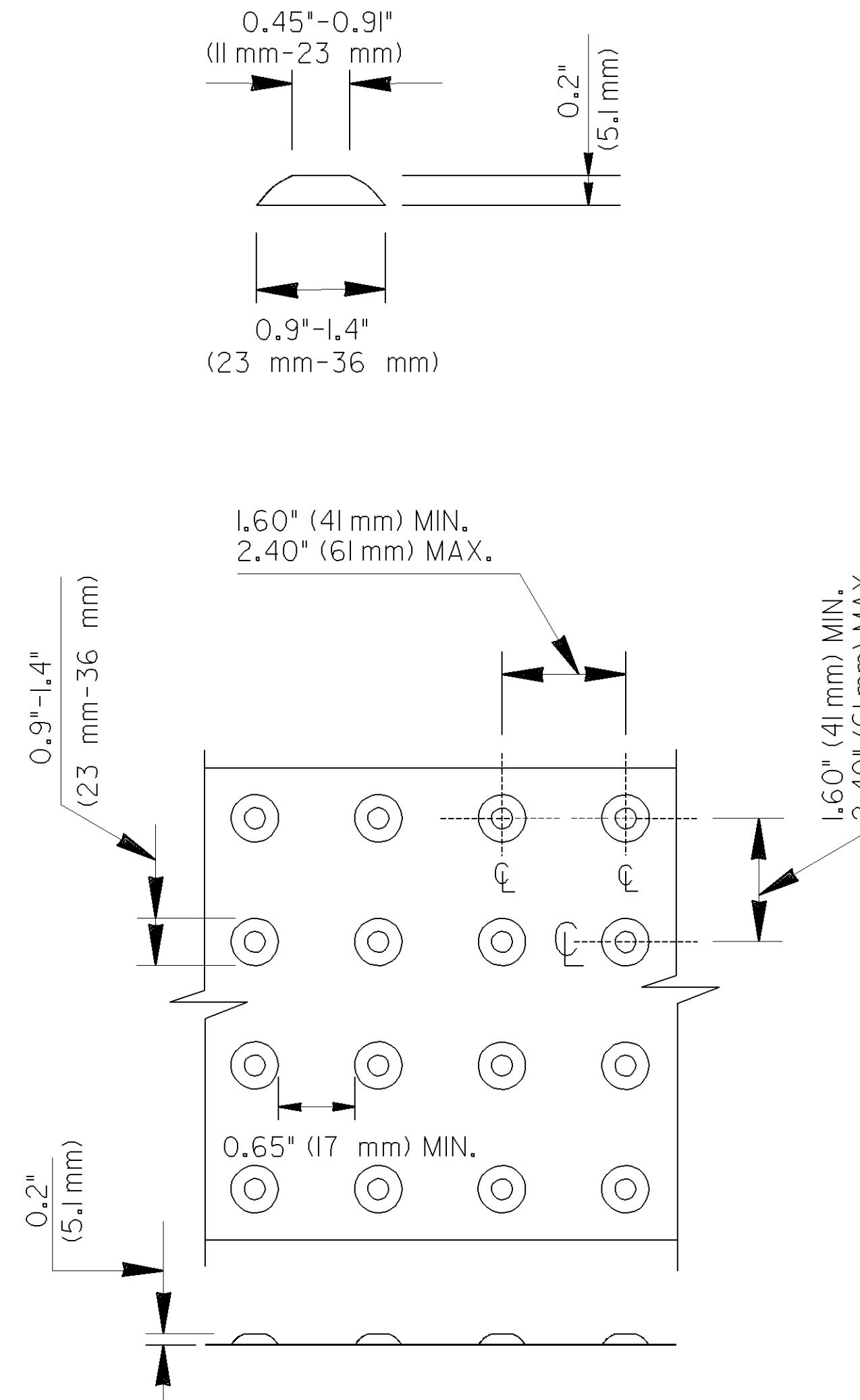
DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND

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 180 mm) FROM THE CURB LINE OR OTHER POTENTIAL HAZARD, SUCH AS A REFLECTIVE POOL EDGE OR THE DYNAMIC ENVELOPE OF RAIL OPERATIONS.

DOMES SIZE AND SPACING: TRUNCATED DOMES SHALL HAVE A BASE DIAMETER OF 0.9 INCH TO 1.4 INCH (23 mm-36 mm) AT THE BOTTOM, A DIAMETER OF 0.45 INCH TO 0.9 INCH (11 mm-23 mm) AT THE TOP, THE TOP DIAMETER SHALL BE A MINIMUM OF 50% AND A MAXIMUM OF 65% OF THE BASE DIAMETER, A HEIGHT OF 0.2 INCH (5.1 mm) AND A CENTER-TO-CENTER SPACING OF 2.40 INCHES (61 mm) DESIRABLE 1.60 INCHES (41 mm) 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 CONTRAST 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.

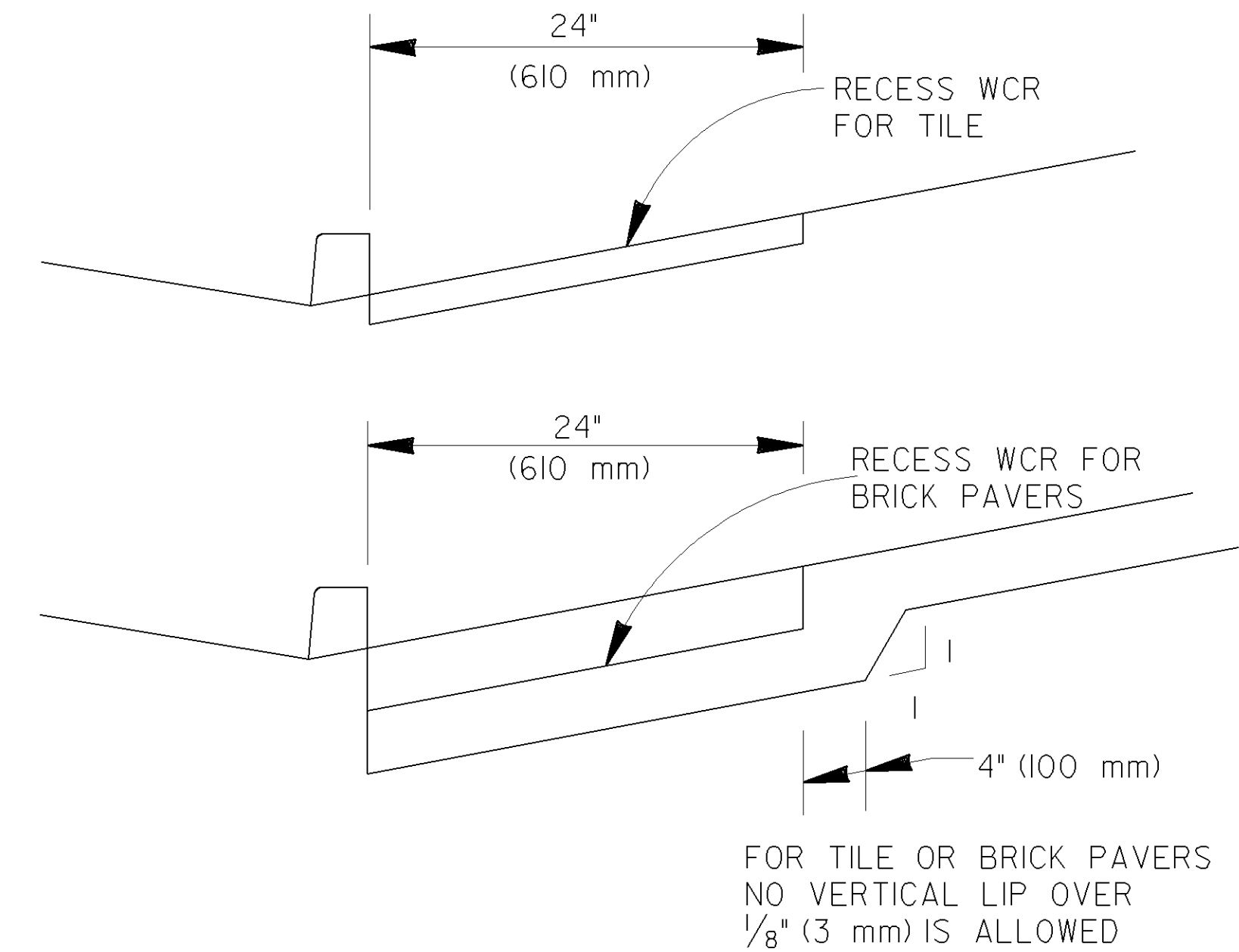
CERAMIC TILE SHALL BE EPOXIED IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMEND ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

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

GENERAL NOTES:

RETROFIT SURFACED APPLIED MATERIALS ONLY:

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



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			

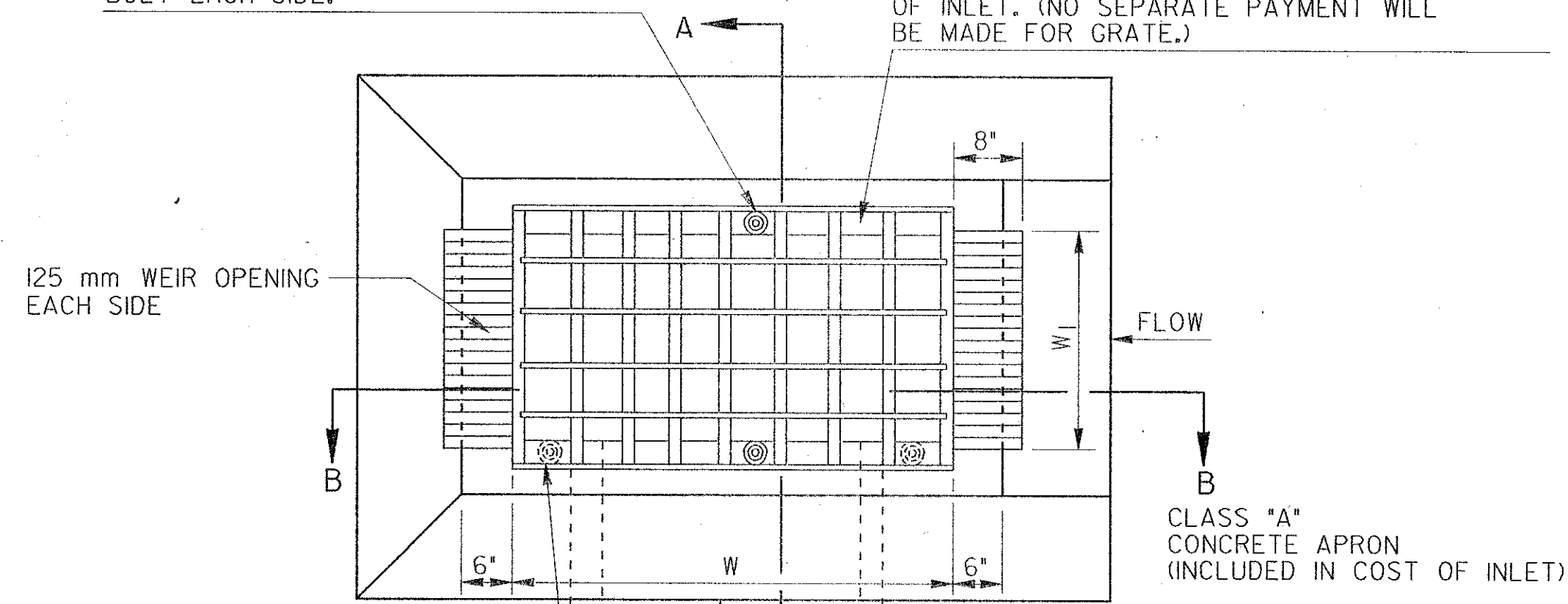
NOTE: MIN. 'H' IS BASED ON TYPICAL OUTSIDE DIAMETER OF CONCRETE PIPES AND MAY BE REDUCED SLIGHTLY WHERE SPECIFIED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.

PIPE SIZE	MIN. H	NORMAL W	75° SKEW W	60° SKEW W	45° SKEW W	MIN. H, IF CIRCULAR ALTER. (STD. 1040) IS USED
15"	3'-0"	2'-0"	2'-0"	2'-6"	3'-0"	3'-10"
18"	3'-0"	2'-6"	2'-6"	3'-0"	3'-6"	4'-3"
24"	4'-0"	3'-0"	3'-0"	3'-6"	4'-0"	4'-9"
30"	4'-6"	3'-6"	4'-0"	4'-0"	5'-0"	6'-2"
36"	5'-0"	4'-0"	4'-6"	5'-0"	6'-0"	6'-9"
42"	5'-6"	5'-0"	5'-0"	5'-6"	6'-6"	7'-4"
48"	6'-0"	5'-6"	5'-6"	6'-0"	7'-6"	7'-11"

⊛ FOR LONGITUDINAL PIPE OVER 18" WITH A 2'-0" DITCH, OR A LONGITUDINAL PIPE OVER 36" WITH A 4'-0" DITCH, AN ENLARGED BASE IS REDUCED TO W_I = DITCH WIDTH WITH APPLICABLE MIN. H IN COLUMN AT EXTREME RIGHT.

1/2" X 6" GALV. ANCHOR BOLT*, NUT AND WASHER-STANDARD LOCATION IS APPROX. CENTER OF GRATE WITH ONE BOLT EACH SIDE.

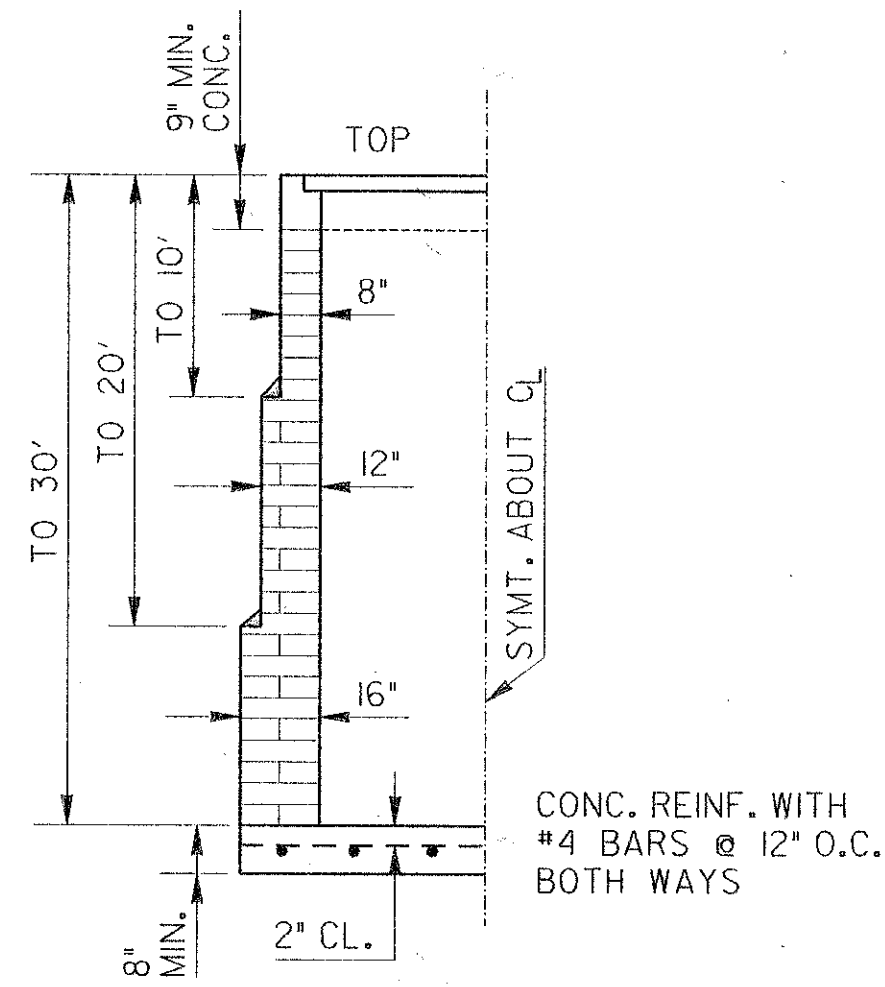
SEE GRATE FABRICATION DETAILS FOR BAR SIZES, ANGLE IRON SIZE AND WELDING DETAILS. GRATE WILL BE INCLUDED IN PAYMENT OF INLET. (NO SEPARATE PAYMENT WILL BE MADE FOR GRATE.)



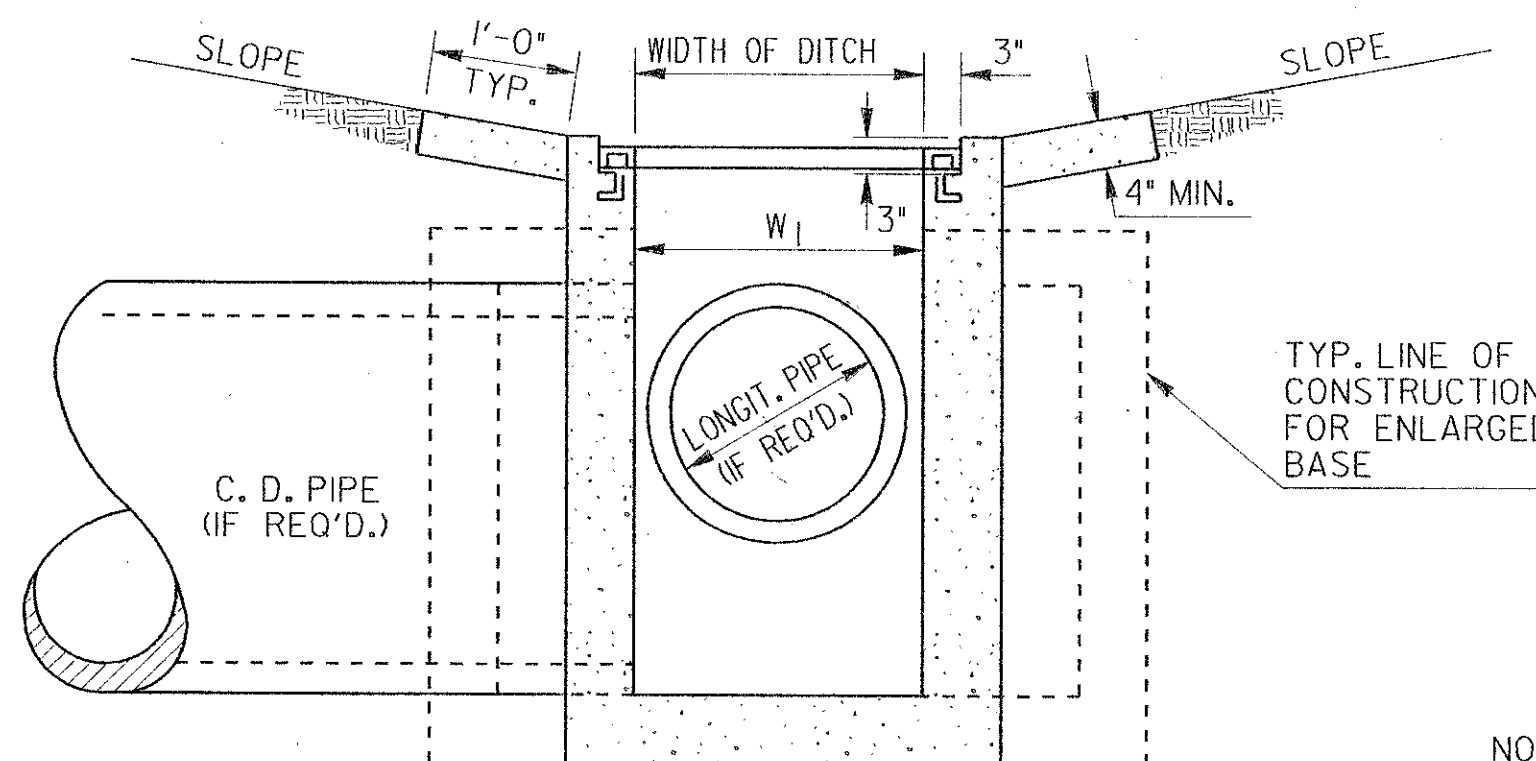
ALTERNATE LOCATION FOR BOLTS IF NEEDED BECAUSE OF SMALL 'H'. TWO BOLTS ON SIDE WITH PIPE. MIN. OF THREE BOLTS TOTAL, IF ALTERNATE LOCATION IS USED.

PLAN VIEW

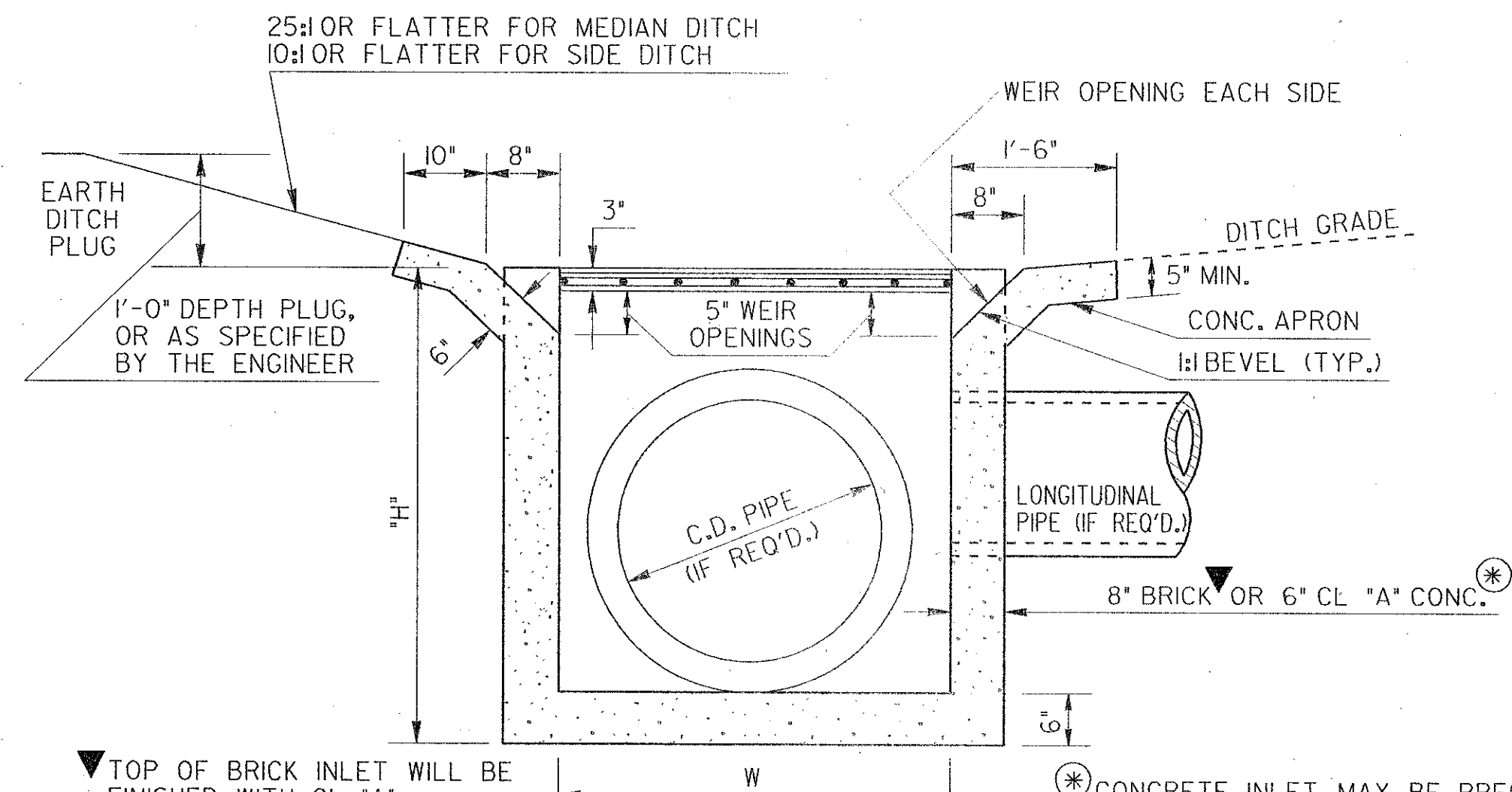
* PARABOLT CONC. ANCHOR BOLTS (P B12-514) OR PHILLIPS RED HEAD (WW-1254), OR AN EQUAL 1/2" DIA. GALVANIZED ANCHOR TYPE BOLT, WHICH HAS BEEN APPROVED BY THE GA. D.O.T. LABORATORY MAY BE USED INSTEAD OF THE BOLT SHOWN. ALL SUCH ALTERNATES ARE TO BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER.



DETAIL OF DEPTH LIMITS FOR BRICK WALL THICKNESS



SECTION A-A

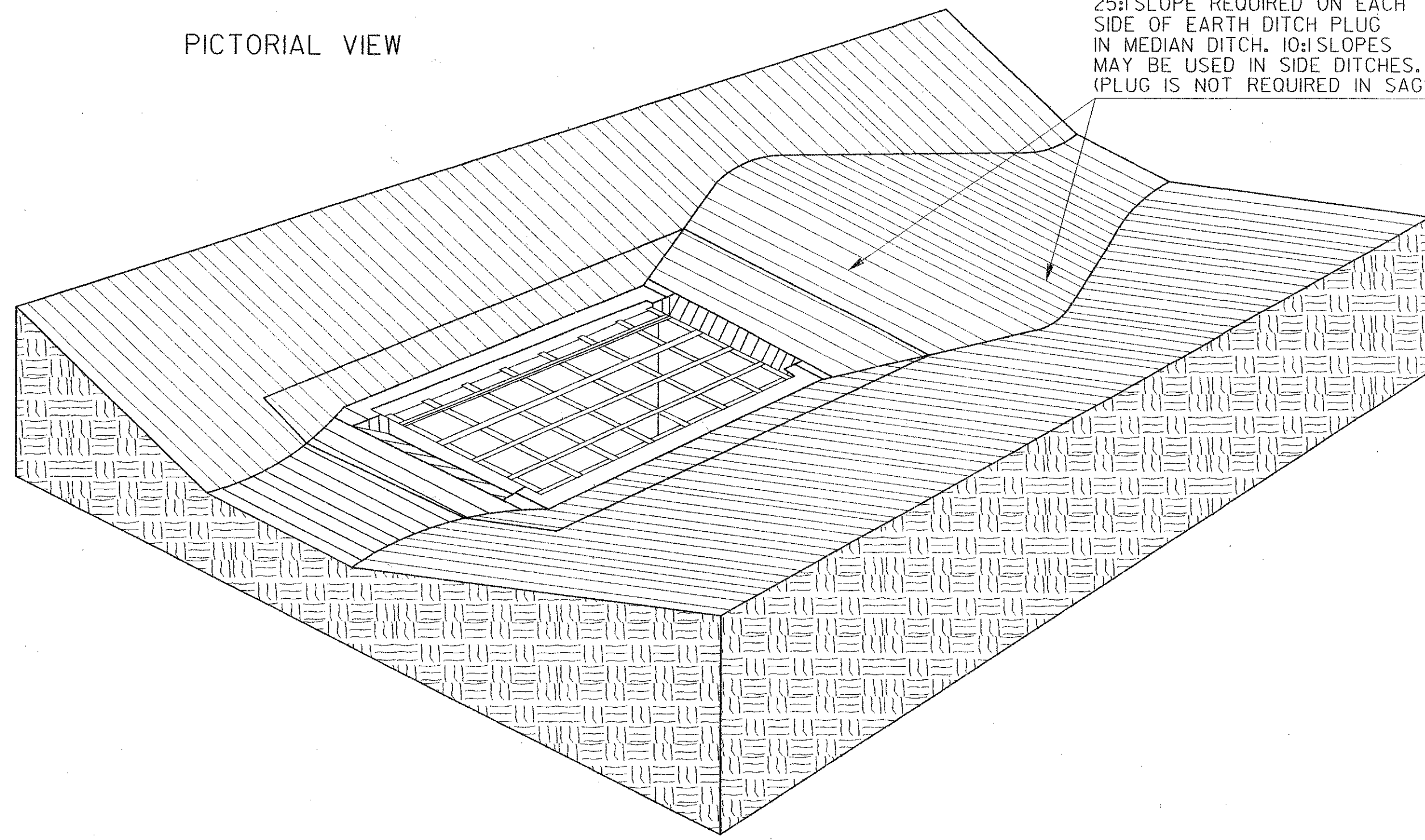


SECTION B-B

TOP OF BRICK INLET WILL BE FINISHED WITH CL 'A' CONCRETE 9" MINIMUM. 8" BRICK THICKNESS WILL BE INCREASED FOR 'H' OVER 10 FT. (SEE DETAIL IN MIDDLE OF SHT.)

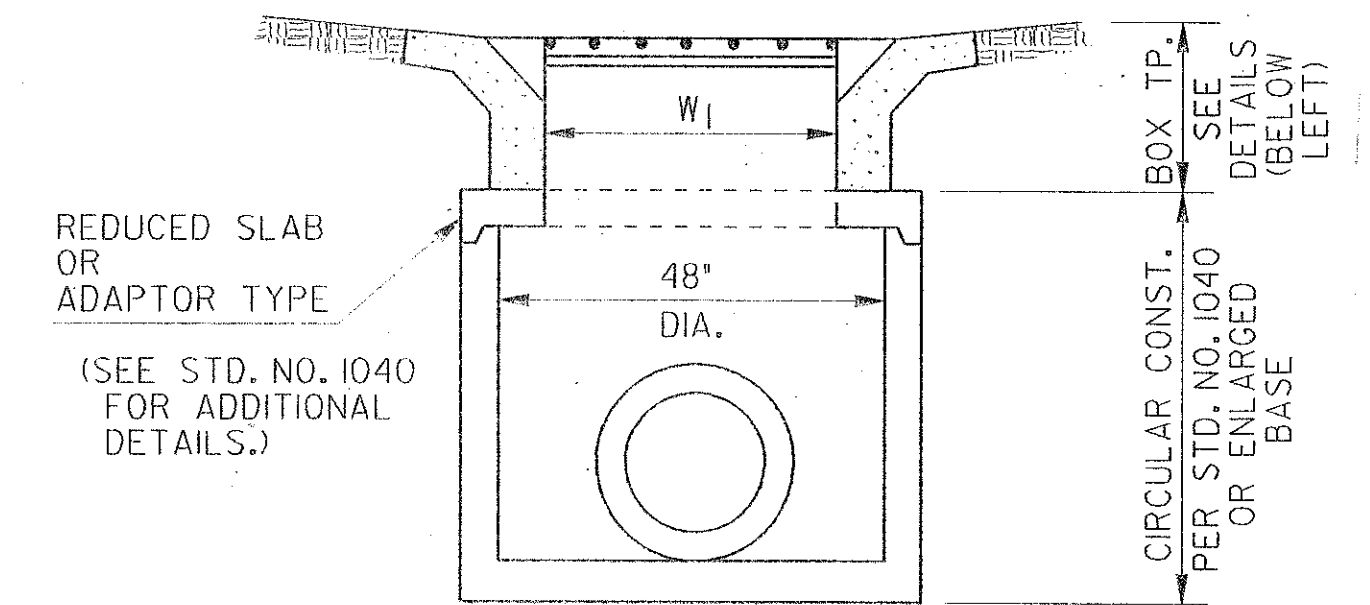
⊛ CONCRETE INLET MAY BE PRECAST OR BUILT-IN-PLACE. ALL PRECAST INLETS AND ANY CAST-IN-PLACE CONC. INLETS WITH 'H' OVER 4'-6" WILL BE REINFORCED IN ALL SIDES & BOTTOM. REINFORCING FOR BOX INLET WILL BE EITHER #4 BARS AT 12" O.C. BOTH WAYS OR 2/2, 6x6 WELDED WIRE FABRIC. ALL REINFORCING WILL HAVE 2" MIN. COVER.

PICTORIAL VIEW



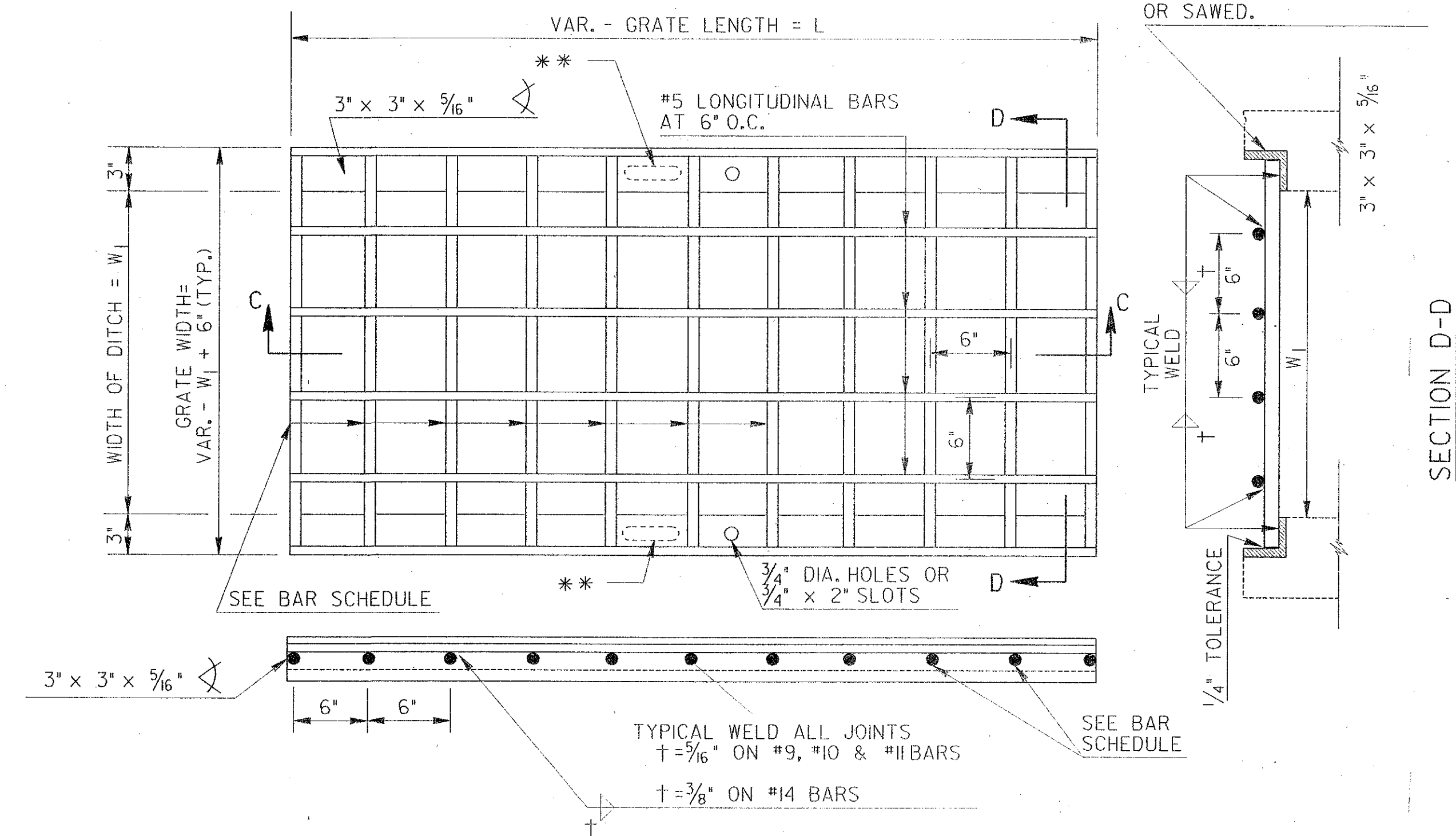
25:1 SLOPE REQUIRED ON EACH SIDE OF EARTH DITCH PLUG IN MEDIAN DITCH. 10:1 SLOPES MAY BE USED IN SIDE DITCHES. (PLUG IS NOT REQUIRED IN SAGS.)

DROP INLET WITH CIRCULAR BASE			
OULET PIPE	ADAPTOR	W X W _I	GRATE SIZE (L X W)
TO 18"	TP. 3	2'-0" X 2'-0"	2'-0" X 2'-6"
TO 30"	TP. 2	3'-0" X 2'-0"	3'-0" X 2'-6"



SECTION B-B FOR: CIRCULAR ALTERNATE OR ENLARGED BASE

SAFETY GRATE FABRICATION DETAILS



BAR SCHEDULE FOR GRATE		
W _I	GRATE TYPE	BAR SIZE
1'-6" TO 2'-0"	1	#9
2'-6"	2	#10
3'-0" TO 3'-6"	3	#11
4'-0" TO 4'-6"	4	#14

** ALTERNATE: INSTEAD OF 3/4" DIAMETER HOLE, A 2" X 3/4" OVAL HOLE MAY BE PROVIDED.

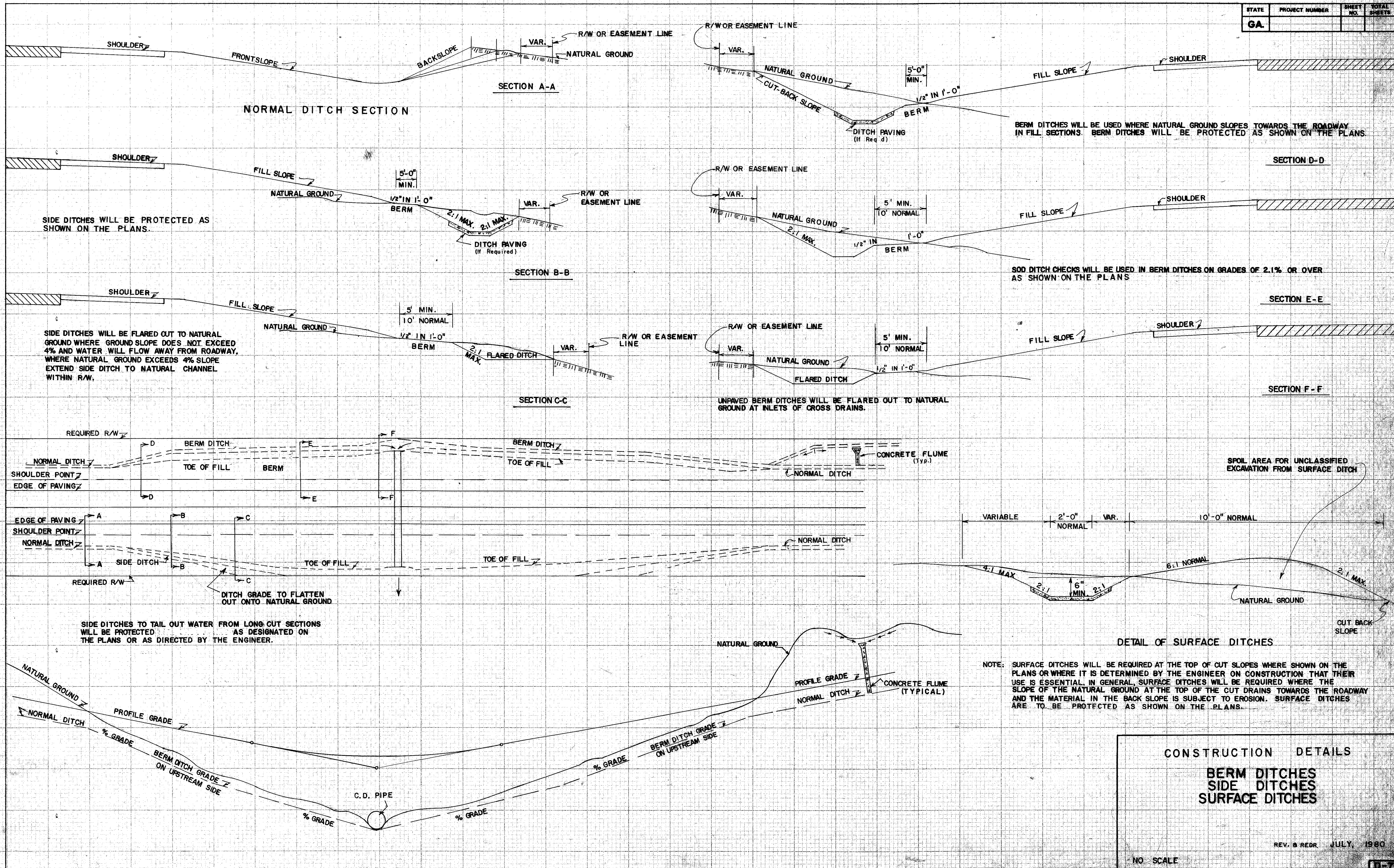
NOTES FOR GRATE: FABRICATOR WILL ARRANGE FOR TESTING BY THE GA. D.O.T. LABORATORY 14 DAYS PRIOR TO FABRICATION.

ALL BARS SHALL MEET THE REQUIREMENTS OF AASHTO M 31 GRADE 60.

ALL LONGITUDINAL BARS WILL BE #5 BARS.

GRATE BAR SPACINGS SHOWN ARE "NOMINAL-MINIMUM" AND MAY BE INCREASED (UP TO 10% TYPICAL) WITH NO ADDITIONAL PAYMENT TO PROVIDE BEST FIT FOR STRUCTURE.

DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION		CONSTRUCTION DETAILS DITCH DROP INLET WITH FABRICATED SAFETY GRATE AND WEIR OPENINGS	
NO SCALE		OCT., 2000	
BY	DES. _____ DRW. _____ TRA. _____ CHK. _____	(SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) CHIEF ENGINEER	NUMBER D-4



BERM DITCHES WILL BE USED WHERE NATURAL GROUND SLOPES TOWARDS THE ROADWAY IN FILL SECTIONS. BERM DITCHES WILL BE PROTECTED AS SHOWN ON THE PLANS.

SOD DITCH CHECKS WILL BE USED IN BERM DITCHES ON GRADES OF 2.1% OR OVER AS SHOWN ON THE PLANS

SIDE DITCHES WILL BE FLARED OUT TO NATURAL GROUND WHERE GROUND SLOPE DOES NOT EXCEED 4% AND WATER WILL FLOW AWAY FROM ROADWAY. WHERE NATURAL GROUND EXCEEDS 4% SLOPE EXTEND SIDE DITCH TO NATURAL CHANNEL WITHIN R/W.

UNPAVED BERM DITCHES WILL BE FLARED OUT TO NATURAL GROUND AT INLETS OF CROSS DRAINS.

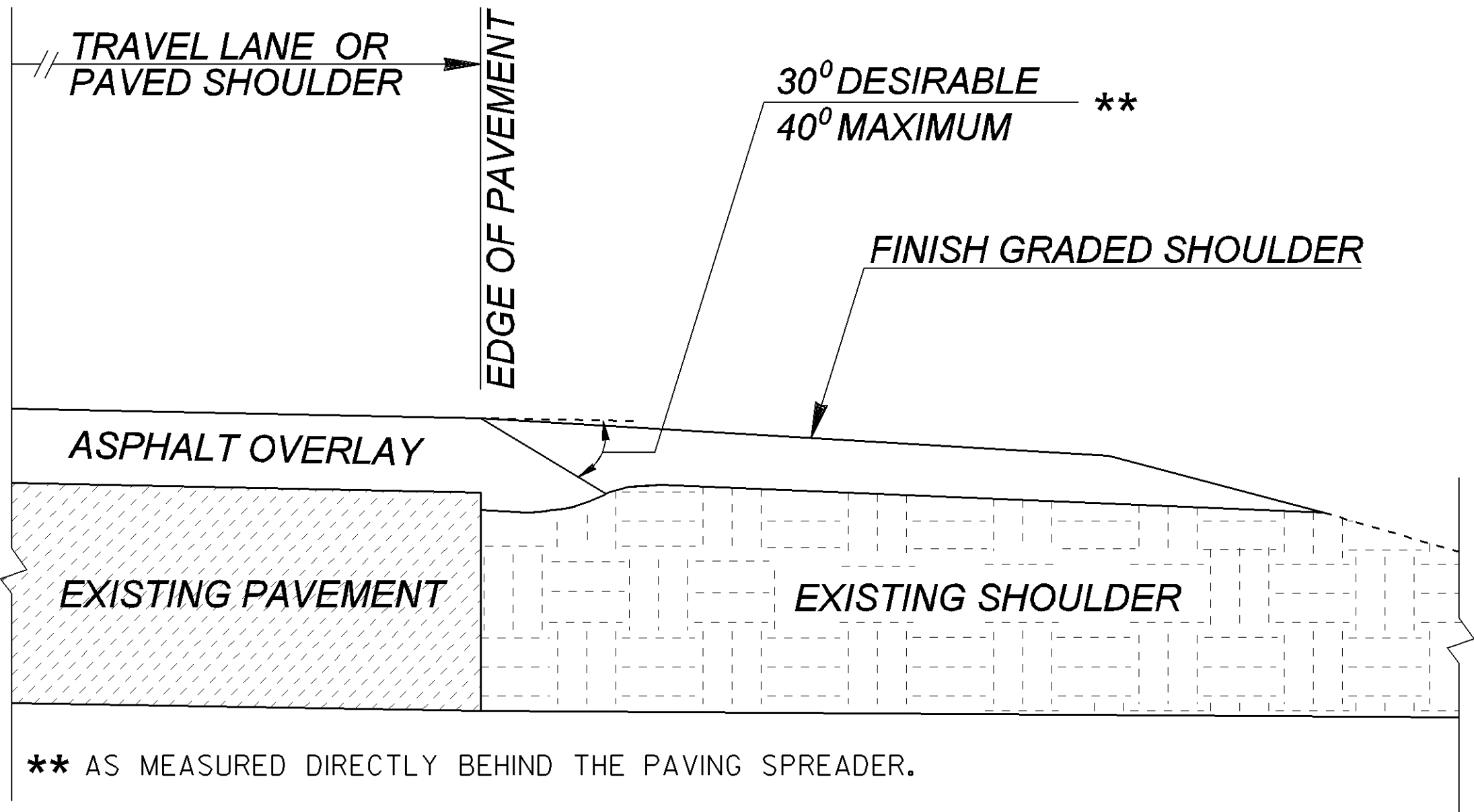
SPOIL AREA FOR UNCLASSIFIED EXCAVATION FROM SURFACE DITCH

SIDE DITCHES TO TAIL OUT WATER FROM LONG CUT SECTIONS WILL BE PROTECTED AS DESIGNATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

NO SCALE

REV. & REDR JULY, 1980

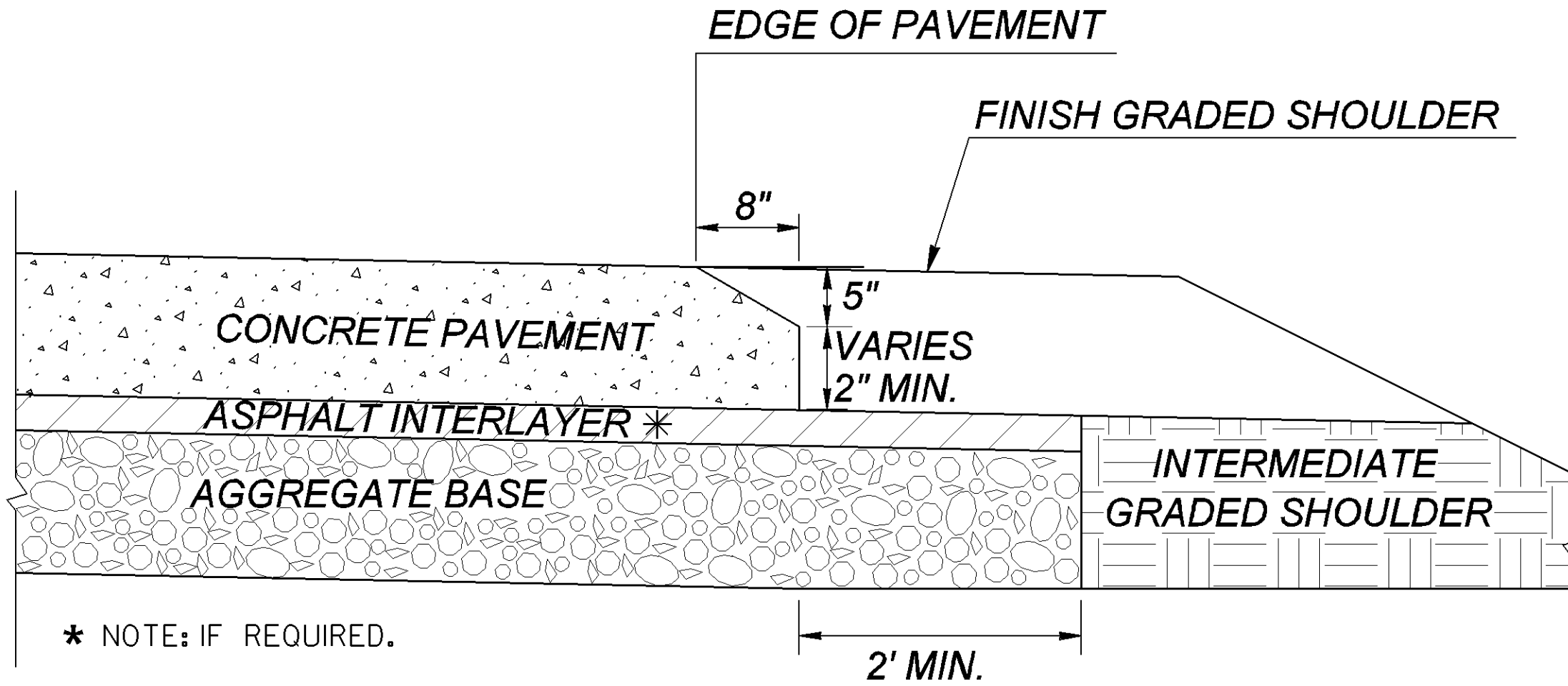
ASPHALT PAVEMENT - OVERLAY



ADDITIONAL QUANTITIES:
DEPTH OF OVERLAY (T), NO RUTTING
(T)² (IN.) X 0.000441 TN/IN.-FT X LENGTH (FT) = _____ TN

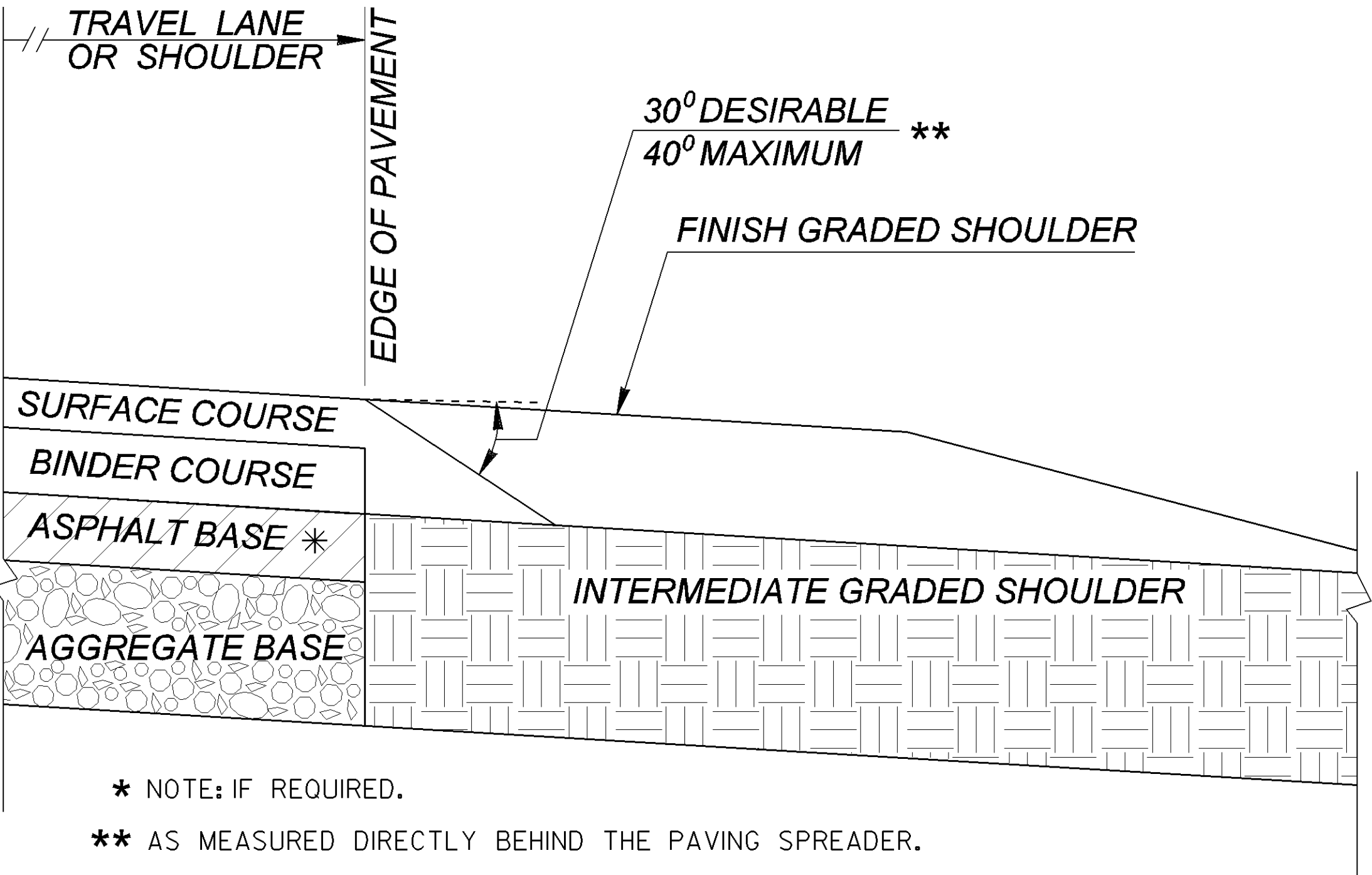
DEPTH OF OVERLAY (T), WITH 1 IN. RUTTING
(T)² (IN.) X 0.000441 TN/IN.-FT X LENGTH (FT) + (T) (IN.) X 0.000882 TN/IN.-FT X LENGTH (FT) = _____ TN

PLAIN PC CONCRETE PAVEMENT
OR ROLLER COMPACTED CONCRETE PAVEMENT



ADDITIONAL QUANTITIES:
CONCRETE
0.07407 SY/FT X LENGTH (FT) = _____ SY
ASPHALT INTERLAYER, IF REQUIRED
(T) IN. X LENGTH (FT) X 0.004074 TN/IN.-FT = _____ TN
AGGREGATE BASE (BASED ON 2.07 TN/CY)
(T) IN. X LENGTH (FT) X 0.0042592 TN/IN.-FT = _____ TN

ASPHALT PAVEMENT - NEW

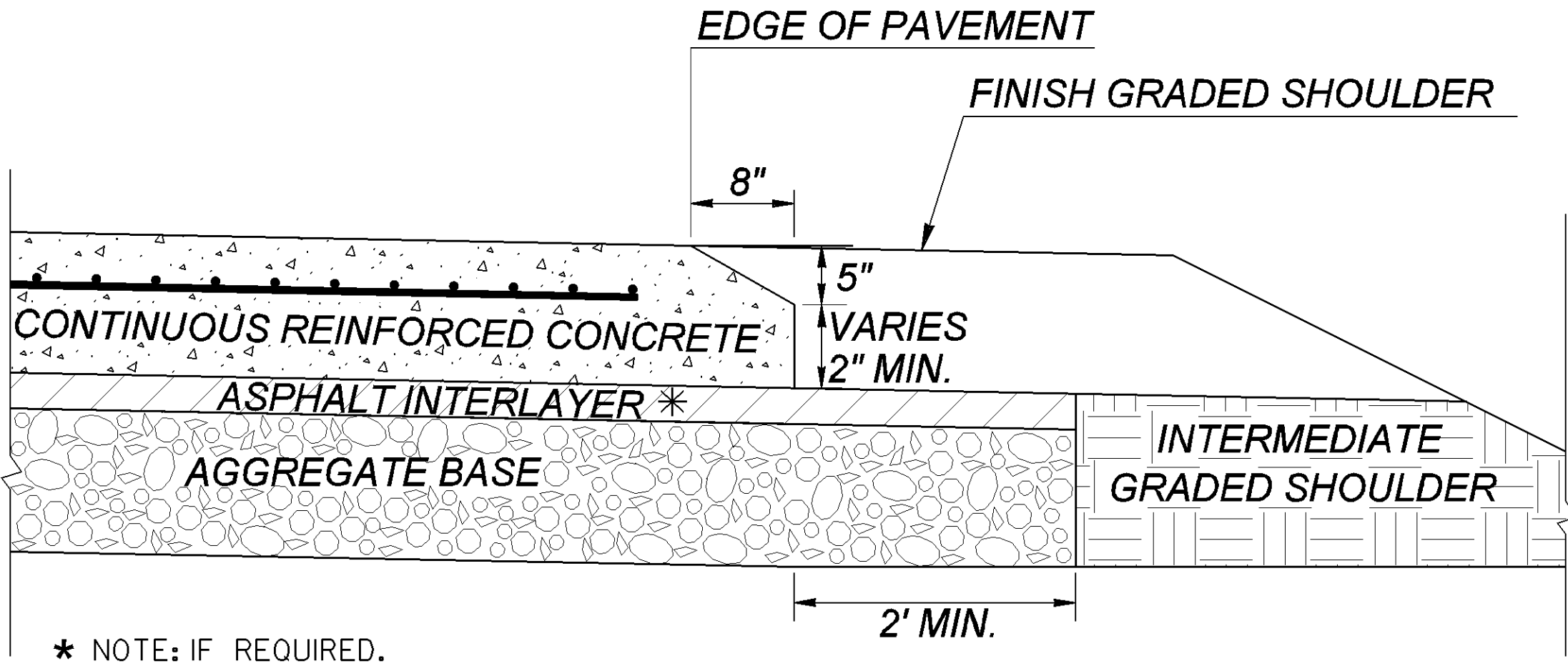


* NOTE: IF REQUIRED.
** AS MEASURED DIRECTLY BEHIND THE PAVING SPREADER.
ADDITIONAL QUANTITIES:
SURFACE COURSE PAVING DEPTH (T)
(T)² (IN.) X 0.000441 TN/IN.-FT X LENGTH (FT) = _____ TN

GENERAL NOTES:
1. THE SAFETY EDGE SHALL BE CONSTRUCTED AS AN INTEGRAL OPERATION OF THE ROADWAY PAVEMENT PLACEMENT PROCESS.

- (ASPHALT PAVEMENT)
- USE AN APPROVED MECHANICAL DEVICE THAT WILL:
 - APPLY COMPACTIVE EFFORT TO THE ASPHALT MIXTURE TO ELIMINATE OBJECTABLE VOIDS AS THE MIXTURE PASSES THROUGH THE WEDGE DEVICE.
 - PRODUCE A WEDGE WITH A UNIFORM TEXTURE, SHAPE, AND DENSITY WHILE AUTOMATICALLY ADJUSTING TO VARYING HEIGHTS ENCOUNTERED ALONG THE ROADWAY SHOULDER.
 - A SINGLE-PLATE STRIKE-OFF METHOD SHALL NOT BE USED FOR BITUMINOUS PAVING, AS THE SINGLE-PLATE STRIKE-OFF METHOD HAS BEEN FOUND TO PRODUCE A NON-DURABLE EDGE.
 - COMPACTION OF THE EDGE SHOULD NOT BE DONE WITH THE FIRST PASS OF THE ROLLER; WITH THE ROLLER STAYING OFF THE EDGE AT LEAST 6 INCHES. THIS IS IN ORDER TO ALLOW THE EDGE MIX TO SLIGHTLY COOL PRIOR TO COMPACTION.
 - SHORT SECTIONS OF HANDWORK ARE ALLOWED, WHEN NECESSARY, FOR TRANSITIONS AND TURNOUTS.

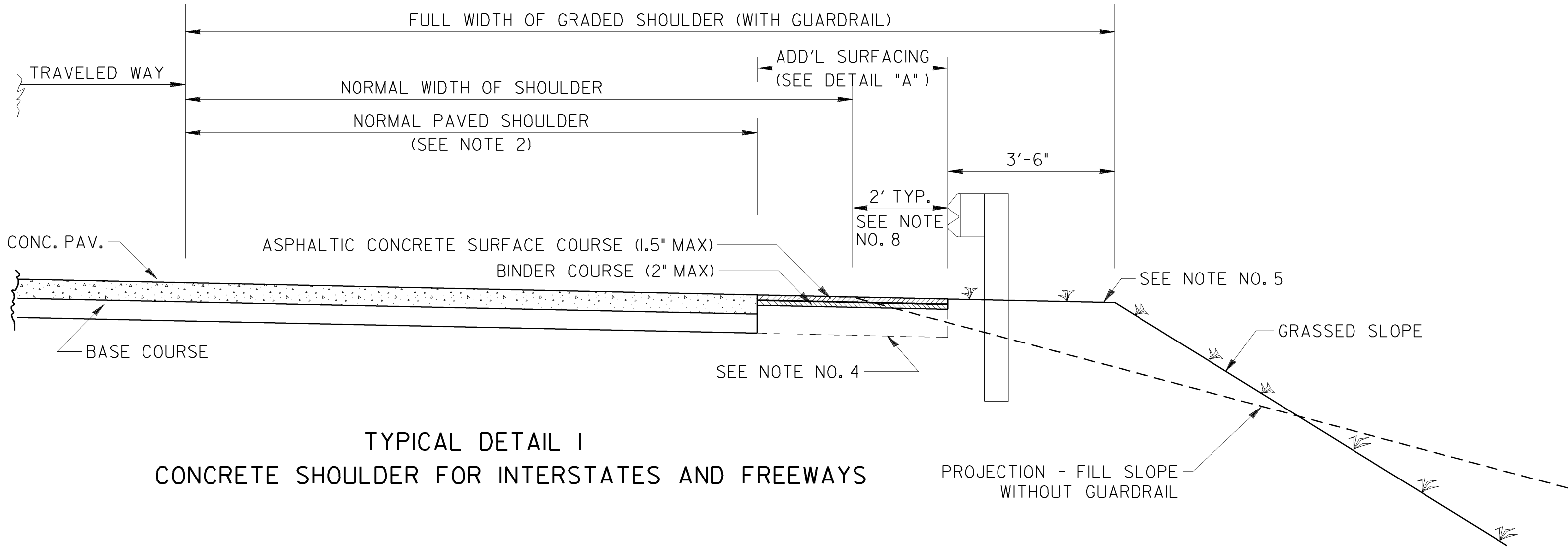
CONTINUOUS REINFORCED CONCRETE PAVEMENT



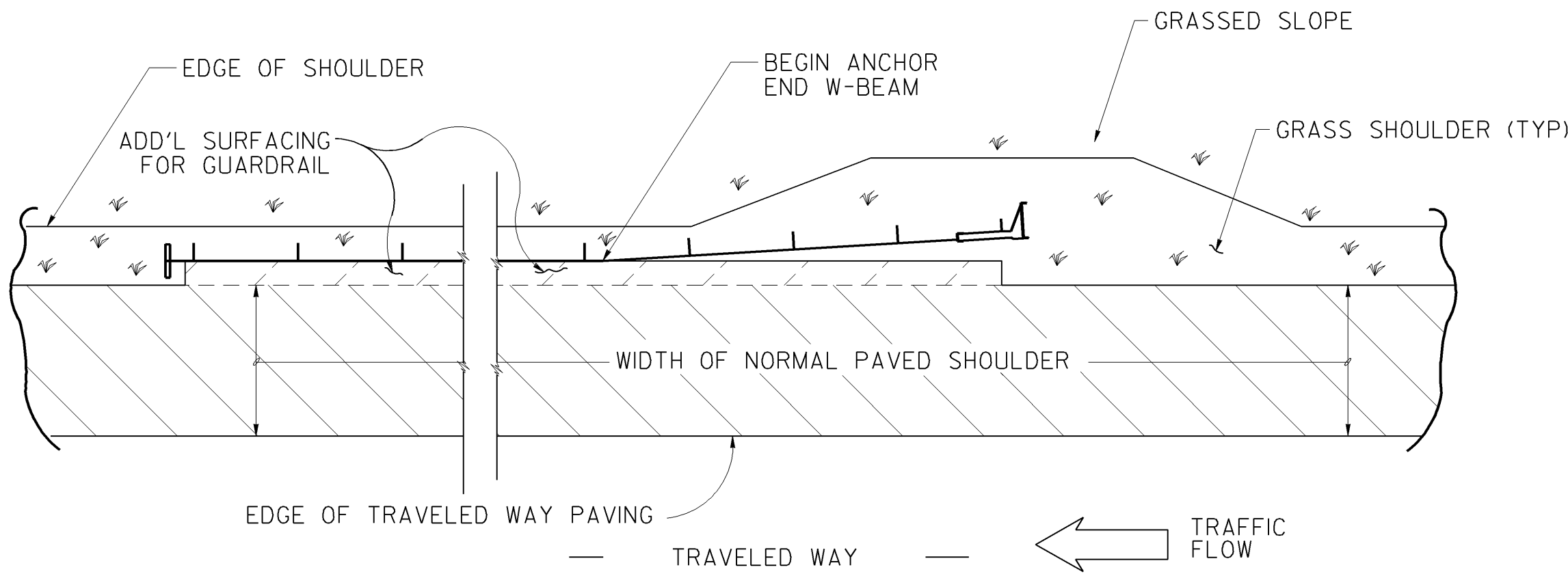
ADDITIONAL QUANTITIES:
CONCRETE
0.07407 SY/FT X LENGTH (FT) = _____ SY
ASPHALT INTERLAYER, IF REQUIRED
(T) IN. X LENGTH (FT) X 0.004074 TN/IN.-FT = _____ TN
AGGREGATE BASE (BASED ON 2.07 TN/CY)
(T) IN. X LENGTH (FT) X 0.0042592 TN/IN.-FT = _____ TN

II-5-11		DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISED ANGLE TOLERANCE ANGLE & ADDED NOTE.		REVISION		CONSTRUCTION DETAIL PAVEMENT EDGE TREATMENT ASPHALT AND CONCRETE PAVEMENT	
		NO SCALE		SEPTEMBER 2011	
TC	BY	DES. B.A.S. DRW. G.L.O. CHK. D.G.P. REVIEW B.A.S.			NUMBER P-7

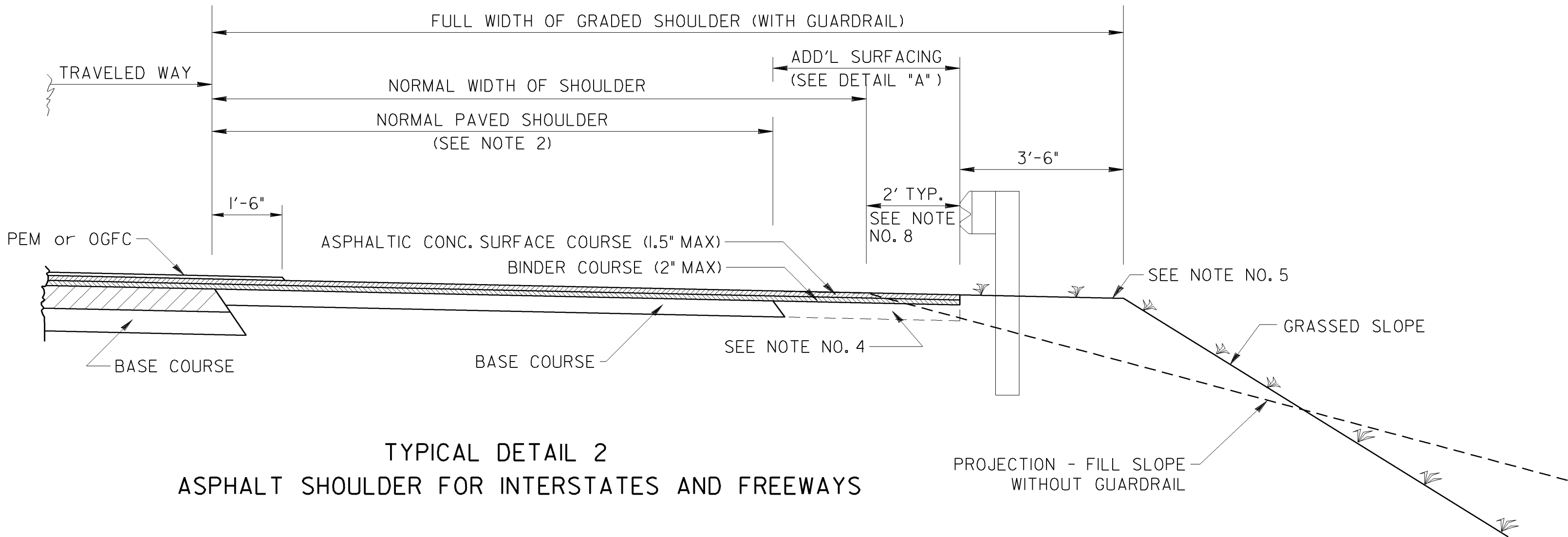
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



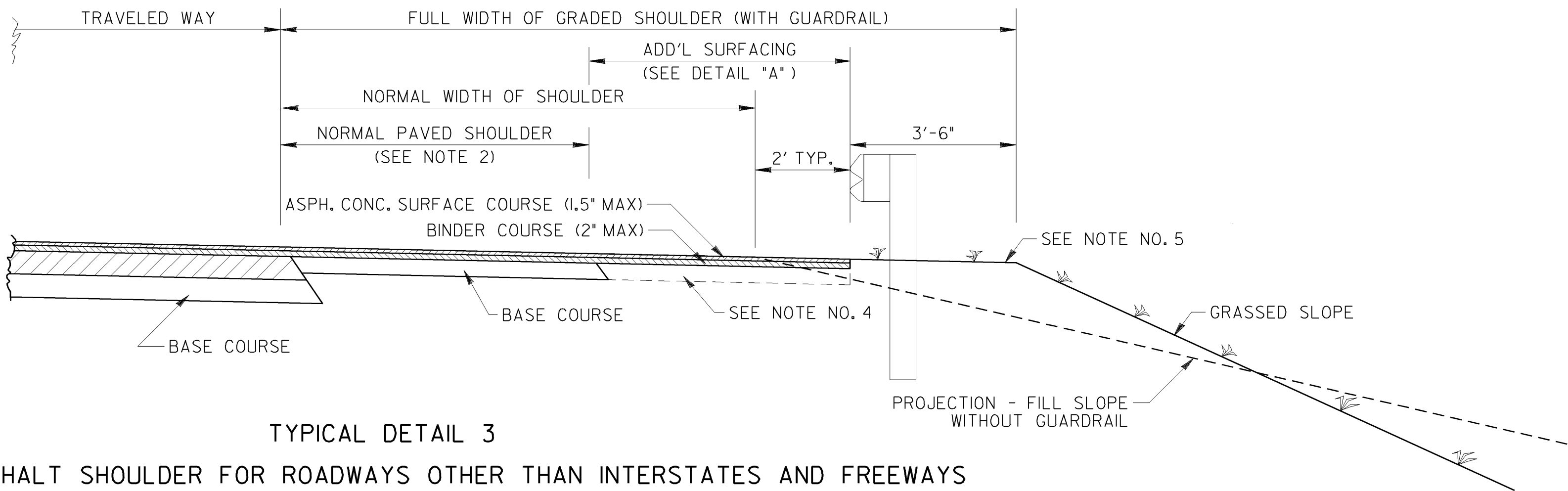
TYPICAL DETAIL 1
CONCRETE SHOULDER FOR INTERSTATES AND FREEWAYS



DETAIL "A"
ADDITIONAL SURFACING AT GUARDRAIL
TYPICAL PLAN VIEW



TYPICAL DETAIL 2
ASPHALT SHOULDER FOR INTERSTATES AND FREEWAYS



TYPICAL DETAIL 3
ASPHALT SHOULDER FOR ROADWAYS OTHER THAN INTERSTATES AND FREEWAYS

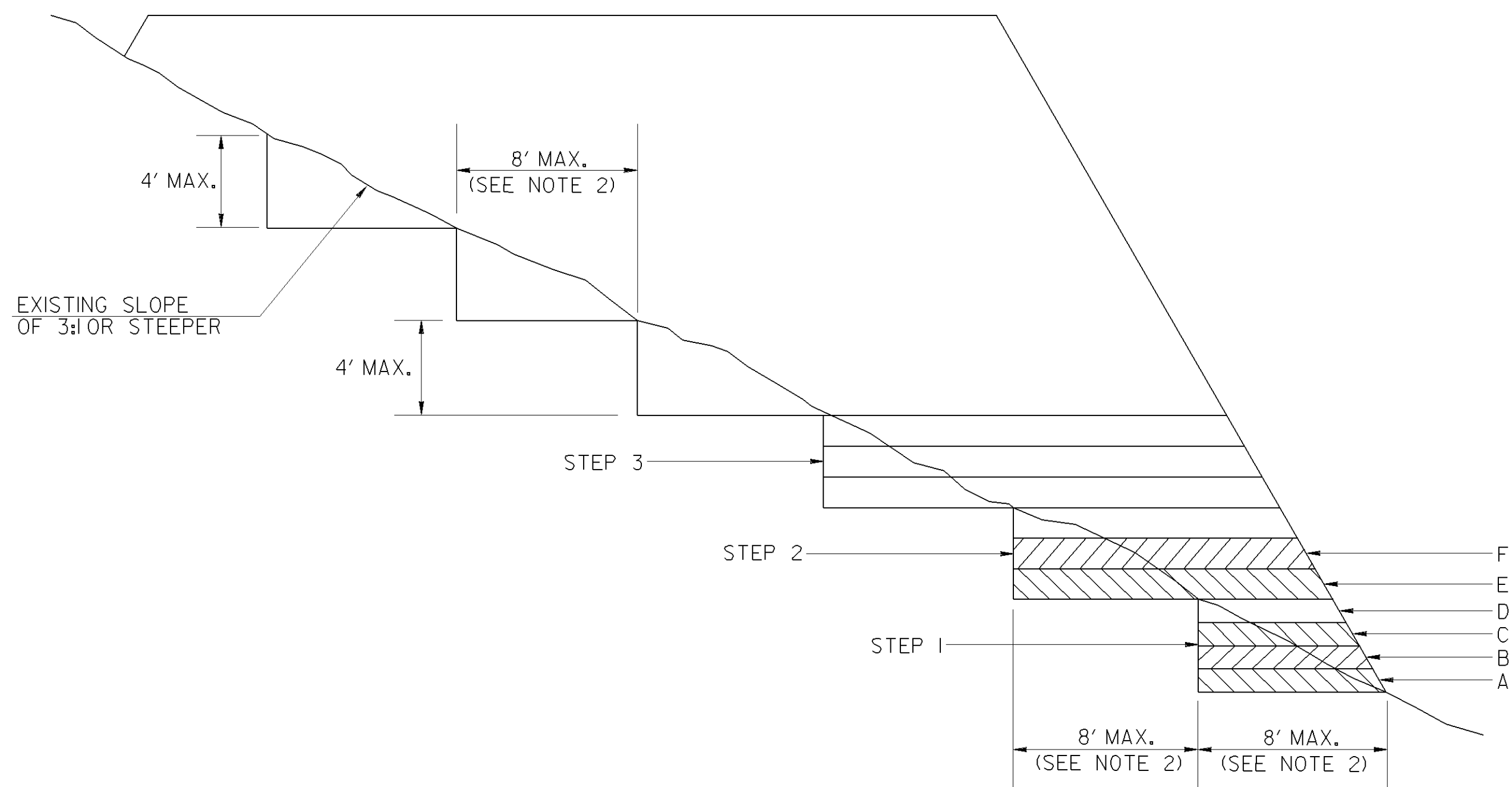
GENERAL NOTES:

1. USE OF THESE DETAILS IS WHERE A PAVED SHOULDER WIDTH IS SPECIFIED AND GUARDRAIL IS REQUIRED
2. DETAILS OF NORMAL SHOULDER PAVING ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE PROJECT PLANS FOR MATERIALS AND DIMENSIONS.
3. ADDITIONAL SURFACING SHALL TERMINATE AT THE FACE OF THE GUARDRAIL.
4. THE NORMAL PAVED SHOULDER WIDTH MAY BE EXTENDED TO THE FACE OF THE GUARDRAIL, WHERE SPECIFIED ON PROJECT PLANS.
5. IN AREAS WITH HIGHLY ERODIBLE SOIL, TEMPORARY EROSION CONTROL MEASURES SHALL BE PLACED ON THE SHOULDER UNTIL THE FORESLOPE IS FULLY GRASSED AND STABILIZED.
6. SEE GUARDRAIL STANDARDS FOR SHOULDER WIDENING DIMENSIONS AT ANCHORAGE, WHERE REQUIRED
7. SEE PROJECT PLANS FOR SHOULDER DIMENSIONS.
8. THE 2-FT OFFSET IS NOT REQUIRED FOR FREEWAYS AND INTERSTATES WITH 14-FT WIDE NORMAL SHOULDERS

4-19-16		3-1-16		9-30-02		4-23-02		DATE		DEPARTMENT OF TRANSPORTATION	
ADDED NOTE 8		REV PYMT UNDER GUARDRAIL		COMBINED TWO S-4 DETAILS		REVISED		REVISION		STATE OF GEORGIA	
FBF		REV NOTES 3 & 5, DETAIL A								CONSTRUCTION DETAIL	
										SHOULDER PAVING AND SURFACING	
										AT GUARDRAIL	
										NO SCALE	
										RE-DRAWN APRIL 2013	
BY										NUMBER	
										S-4	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

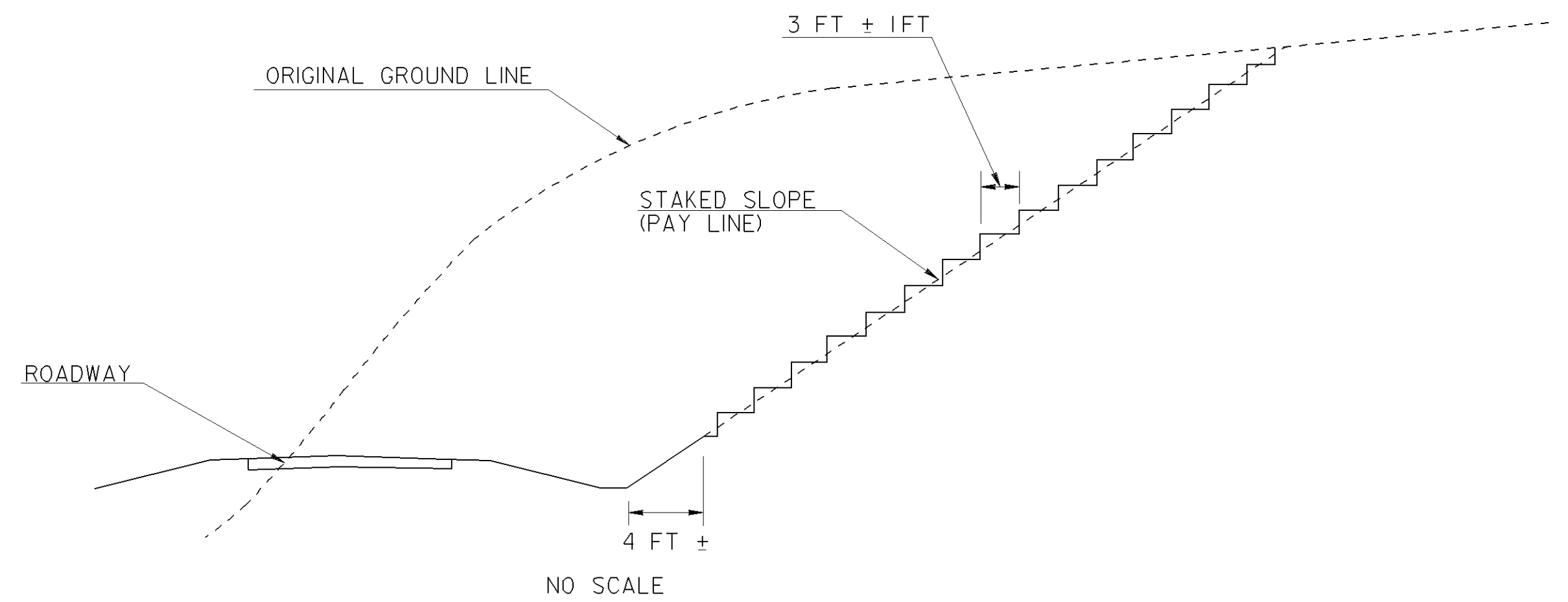
BENCHING DETAIL



NOTES :

1. WHERE THE EMBANKMENT IS TO BE PLACED ON A HILLSIDE OR ANOTHER EXISTING EMBANKMENT HAVING A SLOPE OF 3 TO 1 OR STEEPER, THE FOUNDATION MUST BE BENCHED WHILE THE EMBANKMENT IS BEING MADE.(SEE DIAGRAM ABOVE)
2. THE DIAGRAM SHOWS THAT BEFORE LAYER "A" IS PLACED THE FIRST STEP (1) IS CUT INTO THE SLOPE A MAXIMUM DISTANCE OF ABOUT 8 FEET (ABOUT 3/4 THE WIDTH OF THE TYPICAL D-8 BULLDOZER BLADE). SUCCESSIVE LAYERS B, C, AND D ARE THEN PLACED BEFORE LAYER "E" IS PLACED, THE SECOND STEP IS CUT 8 FEET INTO THE SLOPE AND SUCCESSIVE LAYERS ARE AGAIN PLACED. IF IT IS ANTICIPATED THAT THE VERTICAL PART OF THE STEP WILL EXCEED 4 FEET IF A 8 FEET HORIZONTAL CUT IS MADE, THEN THE ACTUAL CUT STOPS WHEN THE VERTICAL PART REACHES A MAXIMUM OF 4 FEET ALLOWING THE HORIZONTAL DISTANCE TO VARY.
3. THE PROCESS OF BENCHING IS CONSIDERED INCIDENTAL TO THE ITEM OF UNCLASSIFIED EXCAVATION AND BORROW OR GRADING COMPLETE IN CONSTRUCTION OF THE EMBANKMENT AND NO ADDITIONAL MEASUREMENT OF QUANTITY OR PAYMENT WILL BE MADE FOR BENCHING.

SERRATED SLOPE DETAIL

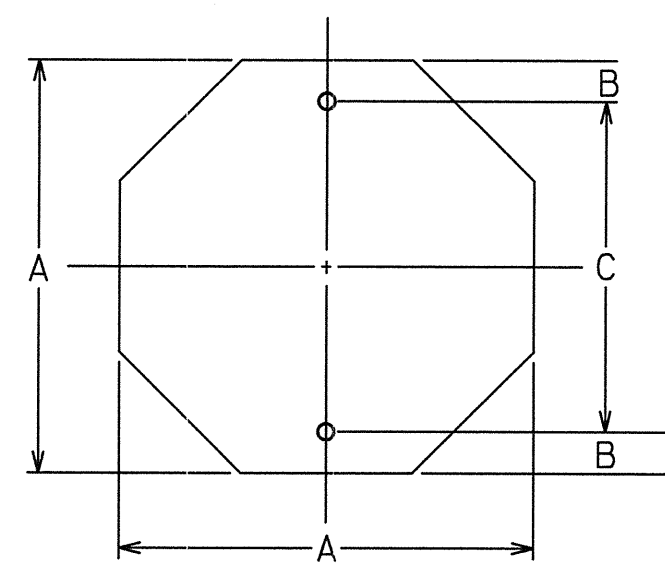


NOTES :

1. SLOPES STEEPER THAN 3:1 SHALL BE SERRATED.
2. WIDTH OF STEP SHALL BE 3 FT ± 1 FT.
3. HEIGHT OF STEP IS A FUNCTION OF WIDTH AND STAKED SLOPE.
4. TREAD OF STEP SHALL BE APPROXIMATELY HORIZONTAL.
5. SERRATED SLOPES SHALL BE USED ON ALL PROJECTS IN DISTRICTS 1, 6, AND 7, EXCEPT WHERE SPECIFICALLY EXCEPTED BY THE GEO-TECHNICAL BUREAU IN THE SOIL SURVEY REPORT. SERRATED SLOPES SHALL NOT BE USED IN DISTRICTS 2, 3, 4, AND 5, UNLESS REQUIRED BY THE SOIL SURVEY.

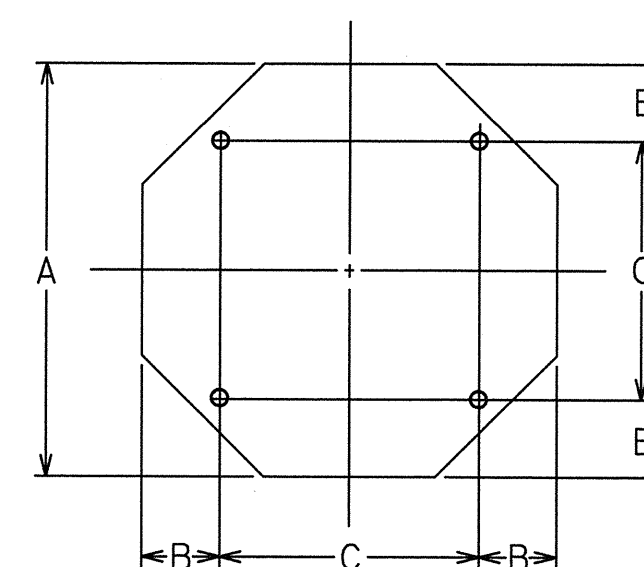
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
CONSTRUCTION DETAIL SERRATED SLOPE DETAIL BENCHING DETAIL			
NO SCALE			
JULY, 1981			
NUMBER S-7			

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

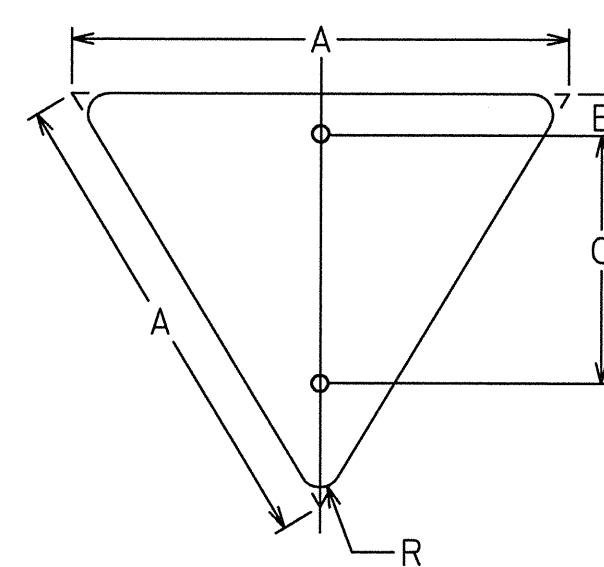


A	B	C
24	3	18
30	3	24
36	3	30

OCTAGON

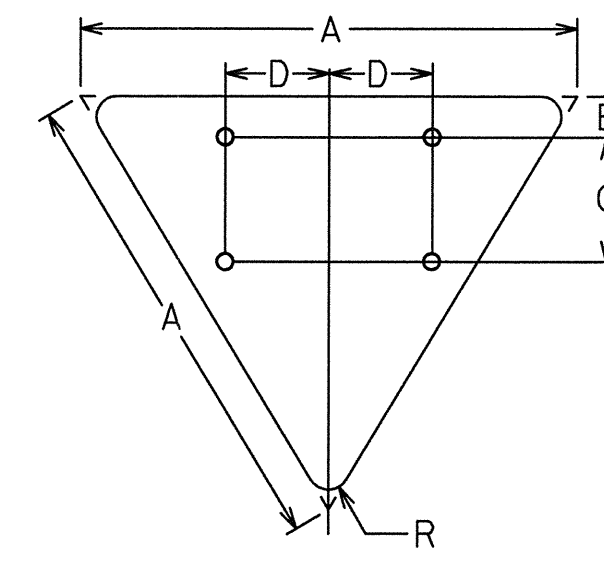


A	B	C
48	9	30

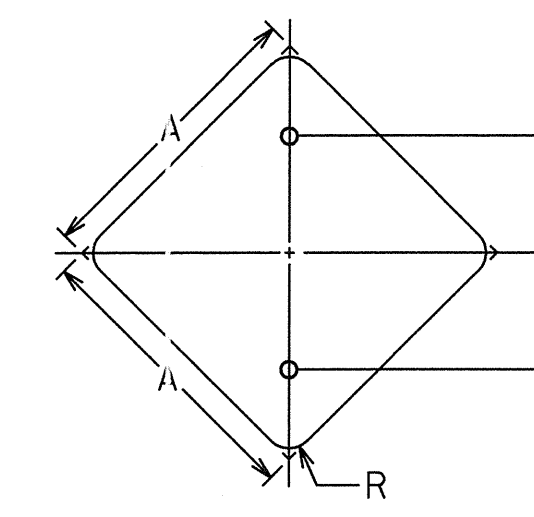


A	B	C	R
30	3	18	$1\frac{1}{2}$
36	3	21	2
48	3	27	3

EQUILATERAL TRIANGLE

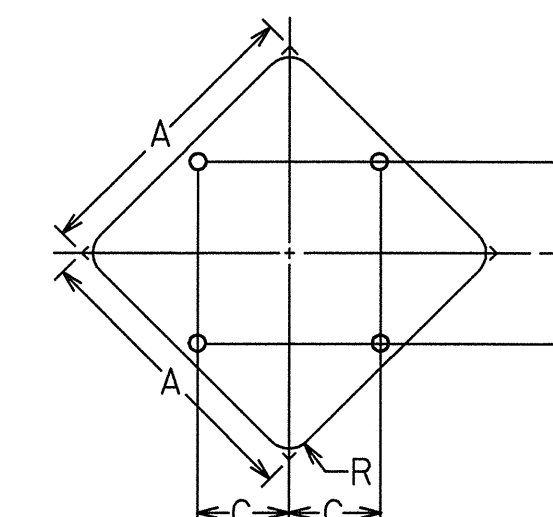


A	B	C	D	R
60	3	18	15	3



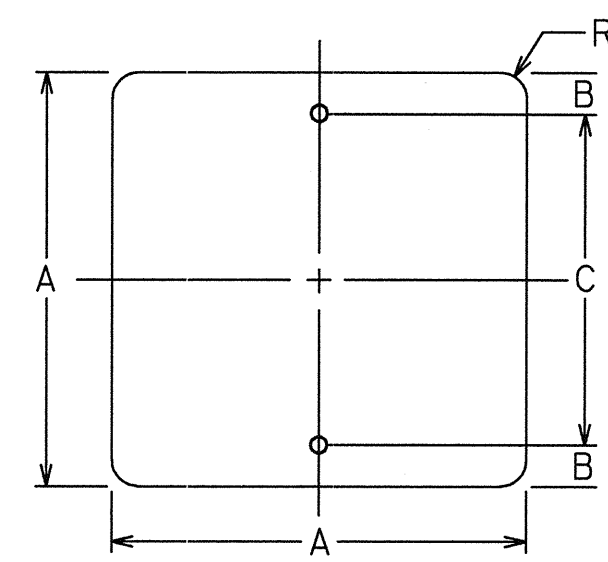
A	B	R
24	12	1½
30	15	1¾
36	18	2½

DIAMOND



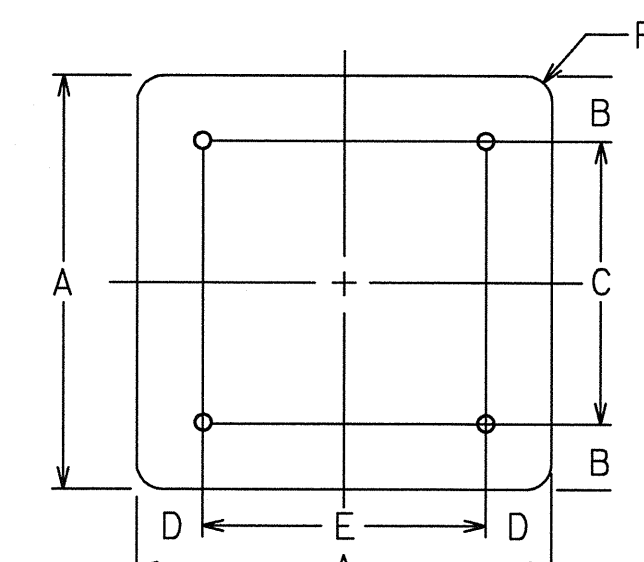
A	B	C	R
36	10	10	21
48	15	15	3
60	18	18	33

* FOR TWO POST ERECTION

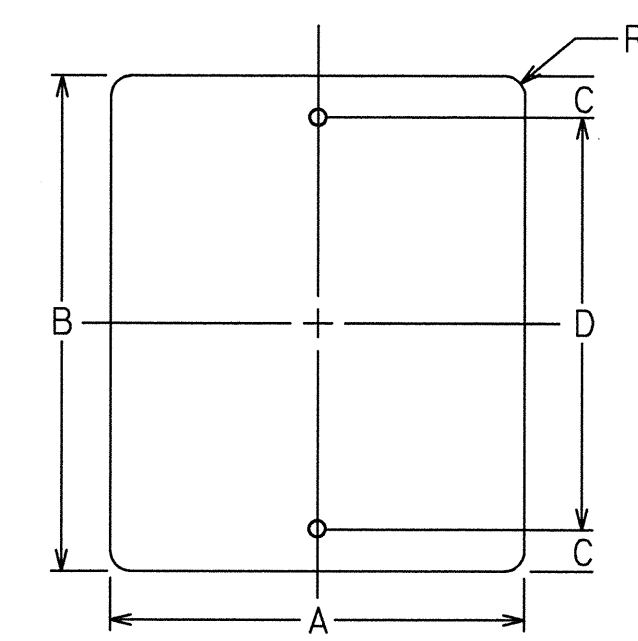


A	B	C	R
18	3	12	$1\frac{1}{2}$
24	3	18	$1\frac{1}{2}$
30	3	24	$1\frac{7}{8}$

SQUARE

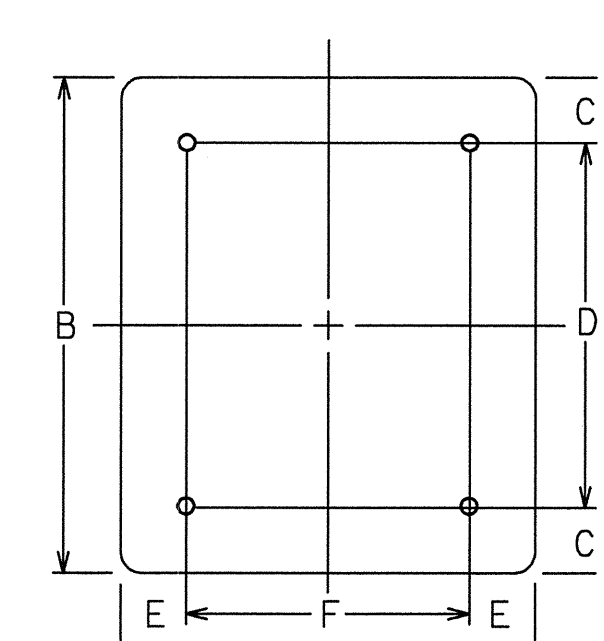


A	B	C	D	E	R
36	6	24	6	24	$2\frac{1}{2}$
48	6	36	6	36	3

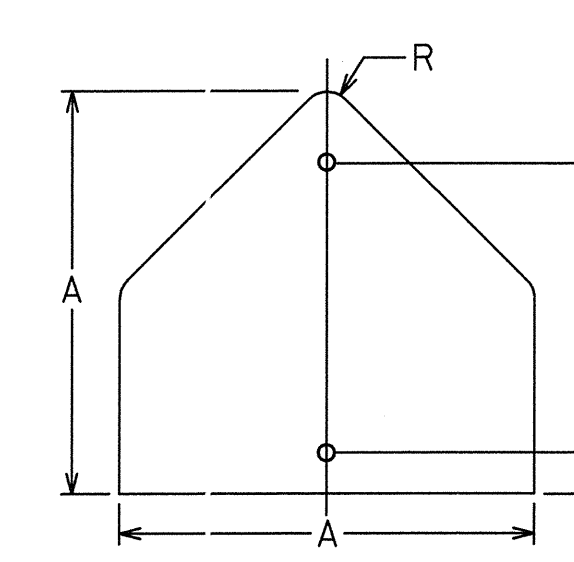


A	B	C	D	R
12	18	$1\frac{1}{2}$	15	$1\frac{1}{2}$
18	24	3	18	$1\frac{1}{2}$
24	30	3	24	$1\frac{1}{2}$
30	36	3	30	$1\frac{7}{8}$

VERTICAL RECTANGLE

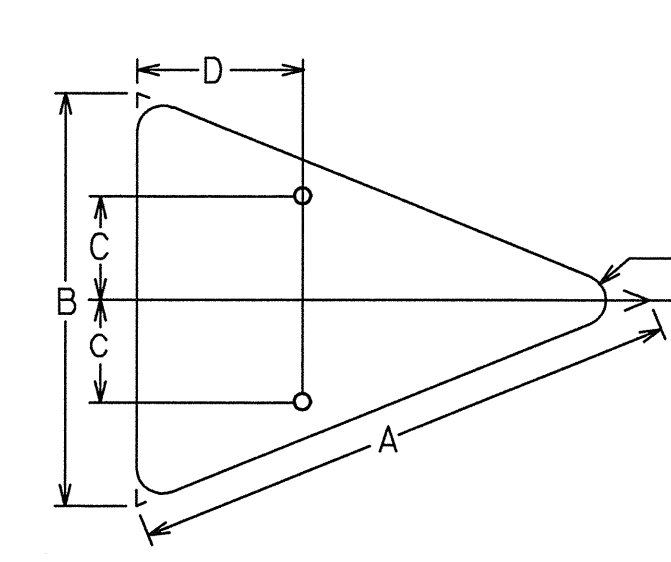


A	B	C	D	E	F	R
36	48	6	36	6	24	21
48	60	6	48	9	30	3



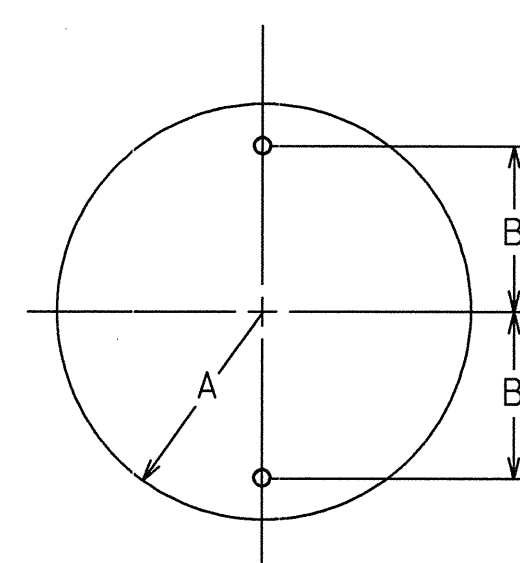
A	B	C	R
30	21	3	17
36	24	3	21

PENTAGON



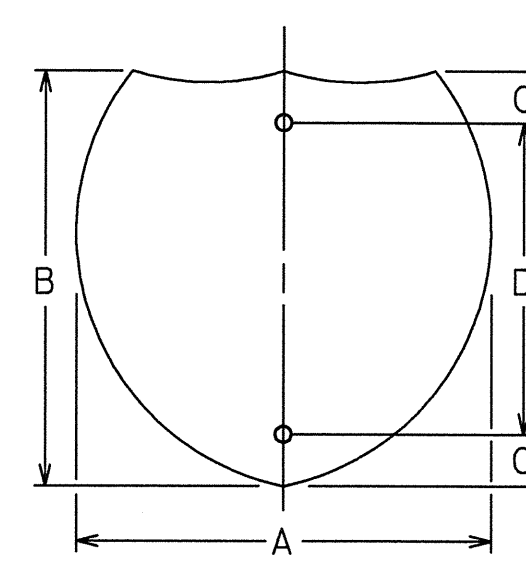
A	B	C	D	R
40	30	$7\frac{1}{2}$	12	$17\frac{1}{2}$
48	36	9	15	$21\frac{1}{2}$

ISOSCELES TRIANGLE



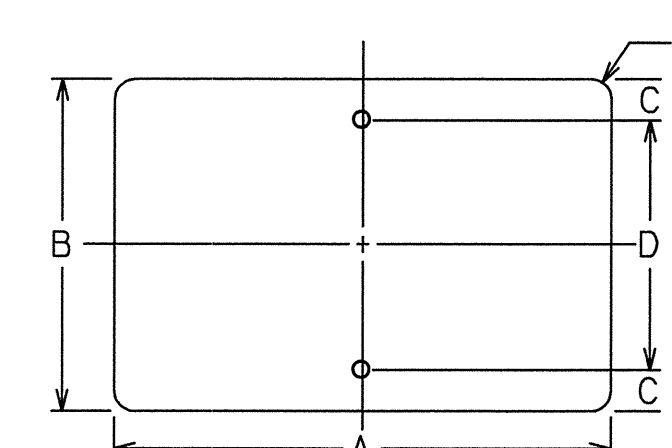
CIRCLE

A	B
15	12
18	15

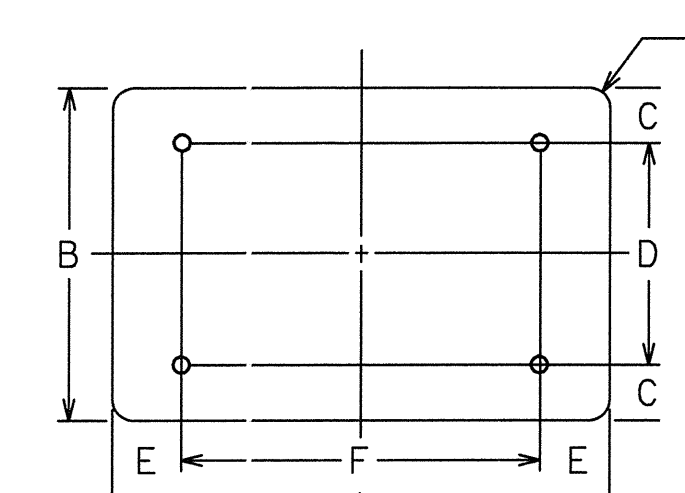


INTERSTATE SHIELD

A	B	C	D
24	24	3	18
30	24	3	18
36	36	6	24
45	36	6	24



HORIZONTAL RECTANGLE



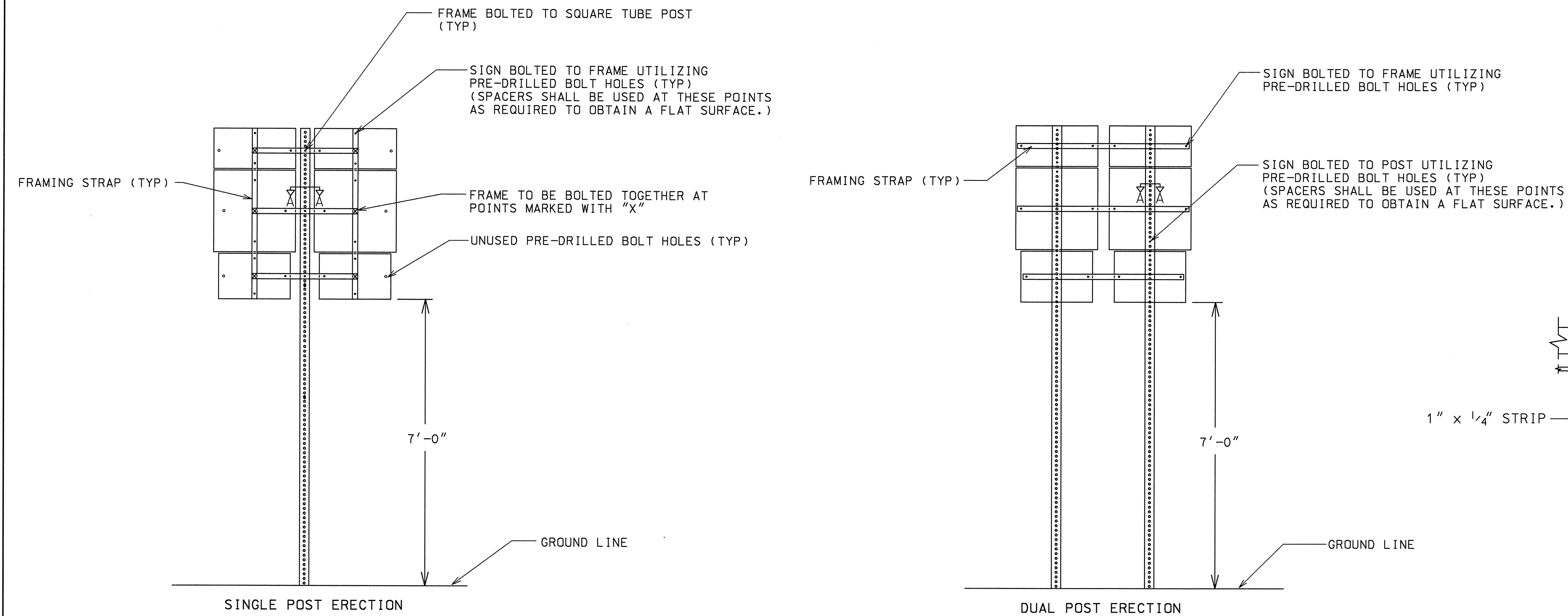
A	B	C	D	E	F	R
48	36	6	24	9	30	2 1/2
60	24	3	18	12	36	1 1/2
60	36	6	24	12	36	2 1/2

DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF SIGN PLATES NO SCALE JANUARY 2000

DETAILS OF SIGN PLATES

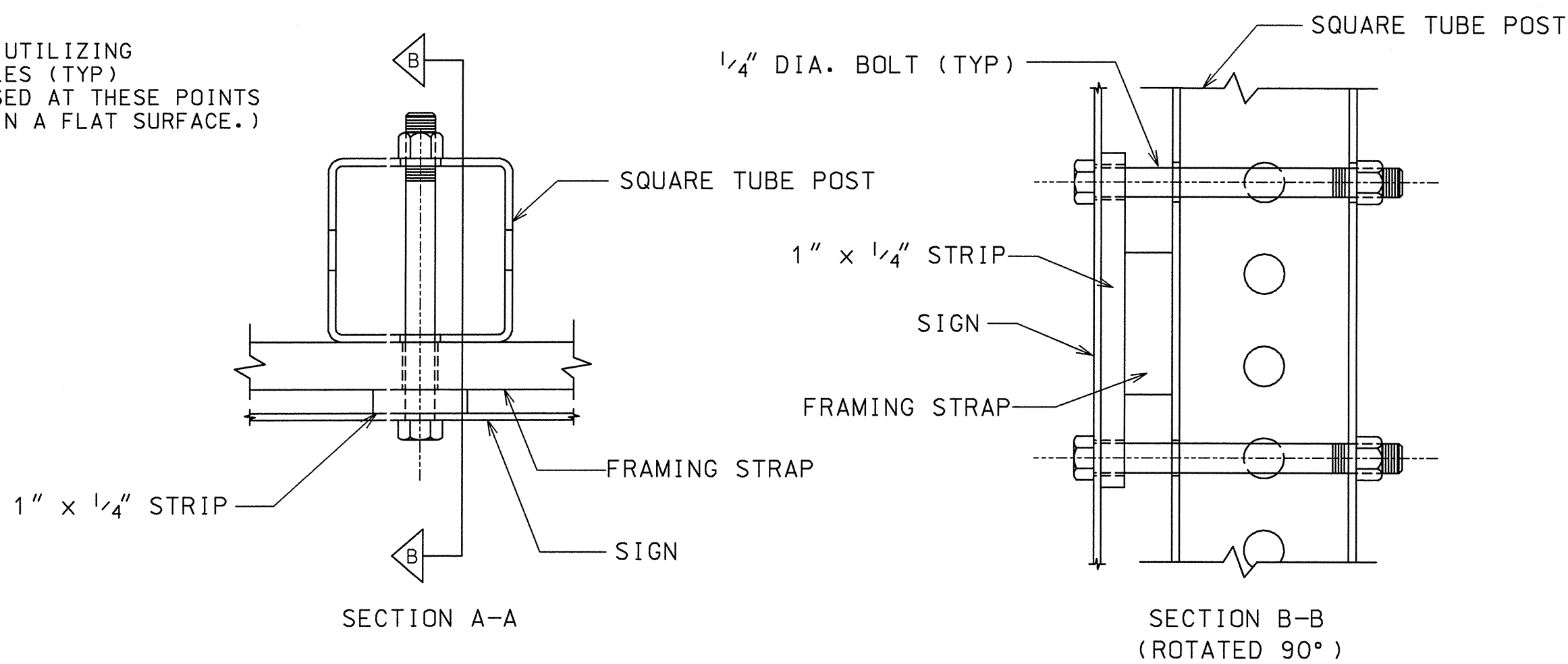
NO SCALE JANUARY 2000

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

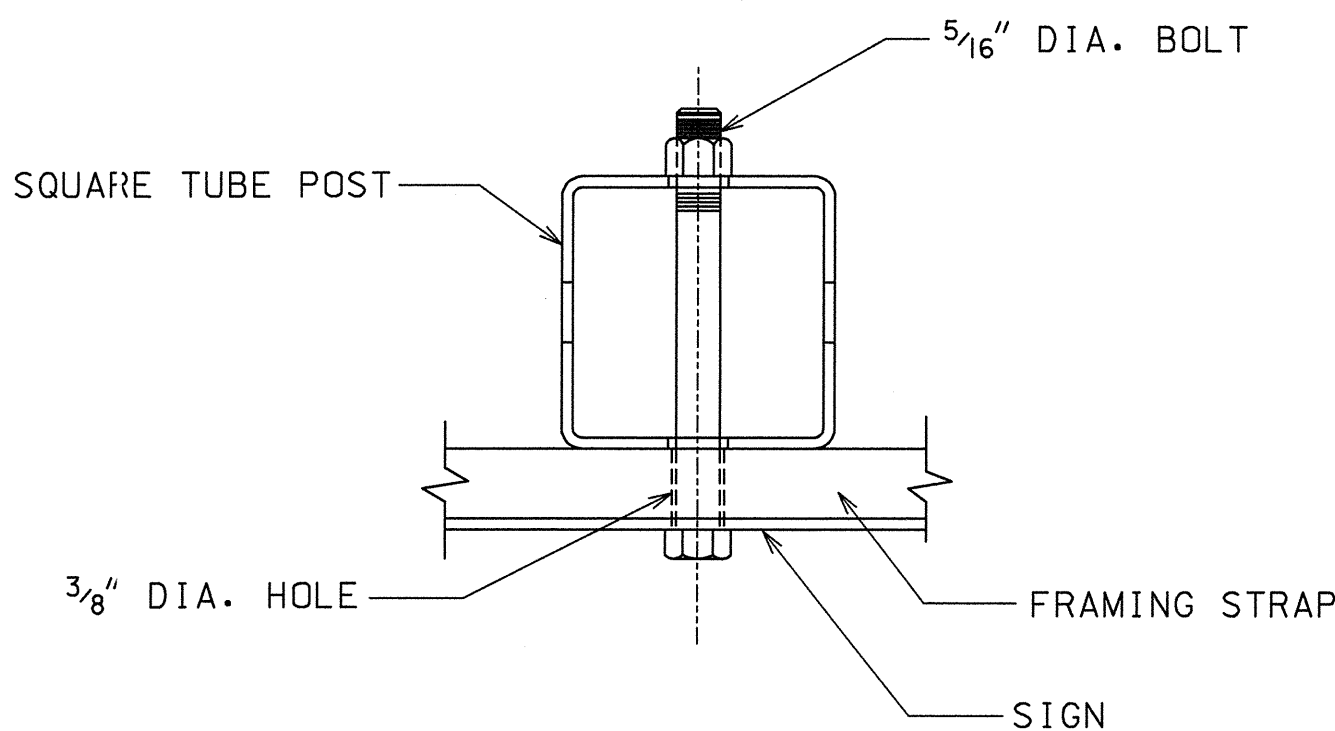


TYPICAL ASSEMBLY UNIT (BACK VIEW)

- GENERAL NOTES:
1. STYLE OF FRAMING IS OPTIONAL. ALTERNATE DESIGNS ARE ACCEPTABLE UPON APPROVAL OF THE ENGINEER. FRAME SHALL BE DESIGNED SO AS TO HOLD THE ASSEMBLY IN A FIXED, RIGID POSITION.
 2. FRAMING STRAPS SHALL BE GALVANIZED STEEL OR ALUMINUM.
 3. STEEL SHALL BE A.S.T.M. DESIGNATION A-283, GRADE D, GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-123.
 4. ALUMINUM SHALL BE ALLOY 6061-T6.
 5. BOLTS, NUTS, WASHERS, AND SPACERS SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND/OR SPECIAL PROVISIONS.
 6. FRAMING STRAPS ON A DUAL POST ERECTION SHALL NOT BE BOLTED TO THE POST.



OPTION #1 - FRAMING STRAP WITHOUT MOUNTING HOLE
(ALL FRAMING STRAPS SHALL BE 1 1/2" x 1/2" x REQUIRED LENGTH)



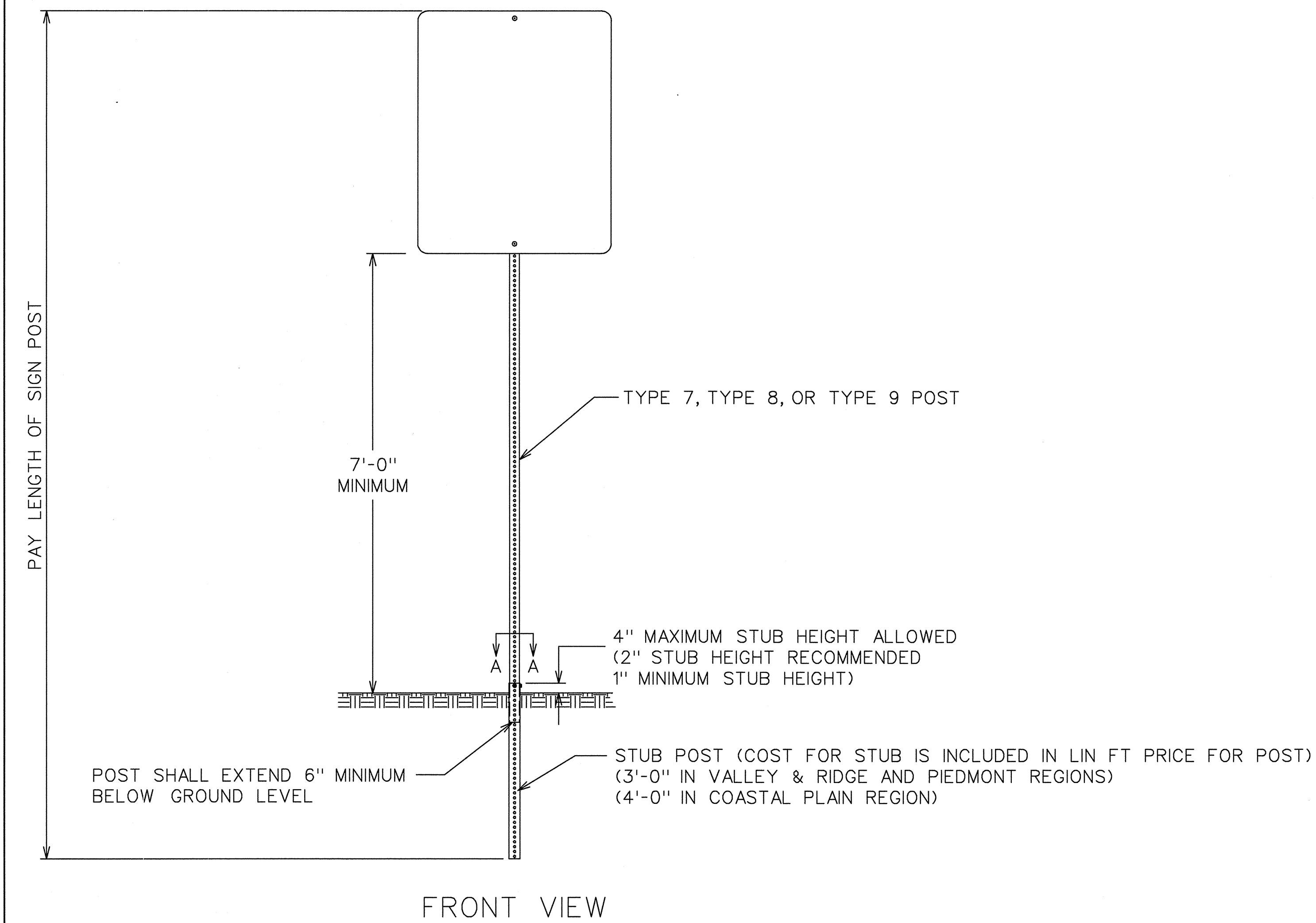
OPTION #2 - FRAMING STRAP WITH MOUNTING HOLE
(ALL FRAMING STRAPS SHALL BE 2" x 1/2" x REQUIRED LENGTH)

DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC OPERATIONS
3/31/00	CHANGED U-CHANNEL POST TO SQUARE TUBE POST	

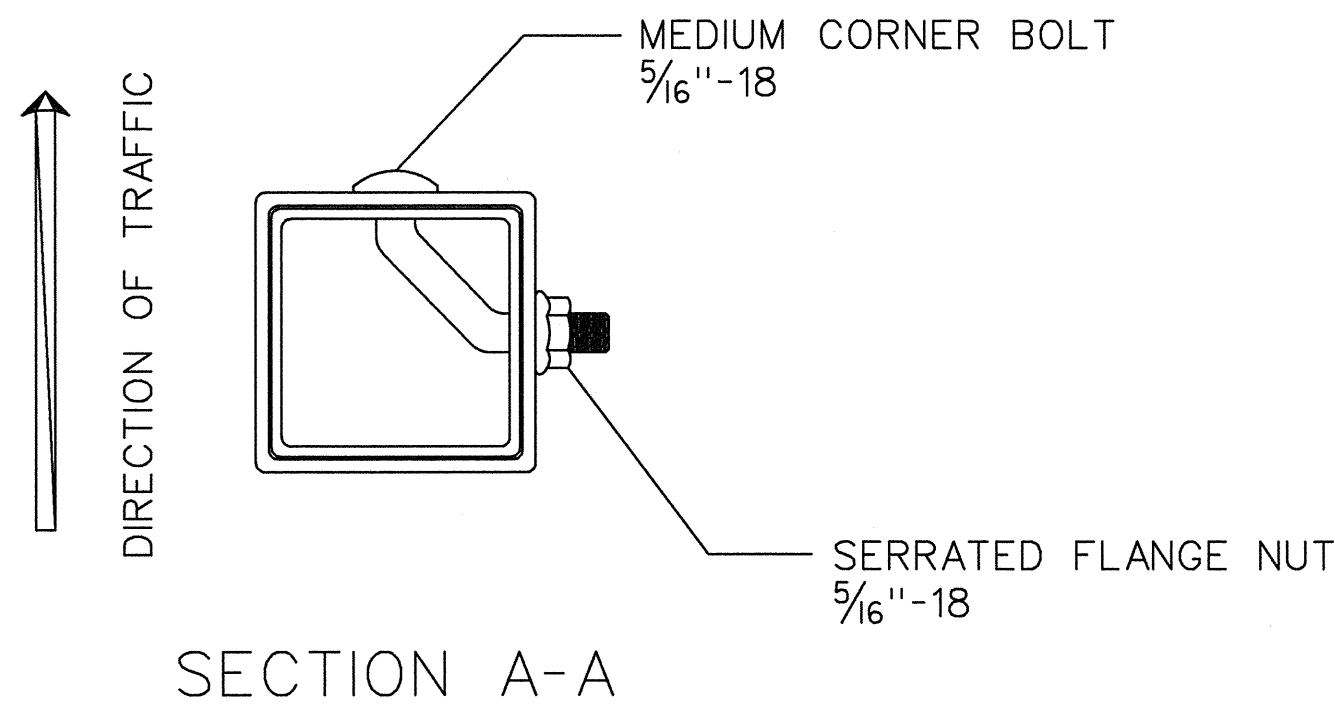
DETAILS FOR
TYPICAL FRAMING

NO SCALE JANUARY 2000

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



POST	STUB SIZE
TYPE 7	2 1/4" x 2 1/4"
TYPE 8	2 3/4" x 2 3/4"
TYPE 9	2 1/2" x 2 1/2"



SIGN POST SELECTION CHART

70 MPH Wind Load Chart + 15% Gust Factor

Sign Centroid	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.		
	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.

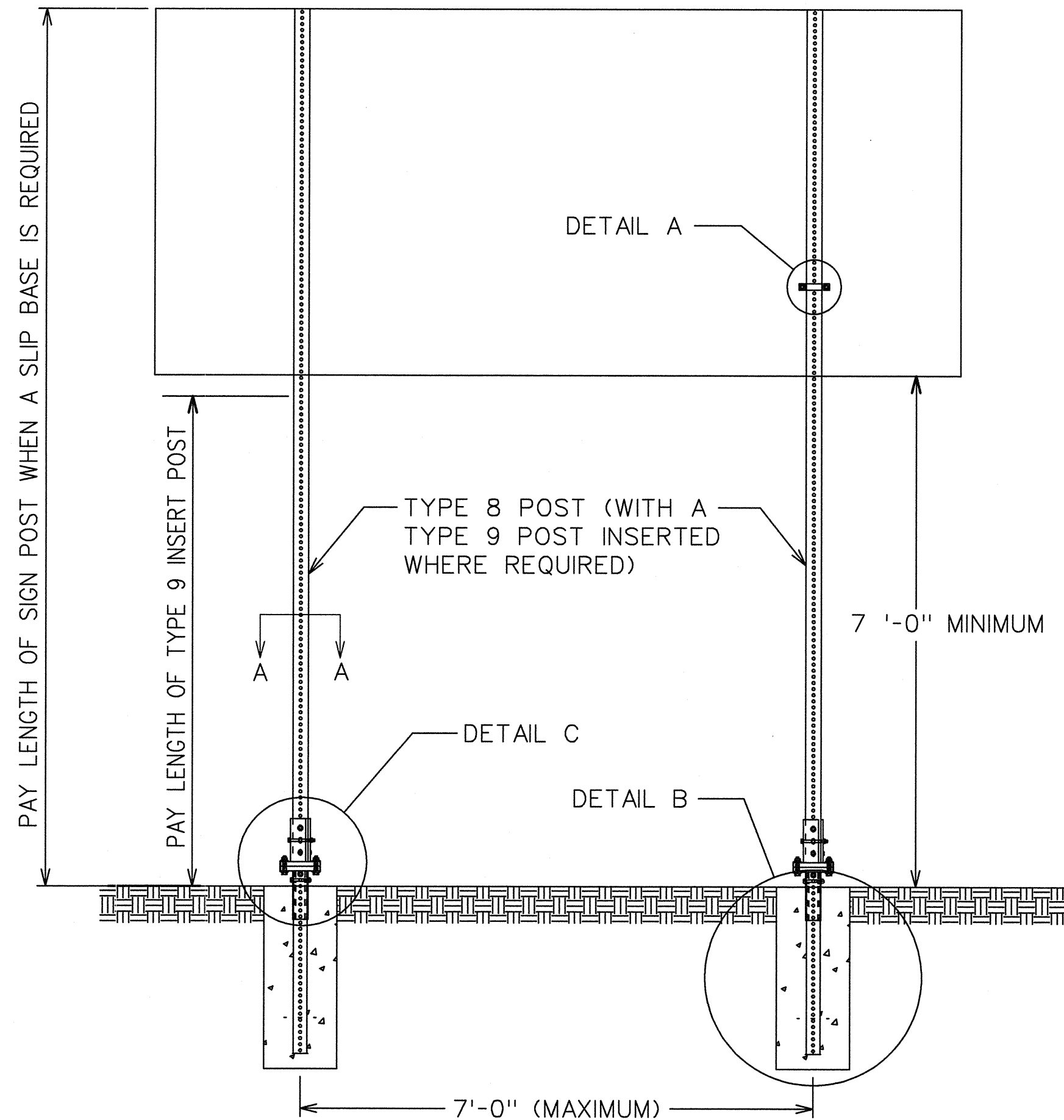
SIGN PLATE SHALL NOT EXCEED 48" IN WIDTH ON A SINGLE POST.

* TYPE 9 INSERT SHALL BE A CONTINUOUS 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.

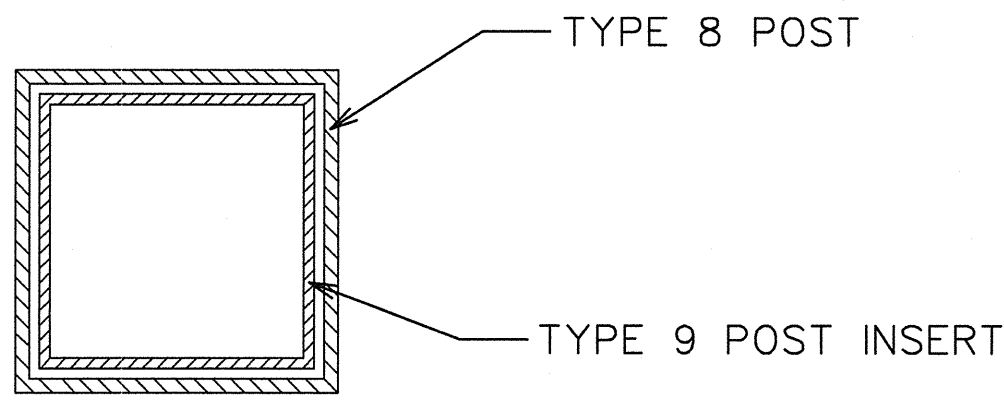
GROUND MOUNTED BREAKAWAY SIGN SUPPORT WILL BE MEASURED AND PAID FOR SEPARATELY. THE COST FOR THIS WORK SHALL INCLUDE THE UPPER AND LOWER ASSEMBLY, STUB POST, CLASS "A" CONCRETE, ALL HARDWARE NECESSARY TO COMPLETE THE INSTALLATION, AND BE INCLUDED IN THE BID PRICE SUBMITTED FOR ITEM 636-3010.

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

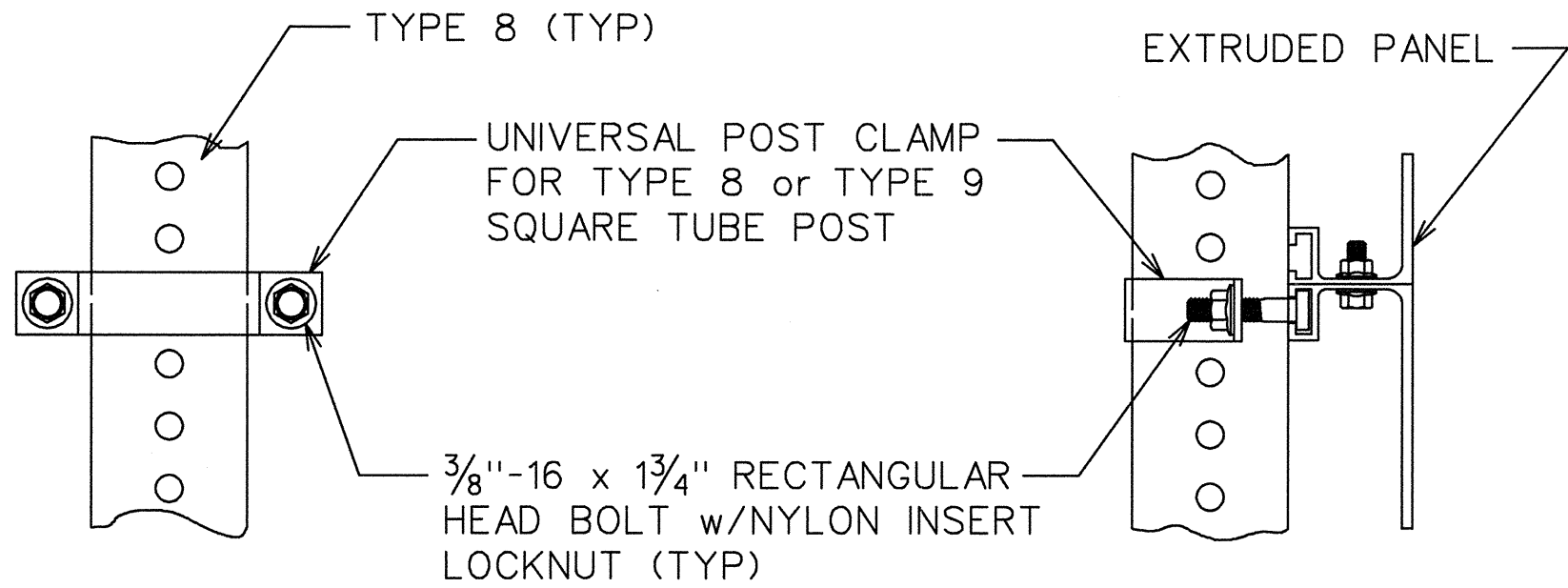
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



BACK VIEW



SECTION A-A



BACK VIEW

DETAIL A

SIDE VIEW

SIGN POST SELECTION CHART

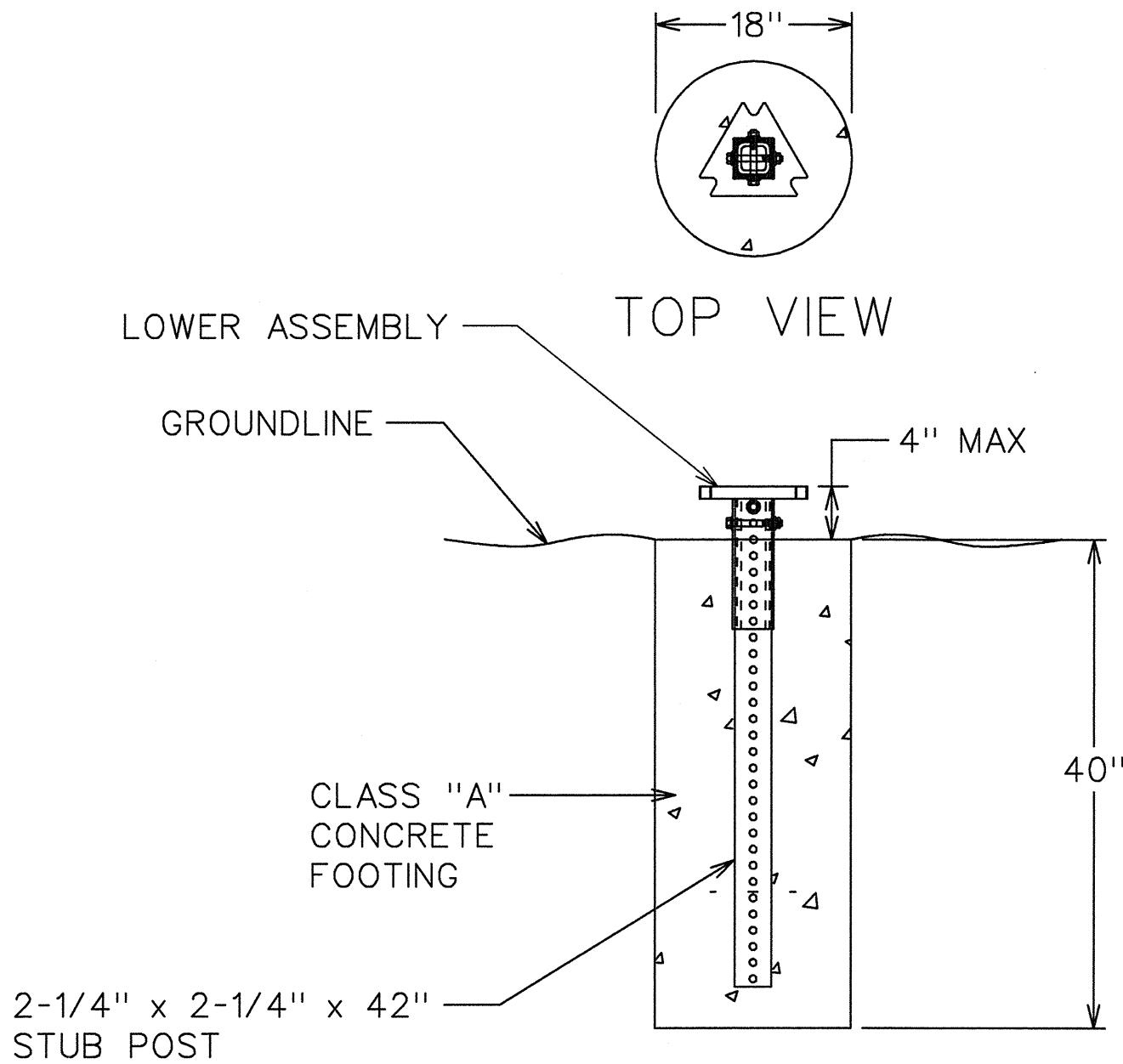
70 MPH Wind Load Chart + 15% Gust Factor

Sign Centroid	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 w / TYPE 9 Insert* 2-1/2" 12 ga. W / 2-1/4" 14 ga.		
	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.

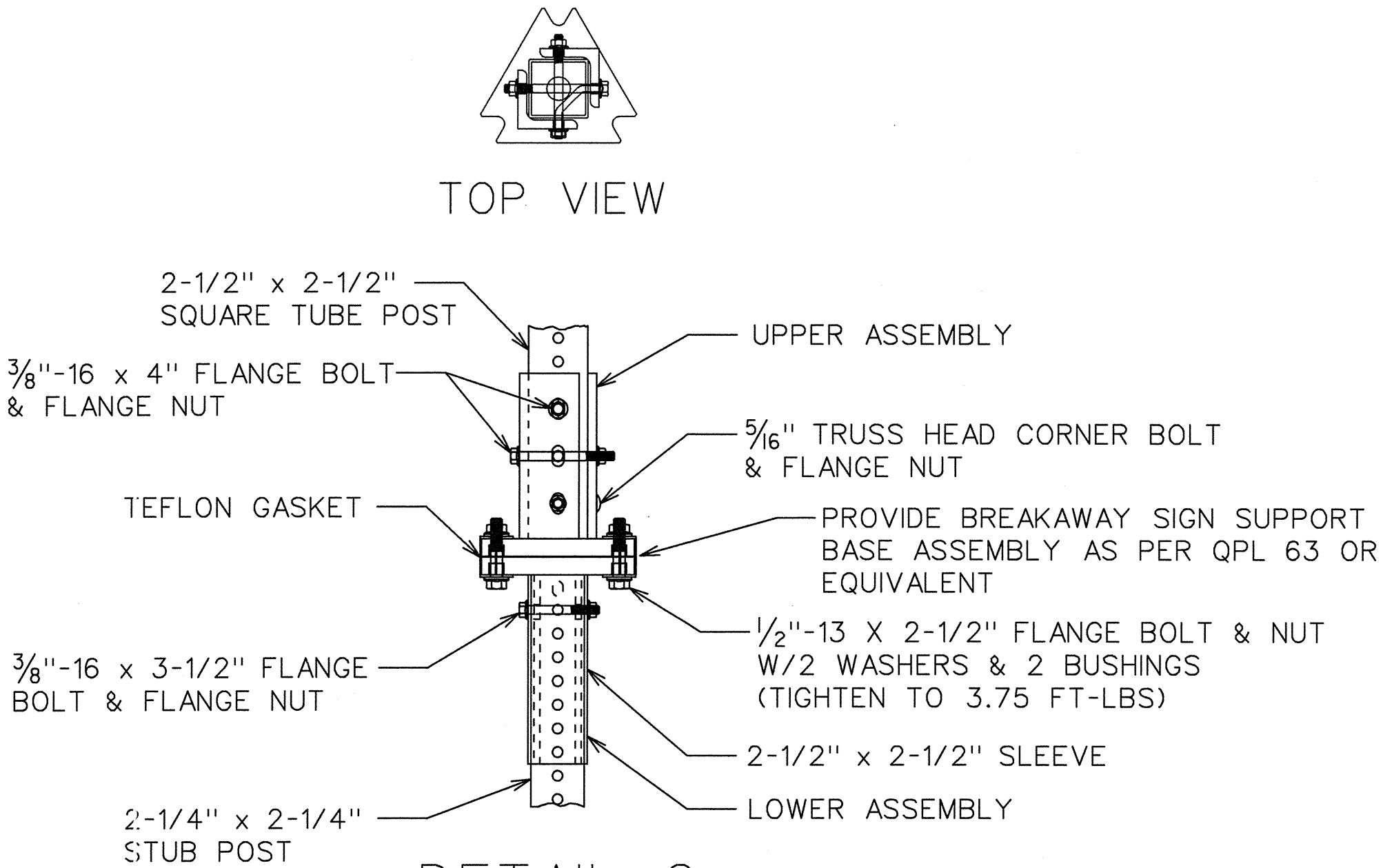
* TYPE 9 INSERT SHALL BE A CONTINUOUS POST INSERTED INTO THE TYPE 8 POST WHERE REQUIRED. THE INSERT POST SHALL EXTEND FROM THE BOTTOM OF THE SLIP BASE UPPER ASSEMBLY TO 4" BELOW THE BOTTOM OF THE SIGN. THE INSERT POST SHALL NOT EXTEND ABOVE THE BOTTOM OF THE SIGN. PAYMENT FOR THE INSERT POST SHALL BE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



DETAIL B

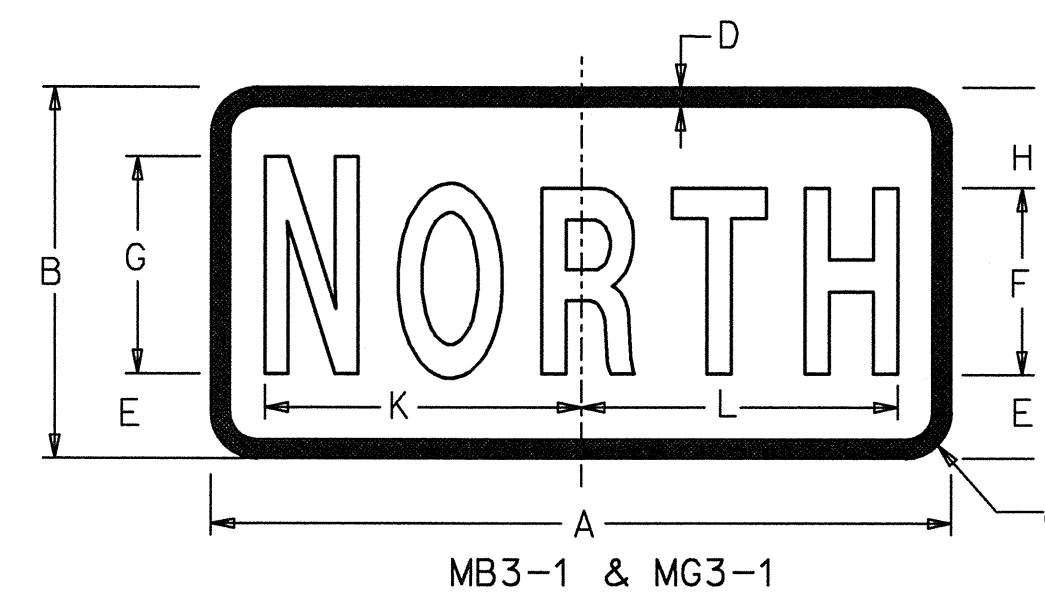
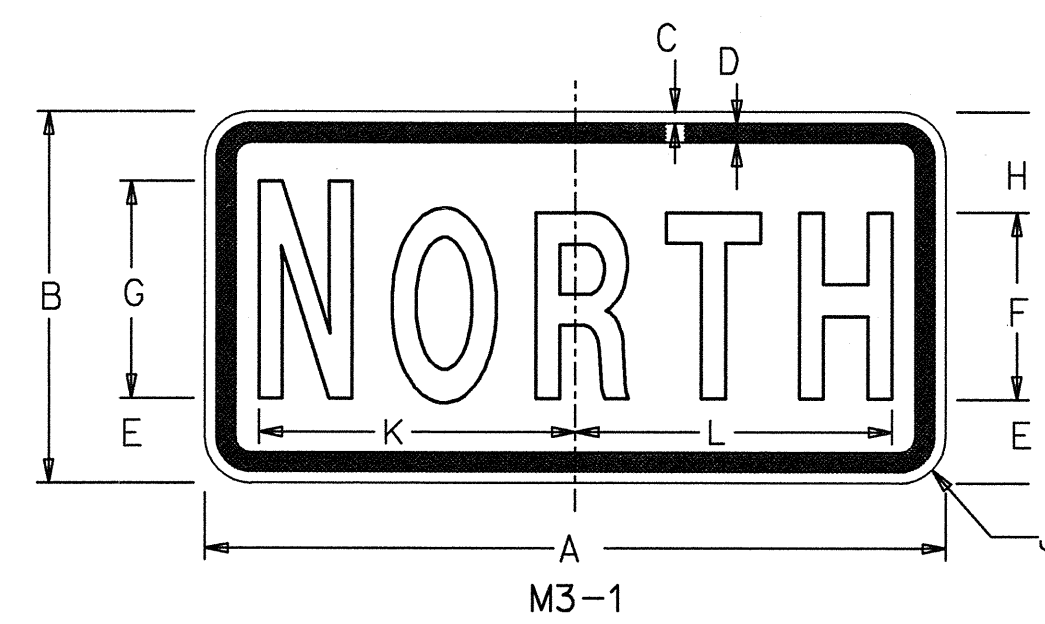
GROUND MOUNTED BREAKAWAY SIGN SUPPORT



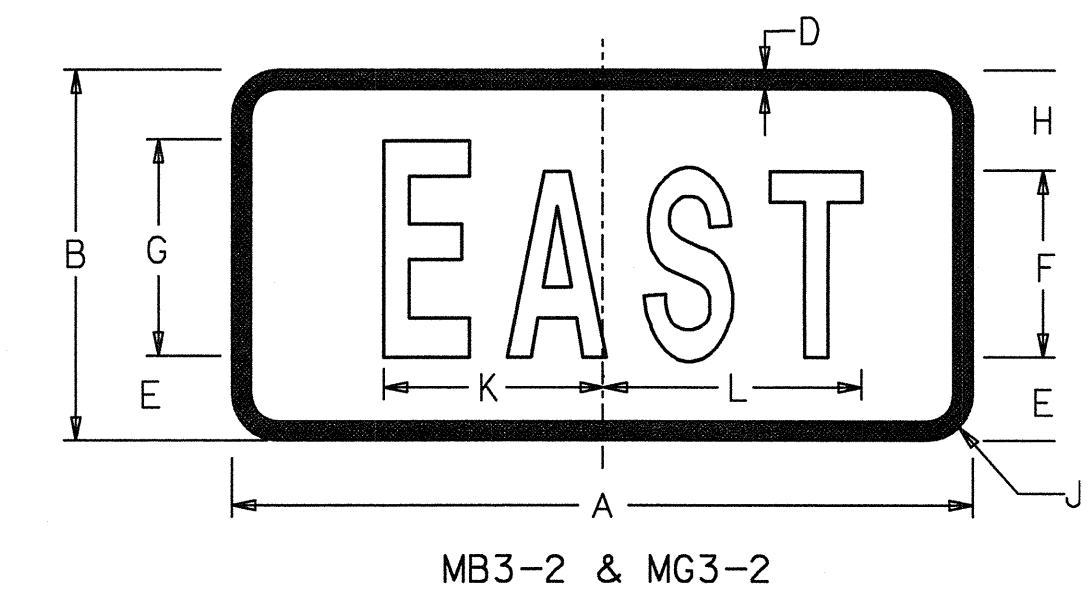
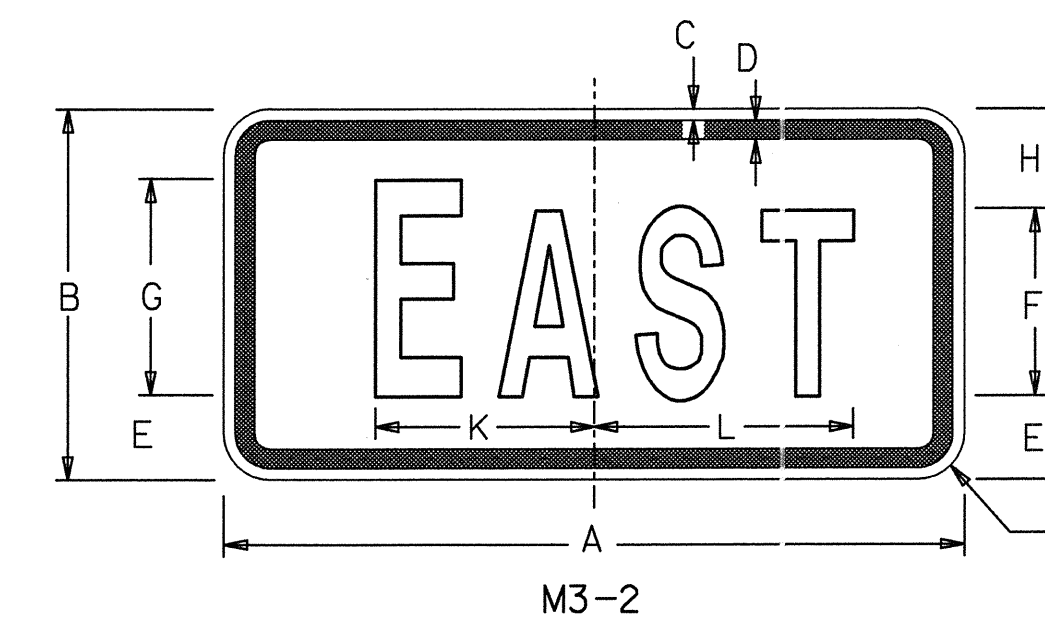
DETAIL C
(CONCRETE NOT SHOWN)

DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF SQUARE TUBE POST (BREAKAWAY SIGN SUPPORT)
		NO SCALE
		July 2002

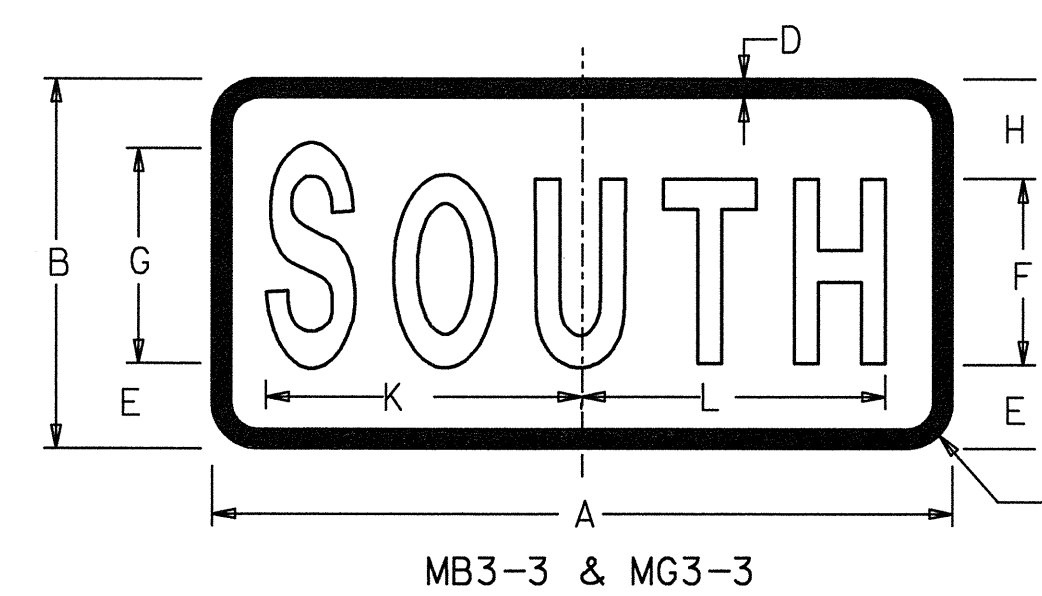
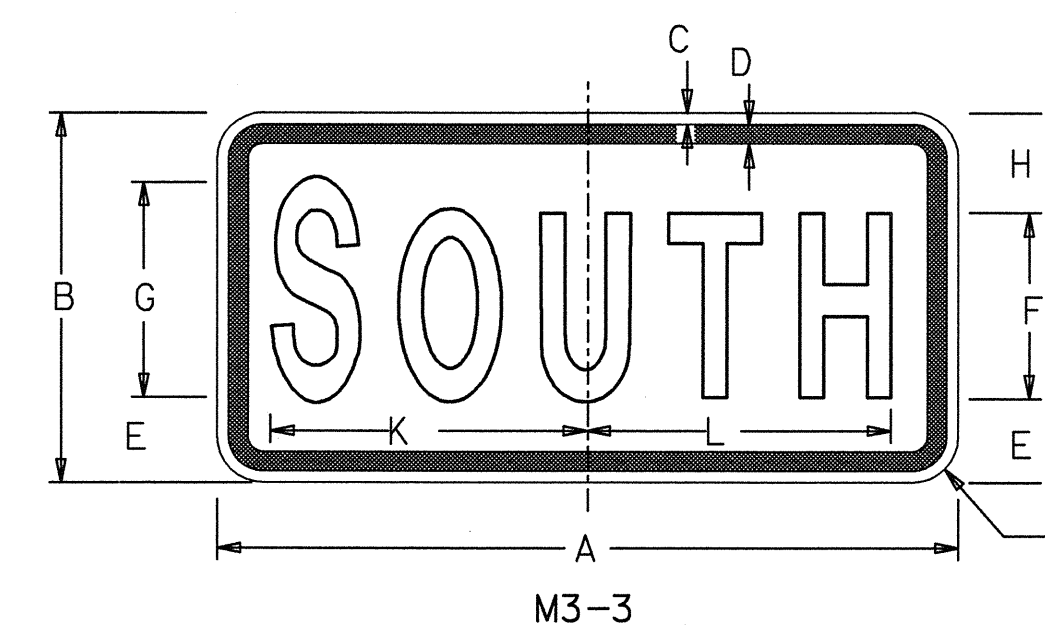
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



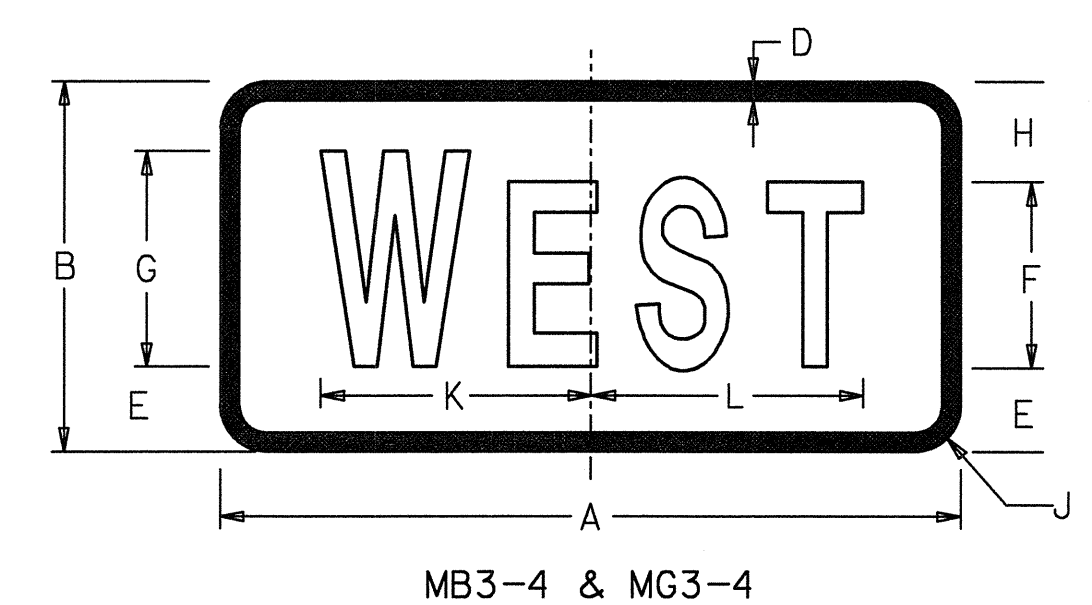
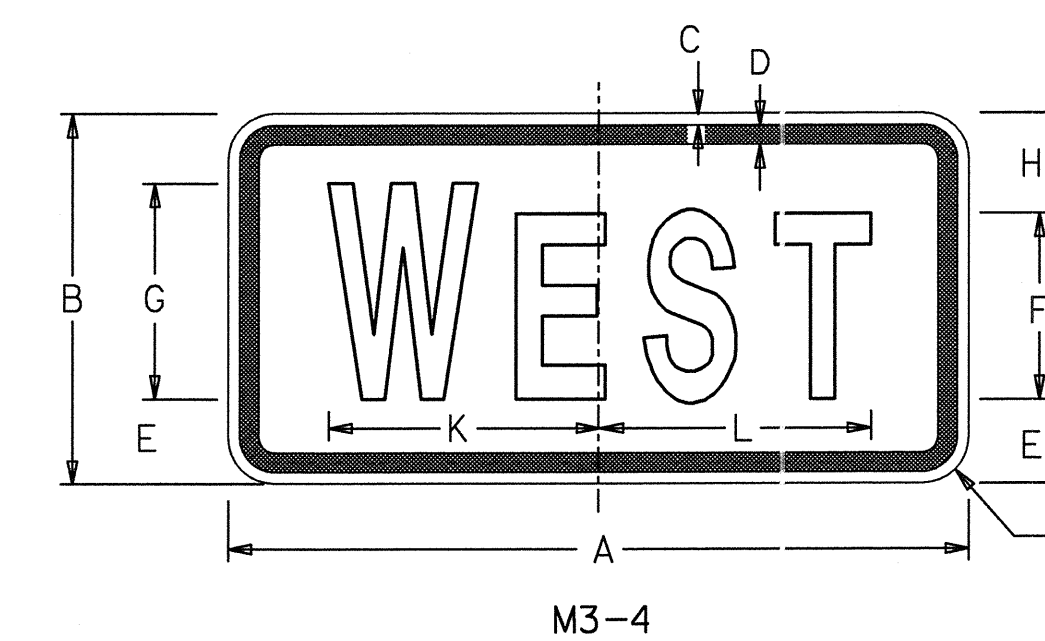
DIMENSIONS (INCHES)											
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	¼	1	2D	2¼D	1	¾	4¼	4¼
MIN & STD	24	12	¾	5/8	2¾	6C	7C	3¼	1½	10¼	10¼
SPECIAL	30	15	¾	5/8	3¼	8C	9C	3¾	1½	12½ ₁₆	12½ ₁₆



		DIMENSIONS (INCHES)									
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	3/4	1/4	1	2D	2 1/4 D	1	3/4	3 3/8	3 3/8
MIN & STD	24	12	3/8	5/8	2 3/4	6C	7C	3 1/4	1 1/2	7 7/8	8 3/4
SPECIAL	30	15	3/8	5/8	3 1/4	8C	9C	3 3/4	1 1/2	10 3/8	11 1/8



DIMENSIONS (INCHES)											
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	1/4	1	2D	2 1/4 D	1	3/4	4 1/4	4 1/4
MIN & STD	24	12	3/8	5/8	2 3/4	6C	7C	3 1/4	1 1/2	10 1/4	9 7/8
SPECIAL	30	15	3/8	5/8	3 1/4	8C	9C	3 3/4	1 1/2	12 7/8	12 1/2



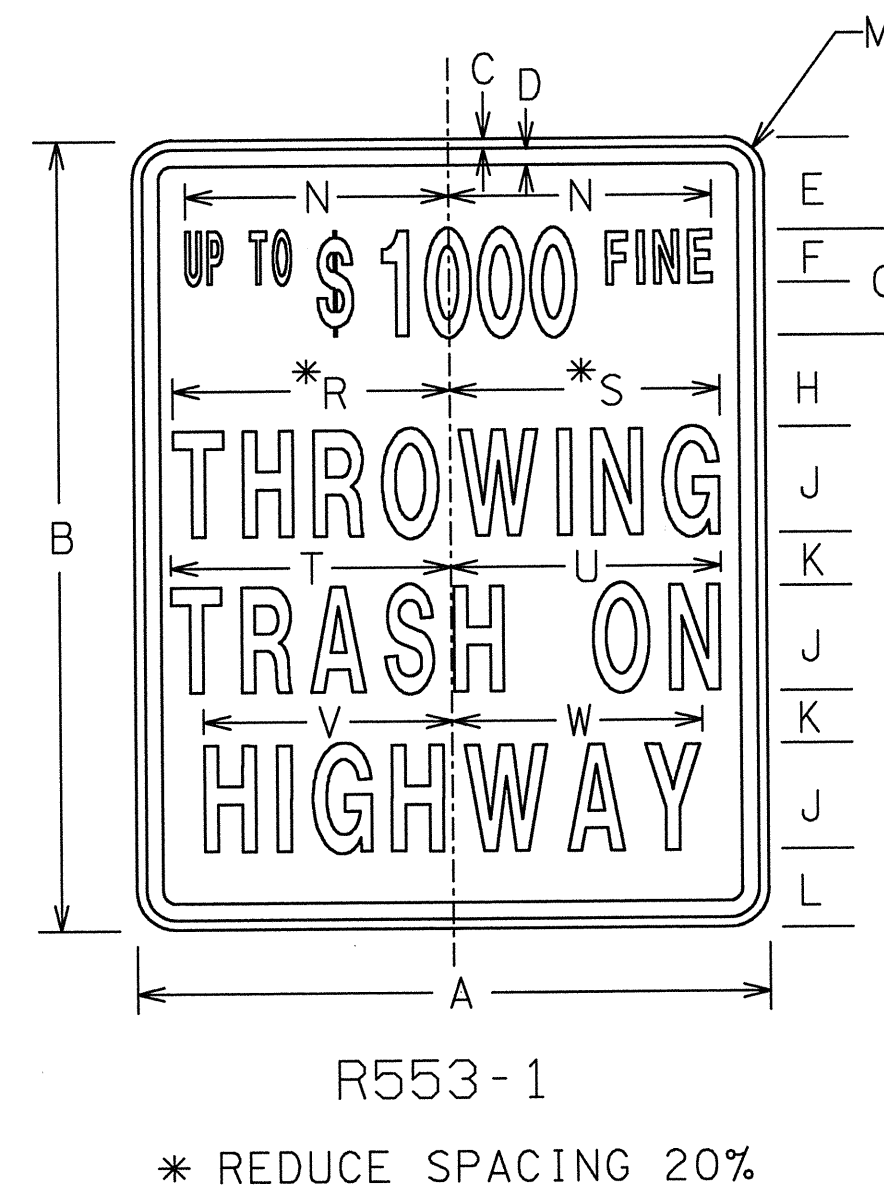
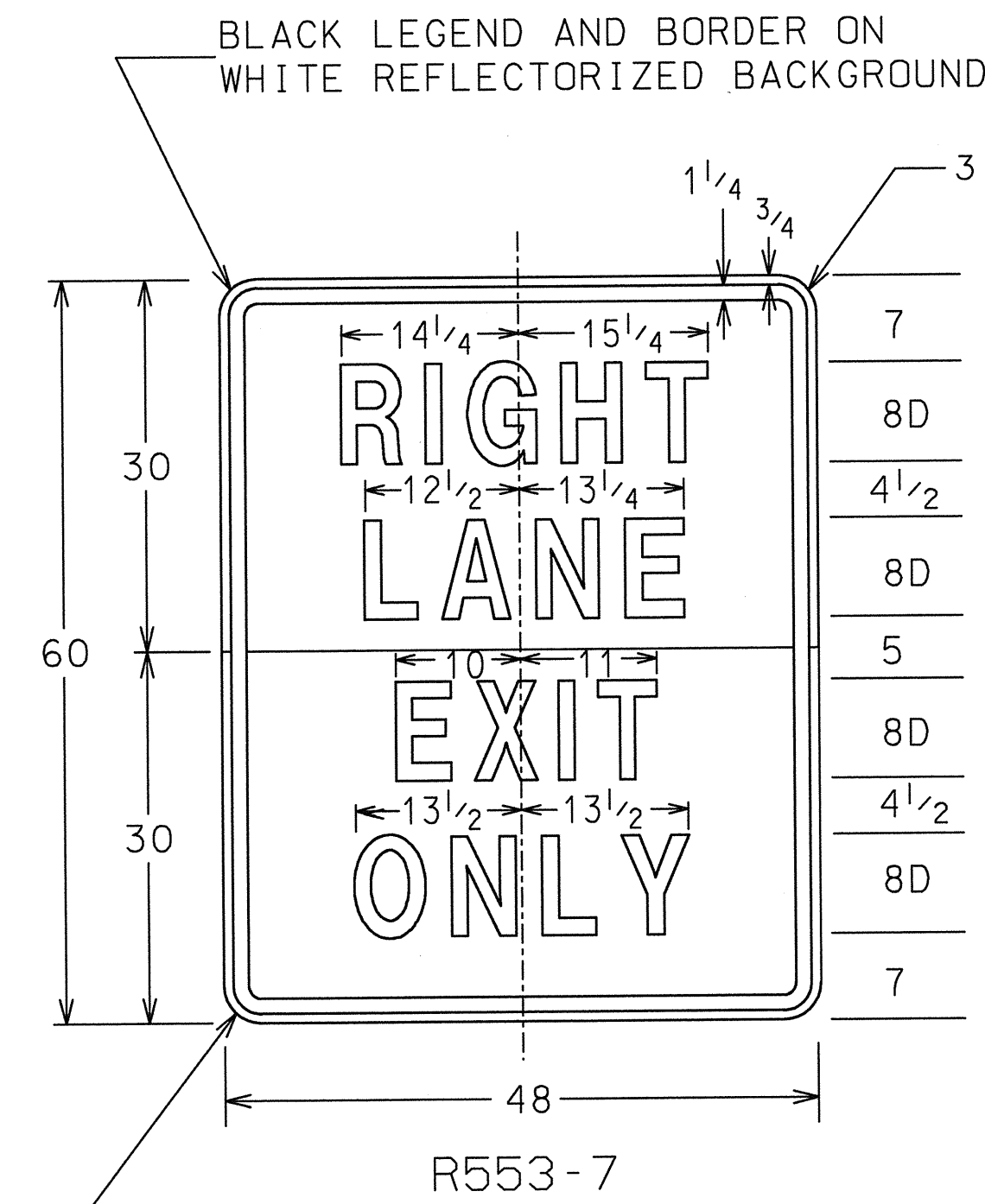
		DIMENSIONS (INCHES)									
SIGN	A	B	C	D	E	F	G	H	J	K	L
BIKE	12	4	-	¼	1	2D	2¼D	1	¾	3½	3½
MIN & STD	24	12	¾	¾	2¾	6C	7C	3¼	1½	8¾	8¾
SPECIAL	30	15	¾	¾	3¼	8C	9C	3¾	1½	10¾	11½

GENERAL NOTES:

1. M3 (CONVENTIONAL ROADWAYS) SIGNS SHALL HAVE BLACK LEGENDS AND BORDERS ON WHITE REFLECTORIZED BACKGROUNDS.
2. MB3 (INTERSTATE HIGHWAYS) SIGNS SHALL HAVE WHITE REFLECTORIZED LEGENDS AND BORDERS ON BLUE REFLECTORIZED BACKGROUNDS.
3. MG3 (BIKE LANES) SIGNS SHALL HAVE WHITE REFLECTORIZED LEGENDS AND BORDERS ON GREEN REFLECTORIZED BACKGROUNDS.

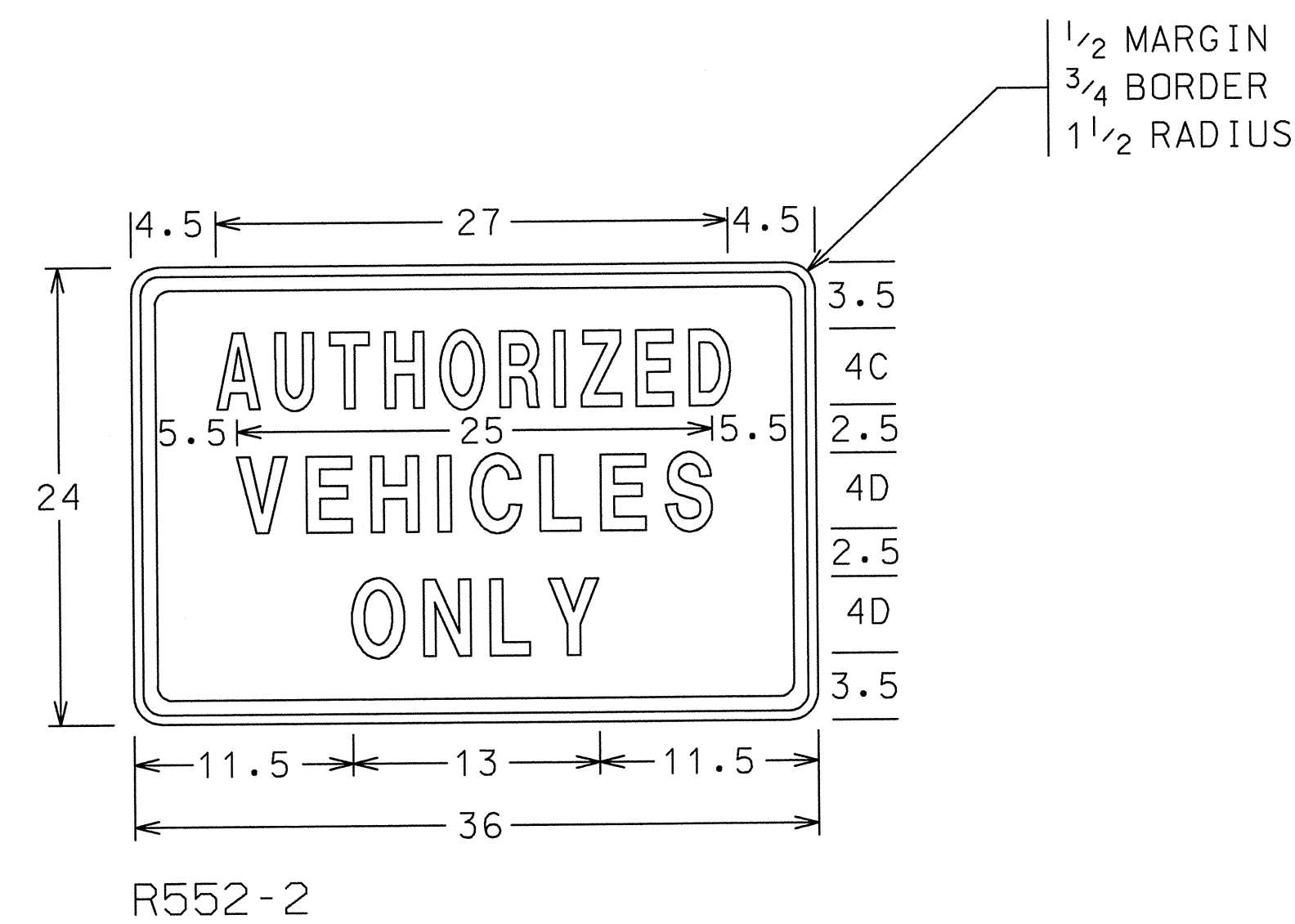
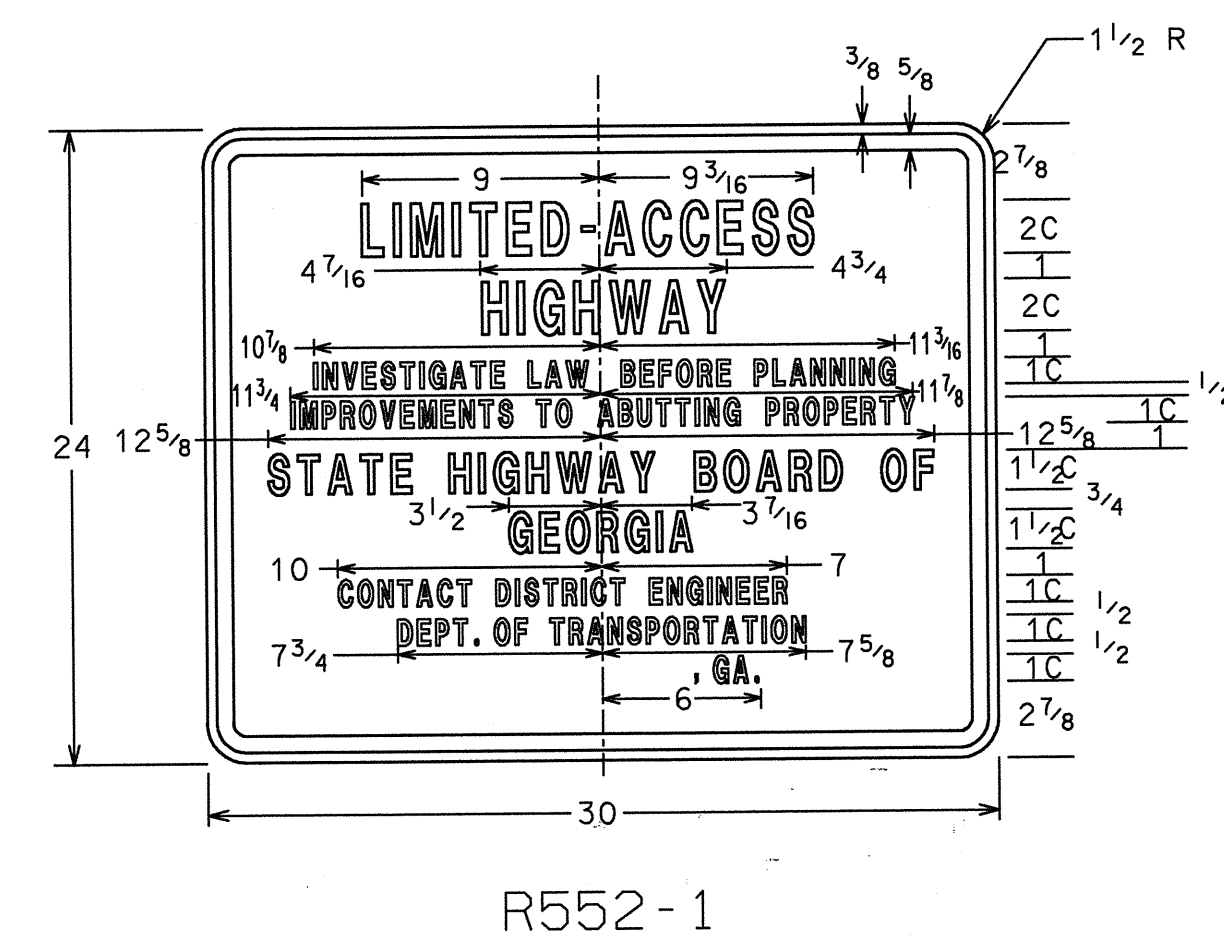
DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION
		OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF CARDINAL DIRECTION SIGNS
		NO SCALE
		JANUARY 2000

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



SIGN	DIMENSIONS (INCHES)																		
	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	U	V	W
STD & MIN	24	30	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{3}{2}$	2B	4C	$\frac{3}{2}$	4C	2	3	$1\frac{1}{2}$	10	$10\frac{1}{2}$	$10\frac{3}{4}$	$10\frac{1}{8}$	$\frac{9}{32}$	$\frac{9}{16}$	$\frac{1}{2}$
EXPWY	36	48	$\frac{5}{8}$	$\frac{7}{8}$	6	3B	6C	6	6C	3	6	$2\frac{1}{4}$	15	$15\frac{3}{4}$	$15\frac{3}{8}$	$16\frac{1}{2}$	$15\frac{3}{8}$	$14\frac{1}{16}$	$14\frac{1}{8}$
FWY	48	60	$\frac{3}{4}$	$1\frac{1}{4}$	7	4B	7C	8	8C	4	6	3	20	21	$20\frac{1}{2}$	$21\frac{1}{2}$	$20\frac{1}{4}$	$18\frac{3}{4}$	$18\frac{1}{2}$

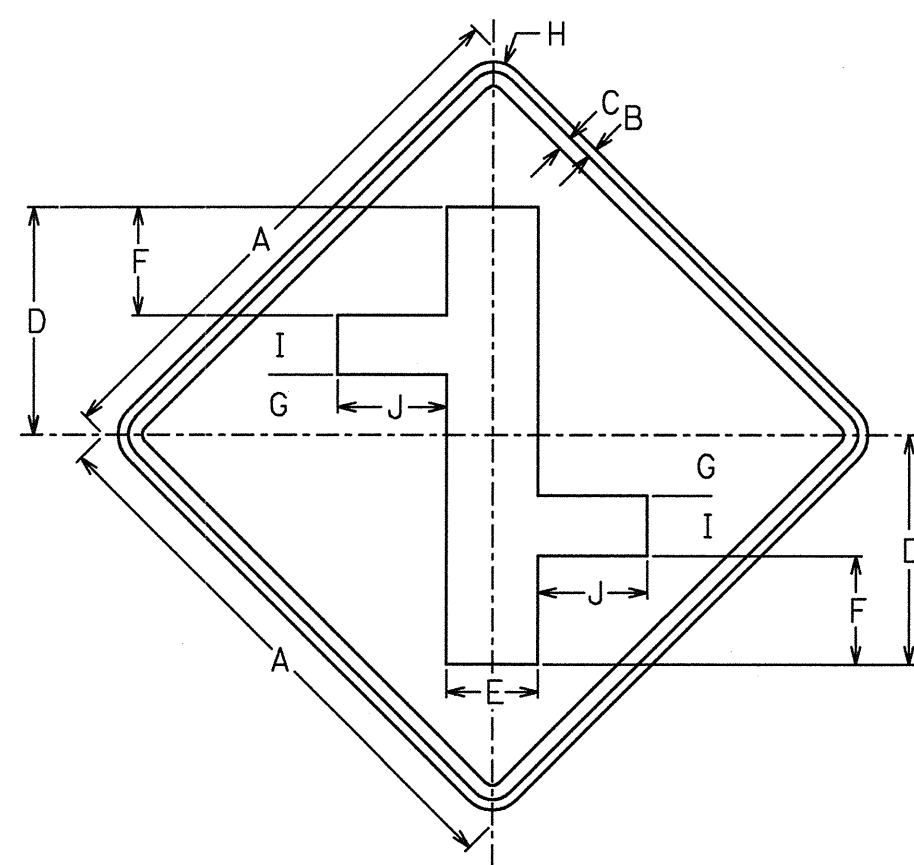
SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
STD & MIN	24	30	3 $\frac{3}{8}$	5 $\frac{5}{8}$	3 $\frac{5}{8}$	4D	2 $\frac{1}{4}$	4E	8 $\frac{3}{4}$	9 $\frac{1}{4}$	4	6 $\frac{3}{4}$	7 $\frac{1}{4}$	9 $\frac{1}{4}$	9 $\frac{3}{4}$	1 $\frac{1}{2}$
EXPWY	36	48	5 $\frac{3}{8}$	7 $\frac{5}{8}$	6	6D	4	6E	13 $\frac{1}{4}$	13 $\frac{3}{4}$	5 $\frac{1}{2}$	10 $\frac{3}{4}$	10 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{3}{4}$	2 $\frac{1}{4}$
FWY	48	60	3 $\frac{1}{4}$	7 $\frac{1}{4}$	4	8D	4 $\frac{1}{2}$	8E	17 $\frac{1}{8}$	17 $\frac{7}{8}$	7	14 $\frac{3}{8}$	13 $\frac{3}{8}$	18 $\frac{3}{8}$	19 $\frac{3}{8}$	3



$\overbrace{\hspace{1.5cm}}^{4} \overbrace{\hspace{1.5cm}}^{3}$
 GAINESVILLE
 $2\frac{1}{4} \overbrace{\hspace{1.5cm}}^{3} \overbrace{\hspace{1.5cm}}^{3}$
 TENNILLE
 $\overbrace{\hspace{1.5cm}}^{4\frac{7}{16}} \overbrace{\hspace{1.5cm}}^{3}$
 THOMASTON
 $11\frac{1}{16} \overbrace{\hspace{1.5cm}}^{3} \overbrace{\hspace{1.5cm}}^{3}$
 TIFTON
 $9\frac{1}{16} \overbrace{\hspace{1.5cm}}^{3} \overbrace{\hspace{1.5cm}}^{3}$
 JESUP
 $\overbrace{\hspace{1.5cm}}^{5\frac{3}{8}} \overbrace{\hspace{1.5cm}}^{3}$
 CARTERSVILLE
 $1\frac{3}{4} \overbrace{\hspace{1.5cm}}^{3} \overbrace{\hspace{1.5cm}}^{3}$
 ATLANTA

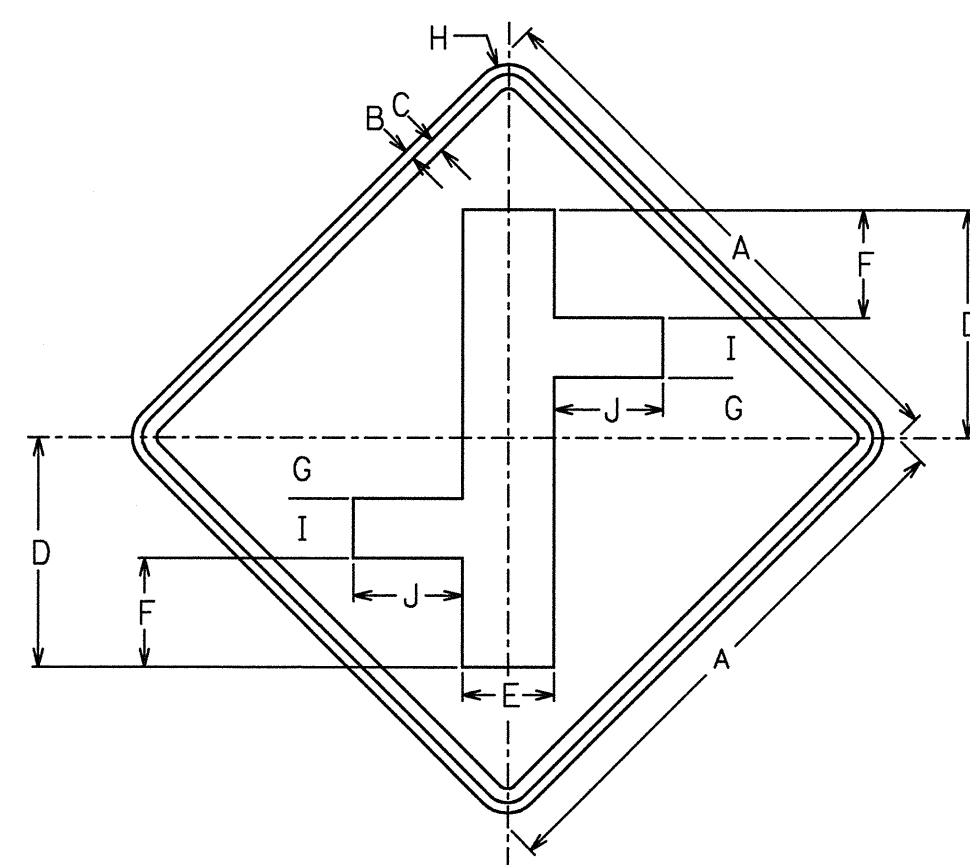
DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF REGULATORY SIGNS SHEET 2 OF 2
		NO SCALE
		JANUARY 2000

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



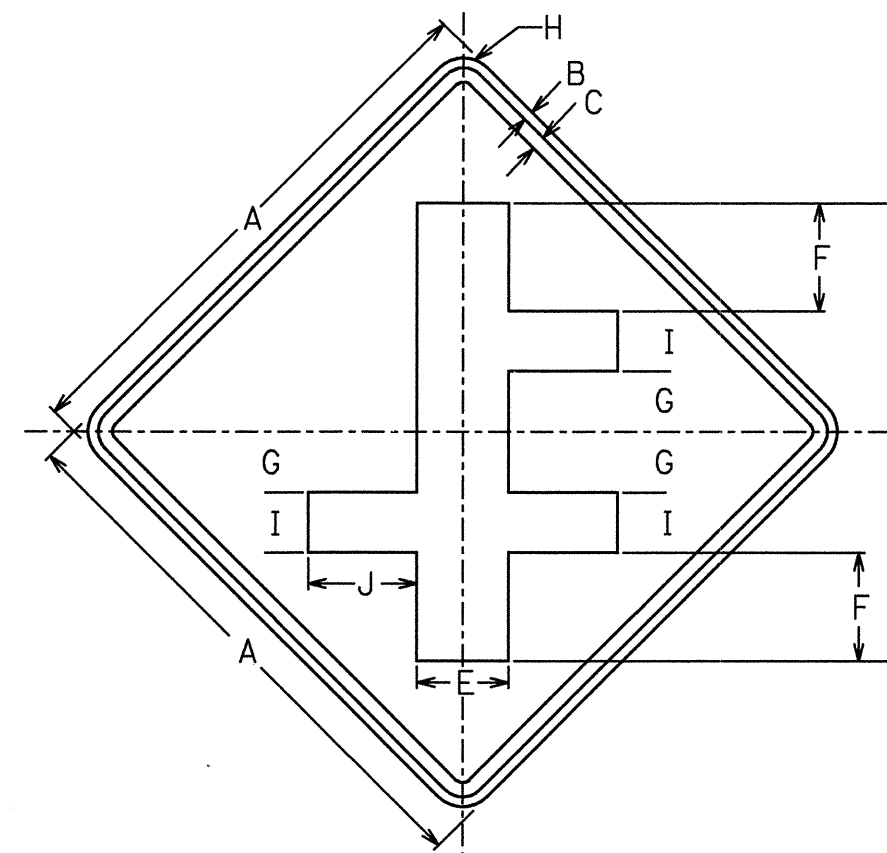
W552-1

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1 1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



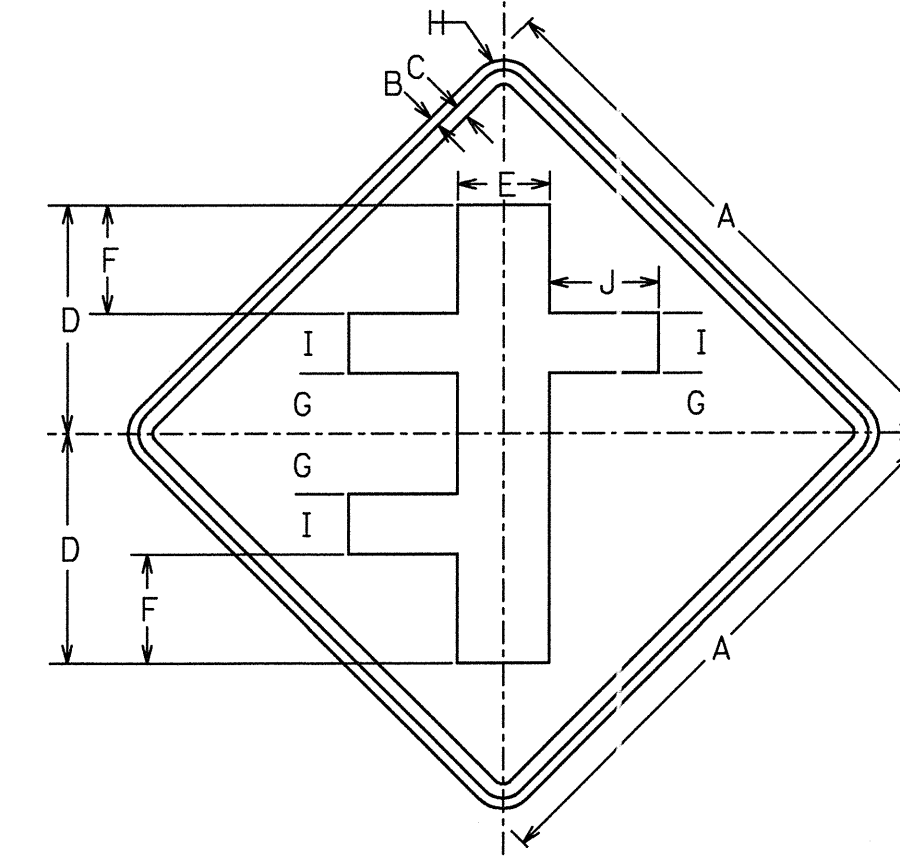
W552-2

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1 1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



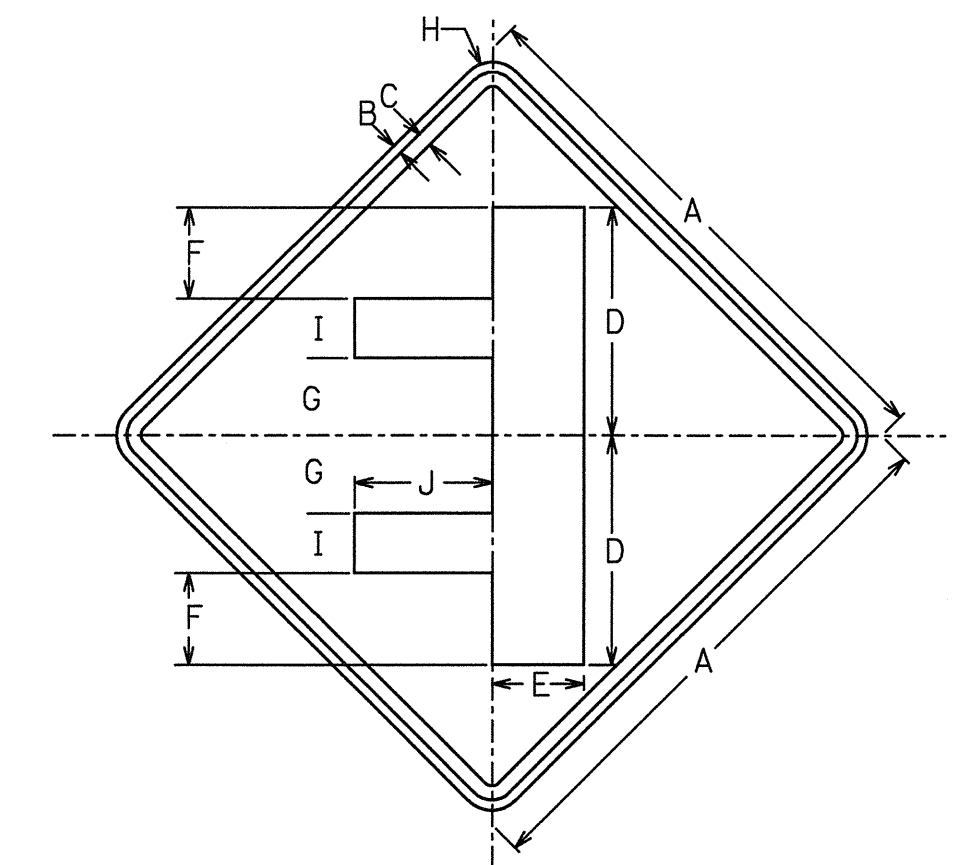
W552-3

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



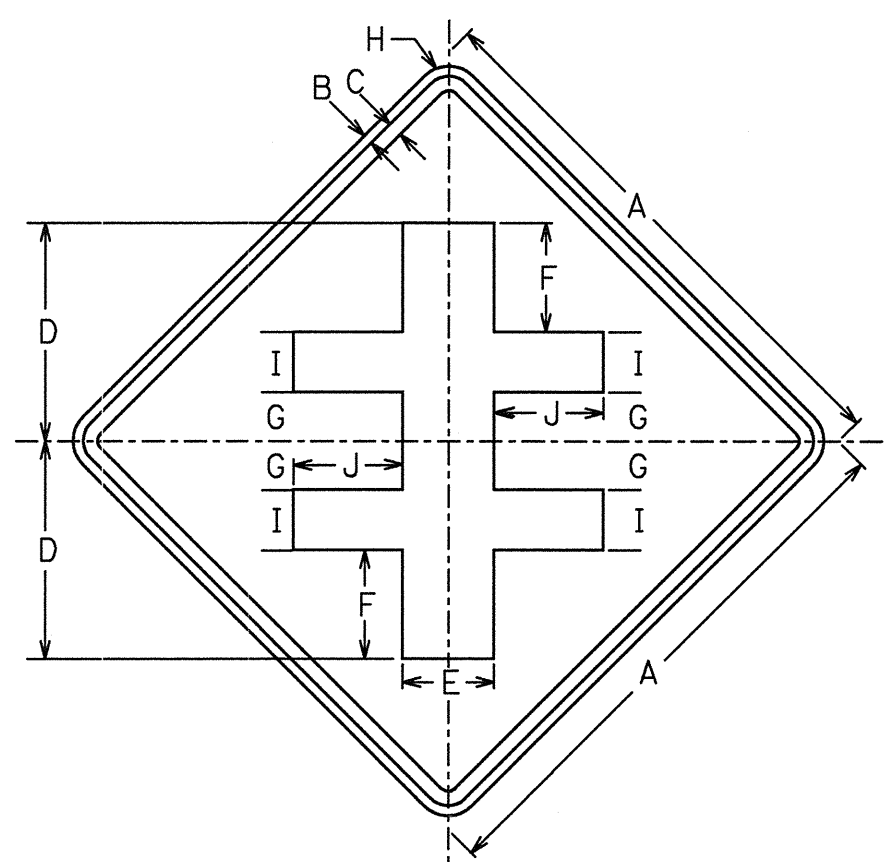
W552-4

SIGN	DIMENSIONS						(INCHES)			
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1/2	3/4	12 1/2	5	6	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



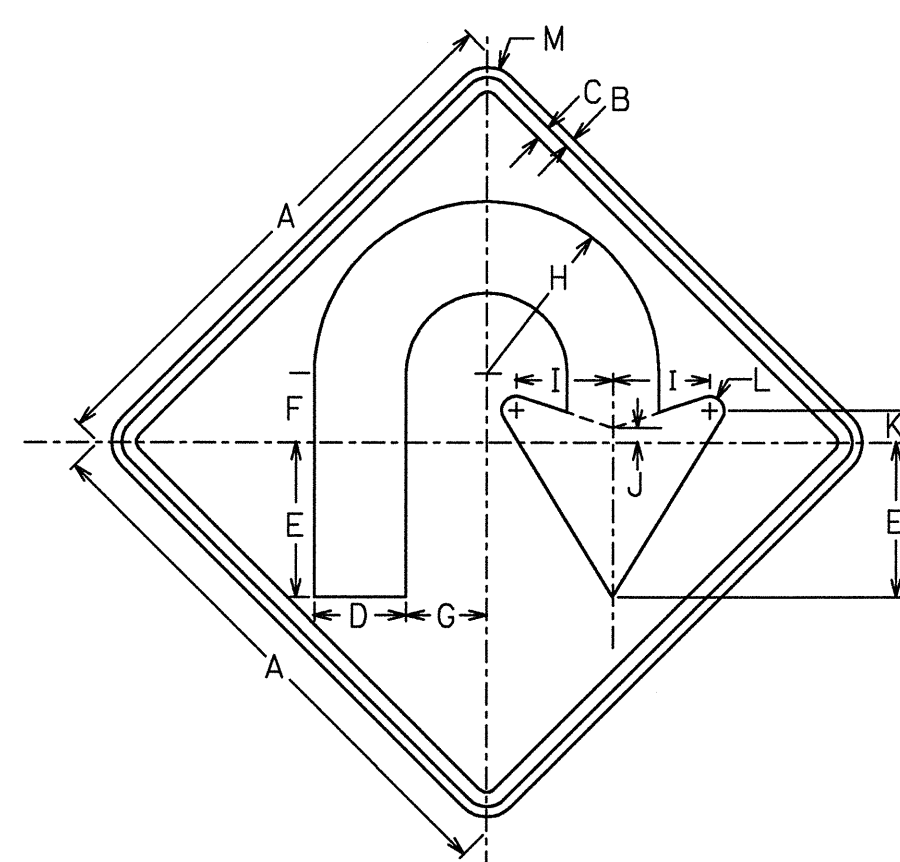
W552-5

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1 1/2	3/4	12 1/2	5	5	4 1/4	1 7/8	3 1/4	8
EXPWY	36	5/8	7/8	15	6	6	5	2 1/4	4	10
FWY	48	7/8	1 1/4	20	8	8	6 3/4	3	5 1/4	12



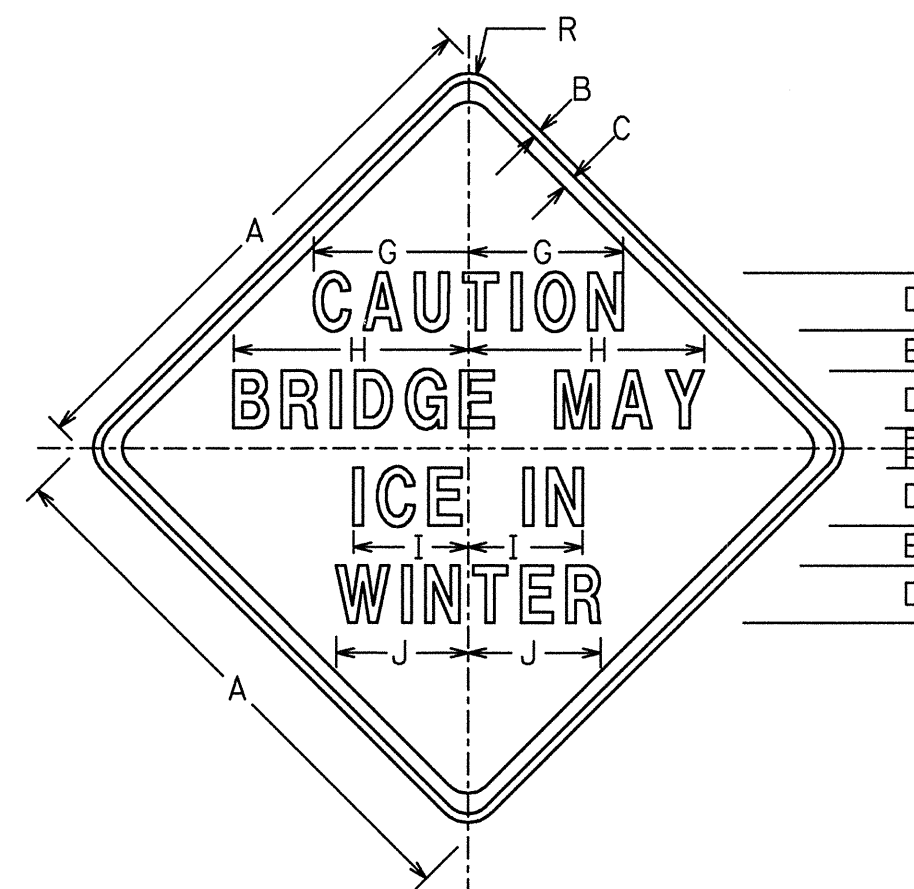
W552-6

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	I	J
STD & MIN	30	1 1/2	3/4	12 1/2	5	5	3 1/4	1 7/8	3 1/4	6
EXPWY	36	5/8	7/8	15	6	7	4	2 1/4	4	7
FWY	48	7/8	1 1/4	20	8	9 1/2	5 1/4	3	5 1/4	9 1/2



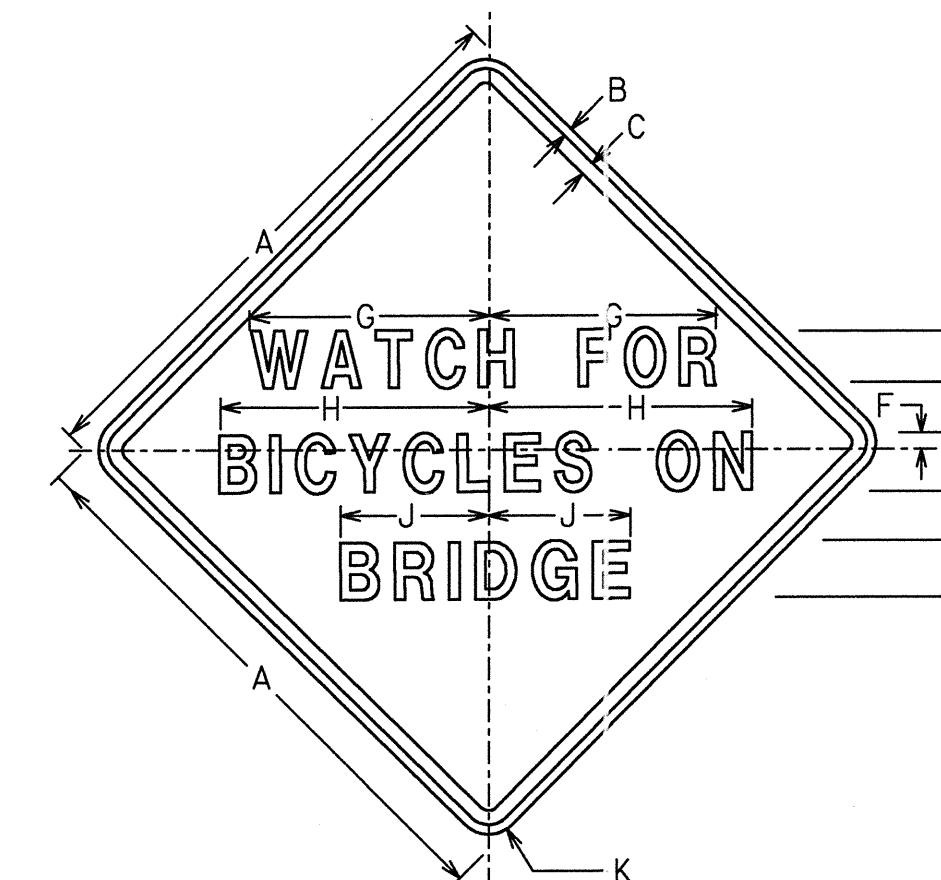
W551-1

SIGN	DIMENSIONS (INCHES)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
STD MIN	30	1/2	3/4	5	8 1/2	3 3/4	4 3/8	9 3/8	3 3/4	1 5/8	3/4	1 7/8	
EXPWY	36	5/8	7/8	6	10	4 1/2	5 1/4	11 1/4	6 7/8	1 5/8	2 3/16	5/8	2 1/4
FWY	48	7/8	1 1/4	8	13 1/2	6	7	15	8 7/8	1 1/4	2 3/4	1 1/4	3



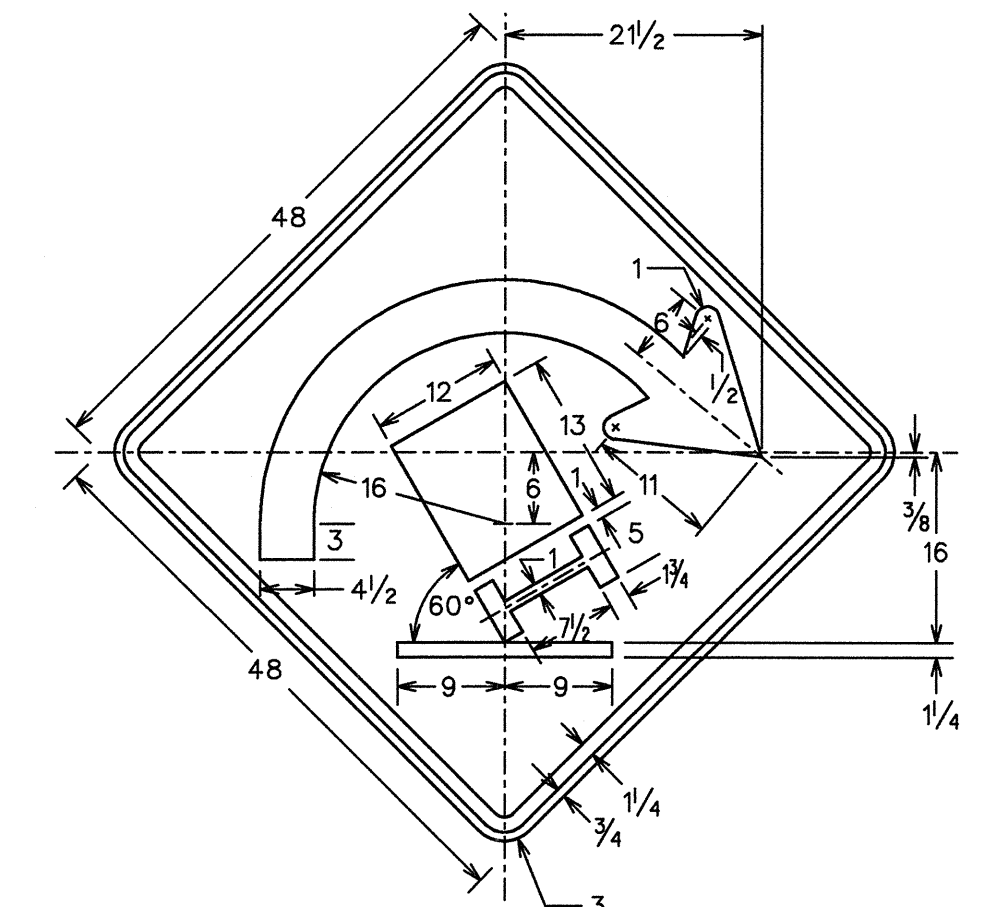
W560-1

SIGN	DIMENSIONS (INCHES)										
	A	B	C	D	E	F	G	H	I	J	R
MIN & STD	30	1 1/2	3/4	3D	2 3/16	1 3/32	8	12 1/2	6	7	1 1/2
EXPWY	36	5/8	7/8	4D	2 5/8	1 5/16	11	16 1/2	8	9	2 1/2
FWY	48	3/4	1 1/4	5D	3 1/2	1 3/4	13 1/2	20 1/2	10	11 1/2	3



W560-2

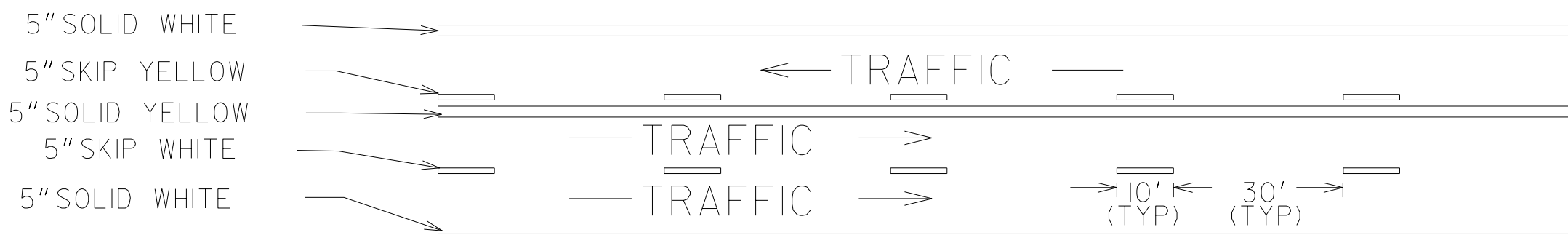
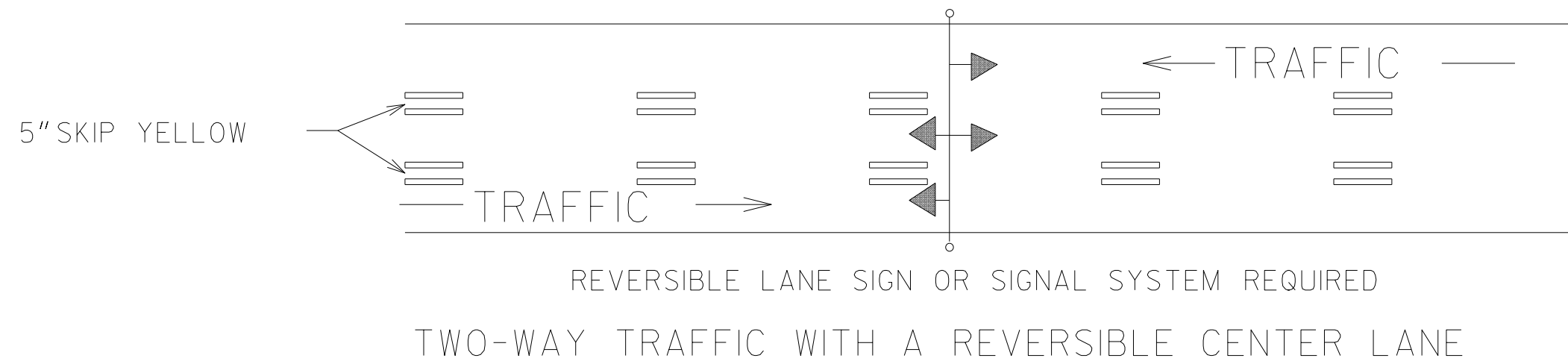
SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MIN & STD	30	1/2	3/4	3C	1 1/2	1 3/32	9/12	1 1/12	6	1 1/4
EXPWY	36	5/8	7/8	4C	3 1/4	2	13	15	7 1/2	2 1/2



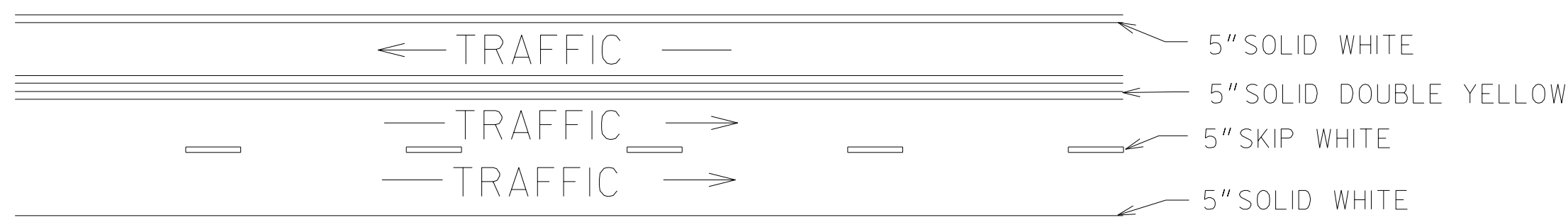
W560-3

SIGNS SHALL HAVE YELLOW REFLECTORIZED BACKGROUNDS WITH BLACK LEGENDS, BORDERS, AND SYMBOLS.

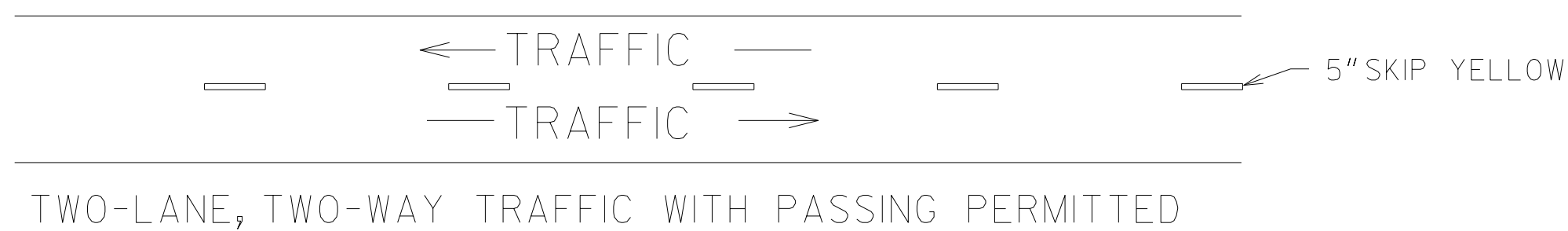
DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION
		OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF
		WARNING SIGNS
		NO SCALE
		JANUARY 2000



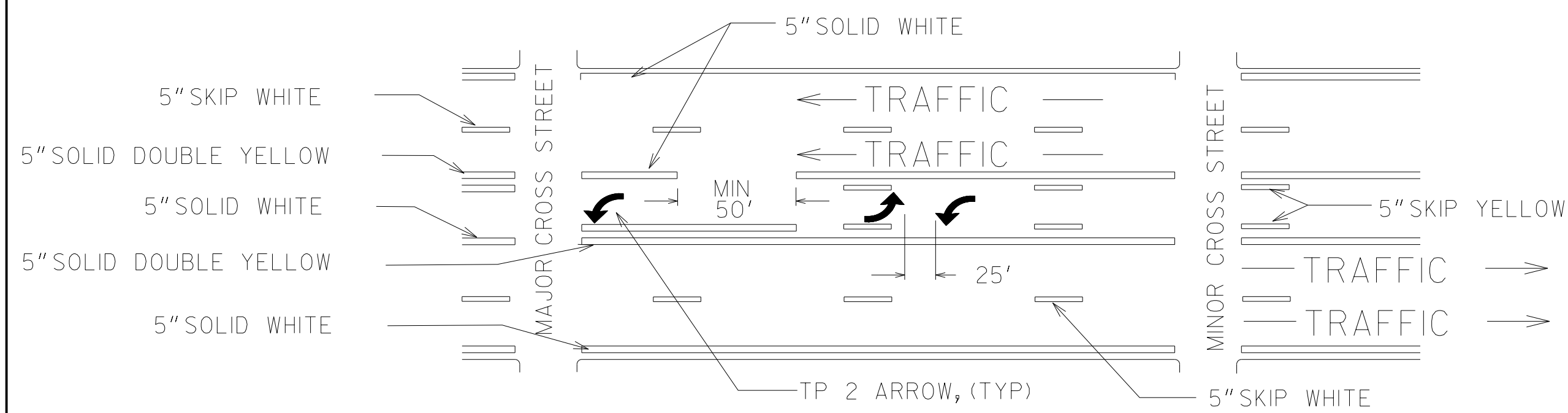
TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE PERMITTED TO PASS



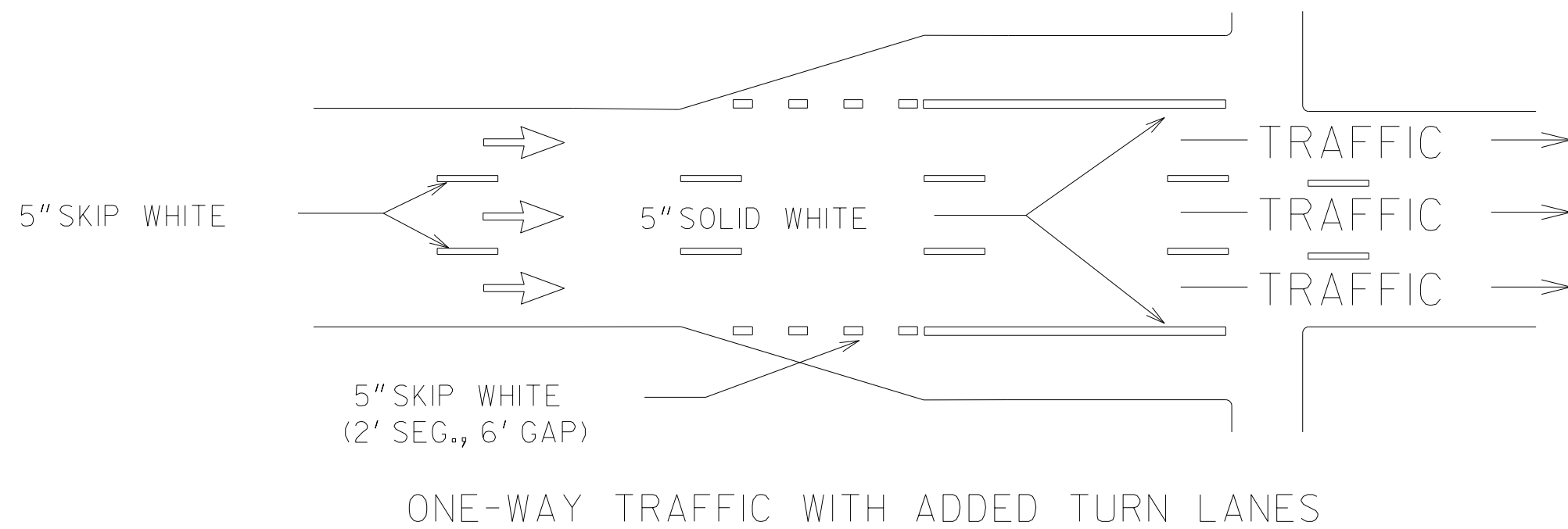
TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE NOT PERMITTED TO PASS



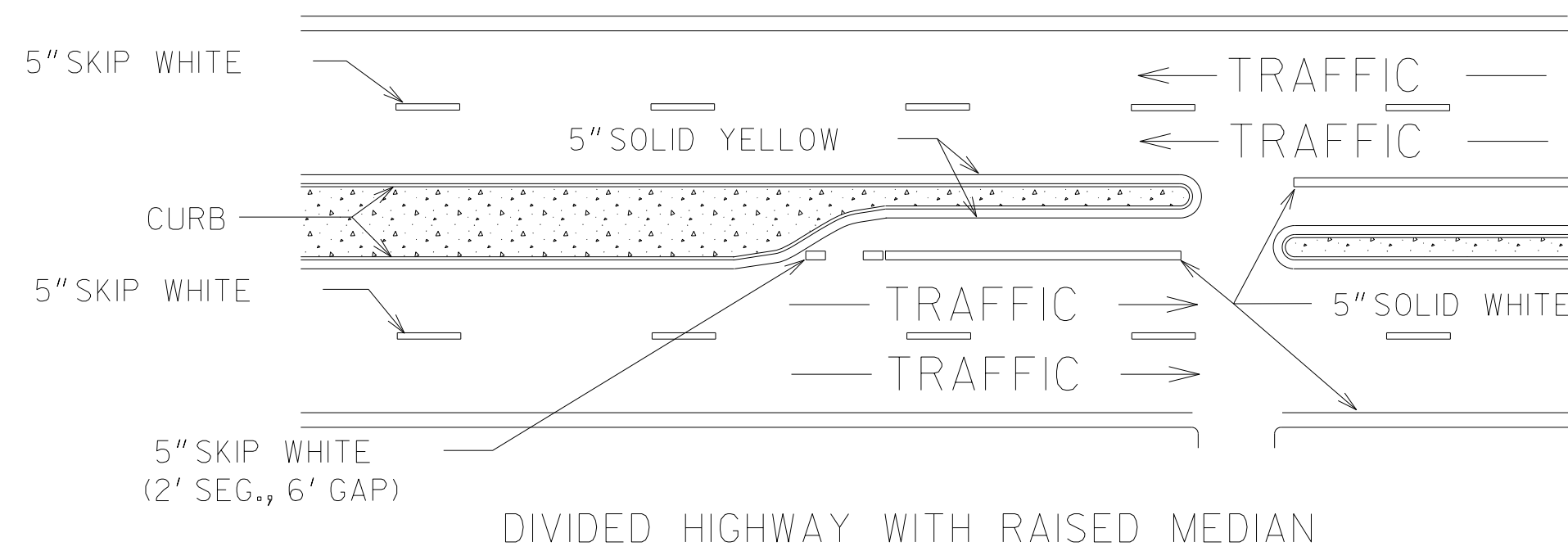
TWO-LANE, TWO-WAY TRAFFIC WITH PASSING PERMITTED



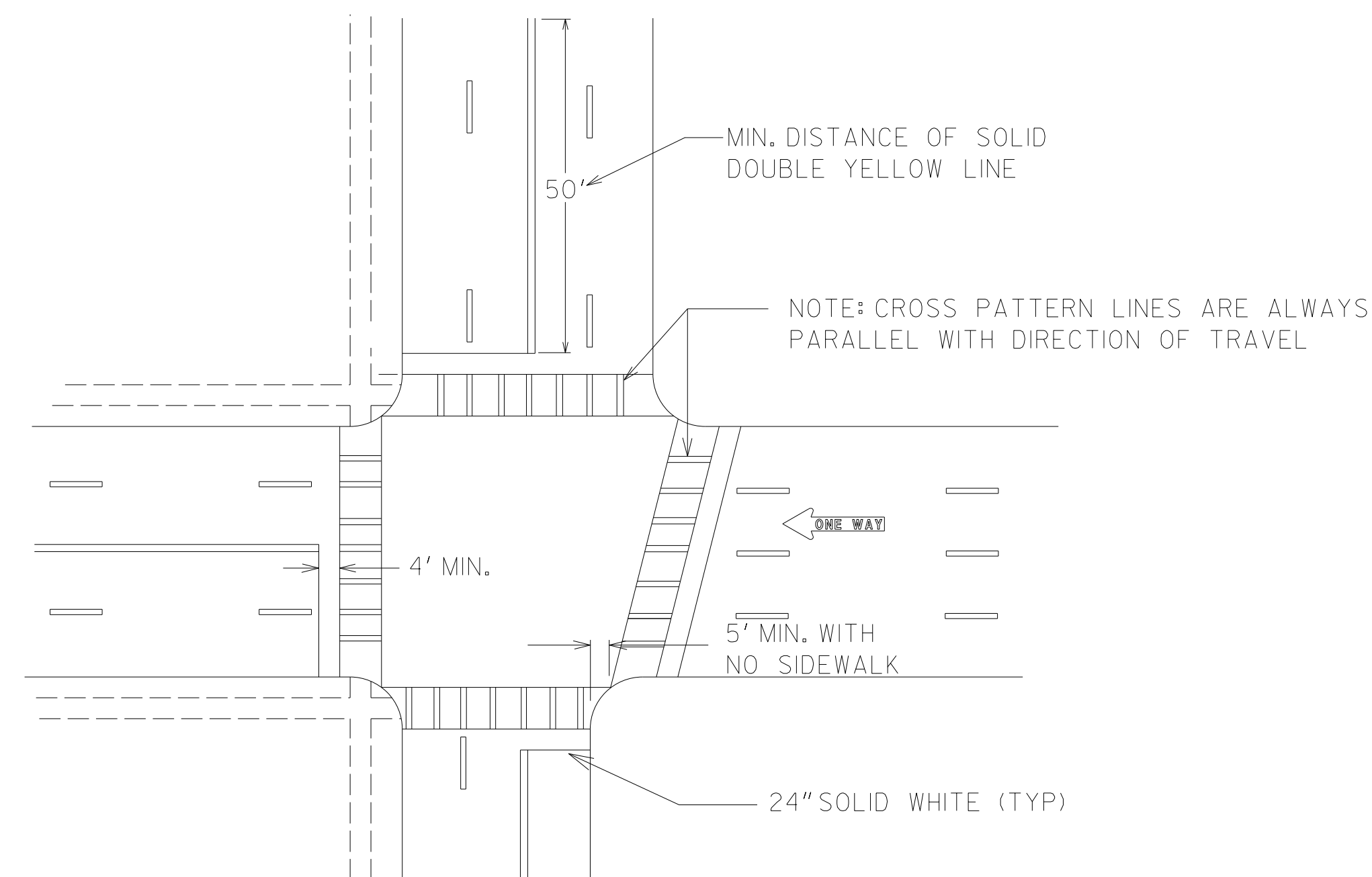
MULTI-LANE, TWO-WAY TRAFFIC WITH SINGLE LANE, TWO-WAY LEFT TURN CHANNELIZATION



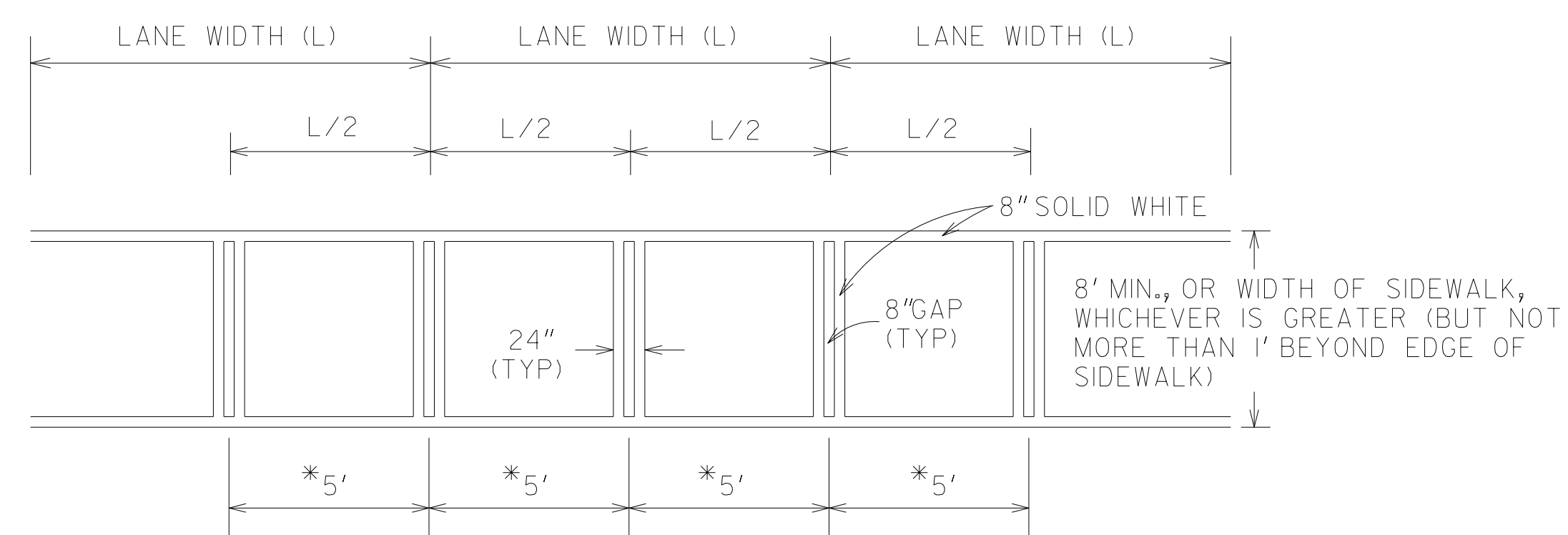
ONE-WAY TRAFFIC WITH ADDED TURN LANES



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

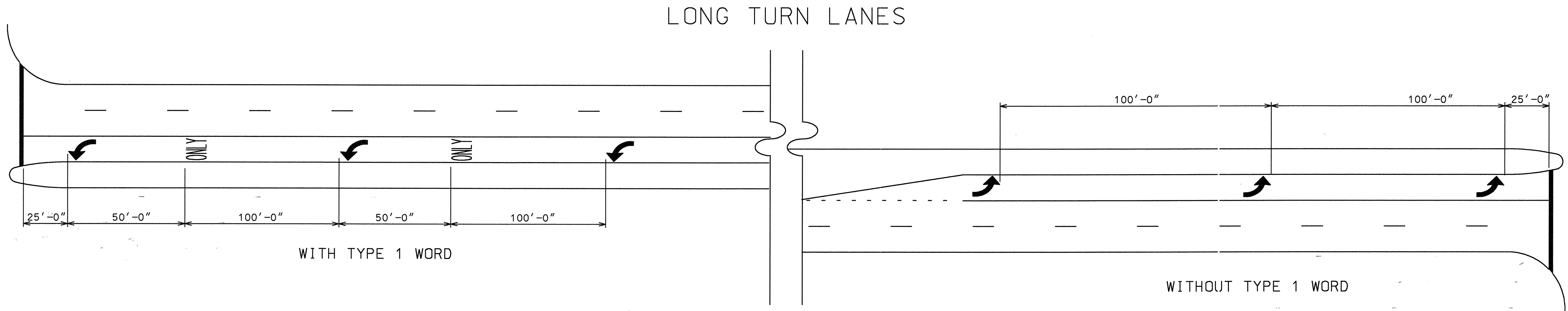
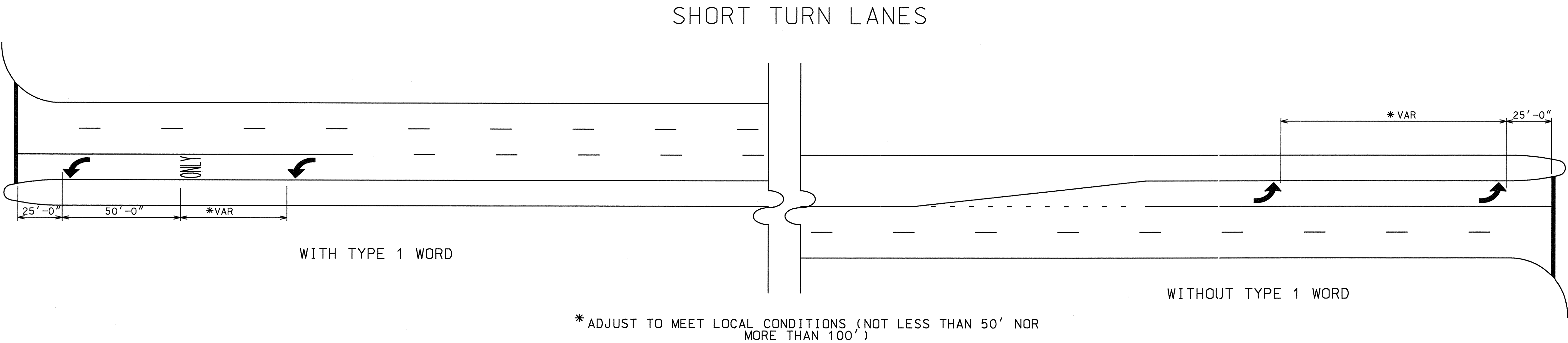
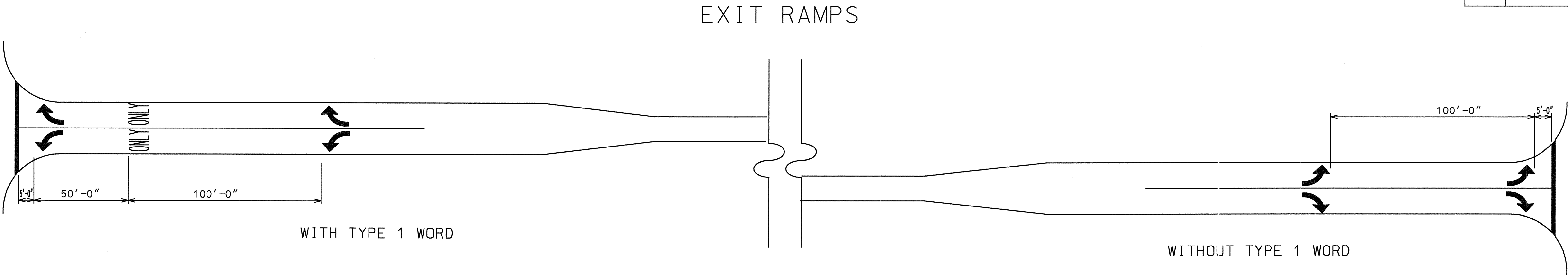
CROSSWALK DETAIL

GENERAL NOTES:

1. SPACING BETWEEN 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-IIB.

		9-15-16	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		ADDED GENERAL NOTE 3	REVISION	CONSTRUCTION DETAILS PAVEMENT MARKING PLACEMENT NON-LIMITED ACCESS ROADWAY	
				NO SCALE	JANUARY 2000
		CDR	BY	DESIGNED _____ DRAWN _____ TRACED _____ CHECKED _____	NUMBER T-IIA

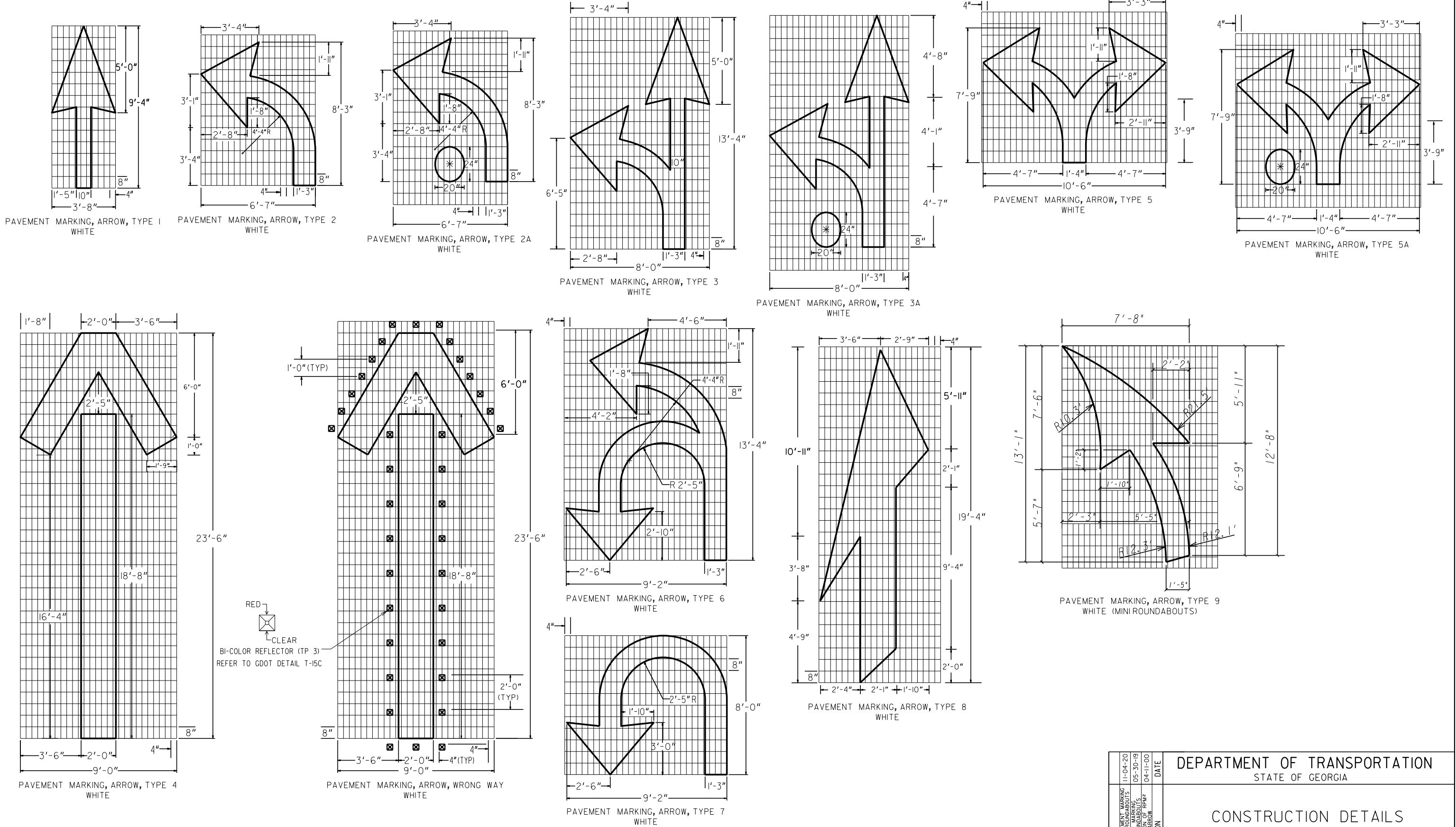
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



GENERAL NOTES:

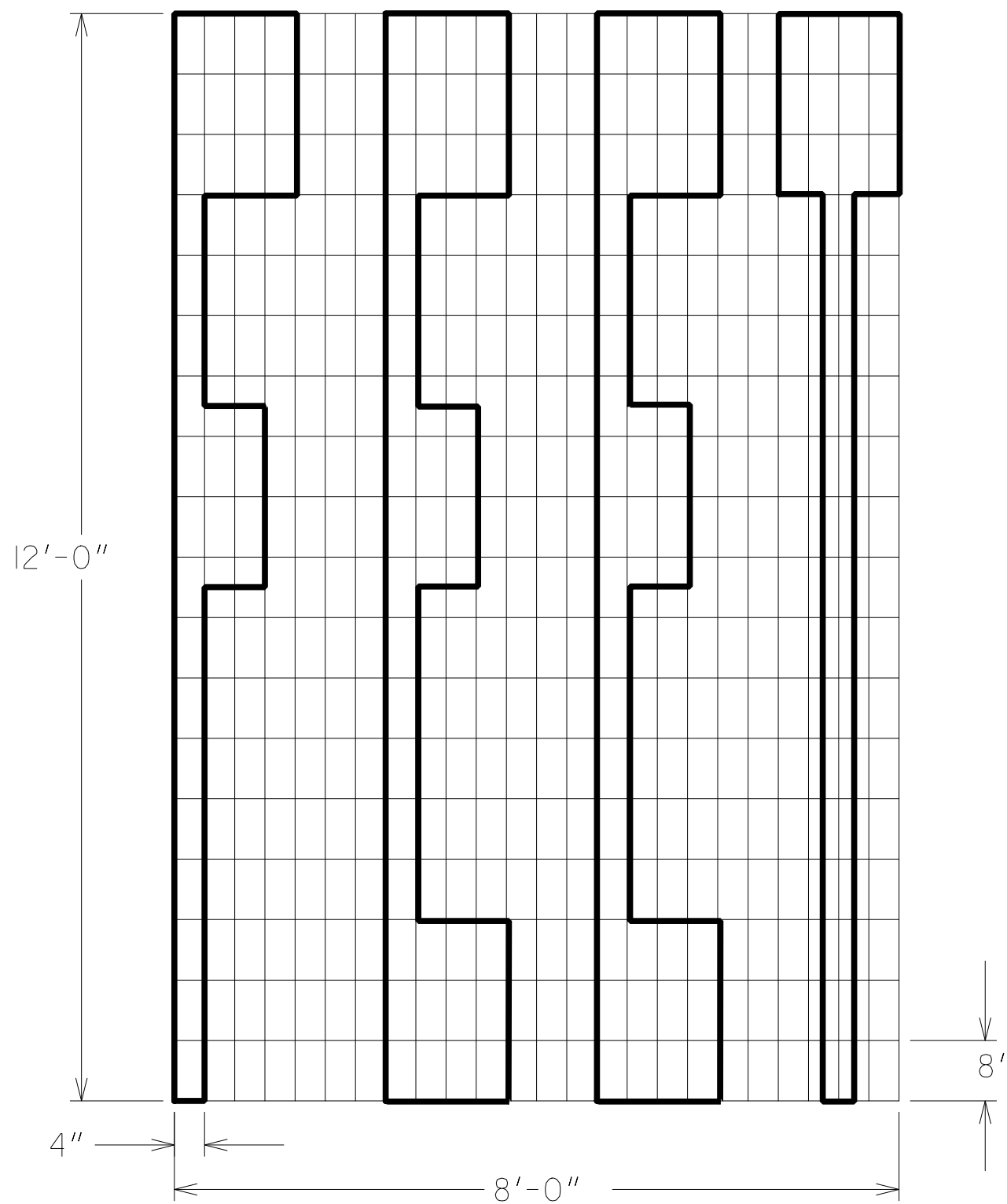
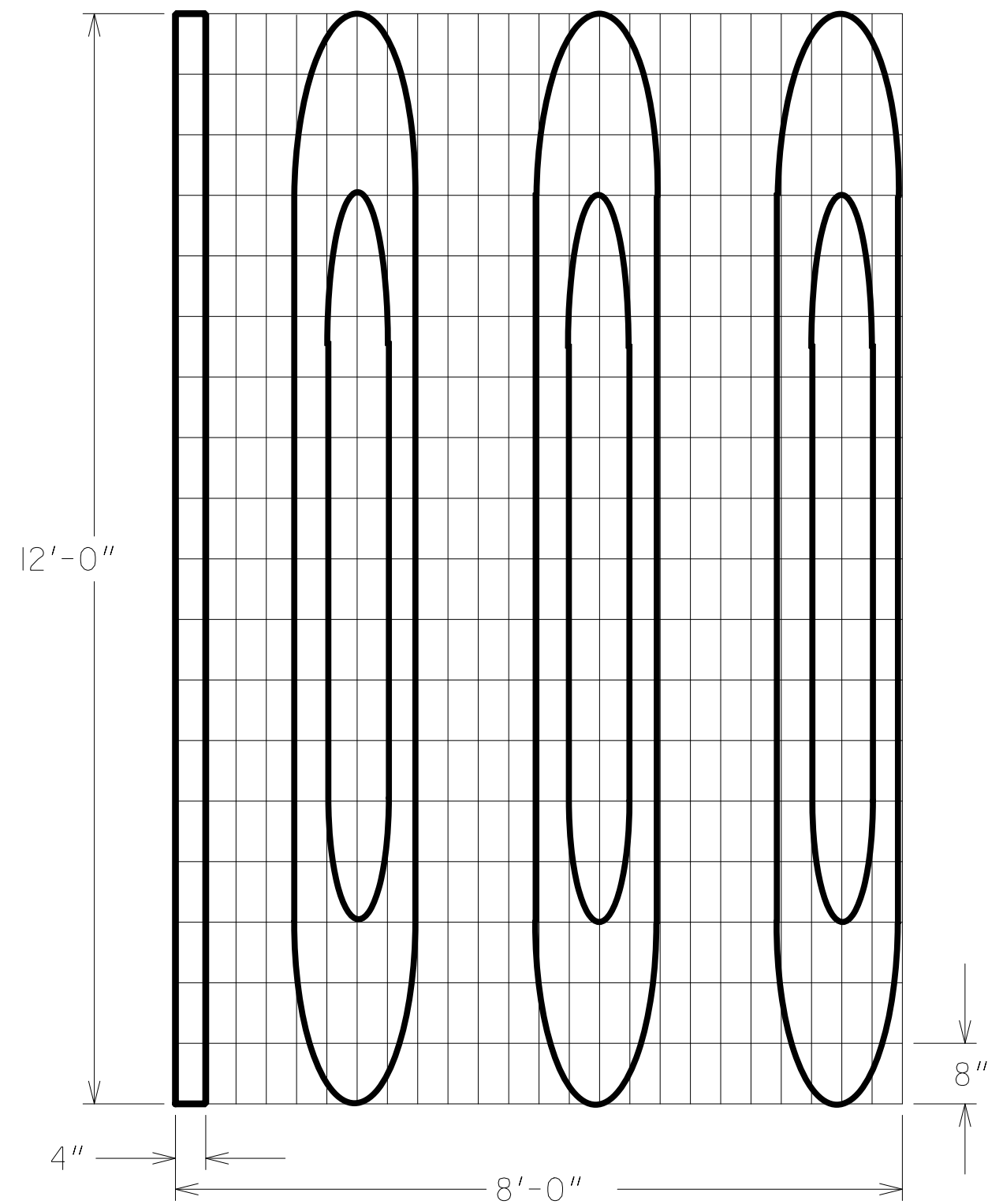
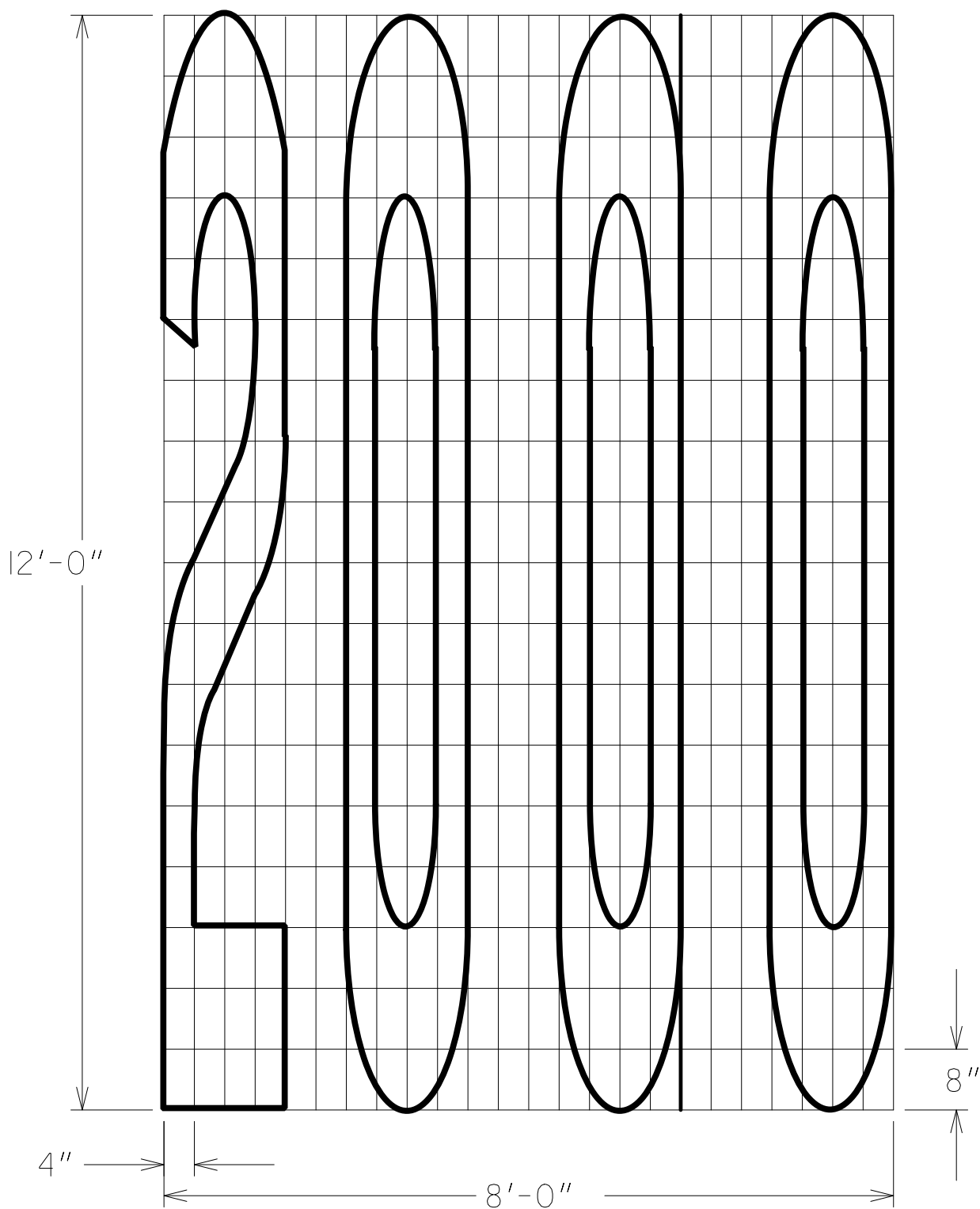
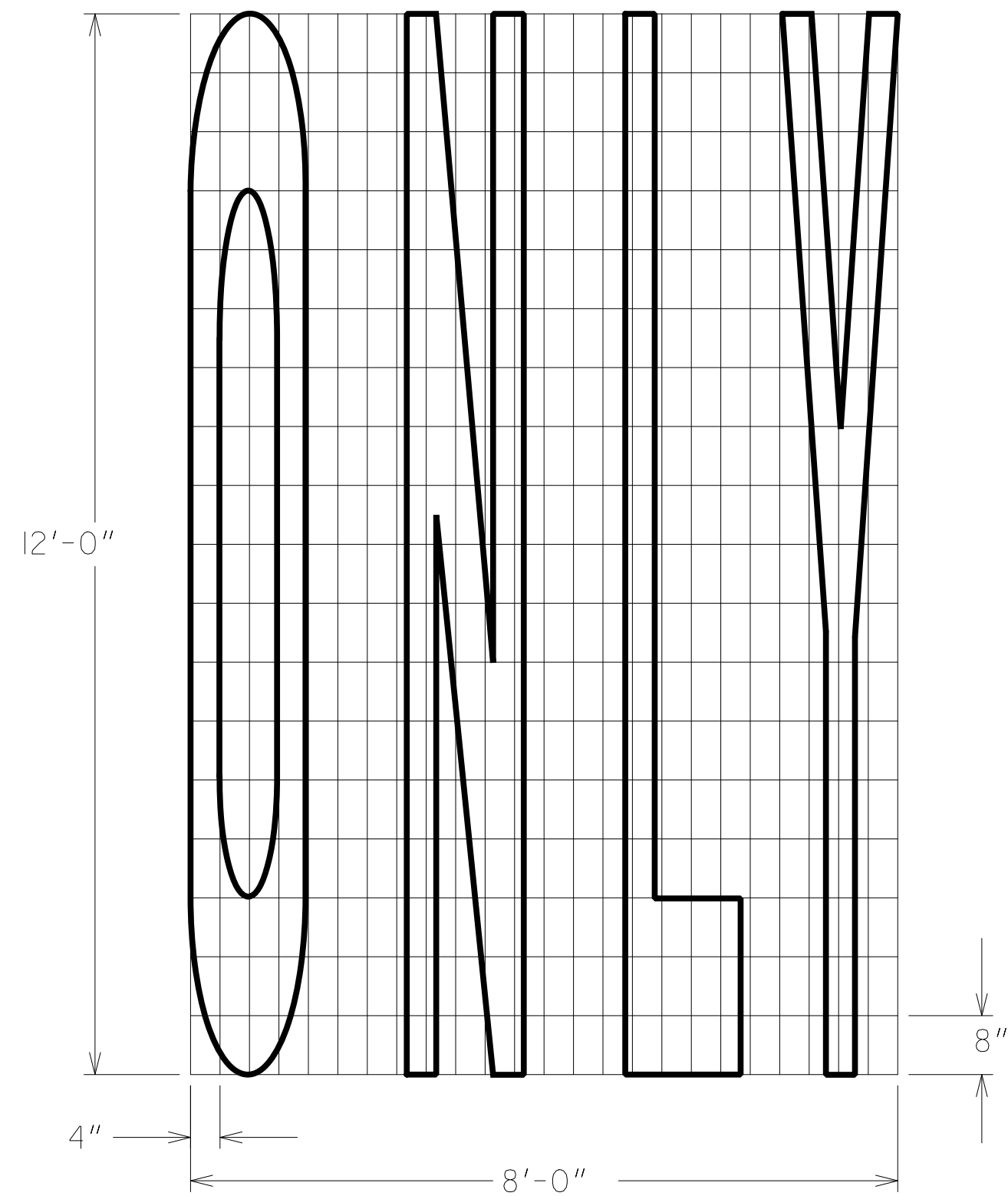
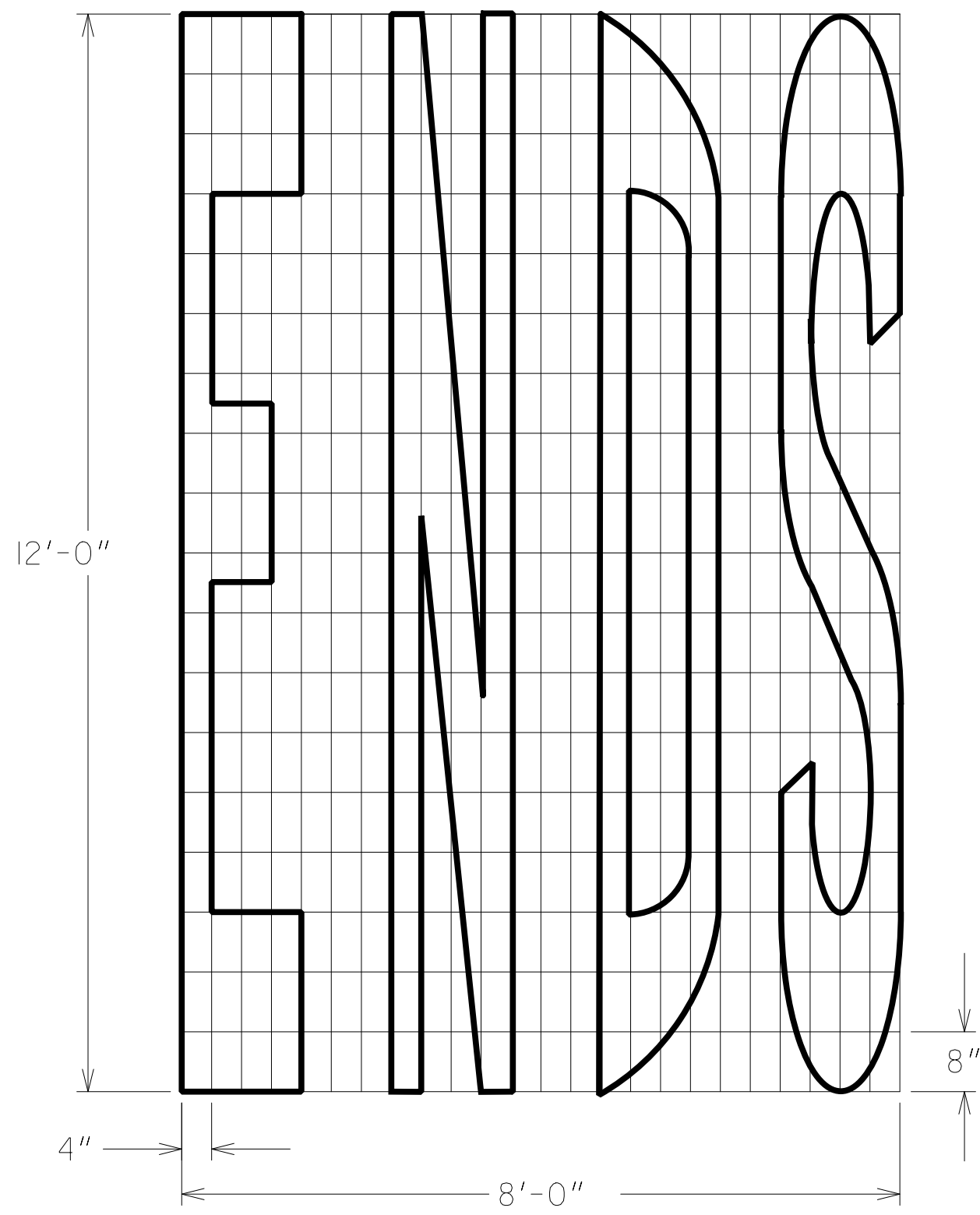
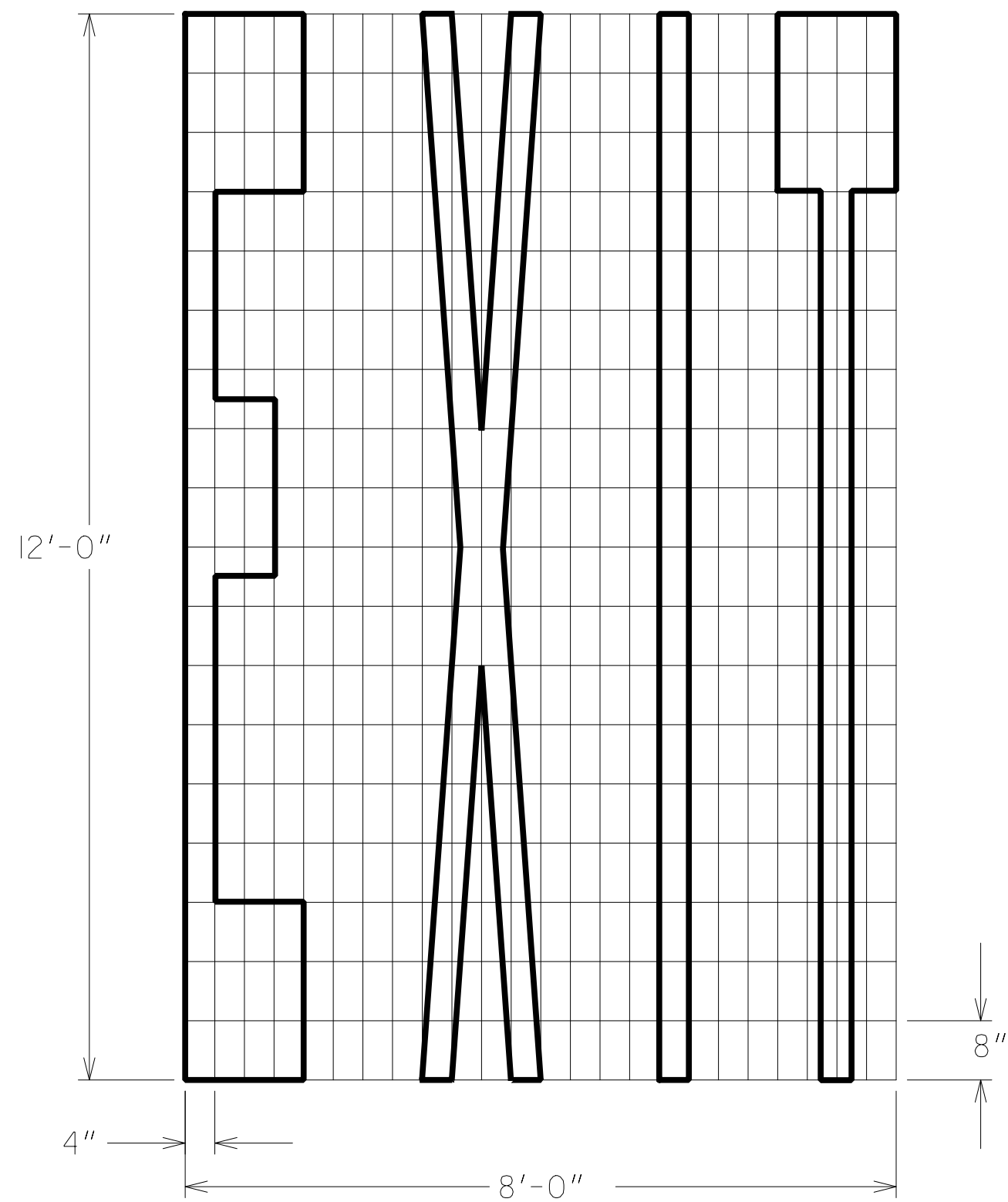
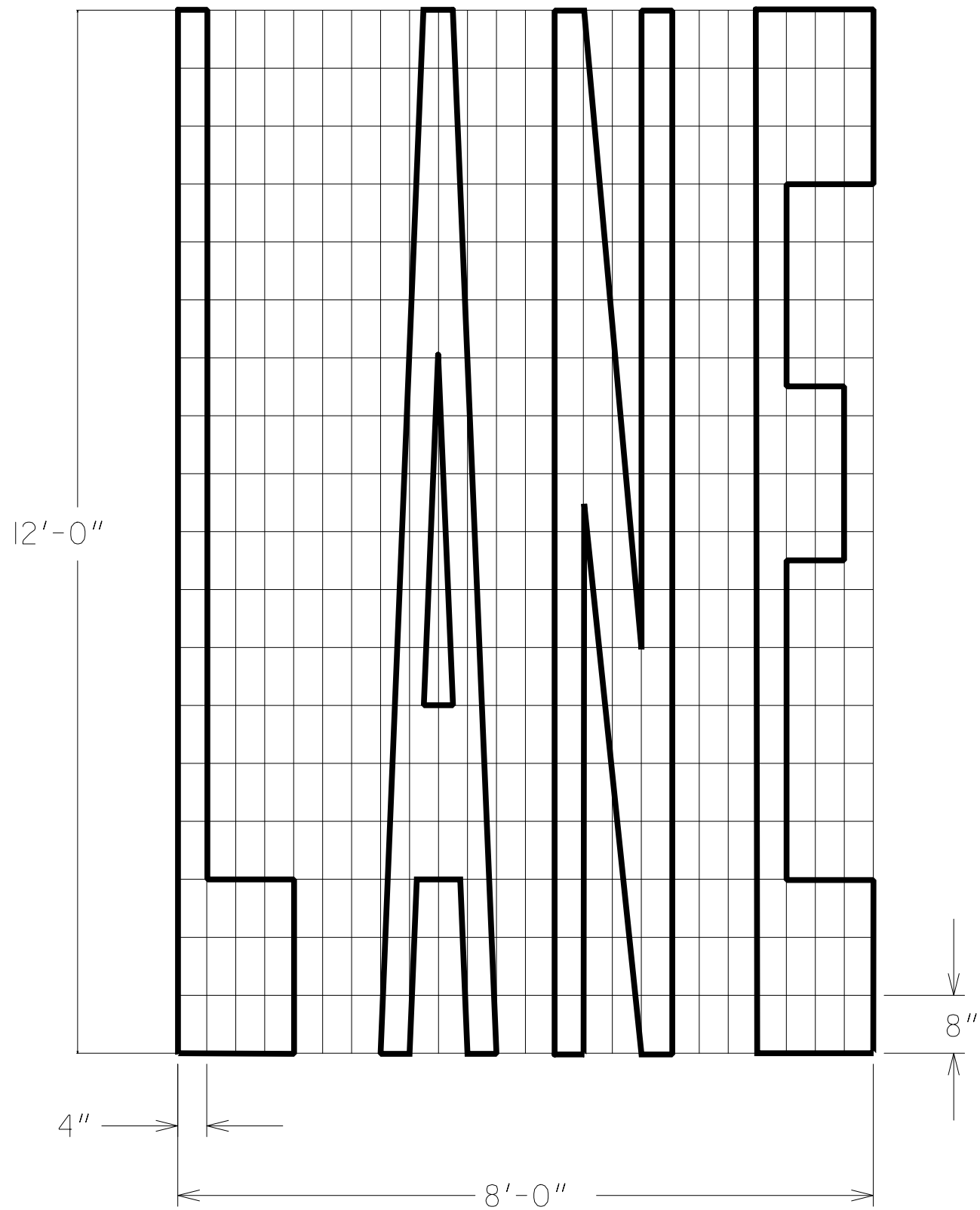
- SPACING OF TYPE 2 ARROW IS REPRESENTATIVE OF SPACING FOR TYPE 1, TYPE 3, TYPE 4, & TYPE 5 ARROWS.
- ALL TURNING LANES SHALL HAVE A MINIMUM OF 2 ARROWS.
- GROUND MOUNTED OR OVERHEAD SIGNING SHALL BE SUPPLEMENTED BY TYPE 1 WORD.

DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF PAVEMENT MARKING ARROW LOCATION
NO SCALE		JANUARY 2000



NOTES
1. PAVEMENT MARKING ARROWS WITH A DOT (2A, 3A, 5A) SHALL BE USED ALONG MULTI-LANE ROUNDABOUT APPROACHES ALONG THE INSIDE LANE ONLY

ADDED P 8 PAVEMENT MARKING ADDED PAVEMENT MARKING ARROWS FOR ROUNDABOUTS CHANGED DOT 11 to RPMz IN MARKING ARROW	11-04-20	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
	05-30-19			
	04-11-00		CONSTRUCTION DETAILS PAVEMENT MARKINGS - ARROWS	
ACP	DESIGNED	BY	NO SCALE	
ACP	DRAWN		APRIL 2000	
ACP	TRACED		NUMBER	
BY	CHECKED		T-12B	



NOTE:
EACH OF THE PAVEMENT WORDS ON THIS DETAIL DEPICTS WORDS BASED ON A DESIGN SPEED OF 50-70 MPH.
(A= 12 FT DISTANCE).

FOR DESIGN SPEEDS OF 35-45 MPH (A=8 FT DISTANCE),
USE PAVEMENT WORDS WITH THE FOLLOWING
DIMENSIONS: VERTICAL 8'-0" AND HORIZONTAL 5'-4".

SEE CONSTRUCTION DETAIL T-13C FOR SPEED LIMIT
DISTANCE TABLE.

9-15-16				DEPARTMENT OF TRANSPORTATION			
				STATE OF GEORGIA			
ADD PAVMT WORD *ONLY*				CONSTRUCTION DETAILS			
REM (AREA SFI PER WORD				DETAILS OF			
ADD WORD DIM NOTE A-8 FT				PAVEMENT MARKING WORDS			
RENUMBER TO SH 2 OF 3							
REVISION				NO SCALE SHEET 2 OF 3 JANUARY 2000			
DATE							
CDR				BY			
				DESIGNED _____			
				DRAWN _____			
				TRACED _____			
				CHECKED _____			
				NUMBER T-13B			

FEET

FEET

FEET

FEET

1000

2000

1000

2000

ENDS

ENDS

ENDS

ONLY

ONLY

LANE

LANE

LANE

EXIT

EXIT

B (TYP)

A (TYP)

B (TYP)

A (TYP)

B (TYP)

A (TYP)

B (TYP)

A (TYP)

B (TYP)

A (TYP)

TYPE 7

TYPE 10

TYPE 11

TYPE 12

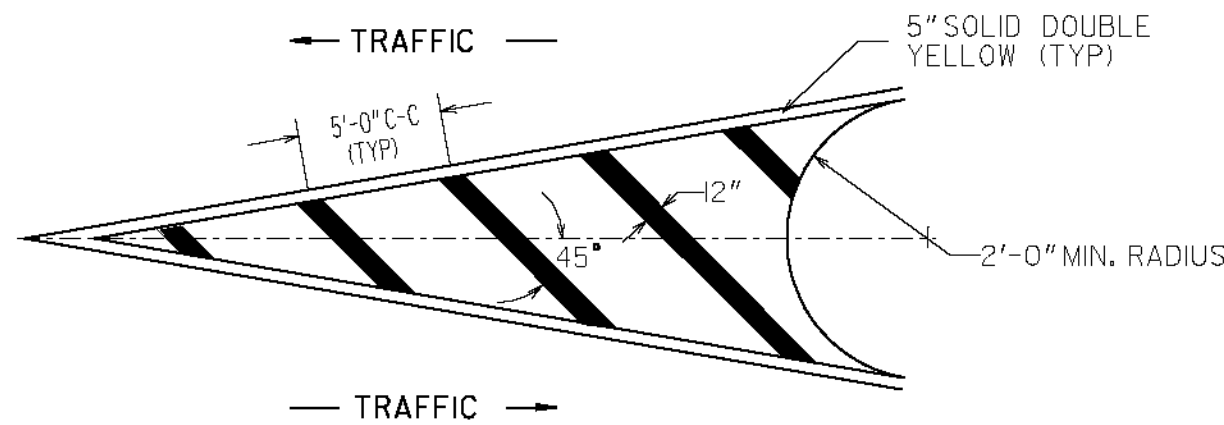
TYPE 13

SPEED LIMIT	DISTANCE (FEET)	
	A	B
35	8	80
45	8	80
55+	12	120

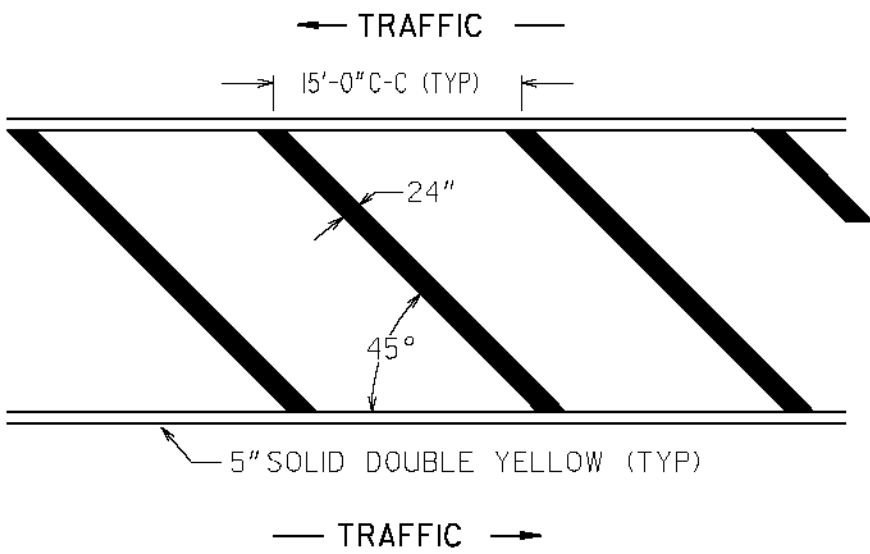
NOTE:
REFER TO GDOT DETAIL T-13B, MUTCD
OR STANDARD HIGHWAY SIGNS GUIDE
FOR ADDITIONAL GUIDANCE

ADD TYPE 7 PWT MARKING REV TO DIMENSION TABLE CDR	09-13-19	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
	9-15-16	CONSTRUCTION DETAILS		
		DETAILS OF PAVEMENT MARKING WORDS PLACEMENT		
		NO SCALE SHEET 3 OF 3 JANUARY 2000		
		NUMBER T-13C		
BY	DESIGNED DRAWN TRACED CHECKED			
REVISION	DATE			
REV TO EXIT ONLY 1000 FT				
REV TO EXIT ONLY 2000 FT				
REV DIST/SPEED LMT CHART				
REM (AREA SF) WORD TOTAL				
RENUMBER TO SH 3 OF 3				

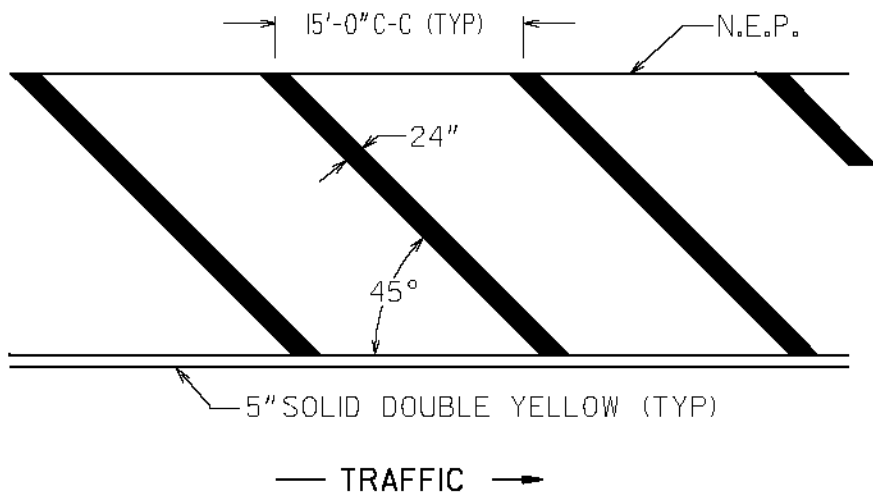
DETAIL "A"(YELLOW)



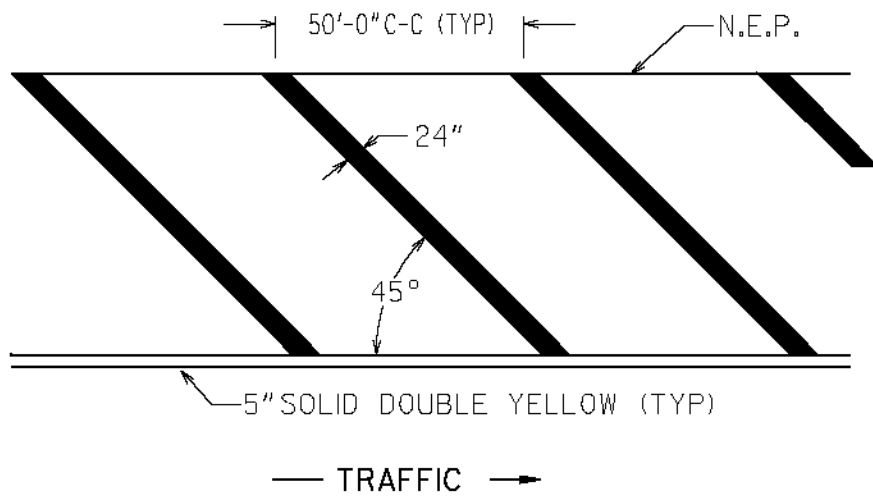
DETAIL "B"(YELLOW)



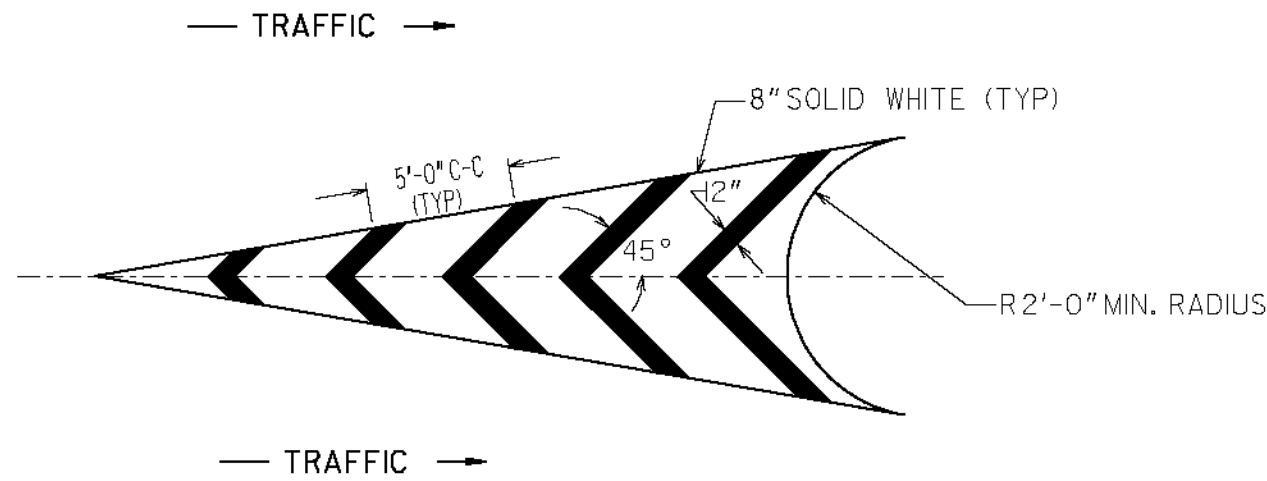
DETAIL "C"(YELLOW)



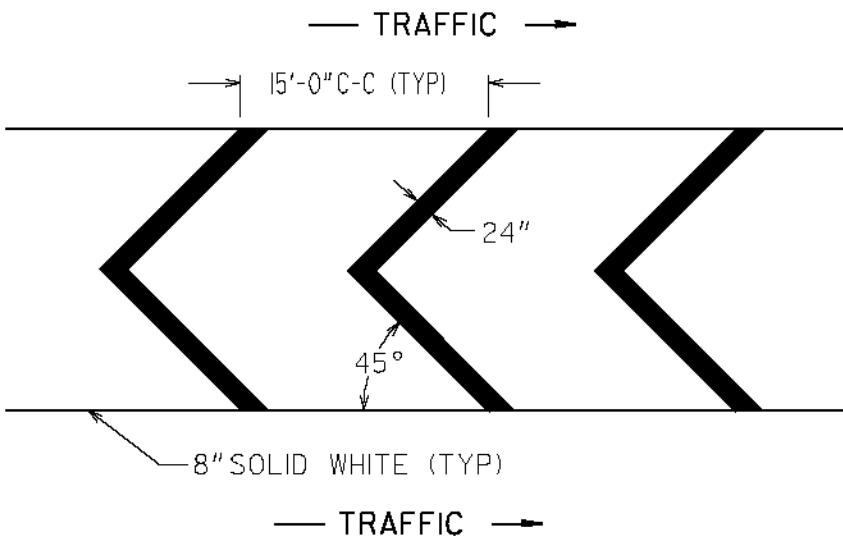
DETAIL "D"(YELLOW)



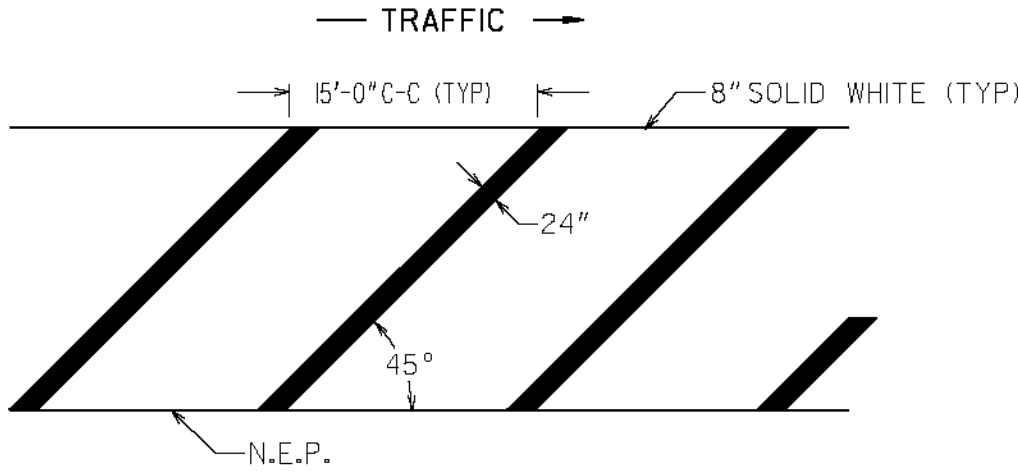
DETAIL "A"(WHITE)



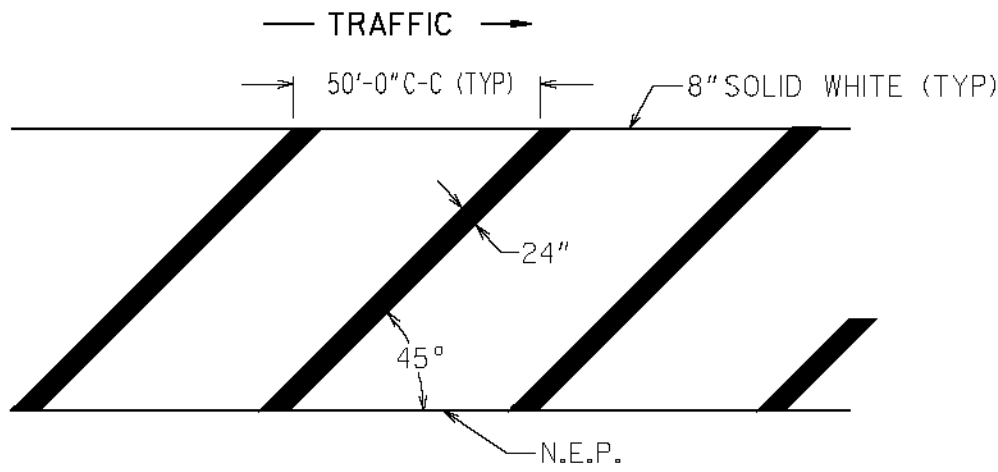
DETAIL "B"(WHITE)



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

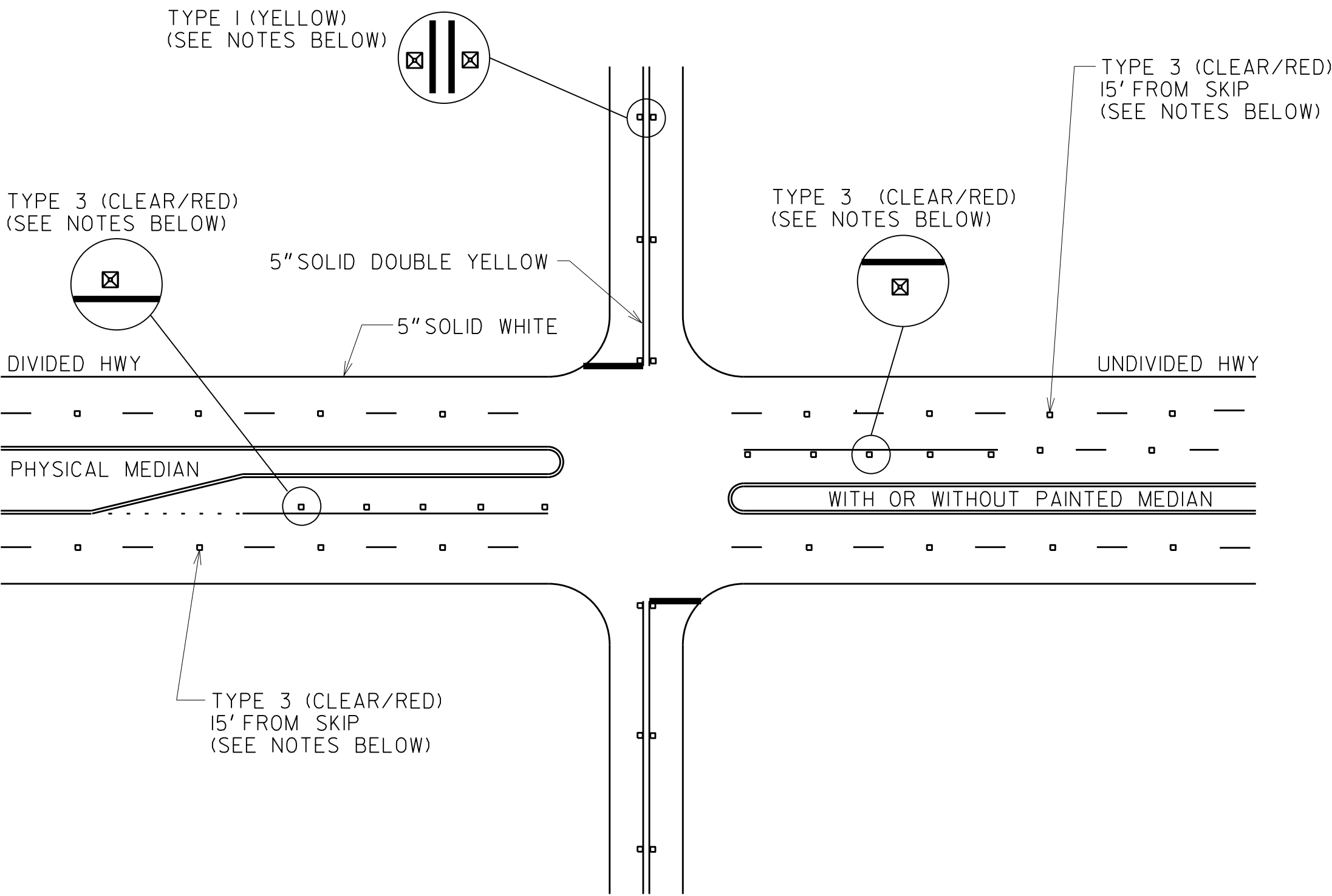
DETAIL OF PAVEMENT MARKING
HATCHING

NUMBER
T-14

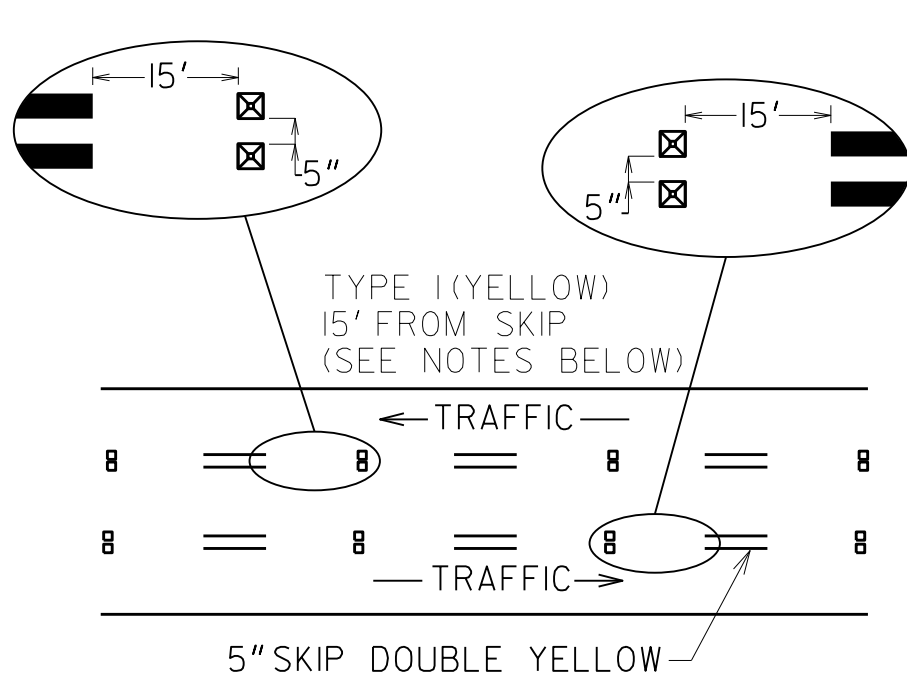
T-14

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

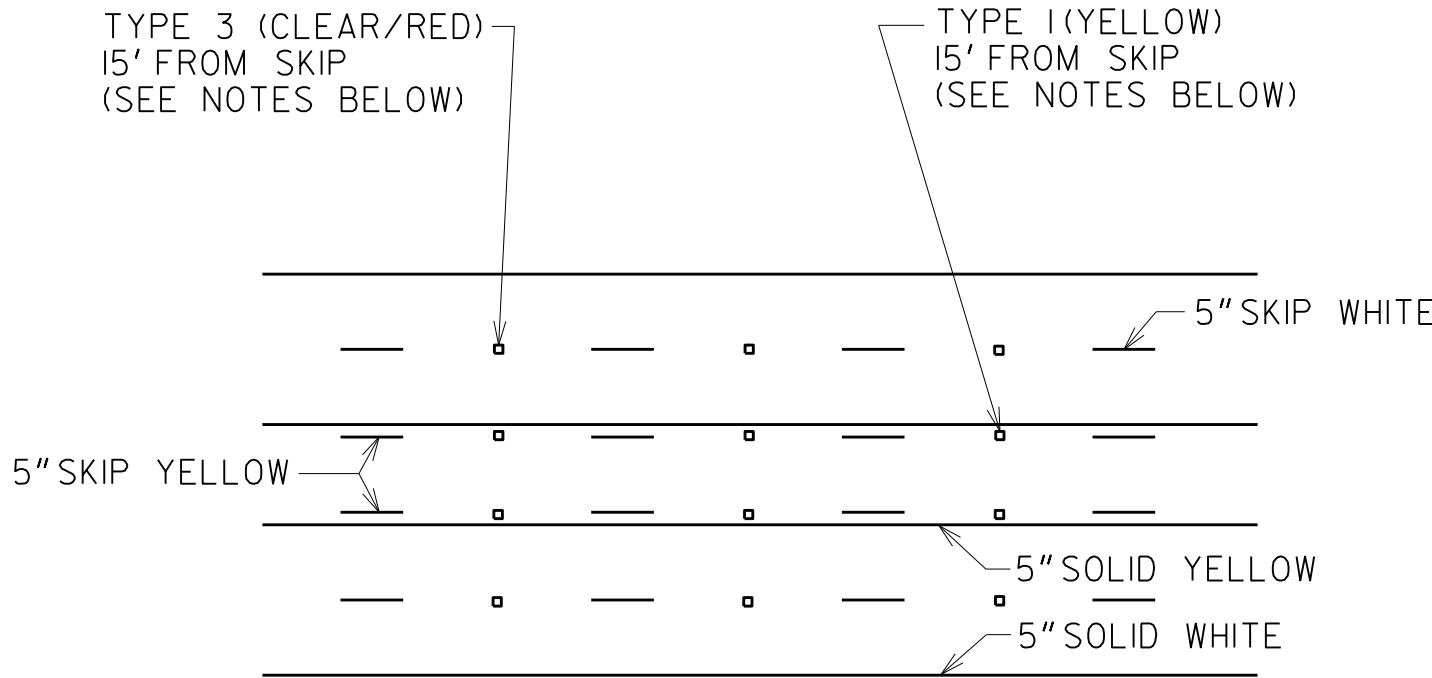
DIVIDED / UNDIVIDED HIGHWAY



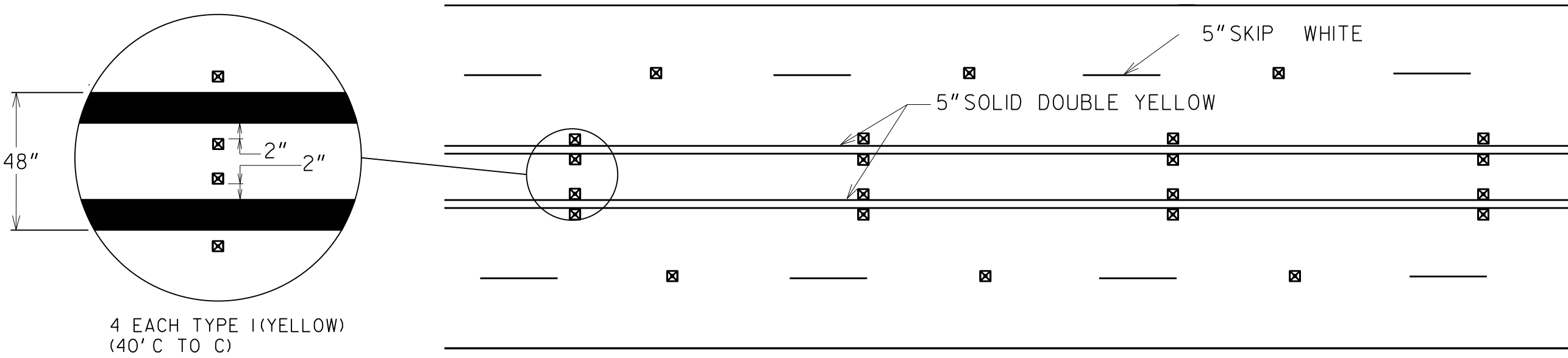
REVERSIBLE LANE



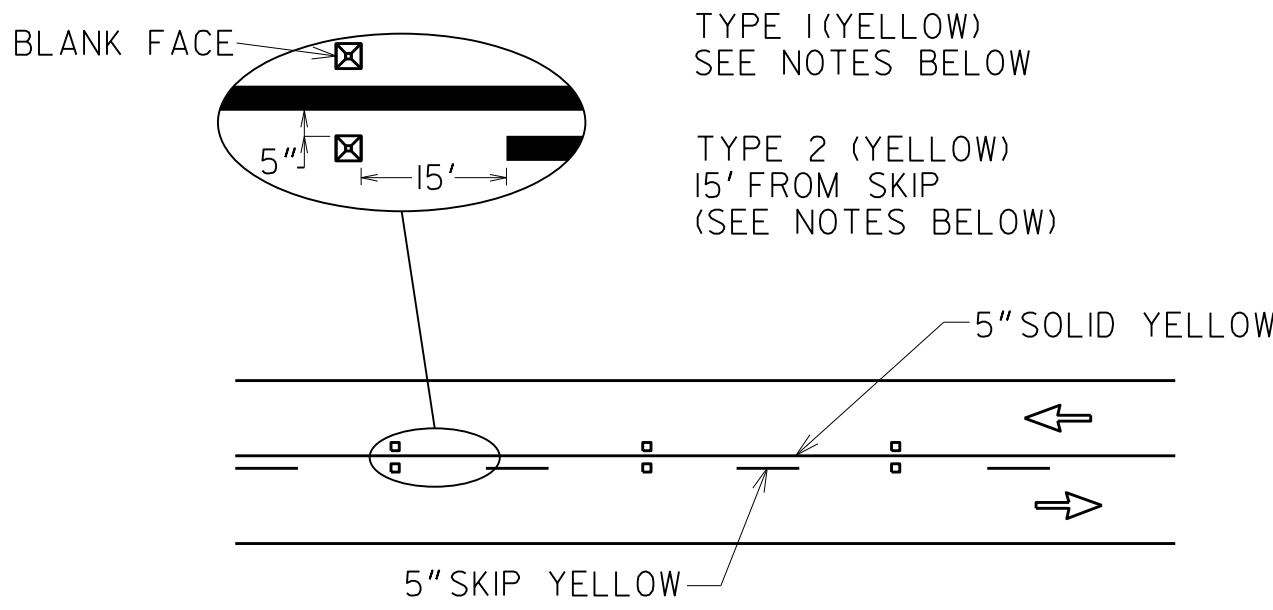
TWO WAY LEFT TURN LANE



4'-0\" STRIPED FLUSH MEDIAN

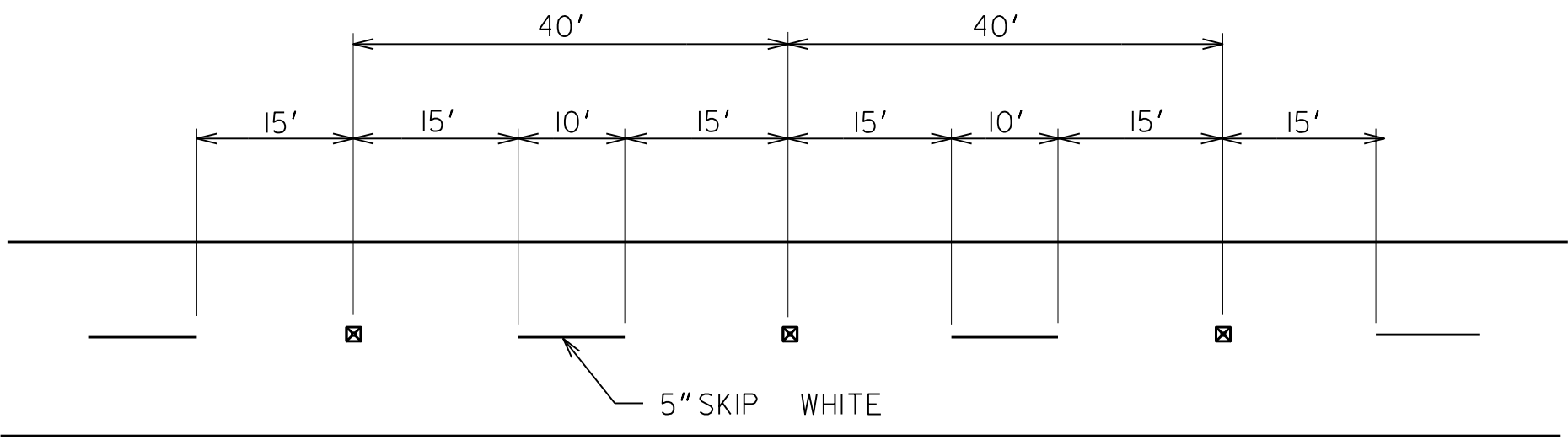


NO PASSING ZONE

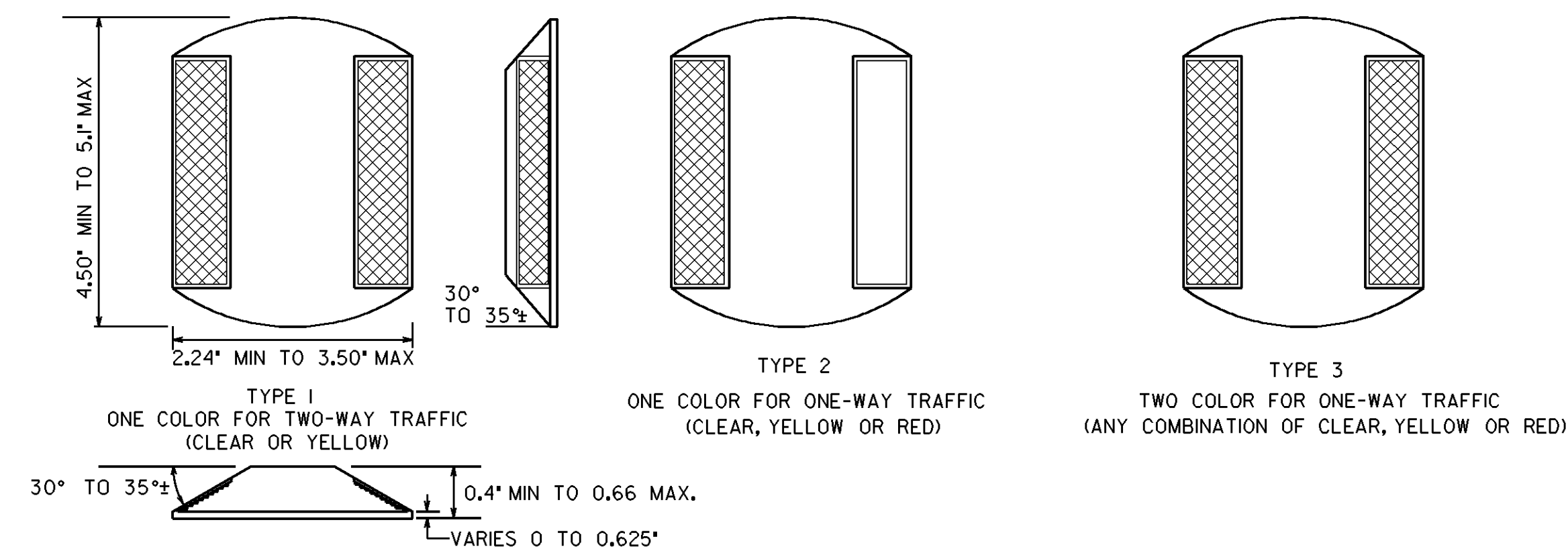


- GENERAL NOTES:
1. RAISED PAVEMENT MARKERS SHALL BE SPACED EVERY 40 FT UNLESS OTHERWISE SPECIFIED.
 2. ON SOLID WHITE TURN BAY LINES, SPACING SHALL BE 20 FT.
 3. RAISED PAVEMENT MARKERS SHALL BE OFFSET 5 INCHES FROM SOLID LANE LINES.
 4. CLEAR FACE OF TYPE 3 RAISED PAVEMENT MARKERS SHALL BE ORIENTED TOWARD ONCOMING TRAFFIC.

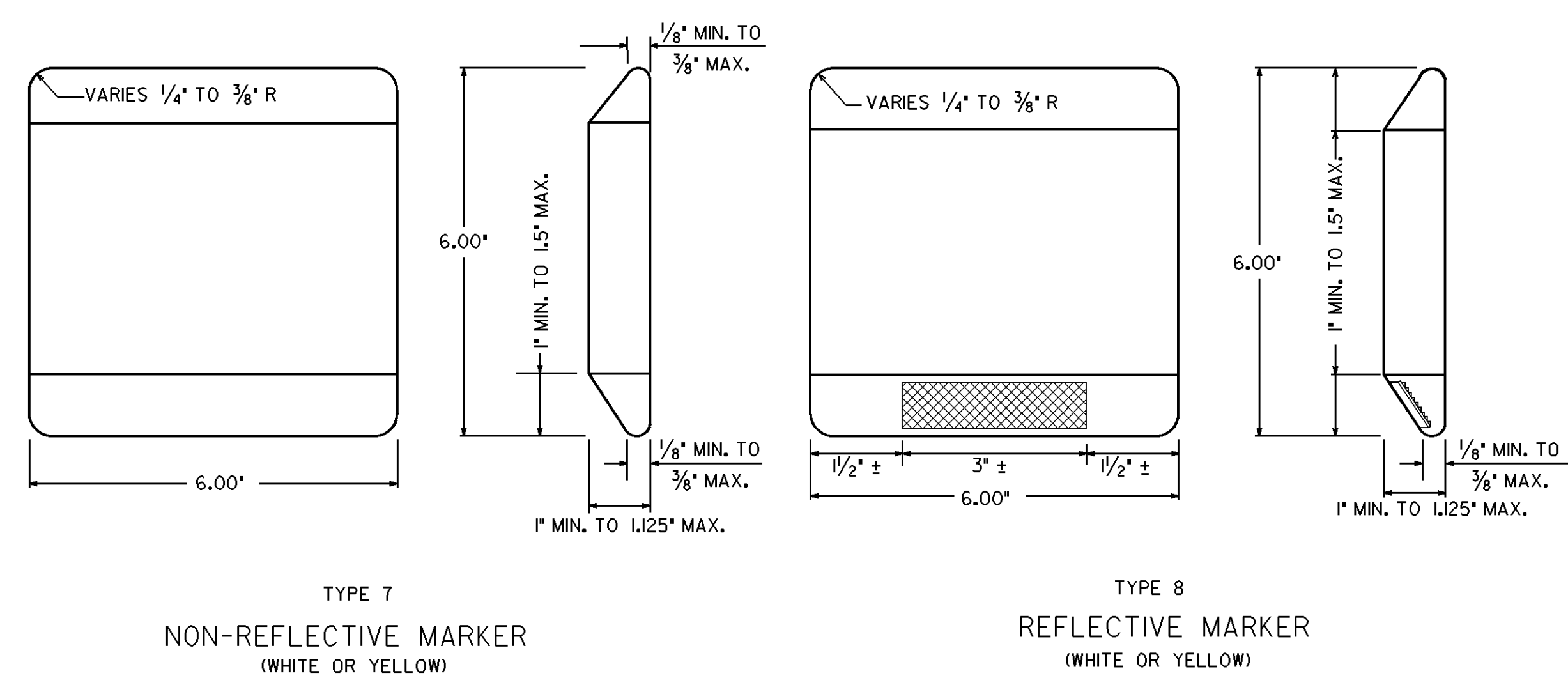
TYPICAL RPM/STRIPE SPACING



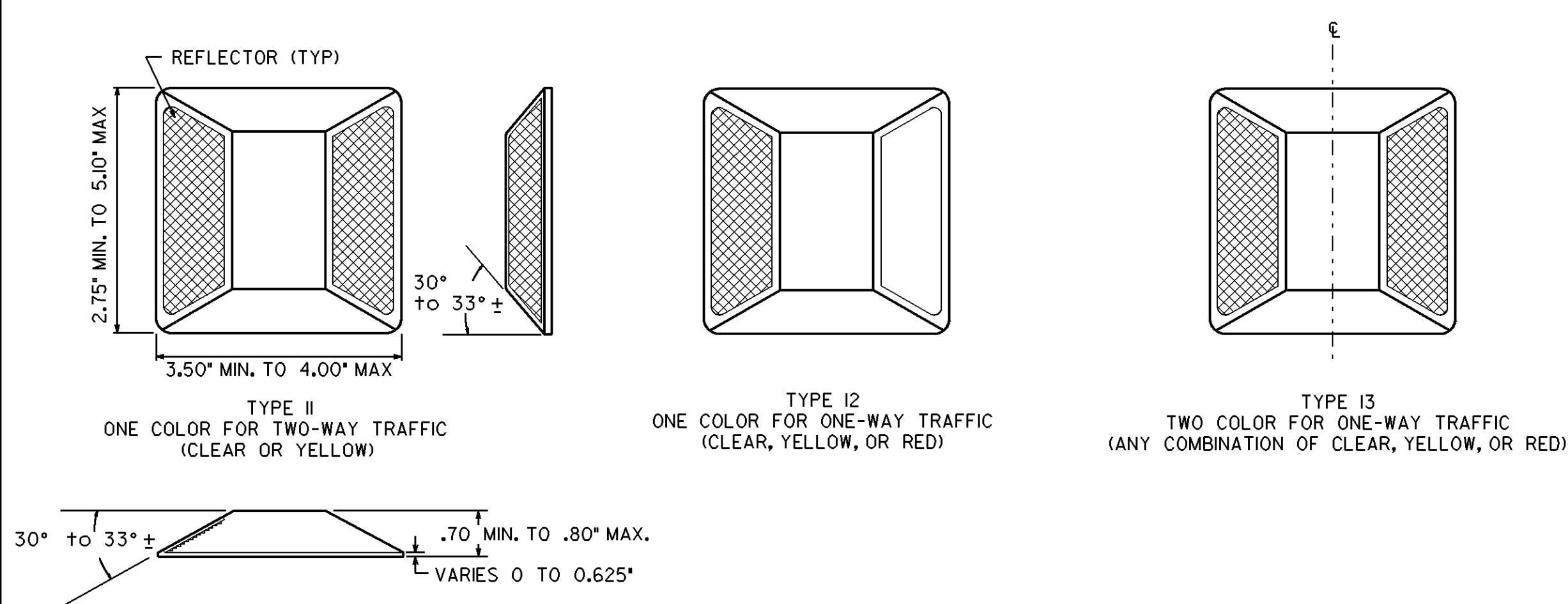
		9-15-2016	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REV. RPM SPACING TO 40'	REVISION	CONSTRUCTION DETAILS RAISED PAVEMENT MARKER LOCATION NON-LIMITED ACCESS ROADWAY	
				NO SCALE	REV. AND REDRAWN, JUNE 2015
		CDR	BY	DESIGNED _____ DRAWN _____ TRACED _____ CHECKED _____	NUMBER T-15A



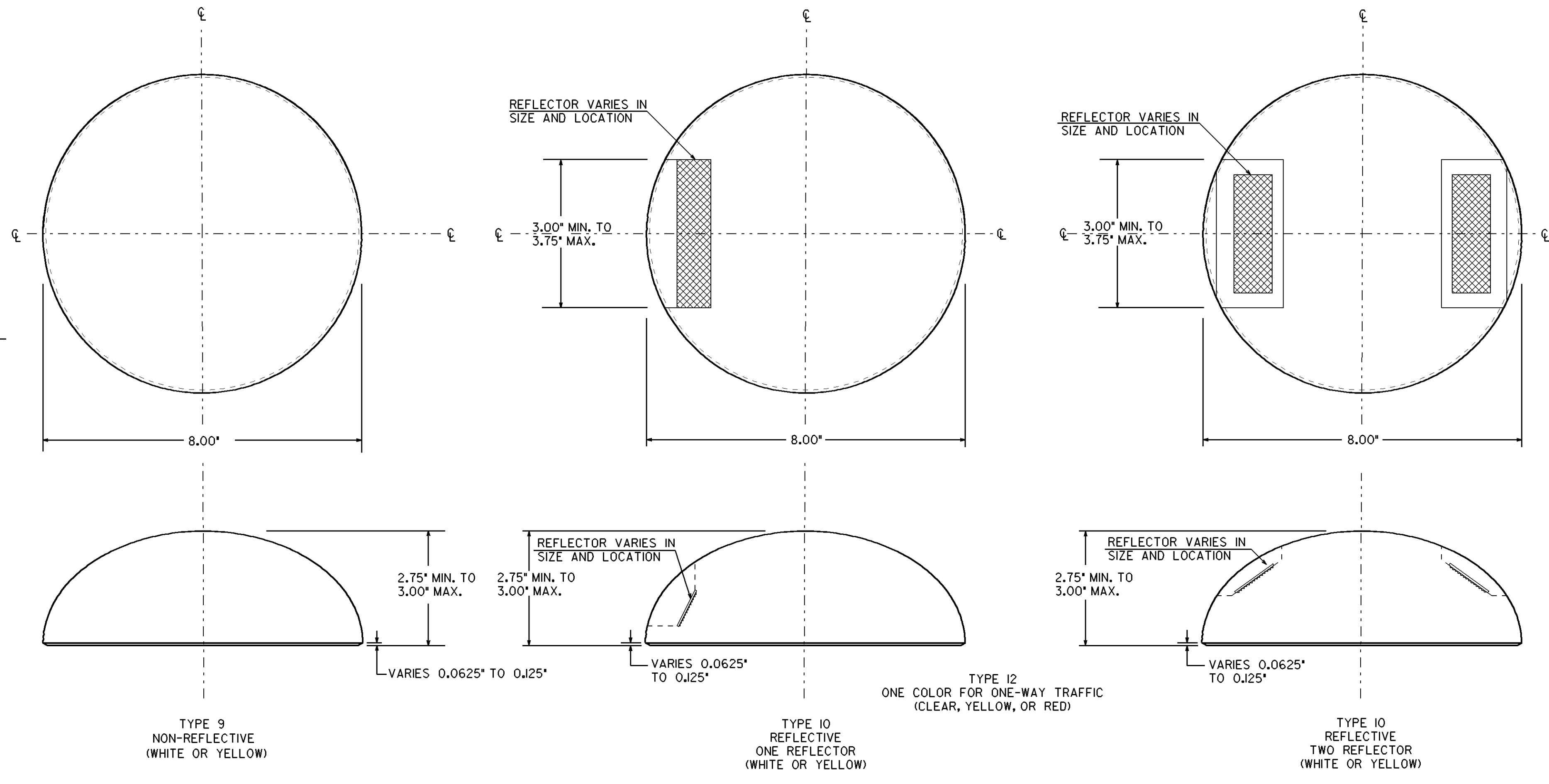
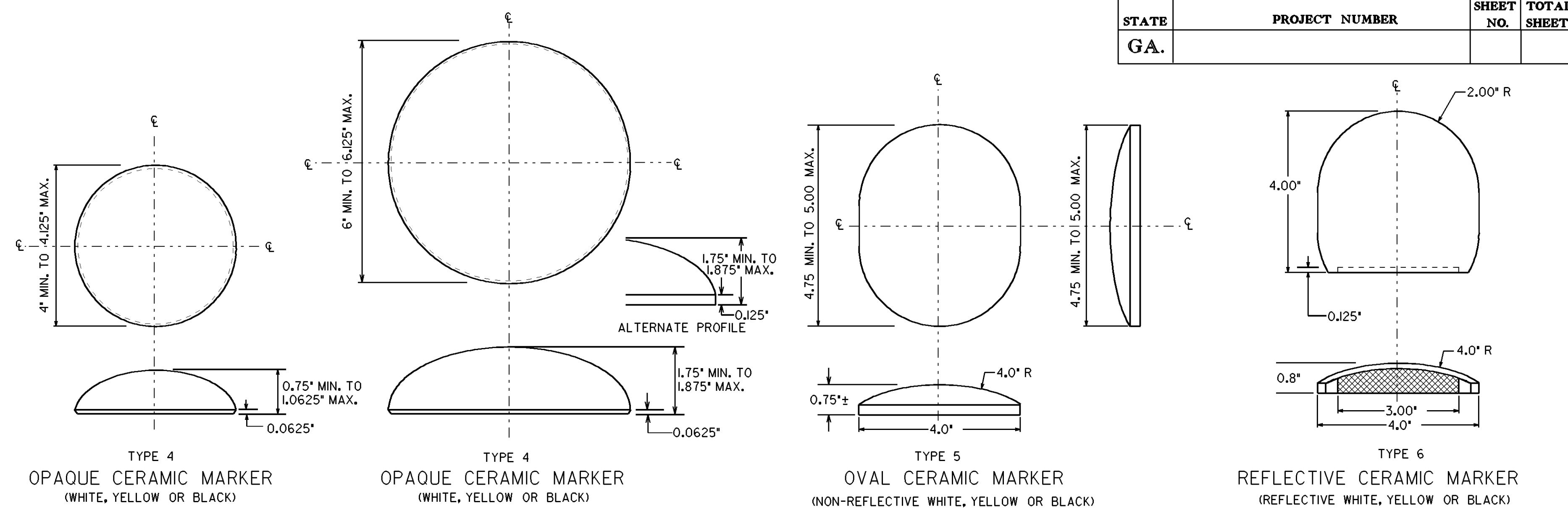
RAISED REFLECTIVE MARKERS



CERAMIC JIGGLE BAR MARKER



ALTERNATE RAISED REFLECTIVE MARKERS



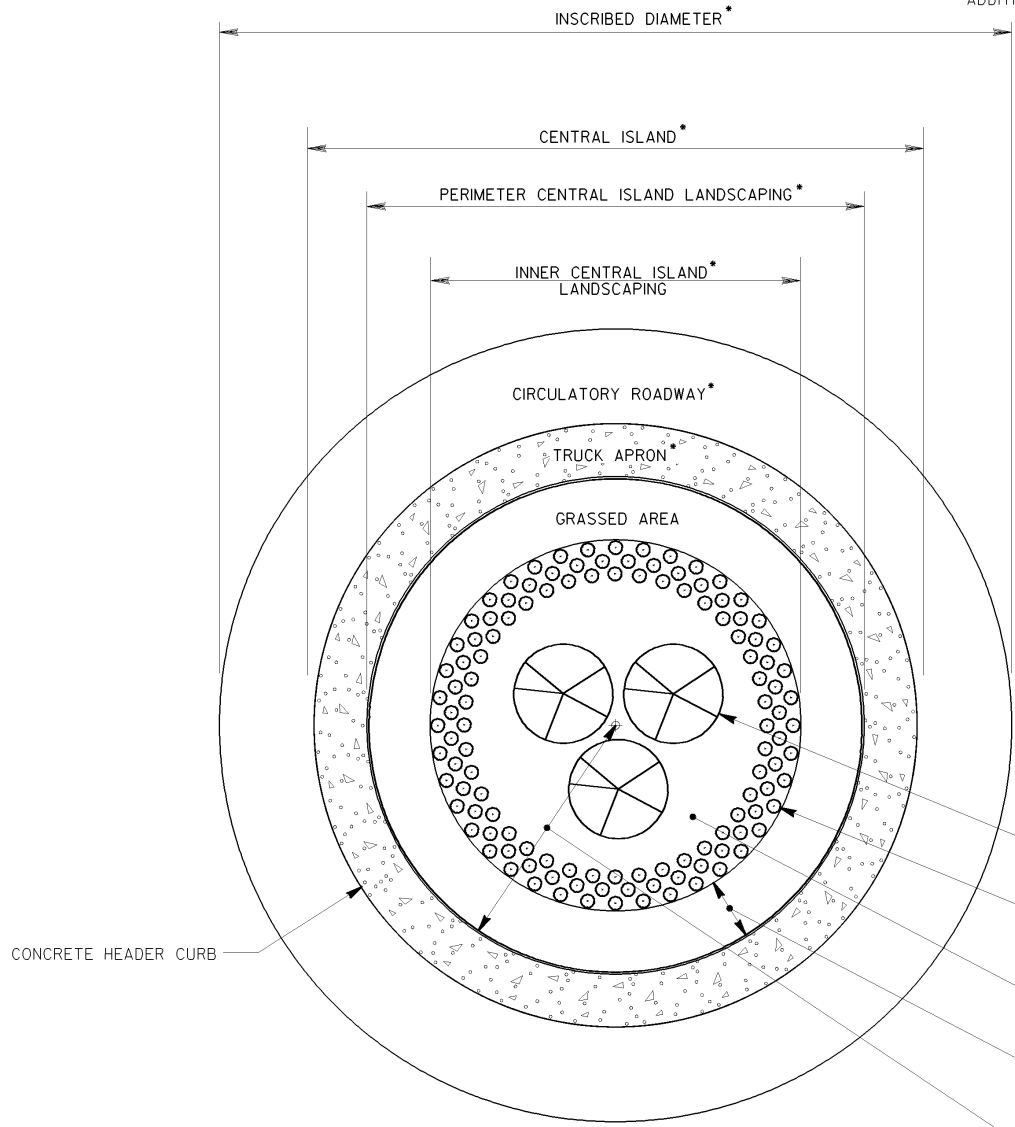
CERAMIC CHANNEL MARKER

- GENERAL NOTES:
1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THERE TO.
 2. THE CONTRACTOR SHALL USE RAISED PAVEMNT MAKER SOURCES AS LISTED IN OPL 76.
 3. COLORS FOR REFLECTIVE ELEMENTS SHALL BE EITHER CLEAR, YELLOW, OR RED AS SPECIFIED.
 4. THE SHELL OF THE REFLECTIVE MARKERS SHALL BE OF ONE COLOR OR OF A COMBINATION OF TWO COLORS, WHICH SHALL BE THE SAME AS THE REFLECTIVE ELEMENT.
 5. THE SURFACE OF OPAQUE CERAMIC MARKERS SHALL BE GLAZED AND OF THE COLOR SPECIFIED IN THE PLANS WITH A WHITE, VITREOUS, CERAMIC BASE.
 6. COLORS FOR ALL RAISED PAVEMENT MARKERS SHALL BE AS SPECIFIED IN THE PLANS.

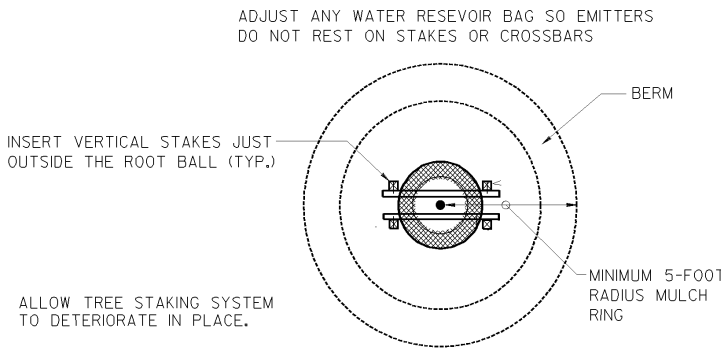
DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN	
9-22-11	REV. DIMENSIONS, ADDED NOTES TO MARKERS AND REV. GEN. NOTES.		
		DETAILS OF RAISED PAVEMENT MARKERS	
		NO SCALE	
		JANUARY 2000	

• SEE PLANS FOR DIMENSIONS AND
ADDITIONAL DETAILS WHERE APPLICABLE.

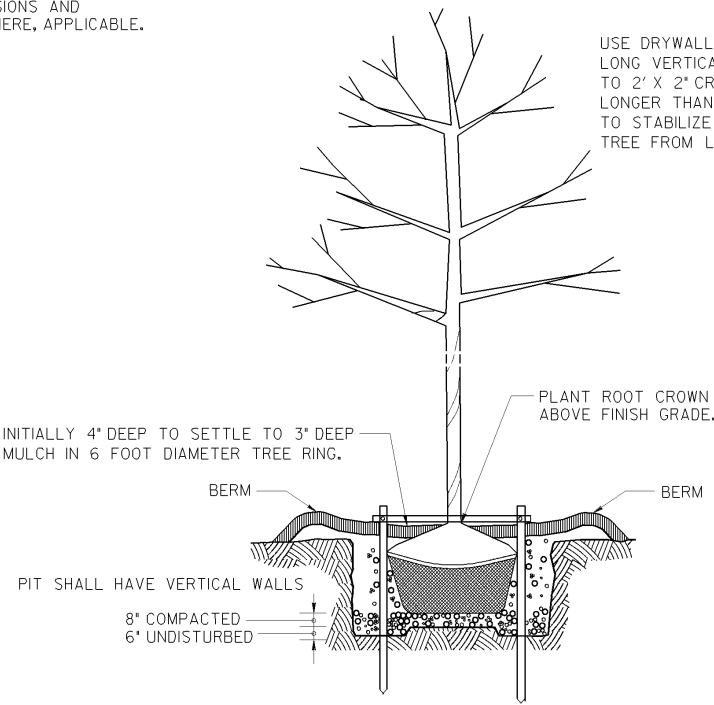
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



PLANTING LAYOUT
NO SCALE

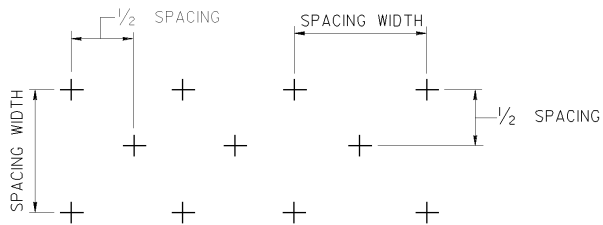


TREE PLANTING DETAIL - PLAN
NO SCALE



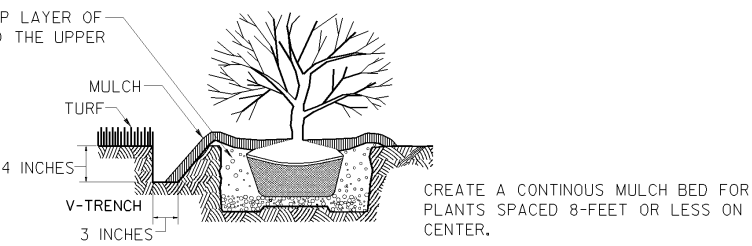
TREE PLANTING DETAIL - ELEVATION
NO SCALE

USE DRYWALL SCREWS TO ATTACH 4-FOOT
LONG VERTICAL 2\"/>



ON CENTER SPACING - STAGGERED ROW
NO SCALE

INCORPORATE A 2 INCH DEEP LAYER OF
ORGANIC SOIL ADDITIVE INTO THE UPPER
6\"/>



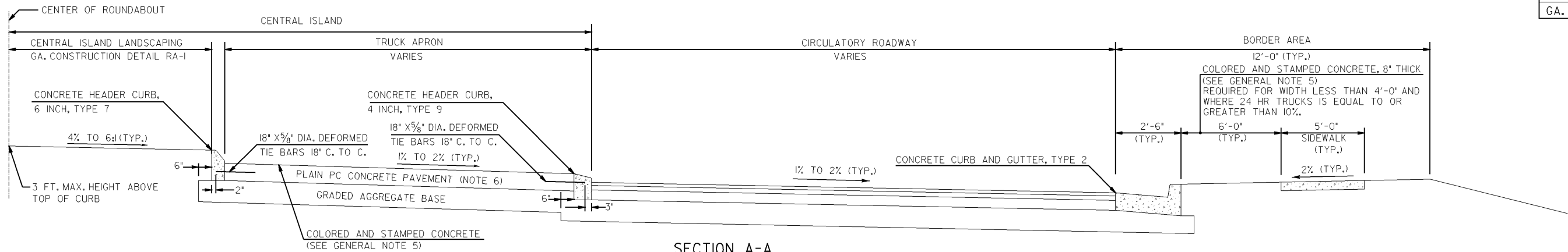
VINE AND SHRUB PLANTING DETAIL
NO SCALE

- GENERAL NOTES:
1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
 2. SEE SPECIAL PROVISIONS 700 AND 702 FOR PLANTING REQUIREMENTS.
 3. SEE PLAN SHEETS FOR THE WIDTH OF THE PERIMETER CENTRAL ISLAND LANDSCAPING.
 4. THE DESIGNER MAY SPECIFY ALTERNATE PLANT MATERIALS WITH PRIOR REVIEW AND APPROVAL BY THE OFFICE OF MAINTENANCE. IF ALTERNATE MATERIALS ARE SPECIFIED, THEY WILL BE DESCRIBED ELSEWHERE IN THE PLANS.
 5. THIS DETAIL CAN BE INCORPORATED INTO PROJECT PLANS AFTER THE DEPARTMENT HAS ENTERED A SEPARATE RIGHT-OF-WAY MOWING AND MAINTENANCE AGREEMENT.

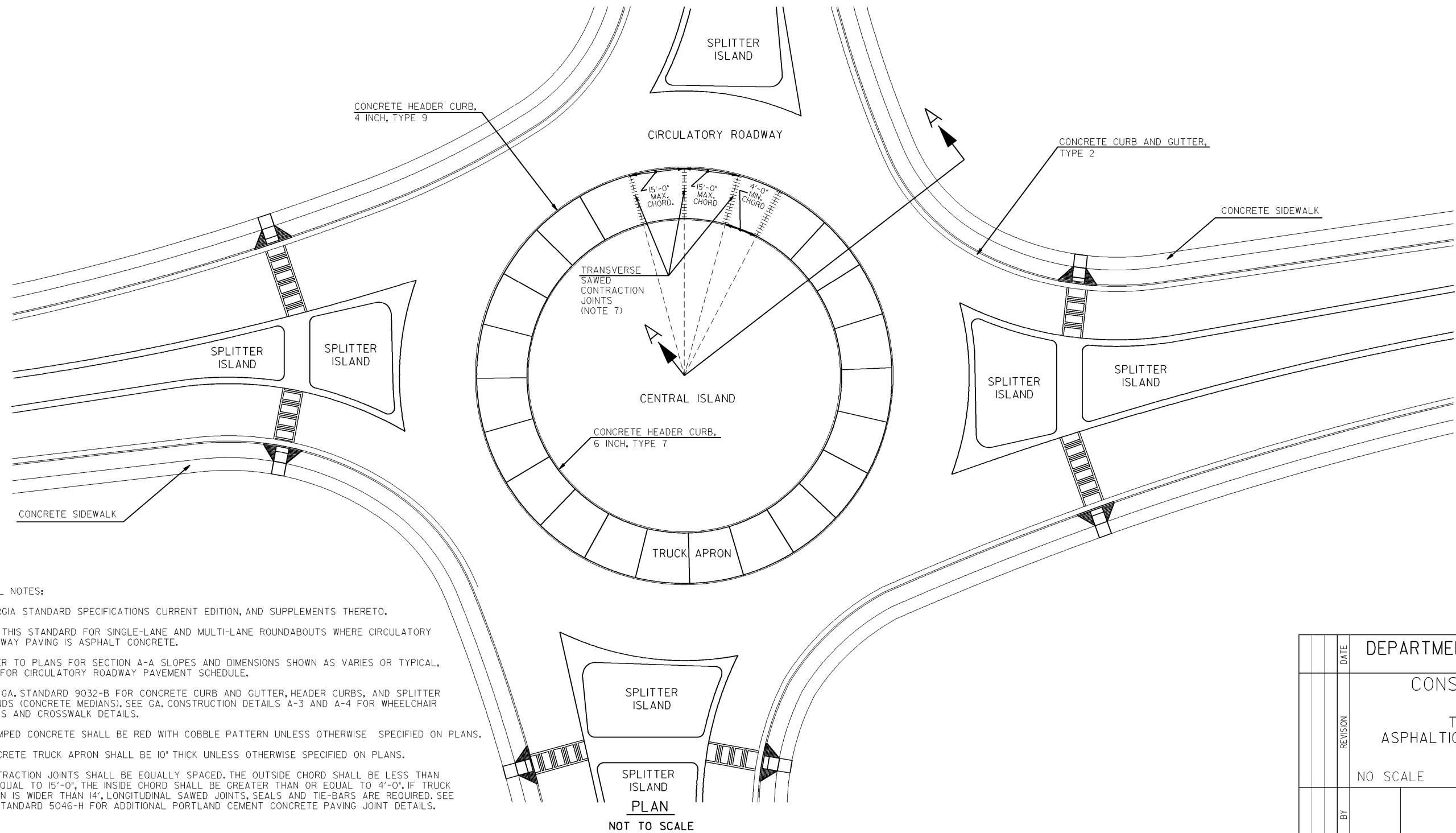
BASIS OF PAYMENT:						
PAY ITEM NUMBER	UNIT	PAY ITEM DESCRIPTION	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
150-1000	LS	TRAFFIC CONTROL	-	-	-	-
700-9300	SY	SOD	CYNODON DACTYLON 'TIFWAY 419' SOD	HYBRID BERMUDA GRASS	-	-
702-0212	EA	CRATAEGUS VIRIDIS	CRATAEGUS VIRIDIS 'WINTER KING'	WINTER KING HAWTHORN	3 INCH CALIPER	SPACING AS SHOWN
702-0470	EA	ILEX VOMITORIA	ILEX VOMITORIA 'NANA'	DWARF YAUPON HOLLY	3 GAL	SPACING AS SHOWN
702-9005	LB	SPRING APPLICATION FERTILIZER	SPRING FERTILIZER	FERTILIZER	-	-
702-9025	SY	LANDSCAPE MULCH	-	PINE STRAW MULCH	-	-

DATE		DEPARTMENT OF TRANSPORTATION	
		STATE OF GEORGIA	
REVISION		CONSTRUCTION DETAIL	
		ROUNDAABOUT LANDSCAPING DETAILS	
		NO SCALE	SEPTEMBER 2011
BY		NUMBER RA-1	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



SECTION A-A
NOT TO SCALE (NOTE 3)

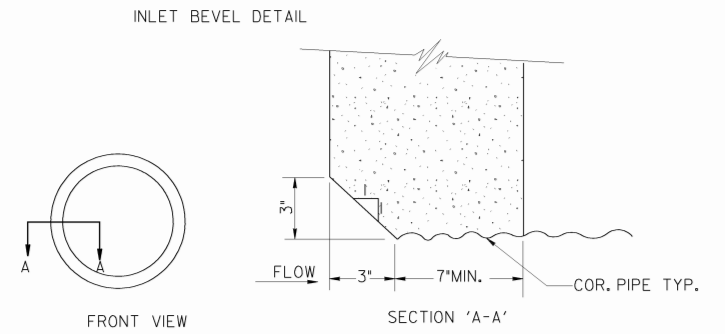


PLAN
NOT TO SCALE

GENERAL NOTES:

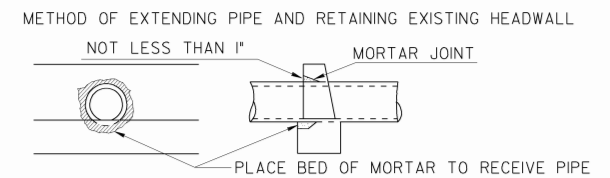
1. GEORGIA STANDARD SPECIFICATIONS CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. USE THIS STANDARD FOR SINGLE-LANE AND MULTI-LANE ROUNDABOUTS WHERE CIRCULATORY ROADWAY PAVING IS ASPHALT CONCRETE.
3. REFER TO PLANS FOR SECTION A-A SLOPES AND DIMENSIONS SHOWN AS VARIES OR TYPICAL, AND FOR CIRCULATORY ROADWAY PAVEMENT SCHEDULE.
4. SEE GA. STANDARD 9032-B FOR CONCRETE CURB AND GUTTER, HEADER CURBS, AND SPLITTER ISLANDS (CONCRETE MEDIANS). SEE GA. CONSTRUCTION DETAILS A-3 AND A-4 FOR WHEELCHAIR RAMPS AND CROSSWALK DETAILS.
5. STAMPED CONCRETE SHALL BE RED WITH COBBLE PATTERN UNLESS OTHERWISE SPECIFIED ON PLANS.
6. CONCRETE TRUCK APRON SHALL BE 10" THICK UNLESS OTHERWISE SPECIFIED ON PLANS.
7. CONTRACTION JOINTS SHALL BE EQUALLY SPACED. THE OUTSIDE CHORD SHALL BE LESS THAN OR EQUAL TO 15'-0", THE INSIDE CHORD SHALL BE GREATER THAN OR EQUAL TO 4'-0". IF TRUCK APRON IS WIDER THAN 14', LONGITUDINAL SAWED JOINTS, SEALS AND TIE-BARS ARE REQUIRED. SEE GA. STANDARD 5046-H FOR ADDITIONAL PORTLAND CEMENT CONCRETE PAVING JOINT DETAILS.

DATE		DEPARTMENT OF TRANSPORTATION	
		STATE OF GEORGIA	
REVISION		CONSTRUCTION DETAIL	
		ROUNDABOUT	
		TYPICAL SECTION	
		ASPHALTIC CONCRETE CIRCULATORY ROADWAY	
		NO SCALE	JANUARY 2012
BY		NUMBER	
		RA-2	

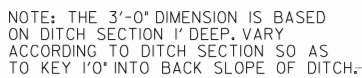


DIMENSIONS							QUANTITIES ONE "U" ENDWALL				
OPENING		WALL			FOOTING		CLASS "B" CONCRETE				STEEL TIE RODS
D	AREA SQ.FT	G	H	K	F	J	CUBIC WALL	FEET FOOT	TOTAL CU.FT.	CU.YD.	
2:1 FILL SLOPES											
12"	0.8	3'8"	2'0"	1'0"	1'3"	2'2"	6.6	7.3	13.9	0.52	NONE
15"	1.2	3'11"	2'3"	1'5"	1'3"	2'2"	8.3	9.1	17.4	0.64	NONE
18"	1.8	4'2"	2'6"	1'9"	1'3"	2'11"	9.9	10.7	20.6	0.76	NONE
24"	3.1	4'8"	3'0"	2'6"	1'6"	3'8"	13.9	15.5	29.4	1.09	2-3/4" DIA.x2'0"
30"	4.9	5'2"	3'6"	3'3"	1'6"	4'5"	18.7	20.0	38.7	1.43	2-3/4" DIA.x2'0"
36"	7.1	5'8"	4'0"	4'0"	1'9"	5'2"	21.2	26.2	50.4	1.87	2-3/4" DIA.x2'0"
42"	9.6	6'2"	4'6"	4'9"	2'0"	5'11"	30.3	33.2	63.5	2.35	2-3/4" DIA.x2'6"
48"	12.6	6'8"	5'0"	5'6"	2'0"	6'8"	37.3	39.6	76.9	2.85	2-3/4" DIA.x3'0"
54"	16.0	7'2"	5'6"	6'3"	2'0"	7'5"	44.2	45.9	90.1	3.33	2-3/4" DIA.x3'6"
60"	19.6	7'8"	6'0"	7'0"	2'0"	8'2"	51.1	49.1	100.2	3.71	2-3/4" DIA.x4'0"
3:1 FILL SLOPES											
12"	0.8	3'8"	2'0"	2'0"	1'3"	3'2"	7.7	9.9	17.6	0.65	NONE
15"	1.2	3'11"	2'3"	2'9"	1'3"	3'11"	10.0	12.8	22.8	0.84	NONE
18"	1.8	4'2"	2'6"	3'6"	1'3"	4'8"	12.5	16.0	28.5	1.06	NONE
24"	3.1	4'8"	3'0"	5'0"	1'6"	6'2"	18.8	24.0	42.8	1.58	2-3/4" DIA.x2'0"
30"	4.9	5'2"	3'6"	6'6"	1'6"	7'8"	26.3	32.3	58.6	2.17	2-3/4" DIA.x2'0"
36"	7.1	5'8"	4'0"	8'0"	1'9"	9'2"	35.1	42.8	77.9	2.89	2-3/4" DIA.x2'0"
42"	9.6	6'2"	4'6"	9'6"	2'0"	10'8"	45.4	54.5	99.9	3.70	2-3/4" DIA.x2'6"
48"	12.6	6'8"	5'0"	11'0"	2'0"	12'2"	56.9	66.5	123.4	4.57	2-3/4" DIA.x3'0"
54"	16.0	7'2"	5'6"	12'6"	2'0"	13'8"	66.7	79.5	146.2	5.41	2-3/4" DIA.x3'6"
60"	19.6	7'8"	6'0"	13'4"	2'0"	17'2"	81.0	87.9	168.9	6.25	2-3/4" DIA.x4'0"
4:1 FILL SLOPES											
12"	0.8	3'8"	2'0"	2'8"	1'3"	3'10"	8.4	11.8	20.2	0.75	NONE
15"	1.2	3'11"	2'3"	3'8"	1'3"	4'10"	11.2	15.5	26.6	0.98	NONE
18"	1.8	4'2"	2'6"	4'8"	1'3"	5'10"	14.3	19.6	33.9	1.26	NONE
24"	3.1	4'8"	3'0"	6'8"	1'6"	7'10"	22.0	29.8	51.8	1.92	2-3/4" DIA.x2'0"
30"	4.9	5'2"	3'6"	8'8"	1'6"	9'10"	31.3	40.7	72.0	2.67	2-3/4" DIA.x2'0"
36"	7.1	5'8"	4'0"	10'8"	1'9"	11'10"	42.5	54.1	96.6	3.58	2-3/4" DIA.x2'0"
42"	9.6	6'2"	4'6"	12'8"	2'0"	13'10"	55.4	69.2	124.6	4.61	2-3/4" DIA.x2'6"
48"	12.6	6'8"	5'0"	14'8"	2'0"	15'10"	70.8	84.8	154.8	5.73	2-3/4" DIA.x3'0"
54"	16.0	7'2"	5'6"	16'8"	2'0"	17'10"	86.4	101.9	188.3	6.97	2-3/4" DIA.x3'6"
60"	19.6	7'8"	6'0"	18'8"	2'0"	19'10"	104.7	120.5	225.2	8.34	2-3/4" DIA.x4'0"

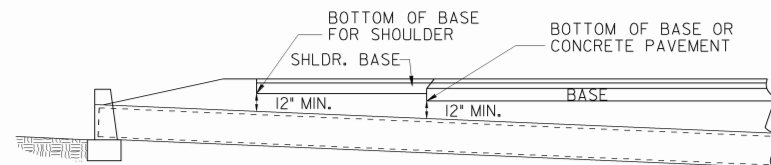
DIMENSIONS						QUANTITIES ONE ENDWALL WITH 45° WING WALLS					
OPENING		WALL		FOOTING		CLASS "B" CONCRETE				STEEL TIE RODS	
D	AREA SQ. FT.	H	G	L	M	F	CUBIC	FEET	TOTAL		
							WALL	FOOT	CU.FT.		CU.YD.
2:1 SLOPES											
18"	1.8	2'6"	3'0"	1'2"	1'7"	1'3"	9.3	10.7	20.0	0.74	NONE
24"	3.1	3'0"	4'4"	1'5"	2'1"	1'4"	13.1	14.1	27.5	1.02	2-3/4" DIA. x2'0"
30"	4.9	3'6"	4'10"	1'9"	2'5"	1'6"	17.4	18.8	36.7	1.34	2-3/4" DIA. x2'0"
36"	7.1	4'0"	5'4"	2'0"	2'1"	1'8"	22.6	24.6	47.2	1.75	2-3/4" DIA. x3'0"
42"	9.6	4'6"	5'10"	2'3"	3'6"	2'0"	29.1	34.6	63.7	2.36	2-3/4" DIA. x3'0"
48"	12.6	5'0"	6'4"	2'6"	4'0"	2'0"	35.9	39.1	75.0	2.78	2-3/4" DIA. x3'0"
54"	16.0	5'6"	6'10"	2'9"	4'6" 1/4"	2'0"	42.9	46.6	89.5	3.31	2-3/4" DIA. x3'0"
60"	19.6	6'0"	7'4"	3'0"	5'0" 1/2"	2'0"	51.8	51.1	102.9	3.88	2-3/4" DIA. x3'0"
3:1 SLOPES											
18"	1.8	2'6"	3'0"	1'2"	1'9"	1'3"	10.7	14.5	25.2	0.93	NONE
24"	3.1	3'0"	4'4"	1'5"	2'10"	1'4"	16.6	17.8	34.4	1.27	2-3/4" DIA. x2'0"
30"	4.9	3'6"	4'10"	1'9"	3'6"	1'6"	22.9	24.4	47.3	1.71	2-3/4" DIA. x2'0"
36"	7.1	4'0"	5'4"	2'1"	4'3"	1'8"	30.2	32.0	62.2	2.30	2-3/4" DIA. x3'0"
42"	9.6	4'6"	5'10"	2'5"	4'11"	2'0"	38.8	44.0	82.8	3.07	2-3/4" DIA. x3'0"
48"	12.6	5'0"	6'4"	2'8"	5'6"	2'0"	47.5	48.6	96.1	3.56	2-3/4" DIA. x3'0"
54"	16.0	5'6"	6'10"	3'2"	6'1"	2'0"	57.0	53.4	110.4	4.09	2-3/4" DIA. x3'0"
60"	19.6	6'0"	7'4"	3'6"	6'9"	2'0"	68.5	59.1	127.6	4.73	2-3/4" DIA. x3'0"



CONCRETE WITHIN THE HATCHED AREA TO BE REMOVED BY CHIPPING OR IN A MANNER APPROVED BY THE ENGINEER, FORMING A RECESS NO LESS THAN 1" LARGER THAN THE OUTSIDE DIMENSION OF THE PIPE.



SECTION SHOWING MINIMUM COVER OVER CULVERTS



NOTE: GRADE GENERALLY TO FOLLOW SLOPE OF STREAM.

⊗ IF PIPE HAS NEITHER A GROOVE NOR A SPIGOT
AT ITS INLET, AN INLET BEVEL WILL BE REQ'D.

DIMENSIONS					QUANTITIES ONE "L" ENDWALL	
D	AREA SQ.F.T.	H IN.	4D TYP.	D+30 TYP.	CU. YD. CONC.	STEEL TIE RODS
15"	1.2	2'3"	5'0"	3'9"	1.08	2- $\frac{3}{4}$ "DIA.x5'0"
18"	1.8	2'6"	6'0"	4'0"	1.24	2- $\frac{3}{4}$ "DIA.x6'0"
24"	3.1	3'0"	8'0"	4'6"	1.59	2- $\frac{3}{4}$ "DIA.x8'0"
30"	4.9	3'6"	10'0"	5'0"	2.00	2- $\frac{3}{4}$ "DIA.x10'0"
36"	7.1	4'0"	12'0"	5'6"	2.46	2- $\frac{3}{4}$ "DIA.x12'0"
42"	9.6	4'6"	14'0"	6'0"	2.98	2- $\frac{3}{4}$ "DIA.x14'0"
48"	12.6	5'0"	16'0"	6'6"	3.53	2- $\frac{3}{4}$ "DIA.x16'0"
54"	16.0	5'6"	18'0"	7'0"	4.13	2- $\frac{3}{4}$ "DIA.x18'0"
60"	19.6	6'0"	20'0"	7'6"	4.85	2- $\frac{3}{4}$ "DIA.x20'0"

NOTE:
QUANTITIES OF CONCRETE ARE BASED ON INSIDE
DIAMETER OF PIPE. NO DEDUCTIONS SHALL BE
MADE FOR SHELL THICKNESS OR SKEW OF PIPE IN
COMPUTING PAY QUANTITIES.

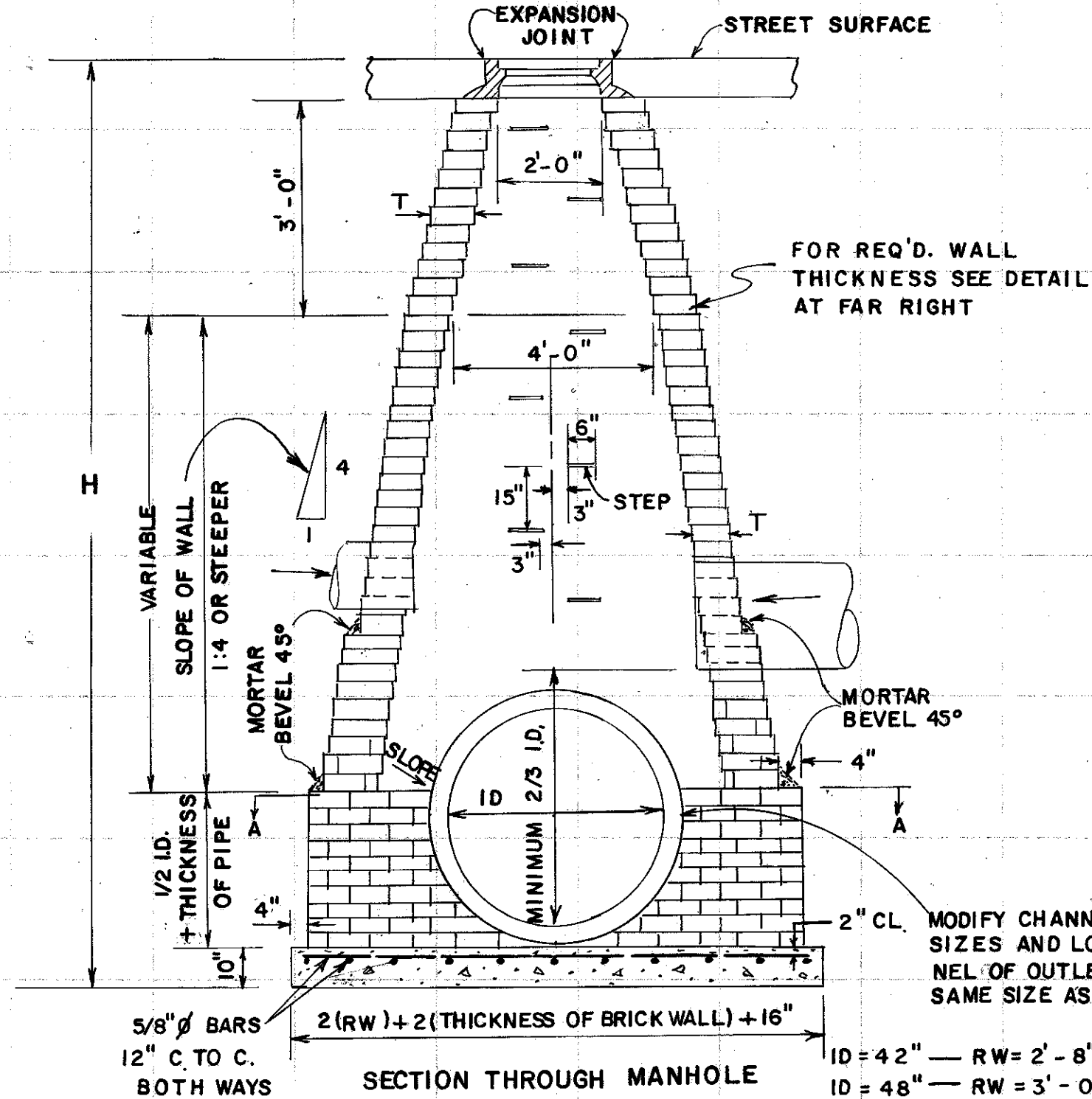
—NOTE TO DESIGNER

THIS STANDARD IS LIMITED FOR USE ONLY AT SPECIAL
CONDITIONS, OTHERWISE, SEE CURRENT STANDARDS I120 & I125.

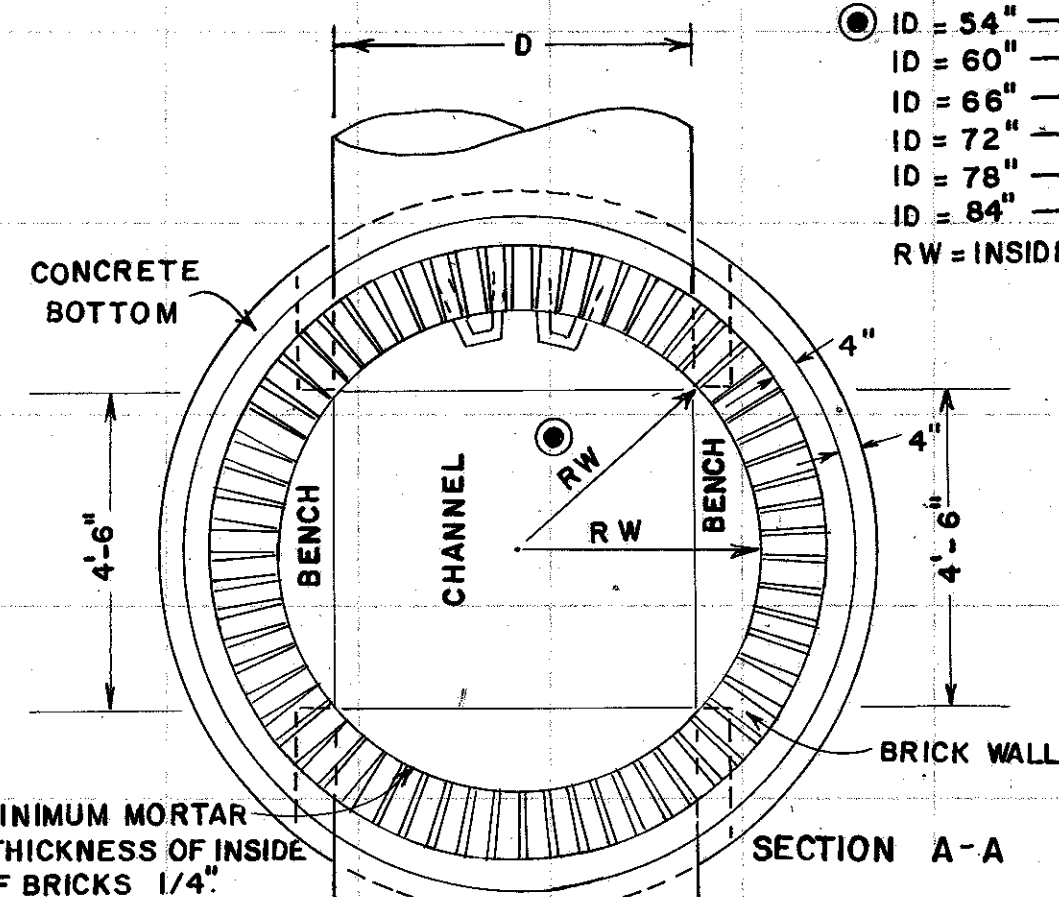
HEADWALLS ARE NOT TO BE PLACED INSIDE THE CLEAR ZONE.

					DATE	DEPARTMENT OF TRANSPORTATION	
						STATE OF GEORGIA	
					REVISION	STANDARD PIPE CULVERT CONCRETE HEADWALL	
					NO SCALE	REV. & REDR. AUG. 1999	
					BY	DESIGNED TRACED CHECKED	(SUBMITTED) <i>James A. Kanul</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>Chad L. Cantel</i> CHIEF ENGINEER
							NUMBER 1001-B

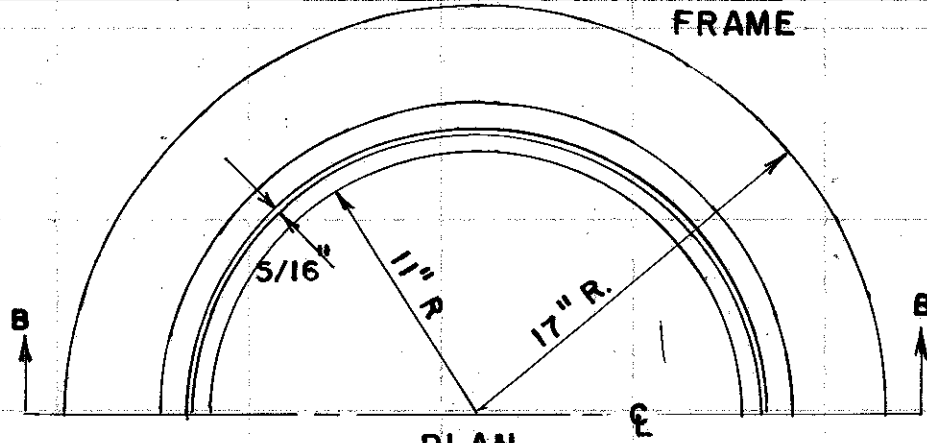
BRICK MANHOLE SECTION (PIPE OUTSIDE DIAMETER IS 48" OR MORE)



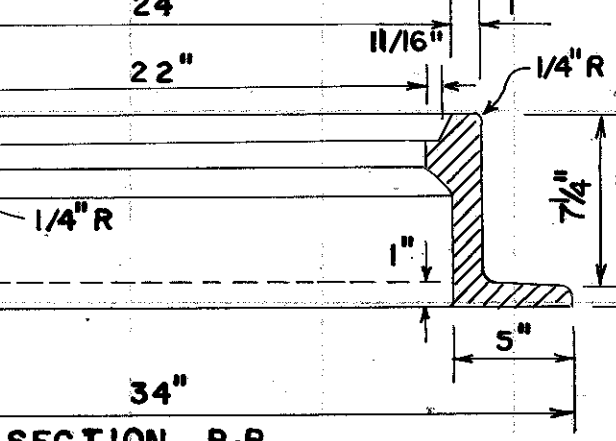
SECTION THROUGH MANHOLE



SECTION A-A



PLAN



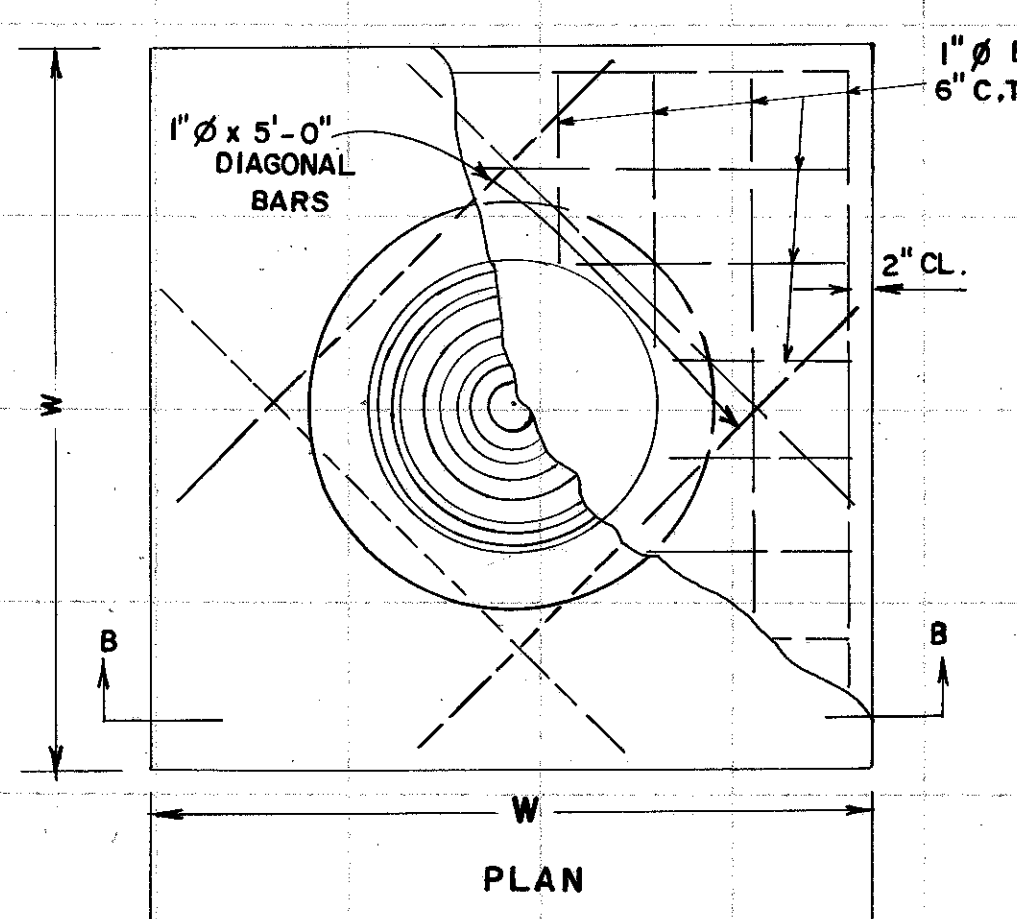
SECTION B-B

APPROXIMATE WEIGHTS
C.I. FRAME 282 LBS.
C.I. COVER 178 LBS.

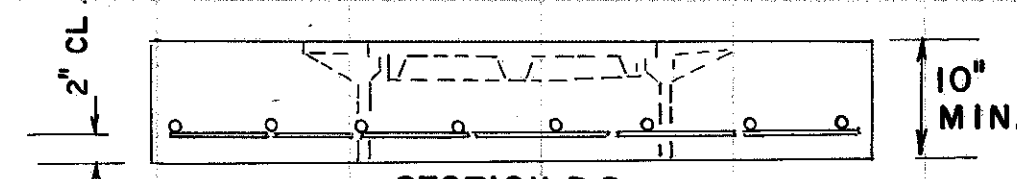
NOTE: COVER AND FRAME MUST BE FITTED BEFORE LEAVING SHOP. PAINT ACTUAL WEIGHT OF EACH CASTING ON ITS FACE.

MANHOLE FRAME & COVER SHOWN ON STD. 1011A PRECAST MAY BE USED AN ALTERNATE TO CASTINGS SHOWN HERE.

REINFORCED CONCRETE COVER

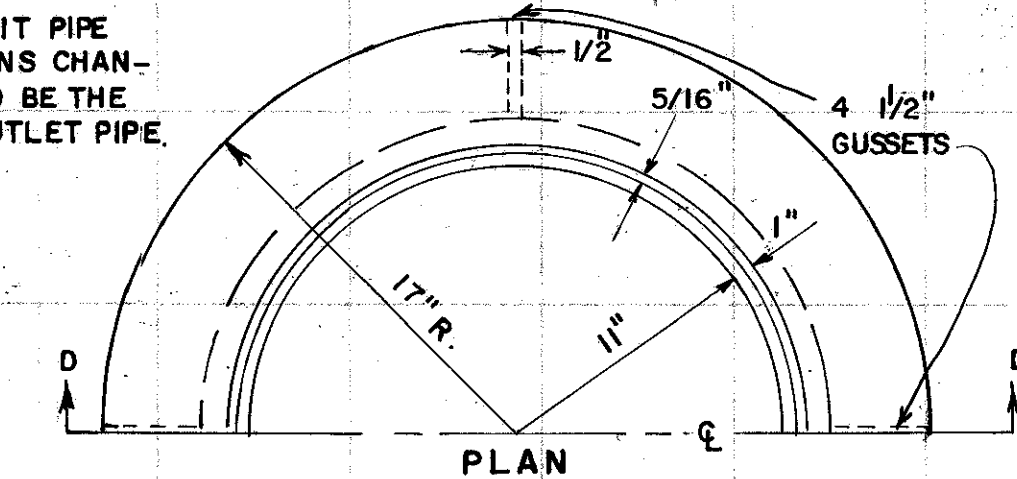


PLAN

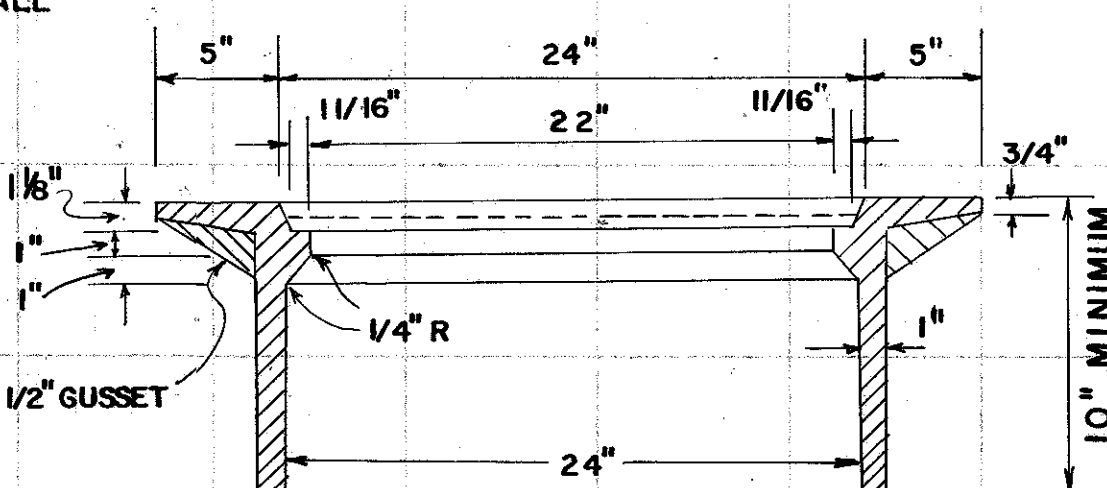


SECTION B-B

FRAME TO BE USED WITH CONCRETE COVER



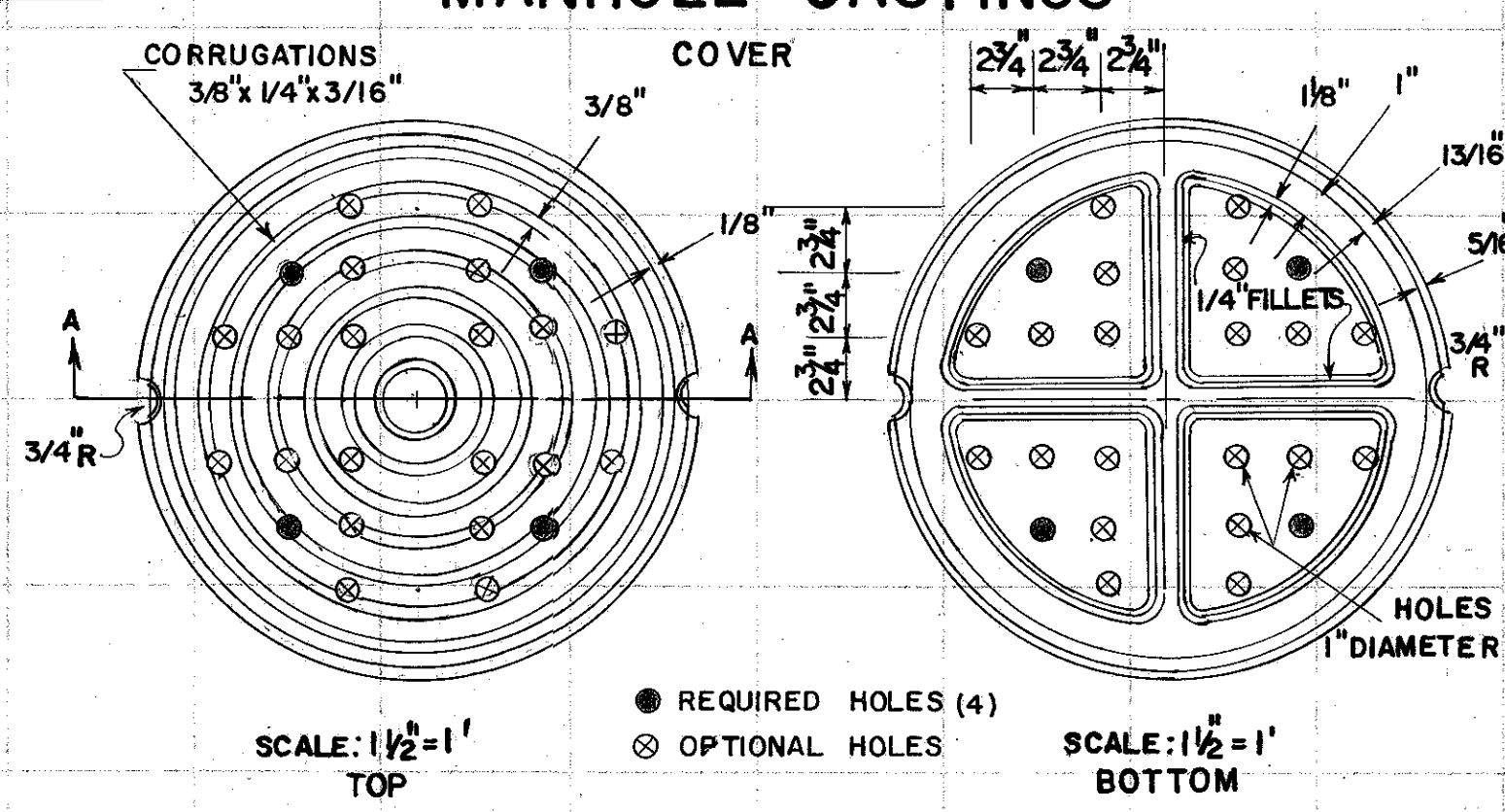
PLAN



SECTION D-D

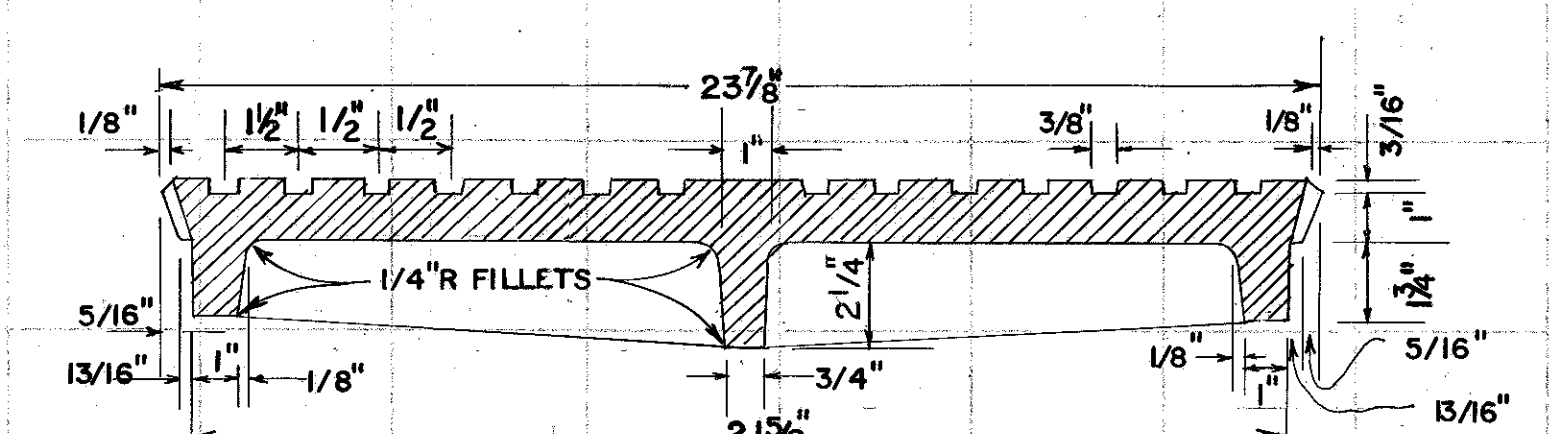
SCALE: 1/2" = 1'

MANHOLE CASTINGS



SCALE: 1/2" = 1'

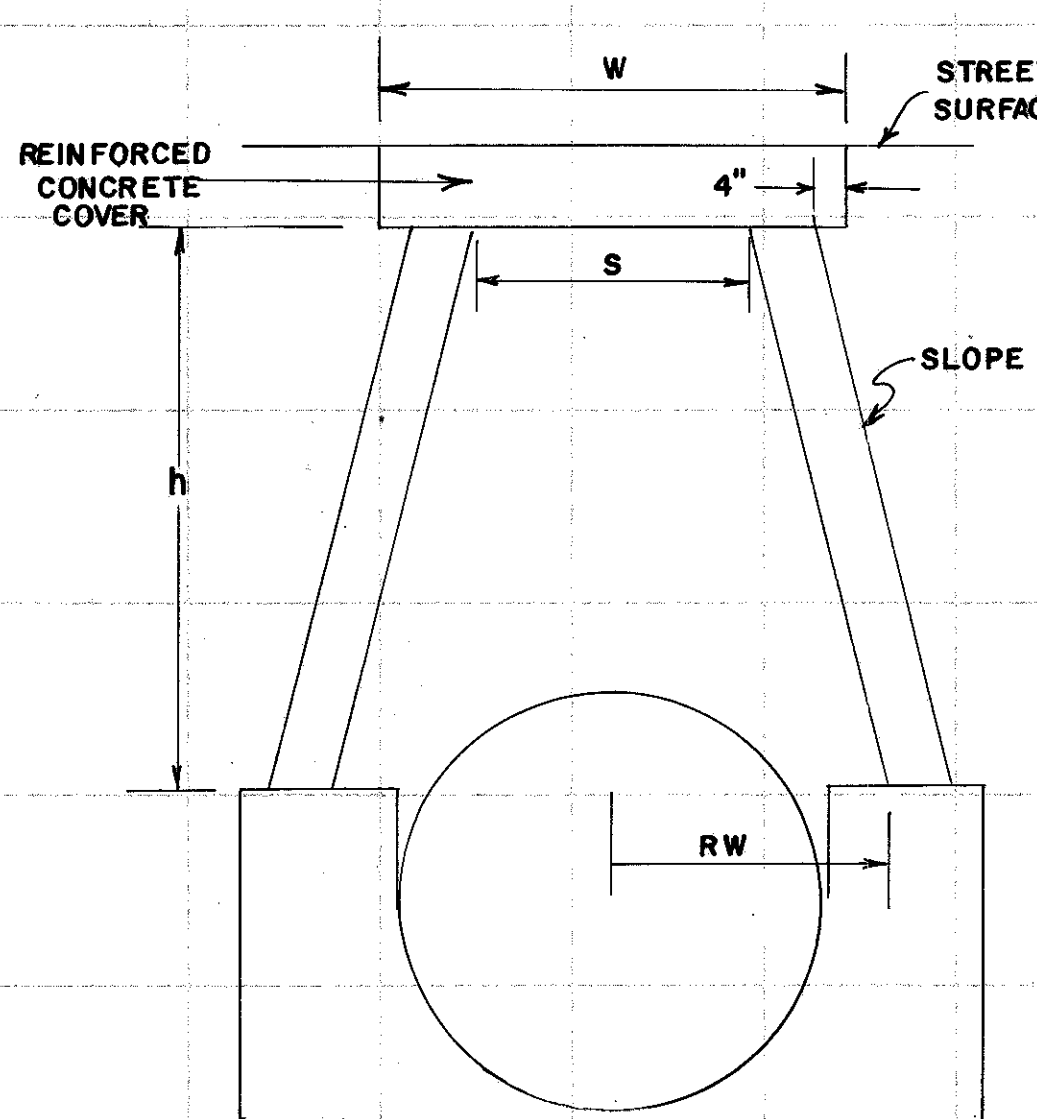
TOP



SECTION A-A

SCALE 5" = 1'

PLACEMENT FOR CONCRETE COVER



FORMULA FOR COMPUTING W
RW = INSIDE RADIUS OF WALL
 $S = 2RW - 1/2$
 $W = S + 24$

NOTE: USE CONCRETE COVER WITH MANHOLE CASTINGS IF FILL FROM TOP OF PIPE TO FINISHED SURFACE IS LESS THAN:

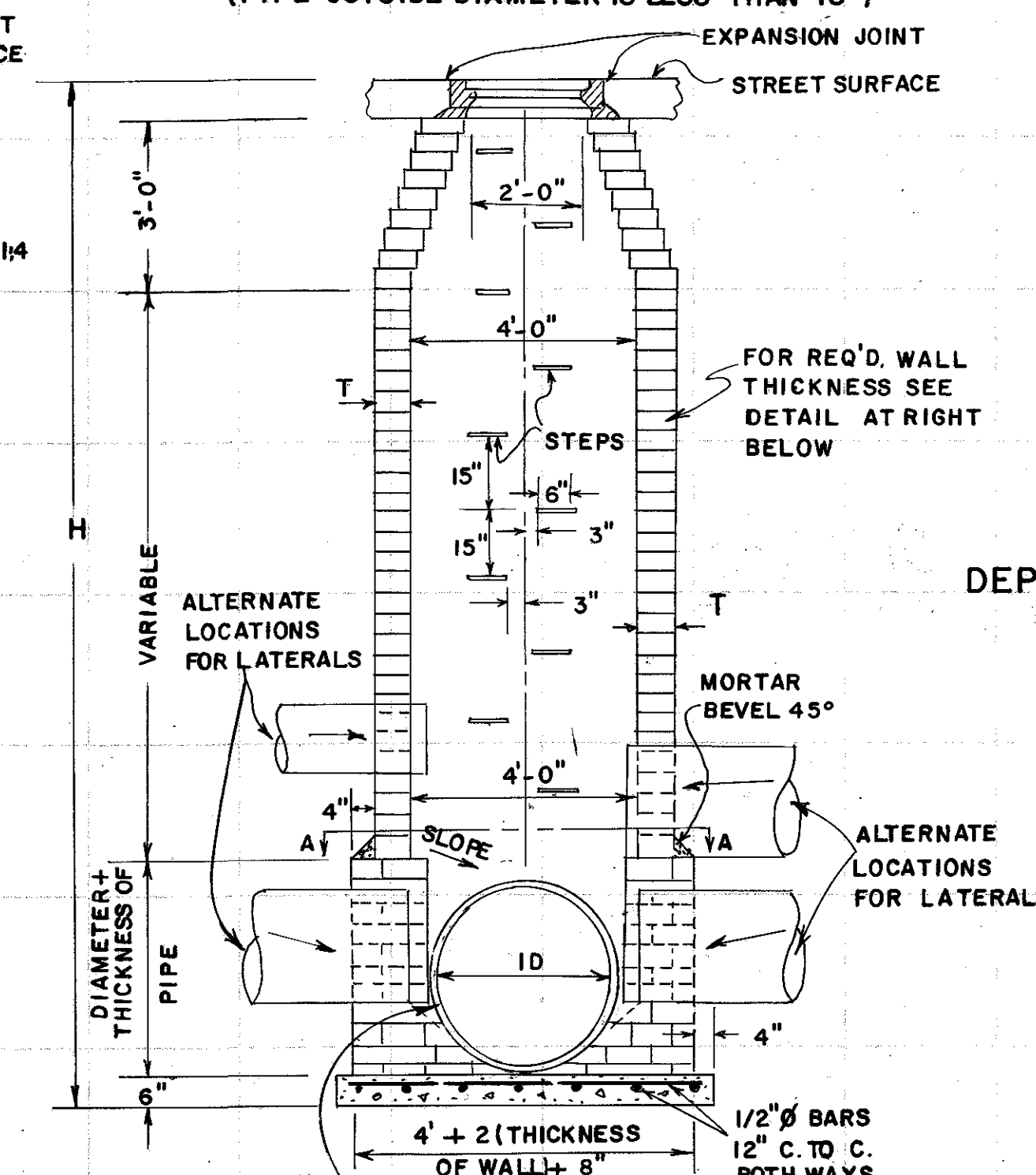
- 4'-6" FOR 42" PIPE
- 5'-0" FOR 48" PIPE
- 5'-6" FOR 54" PIPE
- 6'-0" FOR 60" PIPE
- 6'-6" FOR 66" PIPE
- 7'-0" FOR 72" PIPE
- 7'-6" FOR 78" PIPE
- 8'-0" FOR 84" PIPE

THICKNESS OF BRICK WALL
(SEE DETAIL AT FAR RIGHT)

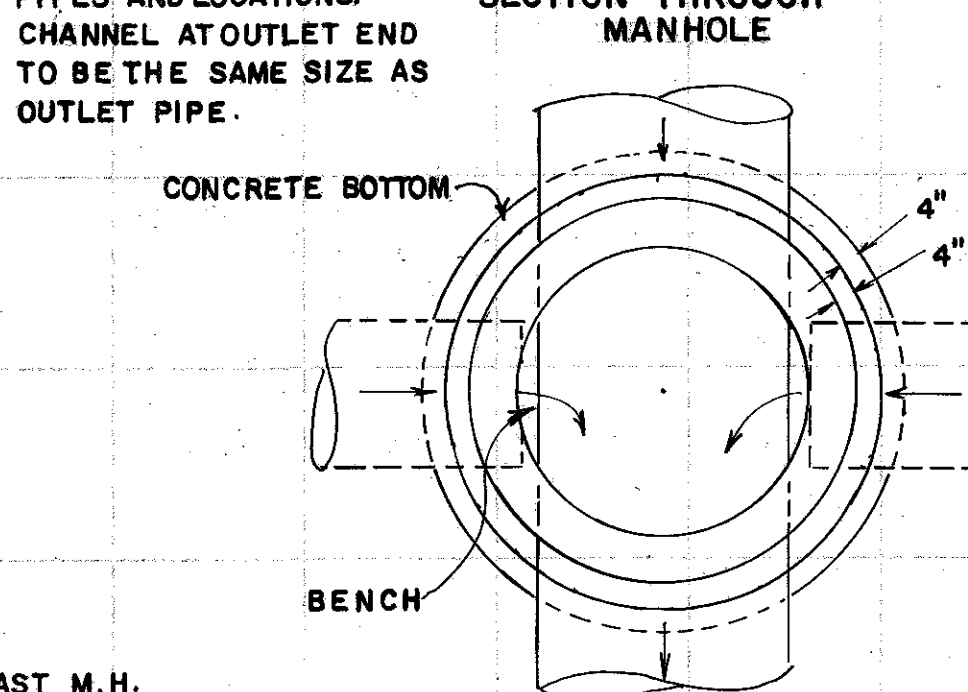
DEPTH	THICKNESS (T)
TO 10'	* 8" MIN.
10' TO 20'	12" MIN.
20' TO 30'	16" MIN.

* FOR COMBINATION BRICK & PRECAST M.H. (SEE BELOW) ONLY 12" OR 16" BRICK WALL THICKNESS IS TO BE USED FOR BASE.

BRICK MANHOLE SECTION (PIPE OUTSIDE DIAMETER IS LESS THAN 48")

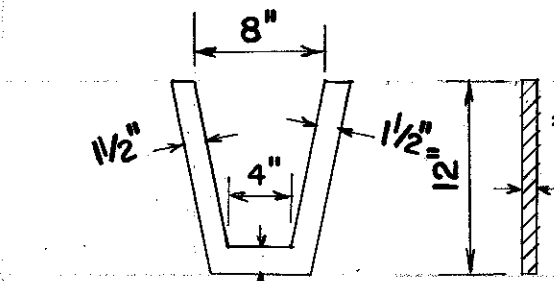


SECTION THROUGH MANHOLE



SECTION A-A

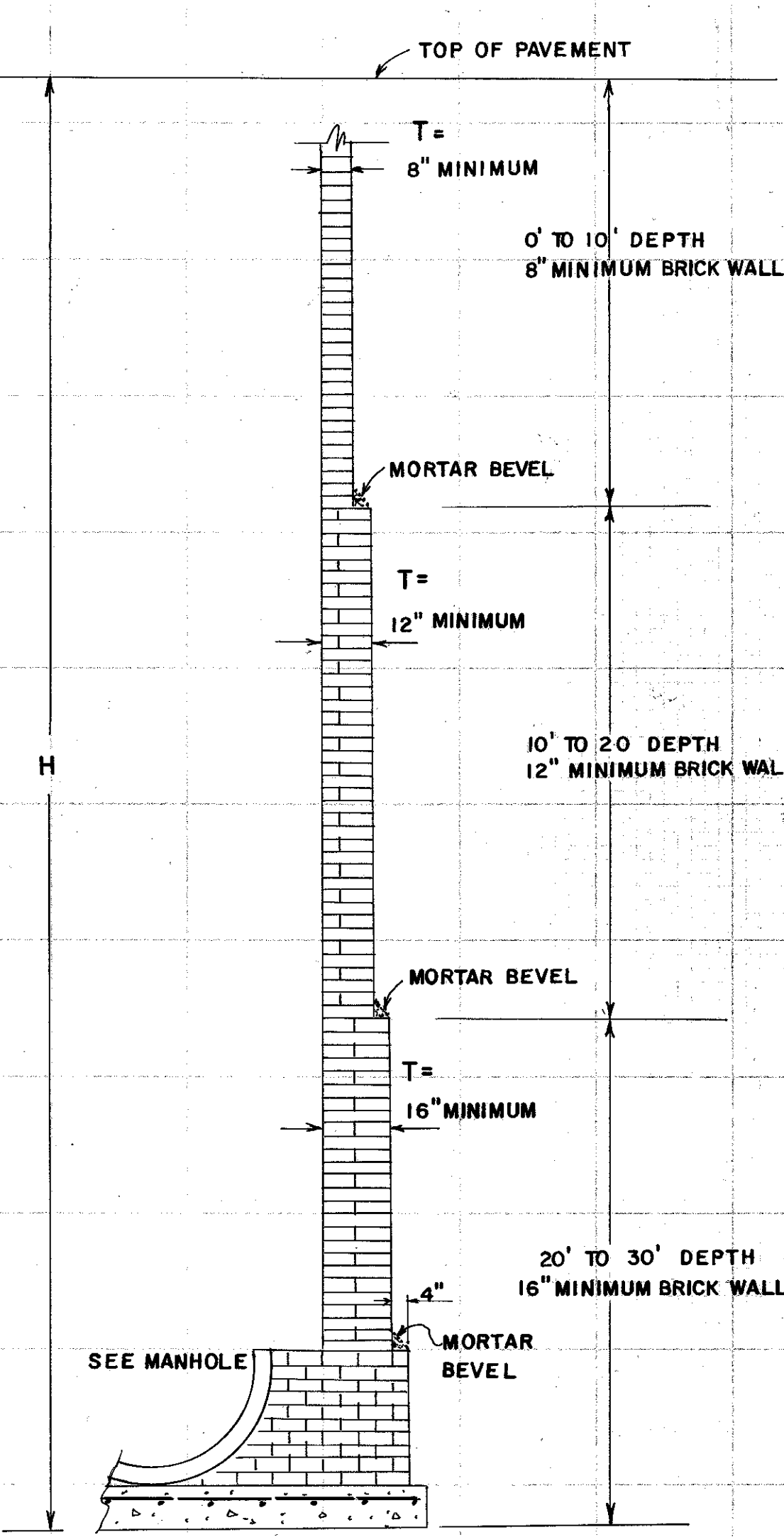
CAST IRON STEP



SCALE: 1/2" = 1'

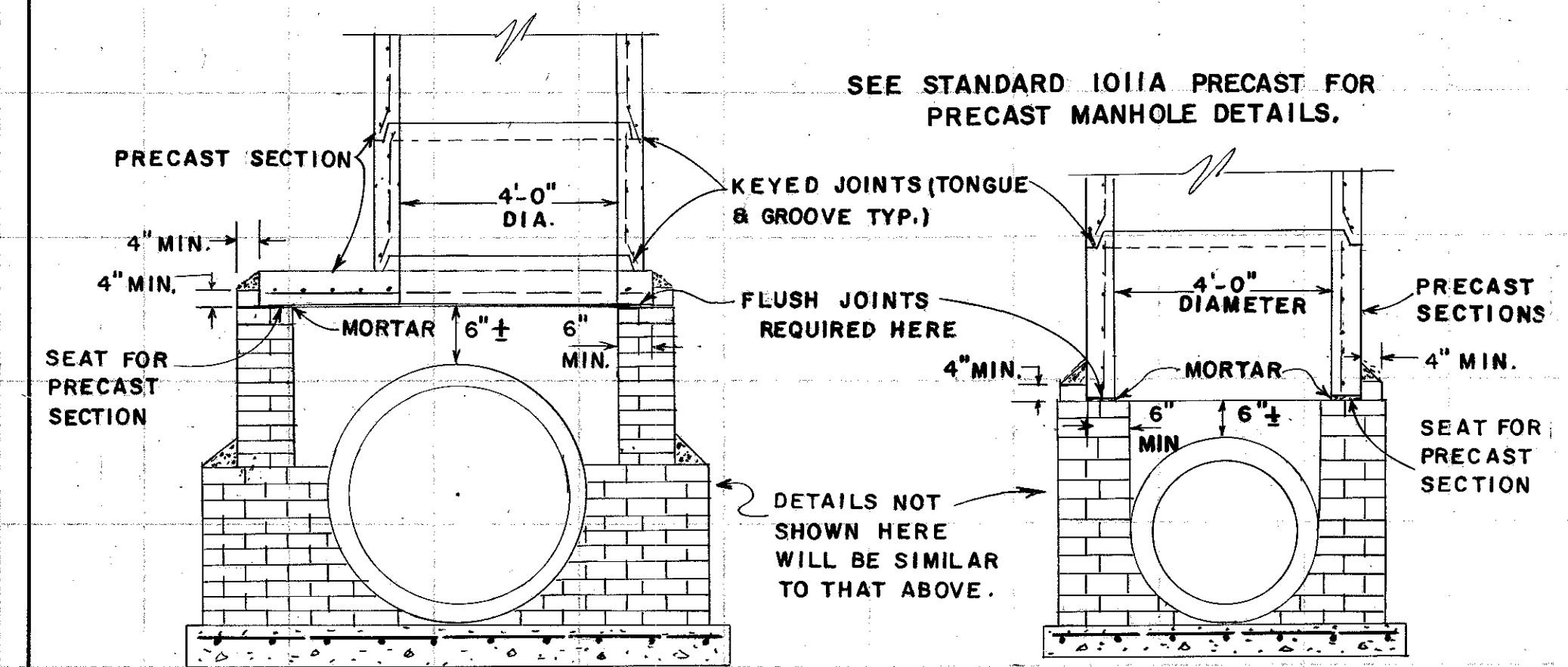
NOTE: STEPS ARE REQUIRED IN ALL MANHOLES WHERE "H" IS GREATER THAN 4'-0". NUMBER AND LOCATION OF STEPS TO BE AS DIRECTED BY THE ENGINEER. PLASTIC OR RUBBER COATED STEPS LISTED IN THE GA. D.O.T. QUALIFIED PRODUCTS MANUAL MAY BE SUBSTITUTED.

DEPTH LIMITS FOR INCREASING WALL THICKNESS



ALTERNATE - COMBINATION BRICK & PRECAST MANHOLES

NOTES FOR COMBINATION MANHOLE:
— BRICK PORTION OF MANHOLE WILL BE CONSTRUCTED WITH SEAT TO GIVE BEST POSSIBLE FIT FOR PRECAST UNIT. MINIMUM THICKNESS FOR BRICK WALL WILL BE 12" FOR H = 20 FT. AND 16" FOR H = 20 FT. TO 30 FT.
— PRECAST UNIT WITHOUT TONGUE OR GROOVE AT BOTTOM SHALL BE PLACED IN BRICK SEAT WITH MORTAR IN JOINT ALL ROUND. BRICK BASE SHALL SET FOR 24 HOURS MIN. BEFORE PRECAST SECTIONS ARE INSTALLED.
— STEPS IN THE BRICK PORTION OF MANHOLE WILL BE IN ALIGNMENT WITH AND MATCH THE STEPS IN THE PRECAST SECTIONS RATHER THAN AS SHOWN FOR THE ALL BRICK MANHOLES.

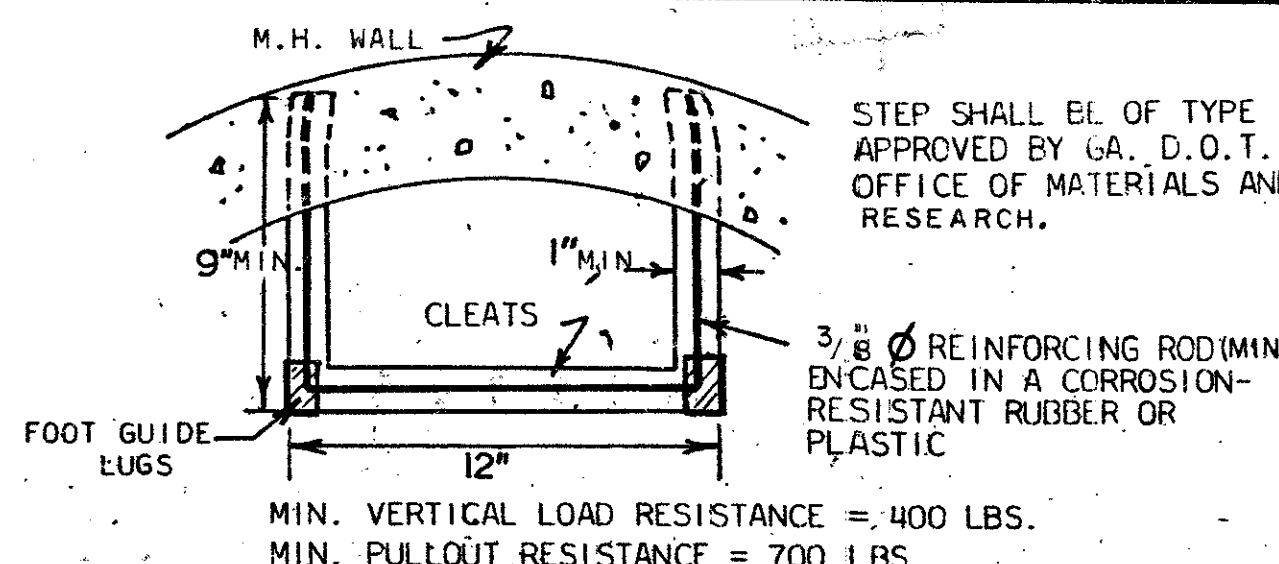
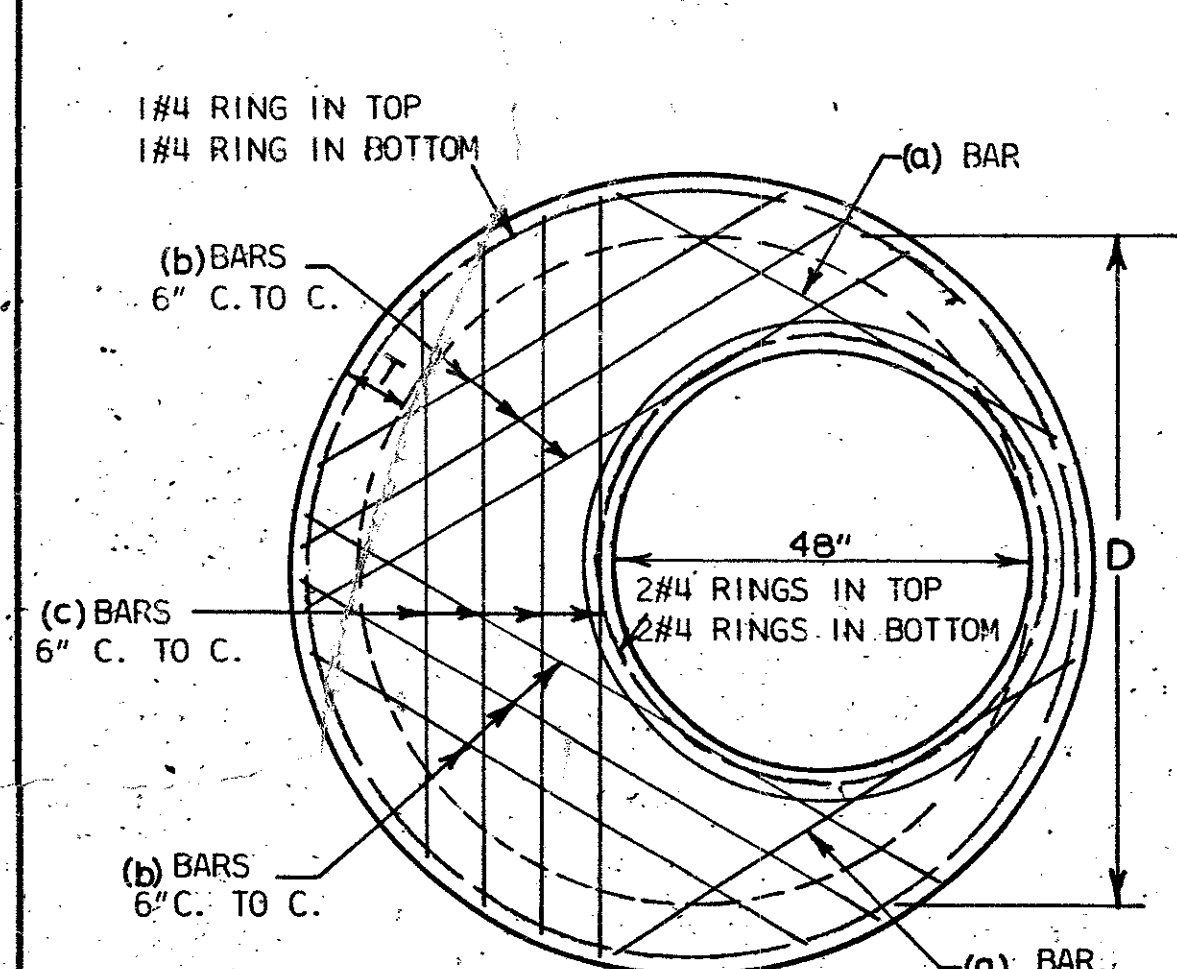


SEE STANDARD 1011A PRECAST FOR PRECAST MANHOLE DETAILS.

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

STANDARD BRICK MANHOLES

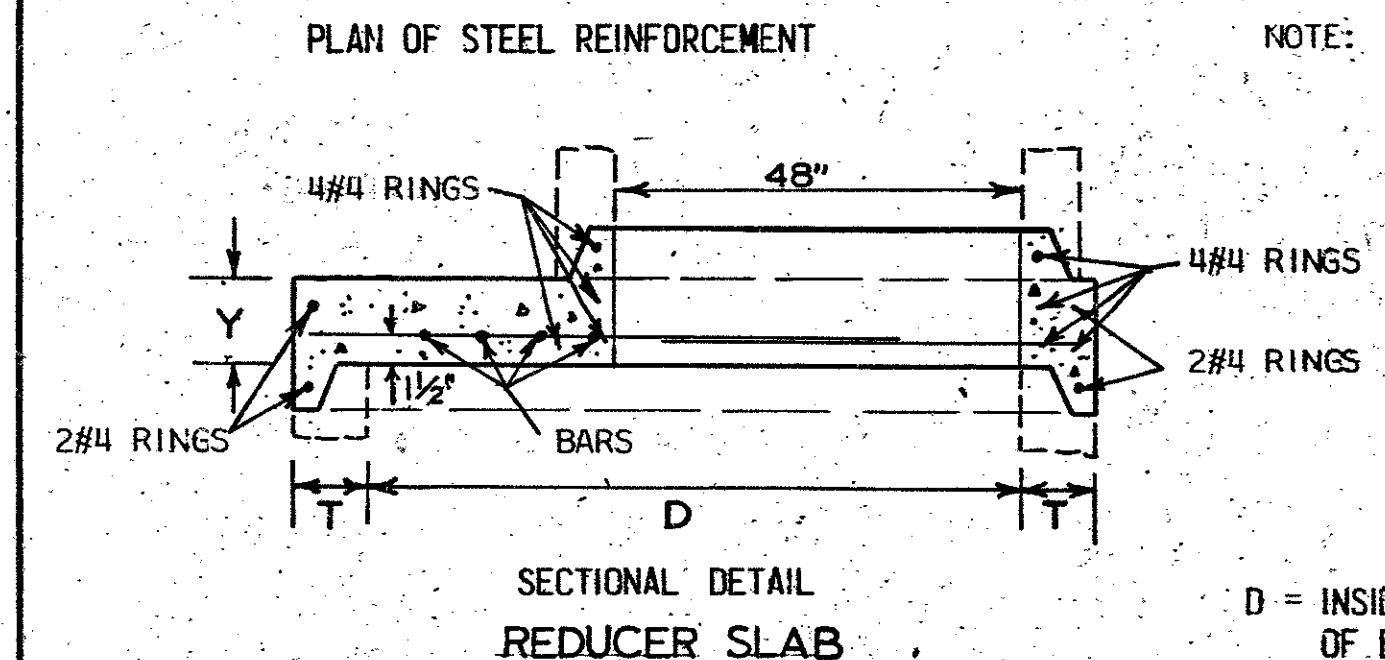
SCALE AS SHOWN
DES. 8-58
DRW. R.M.U.
TRA. G.M.E.
CHK. R.K.C.
(SUBMITTED) *Hynd E. Hardy*
STATE ROAD & AIRPORT DESIGN ENGR.
(APPROVED) *Thomas D. Moreland*
STATE HIGHWAY ENGINEER
REV. & RED. OCTOBER, 1981
NUMBER
1011A



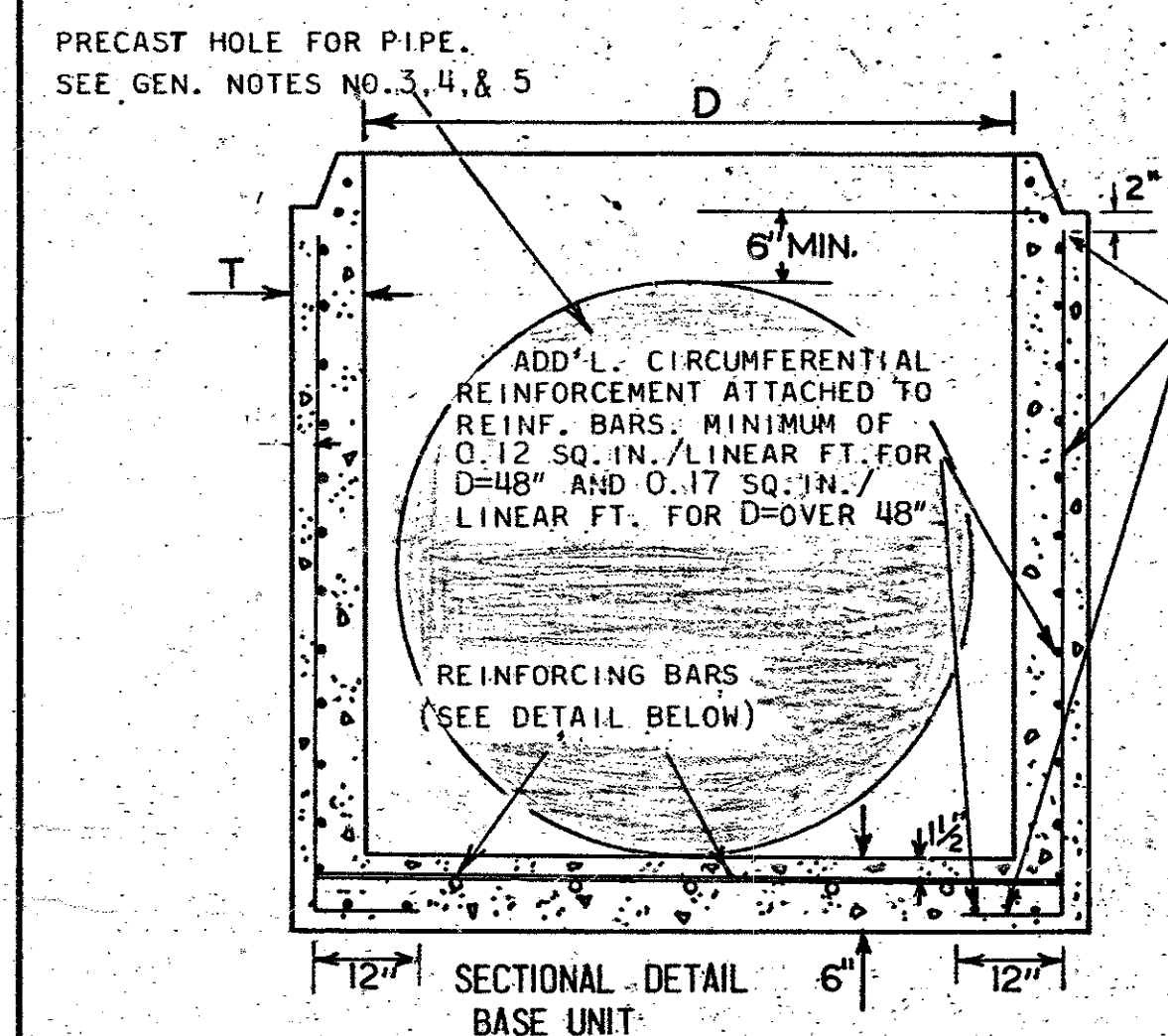
STEP DETAIL

D	Y MIN.	(a) BARS No.	(a) BARS SIZE	(b) BARS No.	(b) BARS SIZE	(c) BARS No.	(c) BARS SIZE
60"	8"	2	#6	4	#6	2	#6
72"	9"	2	#6	6	#6	4	#6

NOTE: 10 FT. MAXIMUM ALLOWANCE COVER ABOVE TOP OF REDUCER SLABS. REDUCER CONES TO BE USED WHERE REDUCER SLABS NOT PERMITTED.

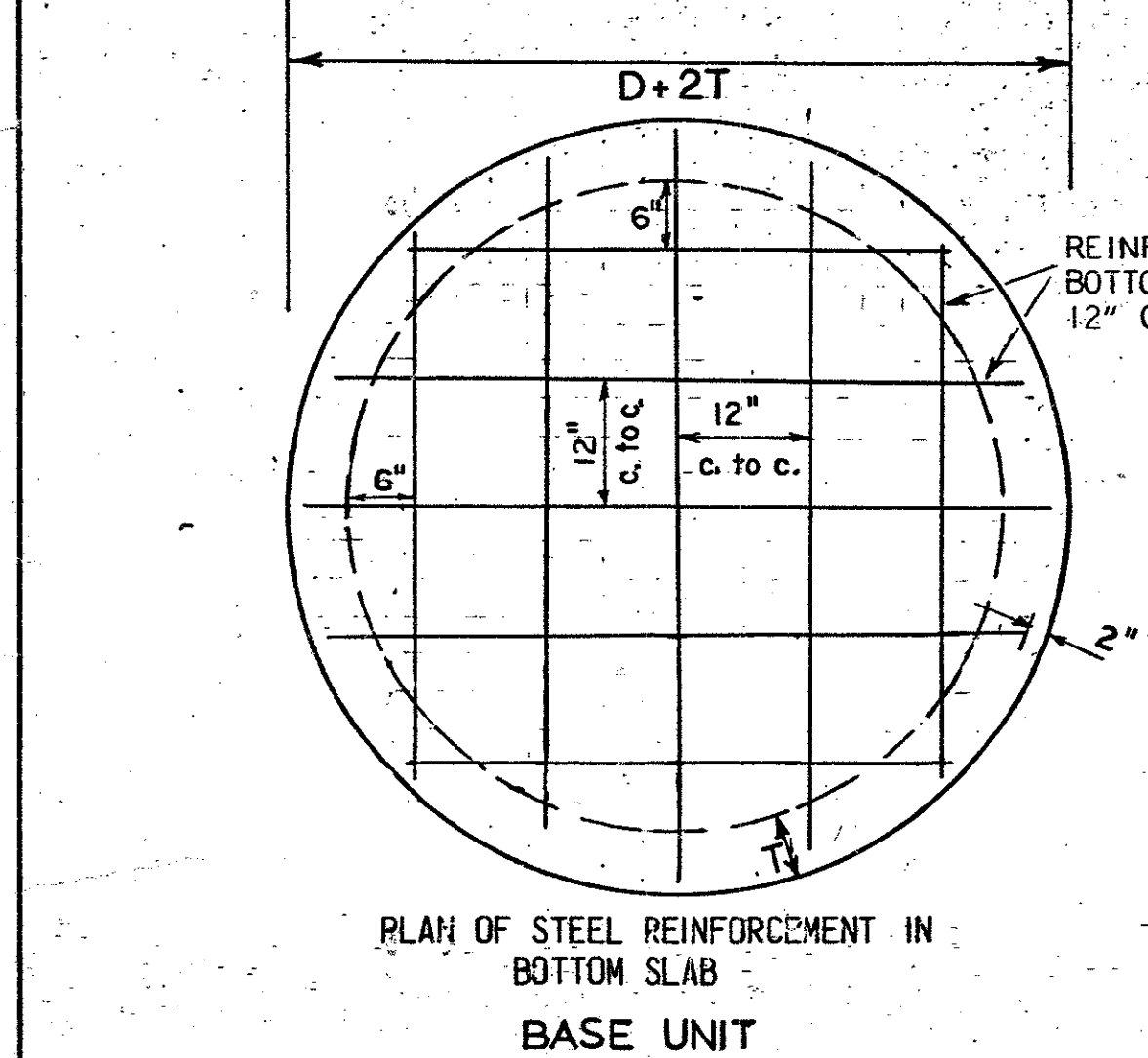


D = INSIDE DIAMETER OF BASE UNIT

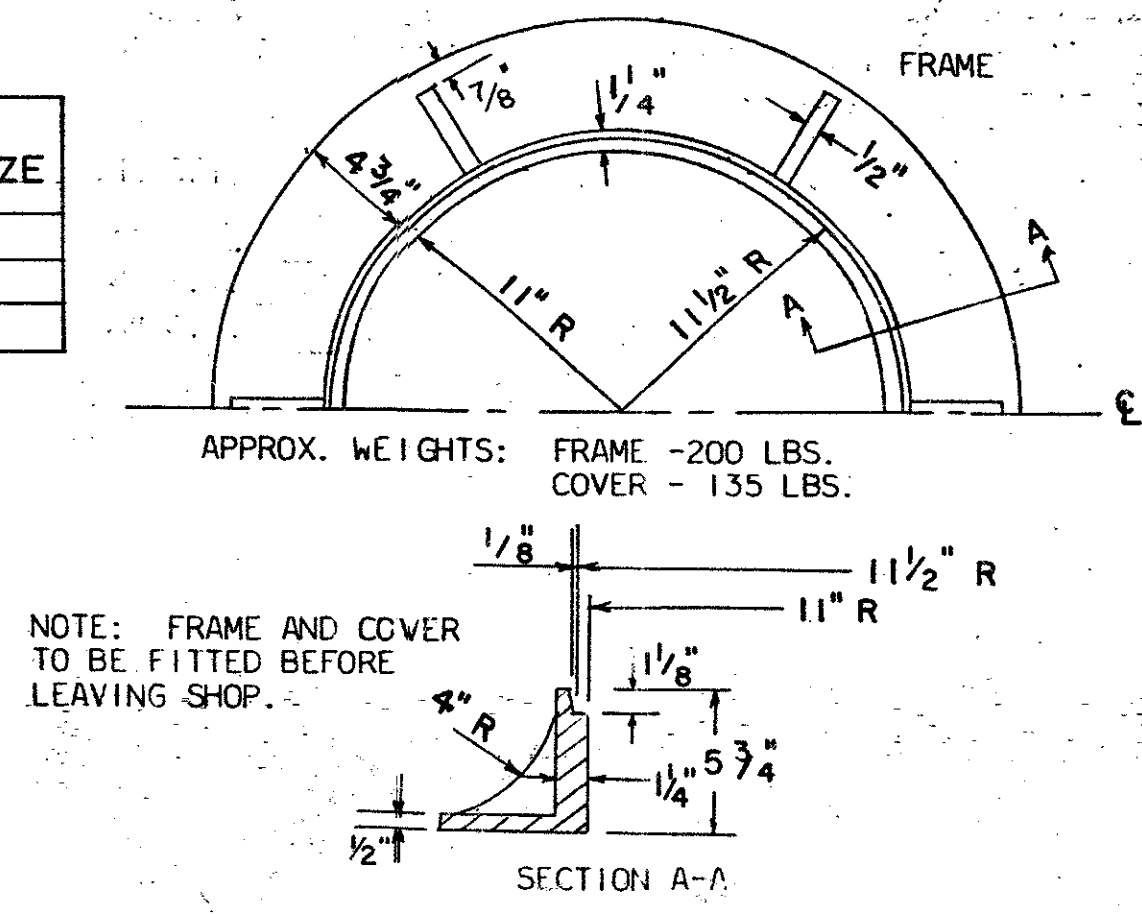


BASE UNIT SHALL CONTAIN IN ADDITION TO A.S.T.M. C-478 REINFORCEMENT, TWO NO. 5 VERTICAL BARS AT EACH OPENING EXTENDING FROM WITHIN 2" OF JOINT DOWN WALL INTO BOTTOM SLAB AS SHOWN MINIMUM 2" CLEARANCE ALL AROUND.

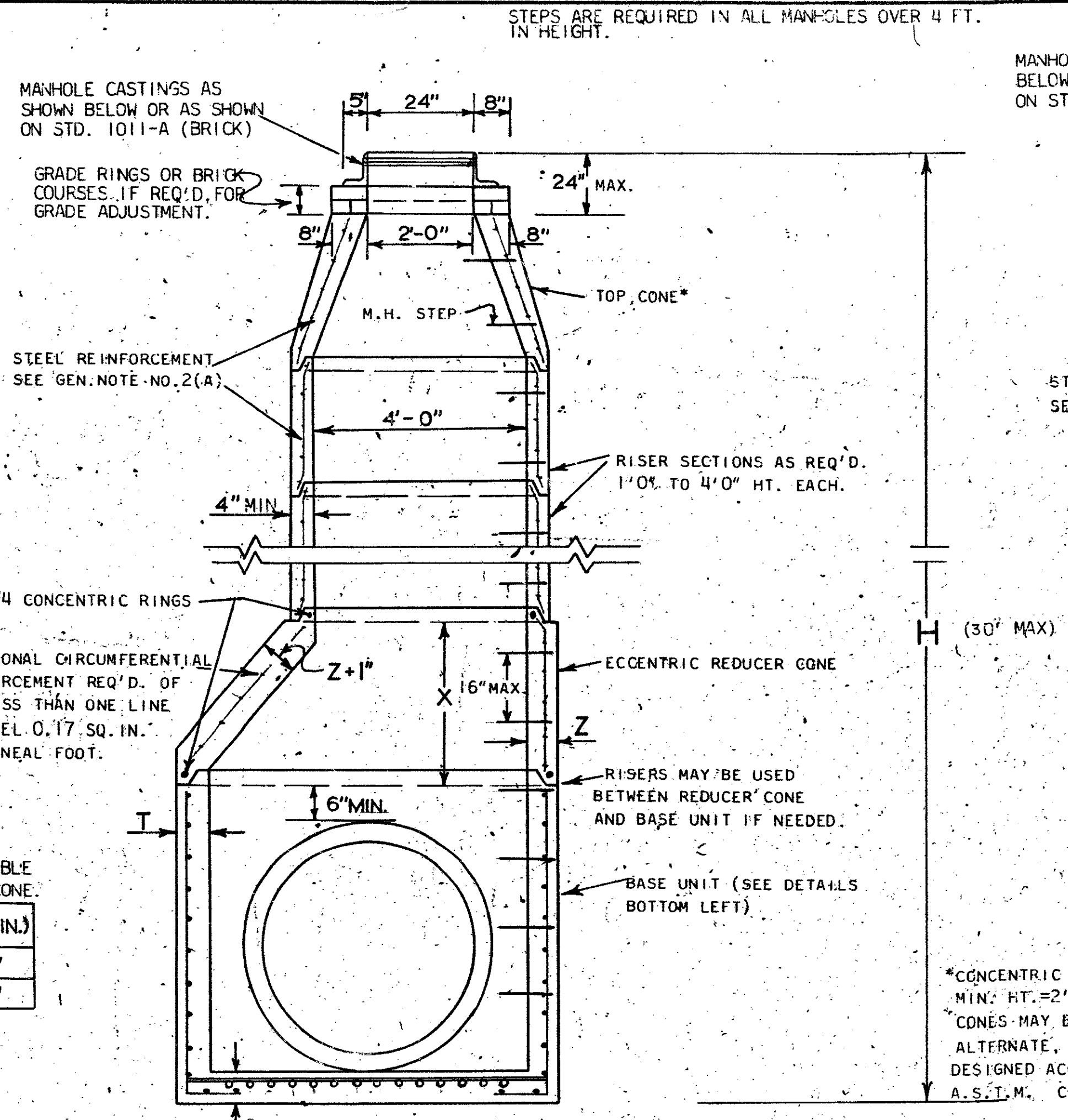
D	T (MIN)
48"	5"
60"	5"
72"	6"



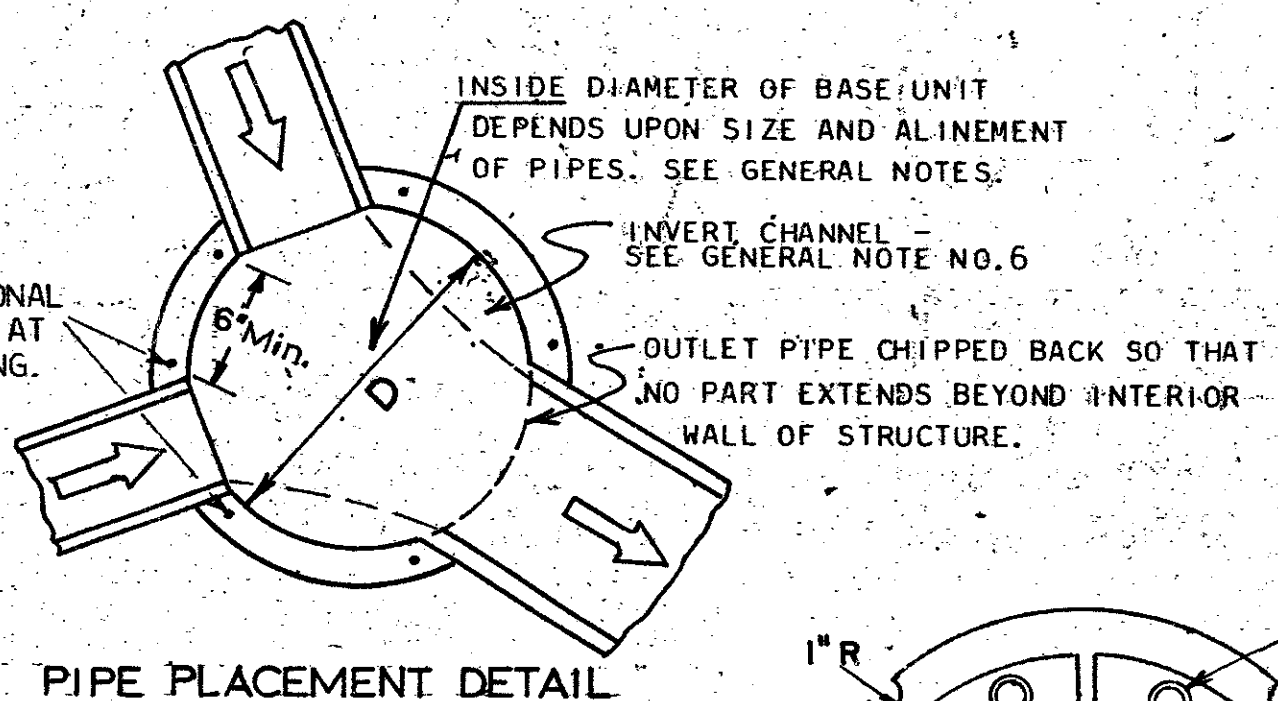
D	BAR SIZE
48"	#5
60"	#6
72"	#6



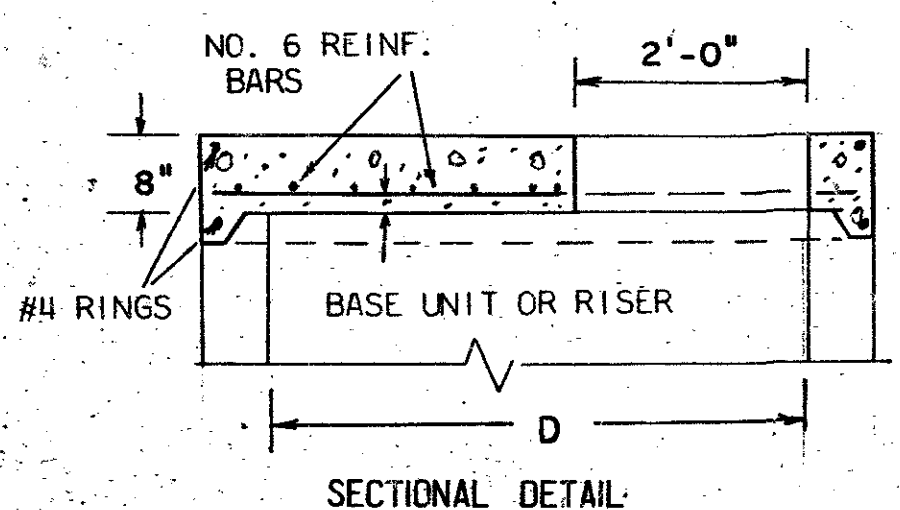
MANHOLE CASTINGS (C.I.)



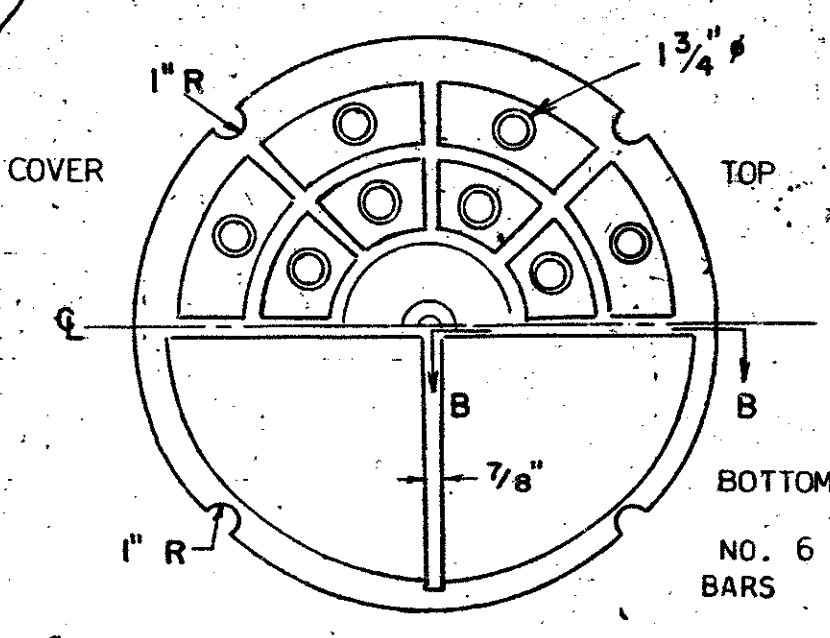
SECTIONAL DETAIL (MANHOLE WITH BASE UNIT OF D-OVER 48")



PIPE PLACEMENT DETAIL

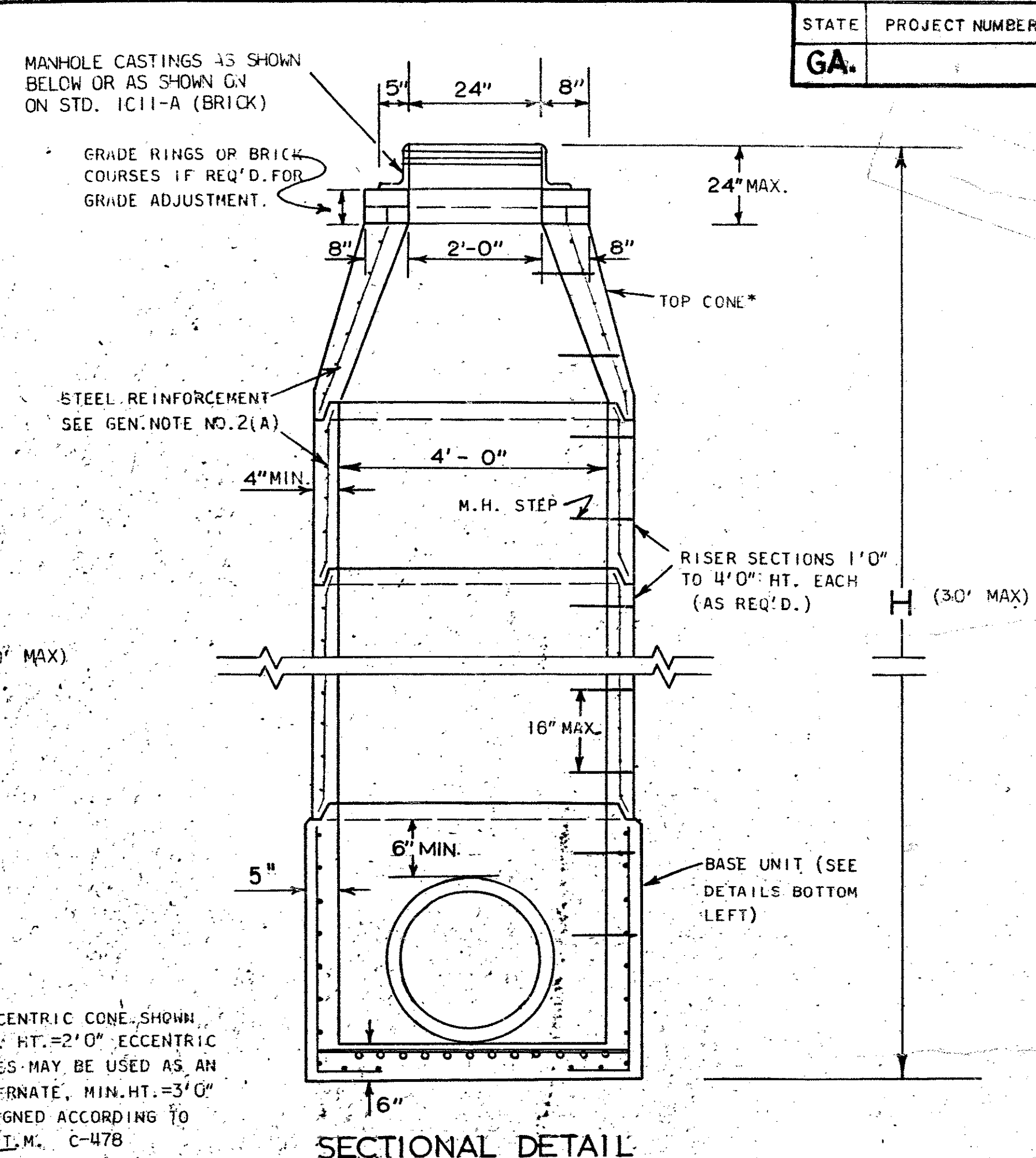


SECTIONAL DETAIL



FLAT TOP SLAB IS FOR USE IN AREA OF MINIMUM COVER ONLY. MAXIMUM HEIGHT OF MANHOLE WITH FLAT TOP SLAB SHALL BE 4 FT. ABOVE TOP OF HIGHEST ENTERING PIPE.

FLAT TOP SLAB

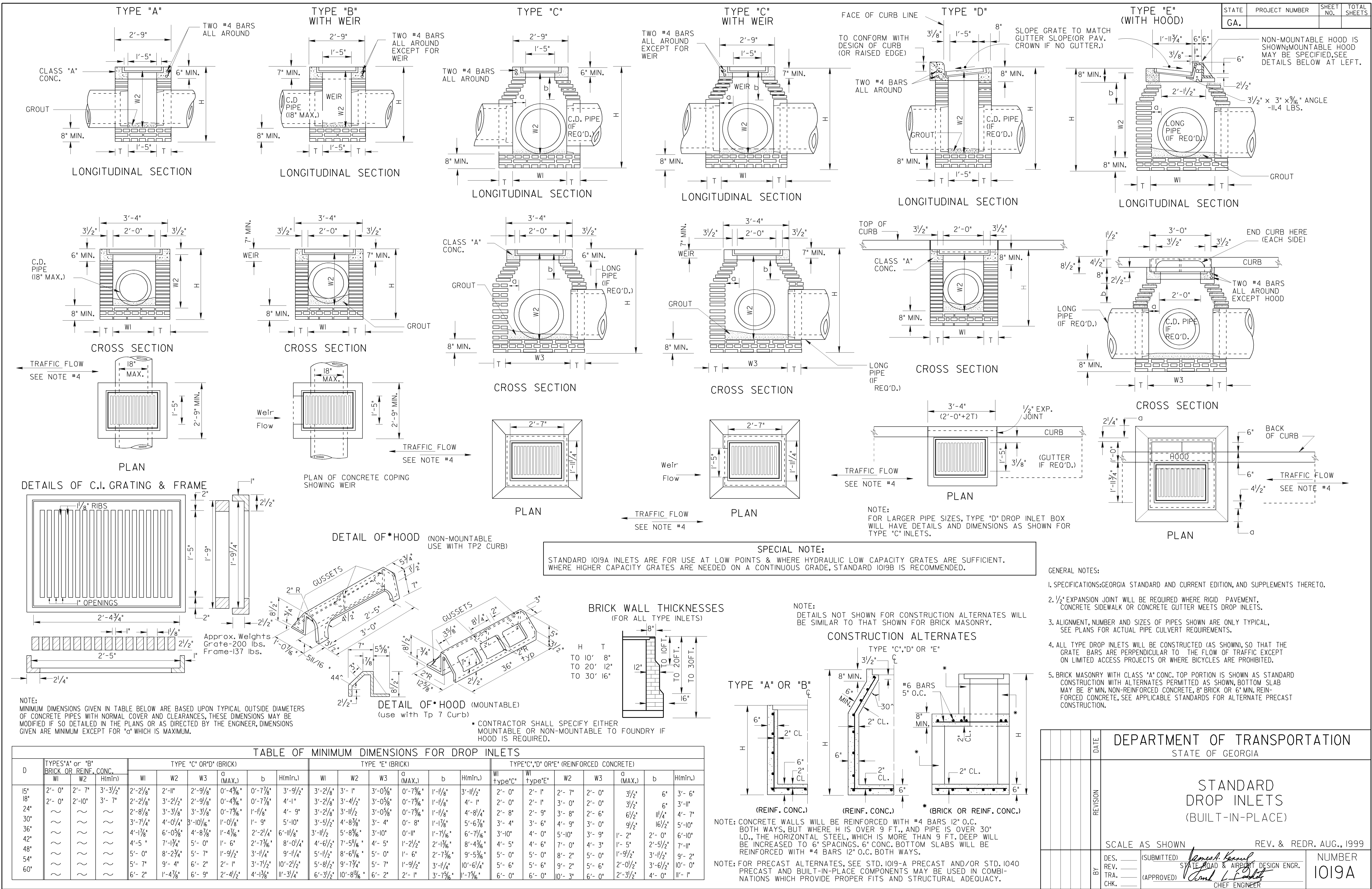


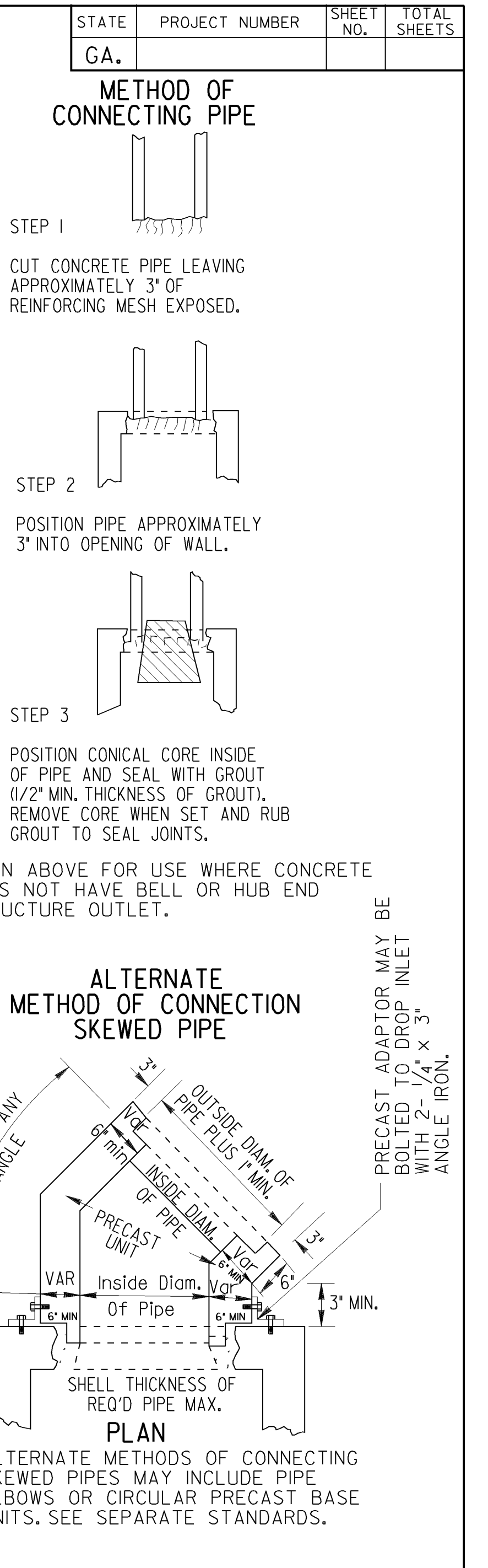
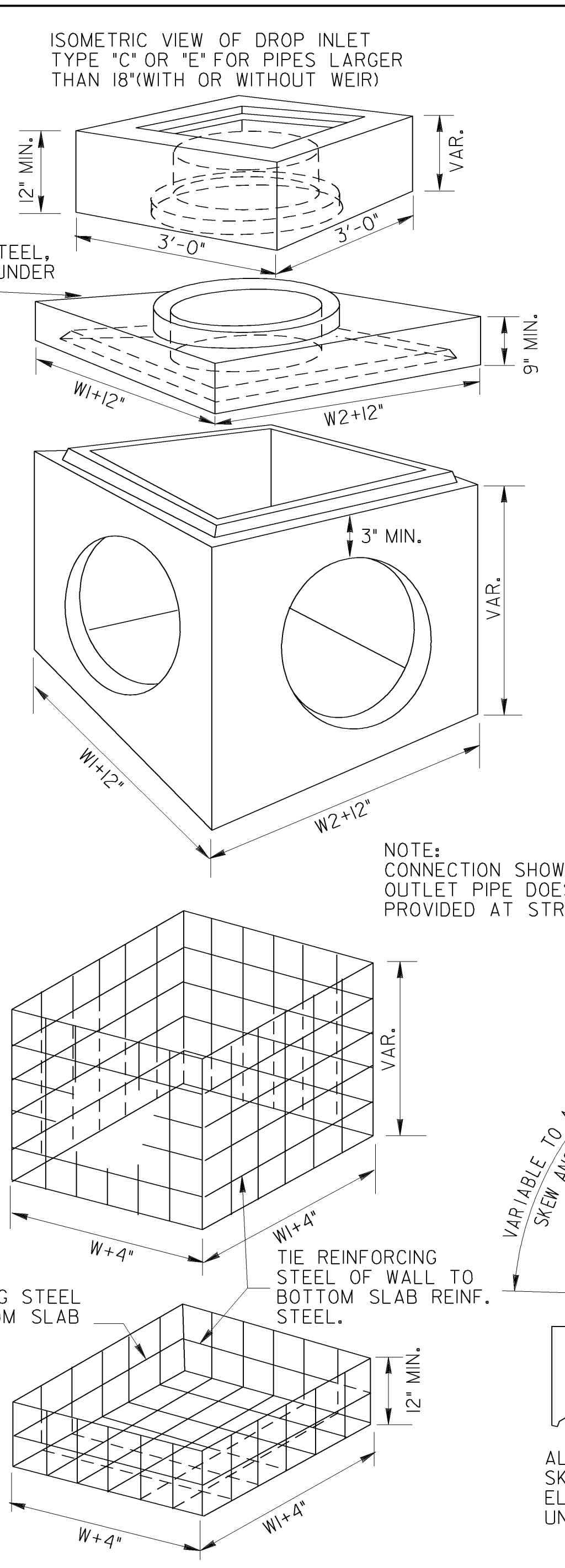
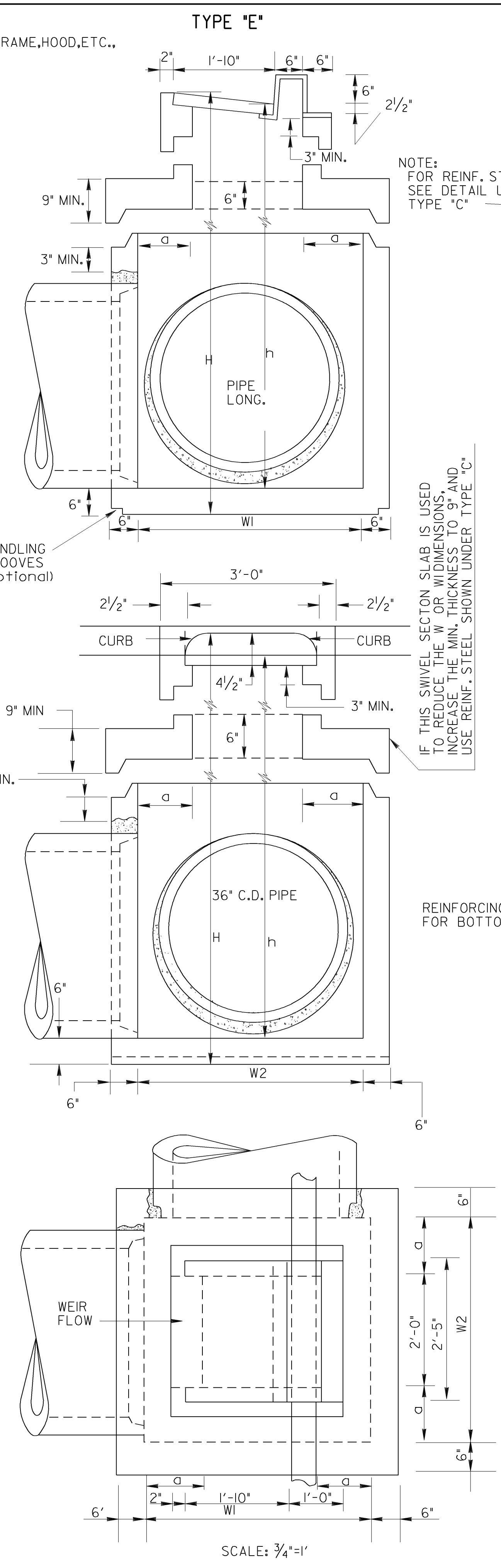
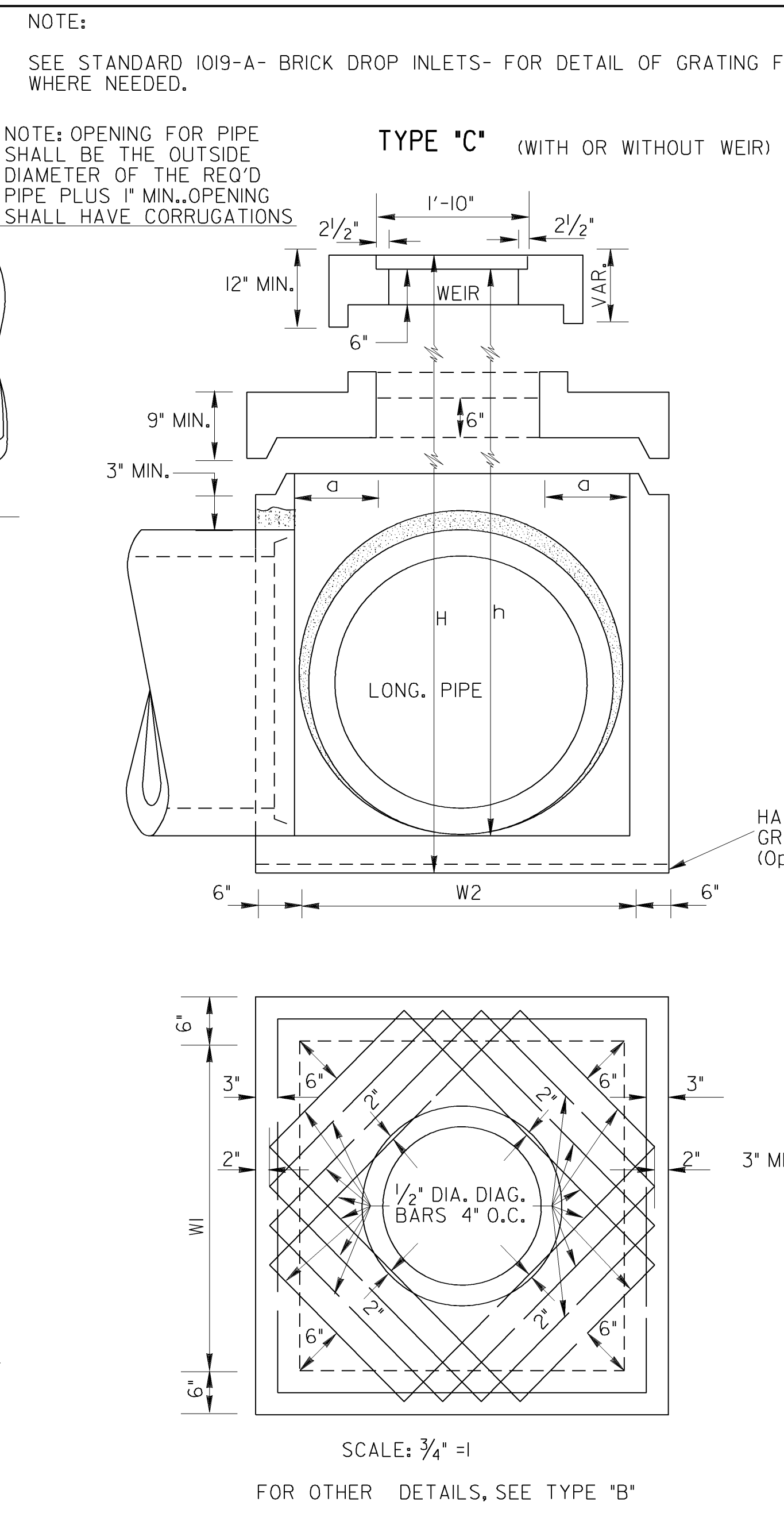
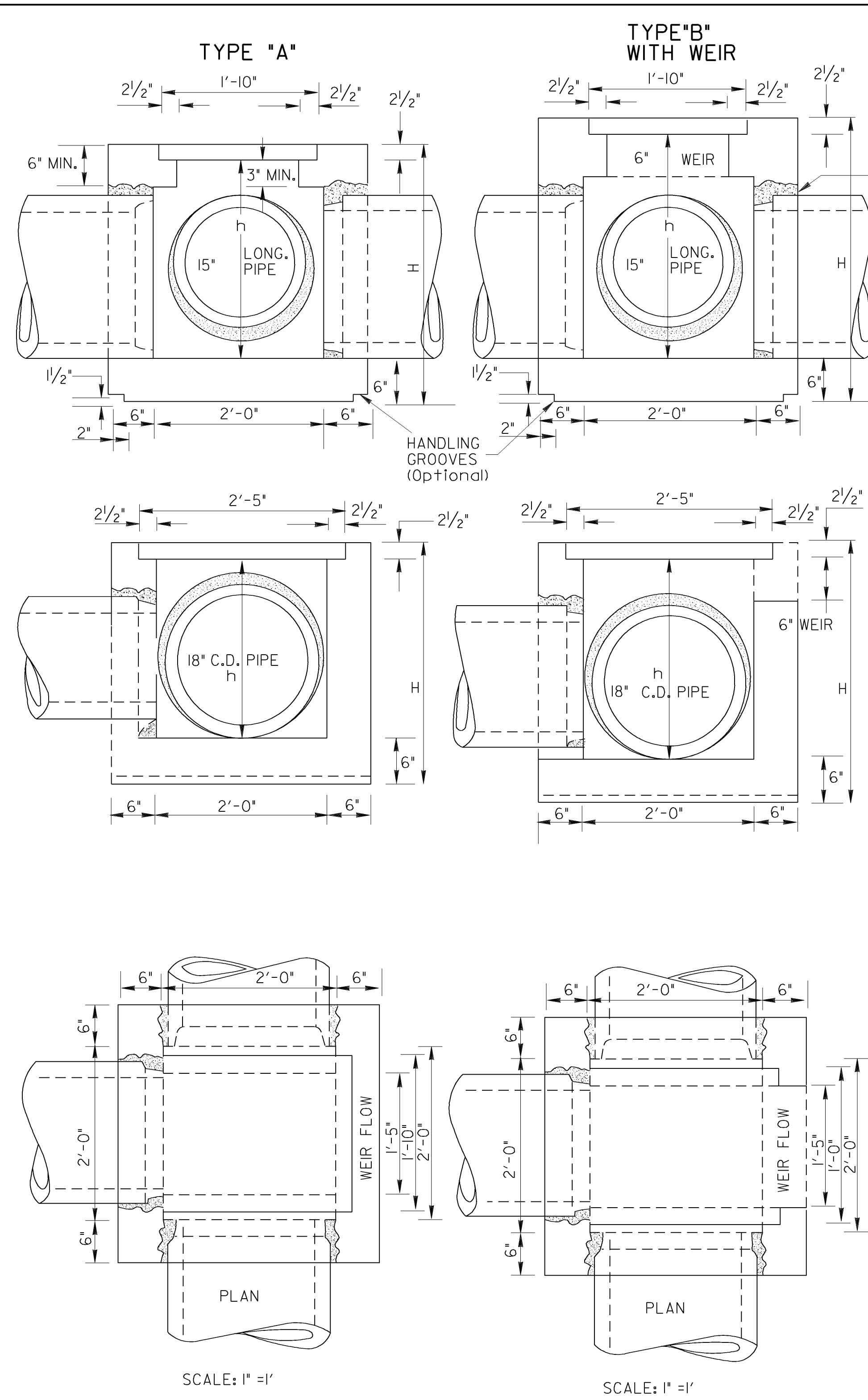
SECTIONAL DETAIL (MANHOLE WITH BASE UNIT OF D=48")

GENERAL NOTES

- MATERIALS: ALL CONCRETE, STEEL BARS AND STEEL WIRE REINFORCEMENT SHALL COMPLY WITH SECTION 866.02 OF GEORGIA STANDARD SPECIFICATIONS AND SPECIAL PROVISION WHICH MODIFY SECTION 866.02.
- REINFORCEMENT: (A) PLACEMENT AND DESIGN OF STEEL REINFORCEMENT IN RISER UNITS, CONE SECTIONS, GRADE RINGS AND JOINTS SHALL BE IN COMPLIANCE WITH A.S.T.M. C-478 UNLESS OTHERWISE NOTED. (B) BASE UNITS, REDUCER SLABS AND FLAT TOP SLABS SHALL HAVE STEEL REINFORCEMENT AS SHOWN IN DETAILS AT LEFT.
- OPENINGS FOR PIPES LARGER THAN 6 INCHES IN DIAMETER ARE TO BE PRECAST. A MINIMUM OF 6" ALONG THE INTERCIRCUMFERENCE IS TO REMAIN BETWEEN THE EXTREMITIES OF HOLE FOR ADJACENT PIPE IN ANY SINGLE UNIT. A MINIMUM OF TWO REINF. BARS SHALL REMAIN IN WALL BETWEEN ANY TWO OPENINGS.
- THE CONTRACTOR WILL FURNISH THE FABRICATOR WITH THE ANGLE OF ALIGNMENT AND SIZE OF ALL PIPES TO ENTER MANHOLE AND THE HEIGHT OF STRUCTURE.
- BASE UNITS SHALL HAVE SUFFICIENT HEIGHT TO ALLOW FOR MINIMUM OF 6" OF WALL BETWEEN TOP OF HIGHEST OPENING FOR PIPES AND BOTTOM OF JOINT.
- INVERT CHANNELS: (A) FOR SANITARY SEWER MANHOLES SEE GEORGIA STANDARD SPECIFICATIONS FOR CHANNEL REQUIREMENTS. (B) FOR STORM SEWER MANHOLES, CHANNELS BUILT TO SUIT PIPE SIZES AND LOCATION. HEIGHT OF CHANNEL EQUAL TO 1/2 DIAMETER OF OUTLET PIPE. CHANNEL BUILT FROM GROUT OR CLASS "A" CONCRETE.
- PIPES ARE TO BE EXTENDED INTO STRUCTURE WALL A MINIMUM OF 4" BUT SHOULD NOT EXTEND BEYOND INTERIOR WALL OF STRUCTURE.
- ALL JOINTS, EXCEPT FOR GRADE RINGS AND TOP OF TOP CONE, SHALL HAVE TONGUE AND GROOVE SECTION.

DATE		6-1-75	
REVISIONS			
CASTINGS & BASE U.			
BY		R M U	
DESIGNED: GCL DRAWN: RMU CHECKED: JEC			
SUBMITTED: J. J. Foster STATE ROAD DESIGN ENGINEER			
APPROVED: [Signature] STATE HIGHWAY ENGINEER			
NO SCALE		AUGUST, 1973	
NUMBER		1011-A	
PRECAST			





DIMENSIONS FOR DROP INLETS												
PIPE SIZE	TYPE "A"		TYPE "B"		TYPE "C"				TYPE "E"			
	MIN. h	MIN. H	MIN. h	MIN. H	WlorW2	α	MIN. h	MIN. H	WlorW2	α	MIN. h	MIN. H
15"	2'- 0"	2'-8/2'	2'- 7"	3'-3/2'	2'- 0"		2'-7"	3'-3/2'	2'- 0"		2'-7"	3 - 3/2'
18"	2'-3/2'	3'- 0"	2'-10"	3'-6/2'	2'- 0"		2'-10"	3'-6/2'	2'- 0"		2'-10"	3 - 6/2'
24"					3'- 0"	0'- 6"	4'- 3/2'	5'- 0"	3'- 0"	0'- 6"	4'- 7"	5 - 3 '
30"					3'- 6"	0'- 9"	4'-10/2'	5'- 7"	3'- 6"	0'- 9"	5'- 2"	5 - 10"
36"					4'- 0"	1'- 0"	5'- 5/2'	6'- 2"	4'- 0"	1'- 0"	5'- 9"	6 - 3 "
42"					4'- 6"	1'- 3"	6'-1/2	6'- 8"	4'- 6"	1'- 3"	6'- 4"	7 - 0 "
48"					5'- 0"	1'- 6"	6'- 7/2'	7'- 3"	5'- 0"	1'- 6"	6'- 11"	7 - 7 "
54"					5'- 6"	1'- 9"	7'- 2/2'	7'-10"	5'- 6"	1'- 9"	7'- 6"	8 - 2 "
60"					6'- 0"	2'- 0"	7'- 9/2'	8'- 5"	6'- 0"	2'- 0"	8'- 1"	8 - 9 "

NOTE: SEE STANDARD 1019A (BRICK) AND STANDARD 1040 FOR CONSTRUCTION ALTERNATES BRICK MASONRY AND CIRCULAR PRECAST SECTIONS RESPECTIVELY.

DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISION		STANDARD PRECAST DROP INLETS	
SCALE AS SHOWN		AUG. 1999	
BY	DESIGNED (SUBMITTED) DRAWN (STATE ROAD & AIRPORT DESIGN ENGINEER) TRACED (APPROVED) CHECKED	NUMBER 1019A PRECAST	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

NORMAL BACKFILL

BACKFILL, AS SHOWN BY THE BROKEN LINE SECTIONS, SHALL CONSIST OF PLACING COMPACTABLE SOIL IN 6" (LOOSE) LAYERS AND COMPACTING EACH LAYER (ACCORDING TO GEORGIA STANDARD SPECIFICATIONS) ON BOTH SIDES OF PIPE FOR ITS FULL LENGTH. MEASUREMENT AND PAYMENT WILL BE MADE UNDER ROADWAY EXCAVATION ITEMS FOR FORMATION OF EMBANKMENTS.

NORMAL EMBANKMENT SHALL BE PLACED A MINIMUM OF 12" WIDE ON EACH SIDE OF THE PIPE AND AT LEAST THE MIN. COVER OVER THE PIPE AND COMPACTED TO THE REQUIRED DENSITY BEFORE EQUIPMENT IS ALLOWED TO CROSS.

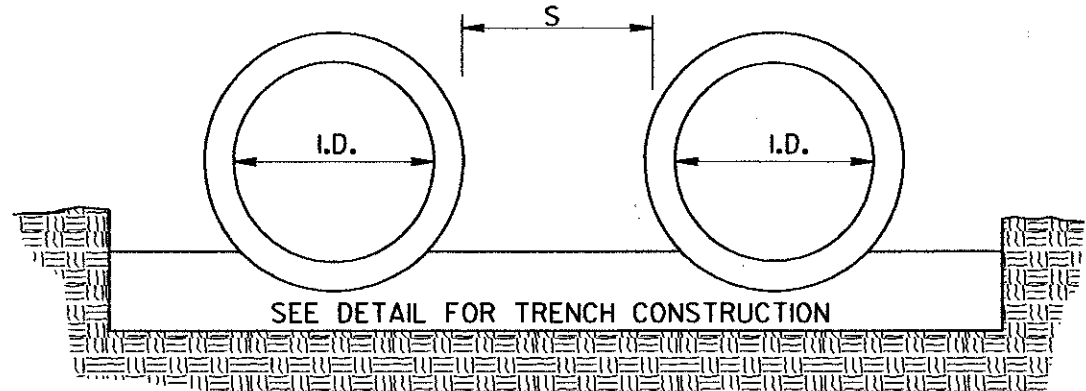
AFTER BACKFILL HAS BEEN COMPACTED, THE BALANCE OF THE FILL UP TO GRADE LINE SHALL BE CONSTRUCTED IN ACCORDANCE WITH EMBANKMENT SPECIFICATIONS

LONGITUDINAL SECTION OF IMPERFECT TRENCH BACKFILL AND BACKFILL METHODS

IMPERFECT BACKFILL

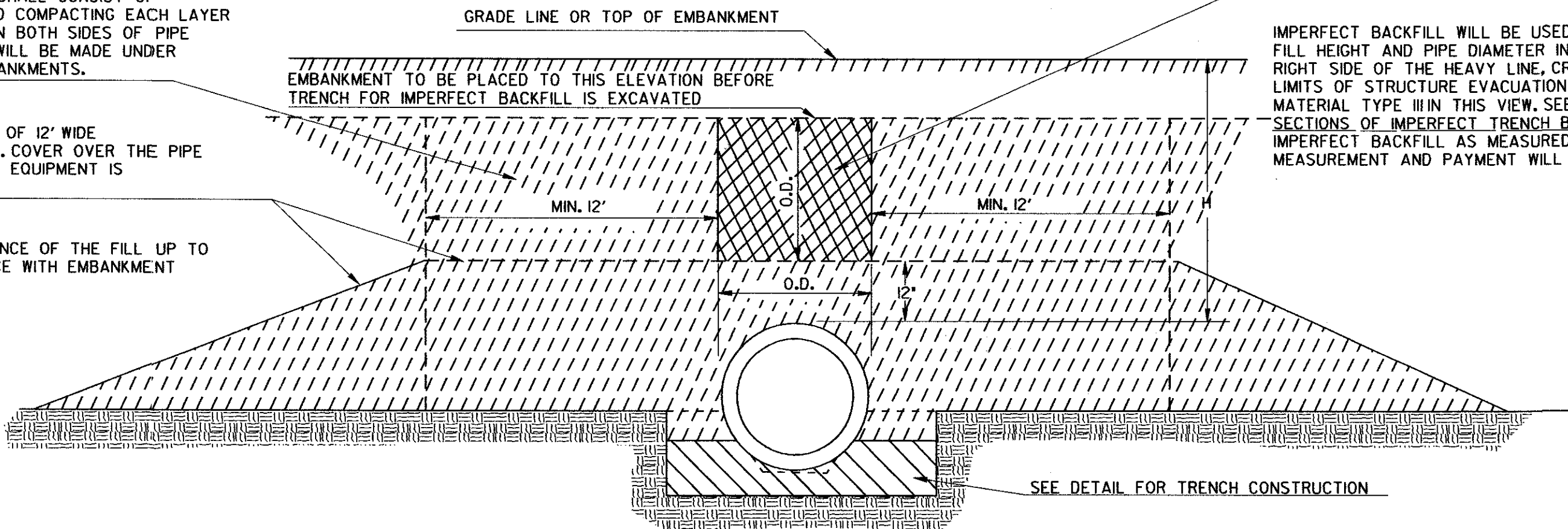
IMPERFECT BACKFILL WILL BE USED WITH CONCRETE PIPE IF FILL HEIGHT AND PIPE DIAMETER IN TABLE NO. 1 FALLS ON THE RIGHT SIDE OF THE HEAVY LINE. CROSS HATCHED AREA SHOWS LIMITS OF STRUCTURE EXCAVATION AND IMPERFECT BACKFILL MATERIAL TYPE III IN THIS VIEW. SEE DETAILS BELOW CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL FOR LIMITS OF IMPERFECT BACKFILL AS MEASURED OVER THE PIPE LENGTHWISE. MEASUREMENT AND PAYMENT WILL BE CONFINED TO THESE LIMITS.

MULTIPLE PIPE CULVERT SPACING



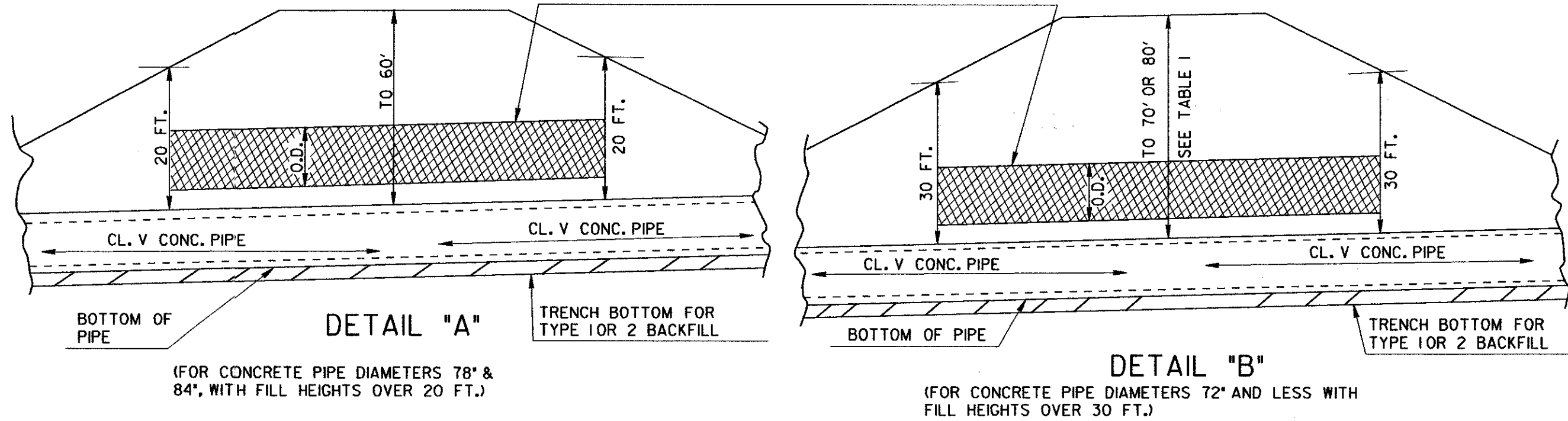
S=ONE INSIDE DIAMETER OF PIPE, OR 3 FEET, WHICHEVER IS SMALLER.
FOR PIPE ARCH CULVERTS, SUBSTITUTE SPAN FOR INSIDE DIAMETER.

NOTE:
FOR MULTIPLE LINES OF C.M. PIPE WITH METAL FLARED END SECTIONS, S MAY BE INCREASED ENOUGH TO AVOID OVERLAP OF END SECTION WINGTIPS. LOCATION OF METAL END SECTION SHOULD BE DETERMINED BEFORE PLACEMENT OF PIPE.

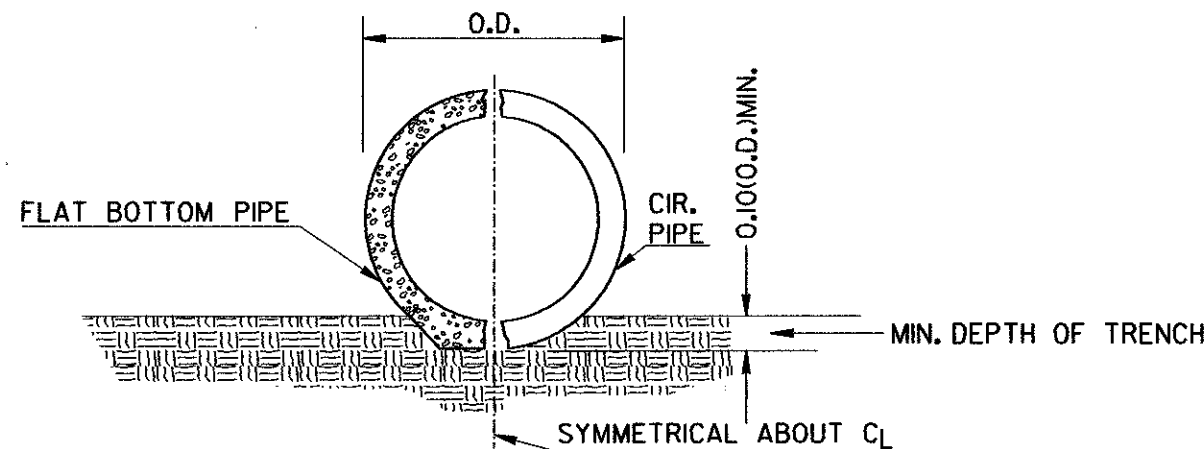


CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL

CROSS HATCHED AREAS SHOW LIMITS OF CONSTRUCTION & MEASUREMENT FOR STRUCTURE EXCAVATION & IMPERFECT TRENCH BACKFILL MATERIAL, TYPE III

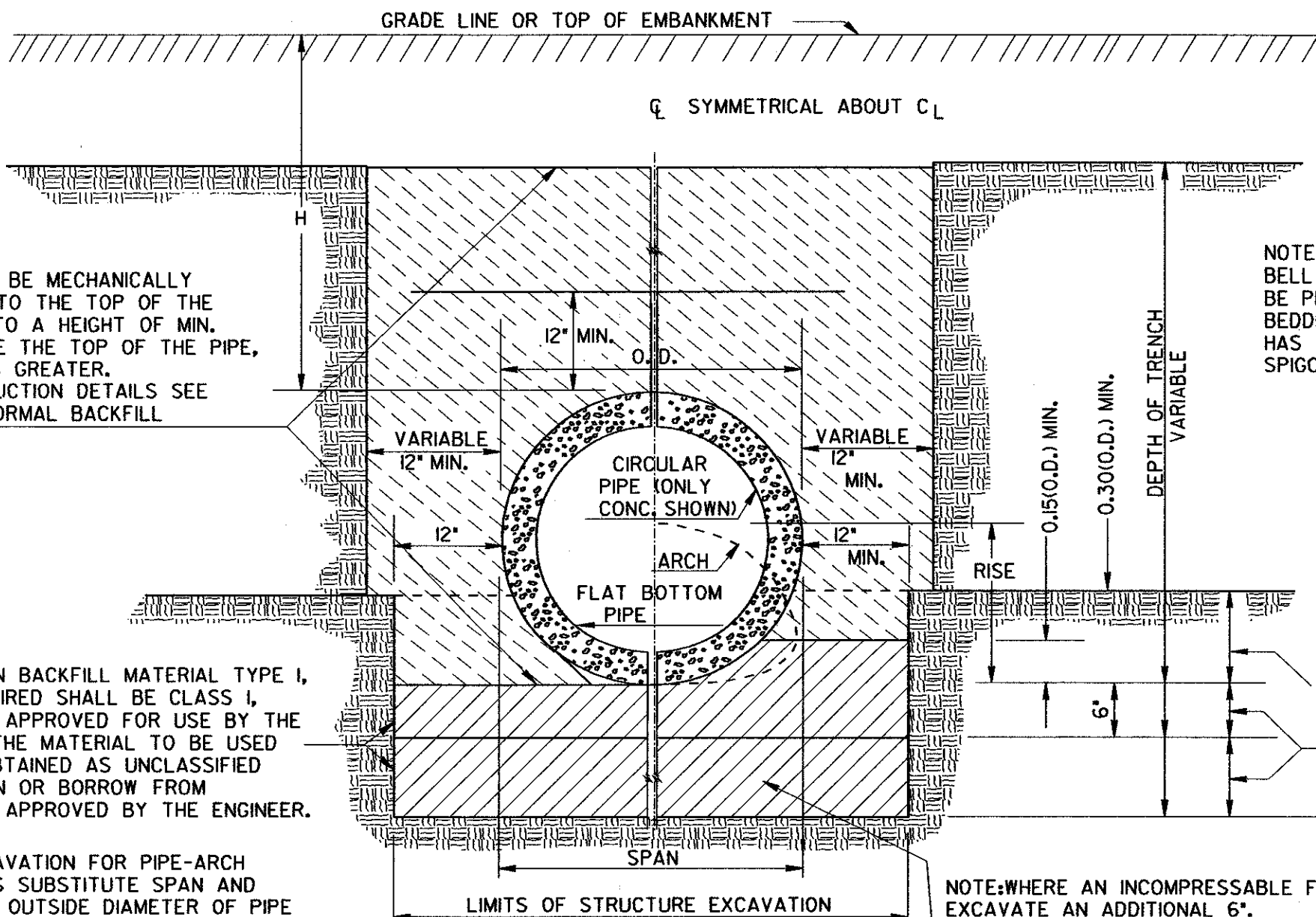


TRENCH CONSTRUCTION FOR SIDE DRAIN



NOTE: THE PIPE SHALL BE BEDDED TO LINE AND GRADE IN A FIRM FOUNDATION SHAPED TO FIT THE LOWER PART OF THE PIPE EXTERIOR. WHERE ROCK EXISTS, EXCAVATE AND BACKFILL WITH COMPRESSIBLE MATERIAL (UNCLASSIFIED EXCAVATION) A MINIMUM OF 6" BELOW THE PIPE.

TRENCH CONSTRUCTION FOR STORM DRAIN.



BACKFILL TO BE MECHANICALLY COMPACTED TO THE TOP OF THE TRENCH OR TO A HEIGHT OF MIN. COVER ABOVE THE TOP OF THE PIPE, WHICHEVER IS GREATER. FOR CONSTRUCTION DETAILS SEE NOTE FOR NORMAL BACKFILL.

FOUNDATION BACKFILL MATERIAL TYPE I, WHEN REQUIRED SHALL BE CLASS I, OR II SOILS APPROVED FOR USE BY THE ENGINEER. THE MATERIAL TO BE USED WILL BE OBTAINED AS UNCLASSIFIED EXCAVATION OR BORROW FROM LOCATIONS APPROVED BY THE ENGINEER.

FOR EXCAVATION FOR PIPE-ARCH CULVERTS SUBSTITUTE SPAN AND RISE FOR OUTSIDE DIAMETER OF PIPE IN HORIZONTAL AND VERTICAL DIMENSIONS SPECIFIED IN DETAIL.

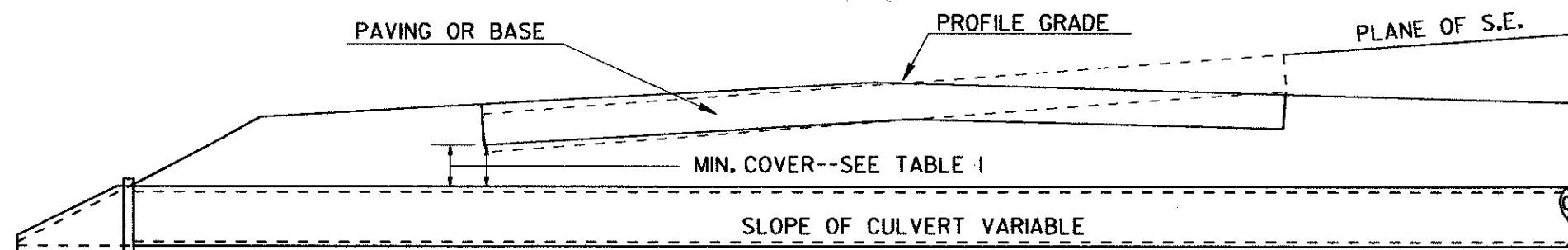
NOTE: PIPE SHALL BE BEDDED IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

NOTE: BELL HOLES SHALL BE PROVIDED IN BEDDING IF PIPE HAS BELL AND SPIGOT JOINTS.

NOTE: TRENCH CONSTRUCTION IS REQUIRED FOR BOTH NORMAL OR IMPERFECT BACKFILL. ALL PIPES WITH BELL & SPIGOT JOINTS SHALL HAVE BELL HOLES IN BEDDING.

NOTE: WHERE AN INCOMPRESSIBLE FOUNDATION EXISTS, EXCAVATE AN ADDITIONAL 6". WHERE AN UNSTABLE FOUNDATION MATERIAL IS ENCOUNTERED, EXCAVATE AN ADDITIONAL DEPTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER

DETAIL SHOWING MINIMUM COVER FOR PIPE CULVERTS



NOTE:

1. FOR FILL HEIGHT TABLES SEE SHEET 2 OF 3 AND SHEET 3 OF 3.
2. ONLY ONE CLASS OR THICKNESS OF PIPE WILL BE SPECIFIED FOR EACH INDIVIDUAL LOCATION. THE CLASS OR THICKNESS WILL BE DETERMINED BY THE MAXIMUM HEIGHT OF FILL.

DEPARTMENT OF TRANSPORTATION			
STATE OF GEORGIA			
STANDARD			
CONCRETE & METAL PIPE CULVERTS			
SHEET 1 OF 3			
(TRENCH CONSTRUCTION, BEDDING, BACKFILLING)			
NO SCALE		REV. & REDR.: SEPT., 2001	
DES.	(SUBMITTED)	NUMBER	
DRW.	(APPROVED)	1030D	
TRA.			
CHK.			

TABLE NO.1 ROUND PIPE - CONCRETE - CORRUGATED STEEL - CORRUGATED ALUMINUM
MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	PIPE TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE										PIPE DIAMETER (INCHES)	
			1 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90
12	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
15	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
18	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
24	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
30	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
36	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
42	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
48	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
54	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
60	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
66	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
72	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
78	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
84	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
90	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
96	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
102	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
108	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
114	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064
120	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075
	CONCRETE	12	III	III	IV	V	V	V	V	V	V	V	V	

TABLE NO.3- INFORMATION ONLY			
COR.	METAL	THICKNESS EQUIVALENT GAGE	
		STEEL	ALUMINUM
		.064	.0060
		.079	.0075
		.109	.0105
		.138	.0135
		.168	.0164

FOR CONDITIONS TO THE RIGHT OF THE HEAVY LINE, CLASS V CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO DETAIL "A" OR "B" ON SHEET 1 OF 3.

STEEL 1 OR ALUM 1 DENOTES CORRUGATION PROFILE 2 2/3" X 1/2"

STEEL 2 OR ALUM 2 DENOTES CORRUGATION PROFILE 3" X 1" (OR 5" X 1" FOR STEEL PIPE ONLY)

ALL STEEL AND ALUMINUM PIPE SHALL BE LOCK-SEAM OR WELDED-SEAM (HELICAL) CONSTRUCTION. MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

TRENCH CONSTRUCTION IS REQUIRED FOR CONDITIONS ON BOTH SIDES OF HEAVY LINE. SEE SHEET 1 OF 3.

FOR CONDITIONS TO RIGHT OF HEAVY LINE, CONCRETE PIPE REQUIRES IMPERFECT BACKFILL ACCORDING TO SPECIFICATIONS AND THIS STANDARD.

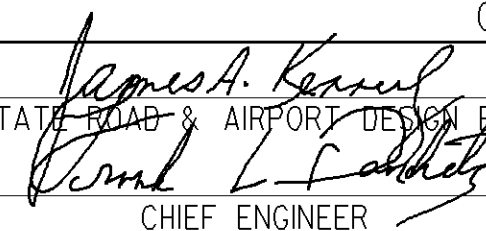
TABLE VALUES FOR ALUMINUM CORRUGATED PIPE (OR ALUMINUM SPIRAL RIB PIPE) ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, fy=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (fy=20,000 PSI), THE TABLE NO.1 ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:

- A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 INCHES BECOMES 13.8 INCHES)
- B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FEET BECOMES 29.7-34.0 FEET)

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 2 OF 3
(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)

NO SCALE
OCTOBER 21, 1998

DES. (SUBMITTED) 
TRA. (APPROVED) 
CHK. CHIEF ENGINEER

NUMBER
1030D

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

TABLE NO. 1 R ROUND PIPE - SPIRAL RIB STEEL - SPIRAL RIB ALUMINUM
MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL (FEET) ABOVE TOP OF PIPE												PIPE DIAMETER (INCHES)
			1 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 50	50 - 60	60 - 70	70 - 80	80 - 90	
12															12
15															15
18	STEEL R ALUM R	12 12	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .060	.064 .075	.064 .075	.064	.079			18
24	STEEL R ALUM R	12 12	.064 .060	.064 .060	.064 .060	.064 .060	.064 .075	.064 .075	.064 .105	.079 .105	.079 .105	.109	.109		24
30	STEEL R ALUM R	12 15	.064 .060	.064 .060	.064 .060	.064 .075	.064 .075	.064 .105	.079 .105	.079 .105	.109	.109	.109		30
36	STEEL R ALUM R	12 18	.064 .060	.064 .060	.064 .075	.064 .075	.064 .105	.079 .105	.079 .105	.109 .135	.109 .135	.109			36
42	STEEL R ALUM R	12 21	.064 .075	.064 .075	.064 .075	.064 .105	.079 .105	.079 .105	.109 .135	.109 .135	.109				42
48	STEEL R ALUM R	12 24	.064 .105	.064 .105	.064 .105	.079 .105	.079 .105	.109 .135	.109 .135	.109					48
54	STEEL R ALUM R	15 24	.064 .105	.064 .105	.064 .105	.079 .105	.079 .135	.109 .135	.109						54
60	STEEL R ALUM R	15 24	.079 .105	.079 .105	.079 .105	.079 .105	.109 .135	.109 .135	.109						60
66	STEEL R ALUM R	18 24	.079 .135	.079 .135	.079 .135	.109 .135	.109 .135	.109							66
72	STEEL R ALUM R	18 27	.109 .135	.109 .135	.109 .135	.109 .135	.109 .135	.109							72
78	STEEL R	21	.109	.109	.109	.109	.109								78
84	STEEL R	21	.109	.109	.109	.109	.109								84
90															90
96															96
102															102
108															108
114															114
120															120

R DENOTES SPIRAL RIB PROFILE 3/4" X 3/4" X 7-1/2"

TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, σ_y =24,000 PSI.
IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (σ_y =20,000 PSI), ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:
A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 IN. BECOMES 13.8 IN.)
B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FT. BECOMES 29.7-34.0 FT.)

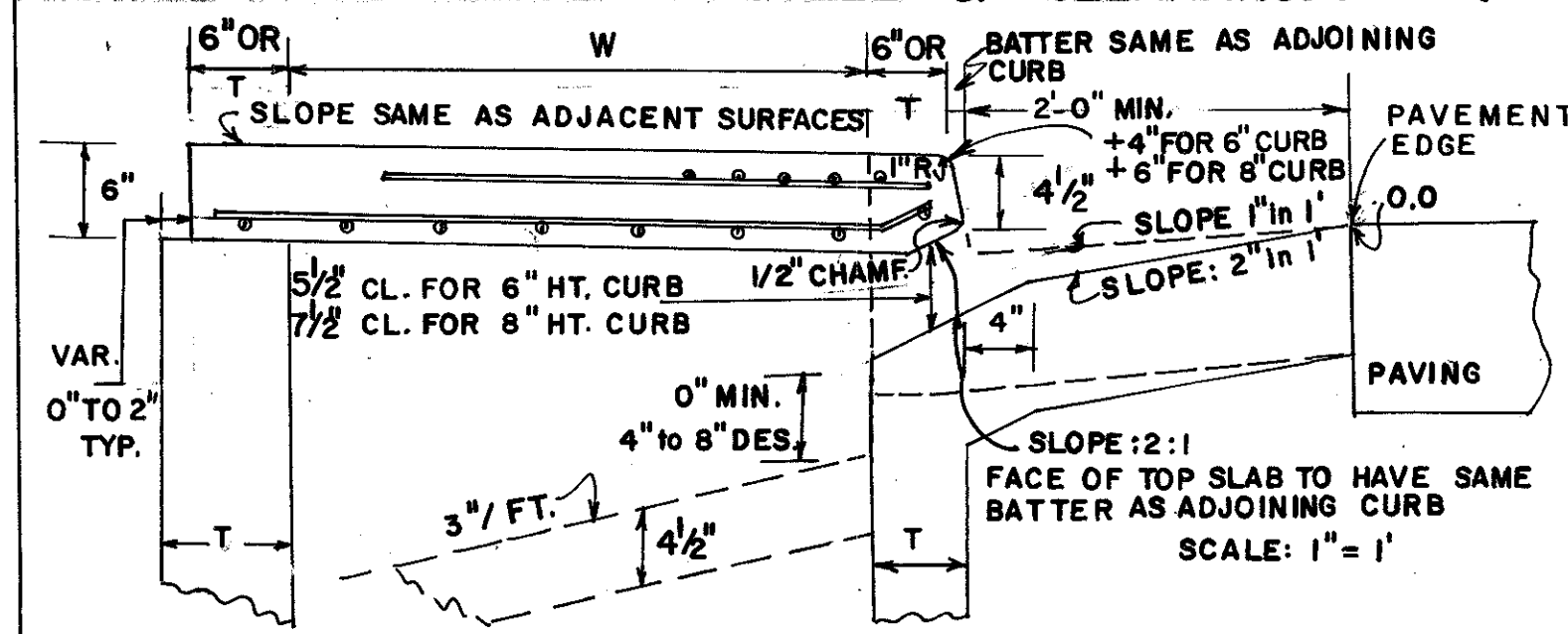
MINIMUM COVER VALUES APPLY TO HS-20 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

		STATE		PROJECT NUMBER		SHEET NO.		TOTAL SHEETS	
		GA.							
		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA STANDARD CONCRETE & METAL PIPE CULVERTS SHEET 3 OF 3 (FILL HEIGHTS FOR SPIRAL RIB METAL PIPE & FOR PIPE ARCH) NO SCALE SEPT., 2001 DESIGNED _____ TRACED _____ CHECKED _____ REVISD _____ (SUBMITTED) <i>James A. Kennel</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>David L. Canfield</i> CHIEF ENGINEER NUMBER 10300							
BY									
REVISION									
DATE									

TABLE NO. 2 (PIPE-ARCH)									
TABLE SHOWING MINIMUM THICKNESS IN INCHES OF CORRUGATED STEEL AND CORRUGATED ALUMINUM PIPE-ARCH AND MAXIMUM HEIGHTS OF FILL IN FEET ABOVE THE TOP OF THE PIPE-ARCH.									
DIAMETER OF PIPE OF EQUAL PERIPHERY INCH	NOM.-MIN. SPAN INCH	NOM.-MIN. INCH	MIN. THICKNESS (INCHES)		COR. STEEL	COR. ALUMINUM		MIN. COVER (INCHES)	MAX. HT. FILL (FEET)
			①	②					
15	17	13	.064			.060		.18	13
18	21	15	.064			.060		.18	15
21	24	18	.064			.060		.18	12
24	28	20	.064			.060		.18	14
30	35	24	.064			.075		.18	16
36	42	29	.064			.075		.18	9
	40	31		.079		.105		.18	7
42	49	33	.079			.105		.18	12
	46	36	.079		.079			.18	7
48	57	38	.109			.135		.18	12
	53	41	.109		.079			.18	7
54	64	43	.109			.135		.18	12
	60	46		.079				.18	7
60	71	47	.138			.164		.18	12
	66	51		.079				.18	7
66	77	52	.168					.18	15
	73	55		.079				.18	8
77	83	57	.168					.18	15
	81	59		.079				.18	5
78	87	63		.079				.18	14
84	95	67		.109				.18	12
90	103	71		.109				.24	11

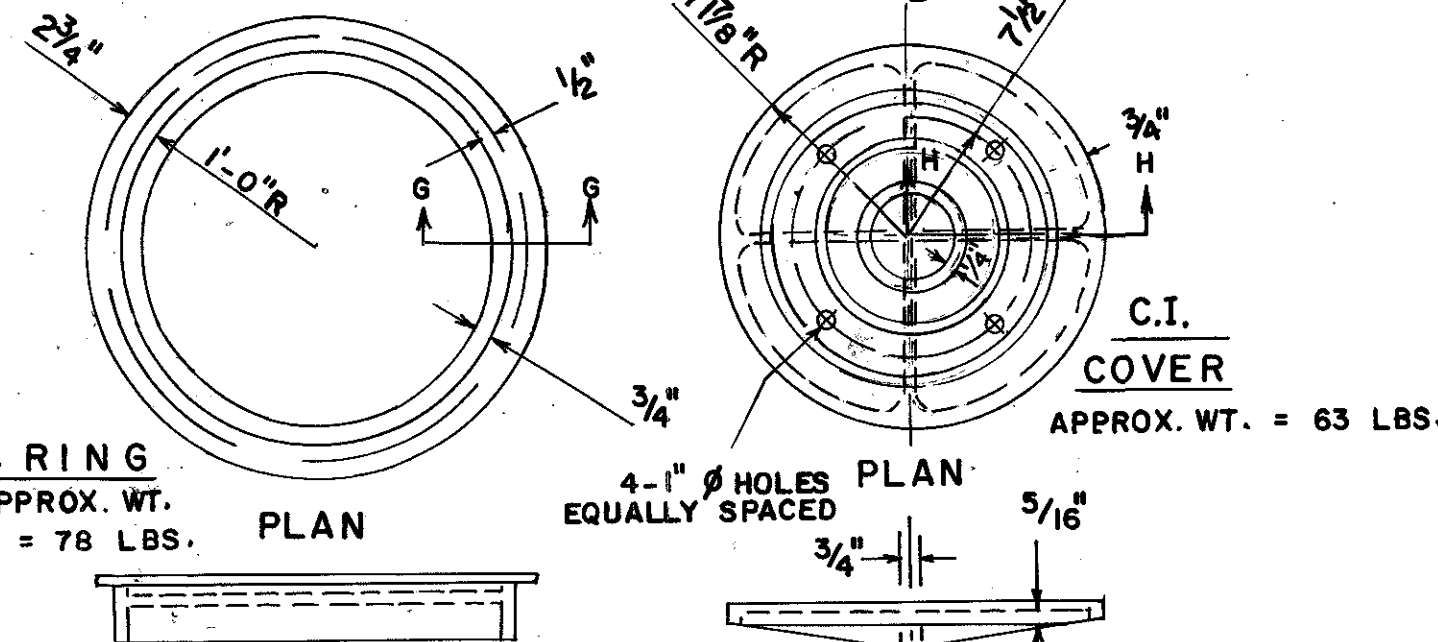
NOTE FOR TABLE NO. 2: COMBINATIONS FOR PIPE-ARCHES HAVING UNEQUAL PERIPHERY TO THAT SHOWN MAY BE SUBSTITUTED IF LISTED IN AASHTO SPECIFICATION.

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

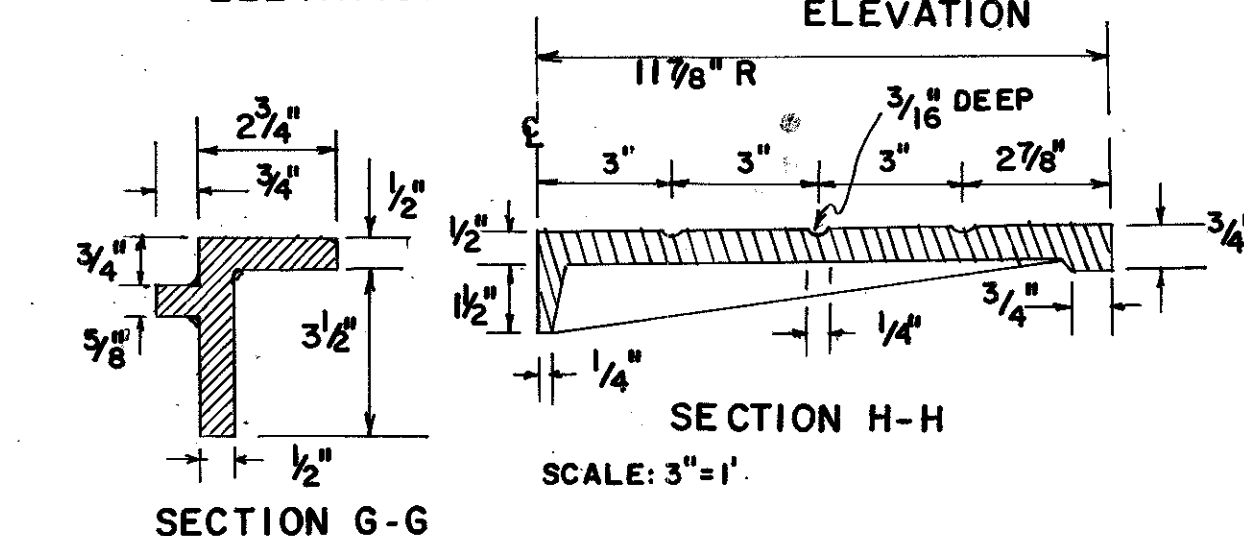


NOTE:
DETAILS NOT SHOWN
HERE WILL BE
SIMILAR TO THOSE
AT FAR LEFT
FOR NORMAL CATCH
BASINS.

3° TO 7° DRAFTS TYP. Q



ELEVATION



NOTE:
DO NOT LOCATE CATCH
BASIN ON RADII IF
OTHER ALTERNATES
ARE FEASIBLE.

DETAILS NOT SHOWN
HERE ARE SIMILAR
TO THOSE FOR NORMAL
CATCH BASINS. PAYMENT
FOR CATCH BASIN
INCLUDES ALL
QUANTITIES FROM
PT. 1 TO PT. 2.

R.T./2
FLOW

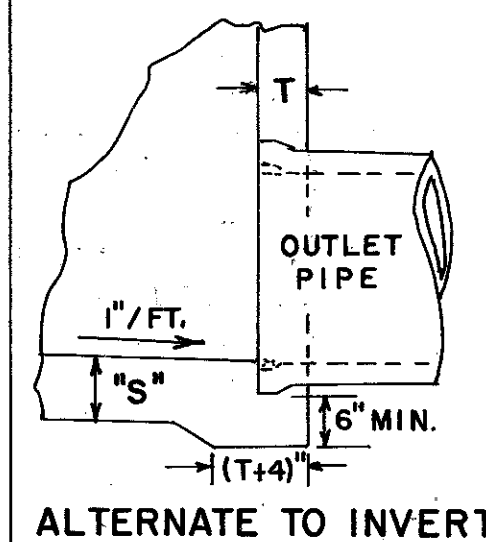
PAYLINE FOR BASIN

PAYLINE FOR BASIN

THREE
PEDESTALS
REQUIRED

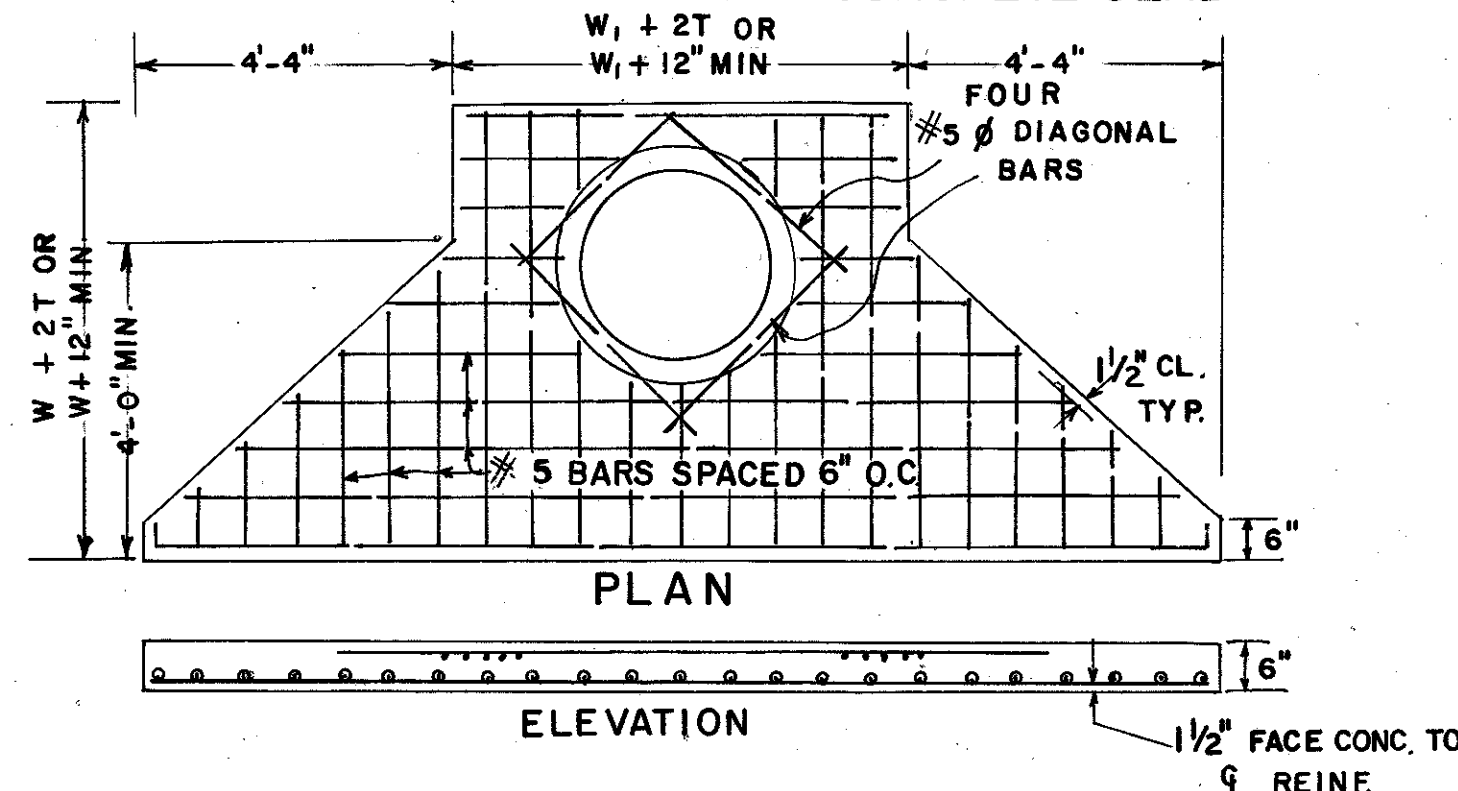
W

S



SECTION A'-A'
(FOR RECESSED BOX)

DETAIL OF TOP REINFORCED CONCRETE SLAB

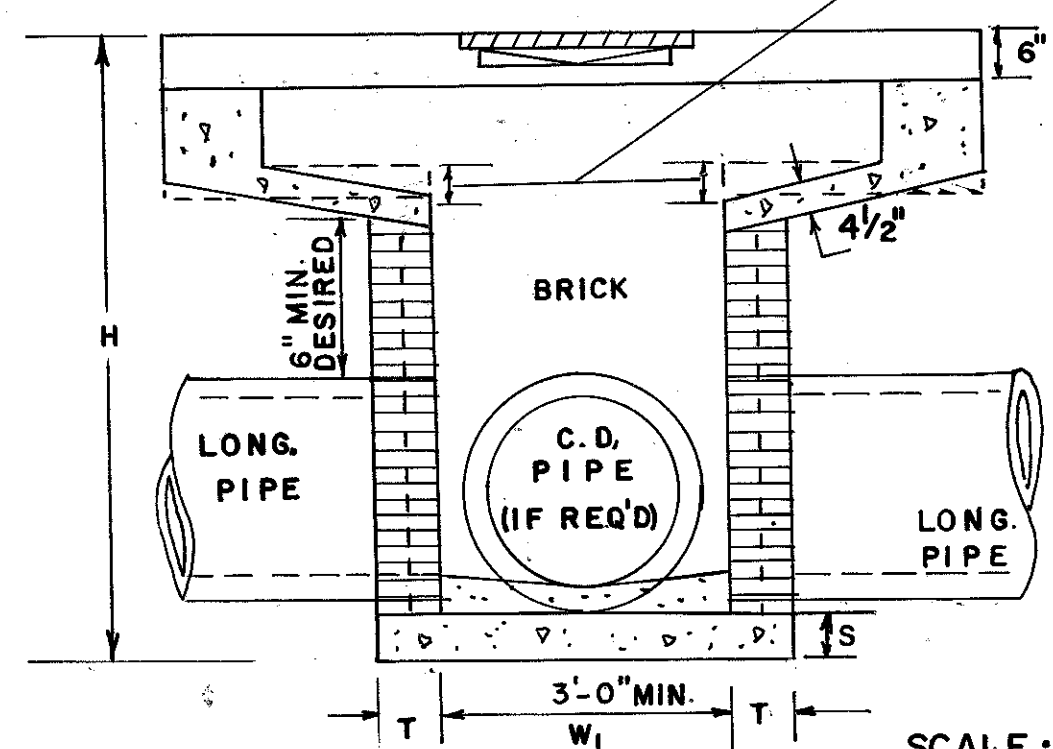


NOTE:

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

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

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



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.

Diagram illustrating the construction of a concrete pedestal for a long pipe, showing dimensions and material specifications.

Dimensions and Labels:

- Top:** INSIDE FACE OF FRONT WALL TO BE ALIGNED WITH BACK OF CURB LINE.
- Left:** 6" (height), H (total height), 3' FT. 2" (height of pedestal), 14 1/2" (height of invert).
- Right:** 2" FT. MIN. (width of curb), 5 1/2" OPENING OR 6" CURB, 7 1/2" OPENING OR 8" CURB, PAV. EDGE, CONST. JT., SLOPE : 2:1, 6" or 8" (width of curb).
- Center:** CONC. PEDESTAL, LONG. PIPE, C.D. PIPE.
- Bottom:** 3'-0" (width), T (thickness of curb), W (width of pedestal), S (height of curb).

Material Specifications:

W OR W ₁ (MAX.)	BOTTOM MATERIAL
TO 4'-6"	NON-REINFORCED CONCRETE

**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)

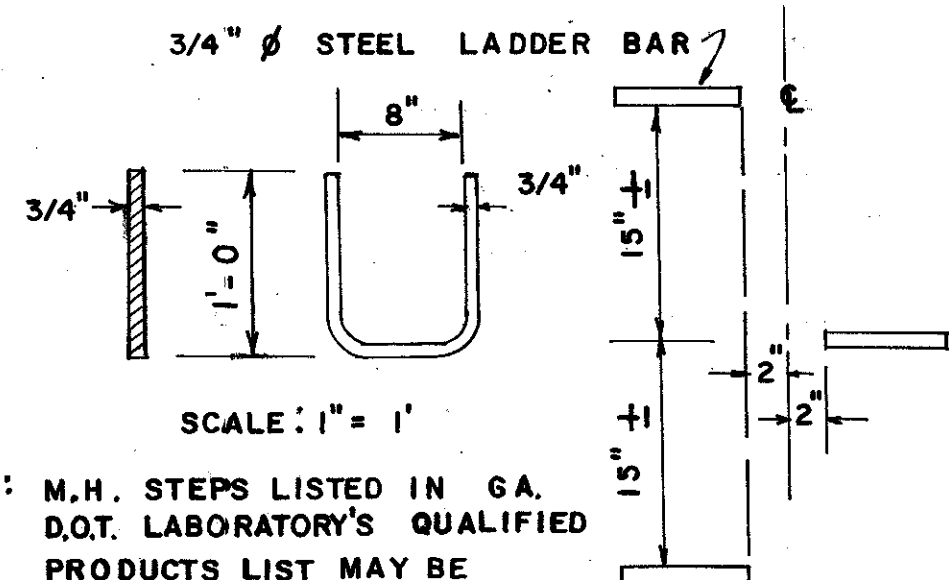
W OR W ₁ (MAX.)	BOTTOM SLAB	
	MATERIALS	"S"
TO 4'-6"	NON-REINF. CONCRETE	6"
	OR BRICK	8"
OVER 4'-6"	CONC. REINF. W ₁ 4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"

Figure 10 is a plan view of a square column. The column has a width of 4'-0" MIN. and a height of 4'-0" MIN. OR W + 2T. The reinforcement cage is circular with a diameter of 1'-0" MIN. and is composed of 5 bars spaced 6" O.C. The cage is centered within the column. The plan view shows the cage with 5 bars spaced 6" O.C. and a 1'-0" MIN. diameter. The column width is 4'-0" MIN. and the height is 4'-0" MIN. OR W + 2T. The cage is centered within the column.

NOTE: ALL BARS IN PLAN VIEW ARE SPACED AT 6" O.C. ELEVATION NOTE: FOR PLAN DETAIL OF REINFORCING STEEL IN TOP PORTION OF SLAB SEE PART PLAN AT TOP RIGHT. 1 1/2" FACE CONC. TO Q REINF.

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.

DETAIL OF LADDER BARS



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.

TYPICAL MIN. DIMENSIONS

PIPE DIA.	H (MIN.)	W or W ₁	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"

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.

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

CONSTRUCTION ALTERNATES

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

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

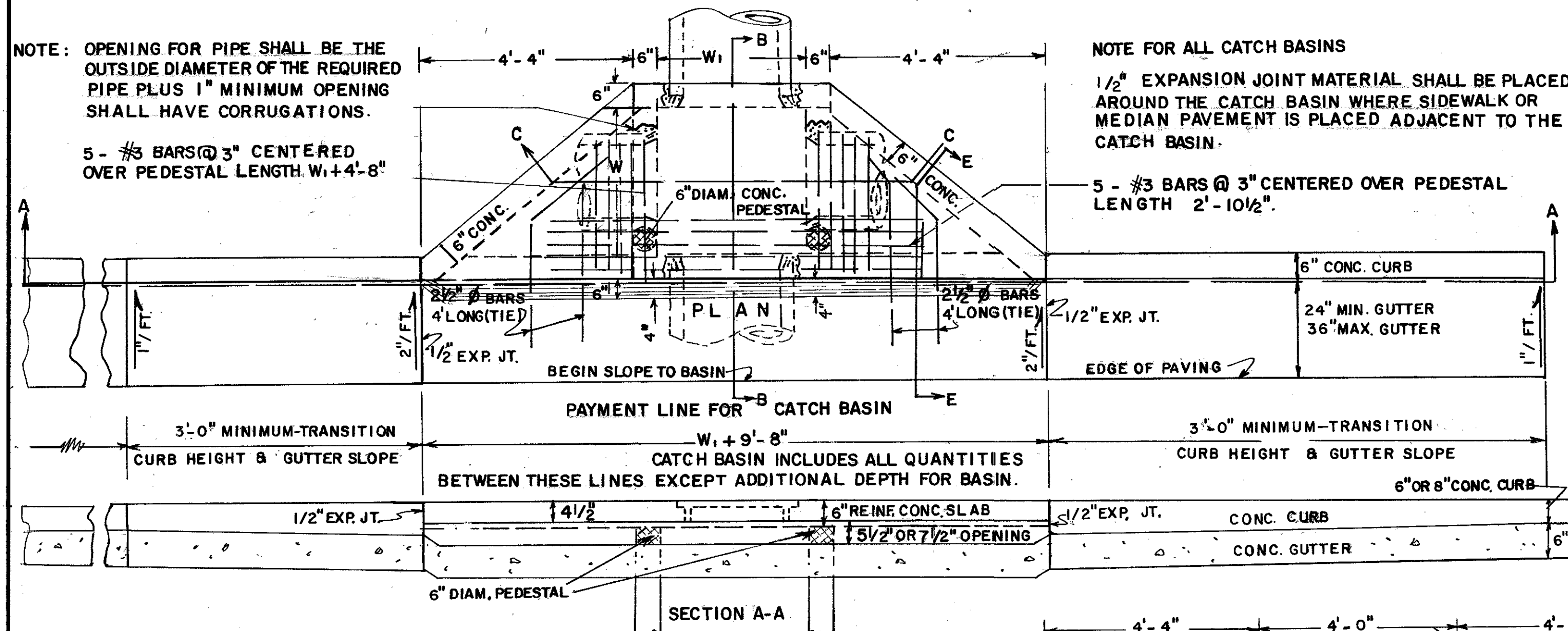
REV. & REDR. R.M.U.	(SUBMITTED) <i>Floyd E. Hardy</i> STATE ROAD & AIRPORT DESIGN ENGR
TRA G.M.F. CHK R.K.C.	(APPROVED) <i>Thomas D. Melandree</i> STATE HIGHWAY ENGINEER

NUMBER	1034D
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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.

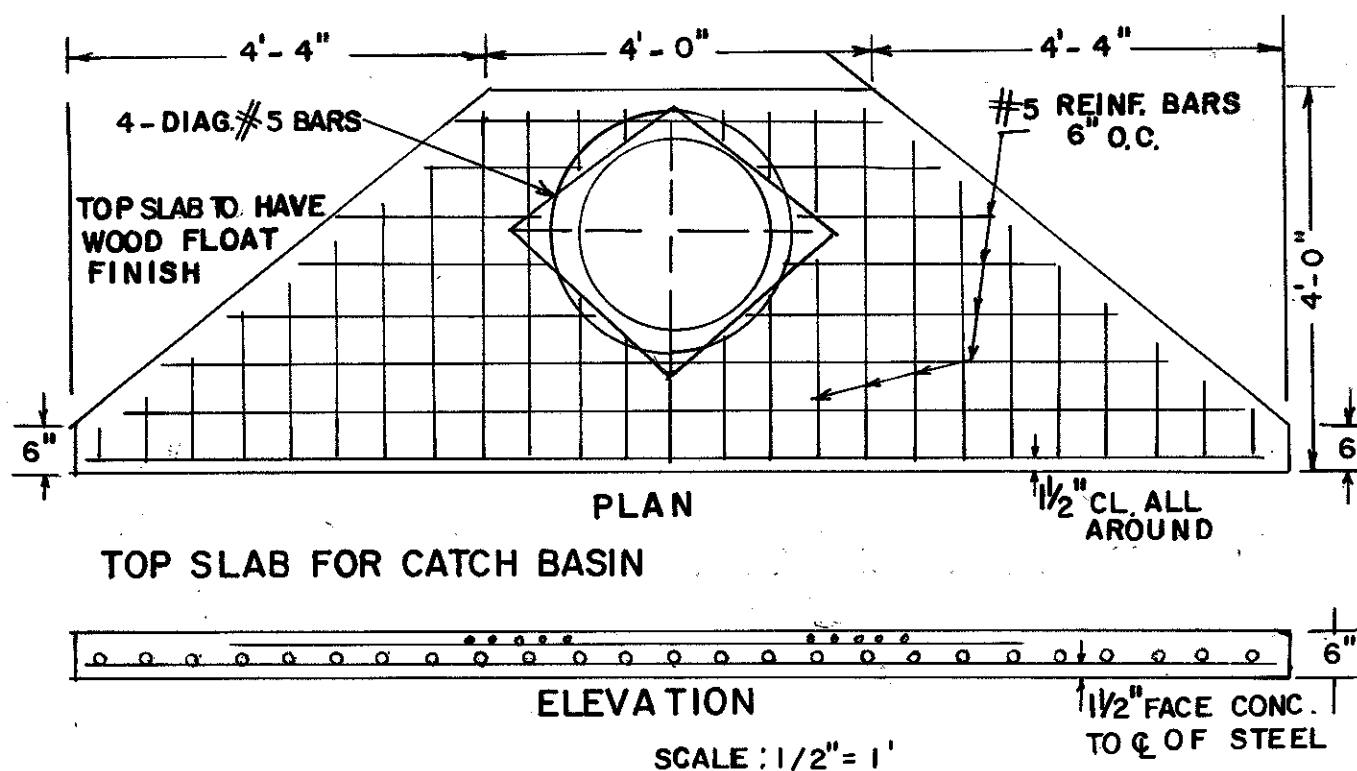
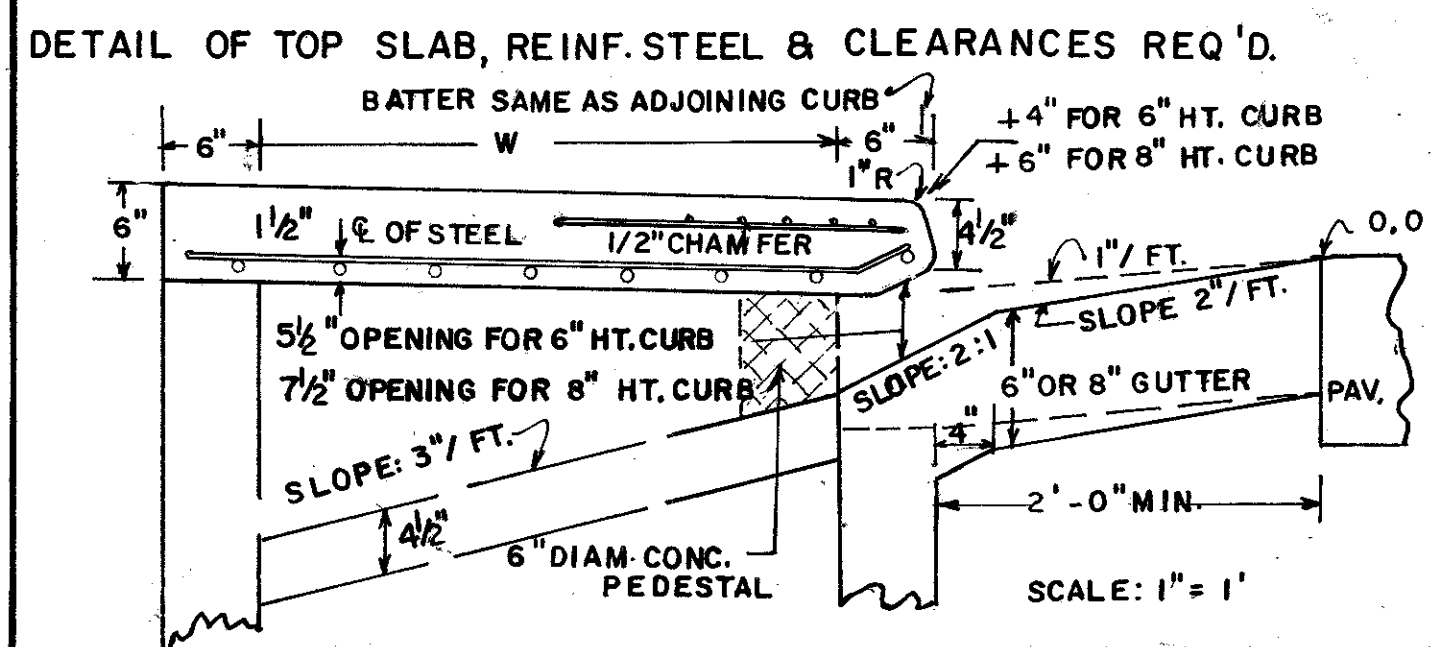
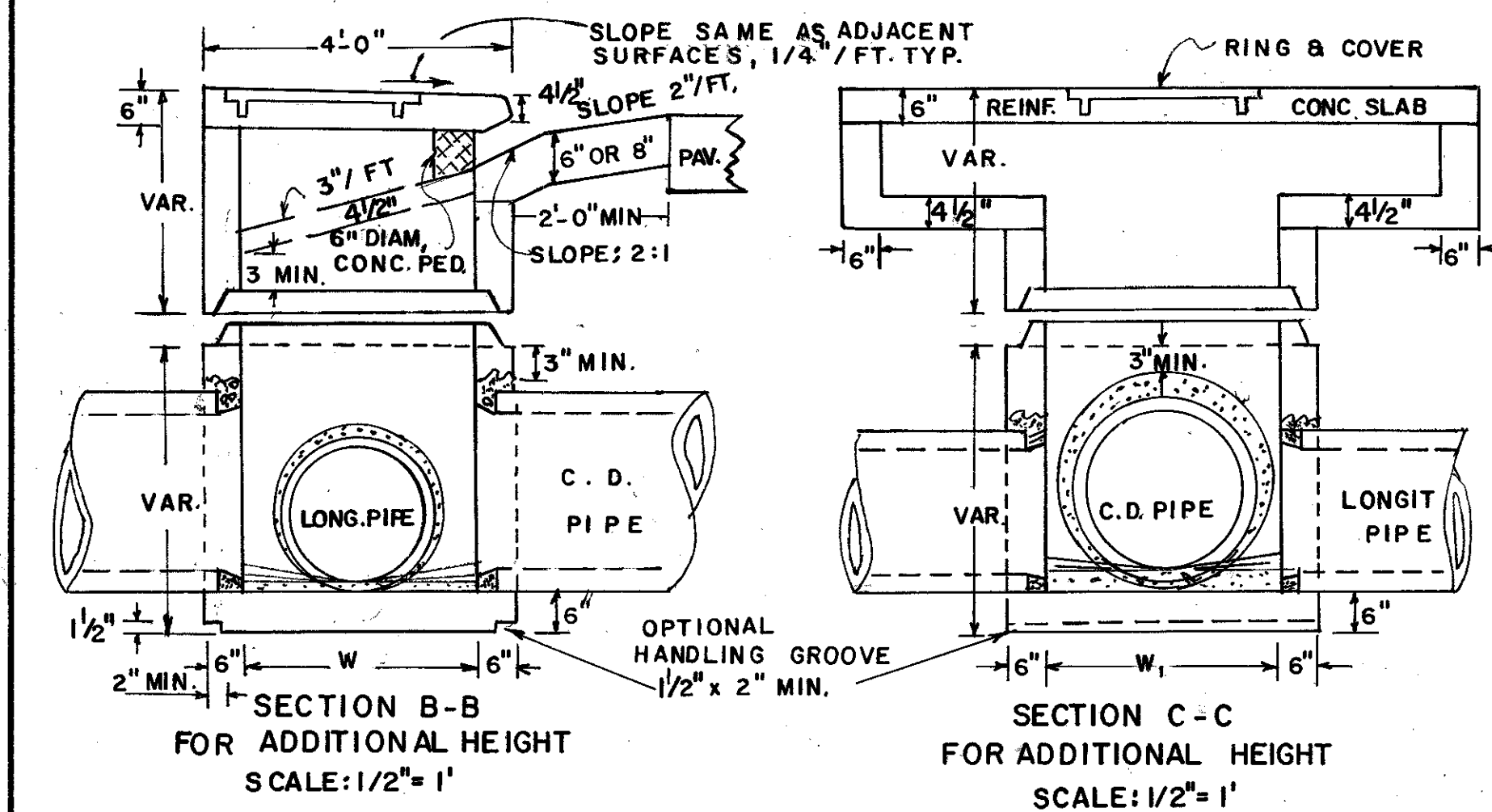
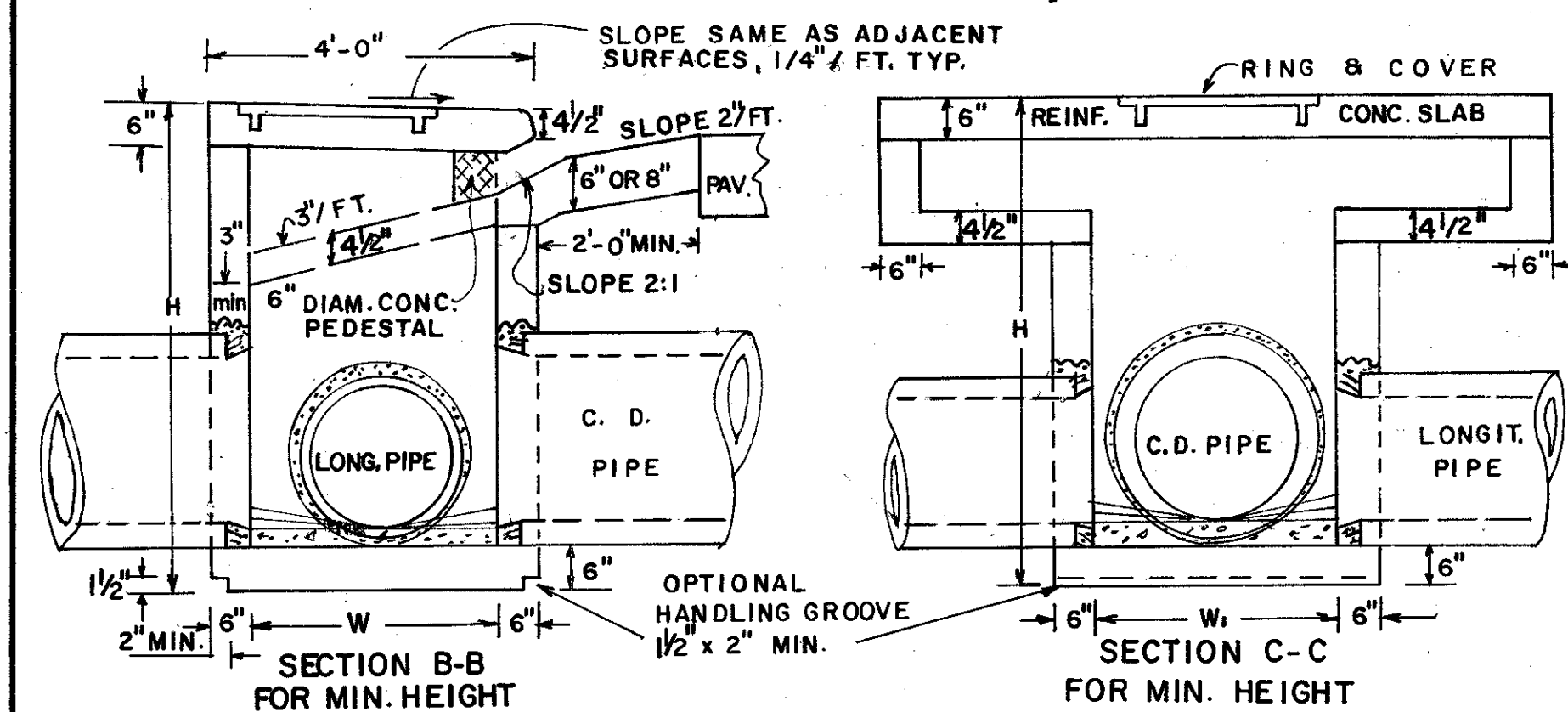
5 - #3 BARS @ 3" CENTERED OVER PEDESTAL LENGTH $W_1 + 4' - 8"$



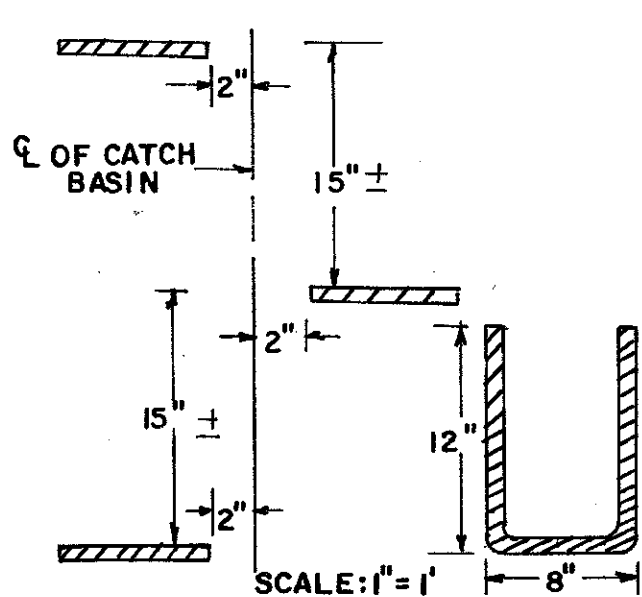
NOTE FOR ALL CATCH BASINS

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'-10 1/2"



DETAIL AND ARRANGEMENT OF LADDER BARS



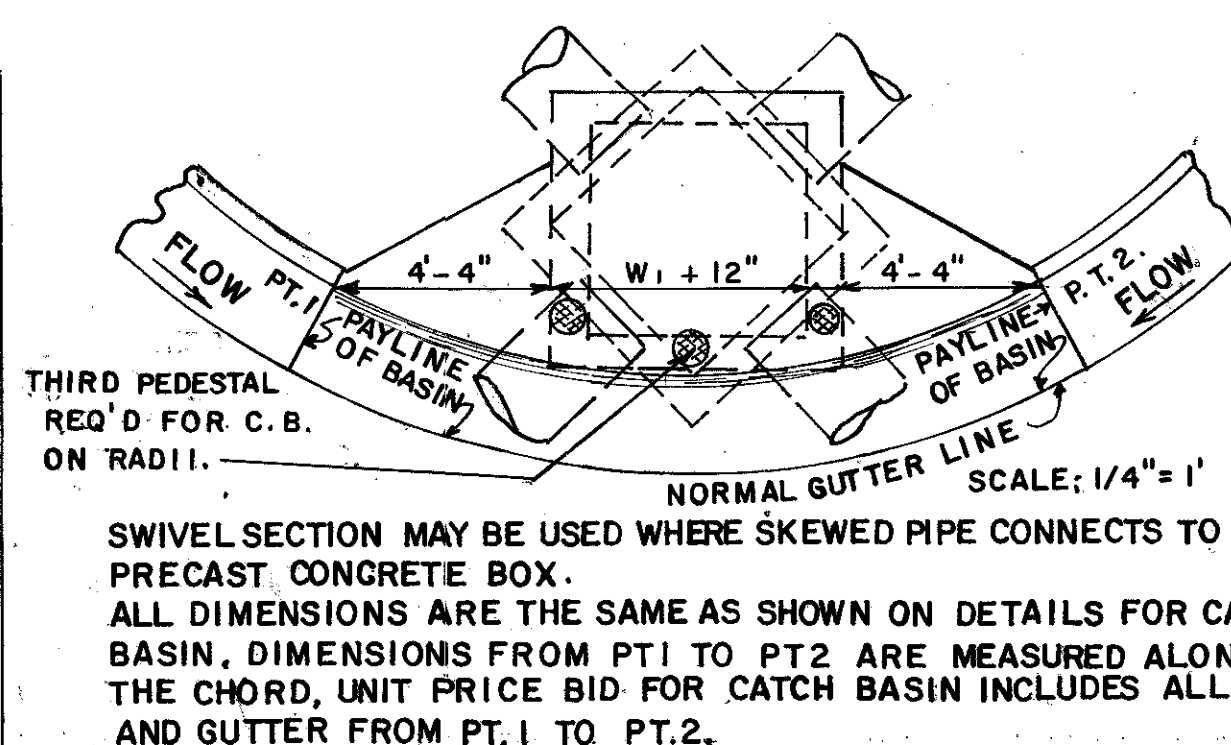
NOTE: NUMBER AND LOCATION OF LADDER BARS IN CATCH BASIN TO BE AS DIRECTED BY THE ENGINEER. M.H. STEPS LISTED IN GA. DOT. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE SUBSTITUTED.

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

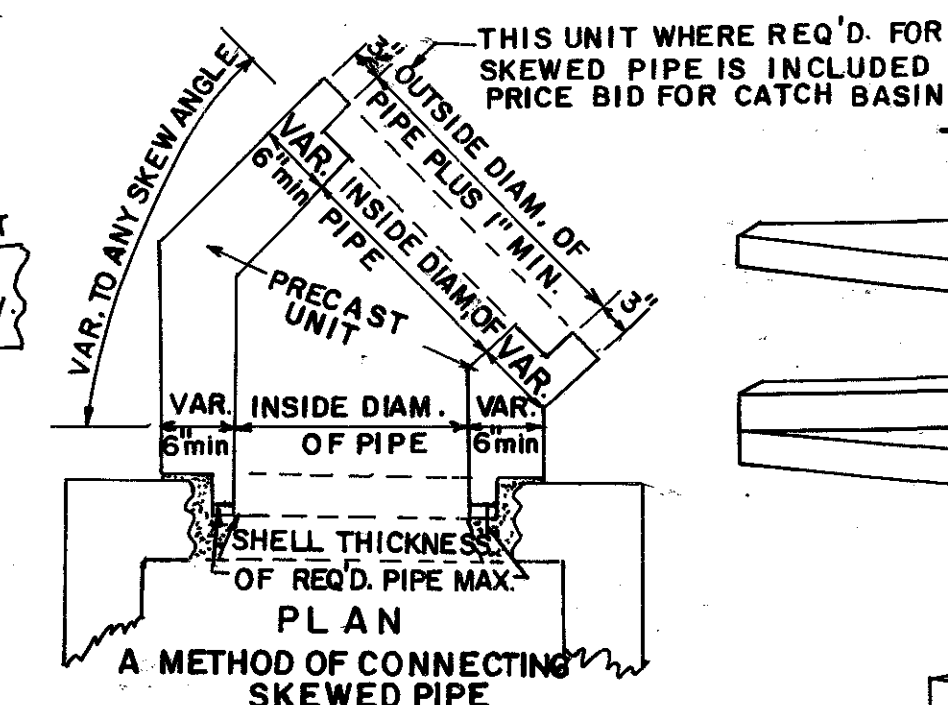
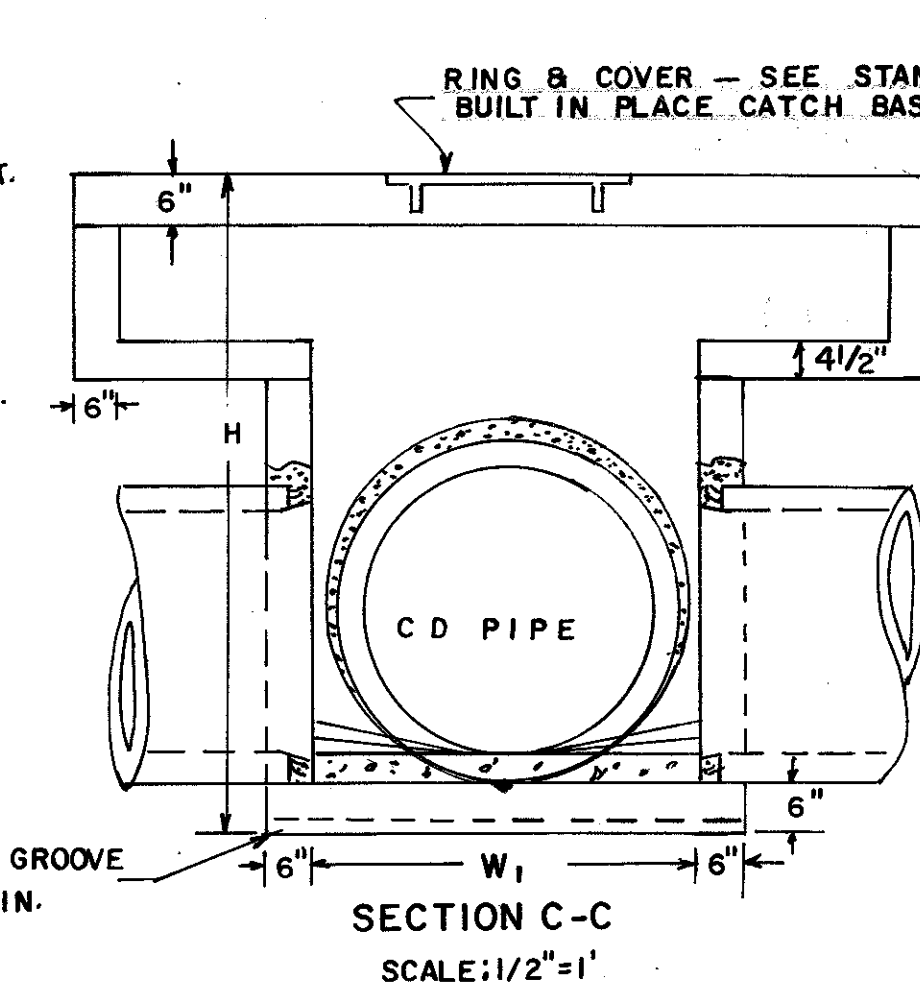
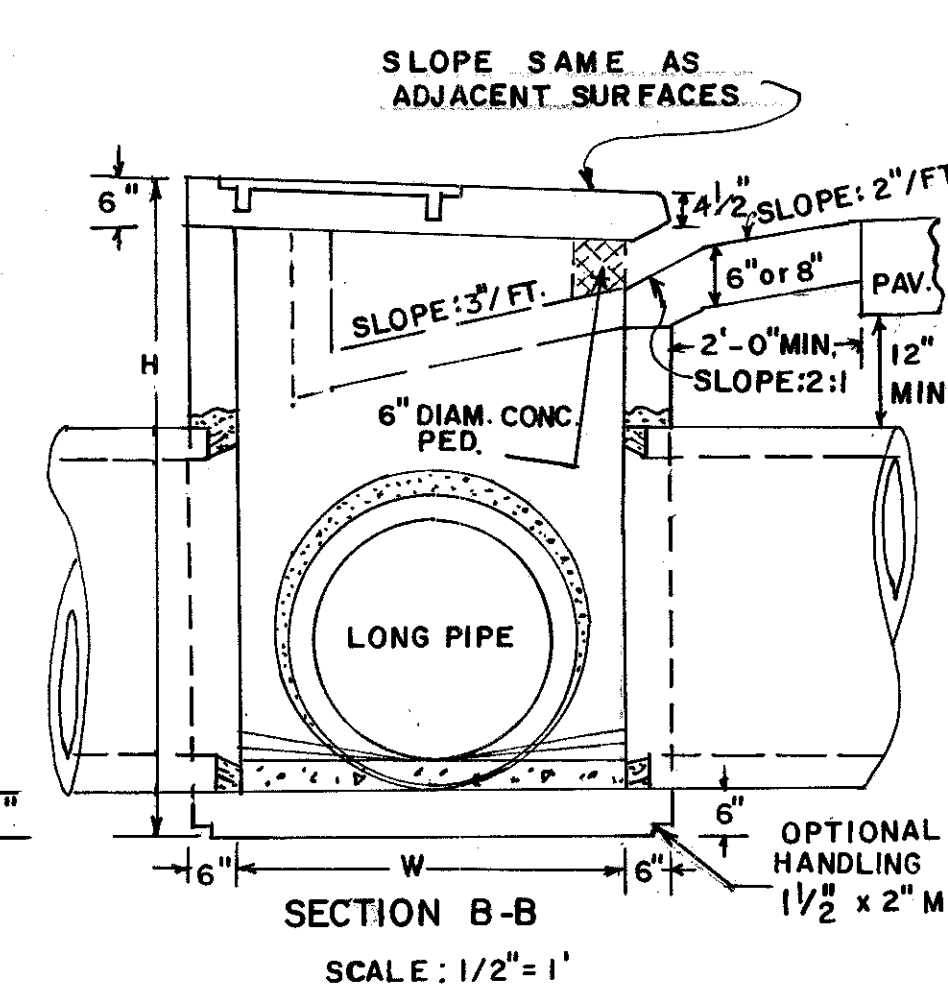
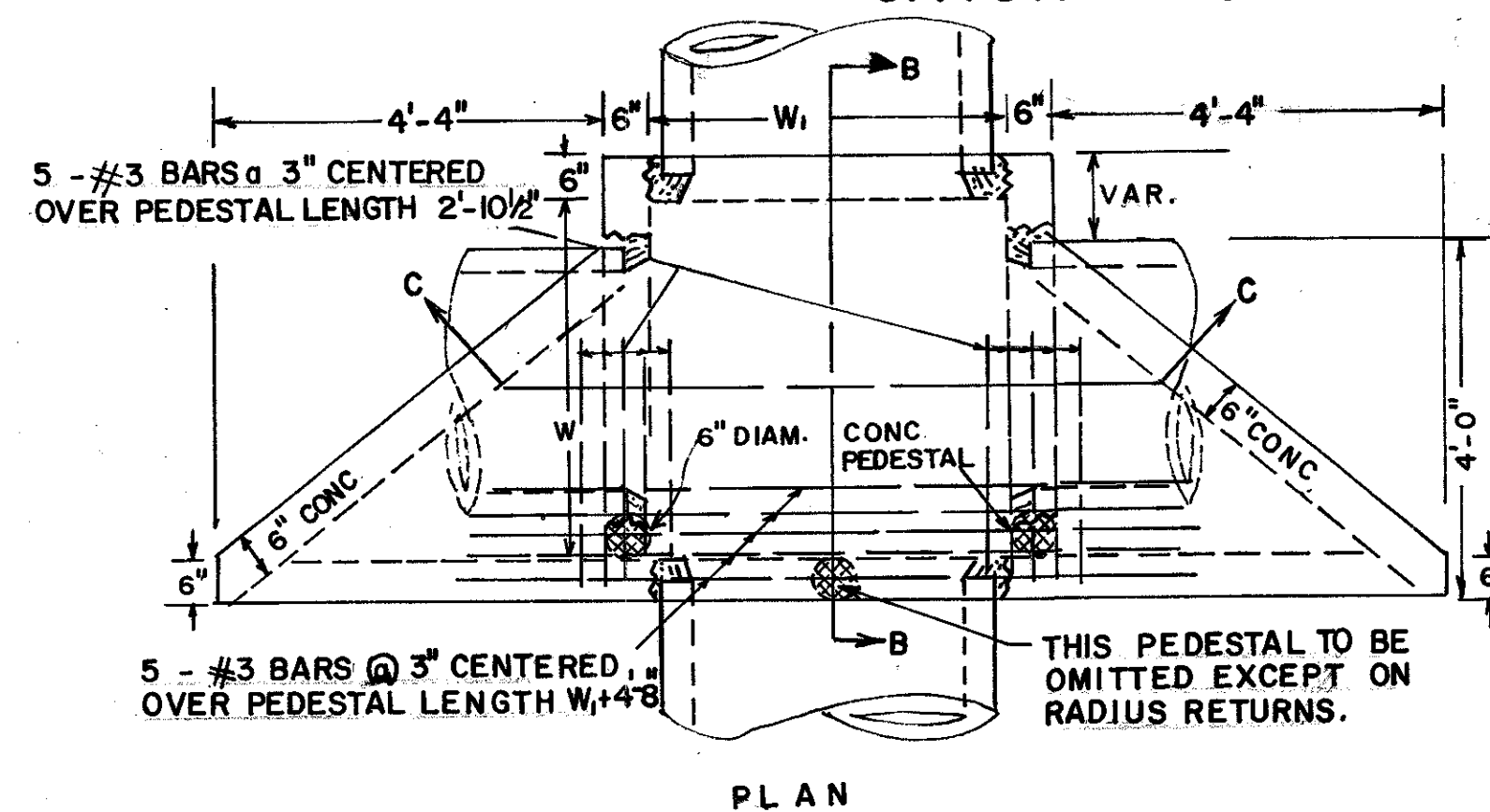
STEP 1: CUT CONCRETE PIPE LEAVING APPROXIMATELY 3" OF REINFORCING MESH EXPOSED

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

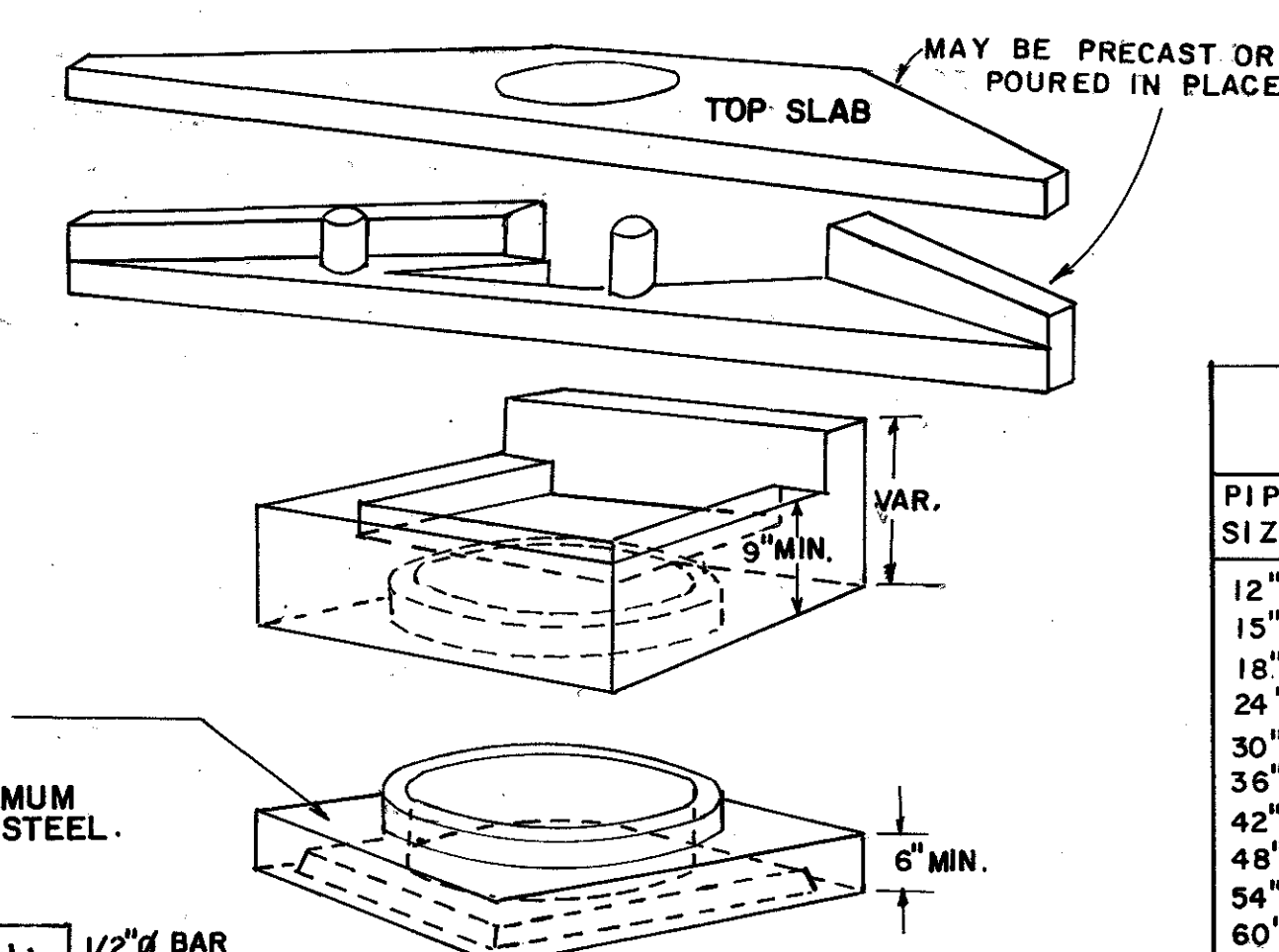
STEP 3: POSITION CONICAL CONE INSIDE OF PIPE AND SEAL WITH GROUT (1/2" MIN. THICKNESS OF GROUT). REMOVE CORE WHEN SET AND RUB GROUT TO SEAL JOINTS.



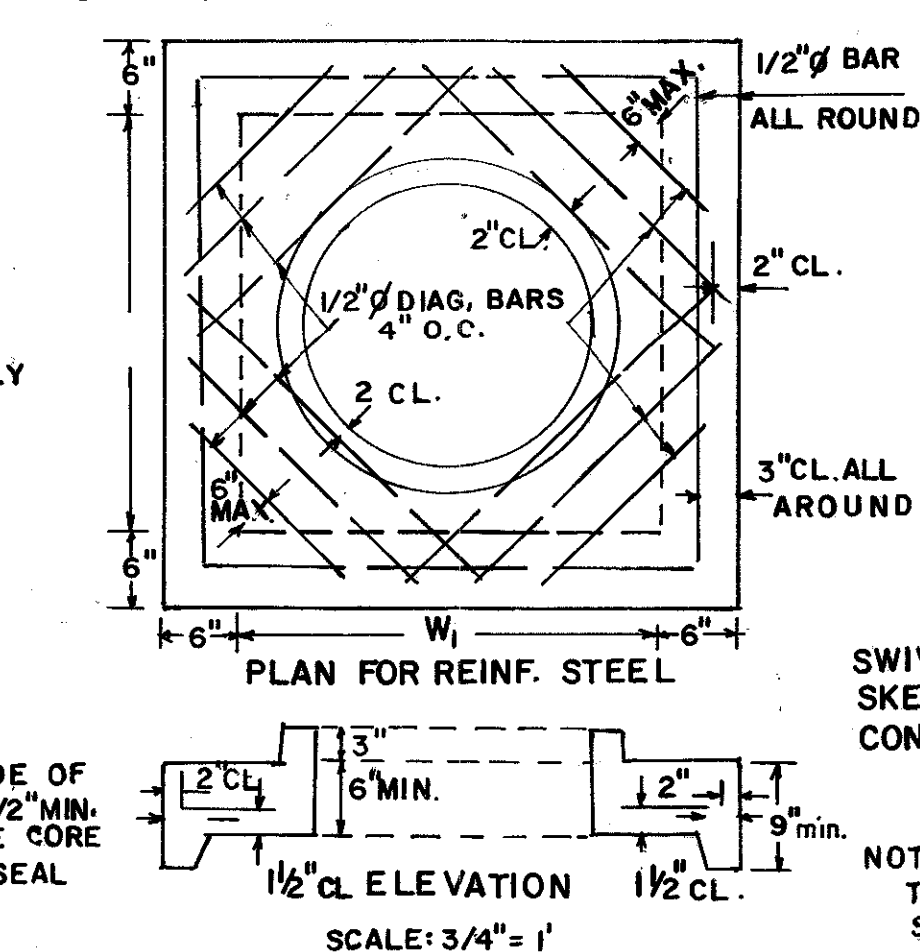
CATCH BASIN (TYPICAL FOR CATCH BASIN WITH LONGITUDINAL PIPE OVER 24")



TYPICAL ISOMETRIC VIEW



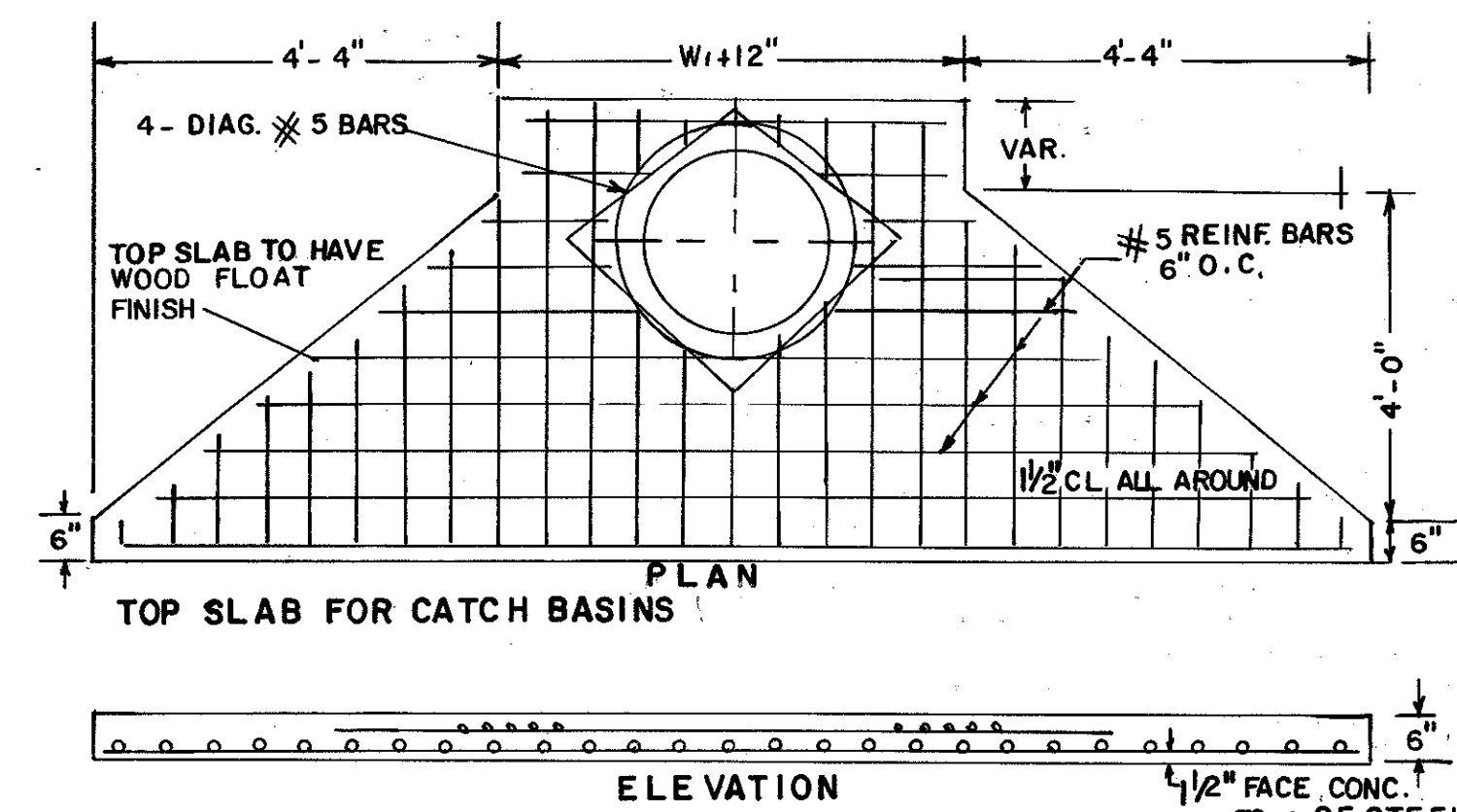
IF THIS SWIVEL SECTION SLAB IS USED TO REDUCE THE W AND W₁ DIMENSIONS, INCREASE THE MINIMUM THICKNESS TO 9" AND USE REIN. STEEL. SEE DETAIL BELOW.



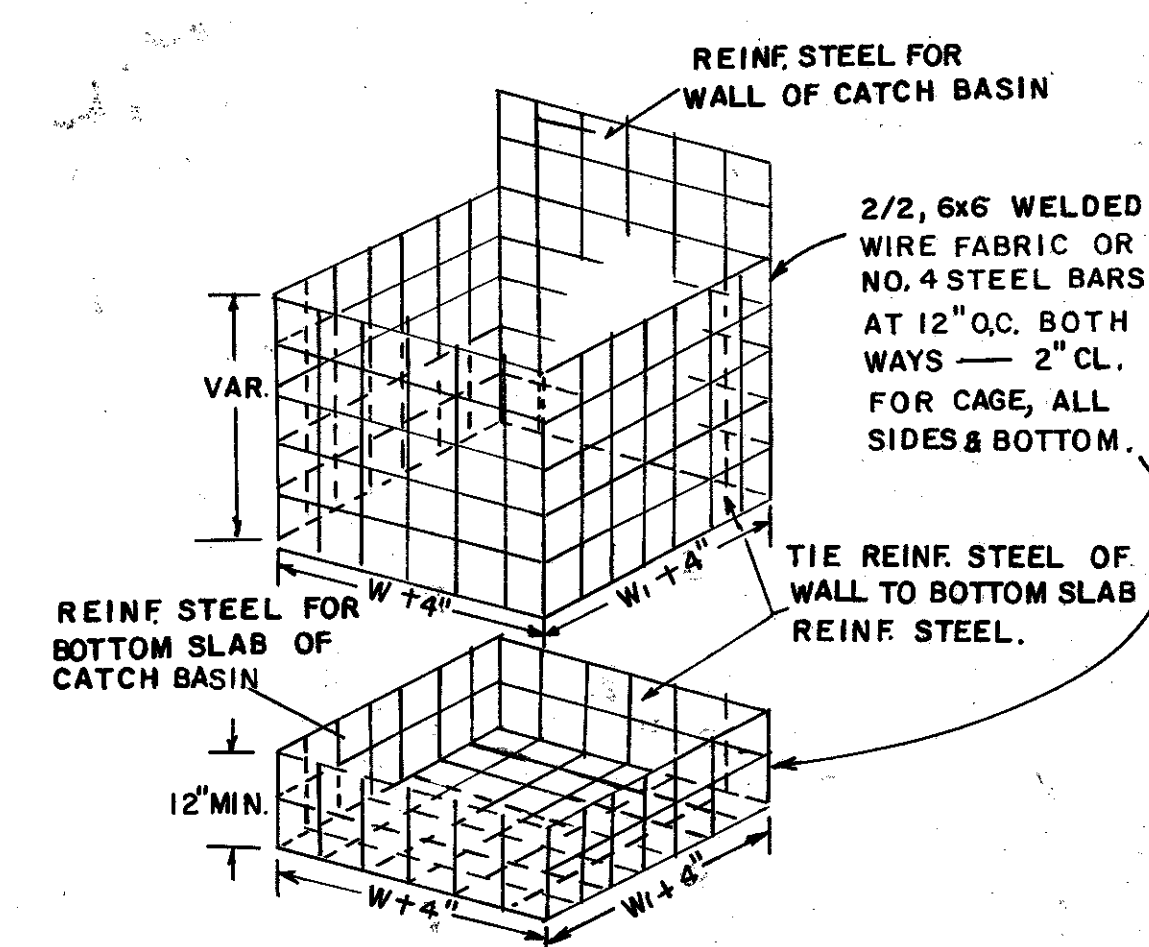
SWIVEL SECTION MAY BE USED WHERE SKEWED PIPE CONNECTS TO PRECAST CONCRETE BOX.

NO SCALE

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



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 KEVED. KEVED JOINTS SHOWN ARE TYPICAL AND MAY BE VARIED.

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 & W₁ 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.

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

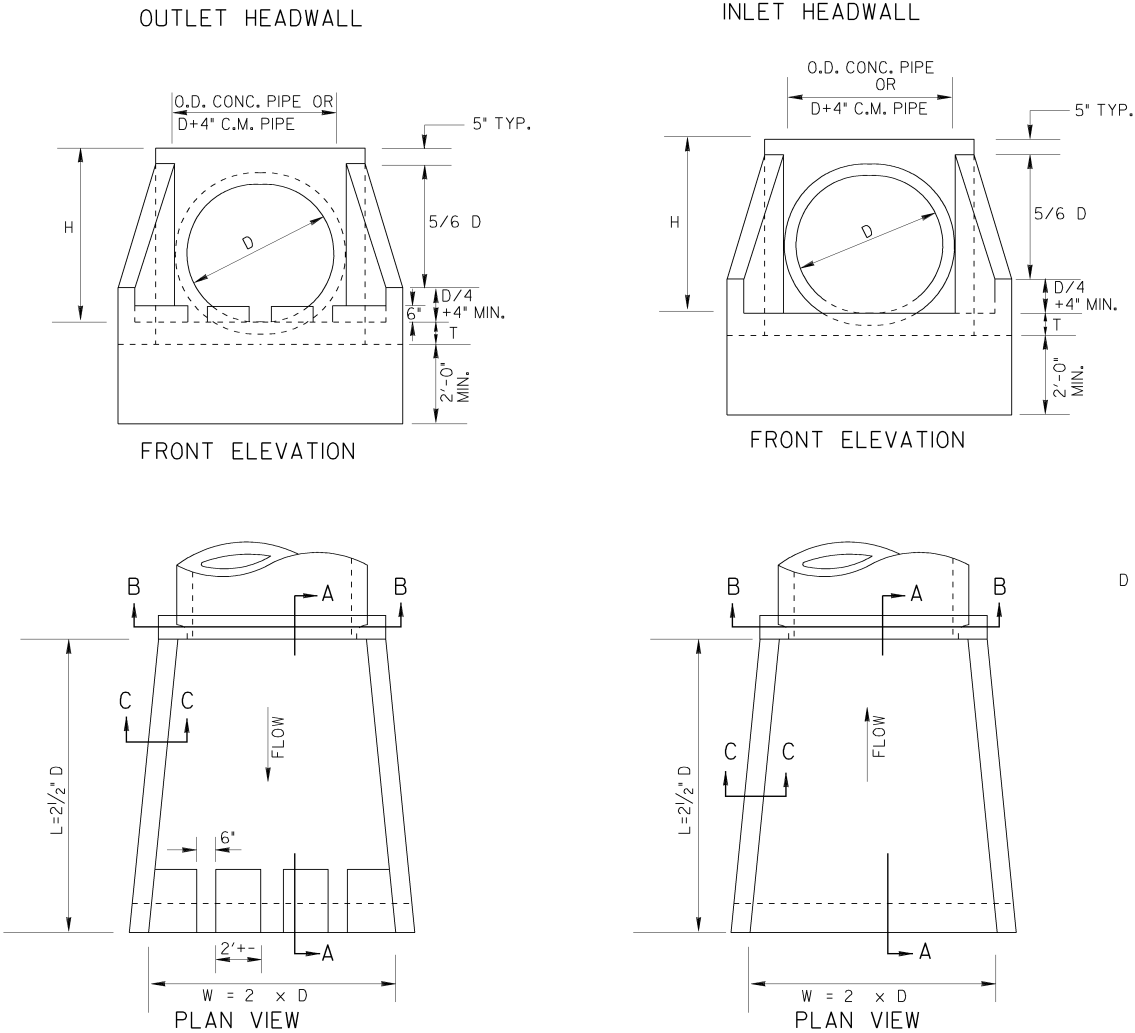
STANDARD PRECAST CATCH BASINS FOR USE WITH CURB (6" OR 8" HT.) & GUTTER (IN SAGS OR LOW POINTS)

SCALE AS SHOWN

REV. & REDR., SEPT. 1982

REV. & REDR. RMJ. (SUBMITTED) *Harold E. Hardy*
TRA. G.M.E. (APPROVED) *James D. Moore*
CHK. R.K.C. STATE HIGHWAY ENGINEER

NUMBER
1034D
PRECAST



D = INSIDE DIAMETER OF PIPE

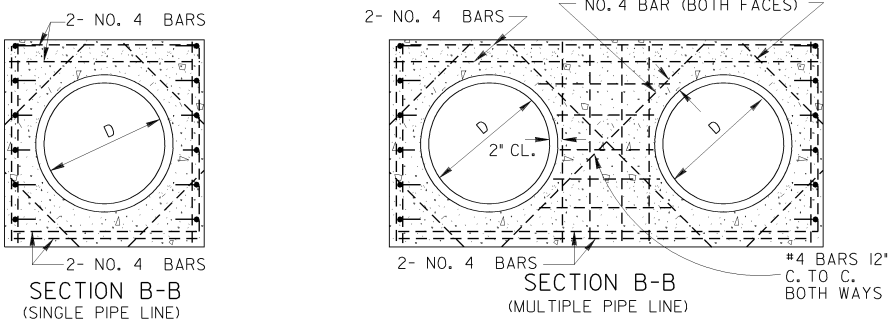
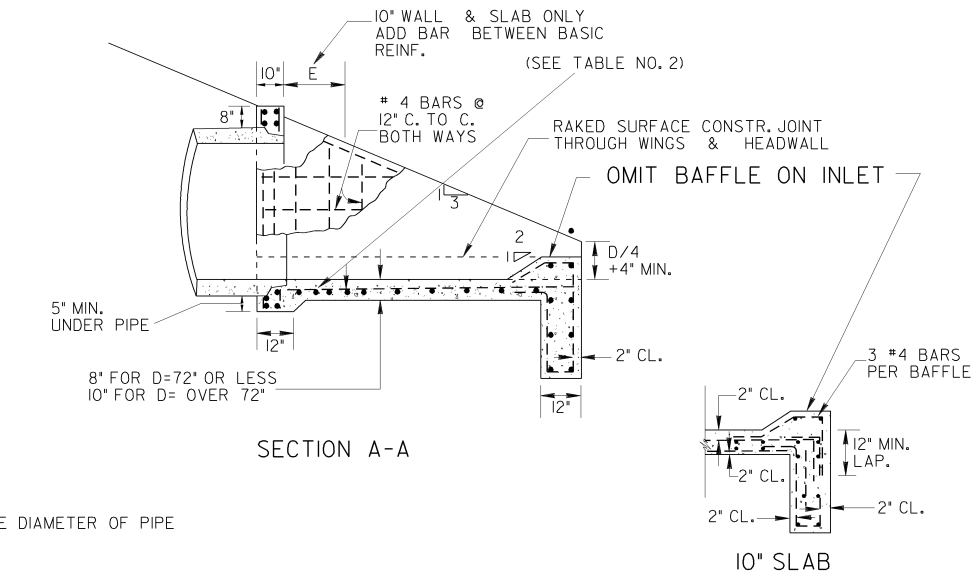


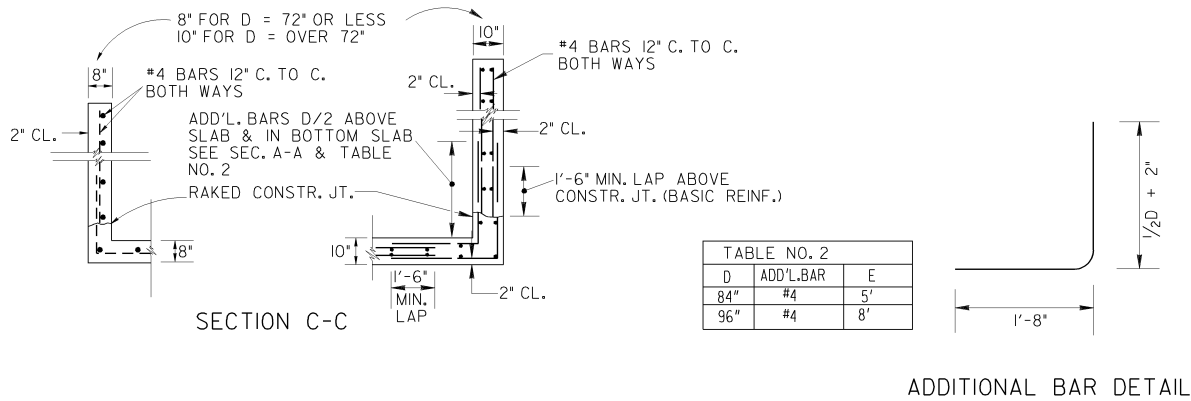
TABLE NO. 1- QUANTITIES FOR HEADWALLS											
CU. YDS. CONCRETE (PAY QUANTITIES)						LBS. STEEL (GIVEN FOR INFORMATION ONLY)					
FOR SINGLE LINE			ADD FOR ADD'L LINE			FOR SINGLE LINE			ADD FOR EACH ADD'L LINE		
D	INLET	OUTLET	INLET	OUTLET		INLET	OUTLET		INLET	OUTLET	
15"	0.87	0.93		0.60	0.66	102	113		73	83	
18"	1.10	1.16		0.85	0.93	106	117		93	104	
24"	1.61	1.69		1.29	1.37	127	138		124	134	
30"	2.21	2.32		1.83	1.96	170	180		154	164	
36"	2.92	3.05		2.49	2.63	238	254		196	212	
42"	3.73	3.87		3.00	3.17	290	306		231	247	
48"	4.62	4.80		3.58	3.74	335	351		265	281	
54"	5.63	5.83		4.17	4.38	407	428		319	340	
60"	6.72	6.95		4.82	5.01	456	477		360	391	
72"	9.22	9.48		6.24	6.46	623	649		475	494	
84"	14.84	15.19		9.05	9.29	1517	1539		1017	1044	
96"	18.88	19.27		11.13	11.41	2118	2150		1323	1350	

*NOTE:
QUANTITIES SHOWN WILL BE ACTUAL PAY QUANTITIES FOR CLASS 'A' CONCRETE, INCLUDING REINFORCED STEEL. NO ADJUSTMENT WILL BE MADE FOR AS BUILT QUANTITIES.

D - INSIDE DIAMETER OF PIPE CULVERT

H = D + 10" MIN. FOR C.M. PIPE
H = D + PIPE WALL THICKNESS + 8" FOR CONC. PIPE
(13/12 D + 9" TYP.)

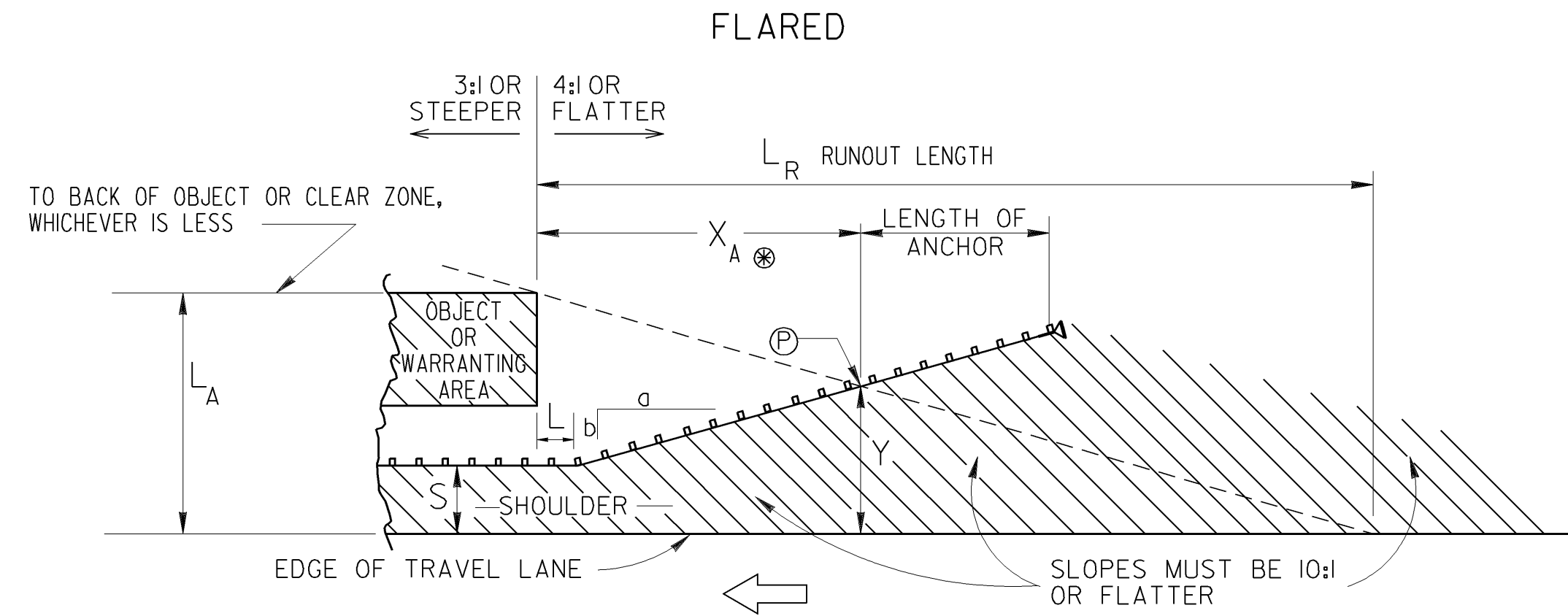
T = 8" FOR D = 72" OR LESS
T = 10" FOR D = OVER 72"



DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
REVISION	STANDARD TAPERED INLET HEADWALL - OUTLET HEADWALL (BUILT-IN-PLACE)		
NO SCALE	REV. & REDR. OCT., 1999		NUMBER 1125
DES. (SUBMITTED)	DRW. (APPROVED)		TRA. (APPROVED)
CHK.	CHK.		CHK.

LENGTH OF GUARDRAIL ADVANCEMENT AT FIXED OBJECTS OR AT WARRANTING FILL SLOPES (TYPICAL)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



FLARE RATE			
DESIGN SPEED (mph)	SHY-LINE OFFSET (ft)	(a/b)	
		BARRIER INSIDE SHY-LINE	BARRIER AT OR BEYOND SHY-LINE
70	9	30	15
60	8	26	14
55	7	24	12
50	6.5	21	11
45	6	18	10
40	5	16	8
30	4	13	7

WHERE 'S' IS LESS THAN THE SHY-LINE OFFSET, USE FLATTER RATES GIVEN IN TABLE.

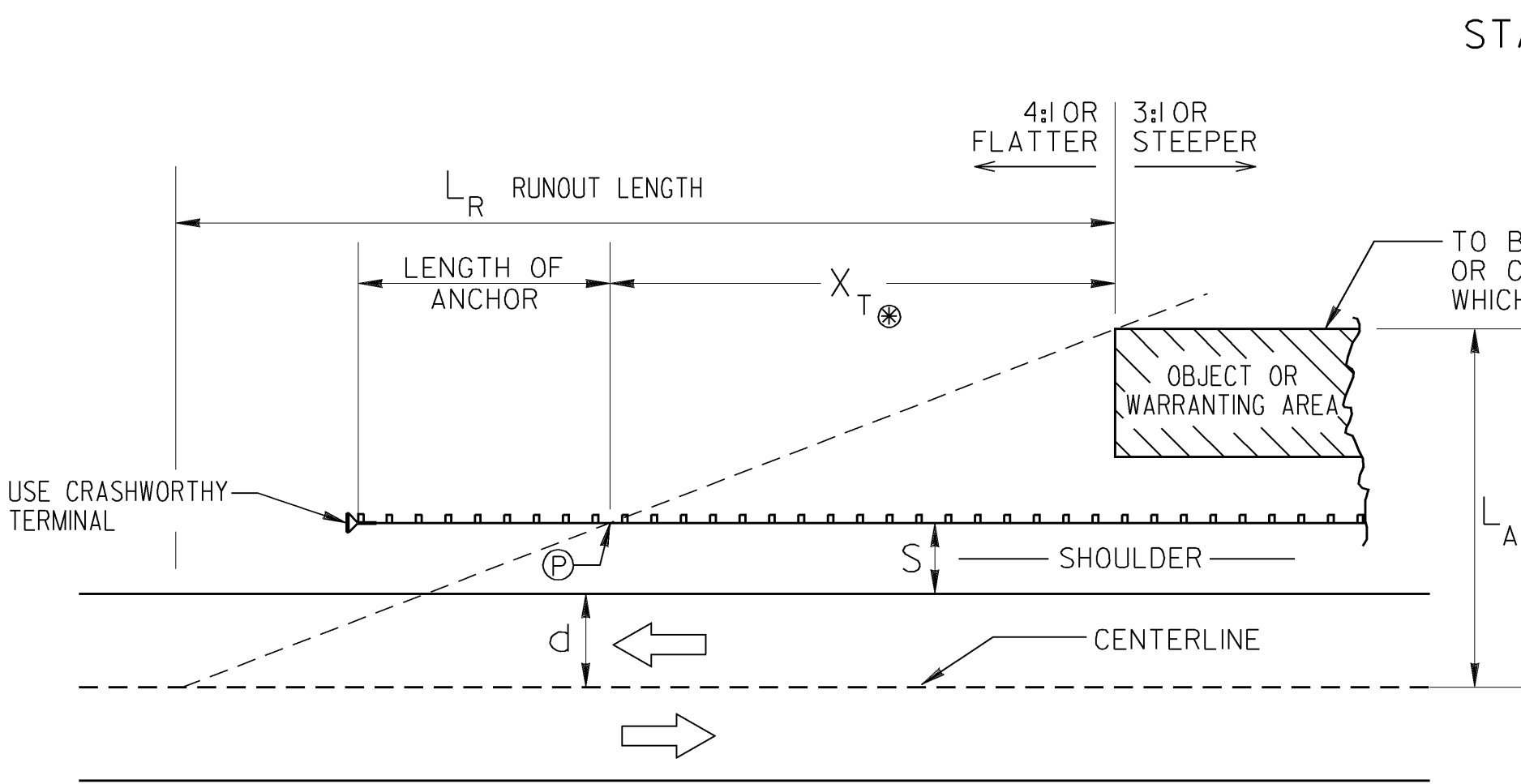
$$Y = L_A - \frac{L_A}{L_R} (X_A) \quad X_A = \frac{L_A + (b/a)L - S}{b/a + (L_A/L_R)}$$

DESIGN SPEED (MPH)	L _R Runout Length in feet			
	OVER 10000 (A.D.T.)	5000-10000 (A.D.T.)	1000-5000 (A.D.T.)	UNDER 1000 (A.D.T.)
80	470	430	380	330
70	360	330	290	250
60	300	250	210	200
50	230	190	160	150
40	160	130	110	100
30	110	90	80	70

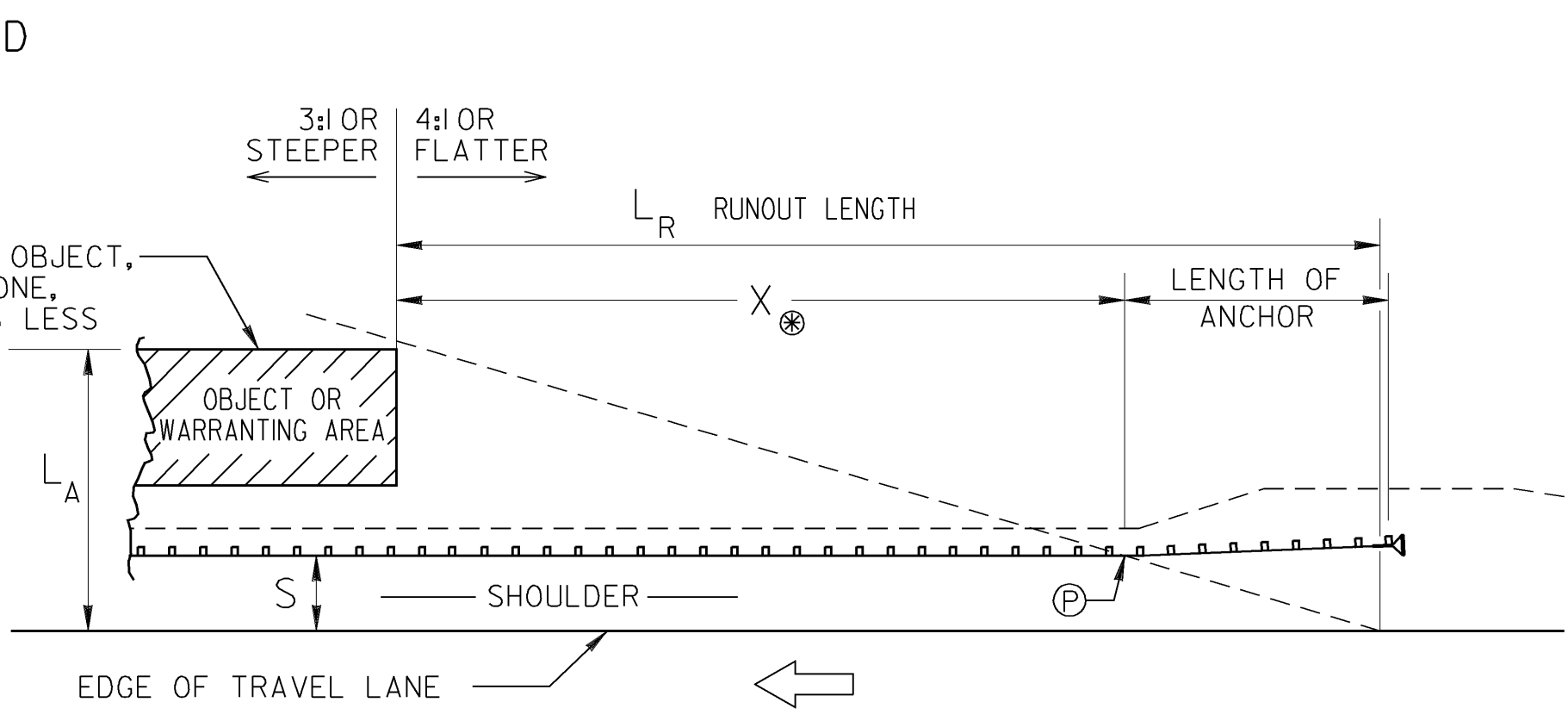
S = NORMAL WIDTH OF USUABLE SHOULDER PLUS 2 FT (TYP.)

Ⓟ = BEGINNING OF TERMINAL (TYP.)

⊗ X_A, X_T, AND X MEASURED TO THE END OF W-BEAM, WHERE TERMINAL BEGINS



$$X_T = L_R \times \frac{L_A - (S+d)}{L_A} \quad \text{(TRAILING END)}$$



$$X = L_R \times \frac{L_A - S}{L_A} \quad \text{(APPROACH END)}$$

CLEAR ZONE DISTANCES

CLEAR ZONE DISTANCES (FT) CHART

DESIGN SPEED	DESIGN ADT	FORESLOPES			BACKSLOPES		
		IV:6H OR FLATTER	IV:5H TO IV:4H	IV:3H	IV:3H	IV:5H TO IV:4H	IV:6H OR FLATTER
40 M.P.H. OR LESS	UNDER 750	7-10	7-10	**	7-10	7-10	7-10
	750-1500	10-12	12-14	**	12-14	12-14	12-14
	1500-6000	12-14	14-16	**	14-16	14-16	14-16
	OVER 6000	14-16	16-18	**	16-18	16-18	16-18
45-50 M.P.H.	UNDER 750	10-12	12-14	**	8-10	8-10	10-12
	750-1500	14-16	16-20	**	10-12	12-14	14-16
	1500-6000	16-18	20-26	**	12-14	14-16	16-18
	OVER 6000	20-22	24-28	**	14-16	18-20	20-22
55 M.P.H.	UNDER 750	12-14	14-18	**	8-10	10-12	10-12
	750-1500	16-18	20-24	**	10-12	14-16	16-18
	1500-6000	20-22	24-30	**	14-16	16-18	20-22
	OVER 6000	22-24	26-32*	**	16-18	20-22	22-24
60 M.P.H.	UNDER 750	16-18	20-24	**	10-12	12-14	14-16
	750-1500	20-24	26-32*	**	12-14	16-18	20-22
	1500-6000	26-30	32-40*	**	14-18	18-22	24-26
	OVER 6000	30-32*	36-44*	**	20-22	24-26	26-28
65-70 M.P.H.	UNDER 750	18-20	20-26	**	10-12	14-16	14-16
	750-1500	24-26	28-36*	**	12-16	18-20	20-22
	1500-6000	28-32*	34-42*	**	16-20	22-24	26-28
	OVER 6000	30-34*	38-46*	**	22-24	26-30	28-30

* WHEN A SITE-SPECIFIC INVESTIGATION INDICATES A HIGH PROBABILITY OF CONTINUING CRASHES OR WHEN SUCH OCCURRENCES ARE INDICATED BY CRASH HISTORY, THE DESIGNER MAY PROVIDE CLEAR-ZONE DISTANCES GREATER THAN THE CLEAR ZONE SHOWN ABOVE. CLEAR ZONES MAY BE LIMITED TO 30 FT. FOR PRACTICALITY AND TO PROVIDE A CONSISTENT ROADWAY TEMPLATE IF PREVIOUS EXPERIENCE WITH SIMILAR PROJECTS OR DESIGNS INDICATES SATISFACTORY PERFORMANCE.

** BECAUSE RECOVERY IS LESS LIKELY ON THE UNSHIELDED, TRAVERSABLE IV:3H FILL SLOPES, FIXED OBJECTS SHOULD NOT BE PRESENT IN THE VICINITY OF THE TOE OF THESE SLOPES. RECOVERY OF HIGH-SPEED VEHICLES THAT ENCRoACH BEYOND THE EDGE OF THE SHOULDER MAY BE EXPECTED TO OCCUR BEYOND THE TOE OF SLOPE. DETERMINATION OF THE WIDTH OF THE RECOVERY AREA AT THE TOE OF SLOPE SHOULD CONSIDER RIGHT-OF-WAY AVAILABILITY, ENVIRONMENTAL CONCERNS, ECONOMIC FACTORS, SAFETY NEEDS, AND CRASH HISTORIES. ALSO, THE DISTANCE BETWEEN THE EDGE OF THE THROUGH TRAVELED LAND AND THE BEGINNING OF THE IV:3H SLOPE SHOULD INFLUENCE THE RECOVERY AREA PROVIDED AT THE TOE OF SLOPE. A 10-FT RECOVERY AREA AT THE TOE OF SLOPE SHOULD BE PROVIDED FOR ALL TRAVERSABLE, NON RECOVERABLE FILL SLOPES.

HORIZONTAL CURVE ADJUSTMENTS

RADIUS (FEET)	K _{CZ} (CURVE CORRECTION FACTOR)					
	DESIGN SPEED (MPH)					
	40	45	50	55	65	70
2950	1.1	1.1	1.1	1.2	1.2	1.2
2300	1.1	1.1	1.2	1.2	1.2	1.3
1970	1.1	1.2	1.2	1.2	1.3	1.4
1640	1.1	1.2	1.2	1.3	1.3	1.4
1475	1.2	1.2	1.3	1.3	1.4	1.5
1315	1.2	1.2	1.3	1.3	1.4	
1150	1.2	1.2	1.3	1.4	1.5	
985	1.2	1.3	1.4	1.5	1.5	
820	1.3	1.3	1.4	1.5		
660	1.3	1.4	1.5			
495	1.4	1.5				
330	1.5					

$$CZ_C = (L_C) (K_{CZ})$$

Where:

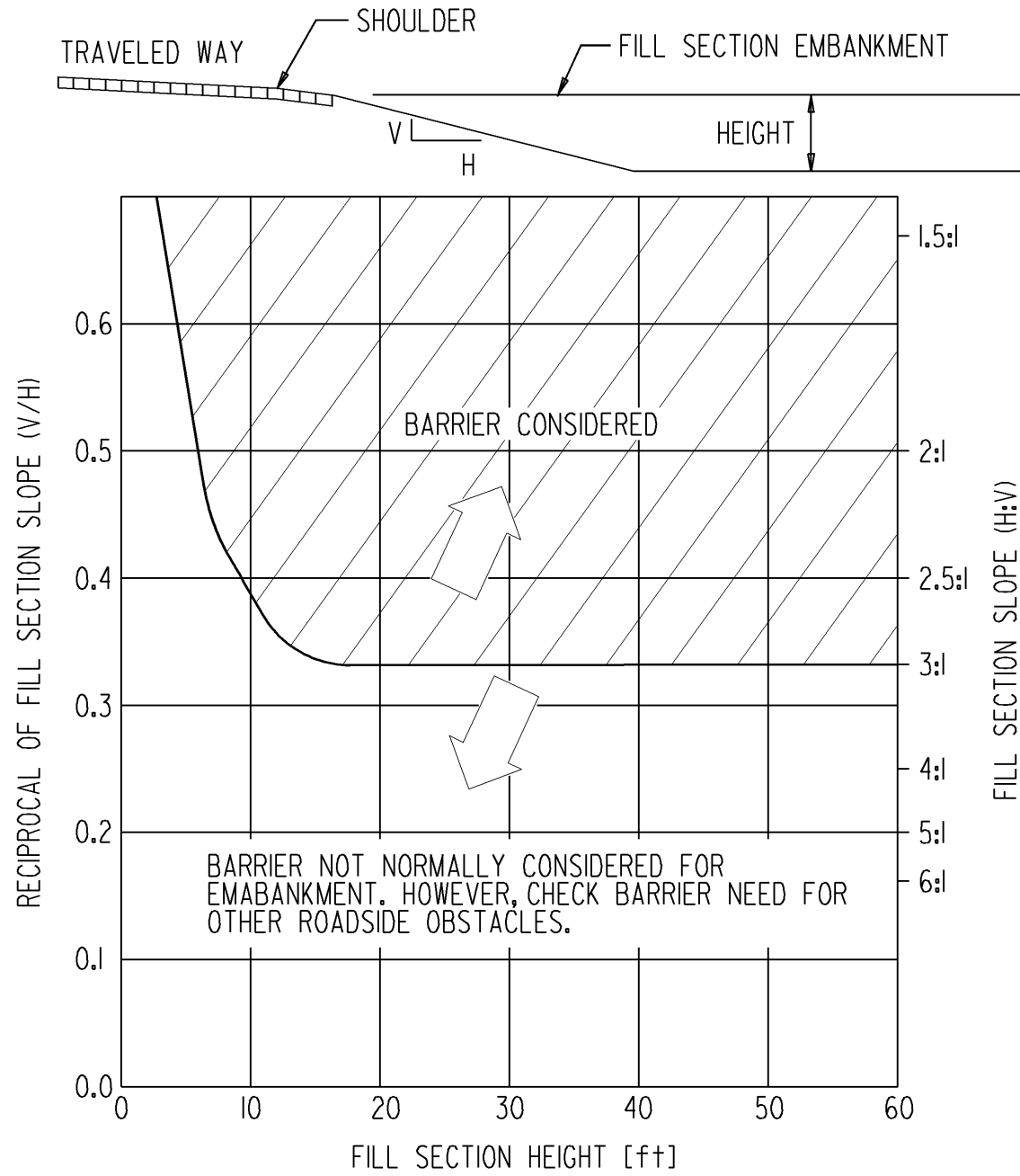
CZ_C = CLEAR ZONE ON OUTSIDE OF CURVATURE, FEET

L_C = CLEAR ZONES DISTANCE, FEET (SEE CHART AT LEFT)

K_{CZ} = CURVE CORRECTION FACTOR

NOTE:
THE CURVE CORRECTION FACTOR IS APPLIED TO THE OUTSIDE OF CURVES ONLY. CORRECTIONS ARE TYPICALLY MADE ONLY TO CURVES LESS THAN 2,950-FT RADIUS.

COMPARATIVE BARRIER CONSIDERATION FOR EMBANKMENTS

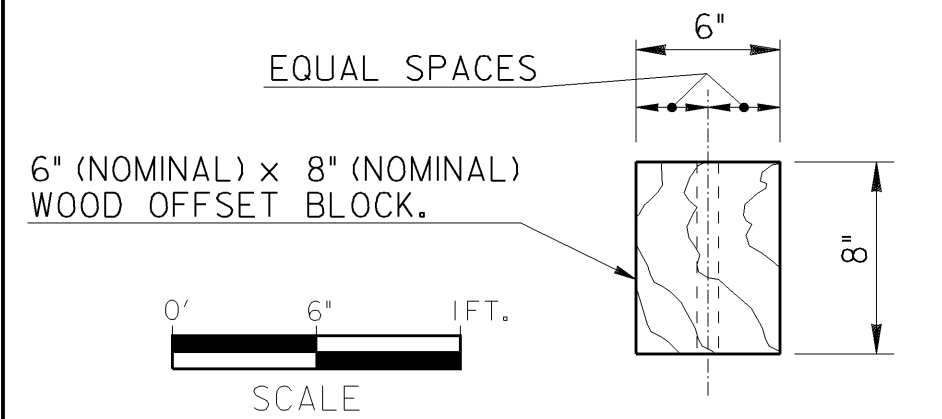
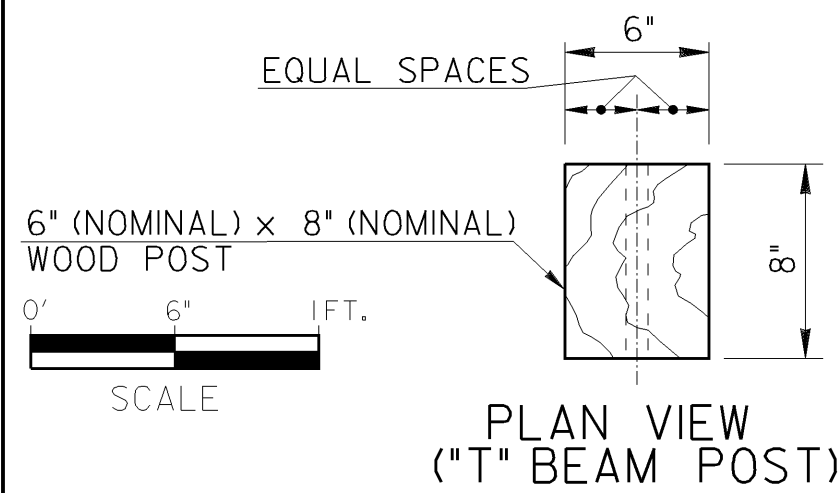
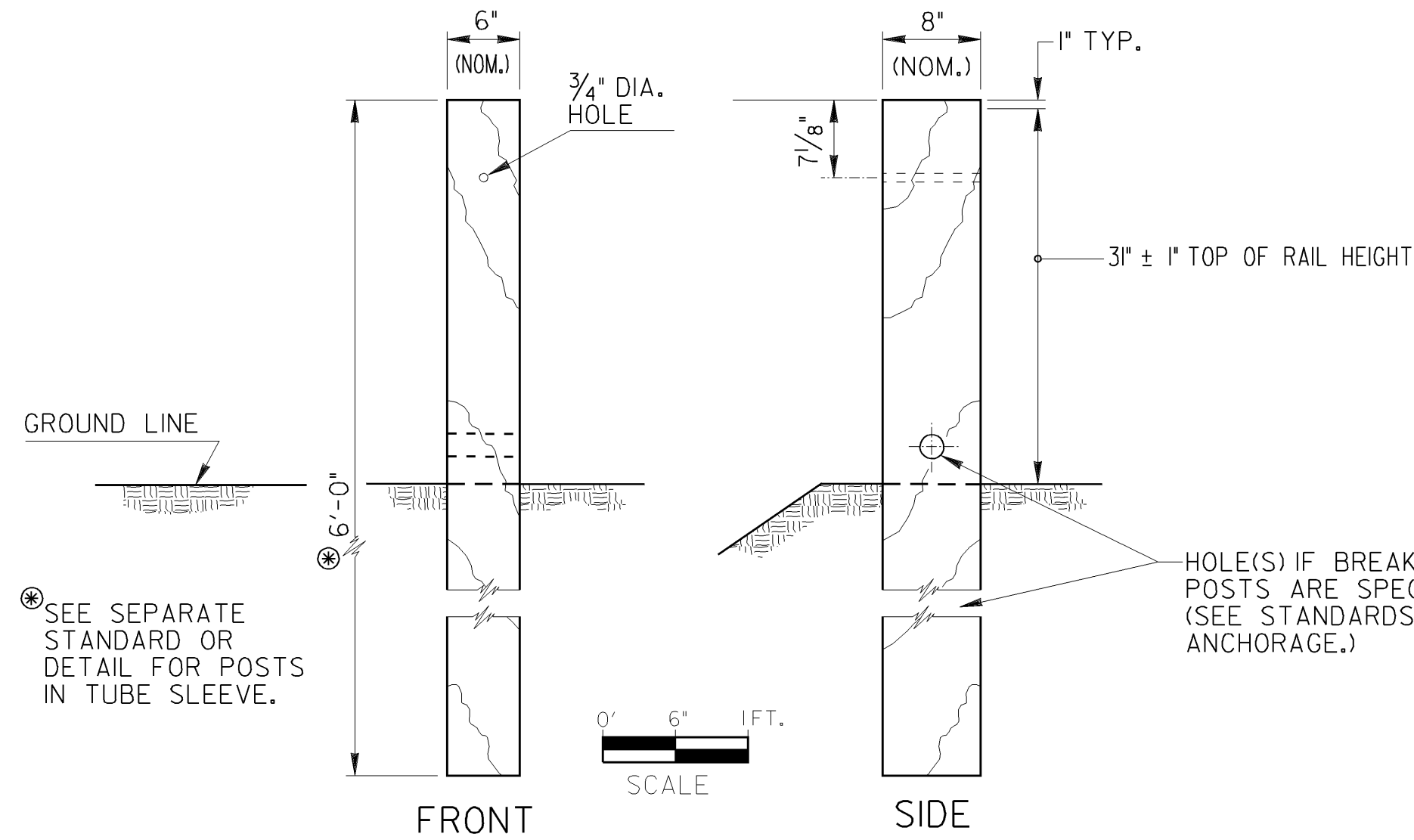


REV. ANCH. LOC. UPDATED	1-29-16	FLARE TBL; ADDED CHART	4-16-15	REVISED TO 20180G	REMOVED SLOPE WARRANTS	9-4-07	REVISED GUARDRAIL AND CLEAR ZONE	DATE	REVISION	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
										STANDARD GUARDRAIL WARRANT GUIDES LENGTHS OF ADVANCEMENT CLEAR ZONE DISTANCES FILL HEIGHT EMBANKMENTS			
										NOT TO SCALE		DEC., 1999	
F.B.F.	B.J.G.	C.L.G.	BY	DES. _____	DRW. _____	TRA. _____	CHK. _____	(SUBMITTED)	STATE DESIGN POLICY ENGINEER		NUMBER 4000W		
										(APPROVED)		CHIEF ENGINEER	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

TYPE A WOOD POST (FOR "W" BEAM GUARDRAIL)

NOTE: WOOD POST ARE ALLOWABLE ONLY WHERE SPECIFIED.



PLAN VIEW
(FOR "W" BEAM
OFFSET BLOCK)

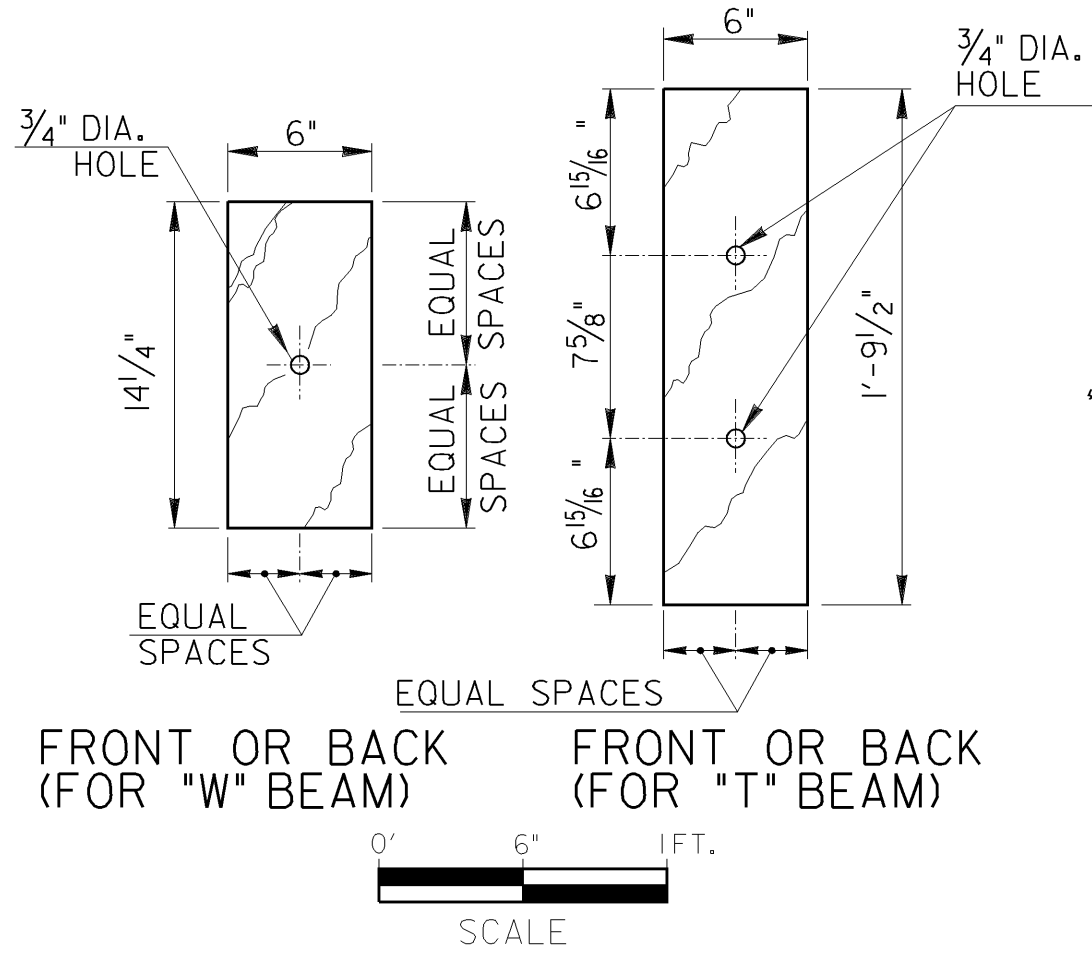
WOOD POSTS AND WOOD OFFSET BLOCKS
MAY BE ROUGH OR SURFACED.

DIMENSIONS FOR WOOD POSTS AND WOOD
OFFSET BLOCKS ARE NOMINAL IN ACCORDANCE
WITH ACCEPTED LUMBER INDUSTRY STANDARDS.

NOTE:
WHERE WOOD OFFSET BLOCK ON STEEL POST IS PERMITTED IN "W" BEAM INSTALLATION, A NAIL OR SCREW FROM POST TO WOOD IS REQUIRED TO PREVENT ROTATION OF THE BLOCK.

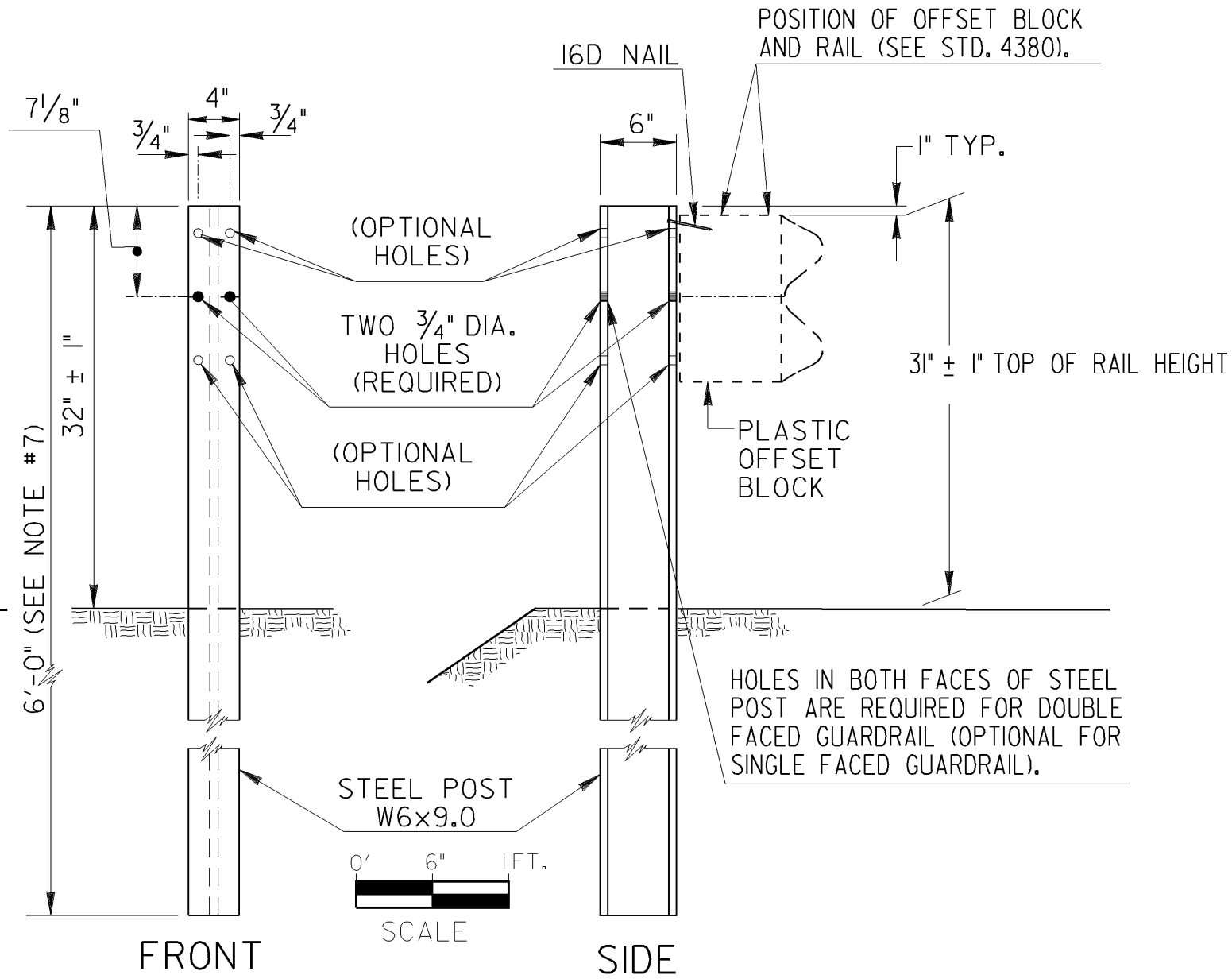
WOOD OFFSET BLOCKS

(WHERE PERMITTED, SEE NOTE 5(d))

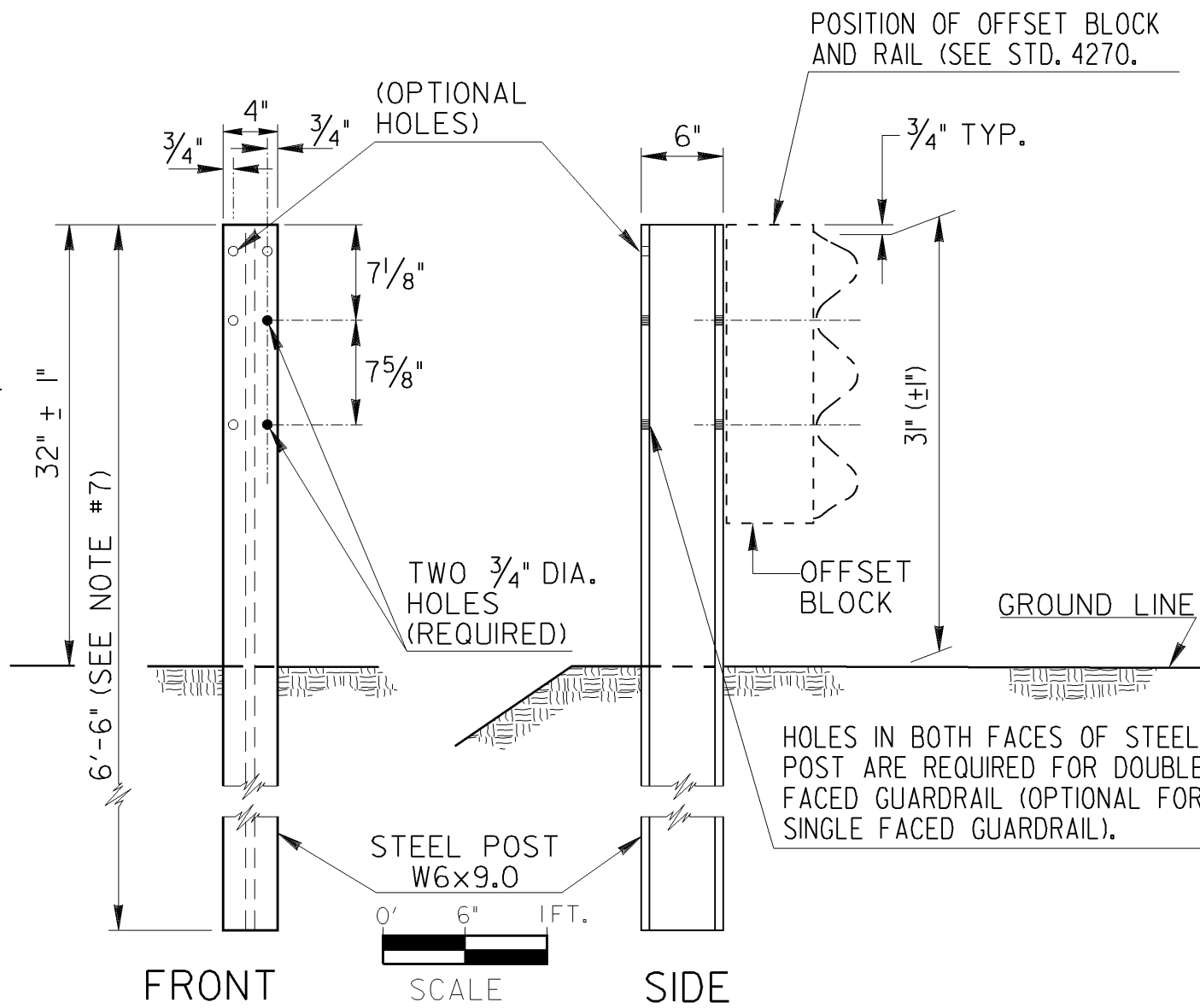


NOTE:
DIMENSIONS ARE SUBJECT TO
MANUFACTURER'S TOLERANCES.

TYPE D STEEL POST (FOR "W" BEAM GUARDRAIL)



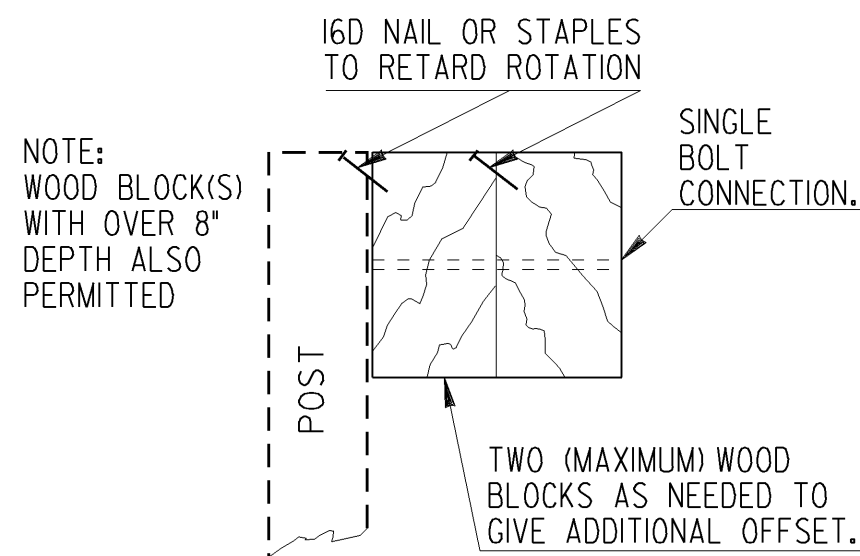
TYPE D-T STEEL POST (FOR "T" BEAM GUARDRAIL)



GENERAL NOTES:

1. SPECIFICATIONS GEORGIA STANDARD, CURRENT EDITION AND SUPPLEMENTS THERETO.
2. STEEL POSTS MAY BE EITHER ROLLED OR WELDED STRUCTURAL SHAPES. STEEL OFFSET BLOCKS SHALL BE ROLLED, WELDED POSTS SHALL BE SEAL WELDED BETWEEN WEB AND FLANGE BEFORE GALVANIZING.
3. WHERE WOOD POST OR WOOD OFFSET BLOCKS ARE PERMITTED, THE WOOD SHALL BE TREATED IN ACCORDANCE WITH GEORGIA STANDARD SPECIFICATIONS.
4. ALL BOLTS USED FOR FASTENING THE RAIL AND OFFSET BLOCKS TO WOOD POSTS SHALL HAVE SUFFICIENT LENGTH TO EXTEND AT LEAST 1/4" BEYOND THE FULL NUT, UP TO 3" BEYOND.
5. (a) "W" BEAM GUARDRAIL: ALL OFFSET BLOCKS SHALL BE 8" DEPTH PLASTIC BLOCKS EXCEPT FOR (d) BELOW.
(b) "T" BEAM GUARDRAIL: STANDARD INSTALLATION WILL USE 8" DEPTH PLASTIC BLOCKS UNLESS OTHERWISE APPROVED.
(c) 13 3/4" DEPTH MODIFIED STEEL OFFSETS MAY BE SPECIFIED WHERE JUSTIFIED FOR MORE SEVERE CONDITIONS. PAY ITEM IS --GUARDRAIL, TP T, MODIFIED OFFSET BLOCK--PER LIN. FT.
(d) WOOD OFFSET BLOCKS MAY BE USED ONLY AT AN ISOLATED LOCATION WITHIN A RUN OF GUARDRAIL, WHERE OTHER BLOCK TYPES WOULD NOT PROVIDE PROPER FIT, AS DETERMINED BY THE ENGINEER OR SHOWN IN THE PLANS.
6. POSTS WILL BE SPACED AT 6'-3" C. TO C., UNLESS OTHERWISE NOTED.
7. ADDITIONAL LENGTH POSTS, WHERE SPECIFIED, SHALL BE 7'-0" AND 7'-6" LONG FOR "W" BEAM AND "T" BEAM GUARDRAILS RESPECTIVELY, WITH HOLES DIMENSIONED FROM THE POST-TOP THE SAME AS SHOWN.
8. 9'-0" POST REQUIRED IF GUARDRAIL INSTALLED ON A 2:1 SLOPE.
9. GROUT FILL SHALL BE A CONTROLLED LOW STRENGTH FLOWABLE FILL THAT HAS A MAXIMUM 28-DAY COMPRESSIVE STRENGTH OF 100 P.S.I. ACCORDING TO SPEC. 600.

ADDITIONAL DEPTH OFFSET BLOCKOUTS (FOR USE WHERE GREATER THAN STANDARD OFFSET IS SPECIFIED)

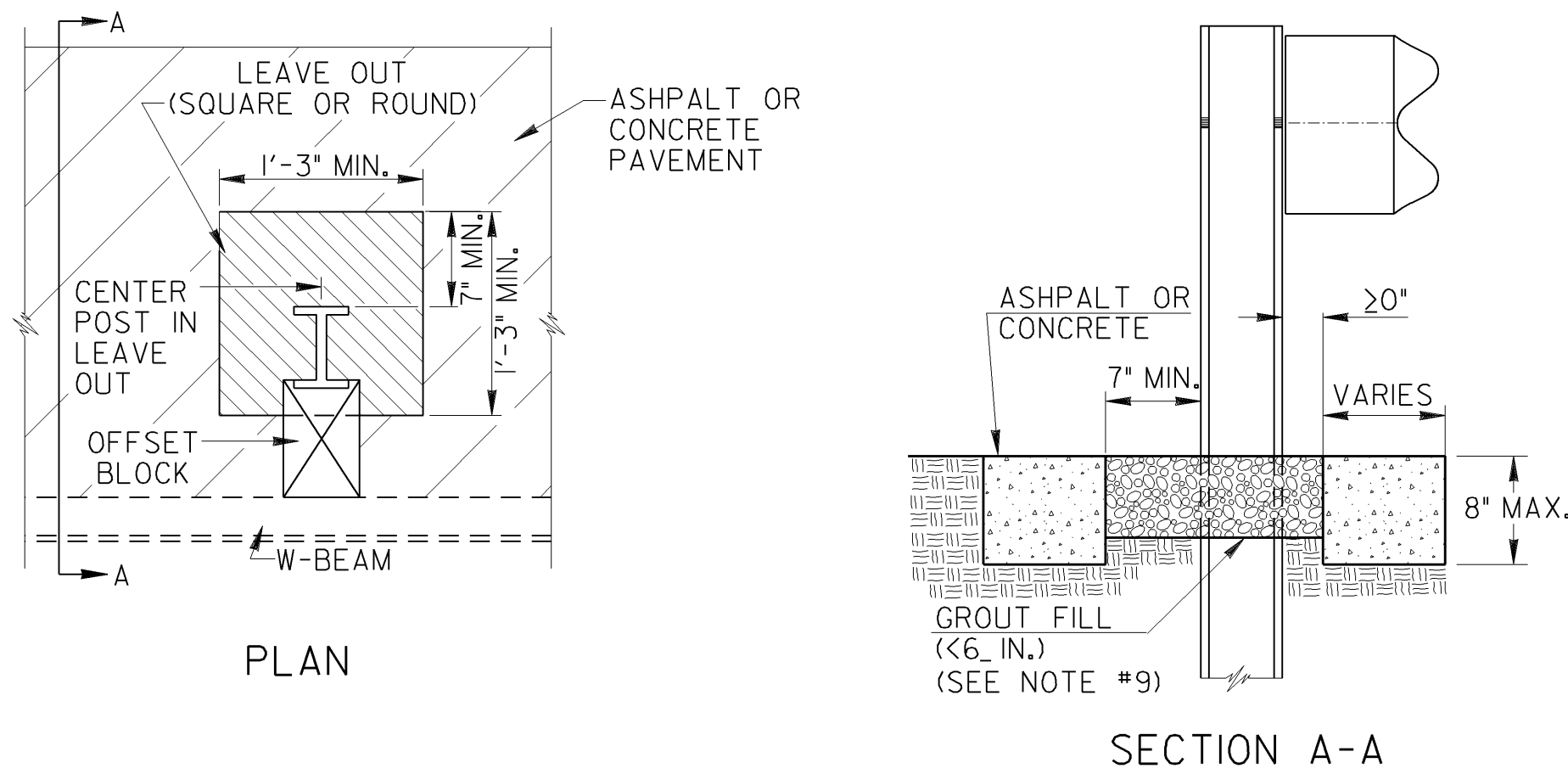


NOTE: ADDITIONAL DEPTH OFFSETS BELOW ARE SHOWN FOR "W" BEAM.
SIMILAR OFFSETS MAY BE APPLIED FOR "T" BEAM GUARDRAIL.

NOTE: ADDITIONAL DEPTH OFFSETS ARE PERMITTED
ONLY WHERE AN ISOLATED POST MUST BE
PLACED AT A GREATER THAN NORMAL OFFSET.

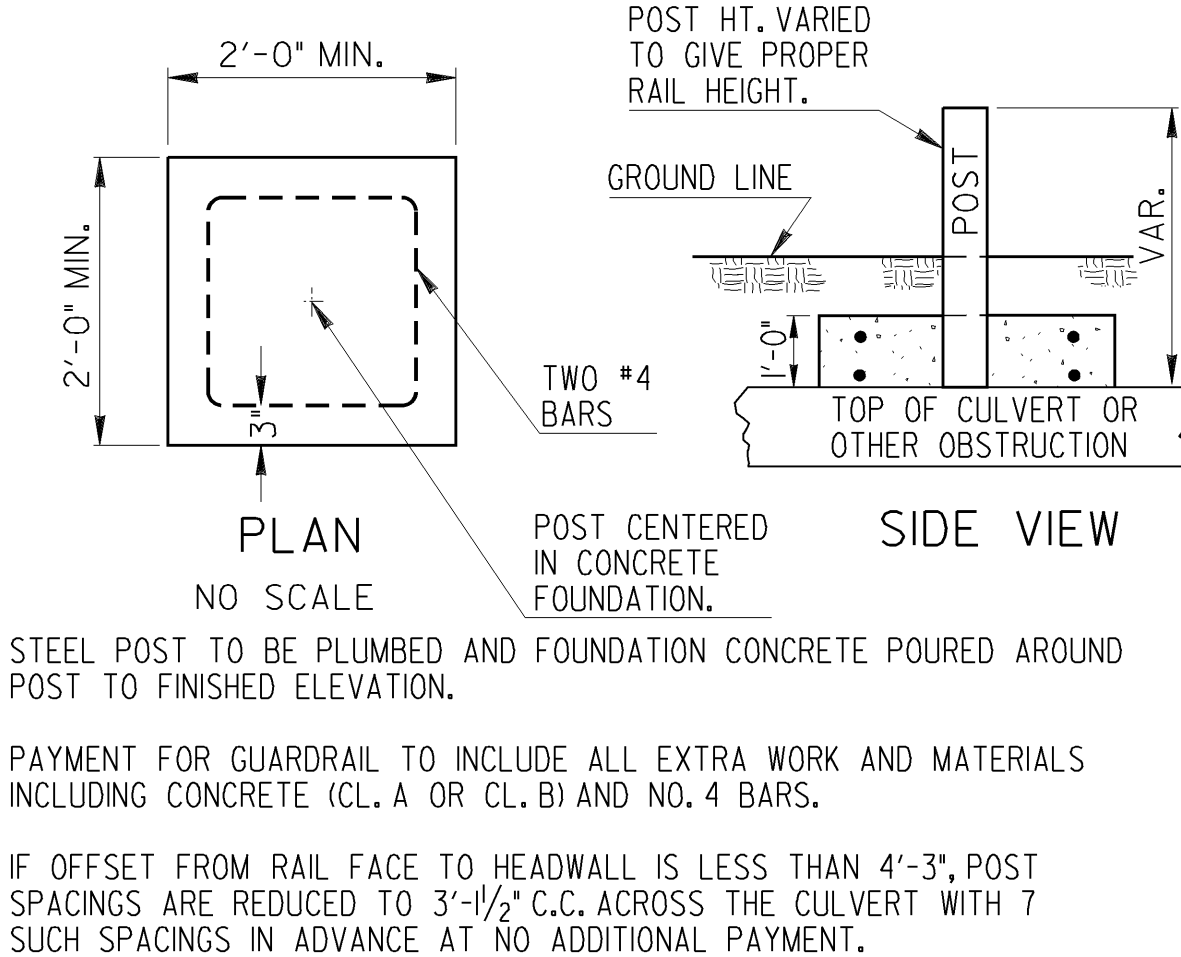
NOTE: FOR BLOCK CONNECTION TO POST AND TO RAIL SEE STD. 4380 OR 4385.

GUARDRAIL POST DETAILS IN ASPHALT OR CONCRETE PAVEMENT APPLICATIONS

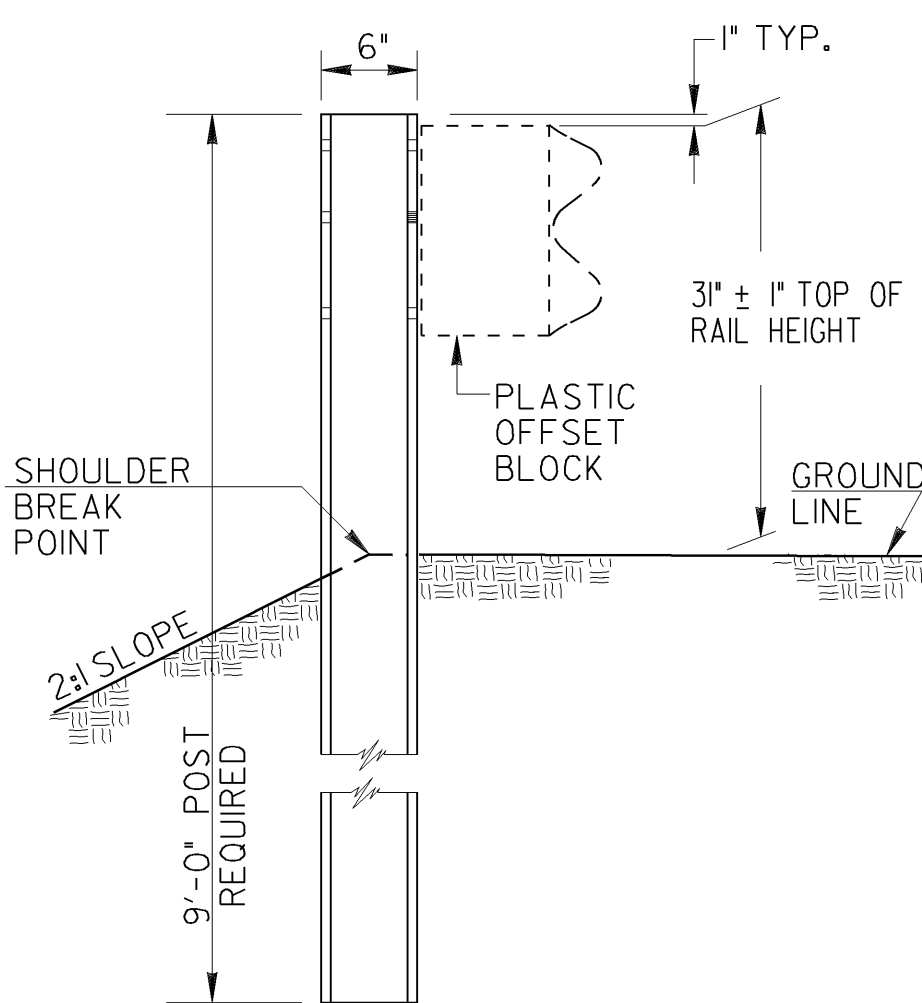


CONCRETE FOUNDATION FOR POST IN SHALLOW FILLS OVER CULVERTS OR OTHER OBSTRUCTIONS

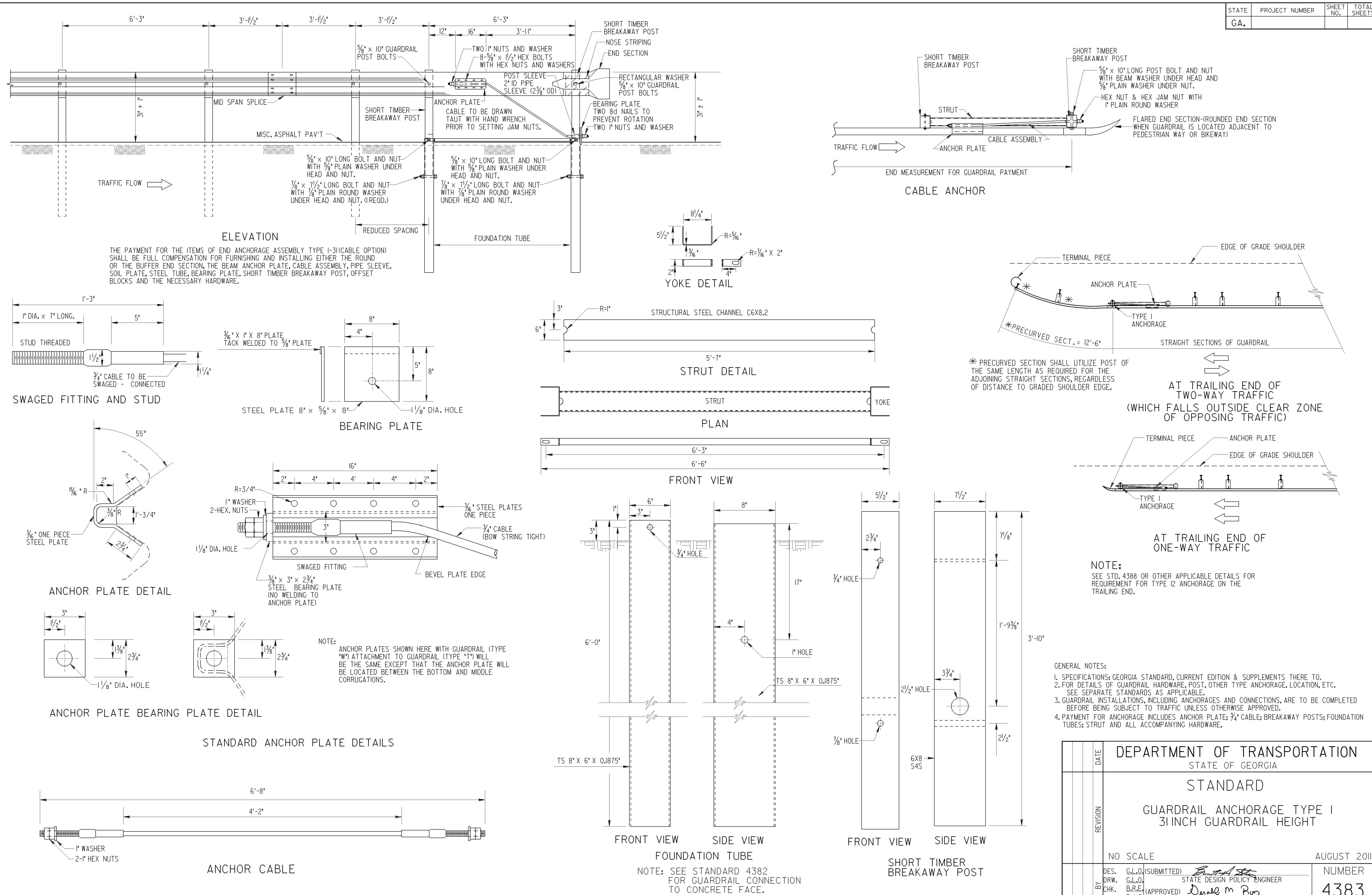
(NOTE: PLATE MOUNTED POST MAY BE USED AS AN ALTERNATE, SEE SEPARATE SHEET).



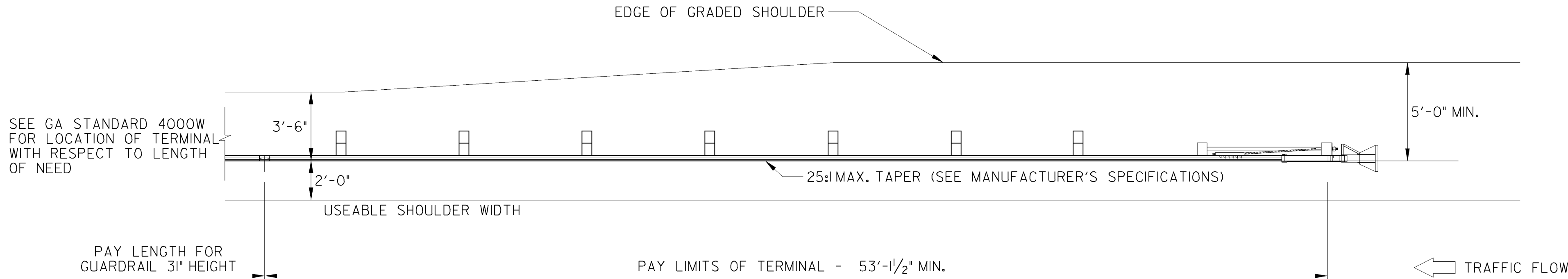
2:1 SLOPE DETAIL



DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		DATE _____
STANDARD POSTS AND OFFSET BLOCKS FOR "W" & "T" BEAM GUARDRAIL 31 INCH GUARDRAIL HEIGHT		REVISION _____
SCALE: AS SHOWN		
REV. # - BM BLOCK TO # DEPTH ADDED NOW STRIP/GRID PAV. INSTALLATION DETAILS		AUGUST 2011
FGI _____	DES. G.L.O. (SUBMITTED) <i>[Signature]</i> DRW. G.L.O. STATE DESIGN POLICY ENGINEER CHK. B.R.E. (APPROVED) <i>[Signature]</i> REVIEW B.A.S. CHIEF ENGINEER	NUMBER 4381



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

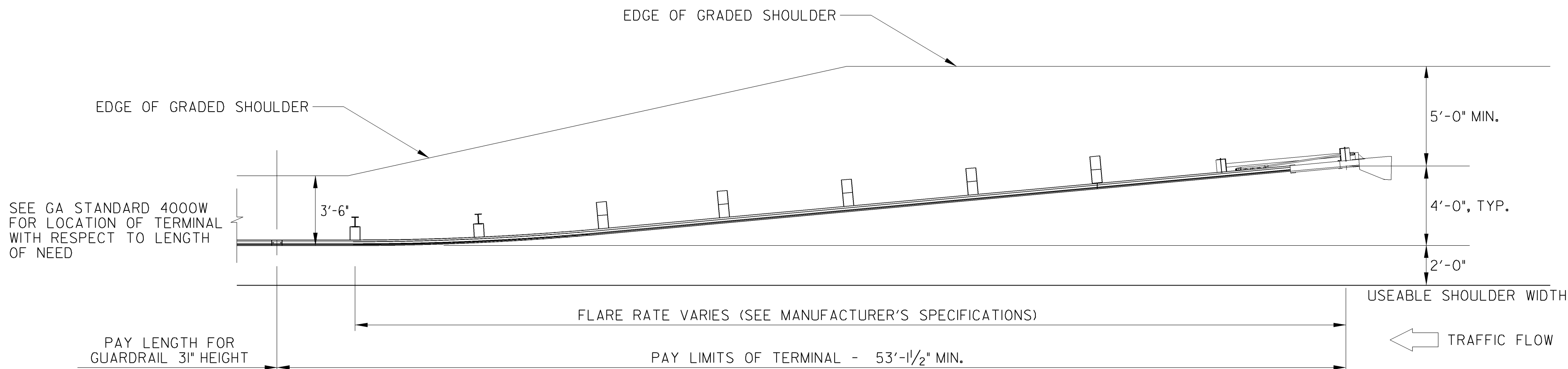


TYPE I2A - 3I" GUARDRAIL TERMINAL
(TANGENT, ENERGY-ABSORBING)

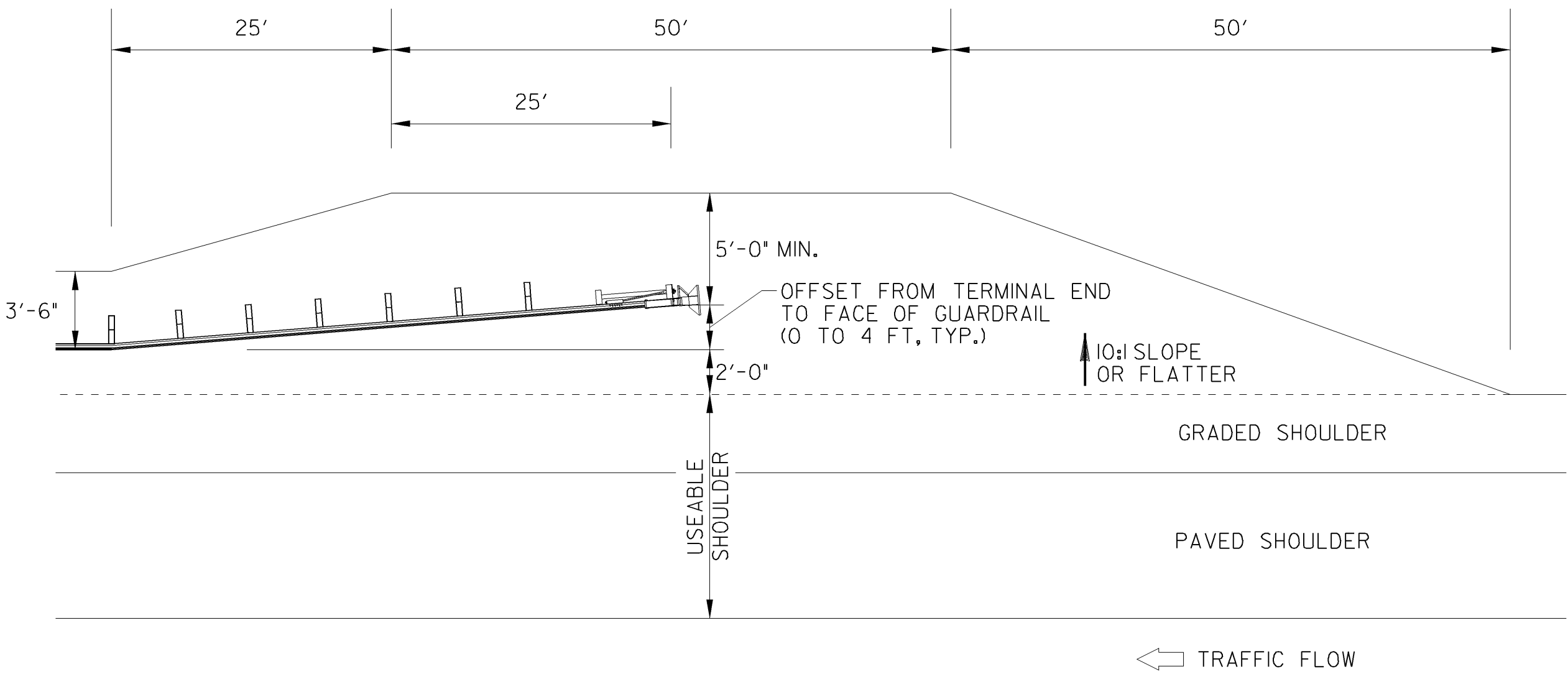
GENERAL NOTES:

- SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
- SEE GDOT OPL 64 FOR APPROVED PRODUCTS.
- THIS SHEET DEPICTS THE PAY LIMITS FOR GUARDRAIL AND TYPE I2 TERMINALS. TYPE I2 TERMINALS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 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 ENERGY-ABSORBING TERMINAL SHOULD BE SELECTED.

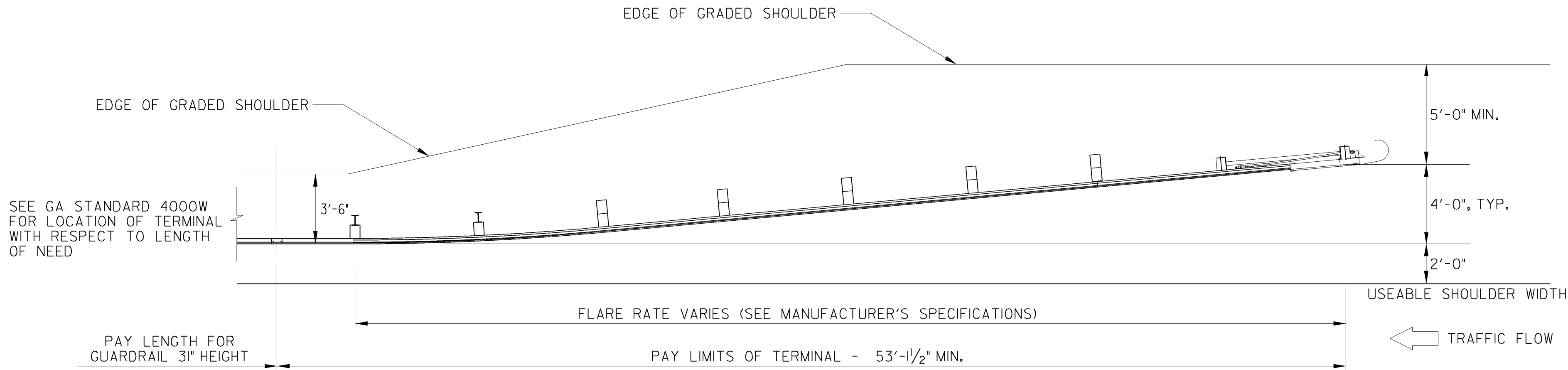
ITEM NO.	UNITS	DESCRIPTION
64I-50I5	EA	GUARDRAIL TERMINAL, TP I2A - 3I", TANGENT, ENERGY-ABSORBING
64I-5020	EA	GUARDRAIL TERMINAL, TP I2B - 3I", FLARED, ENERGY-ABSORBING
64I-5025	EA	GUARDRAIL TERMINAL, TP I2C - 3I", FLARED, NON-ENERGY-ABSORBING



TYPE I2B - 3I" GUARDRAIL TERMINAL
(FLARED, ENERGY-ABSORBING)



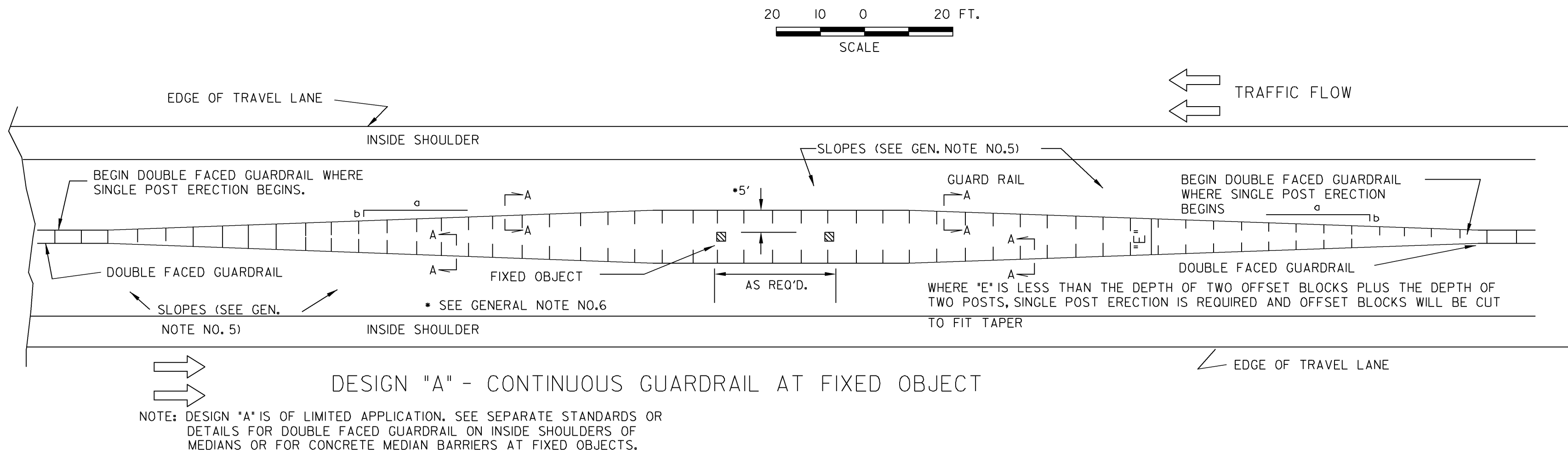
TERMINAL PAD GRADING DETAIL



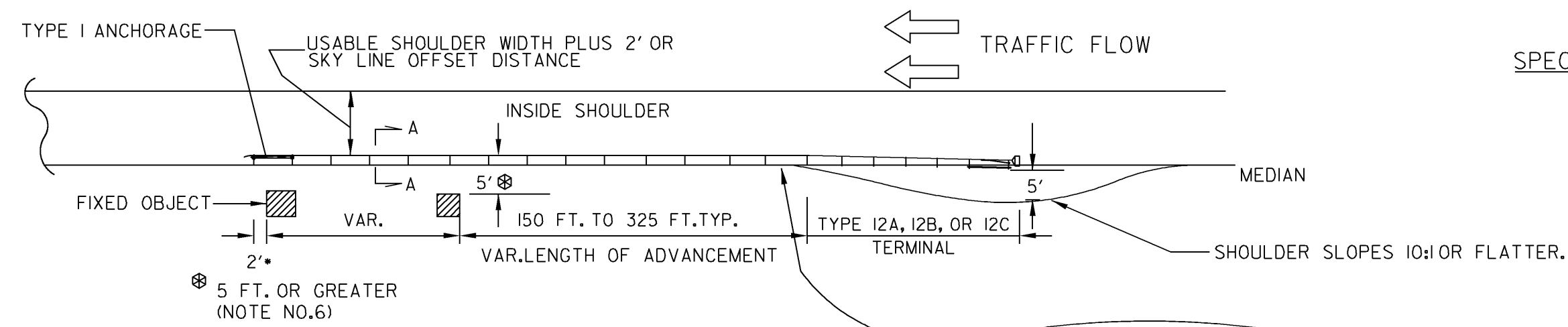
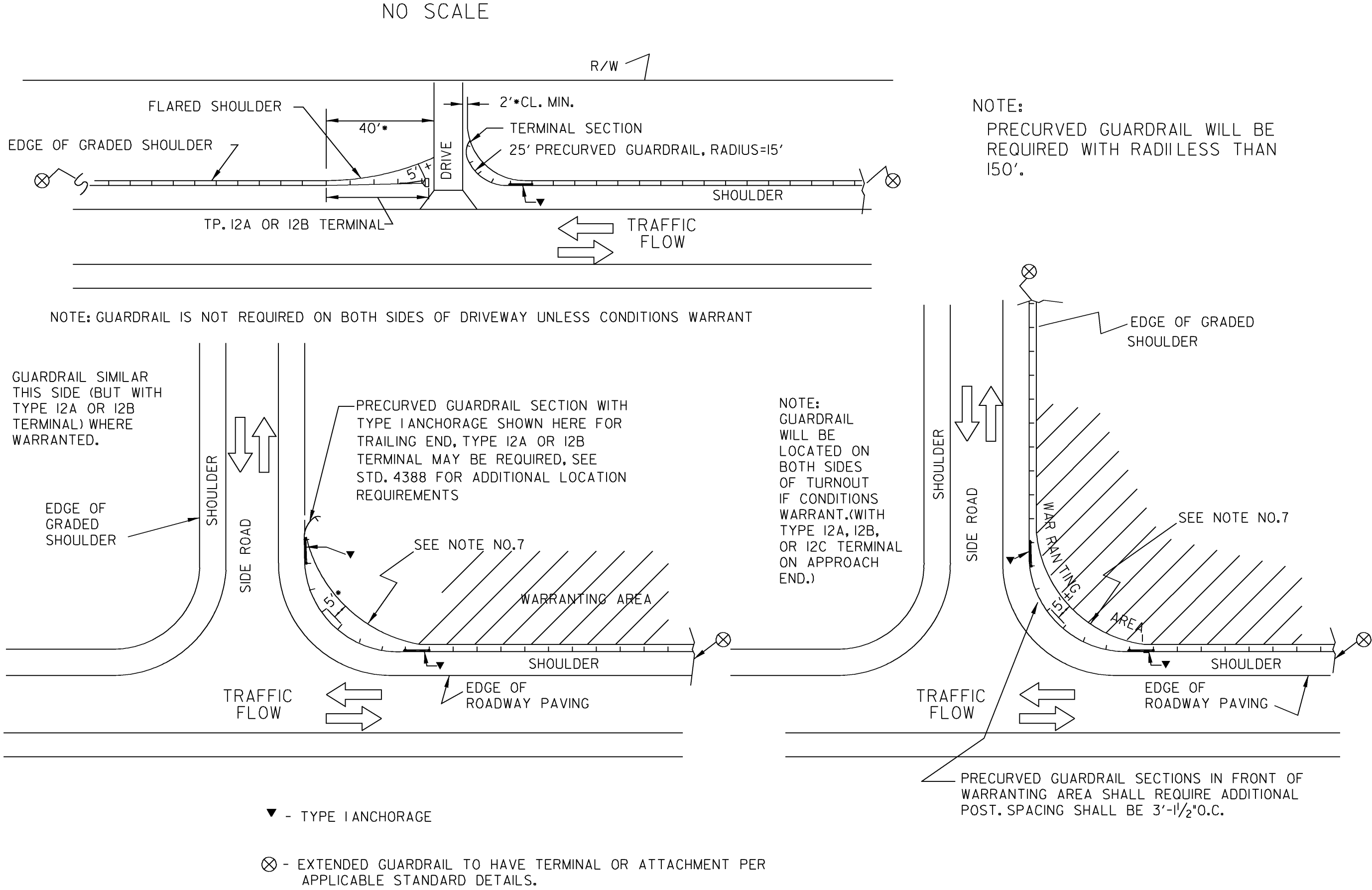
TYPE I2C - 3I" TERMINAL
(FLARED, NON-ENERGY-ABSORBING)

	1-29-16	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
	ADDED I2A, I2B, & I2C; ADDED GRADING DTL	REVISION	STANDARD GUARDRAIL TERMINALS, TYPE I2A, I2B, AND I2C 3I INCH GUARDRAIL HEIGHT	
			NO SCALE	AUGUST 2011
FBF	BY	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 4384

GUARDRAIL LOCATIONS IN MEDIANS



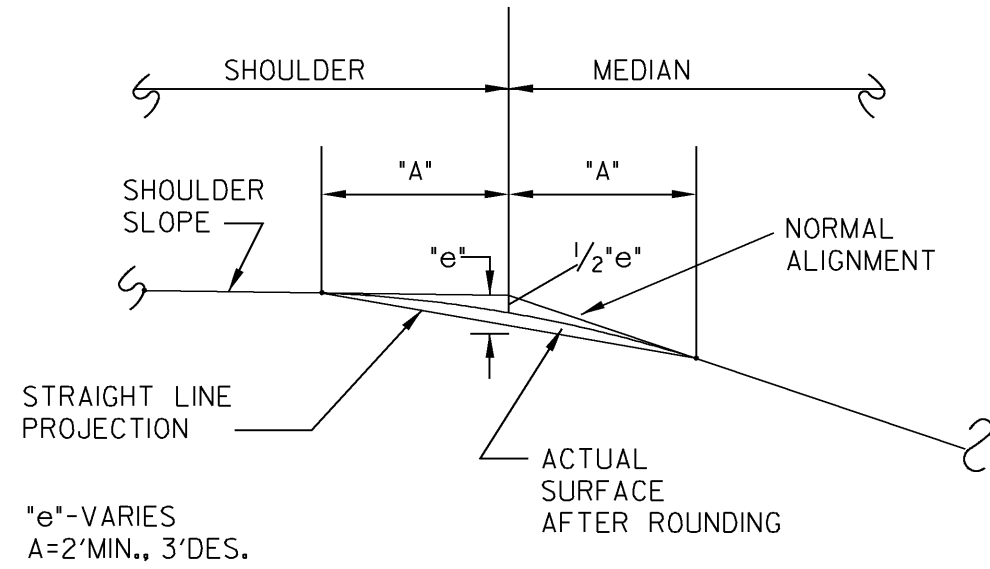
GUARDRAIL LOCATIONS AT TURNOUTS



SPECIAL NOTE: FOR CONTINUOUS DOUBLE FACED GUARDRAIL ON THE INSIDE SHOULDER OF MEDIAN, SEE SEPARATE DETAILS.

FLARE RATE: DESIGN "A", "B", & "D"			
DESIGN SPEED (mph)	SHY-LINE OFFSET (ft)	MAX. FLARE RATE (d/b) BARRIER INSIDE SHY-LINE	BARRIER AT OR BEYOND SHY-LINE
70	9	30	15
60	8	26	14
55	7	24	12
50	6.5	21	11
45	6	18	10
40	5	16	8
30	4	13	7

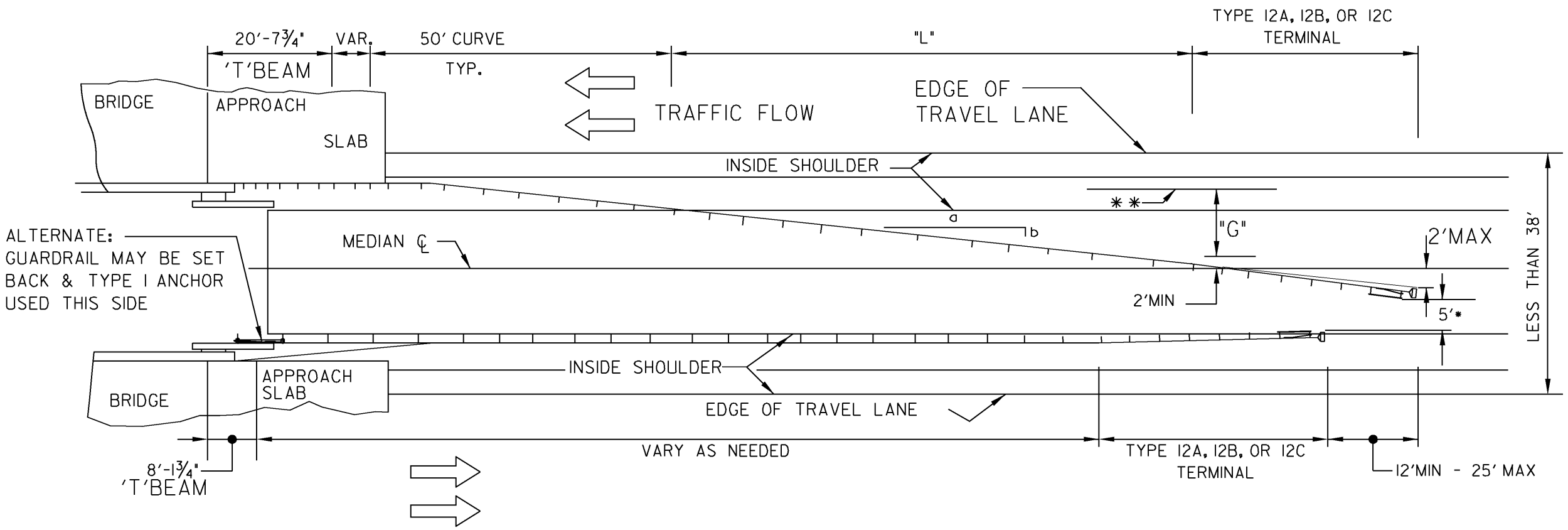
IF THE OFFSET FROM THE EDGE OF THE TRAVEL LANE TO THE FACE OF THE GUARDRAIL AT ANY POINT ALONG THE INSTALLATION IS LESS THAN THE SHY-LINE OFFSET, USE THE FLATTER RATES GIVEN IN THE TABLE.



DETAIL OF SHOULDER ROUNDING (TYPICAL FOR EXISTING GUARDRAIL INSTALLATIONS ON 6:1 OR ON 8:1 SLOPE)

GENERAL NOTES:

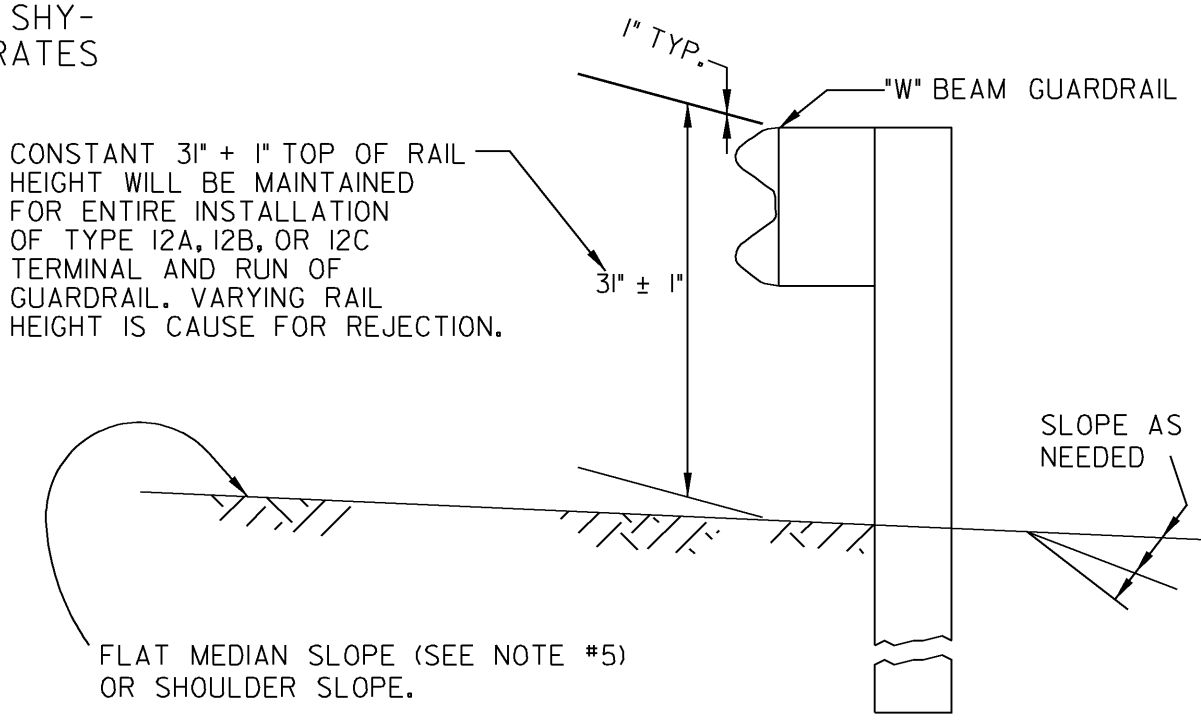
- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THERETO.
- FOR DETAILS OF GUARDRAIL HARDWARE, POST, AND OFFSET BLOCKS, SEE STANDARDS 4381 AND 4382.
- FOR DETAILS OF GUARDRAIL TERMINALS AND ANCHORAGES, SEE SEPARATE STANDARDS, OR CONSTRUCTION DETAILS AS APPLICABLE.
- FOR DETAILS OF DOUBLE FACED GUARDRAIL ATTACHED TO OR TERMINATED AT CONCRETE MEDIAN BARRIER, SEE STANDARD 4940.
- NEGATIVE SLOPES IN FRONT OF GUARDRAIL AND ALL TERMINALS SHALL BE 10:1, OR FLATTER, FOR ALL NEW INSTALLATIONS.
- OFFSET BETWEEN FACE OF GUARDRAIL AND FACE OF FIXED OBJECT SHALL BE 5 FT. + DESIRABLE, 4'-3" MINIMUM. WHERE AN OFFSET OF LEAST 4'-3" CANNOT BE OBTAINED, DOUBLE POST SPACINGS (3'-1/2" O.C.) IN FRONT OF OBJECT PLUS A MINIMUM OF 7 SUCH SPACINGS IN ADVANCE OF OBJECT IS REQUIRED WITH A 3 FT. MINIMUM OFFSET.
- WHERE PRECURVED GUARDRAIL IS INSTALLED AROUND RADIAT. INTERSECTING SIDE ROADS, THE SHOULDER AREA BACK OF THE GUARDRAIL IS TO BE WIDENED AS SHOWN ABOVE WITH THE OFFSET BETWEEN THE TRAVEL LANE AND GUARDRAIL REMAINING APPROXIMATELY CONSTANT.



DESIGN "D" - GUARDRAIL AT BRIDGE ENDS IN NARROW MEDIAN

DESIGN "D" IS LIMITED FOR USE WHERE THE GRASSED MEDIAN AT BRIDGE APPROACHES IS ALMOST FLUSH (SLOPES NOT STEEPER THAN 20:1) AND MEDIAN IS LESS THAN 38 FT. IN WIDTH FOR OTHER CONDITIONS, SEE STD. 4387 OR CONSTRUCTION DETAILS.

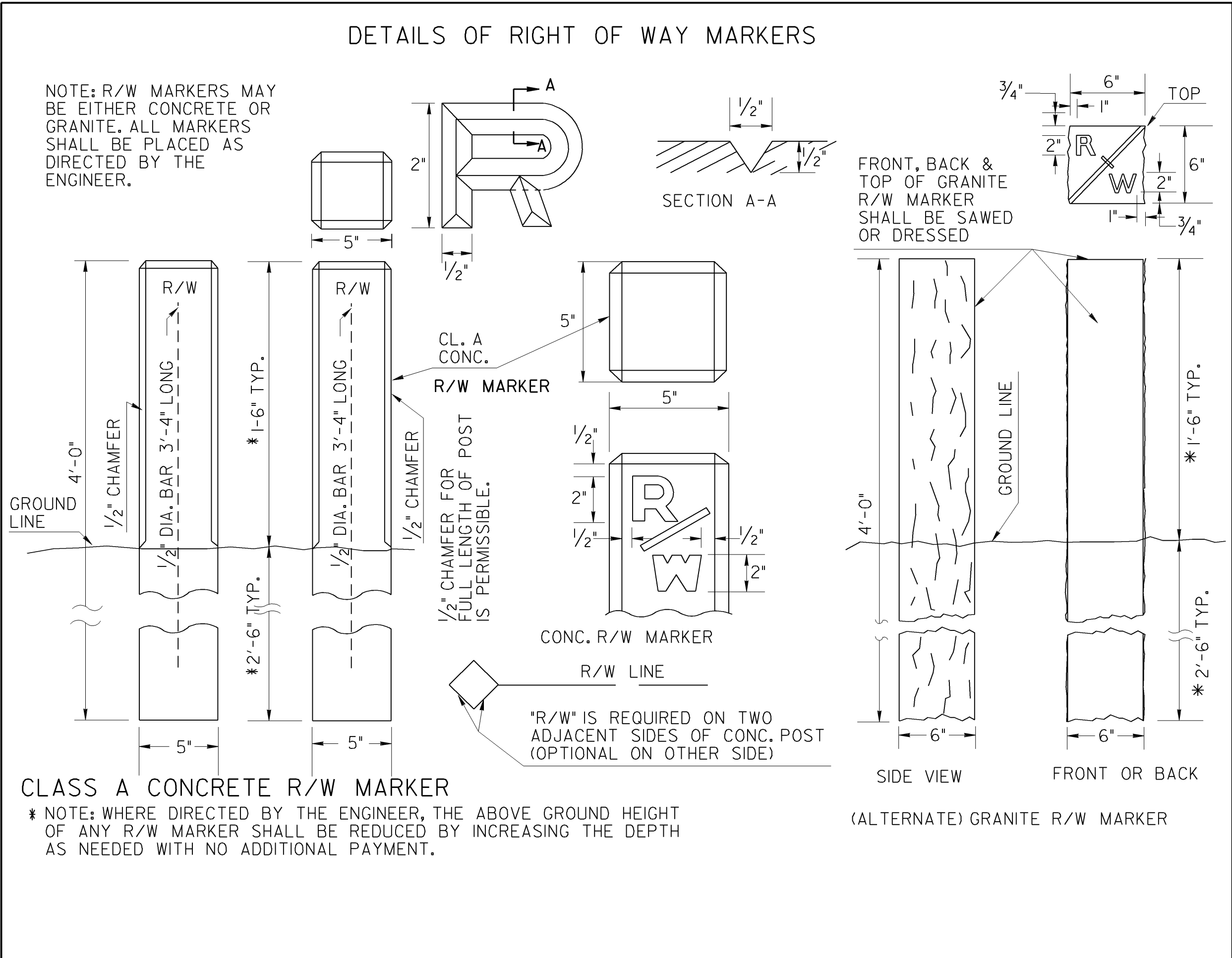
FOR WIDER MEDIANS, SEE STD. 4051



SECTION A-A (SHOWN FOR "W" BEAM GUARDRAIL)

		1-29-16	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION		STANDARD GUARDRAIL LOCATIONS IN MEDIANS GUARDRAIL LOCATIONS AT TURNOUTS 31 INCH GUARDRAIL HEIGHT	
		REV TP12 TO I2A/B/C TRML		SCALE: AS SHOWN AUGUST 2011	
FBF	BY	DES. G.L.O. DRW. G.L.O. CHK. B.R.E. REVIEW B.A.S.	(SUBMITTED) (APPROVED)	STATE DESIGN POLICY ENGINEER CHIEF ENGINEER NUMBER 4386	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



REDRAWN TO MATCH METRIC 4-10-06		GA. STD. 9003		REDRAWN		REV. F.A.P. - SP. POST ALT. 9-28-90		VAR. HT. R/W MARKER 10-11-88		ADD GRANITE R/W M. 5-24-85		DATE	
G.L.O.		G.J.P.		R.M.U.		R.M.U.		R.M.U.		R.M.U.		BY	
DES.		DRW.		TRA.		CHK.		R.K.C.		NO SCALE		REV. & REDR. DEC., 1981	
(SUBMITTED)		(APPROVED)		STATE ROAD & AIRPORT DESIGN ENGINEER		CHIEF ENGINEER		NUMBER		9003			

SEE T-22A and T-22B FOR BRIDGE DELINEATION DETAILS

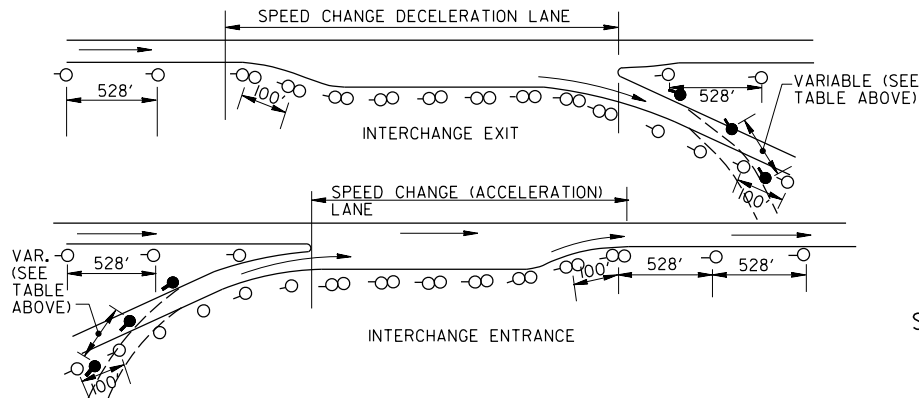
RECOMMENDED SPACING FOR DELINEATORS				
DELINEATORS SHOULD NORMALLY BE SPACED 528' APART, WHERE SUCH IS INTERRUPTED BY DRIVEWAYS, CROSSROADS, ETC., AND WHERE UNDER THE NORMAL SPACING, A DELINEATOR WOULD FALL WITHIN SUCH AN AREA, THAT DELINEATOR MAY BE MOVED IN EITHER DIRECTION A DISTANCE NOT EXCEEDING 1/4 OF THE NORMAL SPACING (132'). IF SUCH DELINEATOR STILL FALLS WITHIN THAT AREA, IT SHOULD BE ELIMINATED. SEE TABLE BELOW FOR RECOMMENDED SPACING OF HORIZONTAL CURVES.				
TABLE SPACING (I) FOR DELINEATORS ON HORIZONTAL CURVES				
RADIUS OF CURVE (IN FEET)	SPACING ON CURVE (IN FEET)	SPACING IN ADVANCE & BEYOND CURVE (IN FEET) (MAINLINE ONLY)		
		1ST	2ND	3RD
50	20	40	65	125
150	30	60	90	180
200	35	70	110	215
250	40	85	125	250
300	50	95	145	290
400	55	110	170	300
500	65	125	190	300
600	70	140	210	300
700	75	150	230	300
800	80	165	245	300
900	85	175	260	300
1000	90	185	275	300

(I) SPACING, S, FOR SPECIFIC RADIUS NOT SHOWN MAY BE INTERPOLATED FROM THE TABLE OR COMPUTED FROM THE FORMULA $S = \sqrt{R \cdot 50}$, WHERE R IS THE RADIUS OF CURVATURE IN FT. AND S IS ROUNDED TO THE NEAREST 5 FT. THE SPACING TO THE FIRST DELINEATOR IN ADVANCE OF THE CURVE IS 25, TO THE SECOND 35, AND THE THIRD 65, BUT NONE TO EXCEED 300 FEET, MINIMUM SPACING IS 20 FEET.

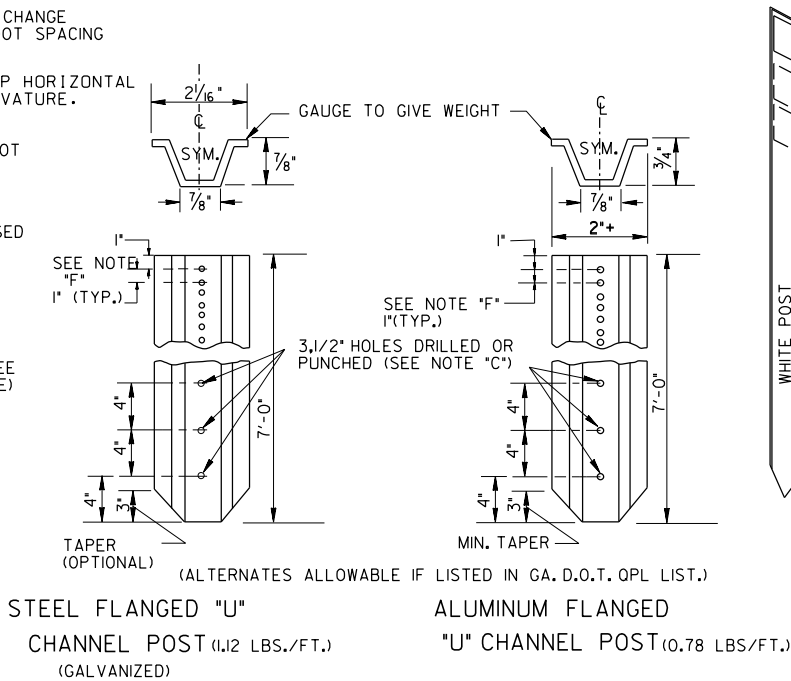
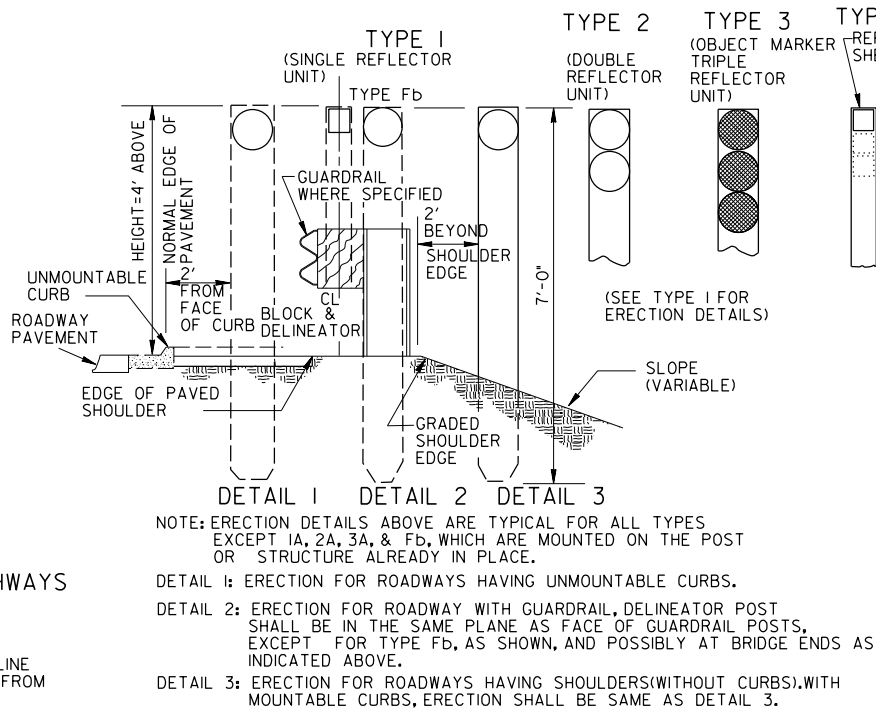
LOCATION OF DELINEATORS ON FREEWAY & EXPRESSWAY TYPE HIGHWAYS

TYPES OF DELINEATORS, ERECTION LOCATION, AND SPACING SHALL BE AS FOLLOWS.

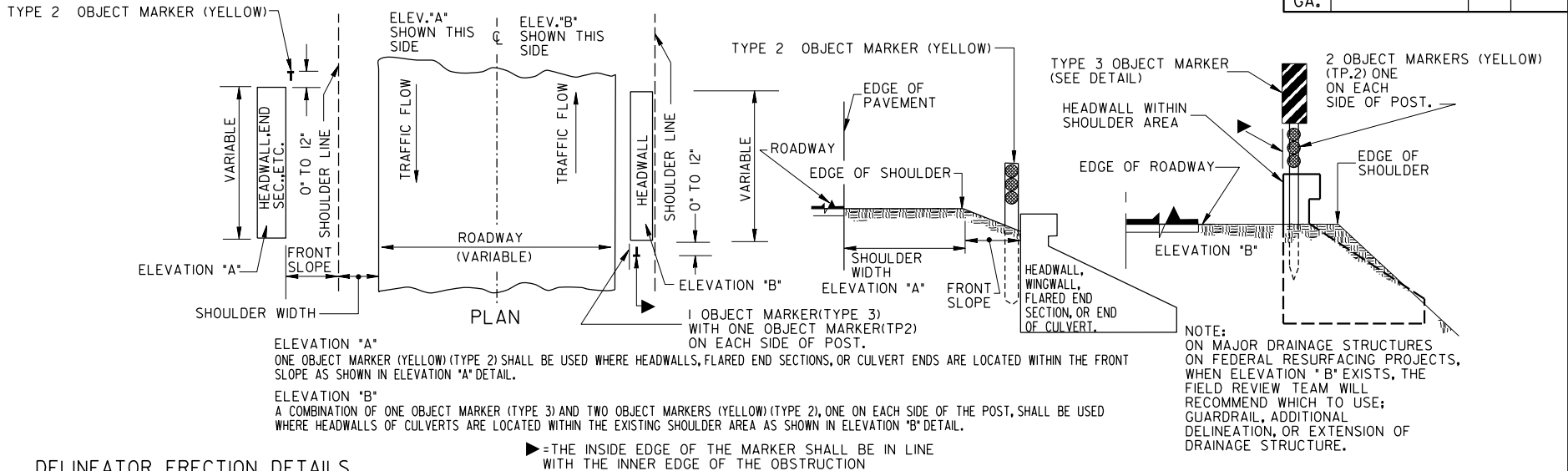
- SINGLE CRYSTAL (WHITE) REFLECTOR UNITS (TYPE 1 DELINEATOR) ON RIGHT SIDE OF MAINLINE AT 528 FOOT SPACING & ON RT. SIDE OF RAMP TGT. SECTIONS AT 100 FOOT SPACING FROM PHYSICAL CORE TO RAMP TERMINUS.
- DOUBLE CRYSTAL (WHITE) REFLECTOR UNITS (TYPE 2 DELINEATOR) ON RIGHT SIDE OF SPEED CHANGE (ACCELERATION & DECELERATION) LANES THAT ARE ON RIGHT SIDE OF MAINLINE AT 100 FOOT SPACING FROM TAPER TO PHYSICAL CORE.
- (YELLOW) SINGLE YELLOW REFLECTOR UNITS (TYPE 1 DELINEATOR) ON LEFT SIDE OF RAMP HORIZONTAL CURVES & ON LEFT SIDE OF MAINLINE HORIZONTAL CURVES GREATER THAN 3° CURVATURE.
- (YELLOW) DOUBLE YELLOW REFLECTOR UNITS (TYPE 2 DELINEATOR) ON LEFT SIDE OF SPEED CHANGE (ACCELERATION & DECELERATION) LANES THAT ARE ON LEFT SIDE OF MAINLINE AT 100 FOOT SPACING FROM TAPER TO PHYSICAL CORE.
- (RED) SINGLE REFLECTOR UNITS (TYPE 1 DELINEATOR) ON LEFT SIDE OF EXIT RAMP AT 100 FOOT SPACING FROM "WRONG WAY" SIGN TO RAMP TERMINUS. USE TYPE 1A RED DELINEATORS ON RIGHT OR LEFT SIDE OF EXIT RAMP WHERE TYPE 1 WHITE OR YELLOW DELINEATORS ARE USED FACE OF RED DELINEATORS ORIENTED OPPOSITE TO NORMAL TRAFFIC FLOW.



DELINEATOR ERECTION DETAILS



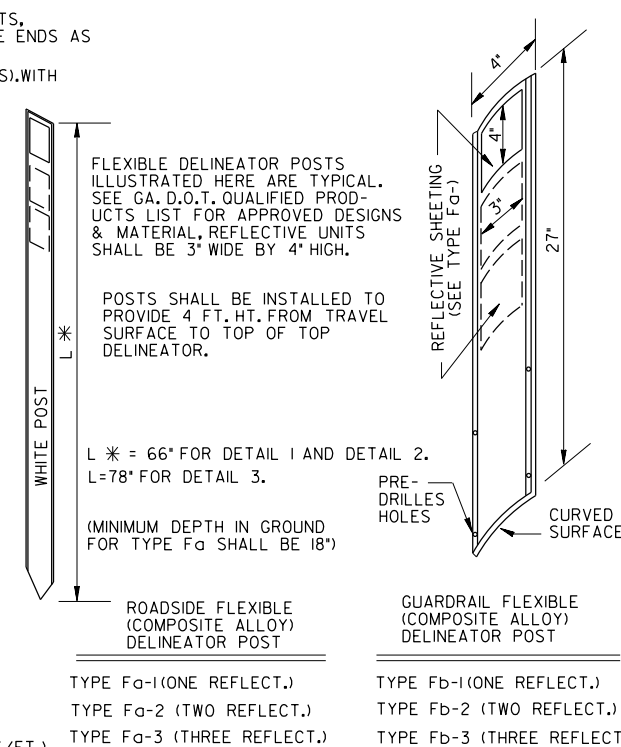
LOCATION OF OBJECT MARKERS AT CULVERT ENDS



TYPES OF DELINEATORS

- TYPE 1 - ALUMINUM OR GALVANIZED STEEL FLANGED "U" CHANNEL POST WITH SINGLE REFLECTOR UNIT. REFLECTOR UNIT TO CONSIST OF: (A) ONE 3" DIAMETER SEALED PRISMATIC REFLEX REFLECTOR WITH PLATE AND FRAME, OR (B) ONE 4" X 5" RECTANGULAR TYPE 1, LEVEL A REFLECTIVE SHEETING REFLECTOR WITH PLATE AND FRAME, OR (C) ONE 3/4" DIAMETER CENTER MOUNT SEALED PRISMATIC REFLEX REFLECTOR HOUSED IN ALUMINUM BACKING WITH SINGLE GROMMETTED HOLE IN CENTER OF REFLECTOR.
- TYPE 2 - ALUMINUM OR GALVANIZED STEEL FLANGED "U" CHANNEL POST WITH DOUBLE REFLECTOR UNIT. REFLECTOR UNIT TO CONSIST OF: (A) TWO 3" DIAMETER SEALED PRISMATIC REFLEX REFLECTORS WITH PLATE AND FRAME, OR (B) TWO 4" X 5" RECTANGULAR TYPE 1, LEVEL A REFLECTIVE SHEETING REFLECTORS WITH PLATE AND FRAME, OR (C) TWO 3/4" DIAMETER CENTER MOUNT SEALED PRISMATIC REFLEX REFLECTOR HOUSED IN ALUMINUM BACKING WITH SINGLE GROMMETTED HOLE IN CENTER OF EACH REFLECTOR.
- TYPE 3 - ALUMINUM OR GALVANIZED STEEL FLANGED "U" CHANNEL POST WITH TRIPLE REFLECTOR UNIT. REFLECTOR UNIT TO CONSIST OF: (A) THREE 3" DIAMETER SEALED PRISMATIC REFLEX REFLECTORS WITH PLATE AND FRAME, OR (B) THREE 4" X 5" RECTANGULAR TYPE 1, LEVEL A REFLECTIVE SHEETING REFLECTORS WITH PLATE AND FRAME, OR (C) THREE 3/4" DIAMETER CENTER MOUNT SEALED PRISMATIC REFLEX REFLECTORS HOUSED IN ALUMINUM BACKING WITH SINGLE GROMMETTED HOLE IN CENTER OF EACH REFLECTOR.
- TYPE 1A-SINGLE REFLECTOR UNIT ONLY MOUNTED ON POST OR STRUCTURE ALREADY IN PLACE. REFLECTOR UNIT SAME AS FOR TYPE 1, 2, AND 3, RESPECTIVELY.
- TYPE 2A-DOUBLE REFLECTOR UNIT ONLY MOUNTED ON POST OR STRUCTURE ALREADY IN PLACE. REFLECTOR UNIT SAME AS FOR TYPE 1, 2, AND 3, RESPECTIVELY.
- TYPE 3A-TRIPLE REFLECTOR UNIT ONLY MOUNTED ON POST OR STRUCTURE ALREADY IN PLACE. REFLECTOR UNIT SAME AS FOR TYPE 1, 2, AND 3, RESPECTIVELY.
- TYPE Fa - FLEXIBLE DELINEATOR POSTS SHALL BE USED AT LOCATIONS WHERE HIGH FREQUENCY OF HITS ARE CONTEMPLATED, SUCH AS GORE AREAS, OUTSIDE OF SHARP CURVES, ETC., AND MAY ALSO BE USED AS ALTERNATIVES TO EITHER TYPE 1, TYPE 2, OR TYPE 3 DELINEATORS WHEN SPECIFIED ON THE PLANS. DIFFERENT DESIGN FLEXIBLE DELINEATORS PERMITTED, IF APPROVED BY THE GA. D.O.T. OFFICE OF MATERIALS AND RESEARCH.

DETAIL OF OBJECT MARKER

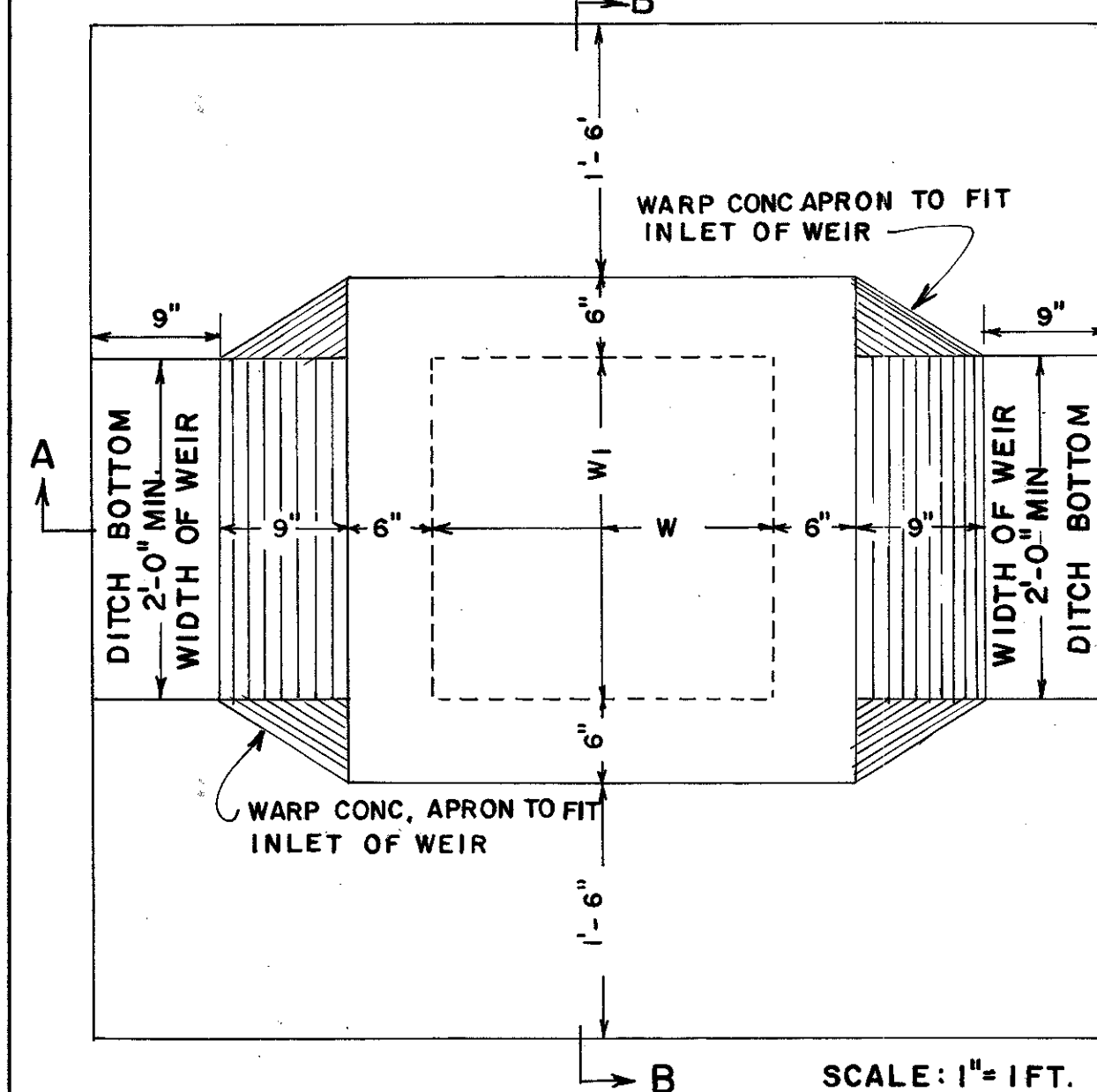


GENERAL NOTES:

- A- SPECIFICATIONS: GA. STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
- B- REFLECTORS FOR TYPES 1 AND 1A SHALL BE CRYSTAL (WHITE), YELLOW OR RED, AS SPECIFIED ON THE PLANS. REFLECTORS FOR TYPES 2 AND 2A SHALL BE CRYSTAL (WHITE) OR YELLOW AS SPECIFIED ON THE PLANS. REFLECTORS FOR TYPE 3 AND 3A SHALL BE YELLOW ONLY AS SPECIFIED ON THE PLANS.
- C- WHEN POSTS ARE SET IN CONCRETE, METAL RODS SHALL BE INSERTED IN 3/12" DIA. HOLES LOCATED AT BOTTOM OF POST. MIN SIZE OF RODS SHALL BE 1/4" DIA. X 3' LONG.
- D- MONODIRECTIONAL DELINEATORS SHALL BE USED AND ERECTED AT THE RECOMMENDED SPACING, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- E- FOR ADDITIONAL DATA ON DELINEATORS, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL SUPPLEMENTS THERETO.
- F- DRILL OR PUNCH 17, 3/8" DIA. HOLES ON 1" CENTERS FOR A DISTANCE OF 17" MINIMUM FROM TOP POST.

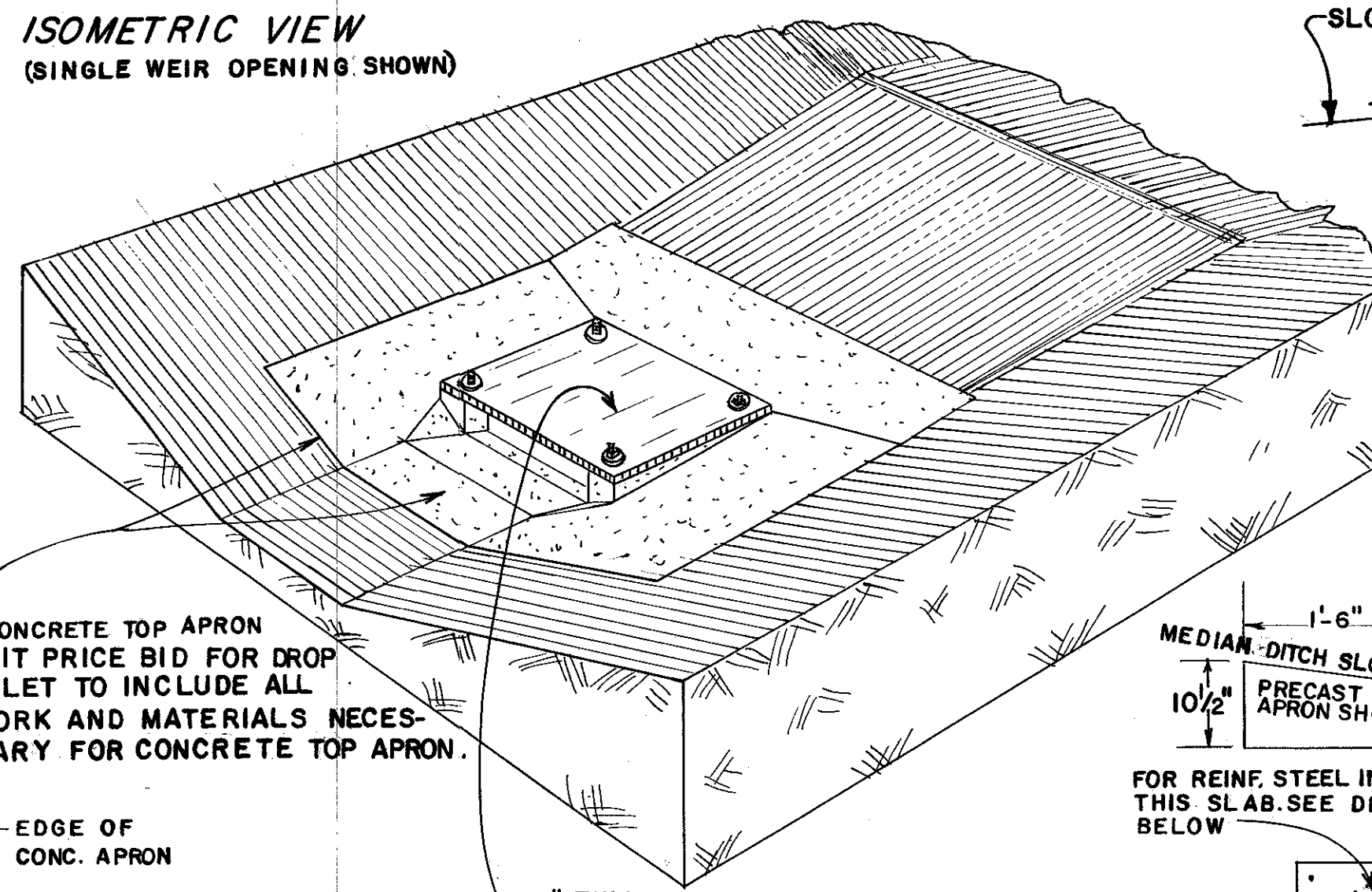
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA				DATE	
STANDARD DELINEATORS & MARKERS AND ALTERNATE POSTS				REVISION	
UPDATED SIGN REFLECTIVITY	07-2022	REV. OBJECT MARKER TYPE, 4-10-06	DELETED DETAIL AND REV. REFLECTIVE SHEETING TYPE.	NO SCALE	
ACP	GLO	BY	DES. _____ REV. _____ TRA. _____ CHK. _____	REV. & REDR. MAR., 2001	
(SUBMITTED) <i>B. A. Smith</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>D. L. Smith</i> CHIEF ENGINEER				NUMBER 9030C	

DETAILS OF DROP INLET WITH DOUBLE WEIR OPENING



SCALE: 1" = 1 FT.

ISOMETRIC VIEW (SINGLE WEIR OPENING SHOWN)

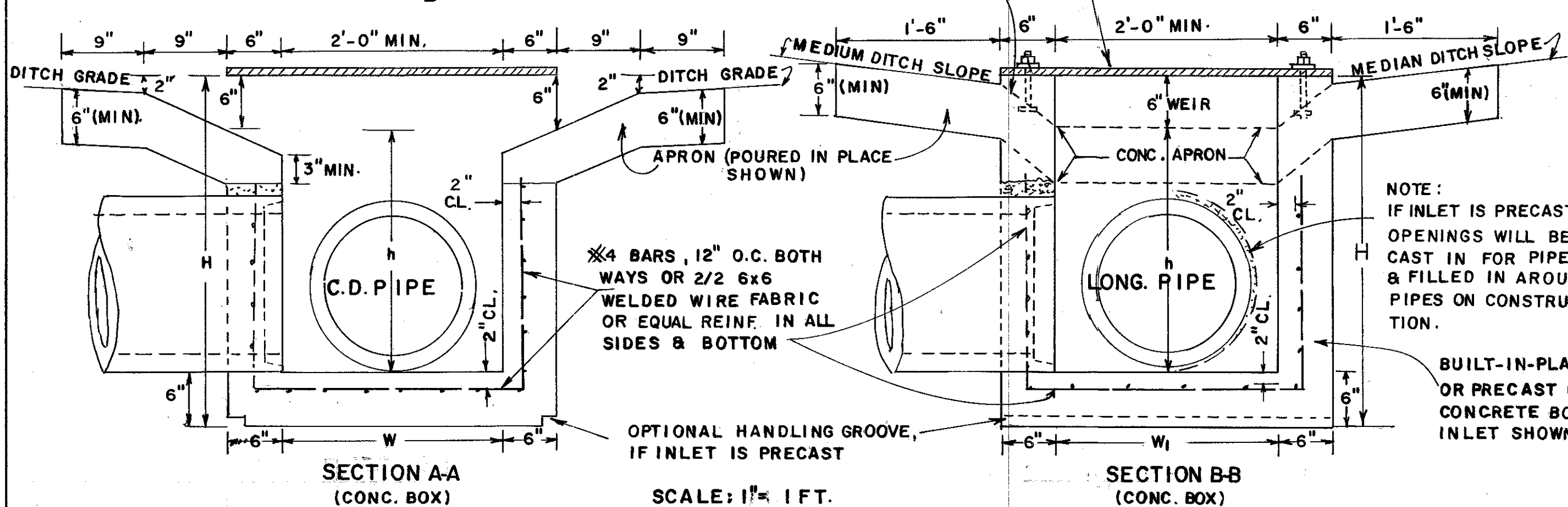


CONCRETE TOP APRON UNIT PRICE BID FOR DROP INLET TO INCLUDE ALL WORK AND MATERIALS NECESSARY FOR CONCRETE TOP APRON.

EDGE OF CONC. APRON

1/2" THICK STEEL PLATE BOLTED AT EACH CORNER WITH 1/2" x 6" BOLT, NUT, AND WASHER. BOLT, NUT AND WASHER GALVANIZED ACCORDING TO A.S.T.M. A-153.

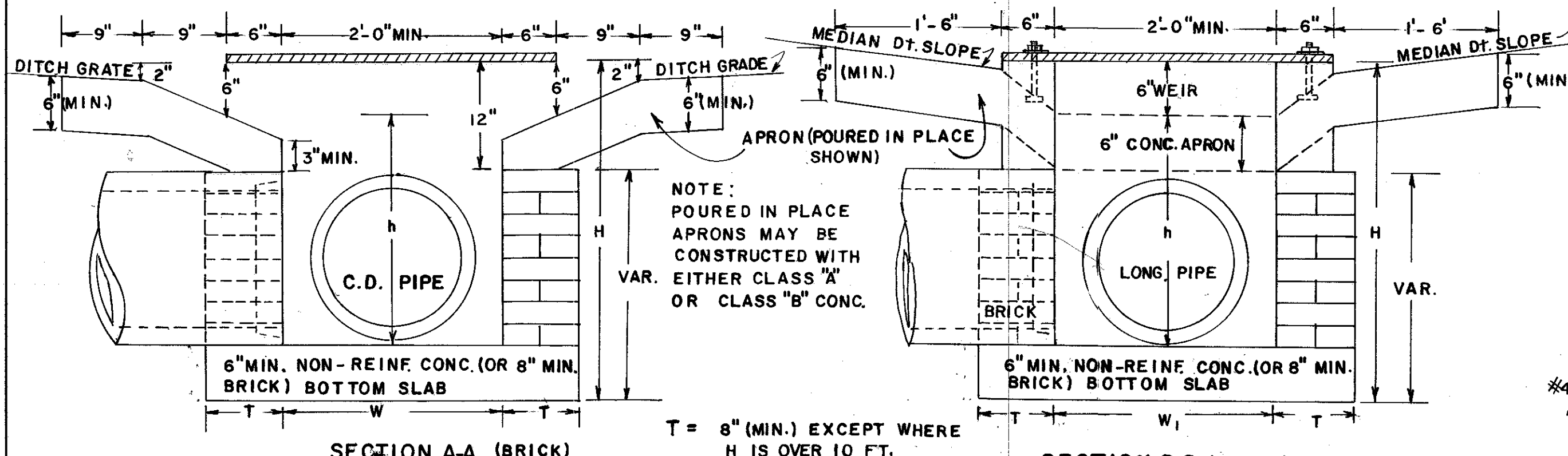
WARP CONC. APRON TO FIT INLET OF WEIR



SECTION A-A (CONC. BOX)

SECTION B-B (CONC. BOX)

SCALE: 1" = 1 FT.

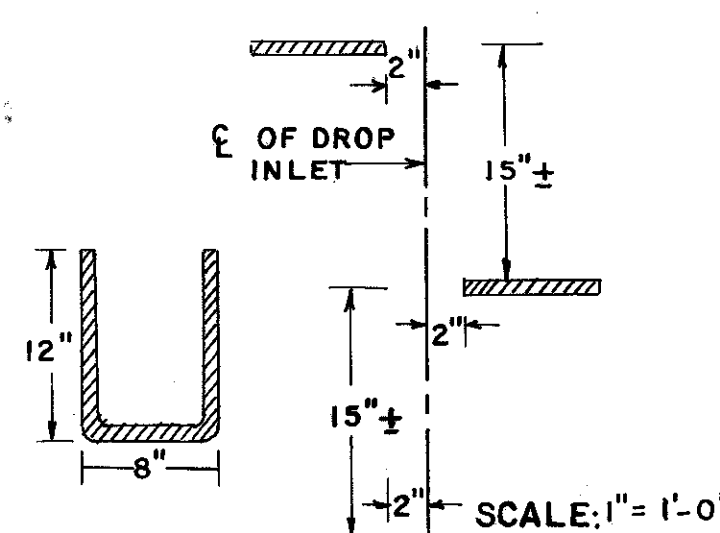


SECTION A-A (BRICK)

SECTION B-B (BRICK)

SCALE: 1" = 1 FT.

DETAIL AND ARRANGEMENT OF LADDER BARS

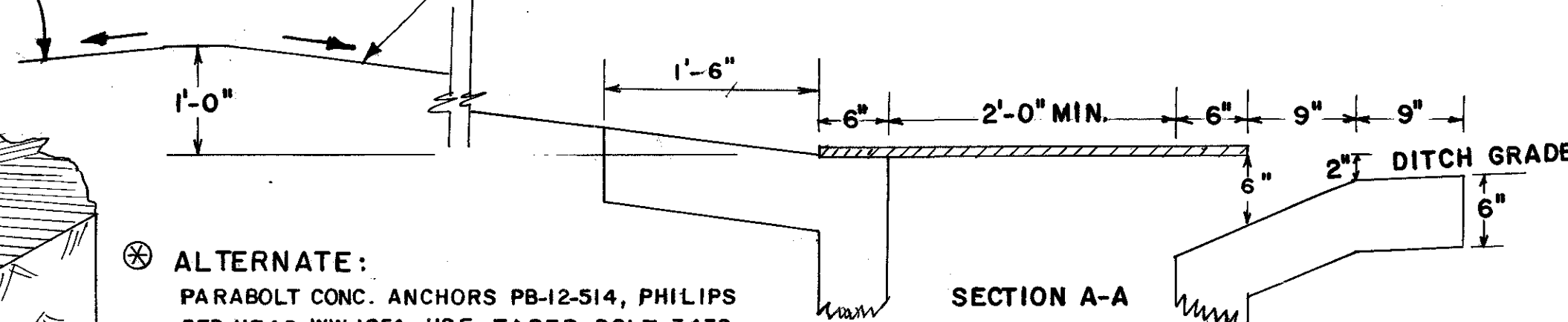


SCALE: 1" = 1'-0"

LADDER BARS ARE REQUIRED IN ALL INLETS, WHERE h OVER 4'-0". NUMBER AND LOCATION OF LADDER BARS TO BE AS DIRECTED BY THE ENGINEER. AN ALTERNATE STEP MAY BE SUBSTITUTED, IF APPROVED BY THE LABORATORY.

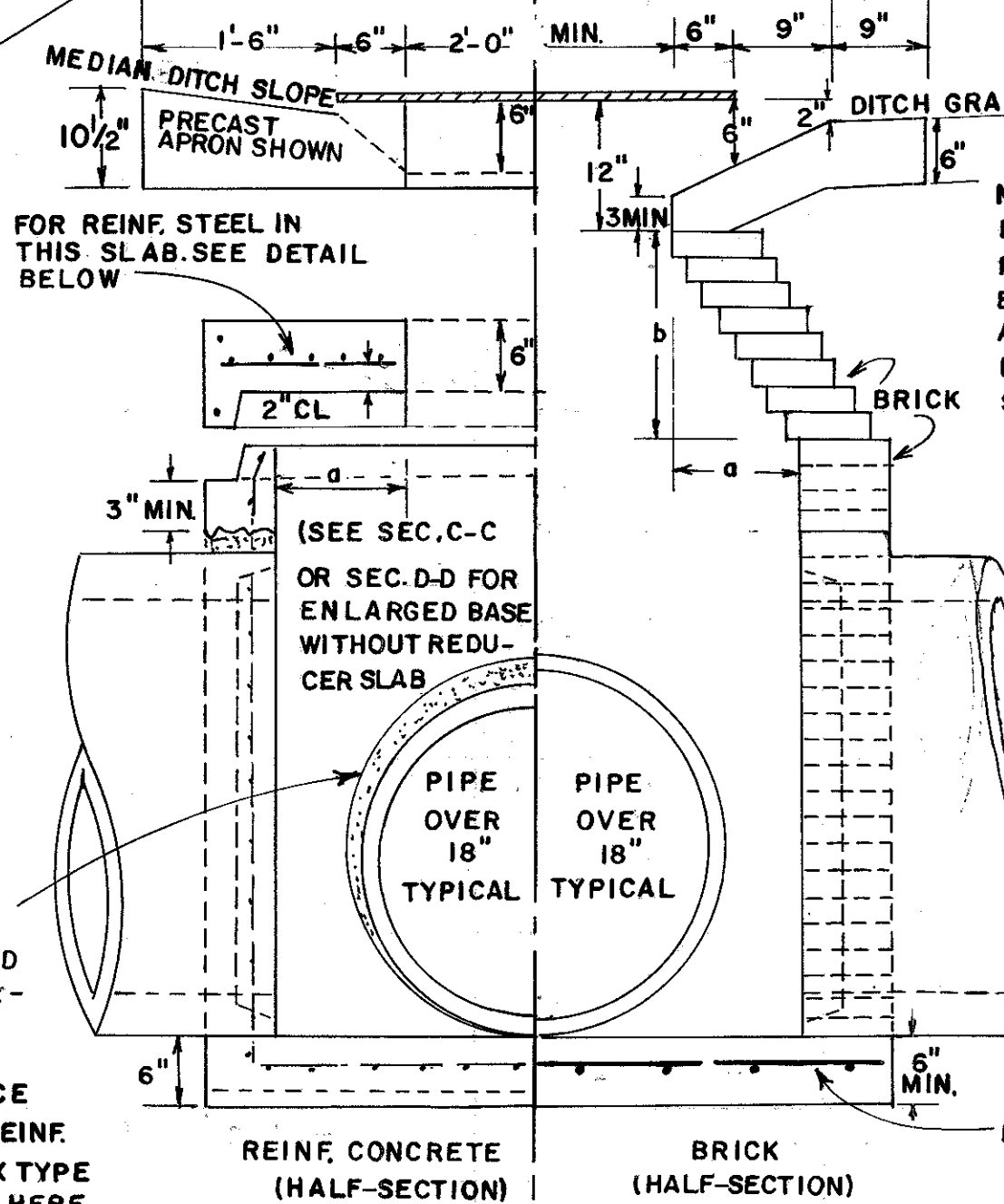
SLOPE 20:1 (REFERENCED TO DITCH GRADE) OR FLATTER

DETAIL OF SINGLE WEIR OPENING



ALTERNATE: PARABOLIC CONC. ANCHORS PB-12-514, PHILIPS RED HEAD WW 1254, U.S.E. TAPER BOLT 3432 OR AN EQUAL 1/2" Ø ANCHOR BOLT MAY BE USED TO SECURE THE STEEL PLATE.

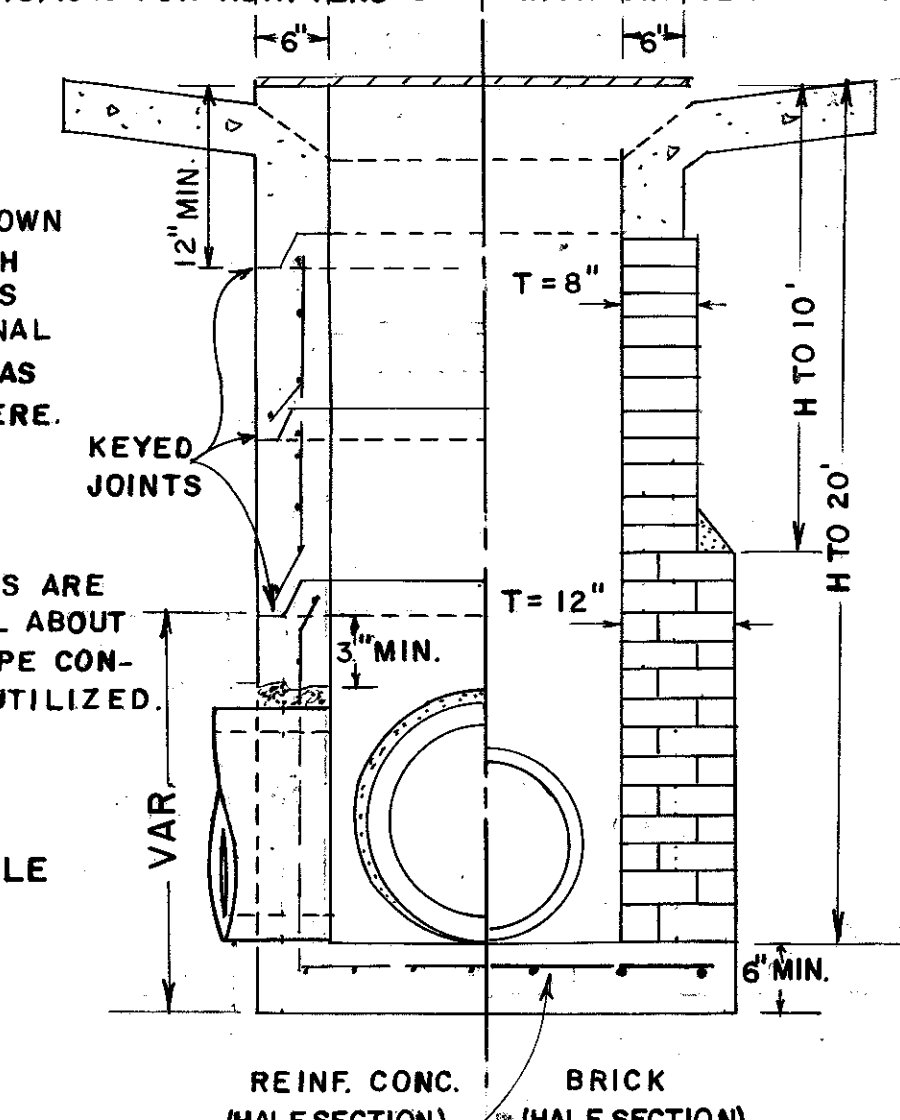
DROP INLET WITH ENLARGED BASE



FOR REINF. STEEL IN THIS SLAB SEE DETAIL BELOW

DROP INLET WITH ADDITIONAL HEIGHT

(DETAILS SHOWN ARE TYPICAL BOX ENCLOSURE FOR PIPE MAY BE BRICK MASONRY WITH PRECAST RISERS, ALSO SEE STD. 1040 FOR ADAPTERS USED WITH CIRCULAR ALTERNATES).

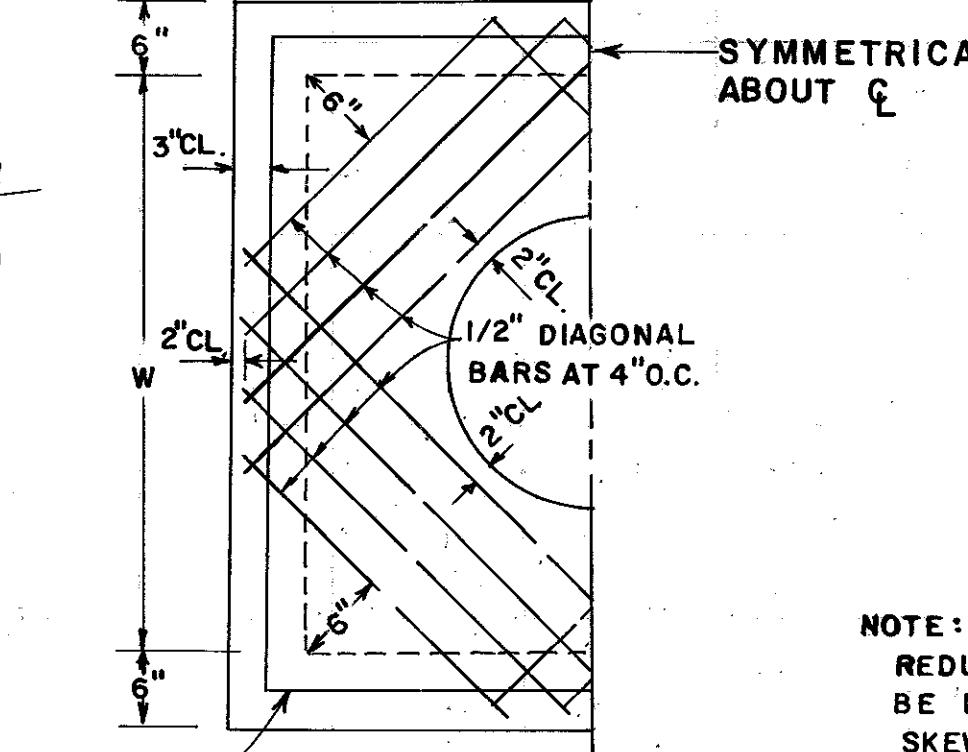


NOTE: DETAILS NOT SHOWN FOR INLETS WITH ENLARGED BASES AND/OR ADDITIONAL HEIGHT WILL BE AS SHOWN ELSEWHERE.

NO SCALE

REINF. CONC. (HALF-SECTION) BRICK (HALF-SECTION)

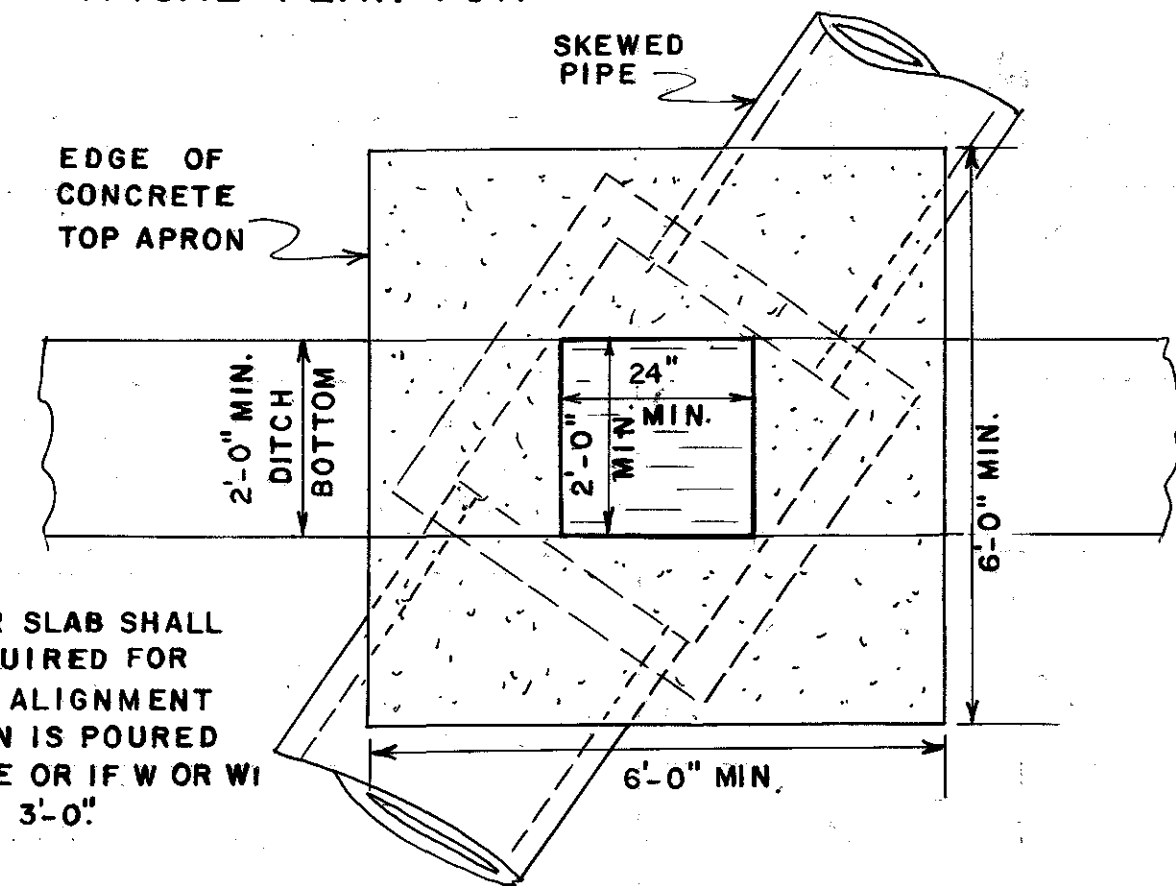
BRICK WALL THICKNESS	
10' 10"	8"
10' 10" TO 20'	12"
20' TO 30'	16"



PLAN FOR REINF. STEEL REDUCER SLAB (HALF-SECTION)

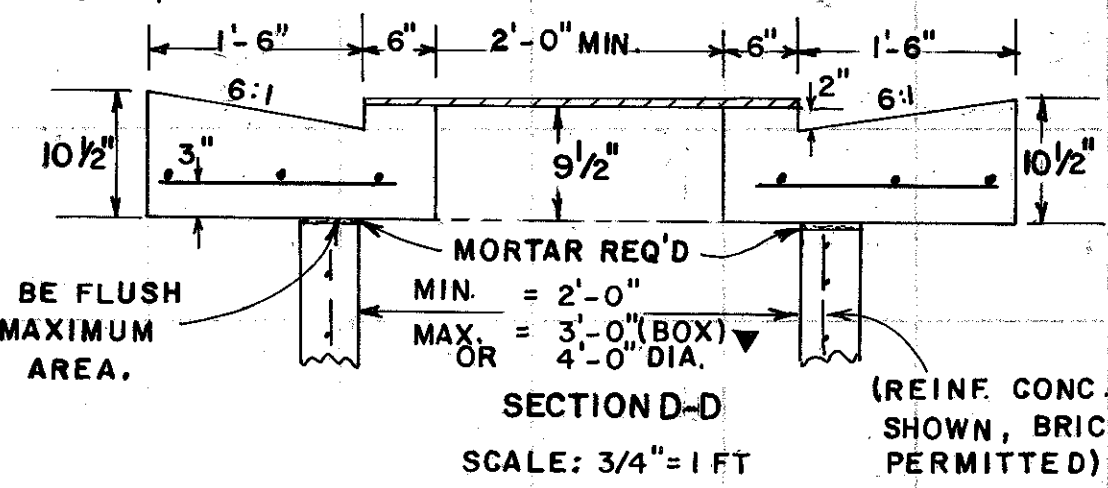
NOTE: REDUCER SLAB SHALL BE REQUIRED FOR SKEWED ALIGNMENT IF APRON IS POURED IN PLACE OR IF W OR W₁ IS OVER 3'-0".

TYPICAL PLAN FOR SKEWED PIPE



NOTE: WHEN USING PRECAST APRON, THE PLATE, BOLTS & OTHER REQUIREMENTS SHALL CONFORM TO THAT SHOWN FOR POURED IN PLACE APRON.

MAXIMUM W OR W₁ PERMITTED WITH PRECAST APRON WITHOUT REDUCER SLAB.



SECTION D-D (REINF. CONC. SHOWN, BRICK PERMITTED)

GENERAL NOTES:

- SPECIFICATIONS: GA. STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
- SEE STD. 9031-L FOR ADDITIONAL DETAILS WHERE INLET IS CONSTRUCTED ON BOX CULVERT.
- SEE STD. 1040 FOR CIRCULAR PRECAST ALTERNATES.
- PRECAST ON BRICK MASONRY: BRICK CONSTRUCTION SHALL EXTEND 6" ABOVE TOP OF PIPE. JOINTS BETWEEN PRECAST & BRICK SECTIONS SHALL BE FLUSH OR CONC. FILLED TO GIVE MAX. BEARING AREA.
- TYPICAL TREATMENT FOR SKEWED PIPES: (a) WITH PRECAST APRON — CONSTRUCT BOX WITH WALLS PERPENDICULAR TO PIPE AND SET PRECAST APRON PARALLEL TO DITCH AND SKEWED RELATIVE TO PIPE OR USE CIRCULAR SECTIONS (STD. 1040) (b) WITH BUILT-IN-PLACE APRON — CONSTRUCT BOX AS DESCRIBED IN (a) AND USE REDUCER SLAB OR INCREASE W OR W₁ DIMENSIONS AS NECESSARY OR USE CIRCULAR SECTIONS (STD. 1040)

PIPE SIZE	BRICK MASONRY				MODIFIED				REINF. CONCRETE			
	MIN. W OR W ₁	MIN. H	MIN. h	a (MAX.)	MIN. W OR W ₁	MIN. H	MIN. h	a (MAX.)	MIN. W OR W ₁	MIN. H	MIN. h	a (MAX.)
15"	2'-0"	3'-10"	2'-10"	1 1/2"	2'-0"	3'-2"	2'-2"	—	2'-0"	3'-2"	2'-2"	—
18"	2'-3"	3'-10"	2'-10"	1 1/2"	2'-3"	3'-5"	2'-5"	—	2'-3"	3'-5"	2'-5"	—
24"	2'-10"	4'-11"	3'-11"	5"	2'-10"	4'-11"	3'-11"	6"	2'-10"	4'-11"	3'-11"	6"
30"	3'-5"	6'-0"	5'-0"	8 1/2"	3'-5"	6'-0"	5'-0"	9"	3'-5"	6'-0"	5'-0"	9"
36"	4'-0"	7'-1"	6'-1"	1'-0"	4'-0"	7'-1"	6'-1"	1'-0"	4'-0"	7'-1"	6'-1"	1'-0"
42"	4'-7"	8'-6"	7'-2"	1'-3 1/2"	4'-7"	8'-6"	7'-2"	1'-3"	4'-7"	8'-6"	7'-2"	1'-3"
48"	5'-2"	9'-7"	8'-3"	1'-7"	5'-2"	9'-7"	8'-3"	1'-6"	5'-2"	9'-7"	8'-3"	1'-6"

* * DIMENSIONS ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPE AND MAY BE VARIED IF CONDITIONS PERMIT, AND THE VARIED DIMENSIONS ARE SHOWN IN THE PLANS OR SPECIFIED BY THE ENGINEER. DIMENSIONS "a" ARE BASED UPON 2'-0" WEIR OPENING. MINIMUM H AND h ARE BASED UPON LARGEST PIPE INVOLVED. BOX ENCLOSURE FOR PIPE DOES NOT HAVE TO BE SQUARE. W AND W₁ DIMENSIONS MAY DIFFER. (DIMENSIONS HAVE BEEN SPECIFIED FOR BOX SHAPED INLETS, SEE STD. 1040 FOR DIMENSIONS OF CIRCULAR ALTERNATES)

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

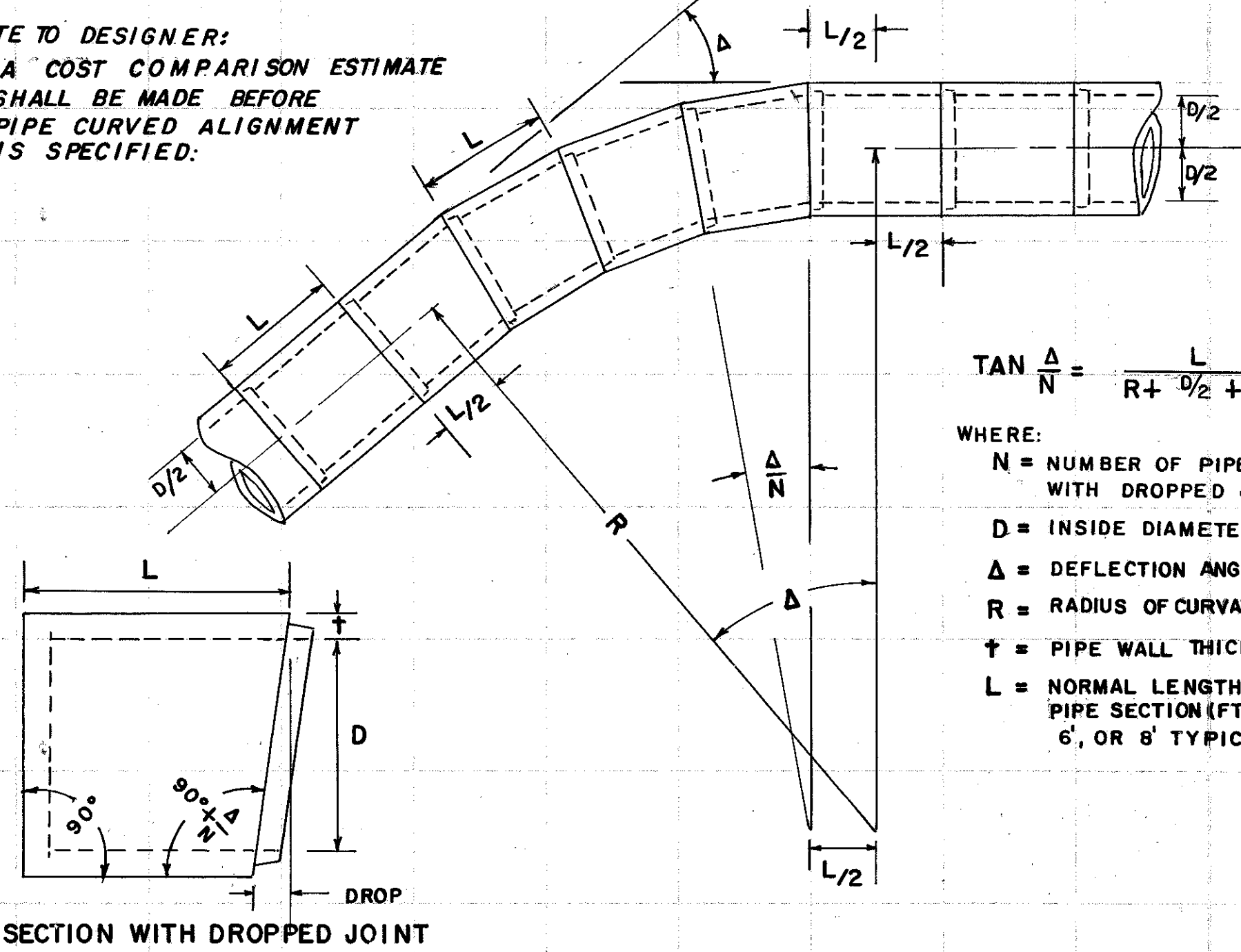
STANDARD MEDIAN DROP INLET (PRECAST OR BUILT-IN-PLACE) & CONCRETE APRON

SCALE AS SHOWN REV. & REDR. AUGUST 26, 1981
DES. 2-67 (SUBMITTED) *Floyd E. Hardy*
REV. R.M.U. STATE ROAD & AIRPORT DESIGN ENGR.
TRA. G.M.E. (APPROVED) *Thomas D. Moreland*
CHK. R.K.C. STATE HIGHWAY ENGINEER

NUMBER
9031-S

PIPE CURVED ALIGNMENT USING SECTIONS WITH DROPPED JOINTS

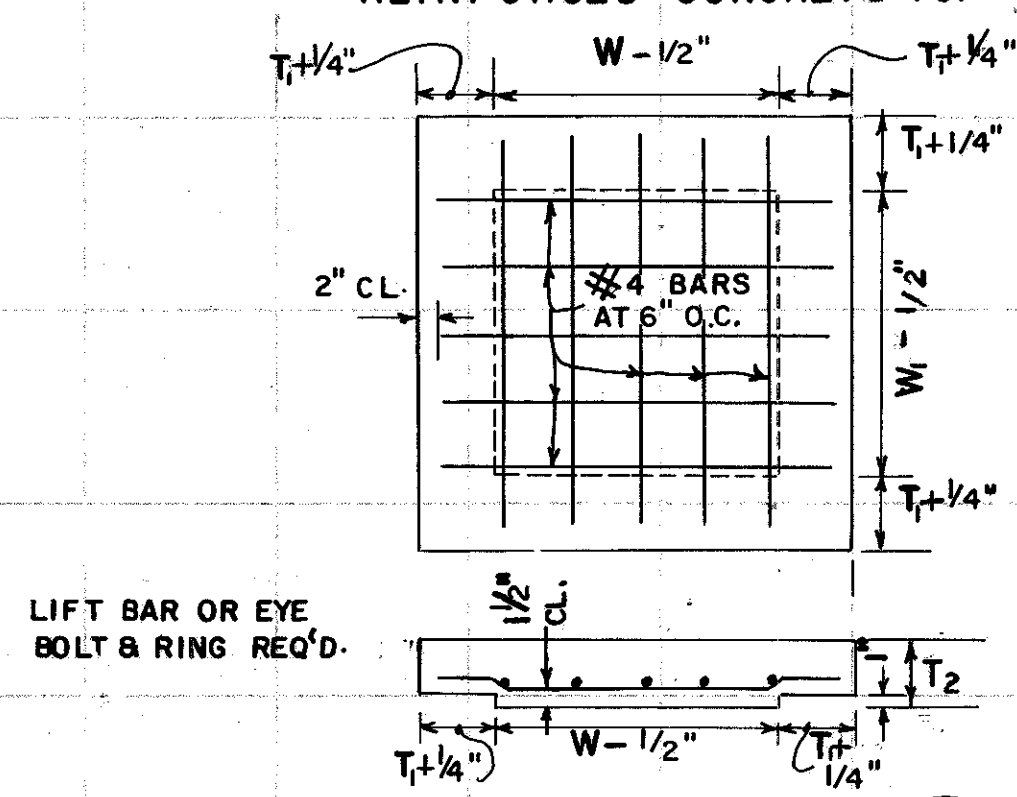
NOTE TO DESIGNER:
A COST COMPARISON ESTIMATE
SHALL BE MADE BEFORE
PIPE CURVED ALIGNMENT
IS SPECIFIED.



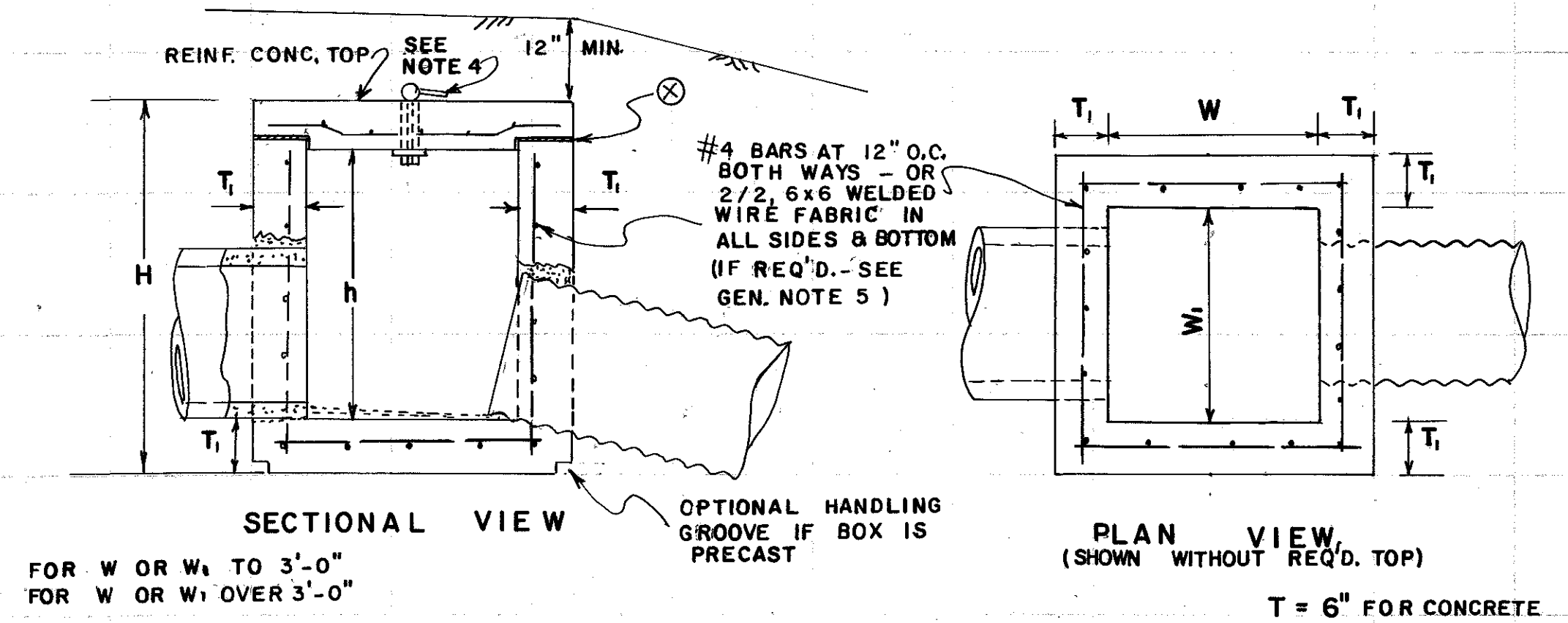
NOTES FOR PIPE CURVED ALIGNMENT:

- PLANS ARE TO SPECIFY ONLY THE PIPE DIAMETER "D", THE ANGLE "Δ", AND THE TANGENT ALIGNMENT.
- PIPE WALL THICKNESS "t", PIPE SECTION LENGTHS "L", AND DROP IN PIPE JOINT "Δ/N" VARIES ACCORDING TO PIPE PRODUCER AND IS BASED ON FEASIBILITY.
- THE RADIUS "R" AND THE NUMBER OF DROPPED JOINT PIPE SECTIONS "N" IS DETERMINED BY (1) & (2) ABOVE. MINOR MODIFICATIONS IN THE RADIUS "R" ARE NORMALLY MADE SO THAT "N" WILL BE A WHOLE NUMBER.
- PIPE SECTIONS SHALL BE ORIENTED SUCH THAT THE PLANE OF THE DROPPED JOINT IS AT RIGHT ANGLES TO THE THEORETICAL CIRCULAR CURVE. THE TOP OF SECTIONS ARE TO BE MARKED SO THAT THE DEFLECTION ANGLE IS PROPERLY ORIENTED.
- DETAILS ARE SHOWN FOR CONCRETE PIPE. CURVED ALIGNMENT FOR C.M. PIPE SHALL BE AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
- PAYMENT PER LIN. FT. OF PIPE INCLUDES PIPE SECTIONS WITH DROPPED JOINTS.

REINFORCED CONCRETE TOP

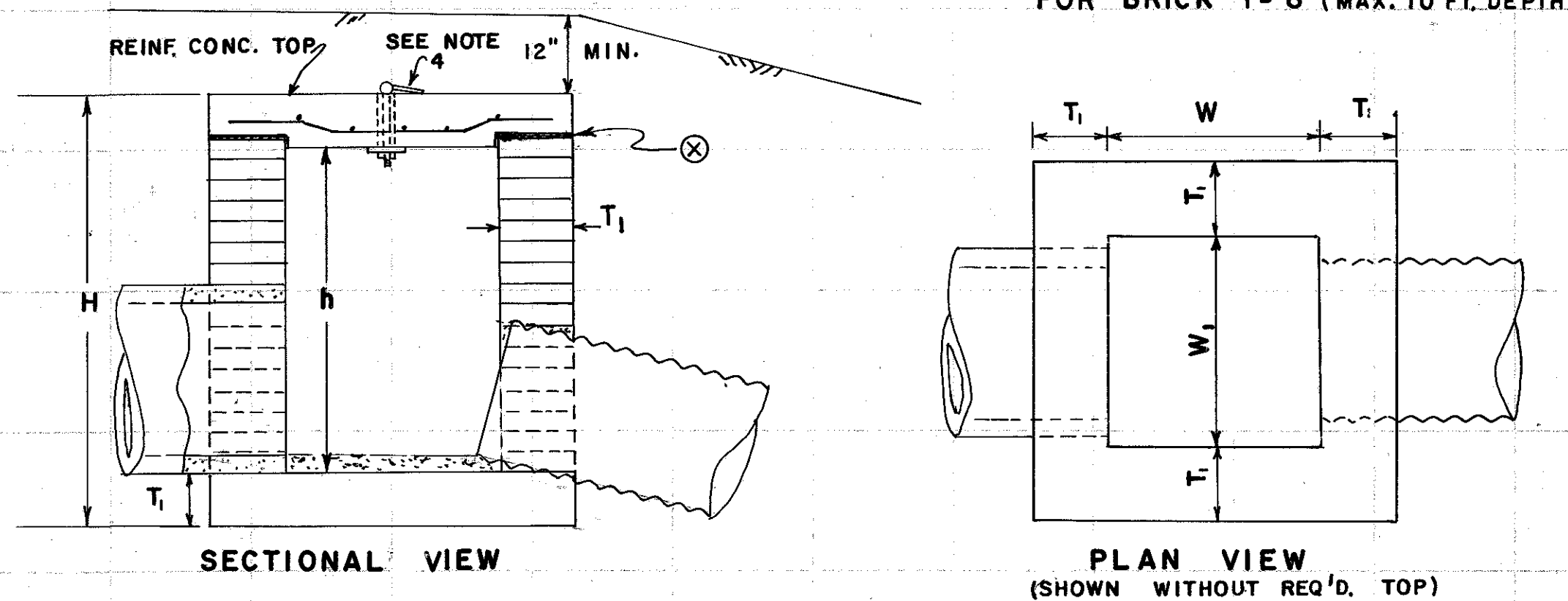


DETAILS OF CONCRETE JUNCTION BOX (PRECAST OR BUILT IN PLACE)

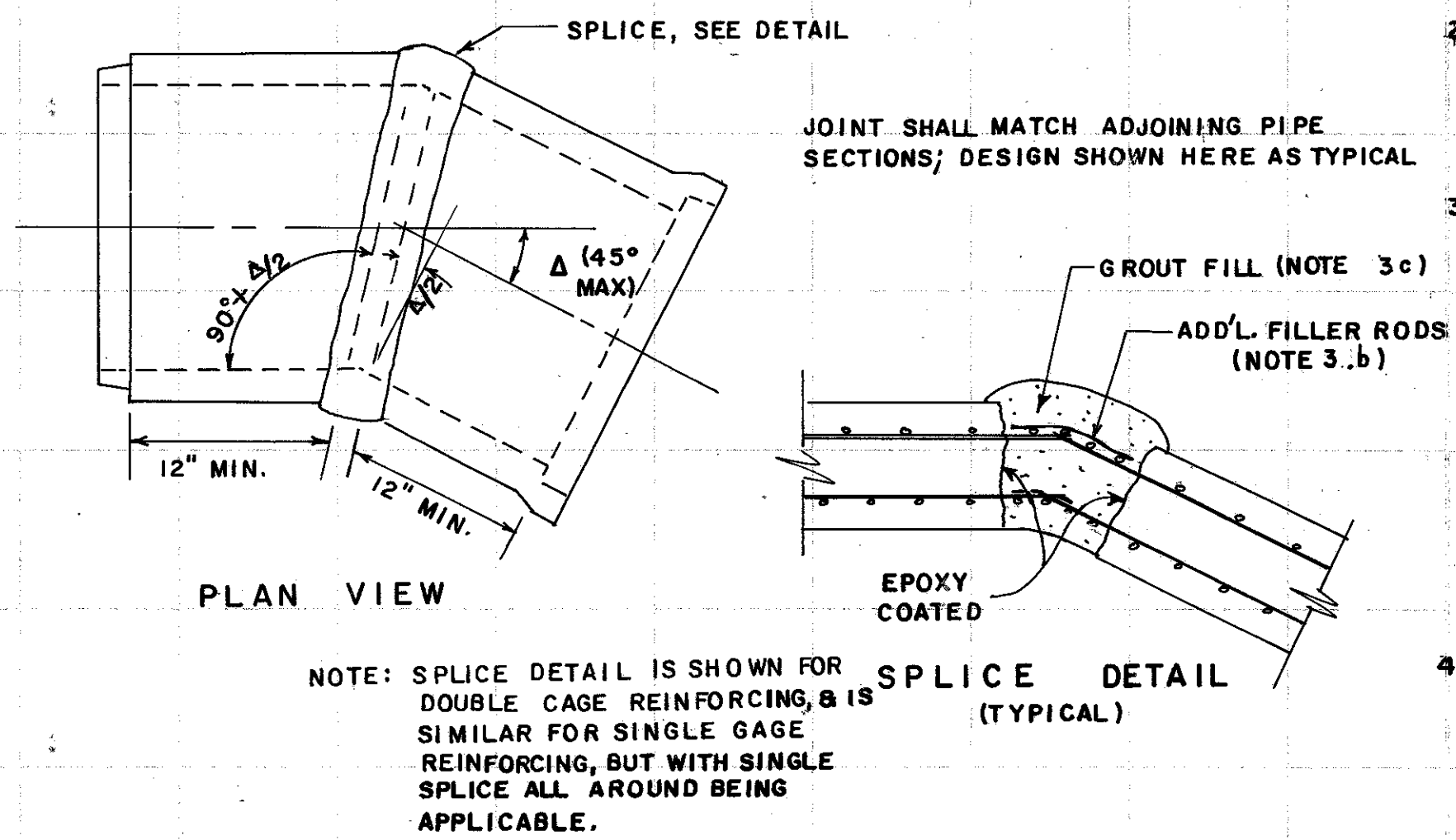


DETAILS OF BRICK JUNCTION BOX

FOR BRICK T = 8" (MAX. 10 FT. DEPTH)



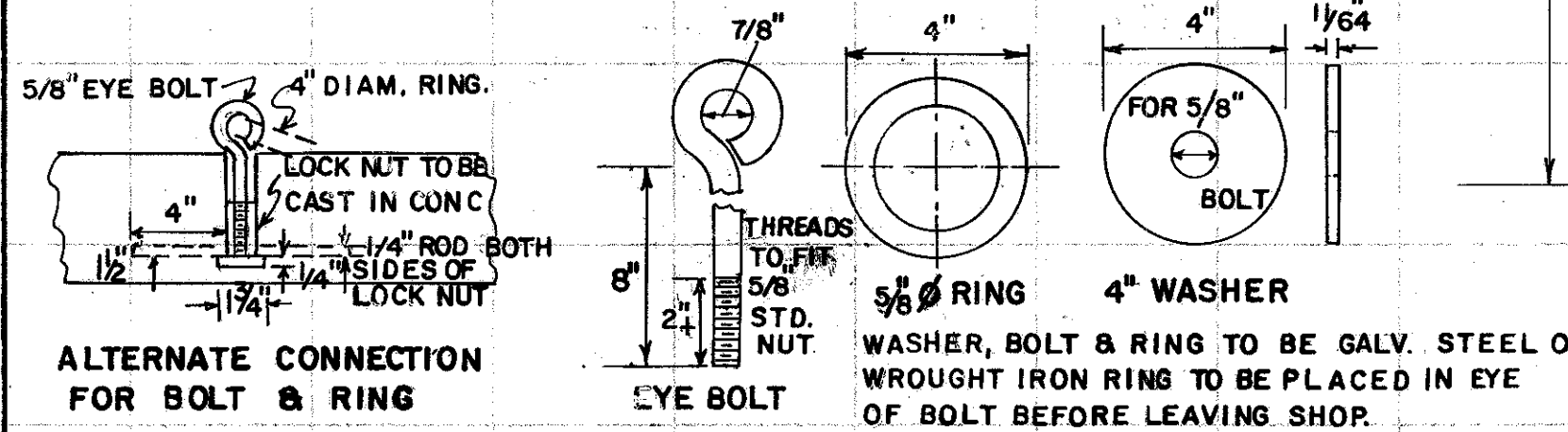
PIPE ELBOW SECTION (PRE-FABRICATED)



NOTES FOR PIPE ELBOW:

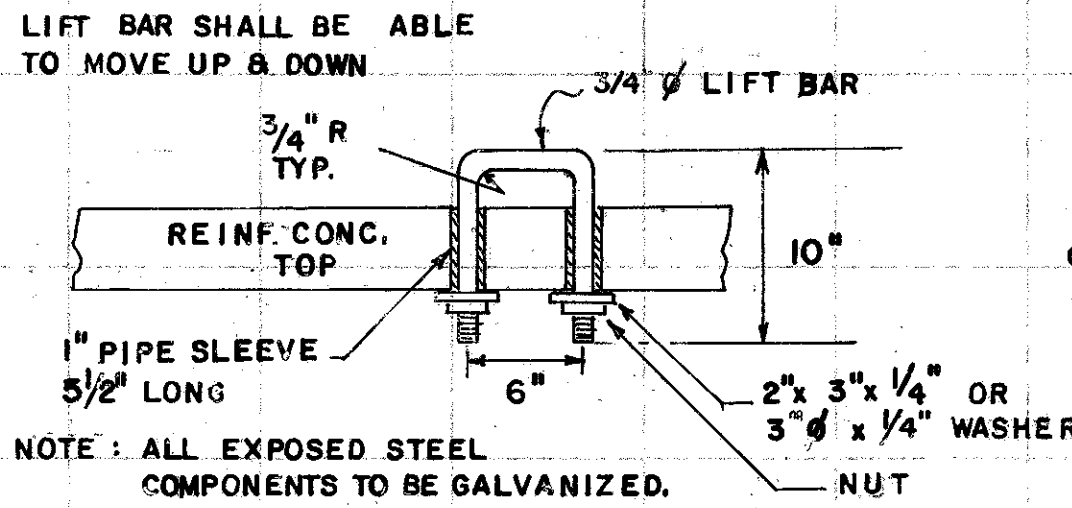
- PAYMENT FOR LIN. FT. OF PIPE INCLUDES ELBOWS.
- ELBOW ANGLE Δ SHALL VARY ACCORDING TO NEED, BUT SHALL NOT BE GREATER THAN 45°. THE CONTRACTOR SHALL INFORM PRODUCER AS TO ANGLE REQUIRED.
- (a) CONCRETE PIPE SHALL BE CUT BEFORE BEING CURED AND STEEL EXPOSED FROM EACH SIDE OF CUT.
(b) EXPOSED STEEL SHALL BE REJOINED, FILLER RODS AT LEAST EQUAL TO RODS IN PIPE SHALL BE ADDED AS NEEDED FOR HANDLING STRENGTH & TO HOLD GROUT.
(c) ALL VOID IN SPLICE SHALL BE PACKED WITH GROUT MORTAR RICH ENOUGH TO GIVE STRENGTH AT LEAST EQUAL TO REMOVED CONCRETE WITH INSIDE SMOOTHED OUT.
- C.M. PIPE ELBOW NOT SHOWN, BUT MAY BE SPECIFIED. SOLID WELD SHALL BE REQUIRED FOR C.M. ELBOW JOINT WITH GALVANIZING AND/OR COATINGS REPAIRED AS REQ'D.

BOLT, RING & WASHER DETAILS



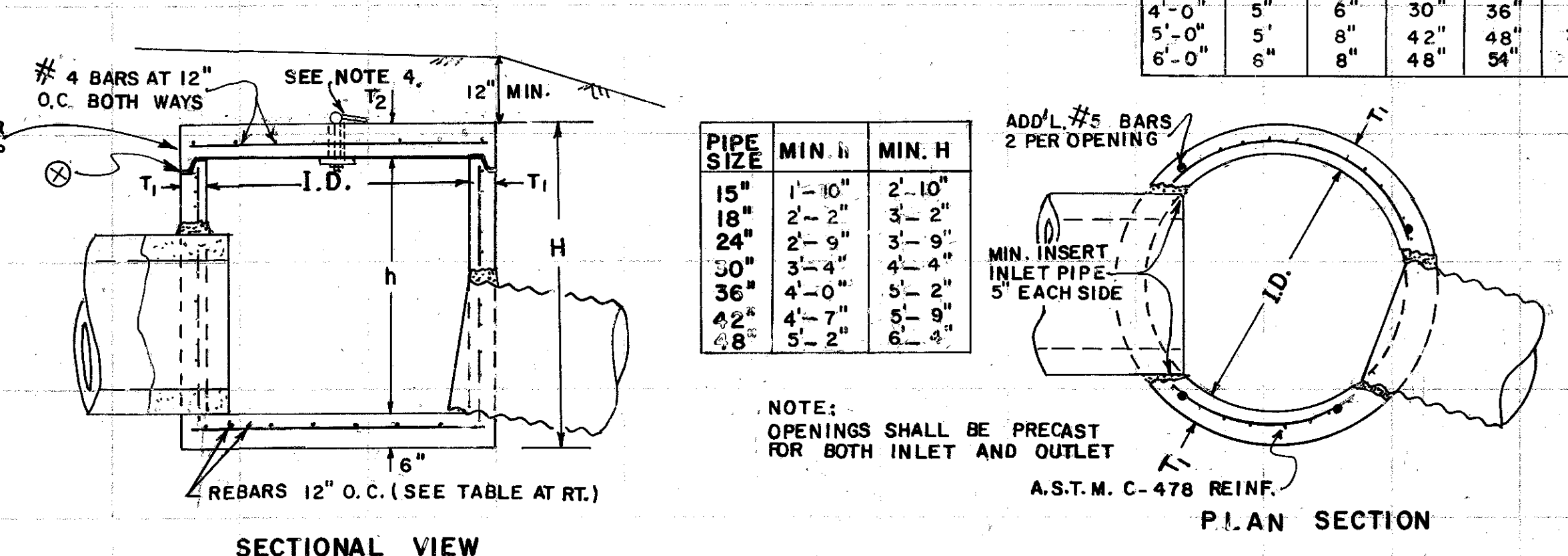
ALTERNATE CONNECTION FOR BOLT & RING

STEEL LIFTING BAR DETAIL

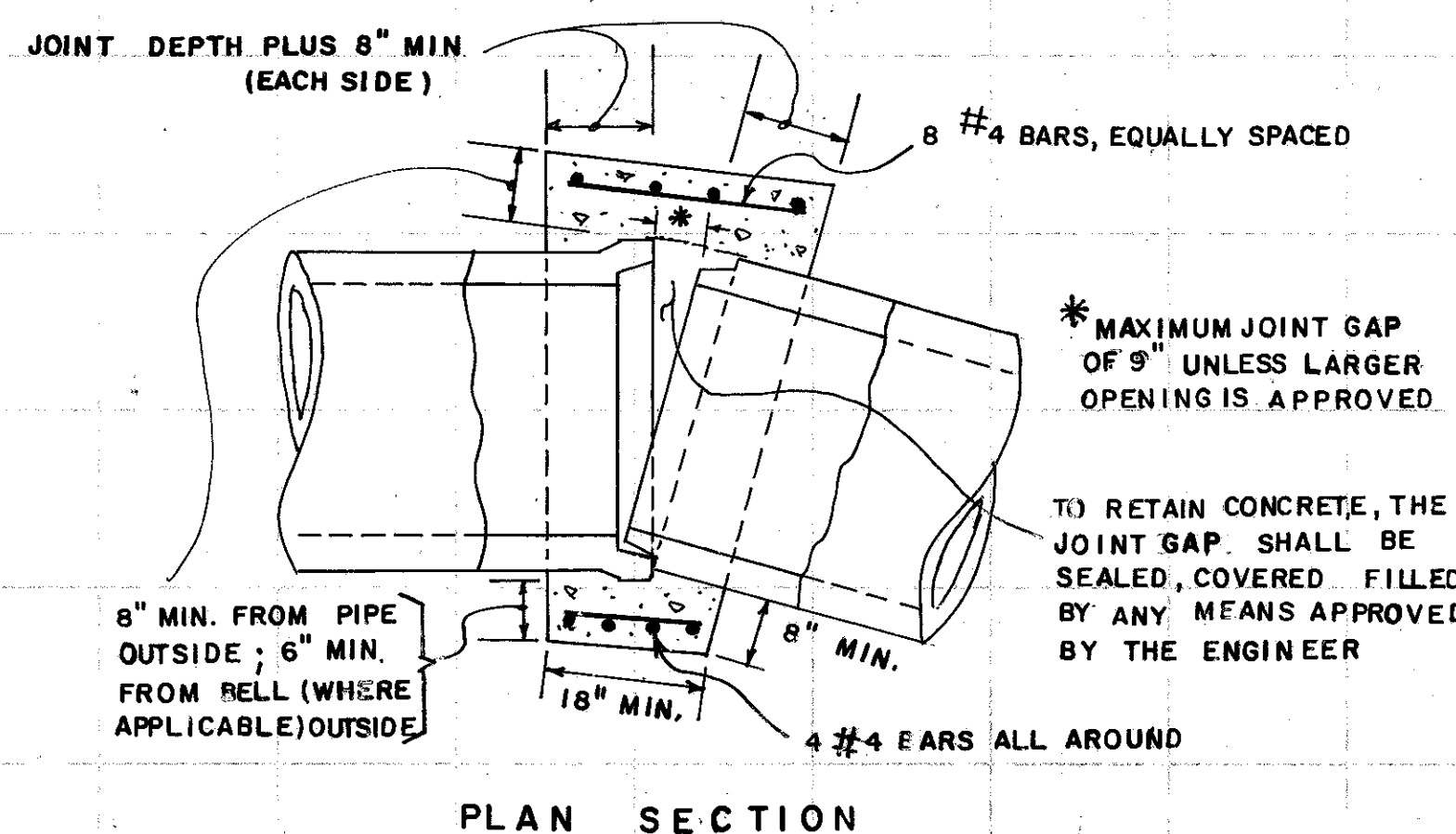


DETAILS OF CIRCULAR PRECAST JUNCTION BOX

(REINFORCING AND DESIGN SHALL COMPLY WITH A.S.T.M. C-478 EXCEPT AS OTHERWISE SHOWN. MATERIALS SHALL COMPLY WITH GA. STD. SPECIFICATIONS FOR PRECAST MANHOLES)



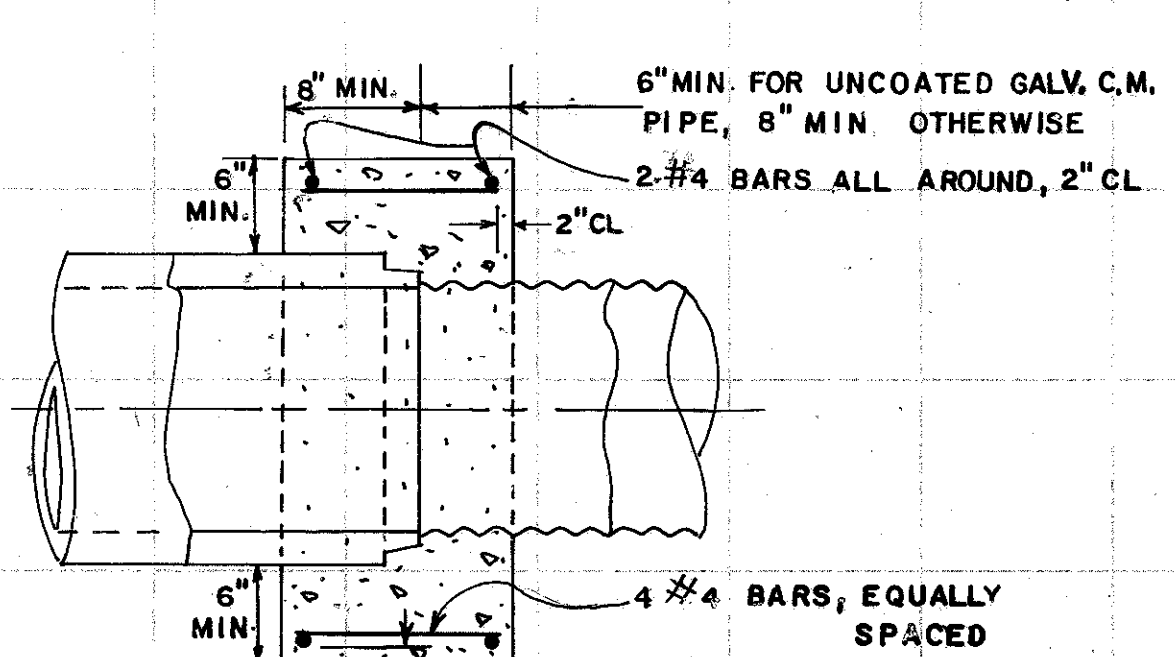
CONCRETE COLLAR FOR DEFLECTING PIPE



NOTES FOR CONCRETE COLLARS:

- PERIMETERS OF CONCRETE COLLARS DO NOT HAVE TO BE SMOOTH LINES. COLLARS MAY BE FORMED AGAINST COMPACTED OR UNDISTURBED SOIL. DIMENSIONS ARE MINIMUM. COLLAR MAY BE SQUARE, ROUND OR SHAPE MAY VARY SO LONG AS MINIMUM DIMENSIONS ARE OBTAINED.
- ALL CONCRETE COLLARS ARE TO BE CONSTRUCTED WITH CLASS A CONCRETE.
- PAYMENT FOR LIN. FT. OF PIPE INCLUDES COLLARS.

CONCRETE COLLAR FOR JOINTING PIPE



GENERAL NOTES:

- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
- ILLUSTRATED PIPES, PIPE JOINTS, ALIGNMENT, SIZES, ETC. ARE SHOWN AS REPRESENTATIVE, ACTUAL REQUIREMENTS VARY PER LOCATION AS INDICATED IN THE PLANS.
- JUNCTION BOXES DO NOT HAVE TO BE CONSTRUCTED SQUARE. W&W DIMENSIONS MAY VARY ACCORDING TO PIPE SIZE.
- ALL JUNCTION BOX TOPS SHALL BE EQUIPPED WITH EITHER AN EYE BOLT & RING (SHOWN) OR A LIFTING BAR (ALTERNATE).
- REINFORCING IS REQUIRED FOR ALL PRECAST JUNCTION BOXES. REINFORCING MAY BE OMITTED FOR BUILT IN PLACE CONCRETE BOXES NOT OVER 10 FT. DEEP AND NOT LARGER THAN 3' x 3'. CONSTRUCTION JOINTS PERMITTED IF DOWELED OR KEYED, ALL JUNCTION BOX TOPS SHALL BE REINFORCED.

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

STANDARD

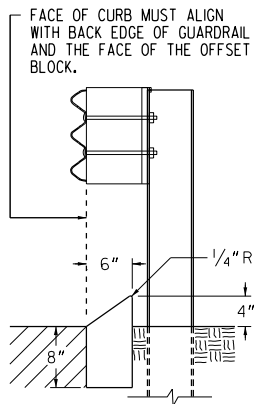
PRECAST OR BUILT IN PLACE
JUNCTION BOXES
PIPE COLLARS, PIPE ELBOW
& PIPE CURVED ALIGNMENT

NO SCALE

REV. & REDR. JULY 1985

DES. RML (SUBMITTED) *Hal Rues*
DRW. RML STATE ROAD & AIRPORT DESIGN ENGR.
TRA. GME (APPROVED) *Hal Rues*
CHK. RKC STATE HIGHWAY ENGINEER

NUMBER
9031U

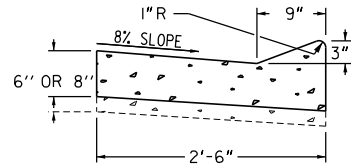


TYPE 8

TYPE 8 HEADER CURB IS USED
IN CONJUNCTION WITH GUARDRAIL
CONNECTIONS TO CONCRETE
BARRIER AS NOTED ON GA. STD.
4382.

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

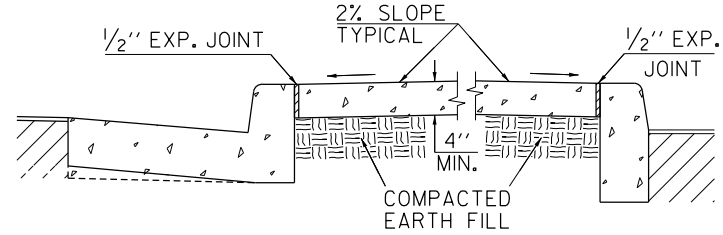
RAISED EDGE WITH CONCRETE GUTTER



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.

CONCRETE MEDIAN (Between Curbs)

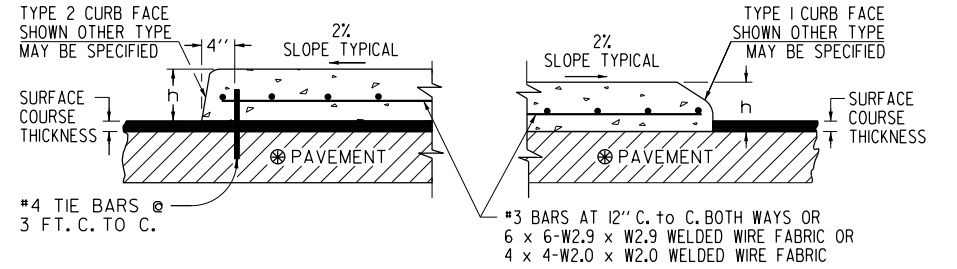
NOTE: CURB TYPES SHOWN ARE TYPICAL.
OTHER TYPES MAY BE SPECIFIED.



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

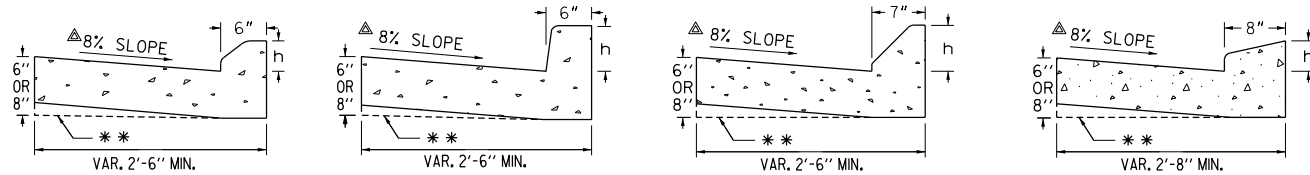
NOTE:
IF CONCRETE MEDIAN INTERCEPTS PEDESTRIAN CROSSWALKS, WHEELCHAIR RAMPS (CONSTRUCTION DETAIL A-3 AND A-4) WILL BE REQUIRED.

CONCRETE MEDIANS (Integral)



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

CONCRETE CURB & GUTTER



TYPE I

TYPE 2, 3 OR 4

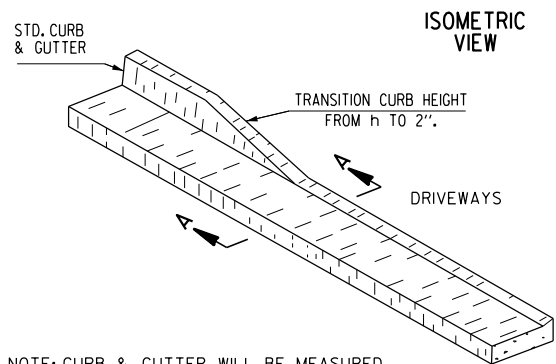
TYPE 7

TYPE 9

* * 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.

▲ WHEN POSITIVE SUPERELEVATION IS REQUIRED, THE SLOPE OF THE GUTTER ON THE HIGH SIDE SHALL BE A CONTINUATION OF THE SLOPE OF THE SUPERELEVATED PAVEMENT.

DETAILS OF RECESSED CURB FOR DRIVEWAYS



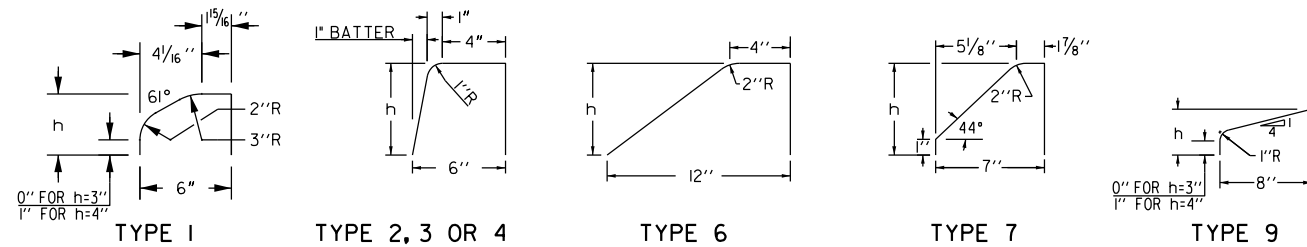
NOTE: CURB & GUTTER WILL BE MEASURED
FOR PAYMENT THRU THE DRIVE



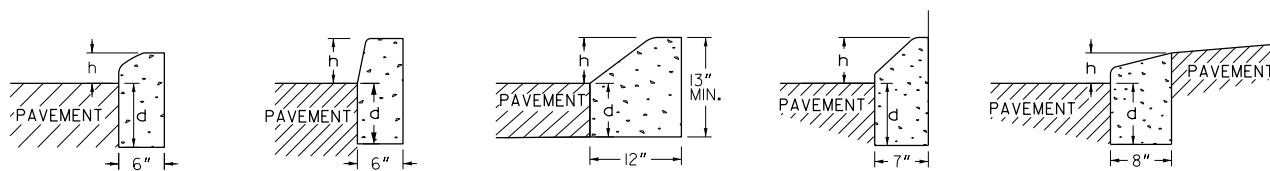
SECTIONAL VIEW
SECTION A-A

(SEE SEPARATE CONSTRUCTION DETAILS FOR DRIVEWAYS)

CURB FACE DESIGN



CONCRETE HEADER CURBS



TYPE I

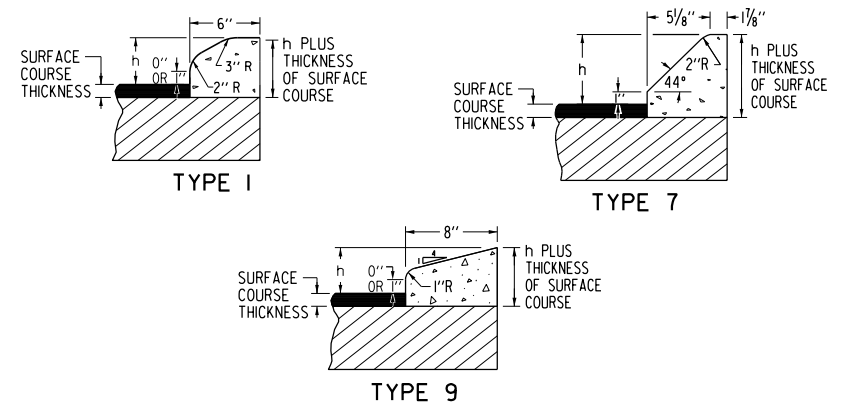
TYPE 2, 3 OR 4

TYPE 6

TYPE 7

TYPE 9
TRUCK APRON
IN ROUNDABOUTS

CONCRETE INTEGRAL CURB



DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
CONCRETE CURB & GUTTER
CONCRETE CURBS, CONCRETE MEDIANS

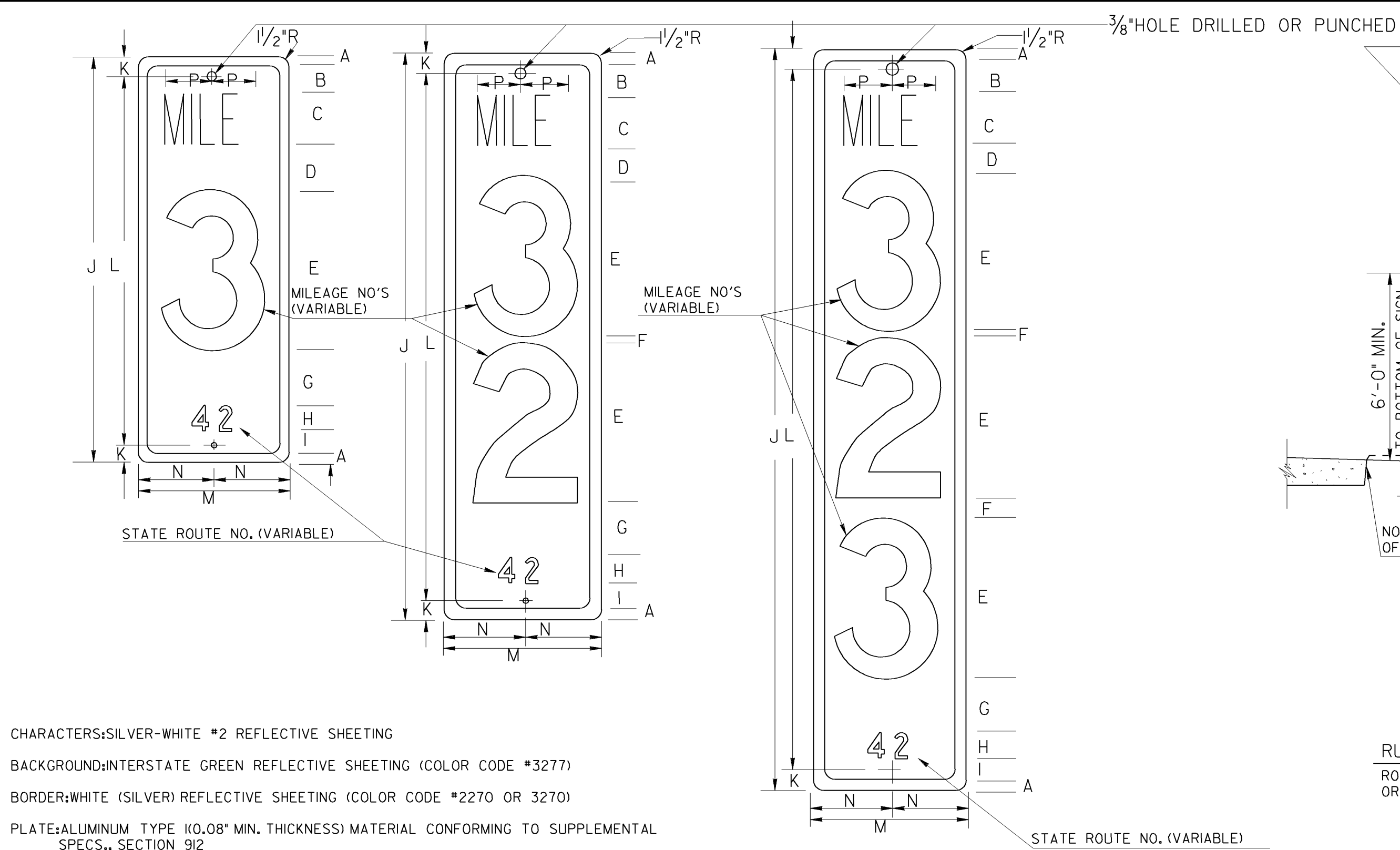
NOT TO SCALE

MAR. 2003

DES. _____	(SUBMITTED) <i>B. A. Stettin</i>
DRW. _____	STATE DESIGN POLICY ENGINEER
TRA. _____	(APPROVED) <i>Donald M. Rums</i>
CHK. _____	CHIEF ENGINEER

NUMBER
0032B

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



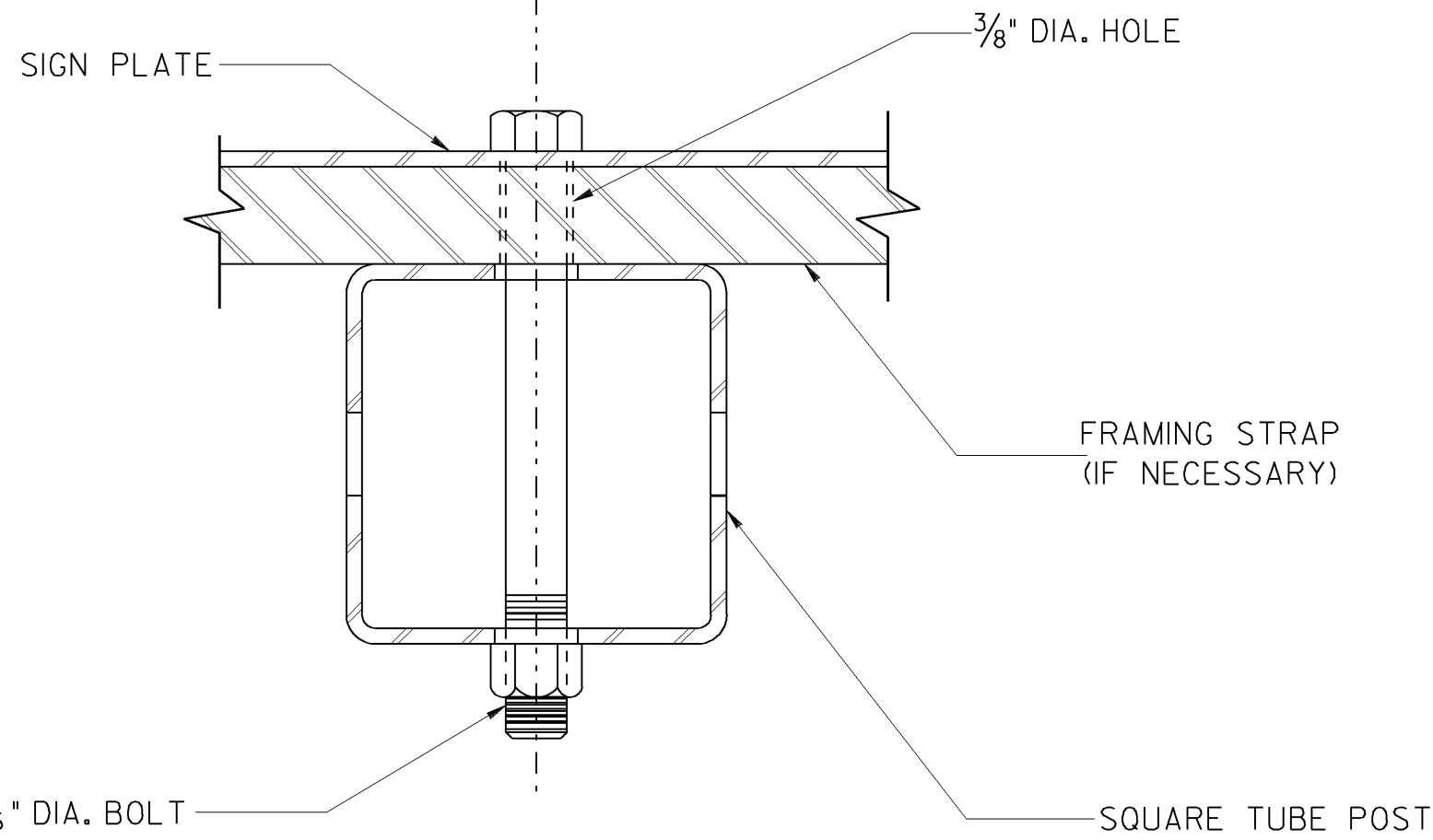
CHARACTERS: SILVER-WHITE #2 REFLECTIVE SHEETING
BACKGROUND: INTERSTATE GREEN REFLECTIVE SHEETING (COLOR CODE #3277)
BORDER: WHITE (SILVER) REFLECTIVE SHEETING (COLOR CODE #2270 OR 3270)
PLATE: ALUMINUM TYPE 10.08 MIN. THICKNESS MATERIAL CONFORMING TO SUPPLEMENTAL SPECS., SECTION 912

TYPICAL MILEPOST SIGN DETAILS

NOTE: INSTALLATION OF MILEPOST SHALL BE WITHHELD UNTIL THE GRASS IS ACCEPTED BY THE STATE.

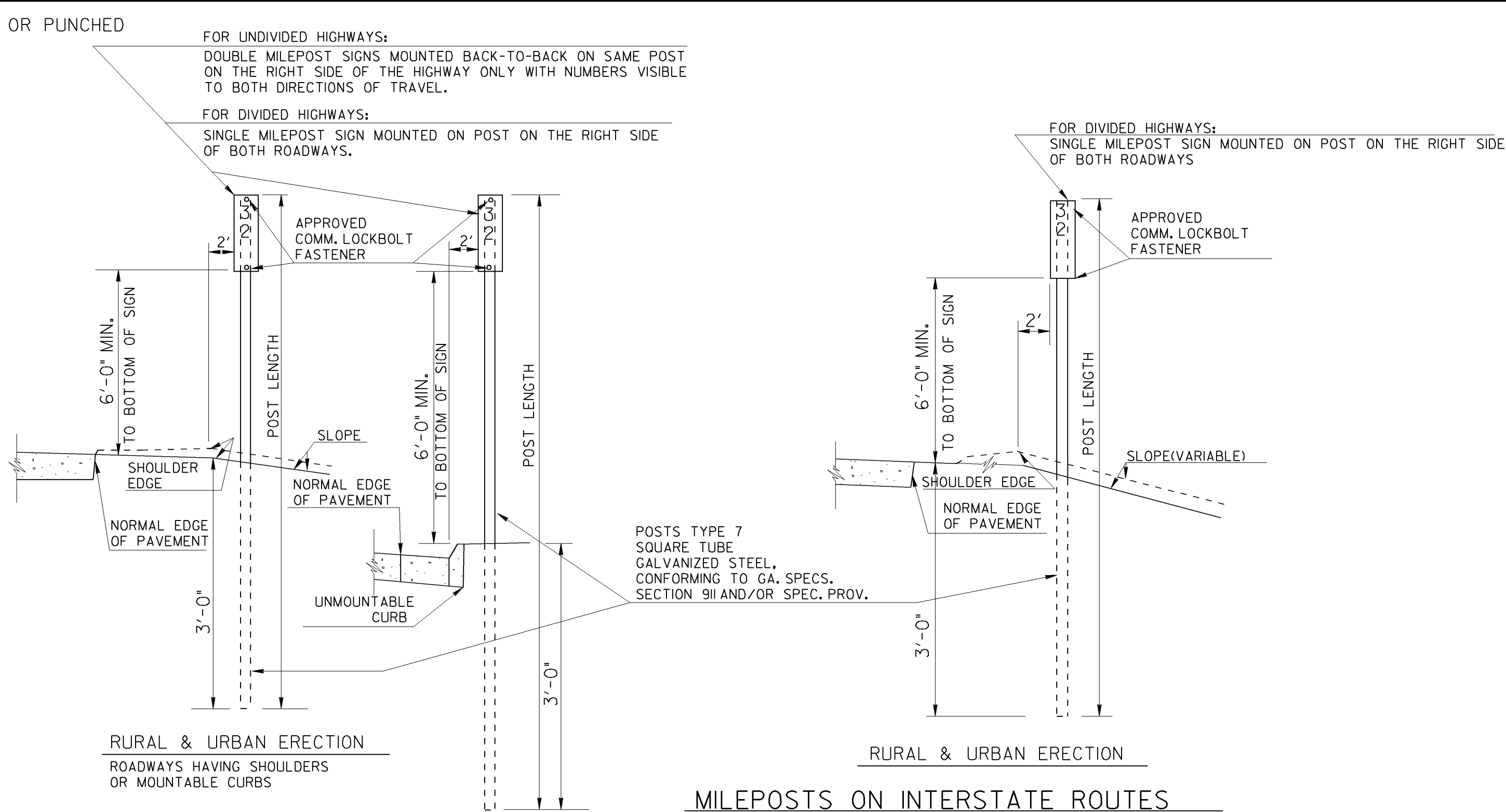
POST	STUB SIZE
TYPE 7	2 1/4" x 2 1/4"

DIRECTION OF TRAFFIC



TYPICAL DETAIL

NOTE: SAMPLE OF COMMERCIAL LOCKBOLT FASTENER TO BE USED MUST BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION



MILEPOSTS ON STATE ROUTES
(FOR CONVENTIONAL HIGHWAYS ONLY)

TYPICAL MILEPOST ERECTION DETAILS

NOTE: MILEPOSTS SHALL BE LOCATED IN LINE WITH DELINEATOR POST OR, IF APPROPRIATE, IN THE SAME PLANE AS FACE OF GUARDRAIL POST WITH THE BOTTOM OF THE MARKER AT THE SAME HEIGHT AS THE DELINEATOR AS SHOWN IN THE DETAILS ABOVE.

MILEPOSTS ON INTERSTATE ROUTES
& STATE ROUTES

(FOR FREEWAYS & EXPRESSWAYS)
ROADWAYS HAVING GUARDRAIL NOT SHOWN. SEE NOTE BELOW.

GENERAL NOTES:

- MILEPOST ARE TO BE LOCATED AND ERECTED ON ACCURATE MILEAGE MEASUREMENTS MADE ON EITHER THE NORTHBOUND OR EASTBOUND ROADWAY BEGINNING WITH ZERO MILEAGE AT THE SOUTH OR WEST STATE LINES FOR THE INTERSTATE HIGHWAY SYSTEM AND AT THE SOUTH OR WEST COUNTY LINES FOR THE STATE HIGHWAY SYSTEM AND AT JUNCTIONS WHERE ROUTES BEGIN AND RUNNING CONTINUOUS WITHIN THE STATE FOR THE INTERSTATE HIGHWAY SYSTEM AND RUNNING CONTINUOUS WITHIN THE COUNTY FOR THE STATE HIGHWAY SYSTEM. CORRESPONDING MILEPOSTS FOR SB OR WB ROADWAY OF DIVIDED HIGHWAYS ONLY, ARE TO BE LOCATED DIRECTLY OPPOSITE THOSE ON NB OR EB ROADWAYS.
- WHERE ANY INTERFERENCE PREVENTS INSTALLING THE MILEPOST AT ITS ACCURATE LOCATION, IT MAY BE MOVED IN EITHER DIRECTION A MAXIMUM OF 50'. IF IT CANNOT BE PLACED WITHIN THAT DEGREE OF ACCURACY, IT SHALL BE OMITTED. MEASUREMENT TO THE NEXT MILEPOST LOCATION SHALL BE MADE FROM THE ACCURATELY ESTABLISHED MILE LOCATION AND NOT FROM THE ADJUSTED LOCATION.
- MILEPOSTS SHALL BE INSTALLED ONLY AFTER IMPROVEMENTS ON EITHER SYSTEM HAVE PROGRESSED SUFFICIENTLY TO PERMIT THE POSTING OF ACCURATE MILEAGE. MILEPOSTS WILL ONLY BE ERECTED ON PAVED ROADS.
- IT SHALL BE THE RESPONSIBILITY OF THE ENGINEER TO MARK THE LOCATION AND NUMERICAL DESIGNATION OF EACH MILEPOST. DISTANCES WILL BE OBTAINED BY THE USE OF A CERTIFIED ODOMETER IN A VEHICLE TRAVELING IN THE RIGHT HAND LANE IN THE DIRECTION IN WHICH THE MILEAGE INCREASES. NUMERICAL DESIGNATIONS SHALL BE DETERMINED AND COORDINATED FROM OFFICIAL GEORGIA D.O.T. MILEPOST RECORDS. CONTACT THE OFFICE OF TRAFFIC ENGINEERING AND SAFETY FOR CERTIFIED MILEPOST DATA.
- WHERE TWO ROUTES ARE COMMON, THE MILEAGE WILL ONLY BE CARRIED AS THE LOWER NUMBERED ROUTE, BUT THE CORRECT MILEAGE ON THE OTHER ROUTE WILL BE MEASURED AND AFTER THE ROUTES SEPARATE, MILEPOST SHOWING THE CORRECT MILEAGE WILL BE ERECTED AS USUAL.
- MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 - (A) HIGHWAY SIGNS-SECTION 636
 - (B) SIGN FABRICATION-SECTION 910, EXCEPT THAT THE MESSAGE SHALL BE OF REFLECTIVE MATERIAL, PRESSURE SENSITIVE.
 - (C) SIGN POST-SECTION 911 AND/OR SPEC. PROV.
 - (D) SIGN BLANKS- SECTION 912
 - (E) REFLECTORIZING MATERIALS-SECTION 913

MILE POST MARKERS DIMENSIONS (INCHES)						
	FREEWAYS AND EXPRESSWAYS			CONVENTIONAL HIGHWAYS		
	1-DIGIT	2-DIGITS	3-DIGITS	1-DIGIT	2-DIGITS	3-DIGITS
A	1/2	1/2	1/2	1/2	1/2	1/2
B	2 1/2	2 1/2	2 1/2	1 1/2	1 1/2	1 1/2
C	4	4	4	4	4	4
D	3	3	3	2	2	2
E	10	10	10	6	6	6
F		3	2 1/2		3	3
G	1 1/4	3/4	3/4	1 1/4	1 1/4	1 1/4
H	10	10	10	10	10	10
I	1 1/4	3/4	3/4	1 1/4	1 1/4	1 1/4
J	24	36	48	18	27	36
K	1	1	1	1	1	1
L	22	34	46	16	25	34
M	12	12	12	10	10	10
N	6	6	6	5	5	5
P	4 3/4	4 3/4	4 3/4	3 3/4	3 3/4	3 3/4
POST LENGTH (LIN. FT.)	11	12	13	11	12	12

DATE		DEPARTMENT OF TRANSPORTATION	
STATE OF GEORGIA		STANDARD	
REVISION		MILEPOSTS	
NO SCALE		RE-DRAWN SEPT. 1999	
BY		NUMBER	
DES. (SUBMITTED) <i>B. A. Smith</i>		9033	
TRA. (APPROVED) <i>O. L. Smith</i>		CHIEF ENGINEER	
CHK.			

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

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 10 FEET 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 RAMP 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 RAMP/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 RAMP AT ALL TIMES.
12. ALL CROSSROADS, SIDEROADS, RAMP 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.

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
- ⊕

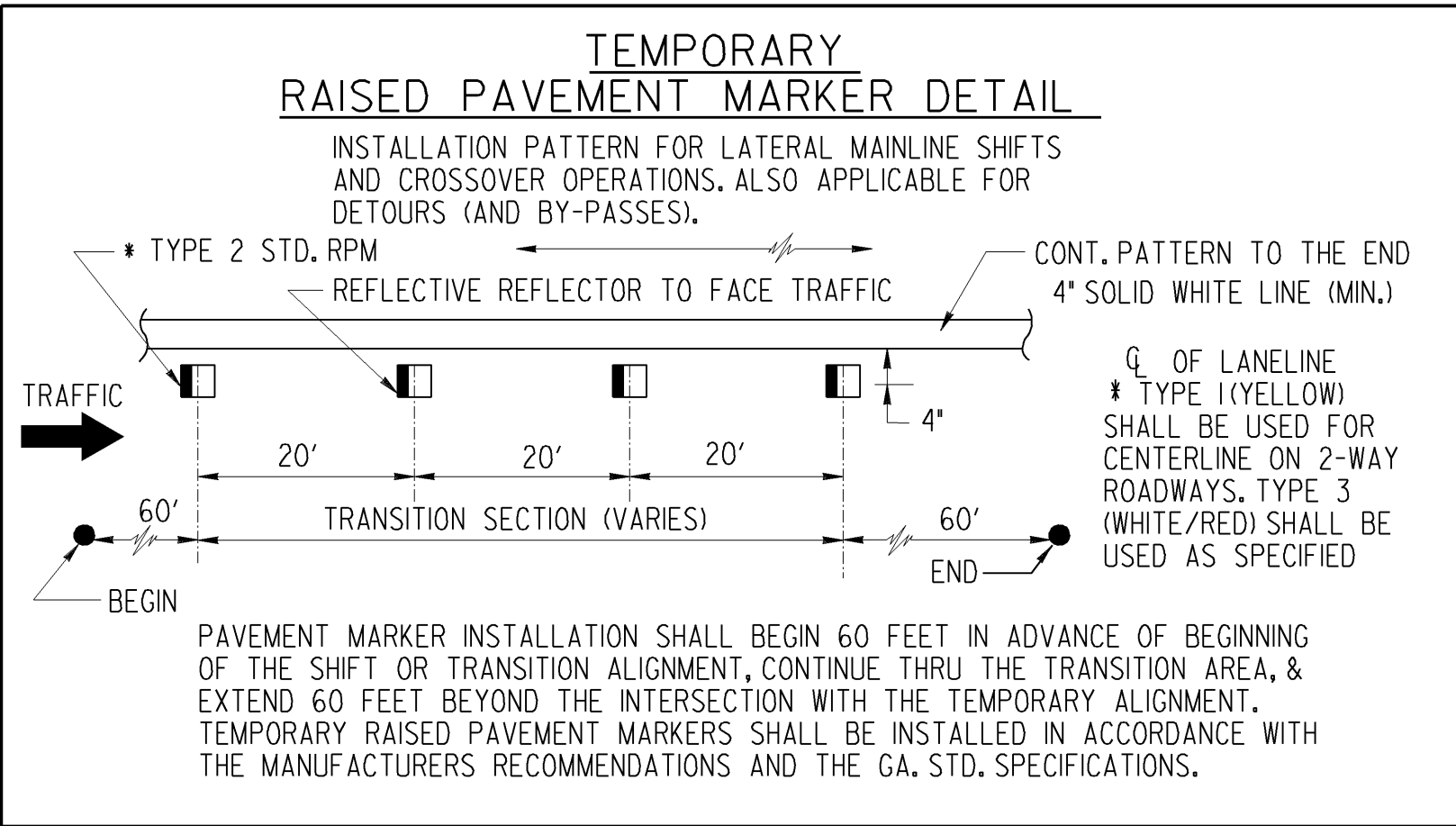
TEMPORARY POST MOUNTED SIGN
- Ⓚ

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



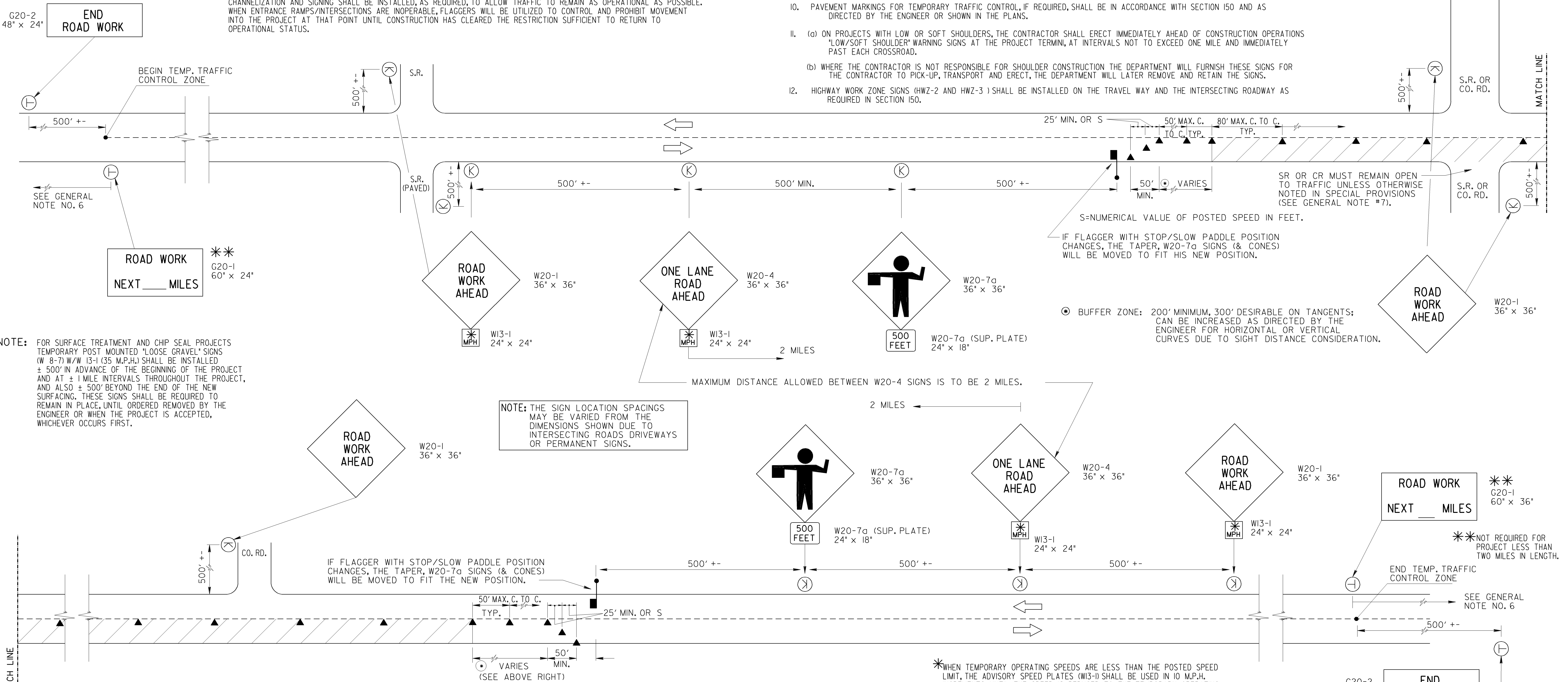
3-30-06		4-24-01		DATE	
REVISED GENERAL NOTES AND LEGEND, DELETED TWO DETAILS.		SPEC. BAR. SH. SPEC. REVISION		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
GLO		BY		STANDARD TRAFFIC CONTROL GENERAL NOTES, STANDARD LEGEND, MISCELLANEOUS DETAILS	
				NO SCALE	
				AUG., 1999	
				DES. (SUBMITTED) <i>[Signature]</i> STATE ROAD & AIRPORT DESIGN ENGINEER	
				TRA. (APPROVED) <i>[Signature]</i> CHIEF ENGINEER	
				NUMBER 9100	

GENERAL NOTES:

- 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)
- ALL TRAFFIC CONTROL DEVICES SHALL BE AS SHOWN, OR AS DIRECTED BY THE ENGINEER. ADDITIONAL DEVICES MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
- ALL PORTABLE SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT 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.
- WHEN THE CONSTRUCTION AREA HAS ENTRANCE/EXIT RAMP 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 RAMP/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.

- 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.
- SIGNS SHOWN HERE ARE IN ADDITION TO ALL ADVANCE WARNING SIGNS REQUIRED IN SECTION 150.
- FLAGGERS SHALL BE PROVIDED AS NECESSARY TO PROHIBIT WRONG DIRECTION OF TRAFFIC THRU WORK AREAS.
- 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 PERMANENT MOUNTED SHALL BE COVERED WHEN NOT APPLICABLE. SEE SECTION 150.
- PAYMENT FOR TRAFFIC CONTROL SHALL BE PER SECTION 150.
- PAVEMENT MARKINGS FOR TEMPORARY TRAFFIC CONTROL, IF REQUIRED, SHALL BE IN ACCORDANCE WITH SECTION 150 AND AS DIRECTED BY THE ENGINEER OR SHOWN IN THE PLANS.
- (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 TERMINI, AT INTERVALS NOT TO EXCEED ONE 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.
- HIGHWAY WORK ZONE SIGNS (HWZ-2 AND HWZ-3) SHALL BE INSTALLED ON THE TRAVEL WAY AND THE INTERSECTING ROADWAY AS REQUIRED IN SECTION 150.

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



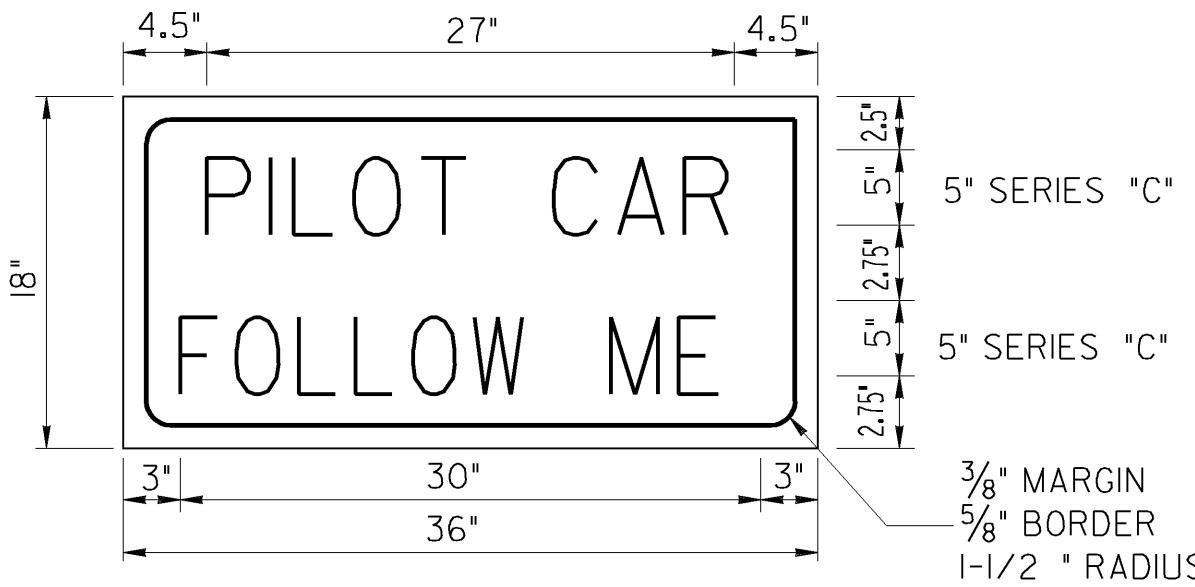
NOTE: FOR SURFACE TREATMENT AND CHIP SEAL PROJECTS TEMPORARY POST MOUNTED "LOOSE GRAVEL" SIGNS (W 8-7) W/W 13-1 (35 M.P.H.) SHALL BE INSTALLED ± 500' IN ADVANCE OF THE BEGINNING OF THE PROJECT AND AT ± 1 MILE INTERVALS THROUGHOUT THE PROJECT, AND ALSO ± 500' BEYOND THE END OF THE NEW SURFACING. THESE SIGNS SHALL BE REQUIRED TO REMAIN IN PLACE, UNTIL ORDERED REMOVED BY THE ENGINEER OR WHEN THE PROJECT IS ACCEPTED, WHICHEVER OCCURS FIRST.

NOTE: THE SIGN LOCATION SPACINGS MAY BE VARIED FROM THE DIMENSIONS SHOWN DUE TO INTERSECTING ROADS, DRIVEWAYS OR PERMANENT SIGNS.

⊙ BUFFER ZONE: 200' MINIMUM, 300' DESIRABLE ON TANGENTS; CAN BE INCREASED AS DIRECTED BY THE ENGINEER FOR HORIZONTAL OR VERTICAL CURVES DUE TO SIGHT DISTANCE CONSIDERATION.

* WHEN TEMPORARY OPERATING SPEEDS ARE LESS THAN THE POSTED SPEED LIMIT, THE ADVISORY SPEED PLATES (W13-1) SHALL BE USED IN 10 M.P.H. INCREMENTS, UNTIL THE SPEED IS REDUCED TO THE TEMPORARY OPERATING SPEED. TEMPORARY OPERATING SPEED SHALL BE 35 M.P.H. UNLESS OTHERWISE DETERMINED BY THE ENGINEER.

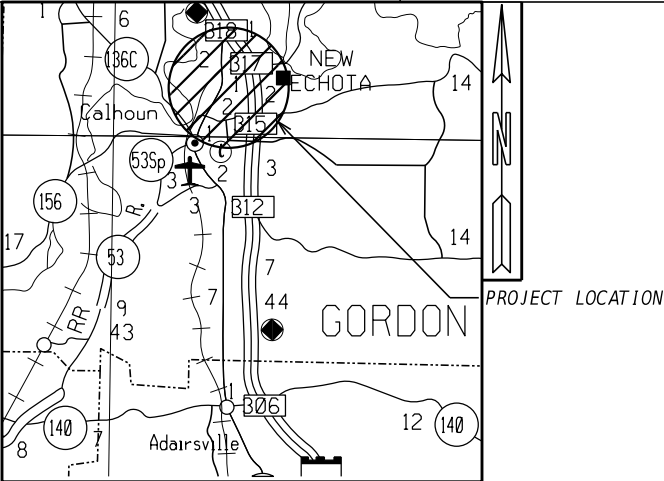
DETAIL OF G20-4 SIGN For Pilot Vehicle IF REQUIRED OR USED ON PROJECT



STANDARD LEGEND

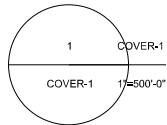
- STRIPED DRUM
- PERMANENT TYPE POST MOUNTED SIGN (7' MOUNT HEIGHT)
- ⊕ TEMPORARY POST MOUNTED SIGN - (7' MOUNT HEIGHT)
- Ⓚ PORTABLE MOUNTED SIGN - MINIMUM HEIGHT OF 1 FT. ABOVE THE EDGE OF PAVEMENT; INSTALLED AS PER NCHRP 350 TESTING REQUIREMENTS.
- ▨ WORK AREA
- ▲ TRAFFIC CONE - 28" MIN. - DAYTIME USE ONLY
- FLAGGER WITH STOP-SLOW PADDLE

3-30-06		DATE	
REMOVED FLAGS AND REV.	GENERAL NOTES REV. SIGN	REVISION	
GLO	BY		
NO SCALE		REV. & REDR. JULY, 1999	
DES. _____		(SUBMITTED) <i>[Signature]</i> STATE ROAD & AIRPORT DESIGN ENGINEER	
TRA. _____		(APPROVED) <i>[Signature]</i> CHIEF ENGINEER	
CHK. _____		NUMBER 9102	



LOCATION SKETCH

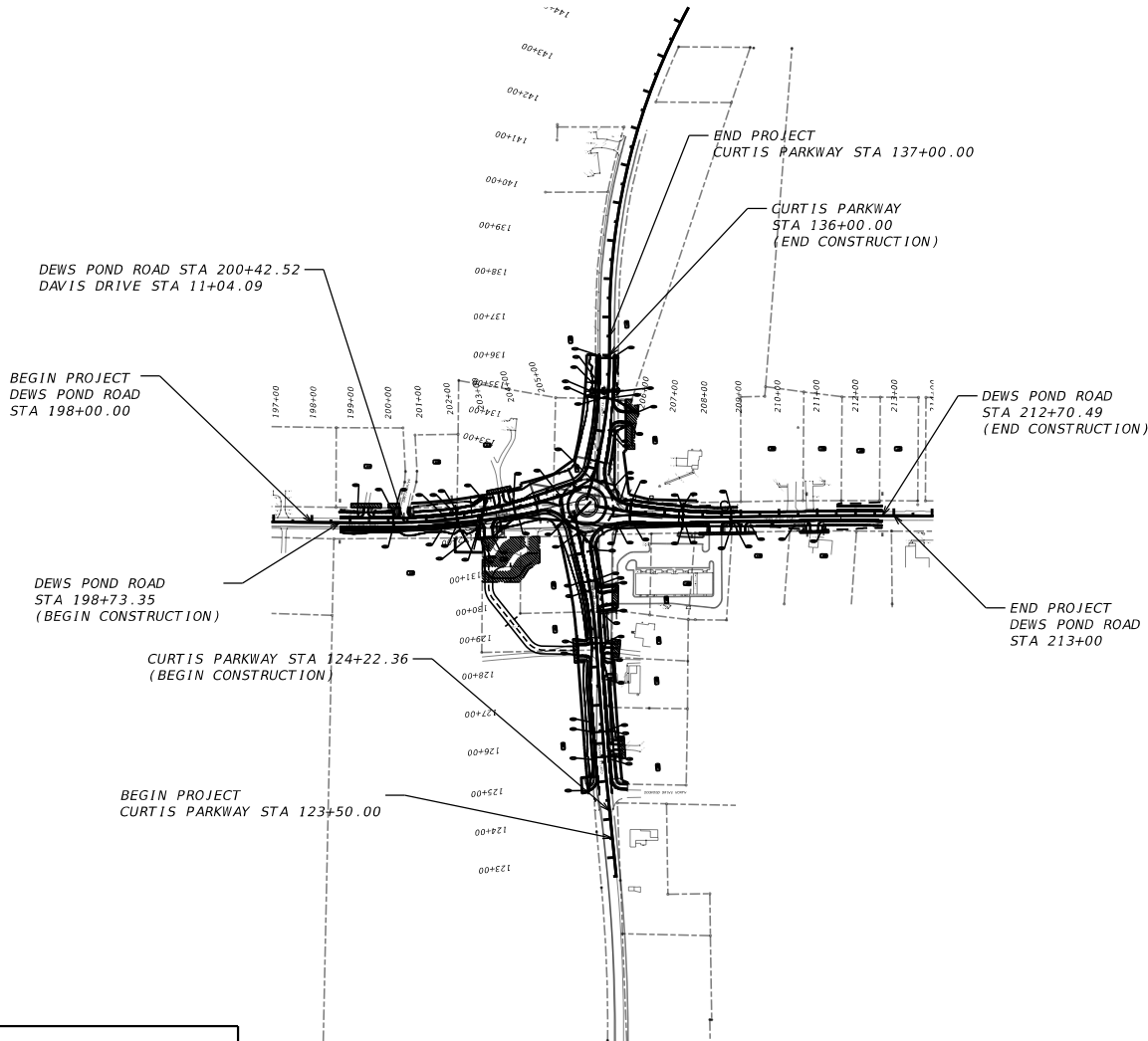
This project has been prepared using the Horizontal Georgia Coordinate System of 1983(NAD1983) West Zone, and the North American Vertical Datum (NAVD) of 1988.



PRIMARY PERMITTEE

CITY OF CALHOUN
226 S Wall St
Calhoun, Georgia 30701
Phone: (706) 629-0151
Email: pworley@calnet-ga.net

CITY OF CALHOUN
GORDON COUNTY, GEORGIA
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN
CURTIS PARKWAY PHASE I I



BEGIN-POINT COORDINATES

Longitude: -084.9253038°

Latitude: 34.5011232°

MID-POINT COORDINATES

Longitude: -084.9255246°

Latitude: 34.5028488°

END-POINT COORDINATES

Longitude: -084.9253380°

Latitude: 34.5043976°

"I certify that this Erosion, Sedimentation and Pollution Control Plan has been prepared in accordance with Part IV, of the General NPDES Permit No. GAR100002."

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land disturbing activity was permitted, provides for sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR100002."

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for the monitoring of: (a) all perennial and intermittent streams and other water bodies shown on the USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or (b) where any such specific identified perennial or intermittent stream and other water body is not proposed to be sampled, I have determined in my professional judgment, utilizing the factors required in the General NPDES Permit No. GAR100002, that the increase in the turbidity of each specific identified sampled receiving water will be representative of the increase in the turbidity of a specific identified un-sampled receiving water."

"I certify under penalty of law that this plan was prepared after a site visit to the location described herein by myself or my authorized agent, under my direct supervision."

24 HOUR CONTACT :

Name _____

Street Address _____

City, State Zip _____

Phone Number _____

Email Address _____

Contractor shall complete the information in this box.

LENGTH OF PROJECT	COUNTY No. 129 COUNTY NAME: GORDON	COUNTY No. COUNTY NAME: -----
	MILES	MILES
NET LENGTH OF ROADWAY	0.2230	
NET LENGTH OF BRIDGES	0	
NET LENGTH OF PROJECT	0.2230	
NET LENGTH OF EXCEPTIONS	0	
GROSS LENGTH OF PROJECT	0.2230	

PLANS COMPLETED				
REVISIONS				
DATE	ENTITY REQUESTING REVISION(S)	DRAWING NUMBER(S)	SIGNATURE	GSWCC LEVEL II CERT.#
- -				
- -				
- -				
- -				
- -				
- -				
- -				
				DRAWING No.
				50-0001

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST

INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: Coosa River SWCD

Project Name: CURTIS PARKWAY - PHASE II

City/County: GORDON

Name & email of person filling out checklist:

Address: CURTIS PARKWAY FROM DOGWOOD DR NE TO 500' N OF DEWS POND RD INTERSECTION

Date on Plans: 05-10-2024

RYAN HIGGINS RYAN.HIGGINS@EXP.COM

51-0001	Y	1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)	51-0002	Y	29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).				
50-54 SHEETS	Y	2 Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signature, seal and level II number must be on each sheet pertaining to ES&PC Plan or the Plan will not be reviewed)	51-0004	Y	30 Provide complete requirements of Inspections and record keeping by the primary permittee. *				
50-0001	Y	3 The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution controls.	51-0003	Y	31 Provide complete requirements of Sampling Frequency and Reporting of sampling results. *				
50-0001	Y	4 Provide the name, address, email address, and phone number of primary permittee.	51-0004	Y	32 Provide complete details for Retention of Records as per Part IV.F. of the permit. *				
53-0001-53-0004	Y	5 Note total and disturbed acreages of the projector phase under construction.	51-0003	Y	33 Description of analytical methods to be used to collect and analyze the samples from each location. *				
50-0001	Y	6 Provide the GPS locations of the beginning and end of the Infrastructure project. Give the Latitude and Longitude in decimal degrees.	51-0004	Y	34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *				
50-0001	Y	7 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.	51-0003 & 55-0001	Y	35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged also provide a summary chart of the justification and analysis for the representative sampling as applicable. *				
51-0002	Y	8 Descriptions of the nature of construction activity and existing site conditions.	51-0002	Y	36 A description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *				
50-0001	Y	9 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.	50-0001	Y	37 Graphic scale and North arrow.				
55-0001	Y	10 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.	55-0001	Y & N	38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following: <table><tr><td>Existing Contours</td><td>USGS 1" : 2000' Topographical Sheets</td></tr><tr><td>Proposed Contours</td><td>1" : 400' Centerline Profile</td></tr></table>	Existing Contours	USGS 1" : 2000' Topographical Sheets	Proposed Contours	1" : 400' Centerline Profile
Existing Contours	USGS 1" : 2000' Topographical Sheets								
Proposed Contours	1" : 400' Centerline Profile								
50-0001	Y	11 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 21 of the permit.	51-0003	Y	39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.georgia.gov.				
50-0001	Y	12 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 20 of the permit. *	51-0003	Y	40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *				
50-0001	Y	13 Design professional certification statement and signature that the permittee's ES&PC Plan provides for representative sampling as stated on Part IV.D.6.c.(3) page 37 of the permit as applicable. *	51-0005	Y	41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to State waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.				
51-0002	Y	14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins within 7 days after installation." in accordance with Part IV.A.5 page 26 of the permit. *	54 SHEETS	Y	42 Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.				
51-0002	Y	15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wooded vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."	51-0004	Y	43 Delineation and acreage of contributing drainage basins on the project site.				
51-0002	Y	16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.	55-0001	Y	44 Delineate on-site drainage and off-site watersheds using USGS 1" : 2000' topographical sheets.				
51-0002	Y	17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *	53 SHEETS	Y	45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.				
51-0002	Y	18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *	53 SHEETS	Y	46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.				
51-0002	Y	19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."	51-0002	Y	47 Soil series for the project site and their delineation.				
51-0002	Y	20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."	54 SHEETS	Y	48 The limits of disturbance for each phase of construction.				
51-0002	Y	21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."	51-0004	Y	49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual must be included for structural BMPs and all calculations used by the design professional to obtain the required sediment storage when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.				
51-0003	Y	22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of a Biotically Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *	54 SHEETS	Y	50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.				
N/A	N/A	23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *	52 SHEETS	Y	51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.				
51-0002	Y	24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *	51-0002	Y	52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of year that seeding will take place and for the appropriate geographic region of Georgia.				
51-0002	Y	25 Provide BMPs for the remediation of all petroleum spills and leaks.							
51-0002	Y	26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *							
51-0002	Y	27 Description of practices to provide cover for building materials and building products on site. *							
51-0002	Y	28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *							



REVISION DATES

ESPCP GENERAL NOTES

CURTIS PARKWAY - PHASE II

CHECKED:		DATE:		DRAWING No.
BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		

51-0001

ESPCP GENERAL NOTES

"The escape of sediment from the project site shall be prevented by the installation of erosion and sediment control measures and practices prior to land-disturbing activities."

"Erosion and sedimentation control measures will be maintained at all times. If full implementation of the approved plan does not provide for effective control, additional erosion and sedimentation control measures shall be implemented to control or treat the sediment source."

"The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMP's, and sediment basins within 7 days after installation."

"Non-exempt activities shall not be conducted within the 25 or 50 undisturbed stream buffers as measured from the point of wrested vegetation or within 25 feet of the coastal marshland buffer as measured from the jurisdictional determination line without first acquiring the necessary variances and permits."

"Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional."

"Waste materials shall not be discharged to waters of the State, except as authorized by a section 404 permit."

"Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."

ESPCP ALTERATIONS

This Erosion, Sedimentation, and Pollution Control Plan (ESPCP) is provided by the Department. It addresses the staged construction of the project on the basis of common construction methods and techniques. If the Contractor elects to alter the staged construction from that shown in the plans or utilize construction techniques that render this plan ineffective, the Contractor shall revise the plans in accordance with Special Provision 161-Control of Soil Erosion and Sedimentation of the contract.

The Contractor, the Certified Design Professional, and the WECS shall carefully evaluate this plan prior to commencing land-disturbing activities. Amendments/revisions to the ESPCP which have a significant effect on BMPs with a hydraulic component requires a formal revision of the ESPCP and the signature of a GSWCC Level-II Certified Design Professional. Additional BMPs may be added per Special Provision 161-Control of Soil Erosion and Sedimentation.

CONSTRUCTION SCHEDULE AND SEQUENCE OF MAJOR ACTIVITIES

The Contractor is responsible for developing the construction schedule for the project. The construction schedule for this project shall be submitted after the project is awarded along with the NOI. A copy of the construction schedule shall be maintained at the project site.

The project budget includes sufficient funds for the payment of construction exits. The Contractor is responsible for establishing at least one (1) construction exit per the specifications of the construction exit detail included in this ESPCP to minimize or eliminate the vehicle tracking of dirt, soils, and sediments off site. To facilitate project logistics, the Contractor is also responsible for selecting the location(s) of the construction exit(s).

Initial Phase of BMP installation shall include all perimeter silt fence, orange barrier fence, double row of silt fence near all stream buffers. Additional mulch and temporary grassing shall be added as initial stage installation progresses.

Intermediate Phase shall include items to be installed during previous stages, including inlet sediment traps and check dams. Maintain and adjust items installed previously as necessary. Temporary grassing, mulch, and any remaining silt fence shall be installed as shown on the BMP Location Detail sheets.

Final BMP installation shall be performed as site conditions permit. All permanent grassing, rip rap and slope matting shall be installed as grading of shoulders and slopes are completed.

SITE STABILIZATION AND VEGETATION PLANTING SCHEDULE

The EPD General NPDES GARI00002 permit states that any disturbed area where construction activities have temporarily or permanently ceased shall be stabilized within 14 days of such cessation or as soon as practicable if precluded by adverse weather conditions. However in special cases, the Project Engineer may require the contractor to perform stabilization more often than 14 days.

Disturbed areas shall be stabilized with suitable material listed in the current edition of the Department's Standard Specifications (or Special Provisions) Sections 161, 163, 700, or 711 on the basis of when construction activities are expected to resume.

All temporary and permanent vegetative practices including plant species, planting dates, seeding, fertilizing, liming, and mulching rates for this project can be found in Section 700 of the current edition of the Department's Standard Specifications (or Special Provisions) and other applicable contract documents or landscaping plans.

BMP INSTALLATION AND MAINTENANCE MEASURES

See the Department's Standard Specifications (or Special Provisions) 161, 163, 165, 700, 711, and other contract documents for installation and maintenance measures.

PETROLEUM STORAGE, SPILLS AND LEAKS

These plans expressly delegate the responsibility of proper on-site hazardous material management to the Contractor. The Contractor shall at a minimum provide an action plan and keep the necessary materials on site for the capture, clean up, and disposal of any petroleum product, or other hazardous material, leaks or spills associated with the servicing, refueling or operation of any equipment utilized at the site. A copy of the action plan shall be submitted to the Project Engineer and maintained on the project site. All personnel operating or servicing equipment shall be familiar with the action plan. The Contractor shall not park, refuel, or maintain equipment within stream buffers.

If the Contractor elects to store petroleum products on site, the Contractor shall prepare an ESPCP addendum that addresses the additional BMPs needed for on-site storage and spill prevention for petroleum products. This plan shall be prepared by a Certified Design Professional as required by GARI00002 for inclusion with these plans. The Contractor's attention is specifically directed to Standard Specification 107-Legal Regulations and Responsibility to the public for additional requirements.

The emergency response phone number for EPD is 800-241-4113 and the emergency phone number for the National Response Center (NRC) is 800-424-8802

WASTE DISPOSAL

Where attainable, locate waste collection areas, dumpsters, trash cans and portable toilets at least 50 feet away from streets, gutters, watercourses and storm drains. Secondary containment shall be provided around liquid waste collection areas to minimize the likelihood of contaminated discharges. The Contractor shall comply with applicable state and local waste storage and disposal regulations and obtain all necessary permits. Solid materials, including building materials, shall not be discharged to Waters of the State, unless authorized by a Section 404 Permit.

DEWATERING AND PUMPING ACTIVITIES

Any pumped discharge from an excavation or disturbed area shall be routed through an appropriately sized sediment basin, silt filter bag, or shall be treated equivalently with suitable BMP's. The contractor shall ensure the post BMP treated discharge is sheet flowing. Failure to create sheet flow will obligate the contractor to perform water quality sampling of pumped discharges. The contractor shall prepare sampling plans in accordance with the current GARI00002 NPDES permit by utilizing a Certified Design Professional. No separate payment will be made for water quality sampling of pump discharges.

NONSTORMWATER DISCHARGES

Nonstormwater discharges defined in Part III.A.2 of the NPDES Permit will be identified after construction has commenced. These discharges shall be subject to the same requirements as storm water discharges required by the Georgia Erosion and Sedimentation Control Act, the NPDES Permit, the Clean Water Act, the Manual for Erosion and Sediment Control in Georgia, Department Standards, and other contract documents. The NPDES does not authorize the discharge of soaps or solvents used in vehicle and equipment washing or the discharge of wastewater containing stucco, paint, oils, curing compounds, and other construction materials.

READY MIX CHUTE WASH DOWN

The washing of ready-mix concrete drums and dump truck bodies used in the delivery of Portland cement concrete is prohibited on this site.

In accordance with Standard Specification 107: Legal Regulations and Responsibility to the Public, only the discharge chute utilized in the delivery of Portland cement concrete may be rinsed free of fresh concrete remains. The Contractor shall excavate a pit outside of State water buffers, at least 25 feet from any storm drain and outside of the travelled way, including shoulders, for a wash-down pit. The pit shall be large enough to store all wash-down water without overlapping. Immediately after the wash-down operations are completed and after the wash-down water has soaked into the ground, the pit shall be filled in, and the ground above it shall be graded to match the elevation of the surrounding areas. Alternate wash-down plans must be approved by the Project Engineer.

Wash-down plans describe procedures that prevent wash-down water from entering streams and rivers. Never dispose of wash-down water down a storm drain. Establish a wash-down pit that includes the following: (1) a location away from any storm drain, stream, or river, (2) access to the vehicle being used for wash down, (3) sufficient volume for wash-down water, and (4) permission to use the area for wash down.

On sites where permission or access to excavate a wash-down pit is unavailable, the Contractor may have to wash-down into a sealable 55-gallon drum or other suitable container and then transport the container to a proper disposal site. For additional information, refer to the Georgia Small Business Environmental Assistance Program's "A Guide for Ready Mix Chute/Hopper Wash-down".

OTHER CONTROLS

If the Contractor elects to store building material, building products, construction waste, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials on the site, the Contractor shall provide an appropriate covering to minimize the exposure of those materials or products to precipitation and stormwater to minimize the discharge of pollutants. Minimization of exposure is not required in cases where exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of the specific material or product poses little risk to stormwater contamination or is intended for outdoor use.

The Contractor shall follow this ESPCP and ensure and demonstrate compliance with all applicable State and/or local regulations for waste disposal, sanitary sewer and septic systems, and petroleum storage.

The Contractor shall control dust from the site in accordance with Section 161 of the current edition of the Department's Standard Specifications.

POSTCONSTRUCTION BMPs FOR STORMWATER MANAGEMENT

All permanent postconstruction BMPs are shown in the construction plans and in the ESPCP plan. The postconstruction BMPs for this project consist of detention ponds, bioretention basins, sand filter basins, bioslopes, enhanced dry/wet swales, vegetated swales/ditches, vegetation, permanent slope drains and/or flumes, riprap at pipe outlets for velocity dissipation and outlet stabilization, channel/ditch stabilization with turf reinforcing mats, slope stabilization matting, riprap and concrete ditch lining where necessary. The postconstruction BMPs will provide permanent stabilization of the site and prevent abnormal transportation of sediment and pollutants into receiving waters.

All temporary BMP's are shown in the ESPCP plan. The temporary BMP's for this project consist of temporary grassing, inlet sediment traps, stone check dams and A and C silt fence at the toe of fill slopes to reduce silt from storm water discharges.

SOIL SERIES INFORMATION

The following is a summary of the soils that are expected to be found on the project site.

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in ADO	Percent of ADO
CA	Colbert silt loam, 0 to 2 percent slopes	Slight	Colbert (85%)		7.4	4.2%
CdB	Conasauga silt loam, 2 to 8 percent slopes	Moderate	Conasauga (85%)	Surface has times slope times R index (0.60)	24.5	14.0%
CdC	Corryton silt loam, 2 to 8 percent slopes	Moderate	Corryton (85%)	Surface has times slope times R index (0.62)	2.5	1.4%
DdB	Dewey silt loam, 2 to 8 percent slopes	Moderate	Dewey (95%)	Surface has times slope times R index (0.60)	6.6	3.9%
DdA	Dixons silt loam, 0 to 2 percent slopes, occasionally flooded	Slight	Dixons (95%)		10.9	6.4%
FD	Fultondale gravelly silt loam, 6 to 15 percent slopes	Moderate	Fultondale (82%)	Surface has times slope times R index (0.75)	40.6	23.2%
KdA	Katona silt clay loam, 0 to 2 percent slopes, rounded	Slight	Katona (85%)		4.4	2.5%
MdC	Monticello-Towleley complex, 15 to 30 percent slopes	Severe	Monticello (85%)	Surface has times slope times R index (0.77)	6.9	3.9%
SdC	Shack-Milledale complex, 6 to 15 percent slopes	Moderate	Shack (45%) Milledale (45%)	Surface has times slope times R index (0.68) Surface has times slope times R index (0.68)	7.7	4.4%
SdE	Shack-Milledale complex, 15 to 30 percent slopes	Severe	Shack (45%)	Surface has times slope times R index (0.91)	7.4	4.2%
TdC	Towleley heavy silt loam, 8 to 15 percent slopes	Severe	Towleley (70%)	Surface has times slope times R index (0.76)	17.2	9.8%

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in ADO	Percent of ADO
TdC	Towleley heavy silt loam, 8 to 15 percent slopes	Severe	Towleley (70%)	Surface has times slope times R index (0.76)	16.5	9.4%
TdE	Towleley heavy silt loam, 8 to 15 percent slopes	Severe	Towleley (70%)	Surface has times slope times R index (0.76)	14.1	8.0%
UdC	Urban land, 2 to 10 percent slopes	Not rated	Urban land (85%)		0.0	0.0%
W	Water	Not rated	Water (100%)		0.1	0.1%
WdA	WdA silt loam, 0 to 2 percent slopes, occasionally flooded	Slight	WdA (95%)		6.6	3.8%
Totals for Area of Interest					114.9	100.0%

SILT FENCE INSTALLATION WITH J HOOKS AND SPURS

Silt fence should never be run continuously. The silt fence should turn back into the fill or slope to create small pockets that trap silt and force stormwater to flow through the silt fence. This technique is called using J hooks (or spurs). The J hooks shall be utilized on all silt fences that are located around the perimeter of the project and along the toe of embankments or slopes. The J hooks shall be spaced in accordance with GDOT Construction Detail D-24C. The maximum J-hook spacing is reached when the top of the J hook is at the same elevation as the bottom of the immediately upgradient J hook. J Hooks shall be paid for as silt fence items per linear foot. All costs and other incidental items are included in cost of installing and maintaining the silt fence.

SEDIMENT BASIN EXCLUSION JUSTIFICATION:

On this project sediment basins are not attainable for all applicable common drainage locations. The main reasons for not being able to use sediment basins are lack of right of way. However equivalent controls will be used such as BMP's that are shown in all construction phases of this project, which will capture any sediment traveling off the project site. The maximum number of BMP's per the manual has been installed per the manual in the attempt to meet the requirement.

DESCRIPTION OF EXISTING SITE AND PROPOSED PROJECT

The scope of this project includes widening Curtis Parkway to provide a dedicated southbound right-turn lane onto Laurel Creek Road, improving traffic flow to and from the nearby school. The project also includes the construction of a roundabout at the intersection of Curtis Parkway and Dews Pond Road to further reduce congestion in the area.

SEDIMENT STORAGE

The site has a total disturbed area of 6.40 acres. The following table summarizes the required and available sediment storage for every outfall on this project.The Contractor shall provide and maintain the storage volumes for the BMP's specified in this table.

Location	Total Drainage Area (acres)	Disturbed Area (acres)	Required Sediment Storage Volume (yd³)	Total Storage Volume Provided (yd³)	Temporary Sediment Basins		Check Dams (19 yd³/each)		Inlet Sediment Traps (18 yd³/each)		Silt Gates (# yd³/each)		Silt Fence (0.3 yd³/ft)	
					Basin #	Total Volume (yd³)	# of Devices	Total Volume (yd³)	# of Devices	Total Volume (yd³)	# of Devices	Total Volume (yd³)	Length (ft)	Total Volume (yd³)
Outfall 1	2.84	5.04	337.68	2388	N/A	N/A	18	342	45	810	N/A	N/A	4120	1236
Outfall 2	83.2	0.451	30.217	136.5	N/A	N/A					N/A	N/A	455	136.5
Outfall 3	0.813	0.427	28.609	345.6	N/A	N/A	3	57	8	144	N/A	N/A	482	144.6
Outfall 4	0.830	0.232	15.544	84.6	N/A	N/A			3	54	N/A	N/A	102	30.6
Outfall 5	70.4	0.113	7.571	34.8	N/A	N/A					N/A	N/A	116	34.8
Outfall 6	0.320	0.135	9.045	138.9	N/A	N/A			3	54	N/A	N/A	283	84.9
Total Sheet Flow	158.40	6.40	428.67	3128.40	N/A	N/A	21.00	399.00	59.00	1062.00	N/A	N/A	5558.00	1667.40

To prevent runoff from bypassing Inlet sediment traps,a temporary sump shall be installed around all Inlet sediment traps that are not located in a low point or an excavated sump. Construct temporary sumps in accordance with Construction Detail D-24C.Temporary sumps shall be installed in a manner that ensures stormwater does not bypass the Inlet. The Contractor may submit alternate temporary containment berm designs to the Project Engineer for approval.

USE OF ALTERNATIVE AND/OR ADDITIONAL BMPS:

Fabric check dams will be used on this project as an alternative BMP. The use of the alternative BMP for stone check dams has been reviewed by the Georgia EPD and has been determined by the Georgia EPD to be allowable only for this ESPCP. This review was site specific and was based on documentation submitted and certified by the Level-II Certified Design Professional and was required by the Georgia EPD and GSWCC.

DISCHARGES INTO OR WITHIN ONE LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT

The following is a summary of project outfalls within 1 mile and within the watershed of an identified Impaired stream segment that has been listed for criteria violated,"Bio F"(Impaired fish community) and/or "Bio M"(Impaired macro Invertebrate community),within Category 4a,4b or 5,and the potential cause is either "NP"(nonpoint source) or "UR"(urban runoff).

Outfall ID# and Location (Station and Offset)	Reach Name	Location of the Impaired Stream Segment as Indicated in the 305b/303d List	Criteria Violated (Bio F Bio M)	Potential Cause (NP UR)	Category (4a, 4b, or 5)	Numeric waste load allocation (WLA) for
Outfall 1 STA 202+42.55, 58.06' RT	UNNAMED TRIBUTARY OF OOTHKALOOGA CREEK	PETERS STREET TO OOTHKALOOGA CREEK, CALHOUN	Bio M	NP FC	4a	NA
Outfall 2 STA 202+32.29, 35.24' RT	UNNAMED TRIBUTARY OF OOTHKALOOGA CREEK	PETERS STREET TO OOTHKALOOGA CREEK, CALHOUN	Bio M	NP FC	4a	NA
Outfall 3 STA 201+95.51, 56.9' RT	UNNAMED TRIBUTARY OF OOTHKALOOGA CREEK	PETERS STREET TO OOTHKALOOGA CREEK, CALHOUN	Bio M	NP FC	4a	NA
Outfall 4 STA 135+26.02, -43.55' LT	UNNAMED TRIBUTARY OF OOTHKALOOGA CREEK	PETERS STREET TO OOTHKALOOGA CREEK, CALHOUN	Bio M	NP FC	4a	NA
Outfall 5 STA 135+03.71, -34.037' LT	UNNAMED TRIBUTARY OF OOTHKALOOGA CREEK	PETERS STREET TO OOTHKALOOGA CREEK, CALHOUN	Bio M	NP FC	4a	NA
Outfall 6 STA 134+86.68, -47.75' LT	UNNAMED TRIBUTARY OF OOTHKALOOGA CREEK	PETERS STREET TO OOTHKALOOGA CREEK, CALHOUN	Bio M	NP FC	4a	NA

* If the TMDL Implementation Plan establishes a specific numeric waste load allocation that applies to the project discharge(s) to the Impaired Stream Segment, then the Certified Design Professional must incorporate that allocation into the Erosion, Sedimentation and Pollution Control Plan and implement all necessary measures to meet that allocation. See Appendix I for additional required BMPs for this project.

STATE-WATER BUFFER IMPACTS

State-water buffers,as defined by O.C.G.A.12-7-1,(are not) impacted by this project.

Non-exempt activities shall not be conducted within the 25- or 50-foot undisturbed stream buffers as measured from the point wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits.

MONITORING SAMPLING METHODS & PROCEDURES

REPRESENTATIVE SAMPLING ON LINEAR PROJECT

Receiving water samples and storm water discharge samples will be collected by "grab samples",as specified in Part IV D.5.b.of the permit. All grab samples will be collected using the following methods and procedures:

OUTFALL SAMPLING:

MANUAL SAMPLING:

Samples will be taken at the appropriate time as stated in Part IV.D.5.d.of the permit. Sampling will occur at the designated representative outfall.The sample will be taken in the center of the outfall channel. A large mouth,clean, glass or plastic jar/bottle, labeled with project number and location will be used to collect the sample. The sample container will be held such that the opening faces upstream. Once the sample jar/bottle is full and capped,it will be transported to the location where the turbidity testing will be conducted.Samples may be analyzed at the site with properly calibrated portable turbidimeters. All turbidity tests will be conducted immediately but in no case,later than 48 hours after the time the sample was obtained.

AUTOMATIC SAMPLING:

Samples will be taken at the appropriate times as specified in Part IV.D.5.d.of the permit. Automatic sampling can be accomplished by using a sampling device similar to the Isco Model 3700 or 6700.These devices can be triggered by flow meters or rain gages to collect the required samples. This determination will be made on a project by project basis.The probe for the automatic sampler will be placed in the center of the outfall channel. Samples will remain in the automatic sampler until the next business day,when they will be collected and tested.

TESTING:

All turbidity tests shall be done in accordance with 40 CFR Part 136 (unless other test procedures have been approved);the guidance document titled "NPDES Storm Water Sampling Guidance Document,EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.Turbidity results will be recorded and reported to EPD in accordance with Part IV.E of the permit.

MONITORING GENERAL NOTES:

This project has a total size of 6.40 acres.The surface water drainage area for the outfall to be monitored has a drainage area of 0.15454 square miles.The receiving waters for this outfall is (an unnamed tributary of Oothkalooga Creek).The NTU value selected from Appendix B for the above noted facility and the surface water drainage area IS 75 NTU.

For this project Outfall No.1 shall be the representative sampling point. A representative from the Department's Office of Environmental Compliance will be responsible for selecting alternate monitoring locations within the active phase of construction,when the designated site is not within the active phase of construction.

An increase in the turbidity of a specific identified receiving water to be sampled will be representative of the increase in the turbidity of a specific identified un-sampled receiving water.

RIP-RAP OUTLET PROTECTION TABLE											
Structure #, Outfall ID#, or Station and Offset	Pipe Diameter Do (ft)	Q10 (ft³/s)	V10 (ft/s)	Tailwater Condition (TW<0.5 Do TW>0.5 Do)	Width at Drainage Structure W1=3Do (ft)	Apron Length La (ft)	Downstrea m Width W2=Do+La (ft)	Average Stone Diameter d50 (ft)	Apron Thickness D (ft)	Riprap Type (Type 3 or Type 1)	Quantity (yd²)
C-1	2.5	14.6	7.814	TW<0.5 Do	7.50	10.13	12.63	0.34	1.50	Type 3	11
D-1	4.5	134.0	13.61	TW<0.5 Do	13.50	30.1	34.60	1.03	1.50	Type 3	80.44
E-1	1.5	3.1	9.36	TW<0.5 Do	4.50	12.06	13.56	0.43	1.50	Type 3	12.1
F-1	1.5	4.9	5.92	TW<0.5 Do	4.50	6.53	8.03	0.22	1.50	Type 3	4.5
G-1	3.5	126.0	11.07	TW<0.5 Do	10.50	20.6	24.10	0.71	1.50	Type 3	49
H-1	1.5	2.1	4.62	TW<0.5 Do	4.50	4.08	5.58	0.16	1.50	Type 3	2.33

INSPECTIONS AND REPORTING

As the primary permittee, the Department must retain the design professional who prepared the ESPCP, or an alternative design professional approved by EPD in writing, to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days of installation over the entire Infrastructure project. Alternatively, for linear Infrastructure projects, the permittee must retain either of these personnel to inspect the initial sediment storage requirements and perimeter control BMPs for the initial segment, as defined by Part IV.A.5. of the current GARI00002 Permit, within 7 days of installation and all sediment basins within the entire linear Infrastructure project within 7 days of installation. The inspecting design professional shall report the results to the primary permittee within 7 days, and the permittee must correct all deficiencies within 2 business days of receipt of the inspection report, unless on-site weather conditions are such that more time is required. Additionally, the Department's Construction Project Engineer will be responsible for all subsequent 7 day inspections for all new BMP installations.

All other inspections shall be documented on the appropriate Department inspection forms. See Standard Specification (or Special Provision) 167 and other contract documents for inspection and reporting requirements. These inspections shall continue until the Notice of Termination (NOT) is submitted.

Whenever the Department finds that a BMP has failed or is deficient beyond routine maintenance and has resulted in sediment deposition into waters of the State, the Contractor shall take reasonable steps to address the condition, including cleaning up any contaminated surfaces so the material will not discharge in subsequent storm events. When the repair does not require a new or replacement BMP or significant repair, the BMP failure or deficiency must be corrected by the close of the next business day from the time of discovery. A repair requiring a new or replacement BMP or significant repair must be operational by no later than 7 days from the time of discovery. If the repair time within 7 days is infeasible, the Contractor and the Department shall schedule the BMP repair to be operational as soon as practical after the 7 day time frame.

Failure to perform inspections as required by the contract documents and the NPDES permit shall result in the cessation of all construction activities with the exception of Traffic Control and Erosion Control. Continued failure to perform inspections shall result in non-refundable deductions as specified in the contract documents.

WATER QUALITY INSPECTING AND SAMPLING PROCEDURES

See Special Provision 167 and other contract documents for the inspecting and sampling procedures. Sampling locations are provided in the Sampling Location table herein.

RETENTION OF RECORDS

The Department will retain all records related to the implementation of this ESPCP in accordance with Part IV.F of the General Permit GARI00002.

SAMPLING LOCATIONS AND GENERAL NOTES

Representative sampling may be utilized on this project as explained here. The individual outfall drainage basins along the project corridor have been carefully evaluated and compared on the basis of four characteristics: the type of construction activity, the disturbed acreage, the average slope about the outfall, and the soil erosion index 0-10, 10 being the most erodible soil. The construction activity types are new road on fill, new road in cut, road widening, and maintenance/safety. The disturbed area classes are less than or equal to 1 acre, greater than 1 acre to less than 2 acres, and equal to or greater than 2 acres. The average outfall slope is mild if it is equal to or less than 0.03, and steep if it is greater than 0.03. The soil erosion index is low if it is less than or equal to 5 and high if it is greater than 5. After evaluation of these characteristics as presented in the project's drainage area map, hydrology and hydraulic studies, construction plans, geotechnical soil survey, and erosion sedimentation and pollution control plans, the Department has determined that the representative sampling scheme shown below is valid for the duration of the project. The table shows the groups of similar outfall drainage basins.

The increase in turbidity at the specified locations in the table below will be representative of the alternate outfall drainage basins when similar outfall drainage basins exist. Approved primary and alternate representative sampled features are identified in the table below.

Note: The Total Site Area is 6.40 acres.											Representative Sampling Scheme				
SAMPLING INFORMATION											OUTFALL CHARACTERISTICS				
Primary Sampled Feature	Location (Station and Offset)	Name of Receiving Water	Applicable Construction Stage for Sampling	Sampling Type (Outfall or Receiving water)	Drainage Area for Receiving Water (mi²)	Upstream Disturbed Area (acres)	Warm or Cold Water Stream	Appendix B NTU Value (Outfall Sampling only)	Allowable NTU Increase (Receiving water sampling only)	Location Description	Construction Activity	Disturbed Area (acres)	Average Outfall Slope (Rise/Run)	Soil Erosion Index	Represented Outfall Drainage Basins
1	202+42.55, 58.06' RT	OOTHKALOOGA CREEK	All	OUTFALL	0.0044	5.04	Warm	75	N/A	30" PIPE	Road Widening	N/A	N/A	N/A	N/A
2	202+32.29, 35.24' RT	OOTHKALOOGA CREEK	All	OUTFALL	0.1300	0.451	Warm	75	N/A	54" PIPE	Road Widening	N/A	N/A	N/A	N/A
3	201+95.51, 56.9' RT	OOTHKALOOGA CREEK	All	OUTFALL	0.0013	0.427	Warm	75	N/A	18" PIPE	Road Widening	N/A	N/A	N/A	N/A
4	135+26.02, -43.55' LT	OOTHKALOOGA CREEK	All	OUTFALL	0.0013	0.232	Warm	75	N/A	18" PIPE	Road Widening	N/A	N/A	N/A	N/A
5	135+03.71, -34.04' LT	OOTHKALOOGA CREEK	All	OUTFALL	0.1100	0.113	Warm	75	N/A	42" PIPE	Road Widening	N/A	N/A	N/A	N/A
6	134+86.68, -47.75' LT	OOTHKALOOGA CREEK	All	OUTFALL	0.0005	0.135	Warm	75	N/A	18" PIPE	Road Widening	N/A	N/A	N/A	N/A

The primary sampled features specified should be used as the initial sampling locations. An alternate sampled feature may be used if additional sampling is required or to replace a primary sampled feature that is no longer located within the active phase of construction.

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CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
	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.
	LINE CODE ORANGE BARRIER FENCE		
ESA	ENVIRONMENTALLY SENSITIVE AREA		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.
	LINE CODE ESA-25' (OR 50') STREAM BUFFER, ETC.		
Bf	BUFFER ZONE		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.
	SYMBOL Bf		
Ds1	MULCH		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.
	SECTION 163	SYMBOL Ds1	
Ds2	TEMPORARY GRASSING		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.
	SECTION 163, 700	SYMBOL Ds2	

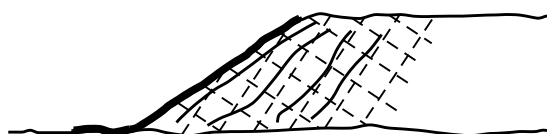
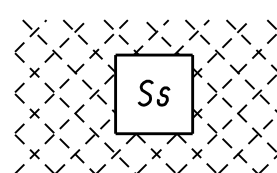
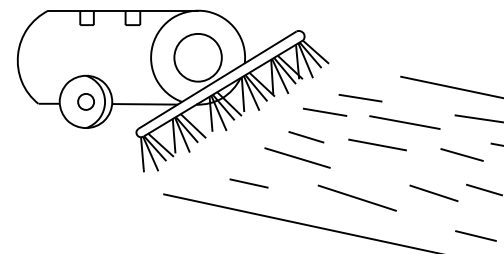
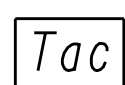
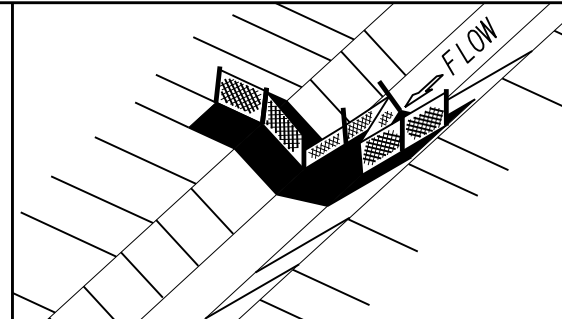
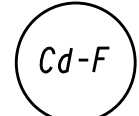
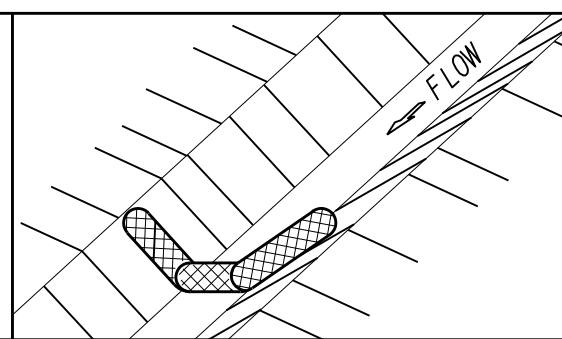
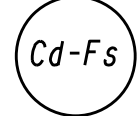
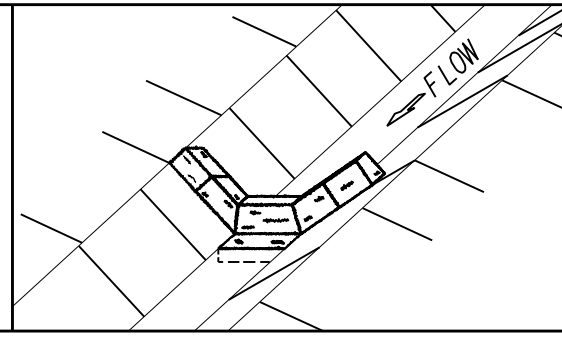
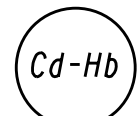
CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ds3	PERMANENT GRASSING		THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON. PERMANENT VEGETATION SHALL BE USED ON ALL PROJECTS ACCORDING TO THE STANDARD SPECIFICATION. THE BMP SYMBOL FOR APPLICABLE AREAS AND/OR A NOTE SHALL BE INCLUDED ON APPLICABLE SHEETS IN SECTION 54.
	SECTION 700	SYMBOL Ds3	
Ds4	SODDING		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.
	CONSTRUCTION DETAIL D-54 SECTION 700, 890	PATTERN Ds4	
Fl-Co	FLOCCULANTS COAGULANTS		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.
	SECTION 163, 700, 895	SYMBOL Fl-Co POLYACRYLAMIDE	
Sb	STREAMBANK STABILIZATION		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.
	SECTION 702	PATTERN Sb	

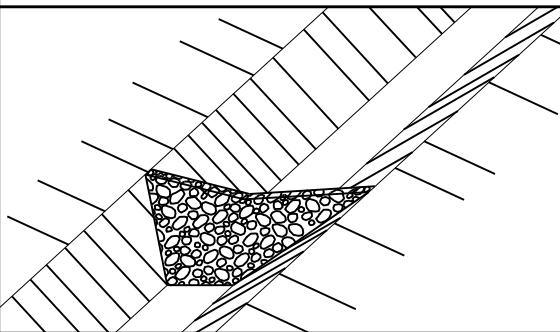
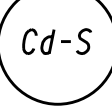
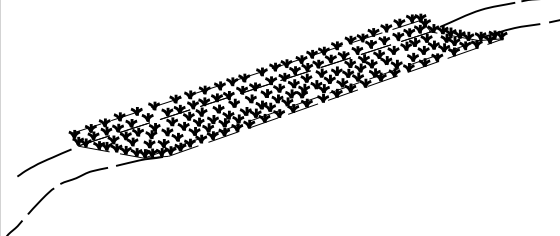
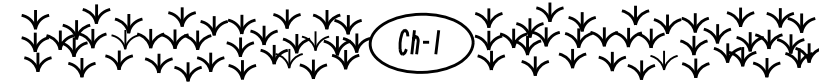
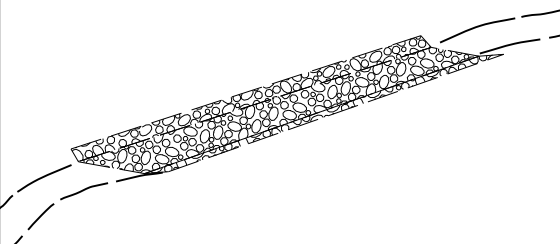
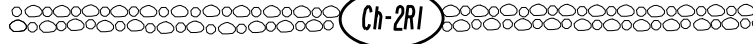
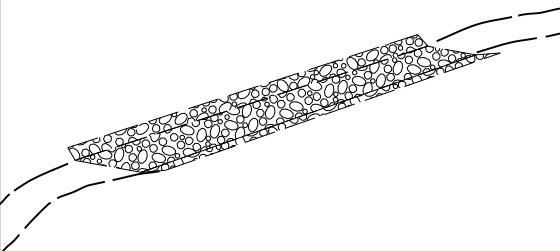
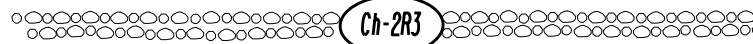
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REVISION DATES			EROSION CONTROL LEGEND			
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			SHEET 1 OF 7			
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BACKCHECKED:		DATE:				
CORRECTED:		DATE:				
VERIFIED:		DATE:		52-0001		

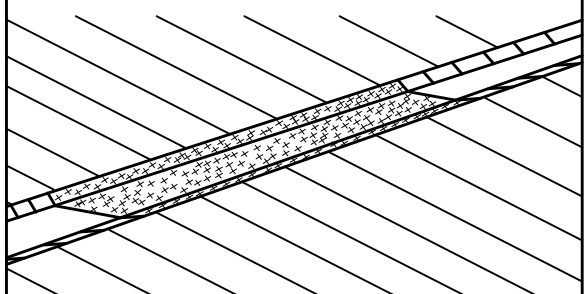
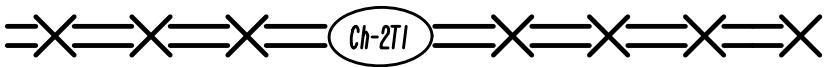
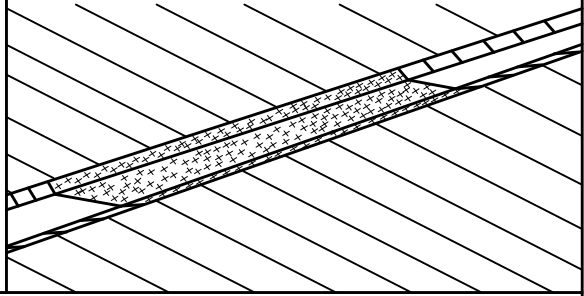
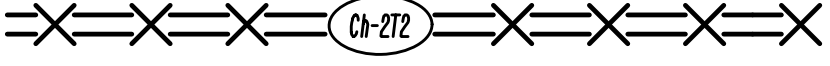
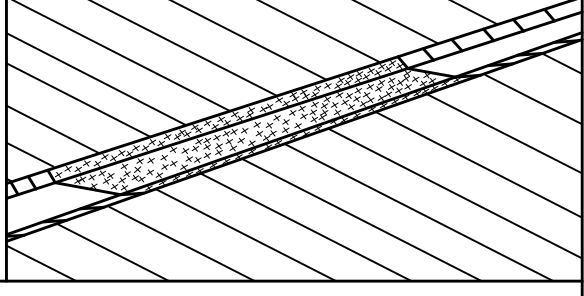
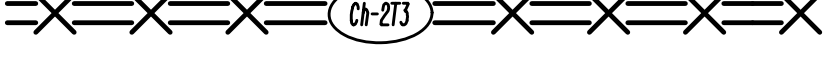
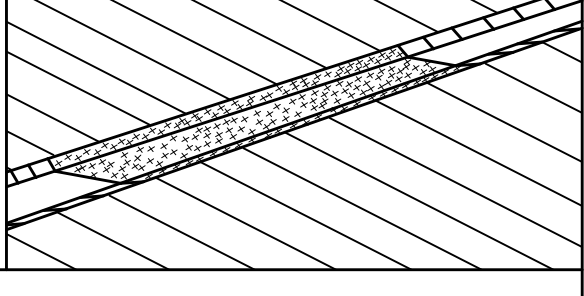
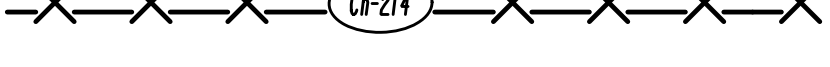
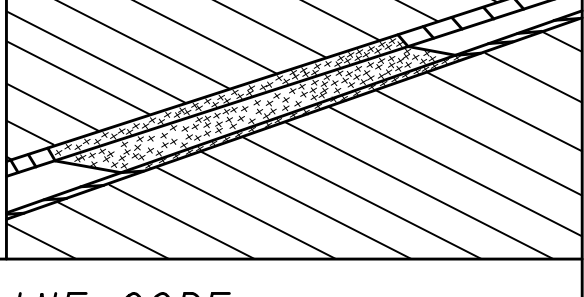
CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ss	SLOPE STABILIZATION CONSTRUCTION DETAIL D-35 SECTION 716		SLOPE STABILIZATION (EROSION CONTROL MATTING) IS A PROTECTIVE COVERING USED TO PREVENT EROSION AND ESTABLISH TEMPORARY OR PERMANENT VEGETATION ON STEEP SLOPES, SHORE LINES, OR CHANNELS. 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.
	PATTERN 		
Tac	TACKIFIERS SECTION 163, 700, 895		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.
	SYMBOL  POLYACRYLAMIDE		
Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL D-24D SECTION 171		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.
	SYMBOL 		
Cd-Fs	COMPOST FILTER SOCK CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163		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.
	SYMBOL 		
Cd-Hb	BALED STRAW CHECK DAM CONSTRUCTION DETAIL D-52 SECTION 163		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 SPLASHPAD. 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.
	SYMBOL 		

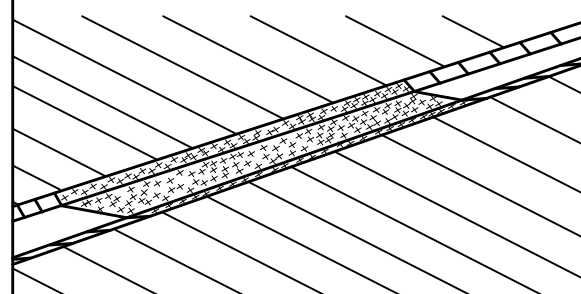
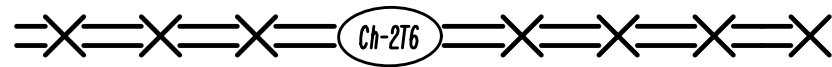
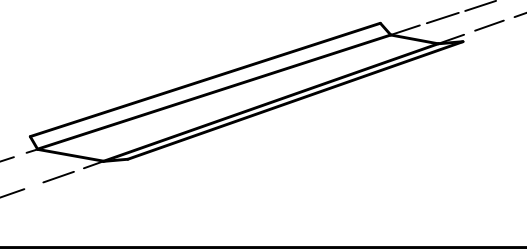
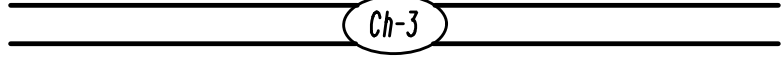
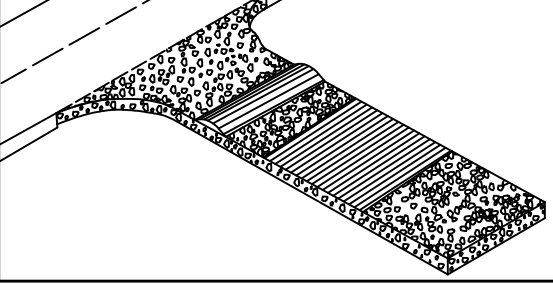
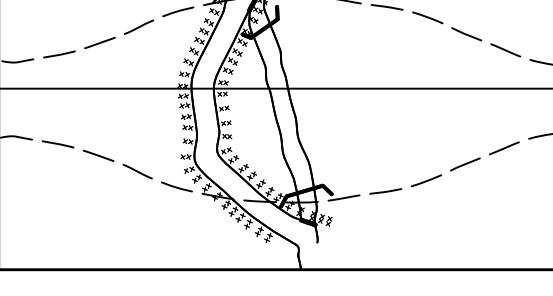
CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Cd-S	STONE CHECK DAM OR SANDBAG CHECK DAM CONSTRUCTION DETAIL D-56 SECTION 163, 603		STONE CHECK DAMS ARE CONSTRUCTED OF TYPE-3 RIP-RAP WITH GEOTEXTILE UNDERLINER. STONE CHECK DAMS ARE PREFERRED IN ROADWAY DITCHES OUTSIDE THE CLEAR ZONE. CONSIDERATION 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.
	SYMBOL 		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-I	VEGETATED CHANNEL STABILIZATION SECTION 700		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.
	LINE CODE 		
Ch-2R1	CHANNEL STABILIZATION RIP-RAP, TYPE 1 CONSTRUCTION DETAIL D-49 SECTION 603		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.
	LINE CODE 		"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		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.
	LINE CODE 		"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

NOTE:

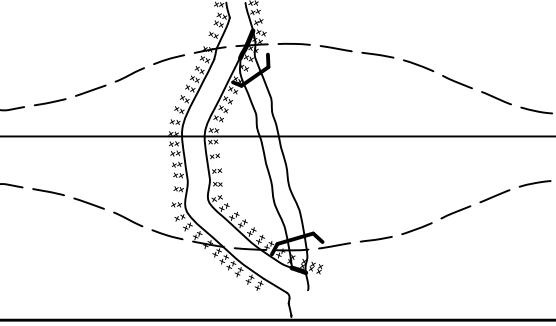
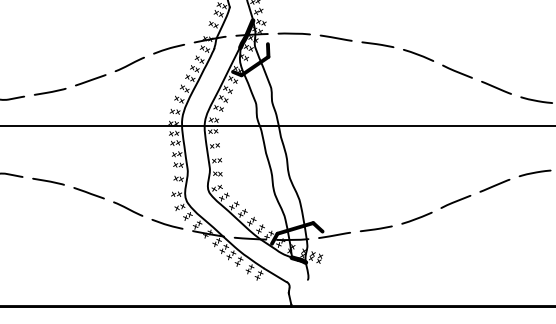
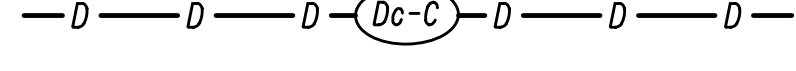
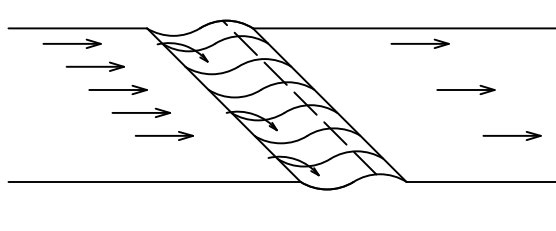
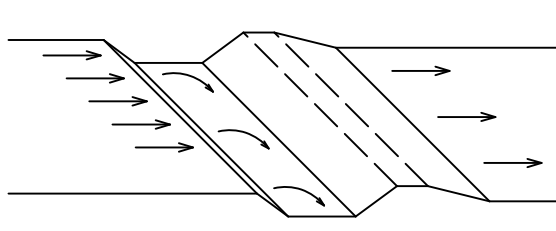
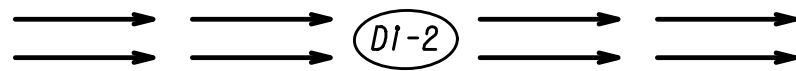
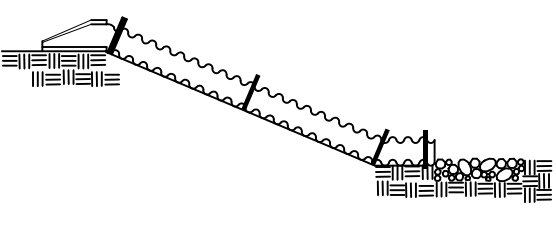
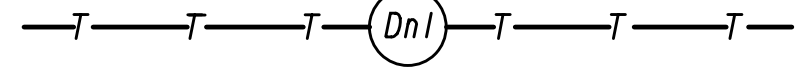
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S,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

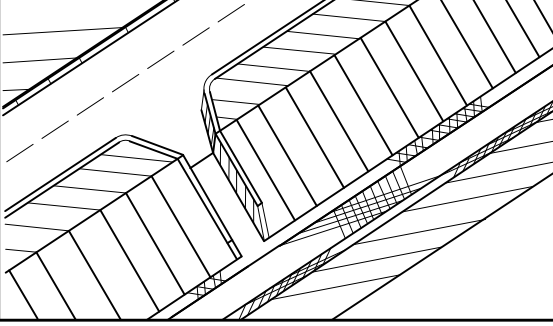
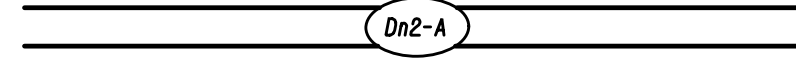
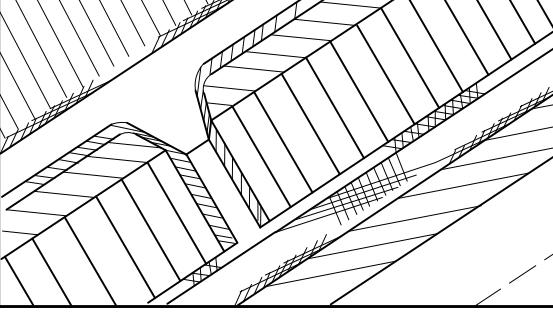
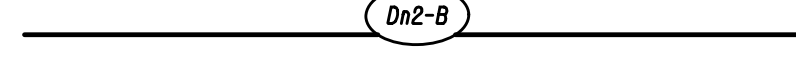
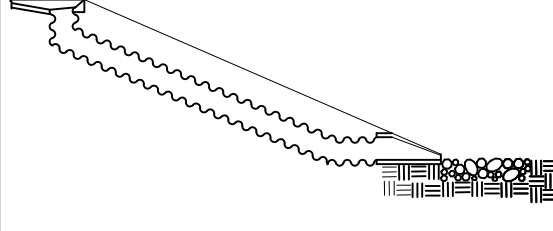
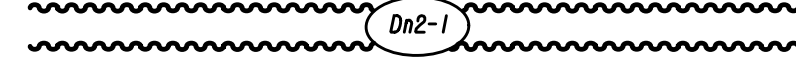
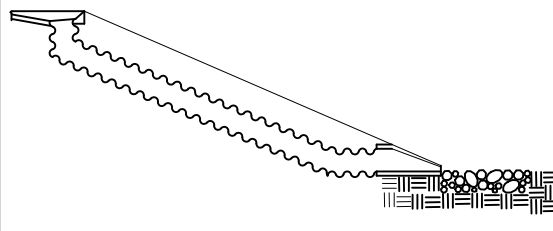
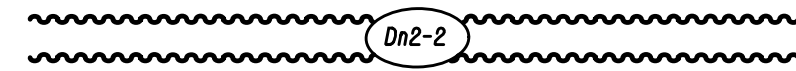
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				3/2/2017			UNIFORM CODE SHEET SHEET 2 OF 7				
				11/28/2018							
							CHECKED:	D. EAGLETON	DATE:	01/01/16	DRAWING No. 52-0002
							BACKCHECKED:		DATE:		
							CORRECTED:		DATE:		
			VERIFIED:		DATE:						

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T1	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		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.
	LINE CODE		"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		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.
	LINE CODE		"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		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.
	LINE CODE		"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		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.
	LINE CODE		"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		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.
	LINE CODE		"Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS AND IN THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

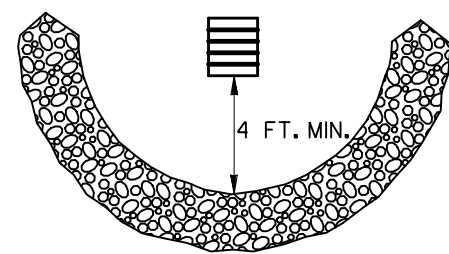
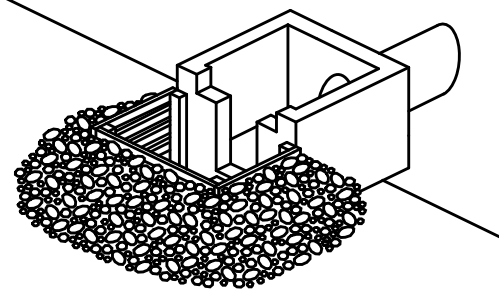
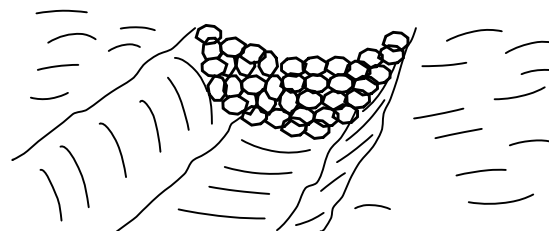
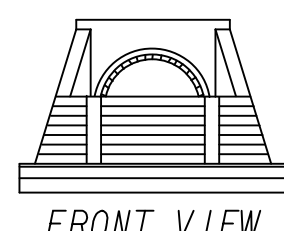
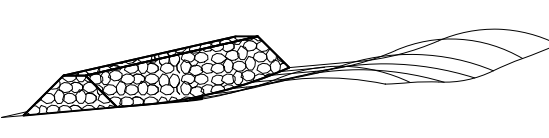
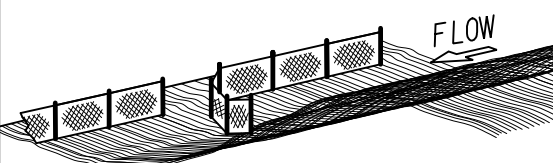
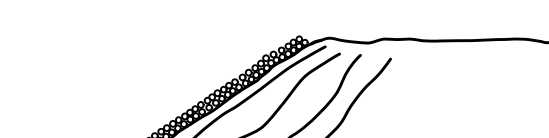
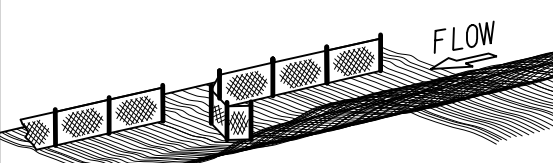
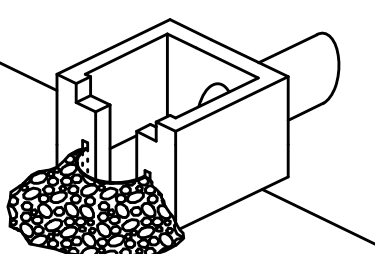
CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Ch-2T6	TURF REINFORCEMENT MAT (TRM) CONSTRUCTION DETAIL D-35 SECTION 711		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN CONJUNCTION WITH PERMANENT VEGETATION IN CHANNELS TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE 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.
	LINE CODE		"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		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.
	LINE CODE		"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		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.
	SYMBOL		ALL CONSTRUCTION EXIT REQUIREMENTS ARE INCLUDED IN THE PRICE OF THE CONSTRUCTION EXIT.
Dc-A	STREAM DIVERSION CHANNEL GEOTEXTILE, POLYETHYLENE FILM 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 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.
	LINE CODE		THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.

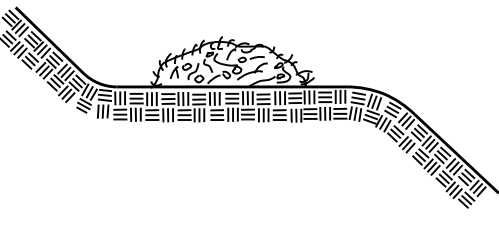
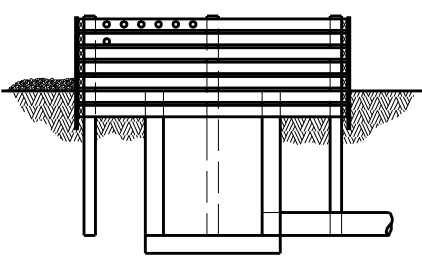
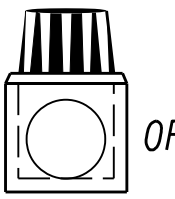
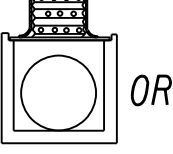
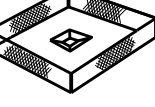
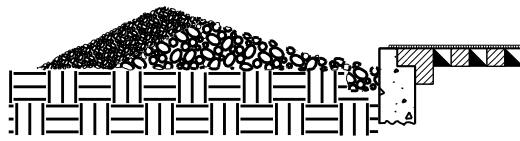
- NOTE:
- DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
 - FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S,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

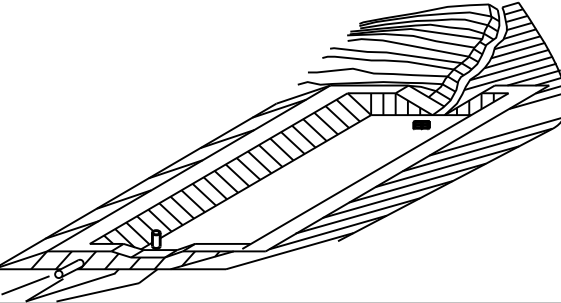
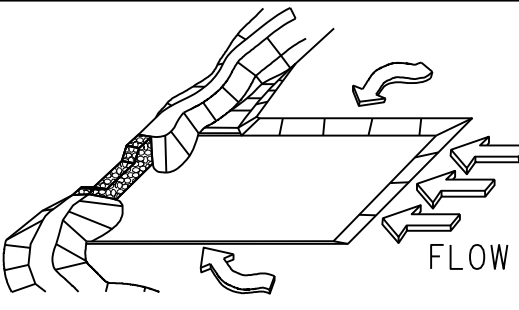
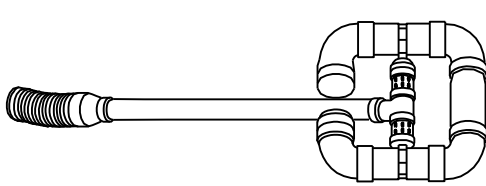
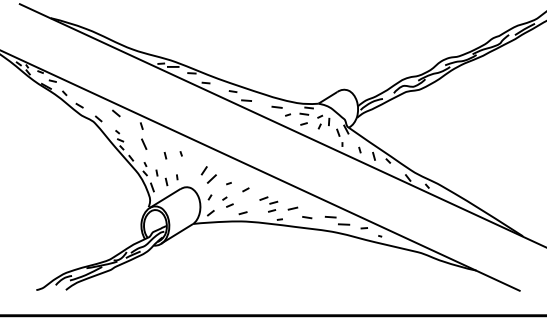
CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Dc-B	STREAM DIVERSION CHANNEL GEOTEXTILE ONLY		A TEMPORARY CHANNEL CONSTRUCTED TO CONVEY FLOW AROUND A CONSTRUCTION SITE WHILE A PERMANENT DRAINAGE STRUCTURE IS BEING CONSTRUCTED IN A NATURAL STREAM. THIS IS A MEASURE USED TO PROTECT STREAM BEDS 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.
	SECTION 163	LINE CODE 	THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
Dc-C	STREAM DIVERSION CHANNEL RIP-RAP & GEOTEXTILE		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.
	SECTION 163	LINE CODE 	THE DRAINAGE AREA SHALL BE NOT GREATER THAN 1 SQUARE MILE. CONSTRUCTION OF THE DIVERSION CHANNEL IS INCLUDED IN THE COST OF THE STRUCTURE.
D1-1	DIVERSION BERM		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.
	CONSTRUCTION DETAIL D-47 SECTION 205	LINE CODE 	
D1-2	DIVERSION CHANNEL		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.
	SECTION 205	LINE CODE 	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.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE FLEXIBLE		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'.
	CONSTRUCTION DETAIL D-19 SECTION 163	LINE CODE 	THE OUTLET AREA SHALL BE STABILIZED FOR VELOCITY DISSIPATION AND EROSION CONTROL.

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-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 	
Dn2-1	PERMANENT DOWNDRAIN STRUCTURE GA. STD 9013 TPI, 9017J TPI, DETAIL D-26 TPI 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 	
Dn2-2	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 	

- NOTE:
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 - 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".

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		CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION		CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION			
		Fr	FILTER RING CONSTRUCTION DETAIL D-46 SECTION 163		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.		Rt-B	RETROFITTING SLOTTED BOARD DAM CONSTRUCTION DETAIL D-45 SECTION 163		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.			
				SYMBOL Fr					SYMBOL Rt-B				
		Rd	ROCK FILTER DAM CONSTRUCTION DETAIL D-43 SECTION 163, 603		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.		Rt-Sg1 Rt-Sg2 Rt-Sg3	RETROFITTING SILT CONTROL GATES CONSTRUCTION DETAIL D-20 SECTION 163		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			
				SYMBOL Rd					SYMBOL Rt-Sg1 Rt-Sg2 Rt-Sg3				
		Rd-B	STONE FILTER BERM CONSTRUCTION DETAIL D-50 SECTION 163, 603		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.		SdI-NS	SEDIMENT BARRIER (NON-SENSITIVE) SILT FENCE TYPE A CONSTRUCTION DETAIL D-24 SECTION 171		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.			
				LINE CODE Rd-B					LINE CODE A A A SdI-NS A A A				
		Rp	RIP-RAP SECTION 603		RIP-RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND BRIDGE END ROLLS. RIP-RAP TYPE-1 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.		SdI-S	SEDIMENT BARRIER (SENSITIVE) SILT FENCE TYPE C CONSTRUCTION DETAIL D-24 SECTION 171		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.			
				PATTERN Rp					LINE CODE C C C SdI-S C C C				
		Rt-P	RETROFITTING PERFORATED HALF-ROUND PIPE CONSTRUCTION DETAIL D-44 SECTION 163		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.								
				SYMBOL Rt-P									

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd1-BB	SEDIMENT BARRIER BRUSH BARRIER CONSTRUCTION DETAIL D-24B SECTION 201		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.
	LINE CODE * * * Sd1-BB * * *		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		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.
	SYMBOL Sd2-B		
Sd2-Bg	INLET SEDIMENT TRAP (BLOCK & GRAVEL) CONSTRUCTION DETAIL D-42 SECTION 163		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.
	SYMBOL Sd2-Bg		
Sd2-F	INLET SEDIMENT TRAP (FILTER FABRIC) CONSTRUCTION DETAIL D-24C SECTION 163	   (a) OR (b) OR (c)	(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%.
	SYMBOL Sd2-F		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		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.
	SYMBOL Sd2-G		

CODE	PRACTICE STD OR DETAIL SPEC. SECT.	DETAIL	DESCRIPTION
Sd3	TEMPORARY SEDIMENT BASIN CONSTRUCTION DETAIL D-22A, D-22B SECTION 163		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.
	SYMBOL Sd3		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		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.
	SYMBOL Sd4-C		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		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.
	SYMBOL Sk		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		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.
	SYMBOL Sr		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:

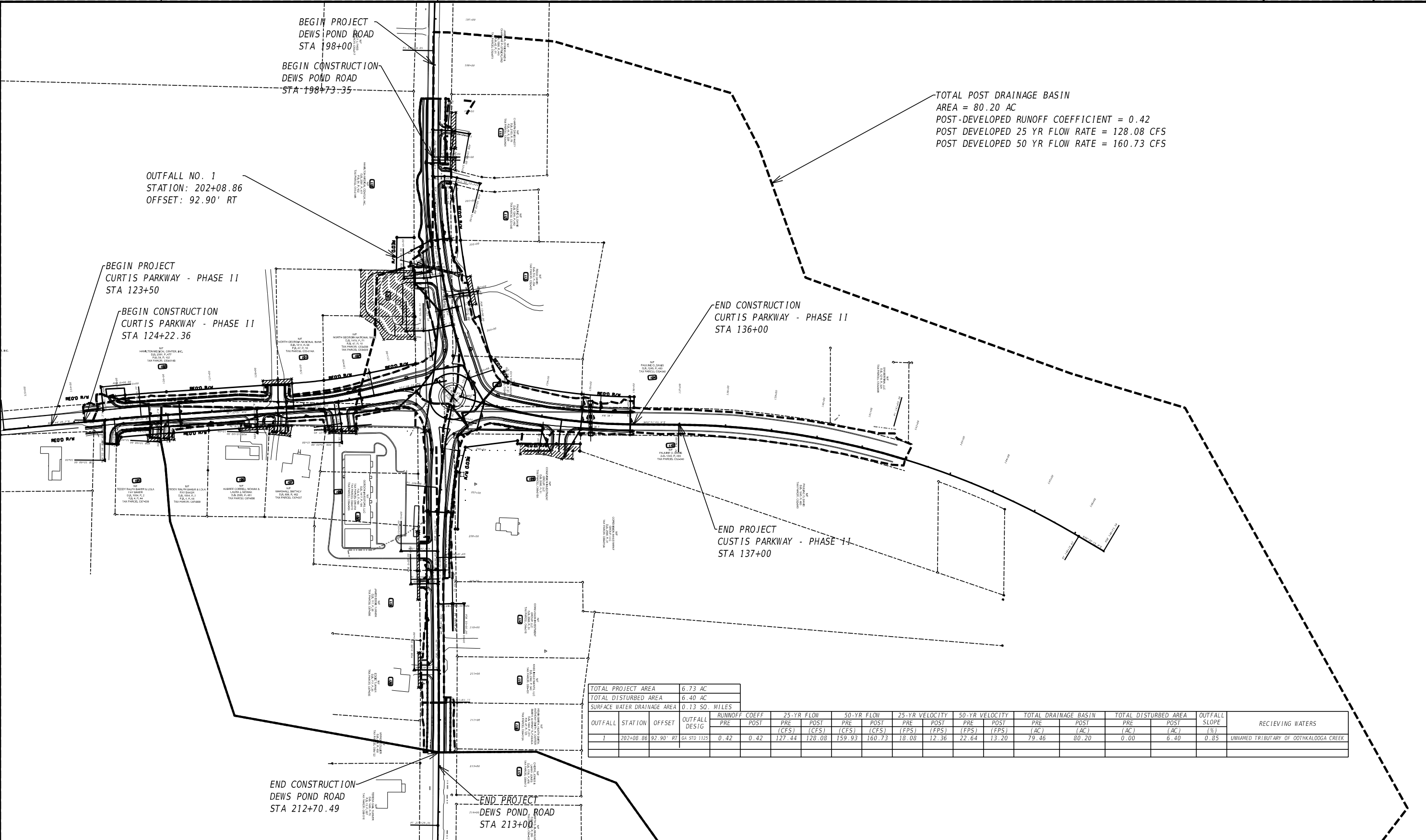
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.
2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs), REFER TO THE LATEST EDITION OF THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION'S,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

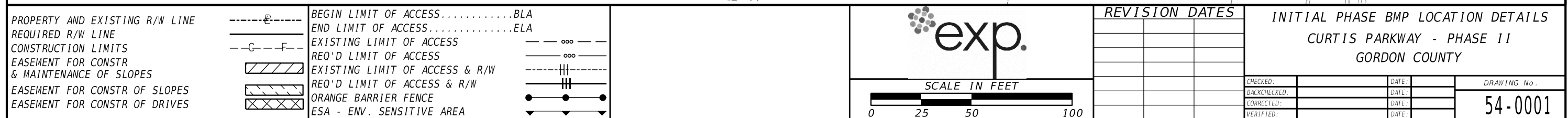
<i>CODE</i>	<i>PRACTICE STD OR DETAIL SPEC. SECT.</i>	<i>DETAIL</i>	<i>DESCRIPTION</i>

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".



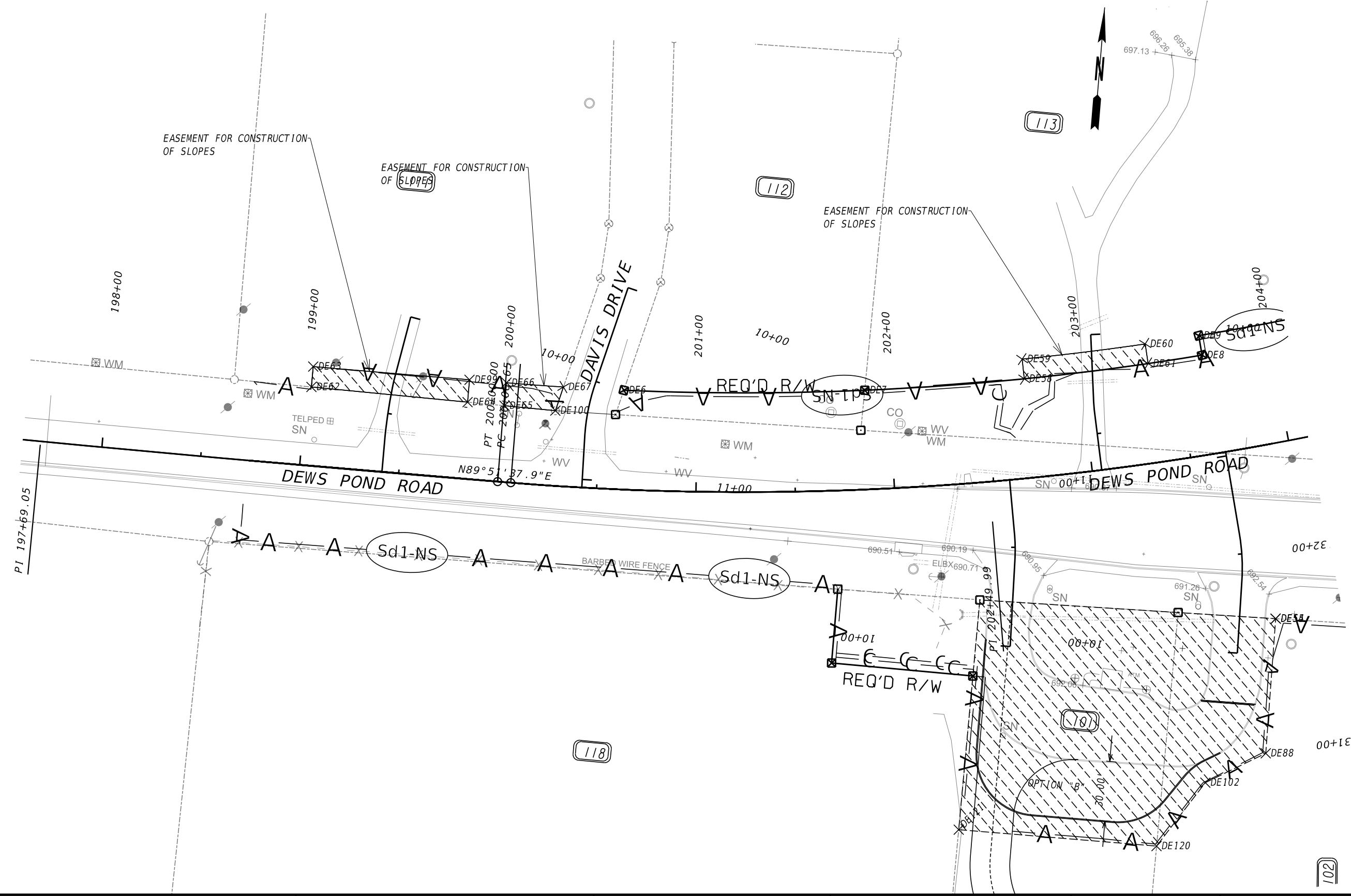
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REVISION DATES			INITIAL PHASE BMP LOCATION DETAILS			
			CURTIS PARKWAY - PHASE II			
			GORDON COUNTY			
			CHECKED:		DATE:	DRAWING No. 54-0002
			BACKCHECKED:		DATE:	
			CORRECTED:		DATE:	
			VERIFIED:		DATE:	



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

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

SCALE IN FEET

REVISION DATES

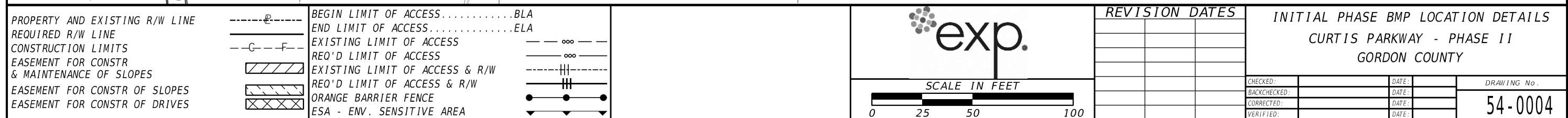
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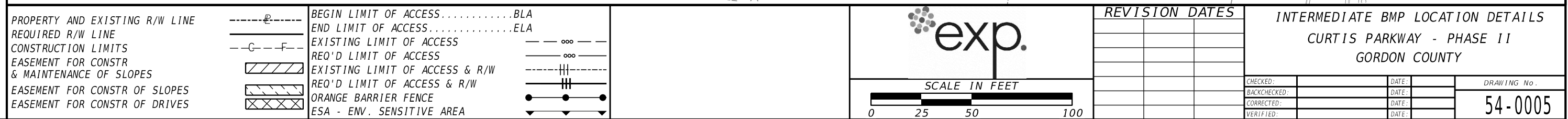
CURTIS PARKWAY - PHASE II

GORDON COUNTY

CHECKED:		DATE:	
BACKCHECKED:		DATE:	
CORRECTED:		DATE:	
VERIFIED:		DATE:	

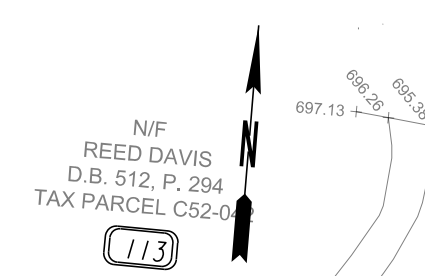
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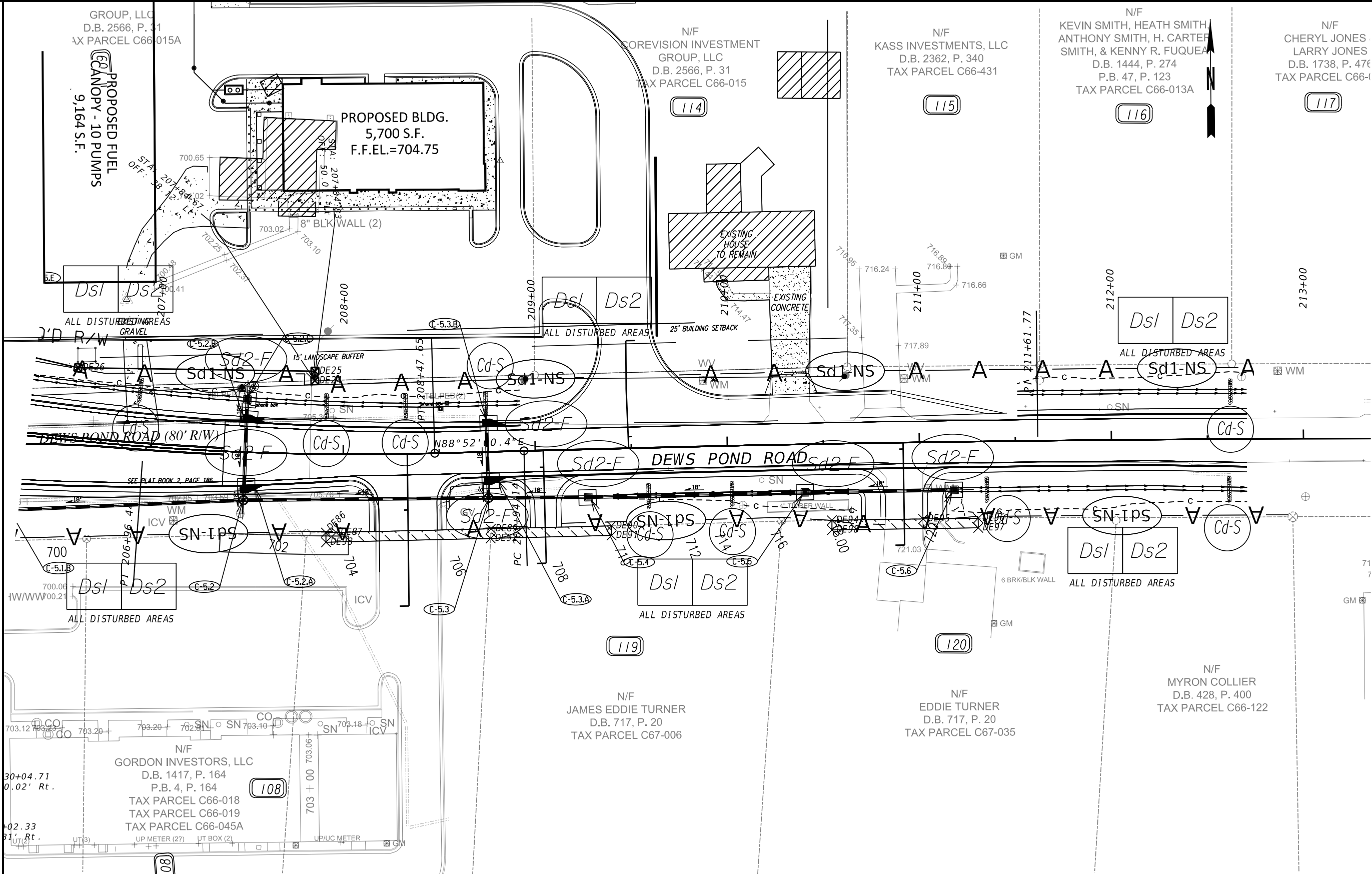




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BACKCHECKED:		DATE:		
CORRECTED:		DATE:		
VERIFIED:		DATE:		



REVISION DATES			INTERMEDIATE BMP LOCATION DETAILS			
			CURTIS PARKWAY - PHASE II			
			GORDON COUNTY			
			CHECKED:		DATE:	
			BACKCHECKED:		DATE:	
			CORRECTED:		DATE:	
			VERIFIED:		DATE:	
						DRAWING No. 54-0007



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

EXISTING LIMIT OF ACCESS

REQ'D LIMIT OF ACCESS

EXISTING LIMIT OF ACCESS & R/W

REQ'D LIMIT OF ACCESS & R/W

ORANGE BARRIER FENCE

ESA - ENV. SENSITIVE AREA

SCALE IN FEET

REVISION DATES

NO.	DATE	DESCRIPTION

INTERMEDIATE BMP LOCATION DETAILS

CURTIS PARKWAY - PHASE II

GORDON COUNTY

CHECKED:

BACKCHECKED:

CORRECTED:

VERIFIED:

DATE:

DATE:

DATE:

DATE:

DRAWING No.

54-0008

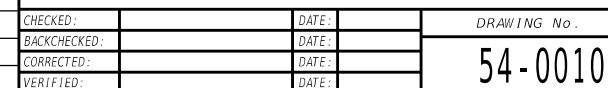


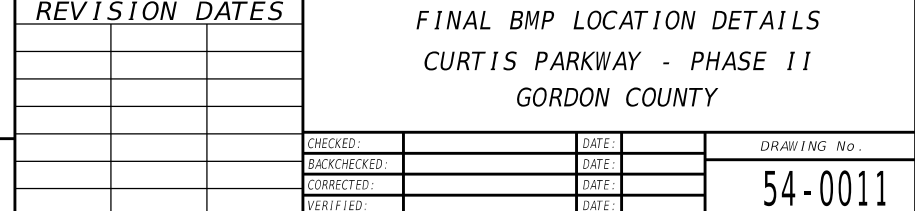
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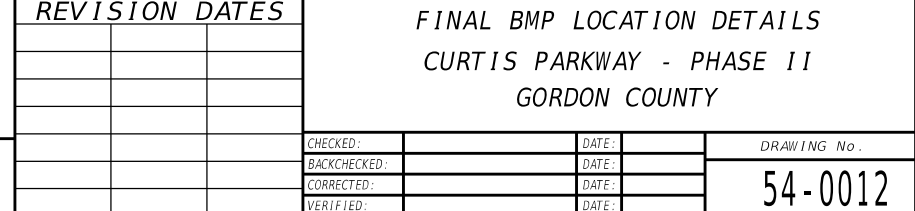
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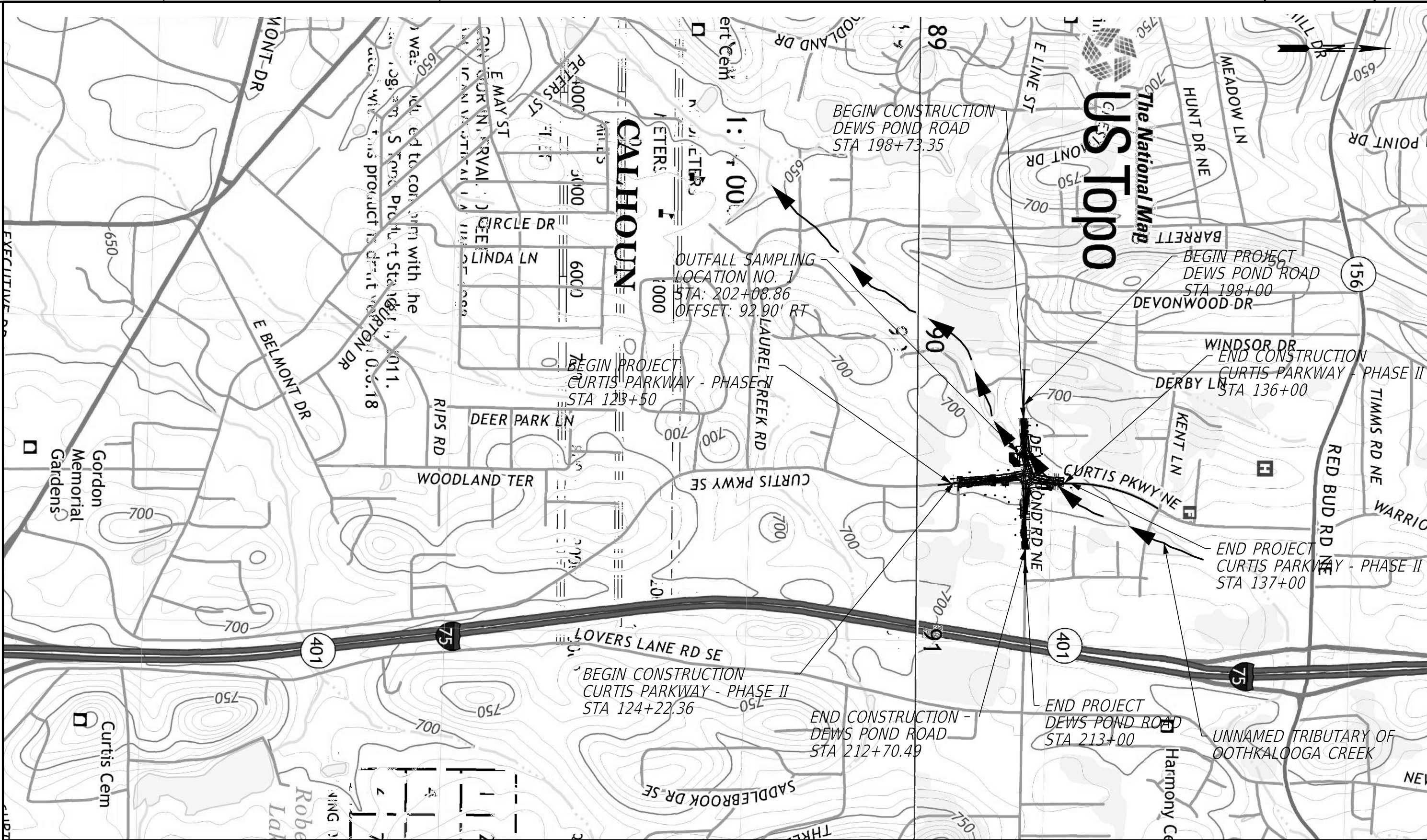
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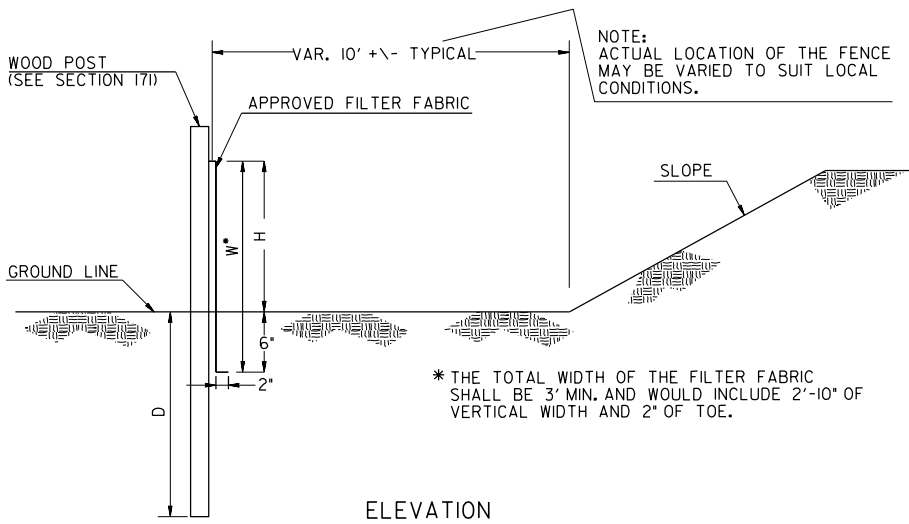
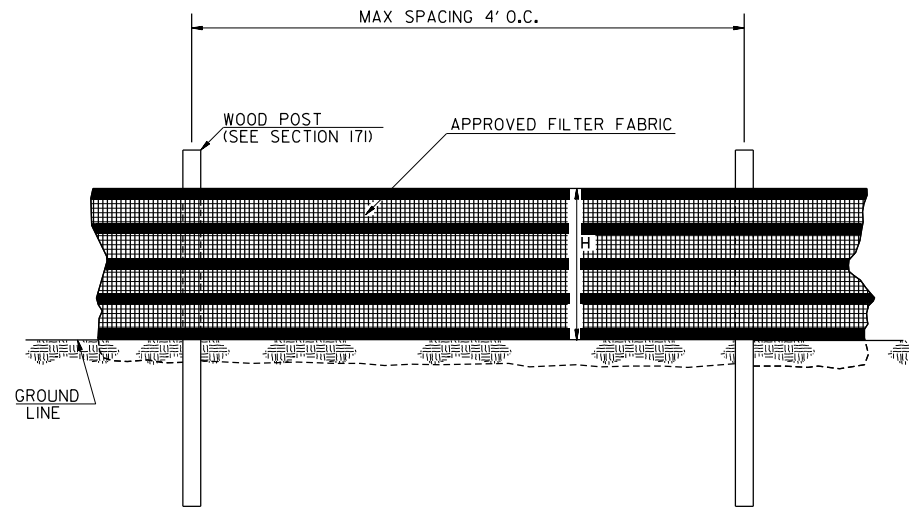
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			BACKCHECKED:		DATE:		
			CORRECTED:		DATE:		
			VERIFIED:		DATE:		



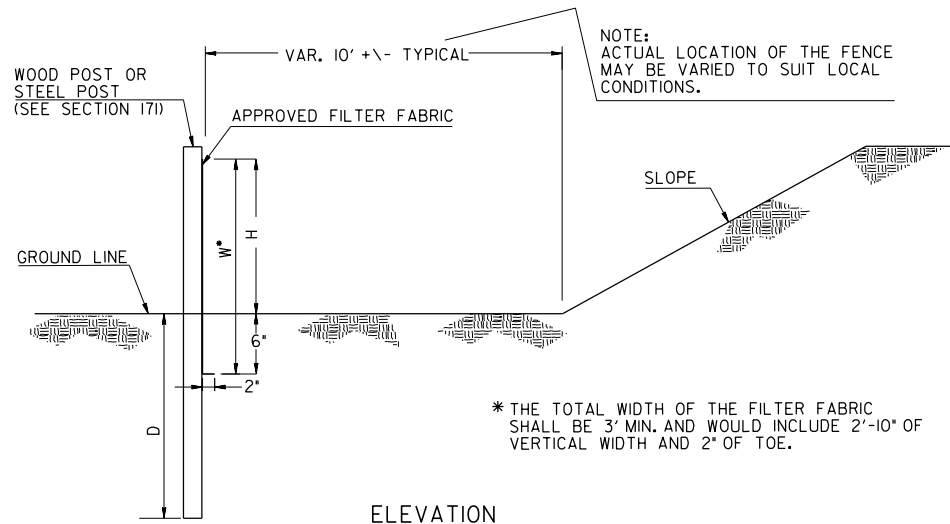
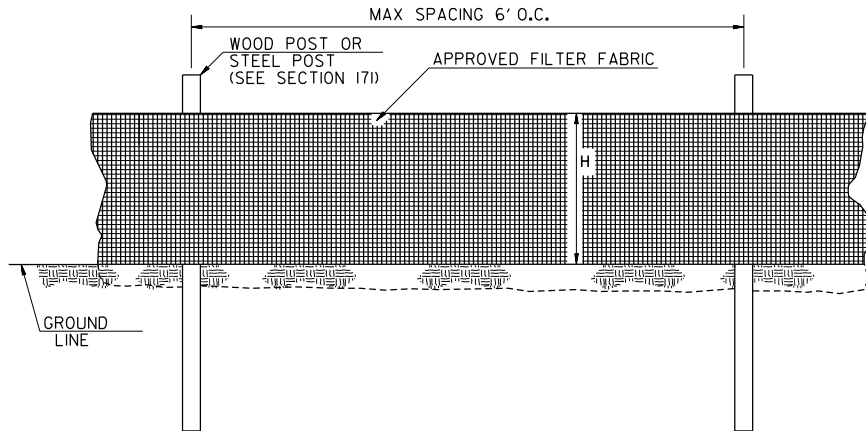




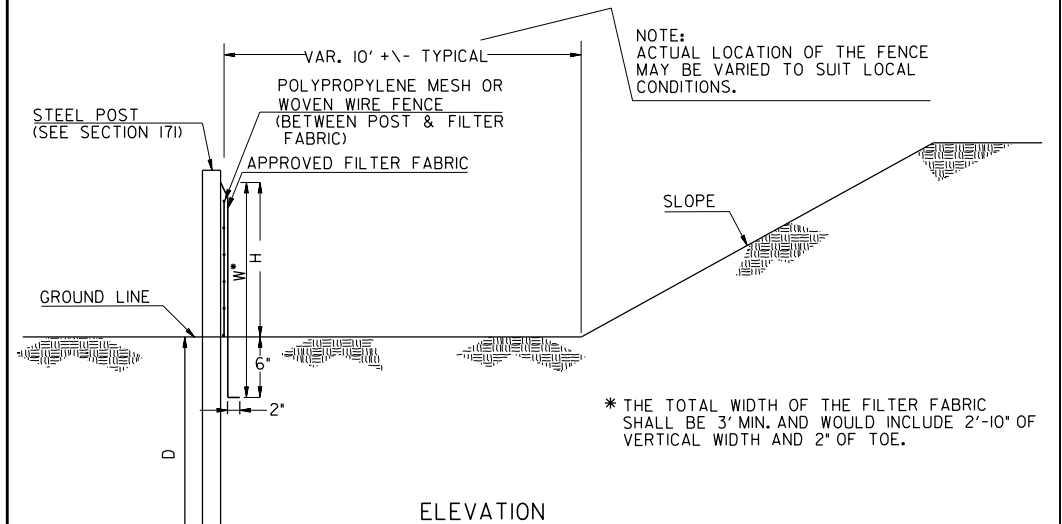
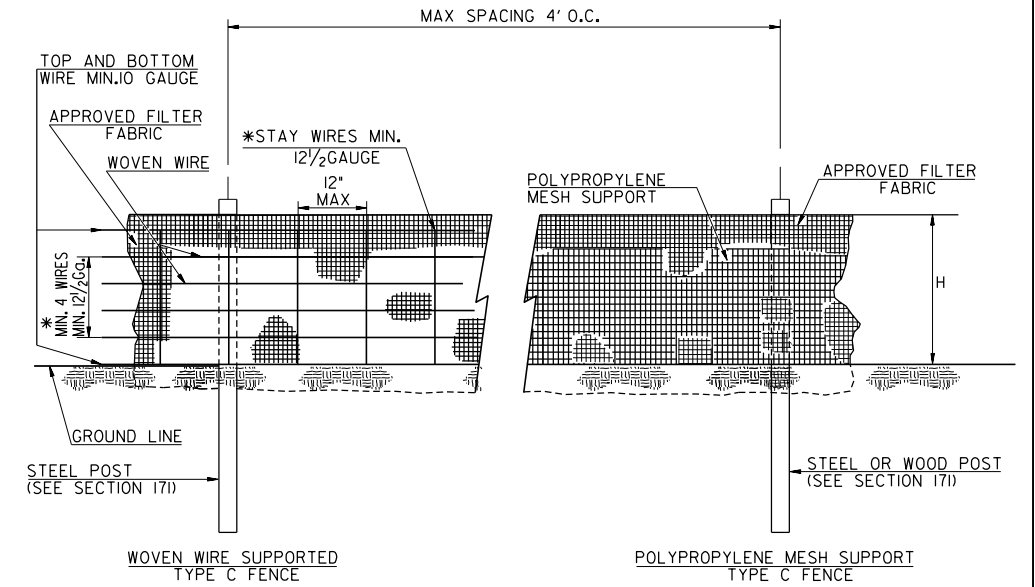




SINGLE ROW TYPE C SILT FENCE WITH HIGH TENSILE
POLYPROPYLENE INTEGRATED SUPPORT WOVEN FABRIC



SINGLE ROW TYPE A SILT FENCE



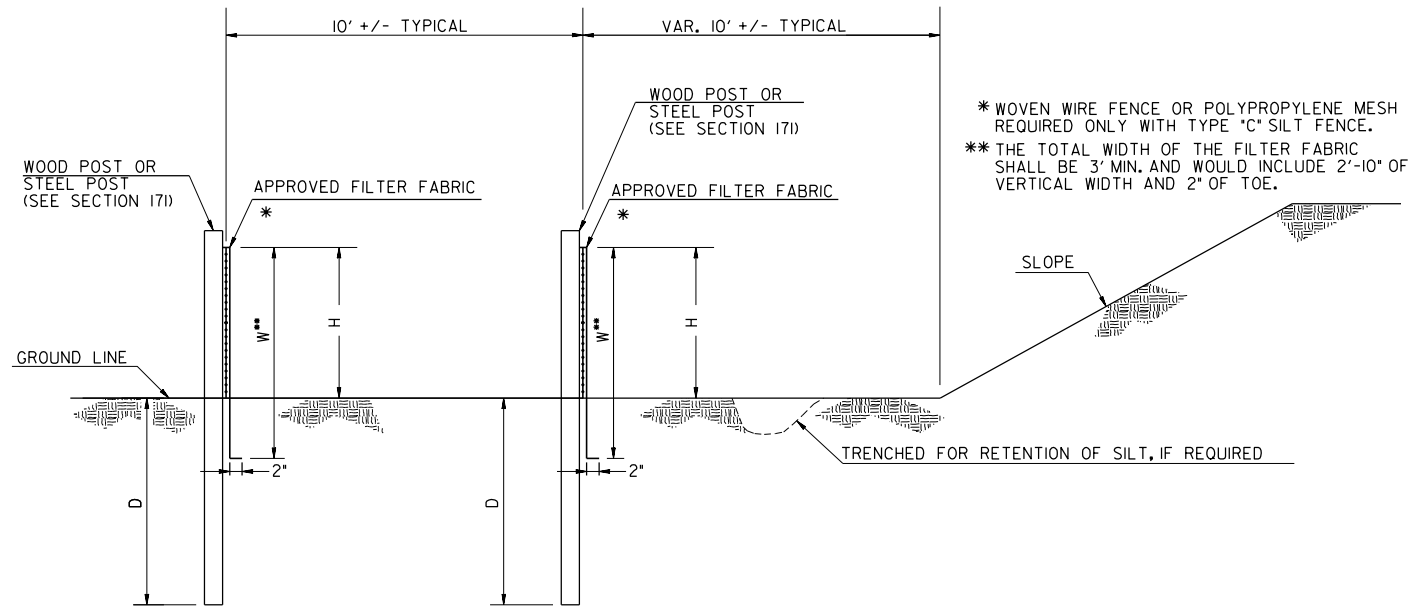
SINGLE ROW TYPE C SILT FENCE WITH WOVEN WIRE SUPPORT
OR POLYPROPYLENE MESH SUPPORT

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-240.

NOTES:

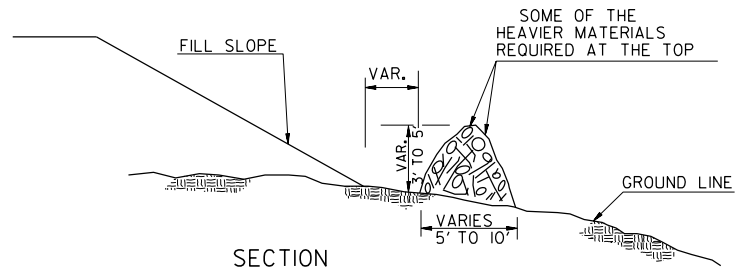
1. WIRE STAPLES SHALL BE AT LEAST 17 GAUGE, WITH LEGS AT LEAST $\frac{1}{2}$ INCHES LONG AND A CROWN AT LEAST $\frac{3}{4}$ INCHES WIDE. NAILS SHALL BE AT LEAST 14 GAUGE, 1 INCH LONG, WITH BUTTON HEADS AT LEAST $\frac{3}{4}$ INCHES WIDE.
2. SEE SECTION 171 FOR PLACEMENT OF NAILS OR STAPLES FOR TYPE A AND TYPE C FENCES.
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 12 $\frac{1}{2}$ 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 OF APPROVED SILT FENCE FABRIC.
8. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.

		09-2022	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		ADDED HIGH TENSILE POLYPROPYLENE INTEGRATED FABRIC	REVISION	CONSTRUCTION DETAIL TEMPORARY SILT FENCE	
	AL	BY	JANUARY 2011 NO SCALE		NUMBER D-24A 1 OF 4



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.

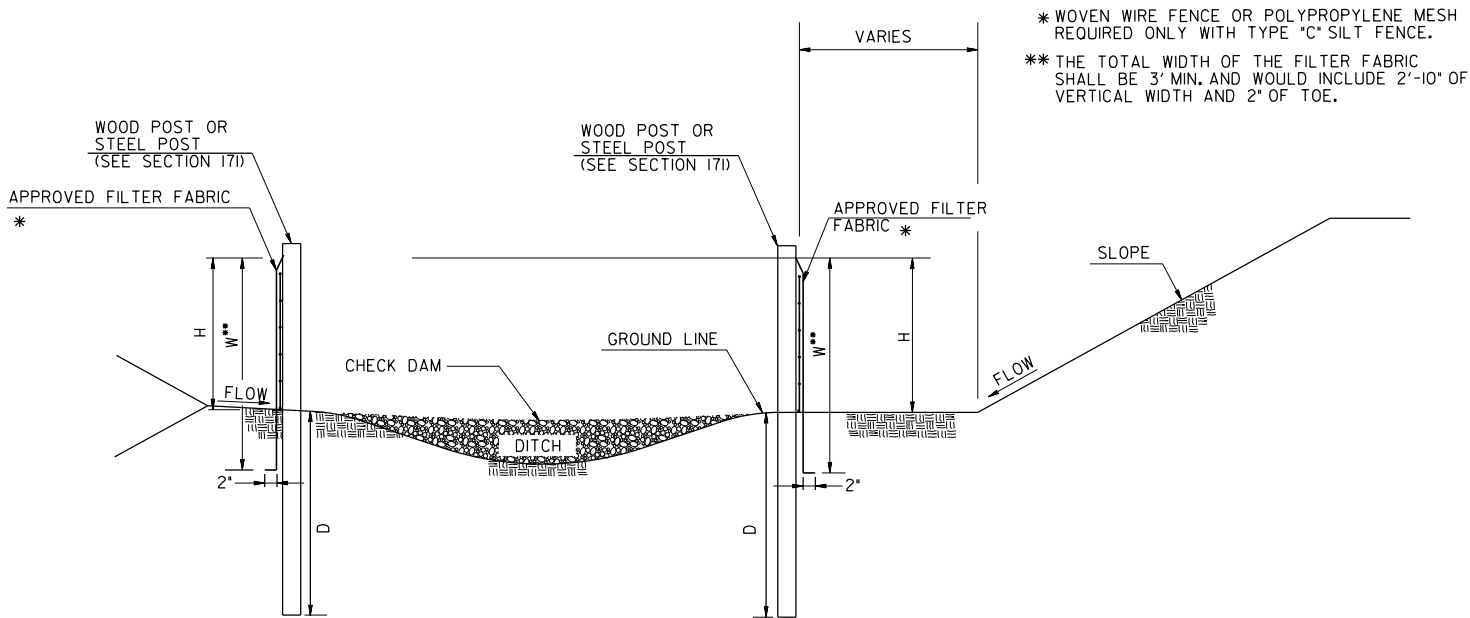


NOTE: INTERMINGLE BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM.

FRONT VIEW

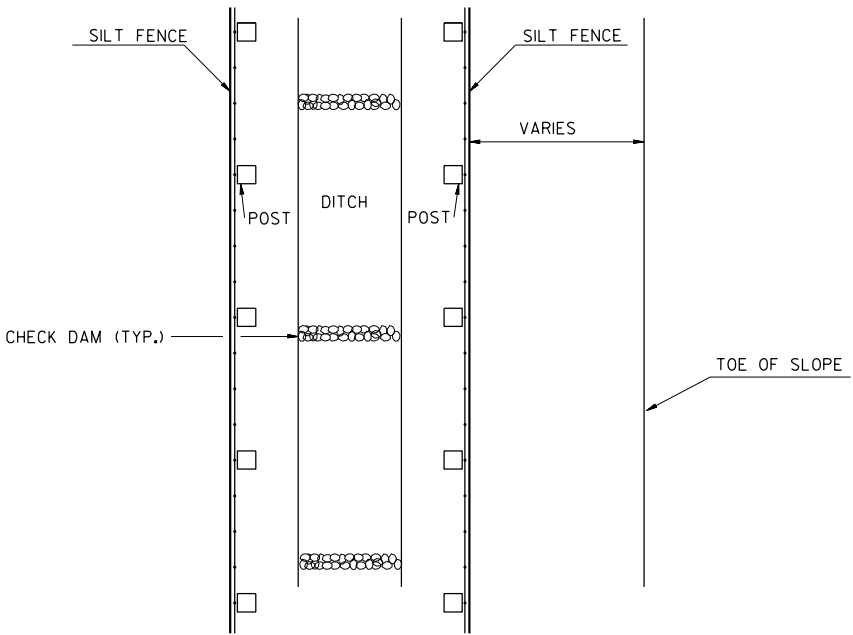
NOTE: BRUSH BARRIER(S) WILL BE INCLUDED IN PAYMENT FOR CLEARING & GRUBBING.

BRUSH BARRIER DETAILS
(FOR USE IN RURAL AREAS)



ELEVATION

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.

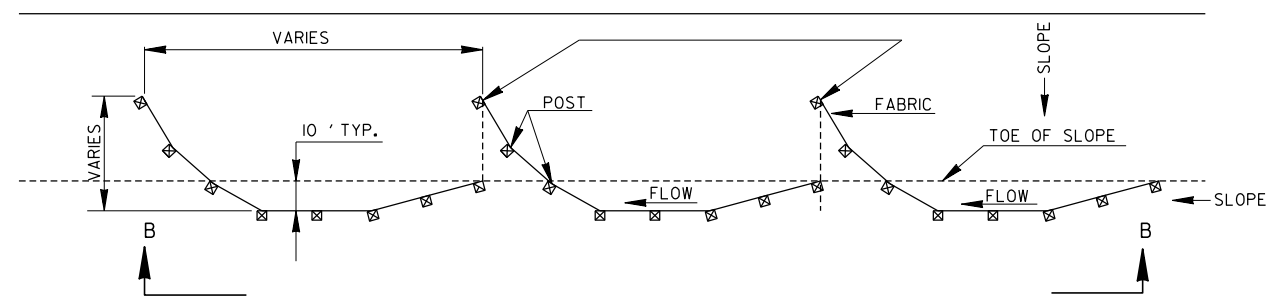
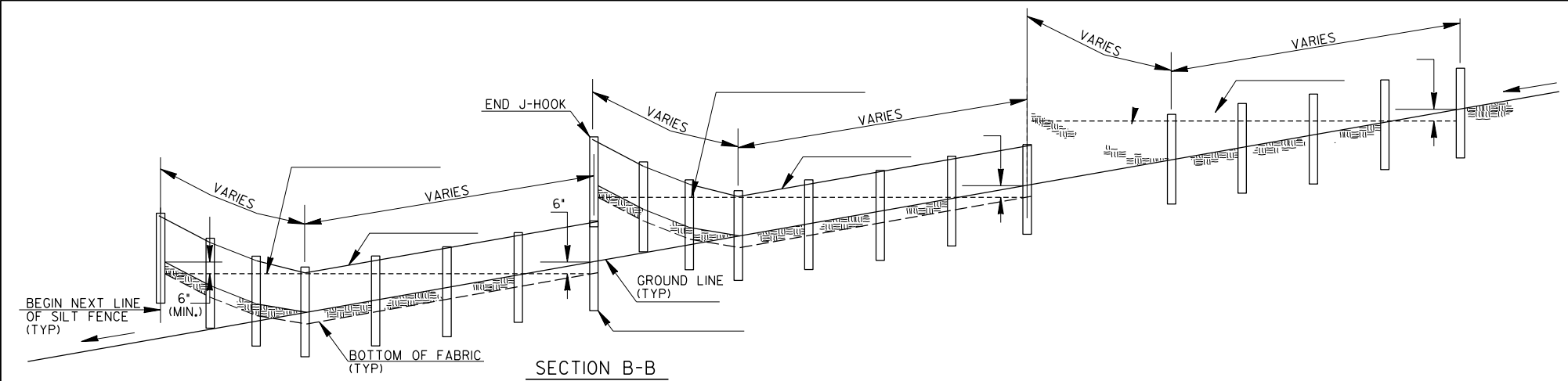


PLAN

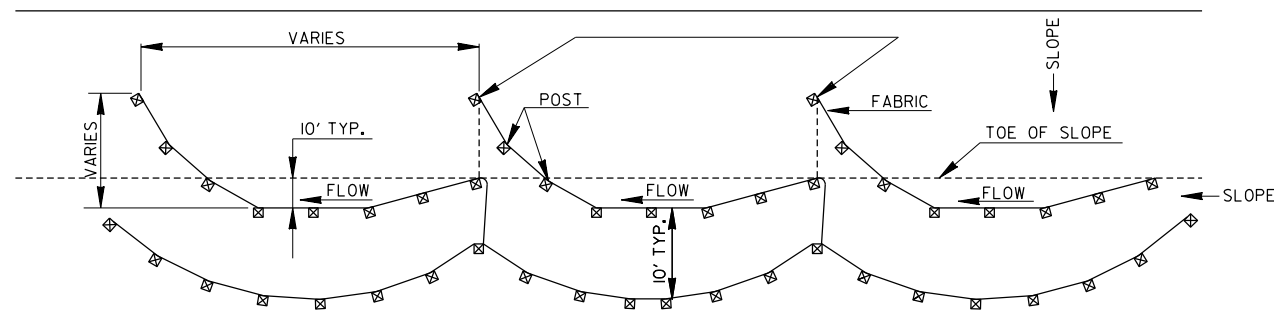
NOTE: TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.

SILT FENCE
PERIMETER INSTALLATION ALONG DITCH SECTION

09-2022		DATE		DEPARTMENT OF TRANSPORTATION	
				STATE OF GEORGIA	
FABRIC WIDTH CLARIFICATION		REVISION		CONSTRUCTION DETAILS	
				TEMPORARY SILT FENCE	
				BERM DITCH, INSTALLATION, BRUSH BARRIER	
BAS		BY		REV. AND REDRAWN JAN. 2011	
				NO SCALE	
				NUMBER	
				D-24B	
				(SHEET 2 OF 4)	



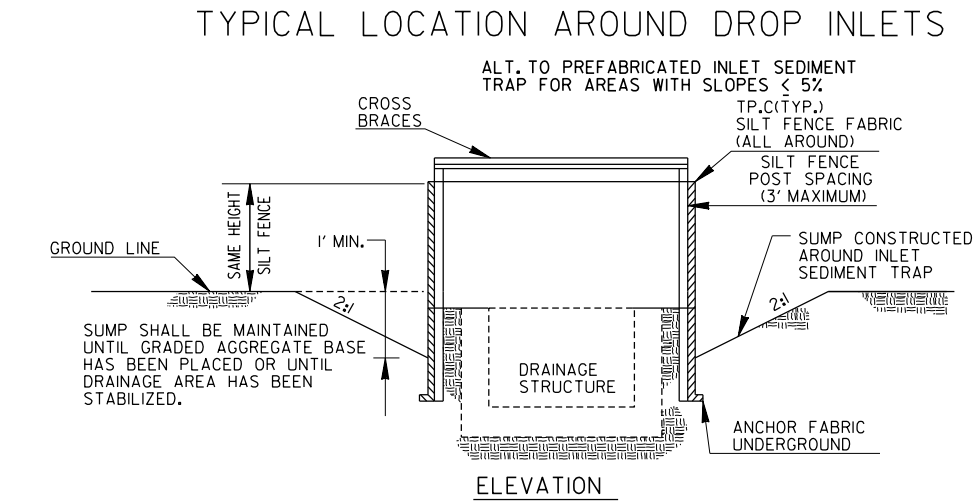
PLAN
SINGLE ROW SILT FENCE



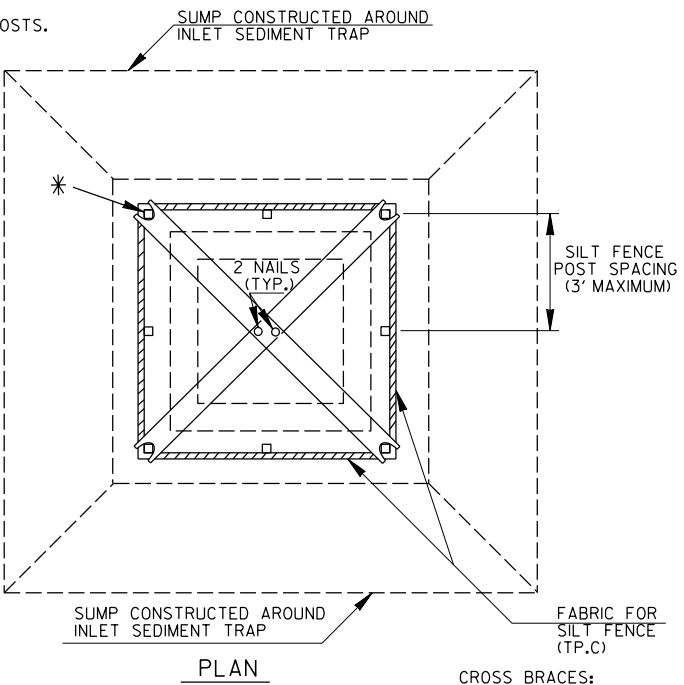
PLAN
DOUBLE ROW SILT FENCE

TYPICAL J HOOK SPACING		
SLOPE PERCENT	TYPE OF SILT FENCE	MINIMUM SPACING (FEET)
1% TO 2%	TYPE A OR TYPE C	100' ±
2% TO 3%	TYPE A OR TYPE C	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 UNLESS PERMITTED.



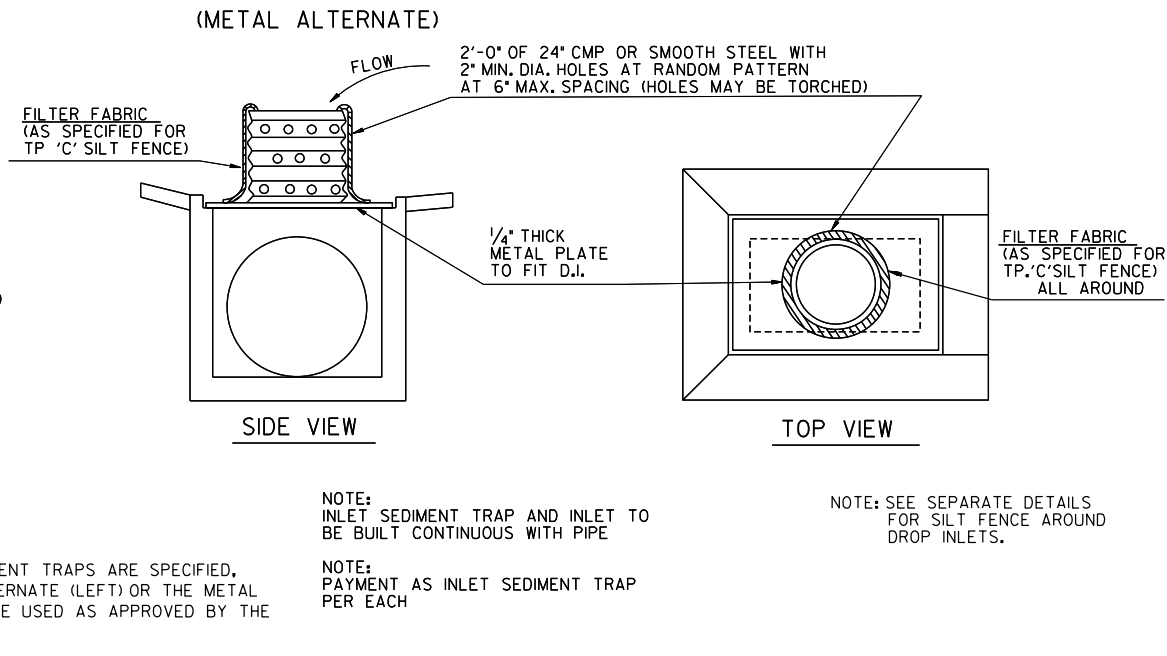
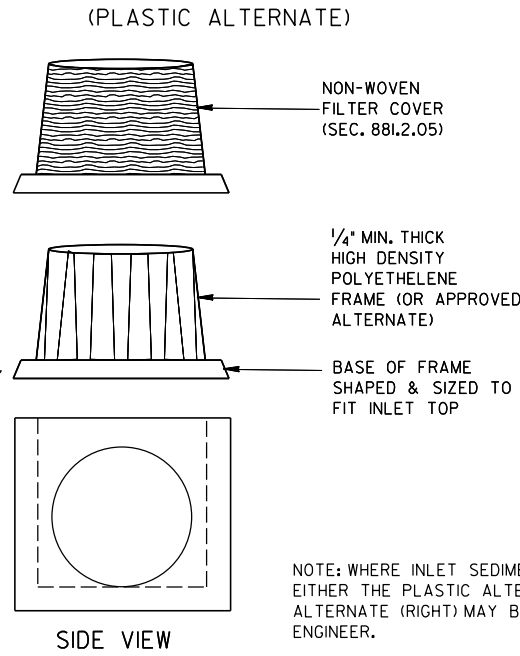
* CROSS BRACING REQUIRED WHEN USING "ALTERNATE" TYPE C PRODUCTS WHICH USE WOOD POSTS.



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.

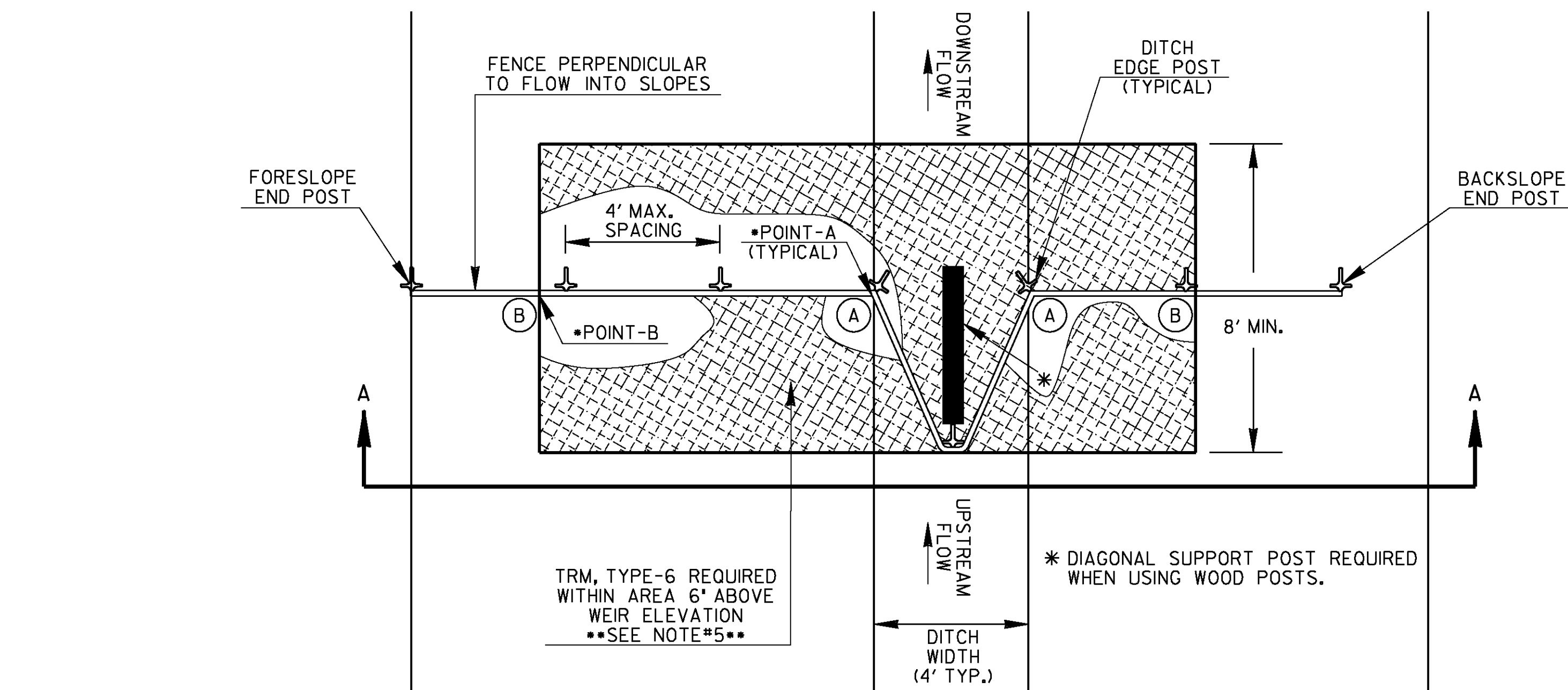
NOTE:
THE DRAINAGE AREA ENTERING THE INLET SEDIMENT TRAP SHALL BE NO GREATER THAN ONE ACRE.
TYPICAL CONSTRUCTION SEQUENCE FOR INLET SEDIMENT TRAP ALTERNATE
1. EXCAVATE APPROXIMATELY 4" TO 6" BELOW THE TOP OF THE INLET STRUCTURE.
2. PLACE THE FRAME ONTO THE INLET STRUCTURE, ENSURING PROPER SEATING OF 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.



NOTE:
INLET SEDIMENT TRAP AND INLET TO BE BUILT CONTINUOUS WITH PIPE
NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH

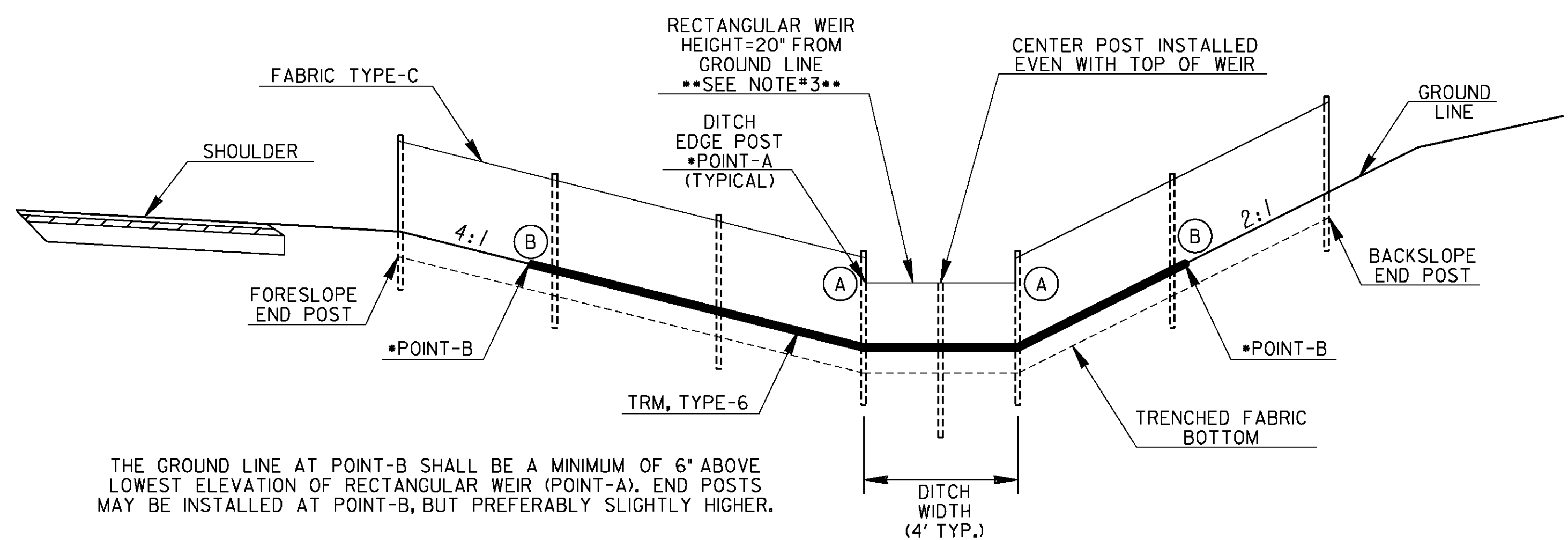
NOTE: SEE SEPARATE DETAILS FOR SILT FENCE AROUND DROP INLETS.

INLET SEDIMENT TRAP - FOR DROP INLETS



PLAN VIEW

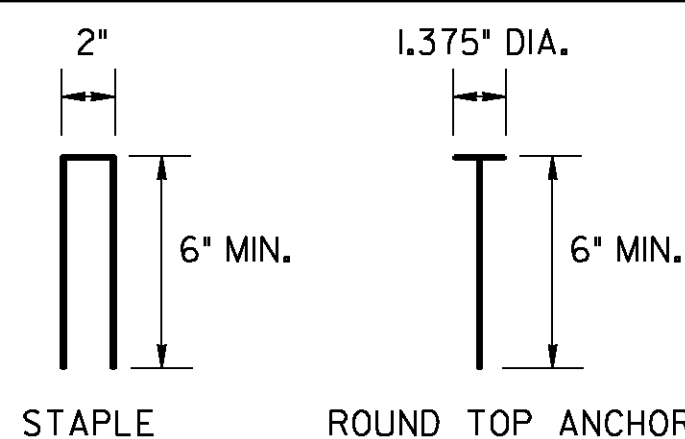
TYPICAL FABRIC CHECK DAM SPACING	
GRADE OF DITCH	MINIMUM SPACING (FEET)
LESS THAN 1%	100' ±
1% TO 3%	75' ±
3% TO 6%	50' ±
6% TO 8%	25' ±



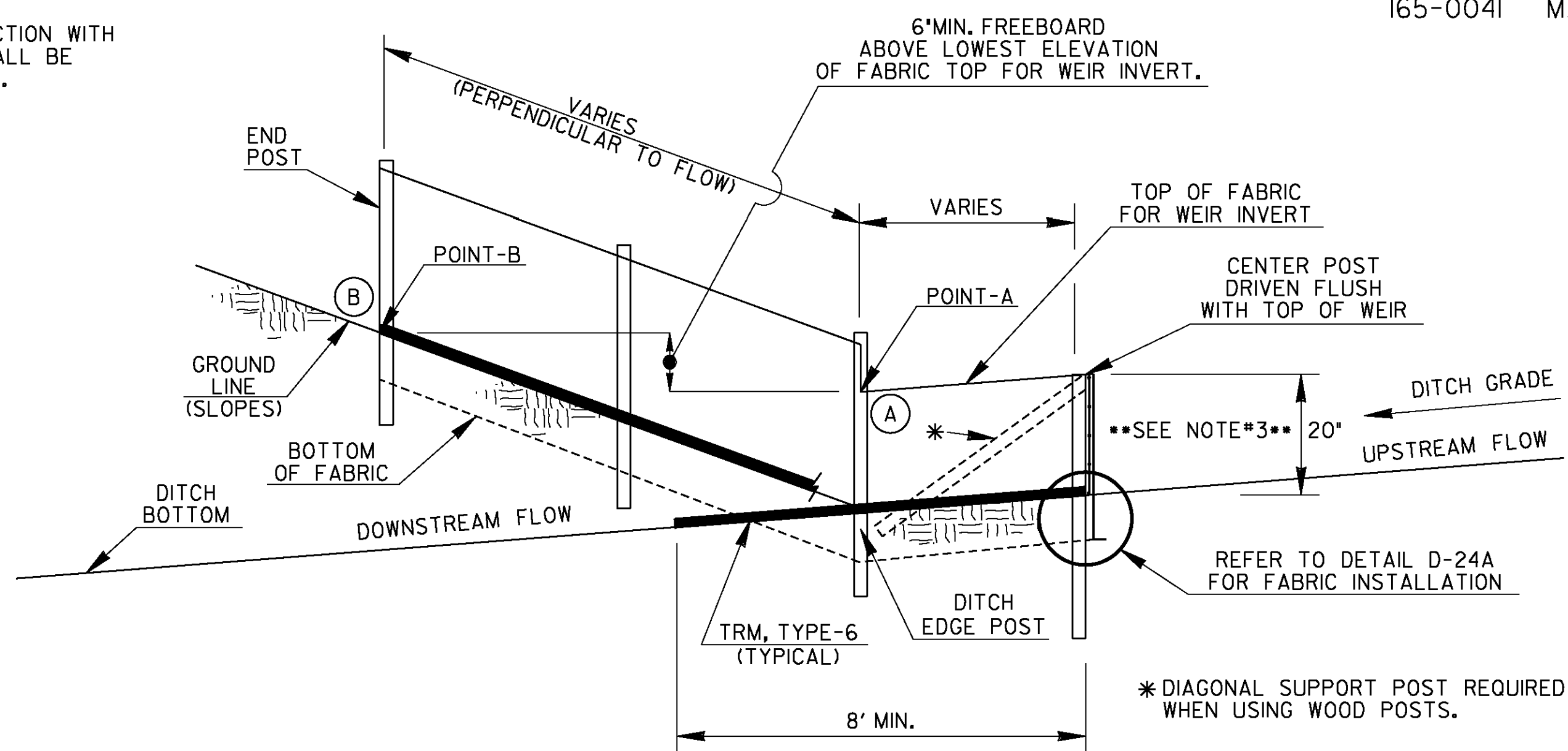
SECTION A-A

NOTE: CROSS-SECTION SHOWN IS AN EXAMPLE OF A TYPICAL CUT SECTION WITH A 4-FT FLAT BOTTOM DITCH. ACTUAL FABRIC CHECK DAMS SHALL BE INSTALLED SIMILARLY ACCORDING TO ROADWAY CROSS-SECTIONS.

TURF REINFORCEMENT
MATTING ANCHOR



NOTE: TURF REINFORCEMENT MATTING SHALL BE ANCHORED WITH 8-GAUGE METAL STAPLES OR ROUND TOP ANCHORS. ANCHORS SHALL BE LONG ENOUGH TO PROVIDE SUFFICIENT GROUND PENETRATION TO RESIST PULL OUT.



NOTES:

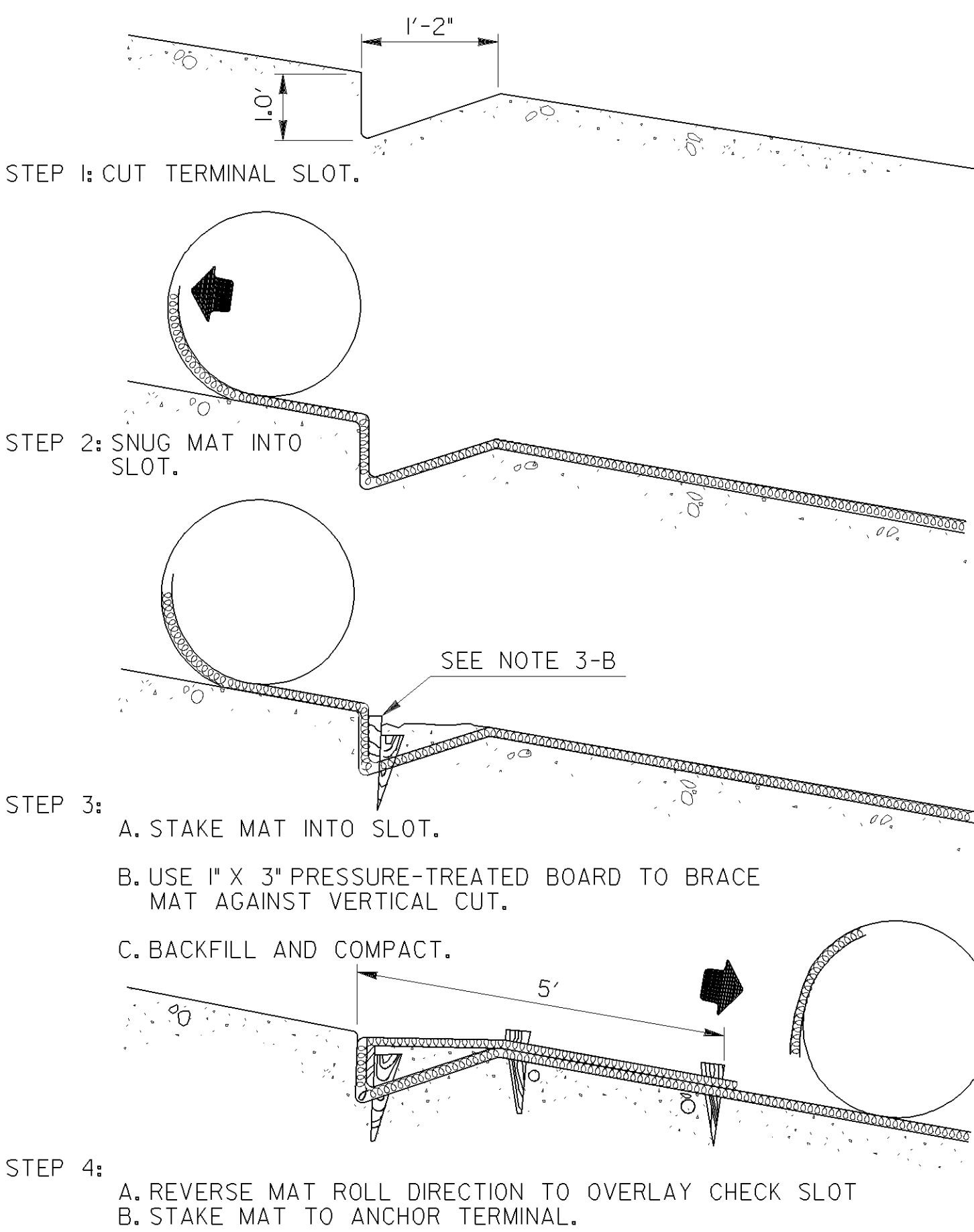
- FABRIC CHECK DAMS MAY BE USED FOR FLOWS UP TO 2.0-CFS. A ROCK FILTER DAM SHALL BE USED AT THE DOWNSTREAM POINT FOR FLOWS GREATER THAN 2.0-CFS.
- FABRIC CHECK DAMS SHALL NOT BE PLACED WITHIN FLOWING STATE WATERS.
- FABRIC CHECK DAMS MAY BE USED IN DITCHES WITH DEPTHS AT LEAST 26-IN. IF DITCH DEPTH IS LESS THAN 26-IN, THE WEIR INVERT MAY BE LOWERED SLIGHTLY IN THE FIELD TO PROVIDE 6-IN MINIMUM FREEBOARD ABOVE POINT-A OR TO MATCH SPACING OF WIRE SUPPORT. THE WEIR HEIGHT SHALL BE NO LESS THAN 15-IN. THE DESIGNER SHALL CONSIDER OTHER APPROPRIATE BMPs FOR CONCENTRATED FLOW FOR DITCH DEPTHS LESS THAN 26-IN.
- THE FOLLOWING STEPS ARE RECOMMENDED FOR PROPER FABRIC CHECK DAM INSTALLATION:
 - DETERMINE DITCH CENTERLINE AND USE A LINE LEVEL OR OTHER MEANS TO FIND POINT-B WITHIN THE DITCH FORESLOPE AND BACKSLOPE TO PROVIDE 6-IN MINIMUM FREEBOARD ABOVE POINT-A.
 - CREATE TRENCH 6-IN BELOW DITCH GRADE TO FIT LAYOUT FROM STEP-A WITH MINIMAL SOIL DISTURBANCE.
 - LAYOUT TURF REINFORCEMENT MATTING (TRM), TYPE-6 TO PROVIDE PROTECTION A MINIMUM LENGTH OF 8-FT DOWNSTREAM OF CENTER POST TO FUNCTION AS A SPLASH PAD TO PREVENT SCOURING. ADDITIONAL NECESSARY TRM SHALL BE OVERLAPPED 3-FT. THE WIDTH SHALL BE THE DISTANCE BETWEEN POINT-B ON THE DITCH FORESLOPE AND POINT-B ON BACKSLOPE.
 - INSTALL FENCE POSTS THROUGH TRM WITHIN TRENCH. CENTER POST AND POSTS WITHIN WEIR AREA SHALL BE INSTALLED FLUSH WITH WEIR. CUT TRM WITHIN TRENCH FOLLOWING CHECK DAM LAYOUT AND SAVE UPSTREAM PORTION OF TRM FOR FURTHER USE.
 - PROPERLY INSTALL TYPE-C SILT FENCE. TRENCH BACKFILL SHALL BE COMPACTED WITH A HAND TAMPER, JUMPING JACK COMPACTOR, OR PLATE COMPACTOR TO PREVENT UNDERMINING.
 - INSTALL PREVIOUSLY CUT TRM FROM STEP-D UPSTREAM AGAINST CHECK DAM. INSTALLING UPSTREAM AND DOWNSTREAM TRM ACCORDING TO DETAIL D-35 FOR THIS TEMPORARY APPLICATION IS NOT REQUIRED. HOWEVER, TRM SHALL HAVE PROPER CONTACT WITH GROUND SURFACE, ANCHORED 6-IN MAXIMUM SPACING ALONG THE EDGES, AND ADEQUATELY WITHIN THE MATTED AREA.
- TEMPORARY INSTALLATION OF TRM WITH FABRIC CHECK DAMS SHALL BE INCLUDED IN THE LINEAR COST OF THE CONSTRUCTION, REMOVAL, AND MAINTENANCE OF EACH FABRIC CHECK DAM. NO ADDITIONAL PAYMENT WILL BE MADE.

PAY ITEMS:

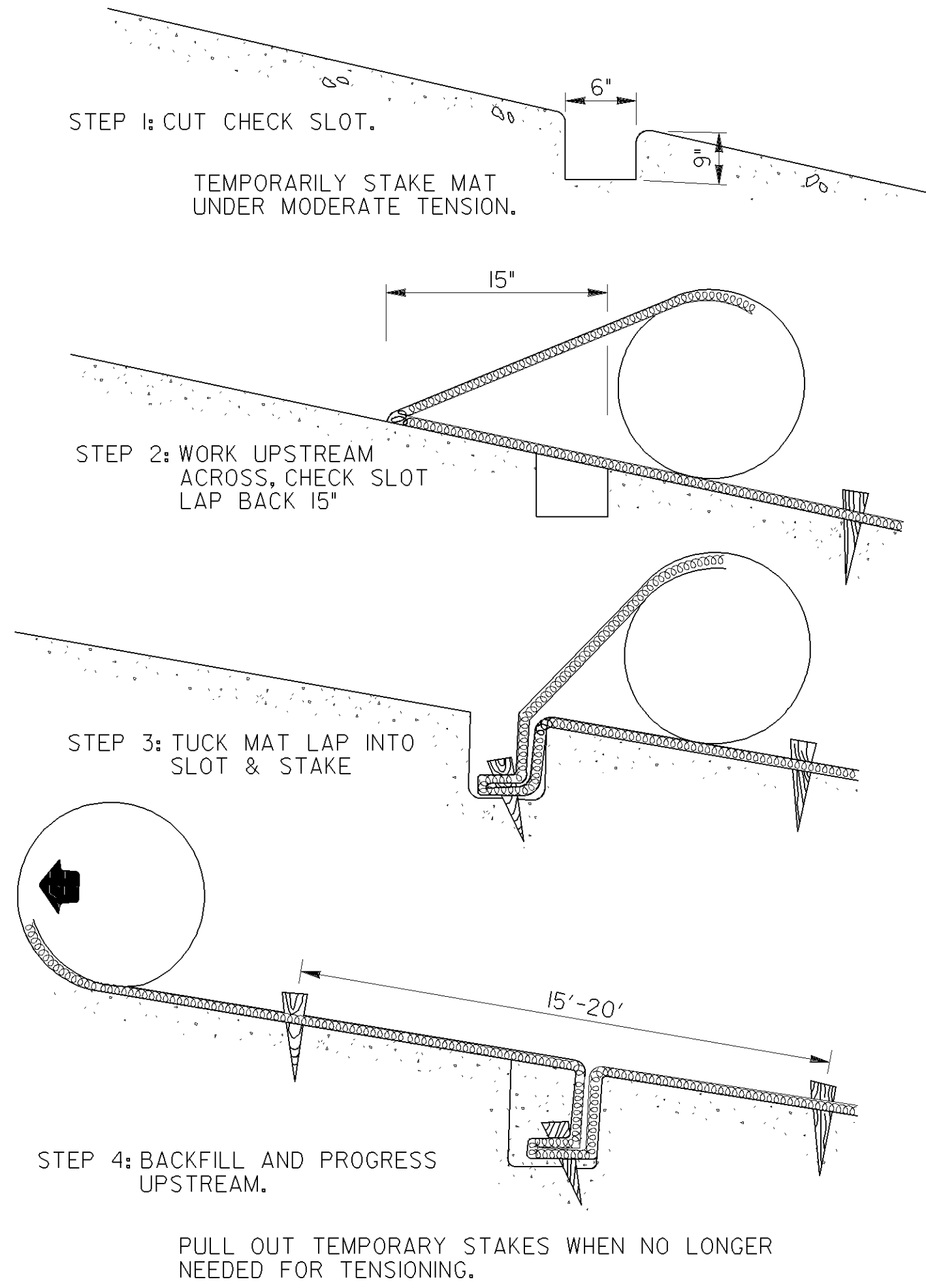
- 163-0528 CONSTRUCT & REMOVE FABRIC CHECK DAM, TYPE-C SILT FENCE (LF)
165-0041 MAINTENANCE OF CHECK DAMS - ALL TYPES (LF)

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE FABRIC CHECK DAM	
		BY	NO SCALE	REV. AND REDRAWN, JULY 2015
				NUMBER D-24D (SHEET 4 OF 4)

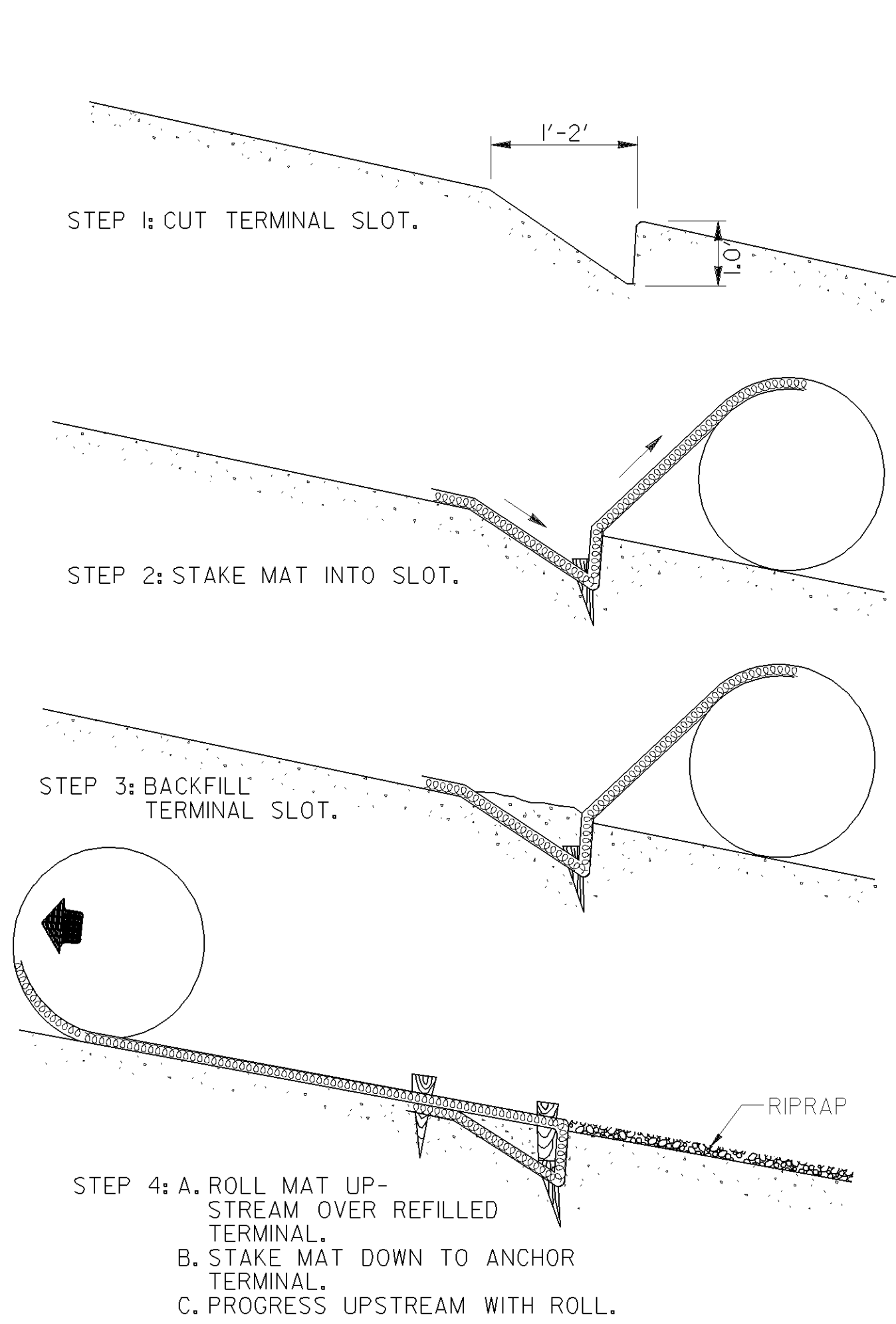
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



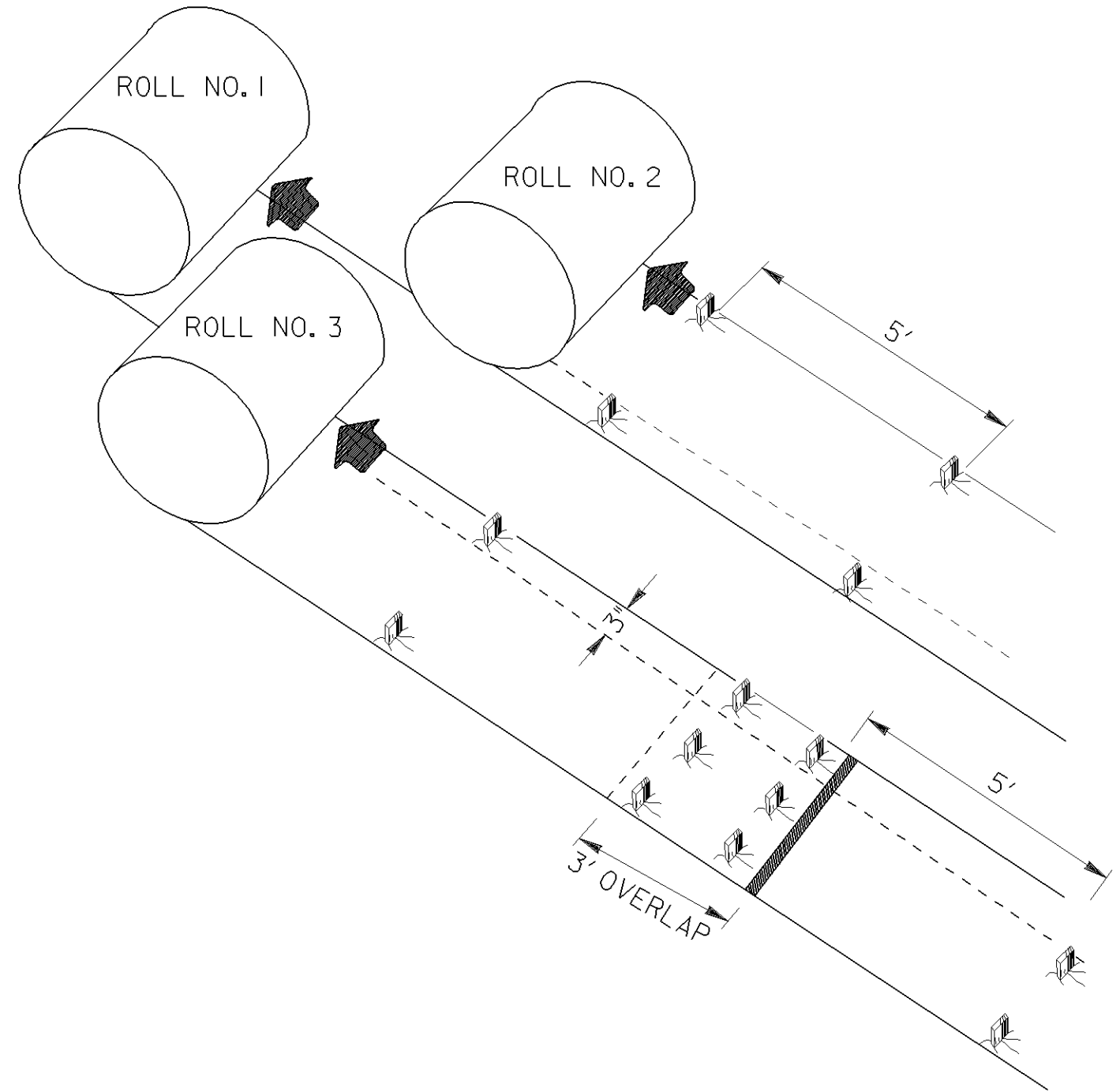
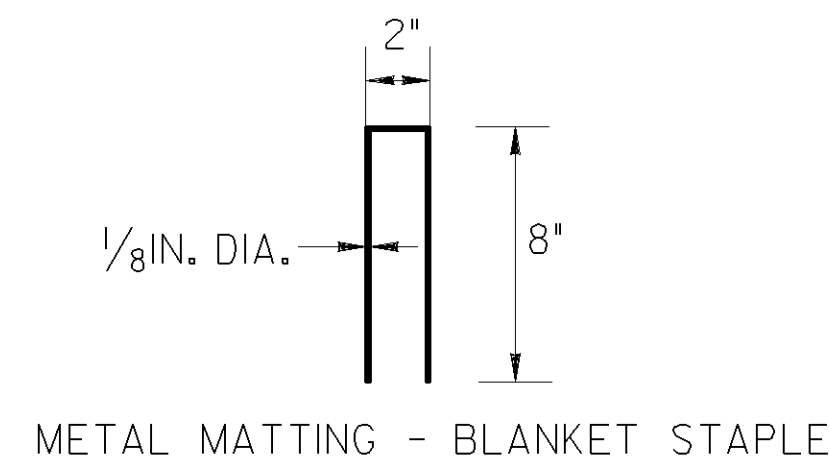
UPSTREAM TERMINAL



TRANSVERSE CHECK SLOT

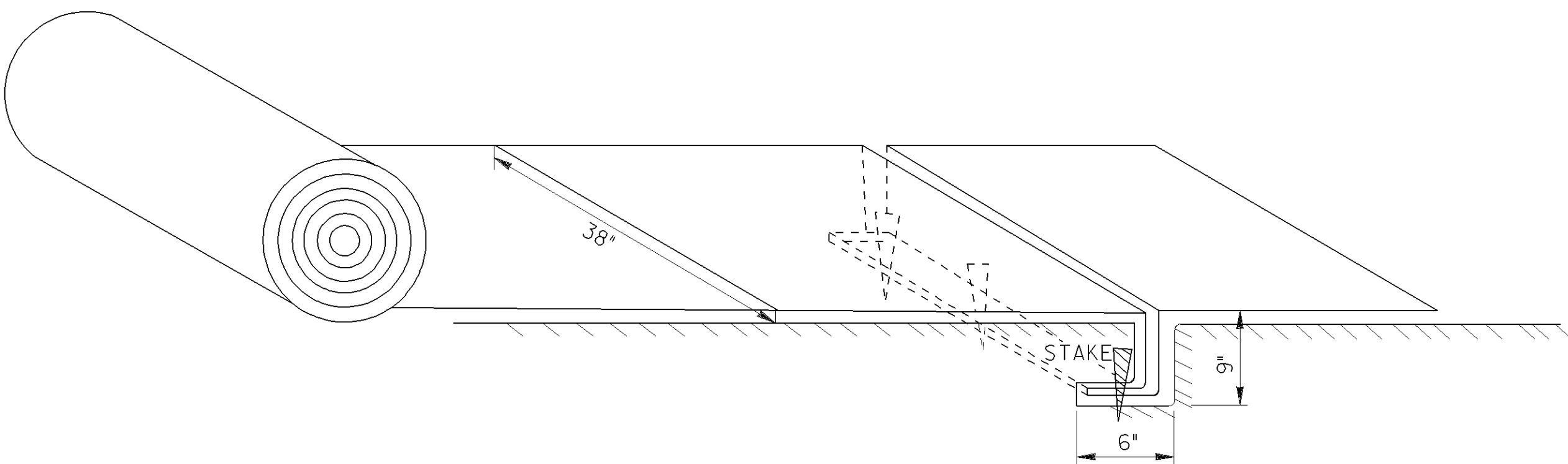


DOWNSTREAM TERMINAL

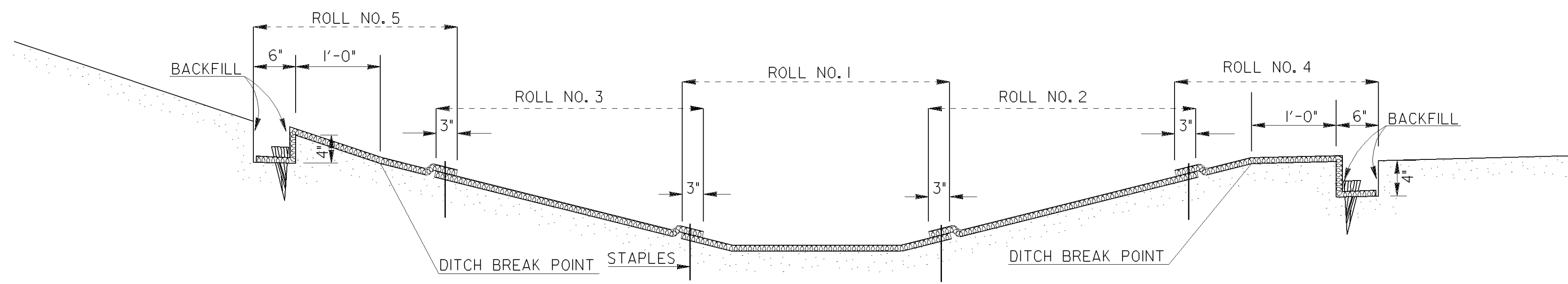


SEQUENTIAL ROLL RUN OUT IN CHANNELS

- GENERAL NOTES
1. INSTALLATION TO BE DONE AS PER MANUFACTURER'S RECOMMENDATIONS.
 2. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
 3. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
 4. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND FIRST ROLL. USE CENTER ROLL FOR ALIGNMENT TO CHANNEL CENTER.
 5. WORK OUTWARDS FROM CHANNEL CENTER TO EDGE.
 6. USE 3' OVERLAP AND STAKE AT 5' INTERVAL ALONG SEAMS.
 7. USE 3' OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT LINING AT ROLL ENDS.
 8. METAL STAPLES MAY BE USED IN LIEU OF WOODEN STAKES.



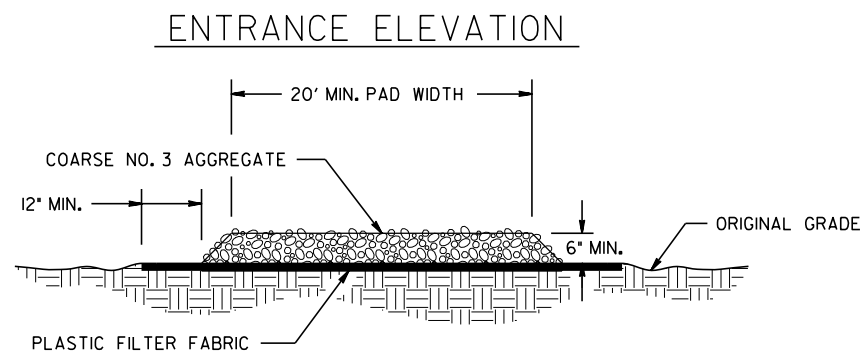
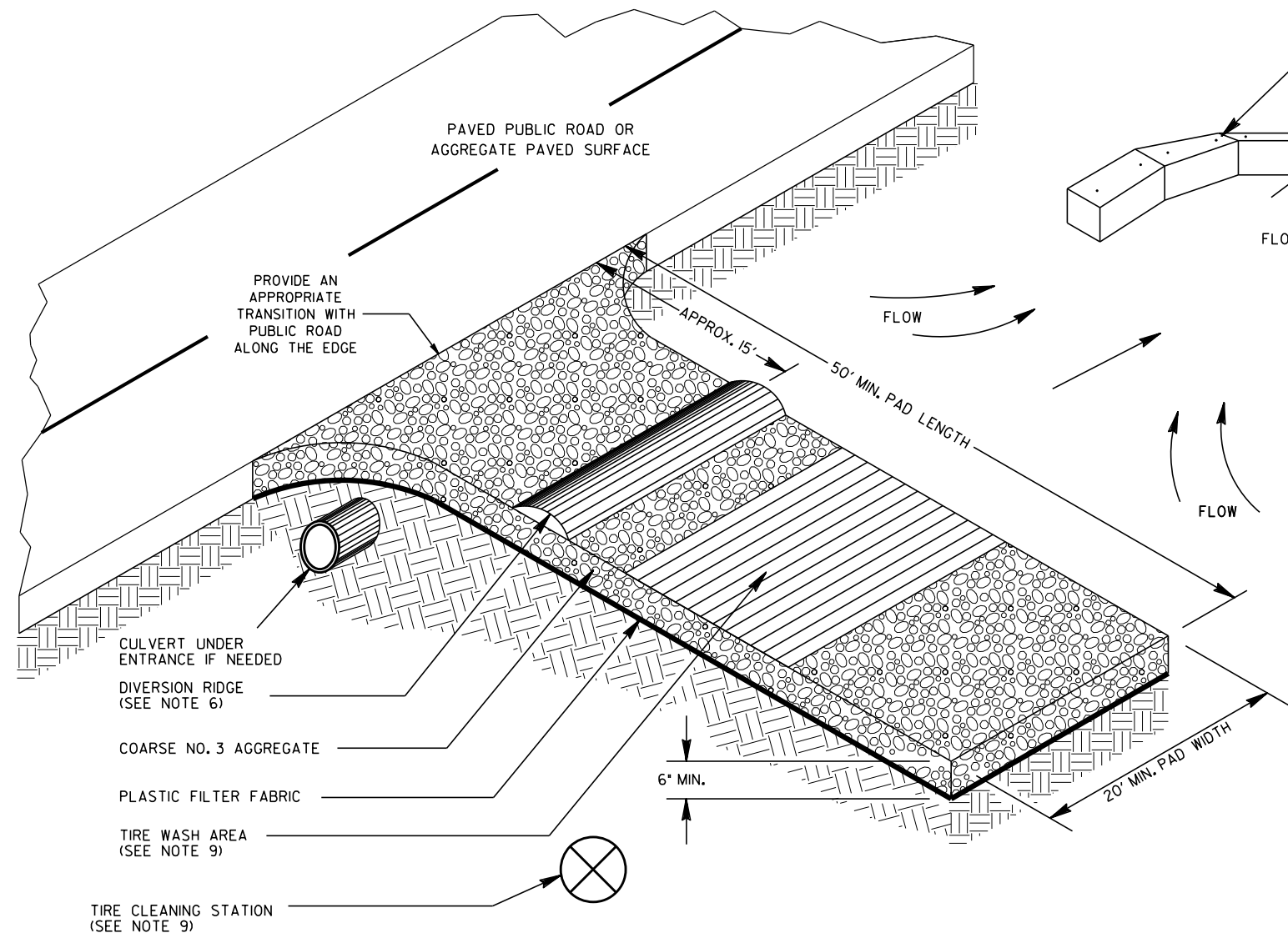
PICTORAL VIEW OF TRANSVERSE SLOT



DITCH SECTION

NOTE: MAT TO BE PLACED ONE FEET ABOVE DITCH BREAK POINT OR ONE FOOT ABOVE THE 25 YEAR STORM.

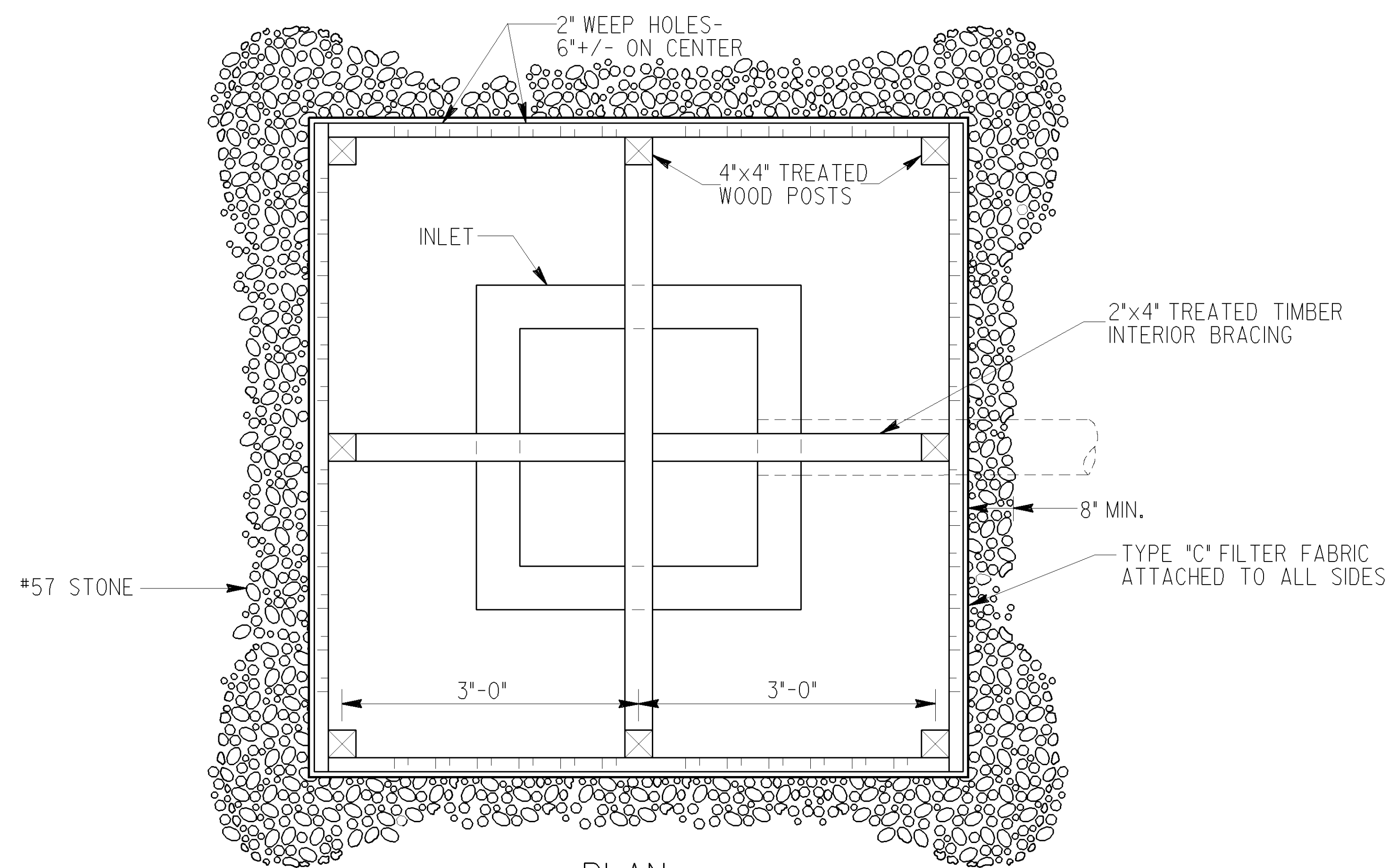
DEPARTMENT OF TRANSPORTATION				STATE OF GEORGIA	
CONSTRUCTION DETAILS				PERMANENT SOIL REINFORCING MAT (TURF REINFORCING MATS) INSTALLATION ON DITCHES	
T.P.C.	REVISED SHEET LAYOUT & ADDED DITCH SECTION. ADDED METAL STAPLE.	BY	REVISION	NO SCALE	
				AUGUST 1988	
				Designed <u>K.L.J.</u>	NUMBER
				Drawn <u> </u>	D-35
				Traced <u> </u>	
				Checked <u> </u>	



PAY ITEM:		
163-0301	CONSTRUCT AND REMOVE CONSTRUCTION EXITS	(EA)
165-0101	MAINTENANCE OF CONSTRUCTION EXIT	(EA)
165-0310	MAINTENANCE OF CONSTRUCTION EXIT TIRE WASH AREA	(EA)

PAY ITEM: FOR FIELD USE ONLY ACCORDING TO SECTION 163		
163-0310	CONSTRUCTION EXIT TIRE CLEANING STATION	(DAY)

11-04-20	REV. GEN. NOTES - B-II	04-18-18	04-22-16	01-19-11	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
HAC	REV. PAY ITEM DESCS/REFS	DLE	REV. TIRE WASH & NOTES	TPC	REV. CONSTR. EXIT LABELS	CONSTRUCTION DETAILS	
						CONSTRUCTION EXIT	
						NO SCALE	
						FEBRUARY 2001	
						DESIGNED DRAWN TRACED CHECKED	NUMBER D-41

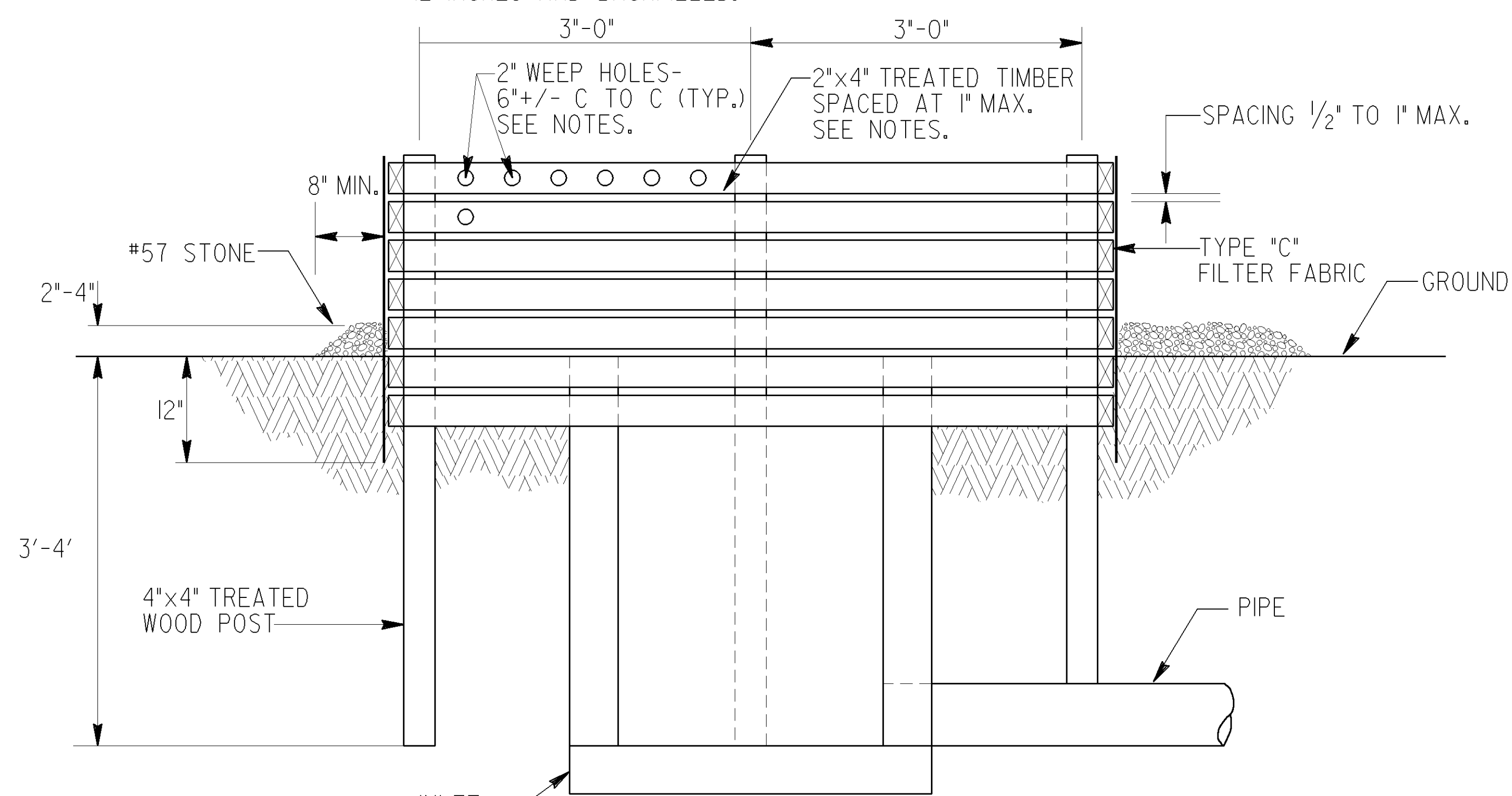


NOTES:

BAFFLE BOX SHALL BE CONSTRUCTED OF 2"x4" TREATED TIMBER SPACED A MAXIMUM OF 1' APART OR OF PLYWOOD WITH WEEP HOLES 2" IN DIAMETER PLACED APPROXIMATELY 6" ON CENTER VERTICALLY AND HORIZONTALLY.

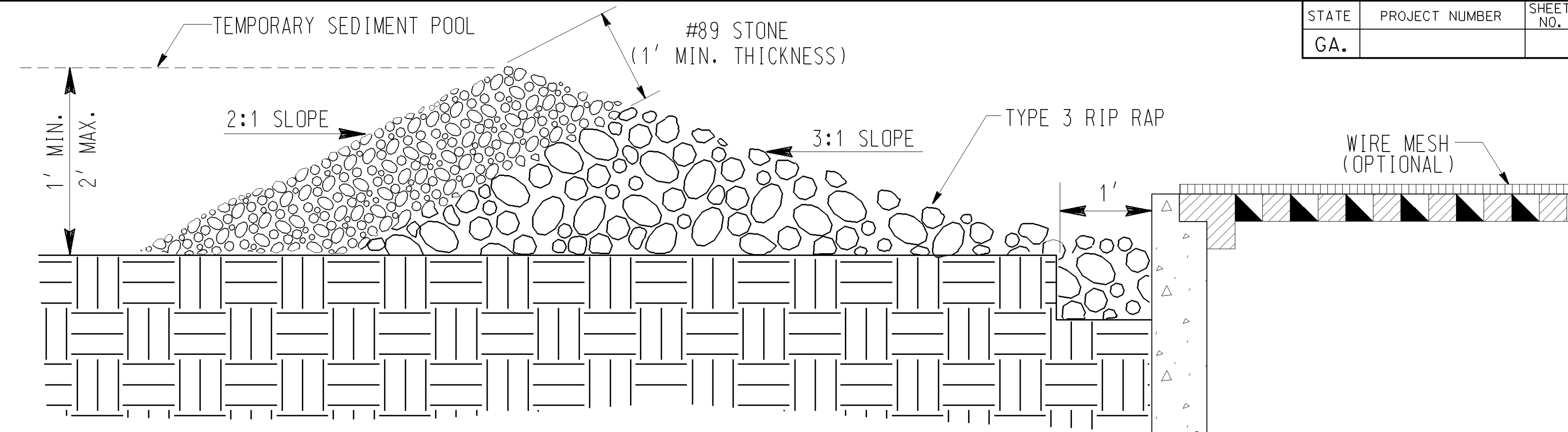
GRAVEL SHALL BE PLACED OUTSIDE THE BOX, ALL AROUND THE INLET, TO A DEPTH OF 2 TO 4 INCHES. THE ENTIRE BOX SHALL BE WRAPPED IN TYPE "C" FILTER FABRIC THAT SHALL BE ENTRENCHED 12 INCHES AND BACKFILLED.

PLAN

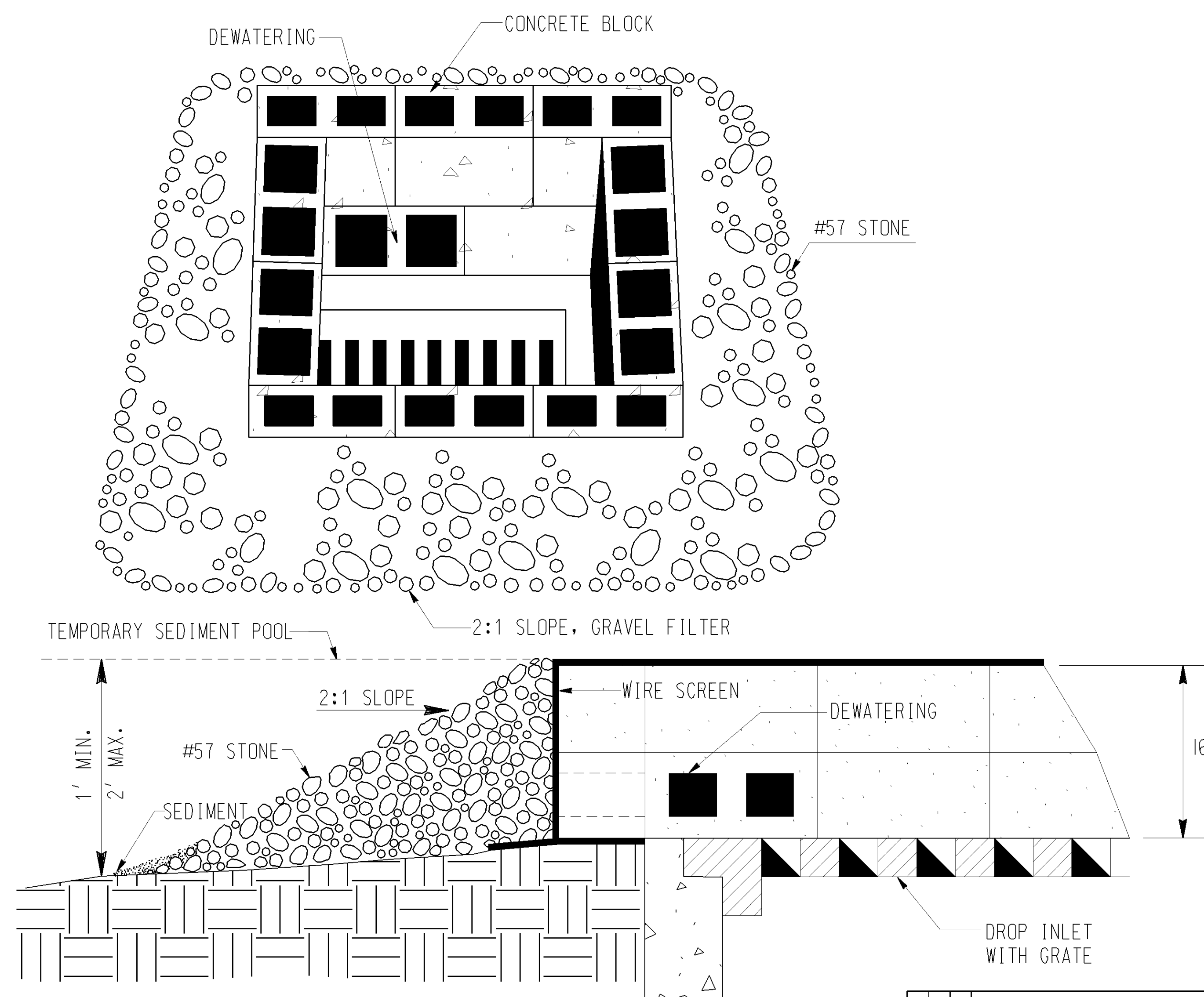


ELEVATION

BAFFLE BOX (Sd2-B)



GRAVEL DROP INLET PROTECTION
(GRAVEL DONUT) Sd2-G

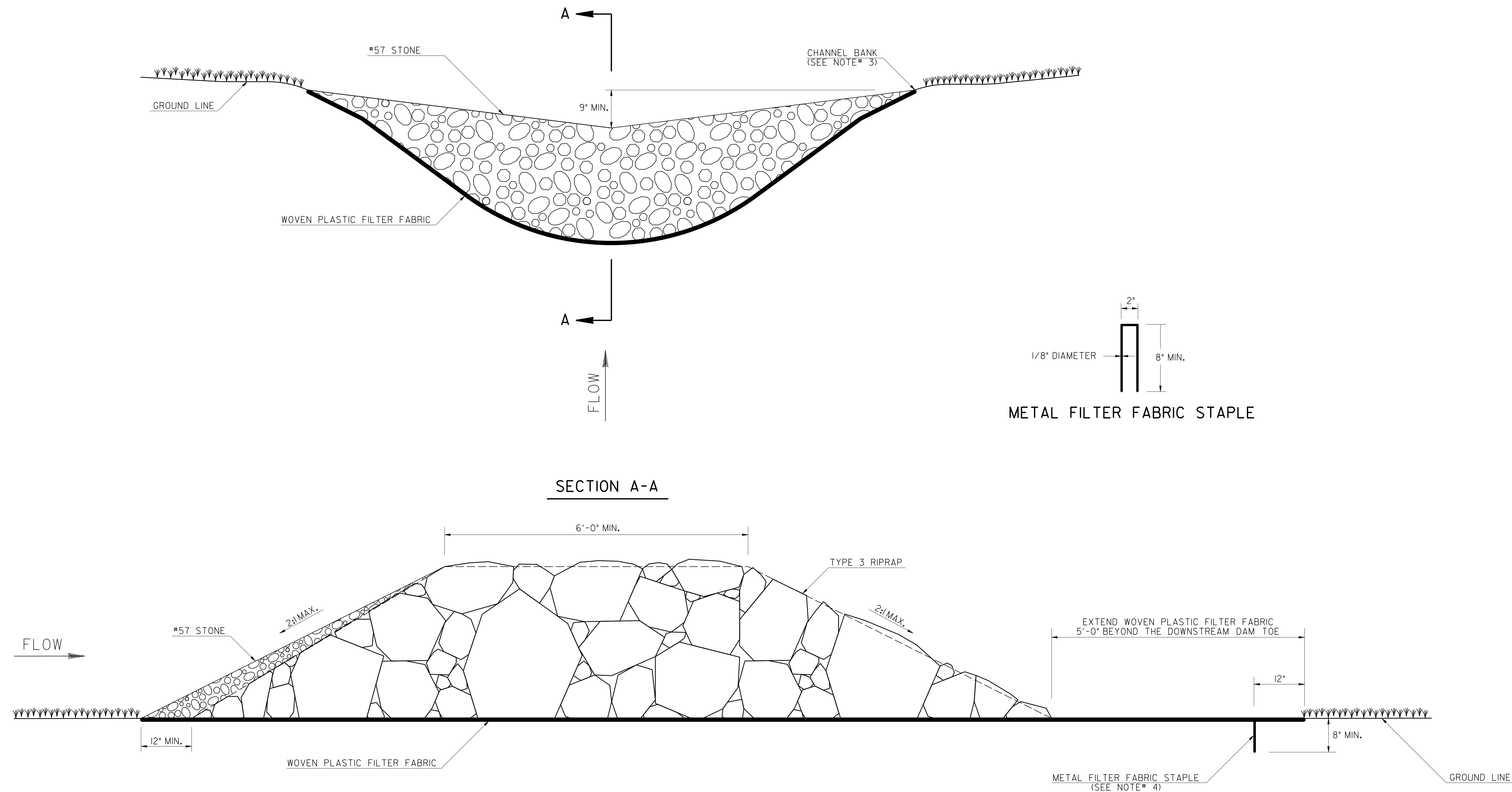


BLOCK & GRAVEL DROP
INLET PROTECTION
(Sd2-Bg)

BASIS OF PAYMENT:
CONSTRUCT AND REMOVE INLET SEDIMENT TRAP _____ EACH

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
CONSTRUCTION DETAIL INLET SEDIMENT TRAPS			
BAFFLE BOX Sd2-B BLOCK AND GRAVEL DROP INLET PROTECTION Sd2-Bg GRAVEL DROP INLET PROTECTION Sd2-G NO SCALE			
MAY 2008			NUMBER D-42
DATE	REVISION	BY	

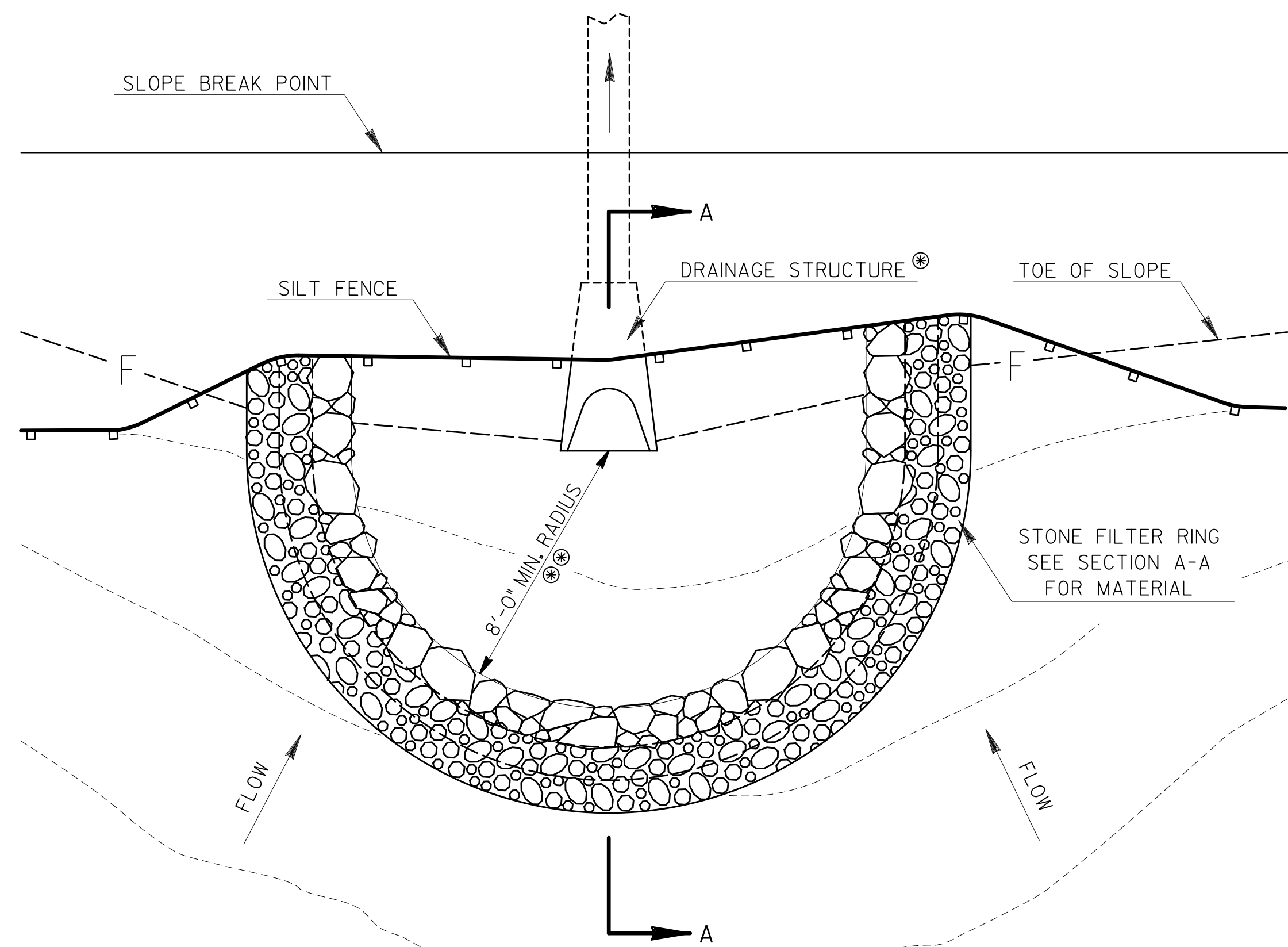


- GENERAL NOTES:
- THE MAXIMUM DRAINAGE AREA TO A ROCK FILTER DAM SHALL BE 50-ACRES.
 - ROCK FILTER DAMS SHALL NOT BE INSTALLED IN STATE WATERS.
 - THE ROCK FILTER DAM SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS OR ADVERSELY IMPACT UPSTREAM PROPERTY OR STATE WATERS WITH BACKWATER. THE CENTER OF THE ROCK FILTER DAM SHOULD BE AT LEAST 9-INCHES LOWER THAN THE OUTER EDGES OF THE ROCK FILTER DAM AT THE CHANNEL BANKS.
 - ANCHOR THE WOVEN PLASTIC FILTER FABRIC TO THE GROUND SURFACE WITH METAL FILTER FABRIC STAPLES 12-INCHES FROM THE EDGE AND NO GREATER THAN 12-INCHES APART.
 - REMOVE SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE ROCK FILTER DAM. WOVEN PLASTIC FILTER FABRIC SHALL BE REPLACED WHEN DAMAGED OR DETERIORATED.

PAY ITEMS:			
163-054I	CONSTRUCT AND REMOVE ROCK FILTER DAM	(EA)	
165-0110	MAINTENANCE OF ROCK FILTER DAM	(EA)	

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	CONSTRUCTION DETAILS ROCK FILTER DAM	
		BY	NO SCALE	4-22-2016
				NUMBER D-43

ROADWAY DRAINAGE STRUCTURE INLET



PLAN VIEW

⊗ A FLARED END ROADWAY DRAINAGE STRUCTURE IS SHOWN. HOWEVER, OTHER ROADWAY DRAINAGE STRUCTURES OR A DETENTION POND'S OUTLET STRUCTURE MAY APPLY. AN APPROPRIATE RETROFIT BMP IS PREFERRED IN CONJUNCTION WITH THE STONE FILTER RING. SEE GENERAL NOTE 1 FOR ADDITIONAL INFORMATION.

⊗⊗ THE PREFERRED MINIMUM RADIUS OF THE STONE FILTER RING IS 8 FEET. THE RADIUS MAY BE REDUCED TO A MINIMUM OF 4 FEET FROM THE DRAINAGE STRUCTURE IF A RETROFIT BMP IS NOT PROVIDED. SEE GENERAL NOTE 1 FOR ADDITIONAL REQUIREMENTS.

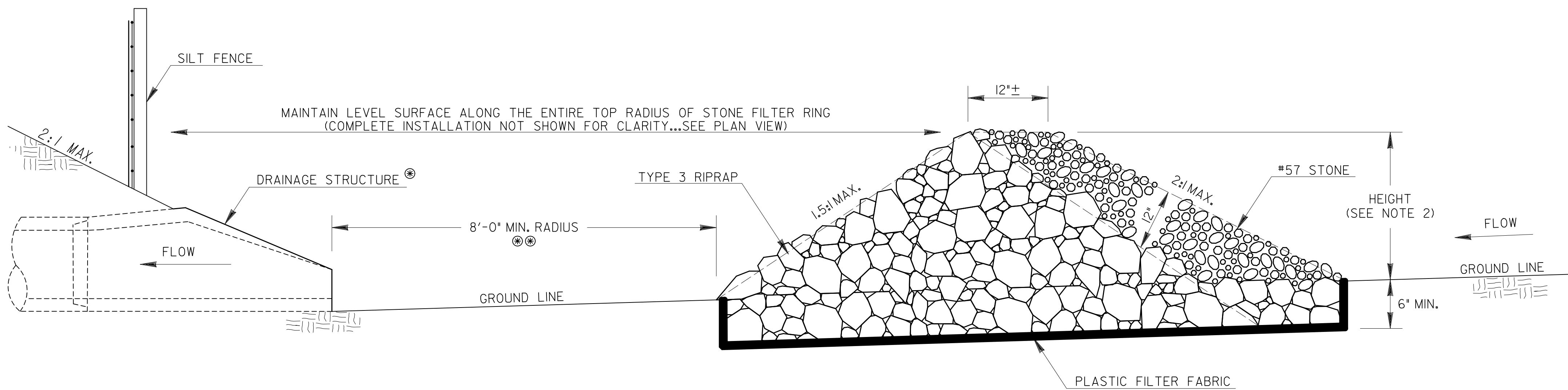
GENERAL NOTES:

1. A STONE FILTER RING MAY BE PLACED ON ROADWAY DRAINAGE STRUCTURE INLETS, SUCH AS FLARED END SECTIONS, TO STORE SEDIMENT IN LOW AREAS WITHIN THE PROJECT. IN CONJUNCTION WITH THE STONE FILTER RING, A RETROFIT BMP APPROPRIATE FOR ROADWAY DRAINAGE STRUCTURE INLETS IS PREFERRED. IF A RETROFIT BMP IS NOT PROVIDED, OTHER SEDIMENT CONTROL BMPs SHALL BE PROVIDED DOWNSTREAM OF THE STONE FILTER RING PRIOR TO LEAVING THE PROJECT AREA. THE STONE FILTER RING SHALL BE 8 FEET TO 10 FEET UPSTREAM OF THE RETROFIT BMP. THE STONE FILTER RING IS NOT INTENDED TO SUBSTANTIALLY IMPOUND WATER, ADVERSELY IMPACTING AREAS OUTSIDE OF THE PROJECT.

A STONE FILTER RING MAY ALSO BE USED IN CONJUNCTION WITH A RETROFIT BMP USED ON A DETENTION POND'S PERMANENT OUTLET STRUCTURE TO PROVIDE ADDITIONAL SEDIMENT FILTERING. THE STONE FILTER RING SHALL BE INSTALLED 8 FEET TO 10 FEET UPSTREAM OF THE POND'S RETROFIT BMP.

STONE FILTER RINGS ARE NOT RECOMMENDED WITHIN ROADWAY DRAINAGE DITCHES. STONE FILTER RINGS SHALL NOT BE PLACED WITHIN STATE WATERS.

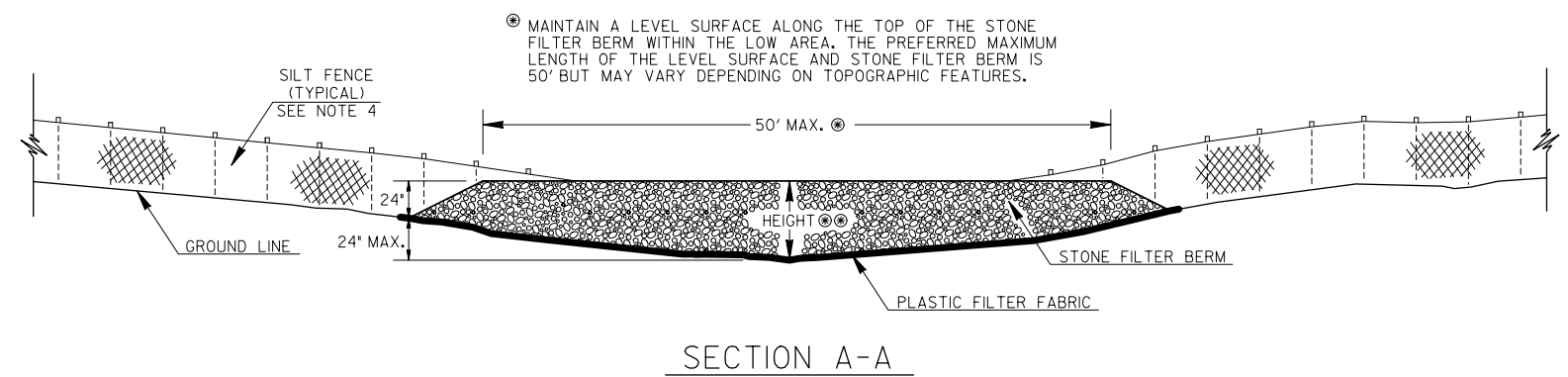
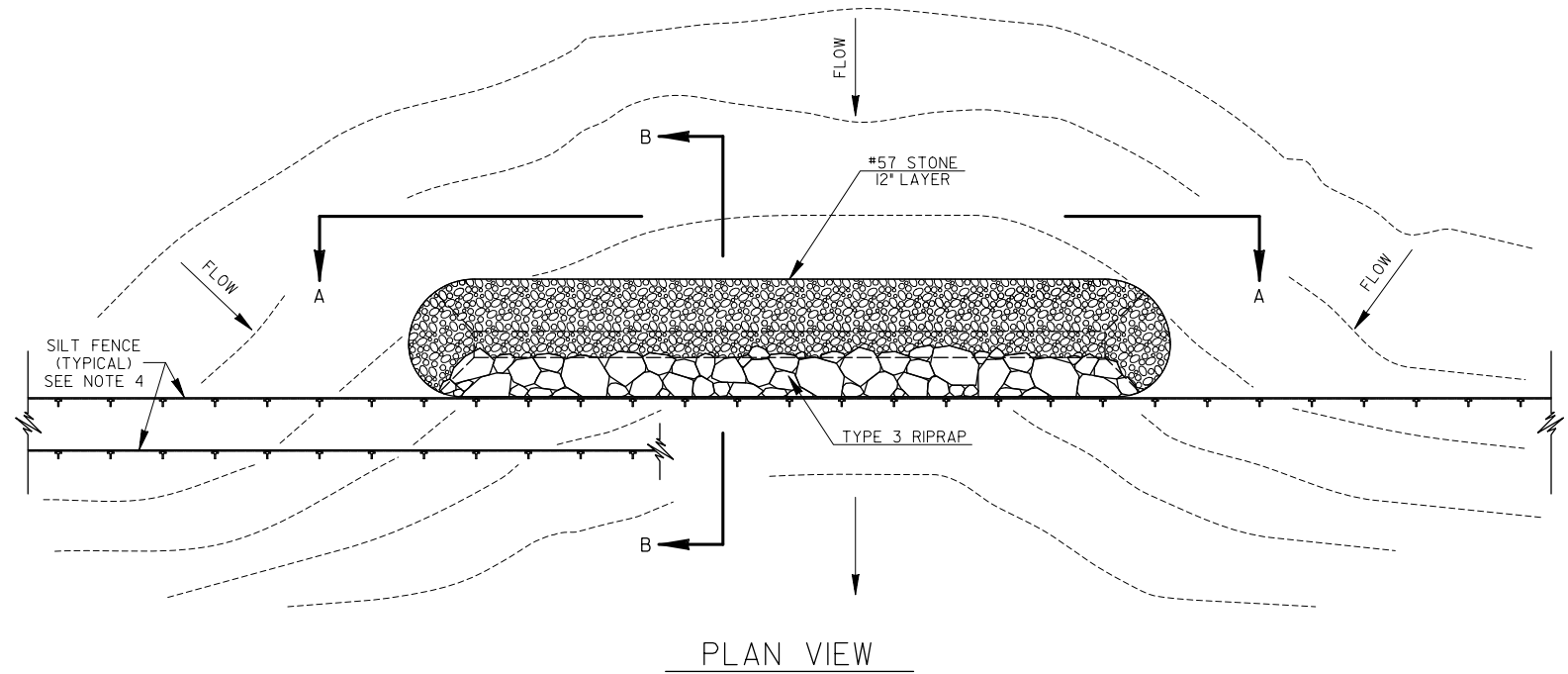
2. THE HEIGHT OF THE STONE FILTER RING SHALL BE A MINIMUM OF 24 INCHES WITH A MAXIMUM HEIGHT OF 48 INCHES. MAINTAIN A LEVEL SURFACE ALONG THE ENTIRE TOP RADIUS OF THE STONE FILTER RING.
3. REFER TO THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN (ESPCP) FOR THE LOCATION OF STONE FILTER RINGS. THE INSTALLATION OF SILT FENCE AND RETROFITS ARE INDEPENDENT OF THE STONE FILTER RING AND WILL BE PAID FOR SEPARATELY AS APPLICABLE TO THE ESPCP.
4. SEE STANDARD SPECIFICATION 163, AND SUPPLEMENTS THERETO FOR THE CONSTRUCTION AND REMOVAL OF STONE FILTER RINGS. SEE STANDARD SPECIFICATION 165, AND SUPPLEMENTS THERETO FOR THE MAINTENANCE OF STONE FILTER RINGS.



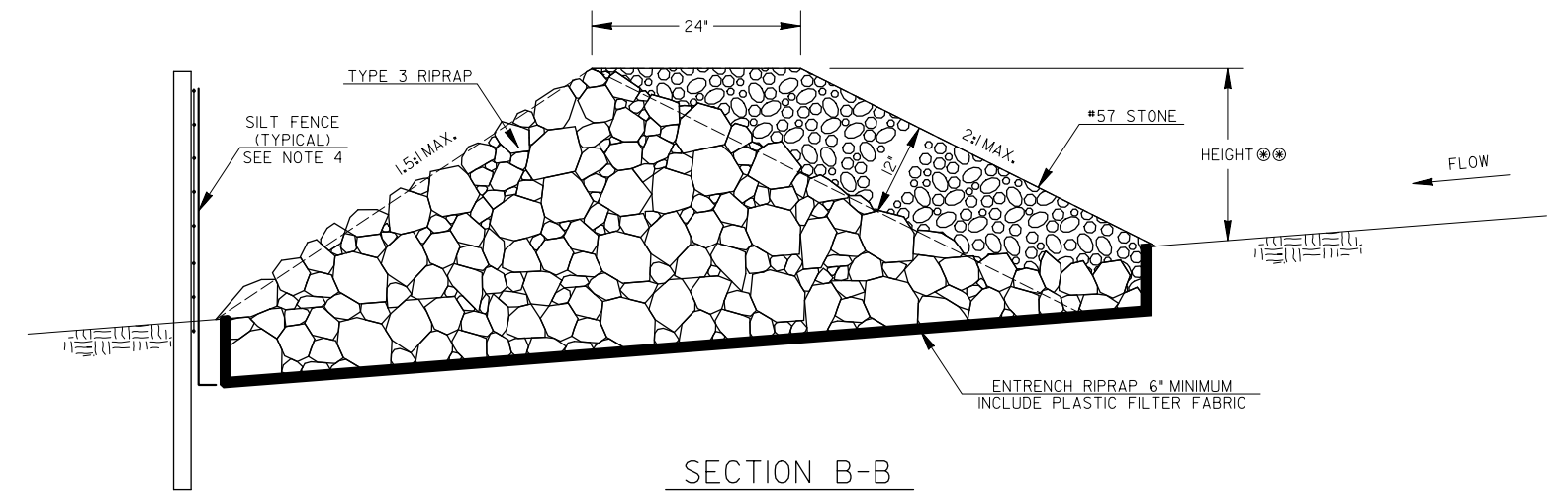
SECTION A-A

PAY ITEMS:
163-0542 CONSTRUCT & REMOVE STONE FILTER RING (EA)
165-0111 MAINTENANCE OF STONE FILTER RING (EA)

	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
	REVISION	CONSTRUCTION DETAIL STONE FILTER RING	
		NO SCALE	JULY 2018
BY	DESIGNED DRAWN CHECKED REVISED	DLE DLE _____ _____	NUMBER D-46



SEE NOTE 3 FOR STONE FILTER BERM HEIGHT.



GENERAL NOTES:

- A STONE FILTER BERM IS AN ADDITIONAL PERIMETER CONTROL BMP WHERE PERIMETER SILT FENCE ALONE MAY BE INSUFFICIENT FOR SHEET FLOW AND/OR SHALLOW CONCENTRATED FLOW TO A COMMON LOW AREA, THERE IS NO WELL-DEFINED CHANNEL FOR A ROCK FILTER DAM, AND/OR CONSTRUCTING A ROCK OUTLET TEMPORARY SEDIMENT TRAP IS NOT APPLICABLE.
- SEDIMENT STORED BY A STONE FILTER BERM IS CONSIDERED PRE-TREATMENT FOR THE PERIMETER SILT FENCE AND SHALL NOT BE CALCULATED AS ADDITIONAL SEDIMENT STORAGE IN THE SEDIMENT STORAGE TABLE PROVIDED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN (ESPCP). CONVENTIONAL OR APPROVED ALTERNATIVE/EQUIVALENT BMPs MUST BE USED TO STORE SEDIMENT UPSTREAM AND/OR DOWNSTREAM OF A STONE FILTER BERM.

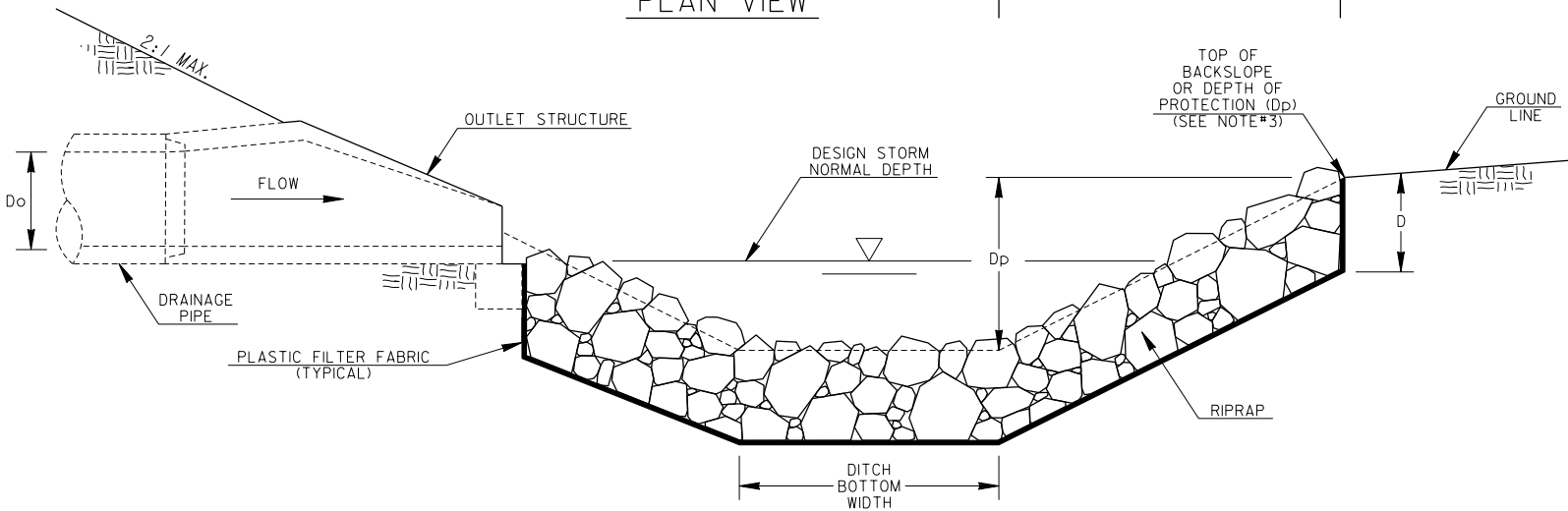
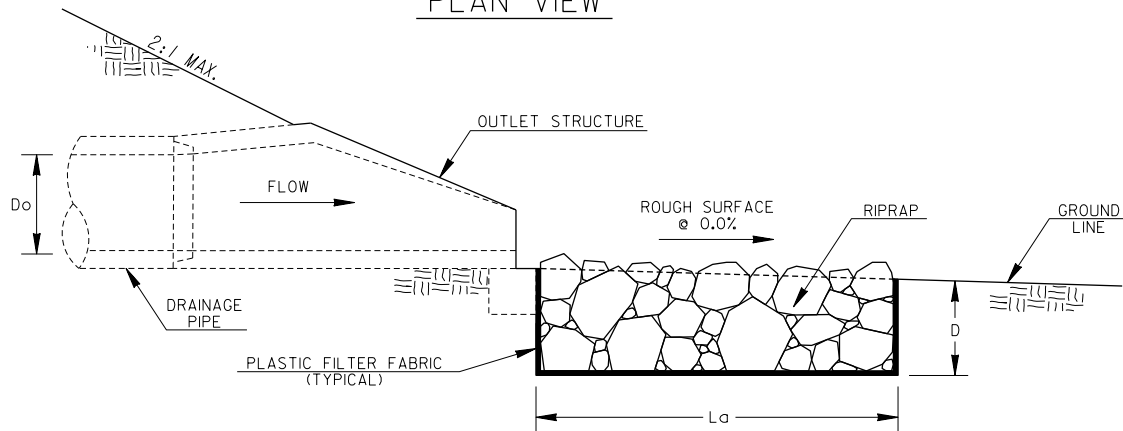
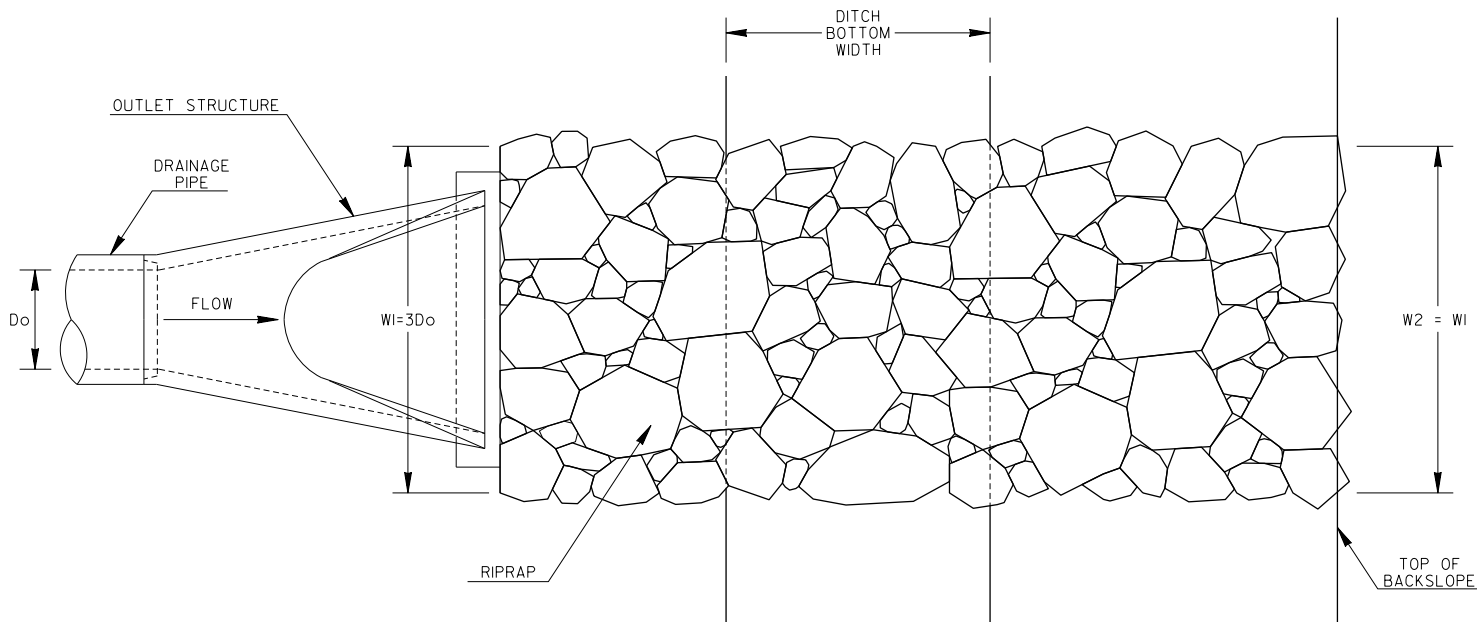
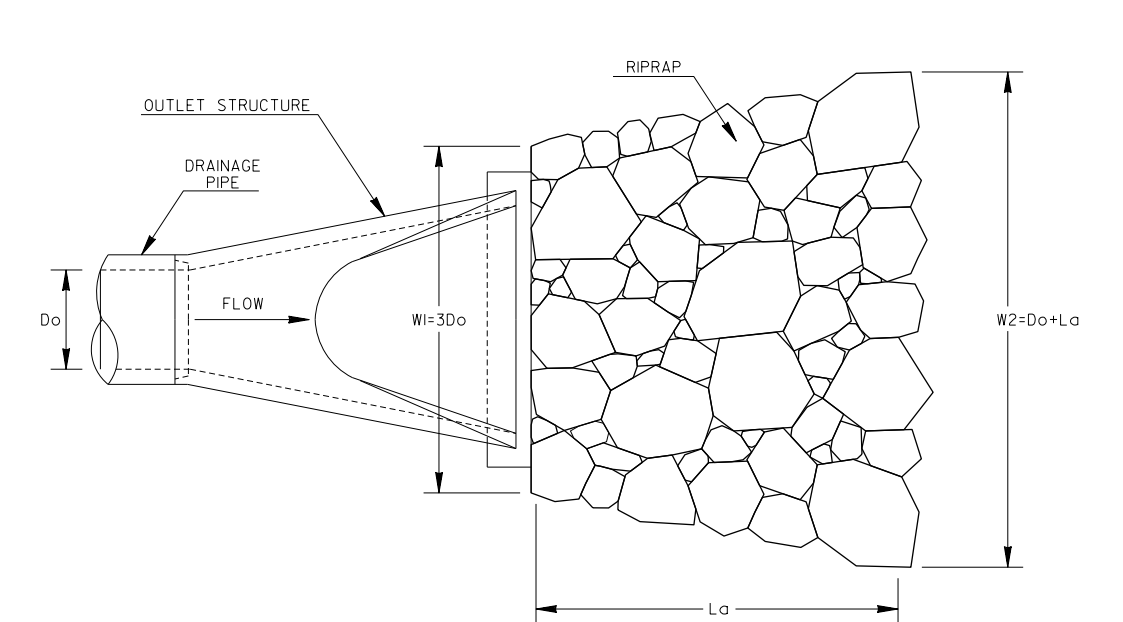
A ROCK OUTLET TEMPORARY SEDIMENT TRAP SHALL BE EVALUATED PRIOR TO CONSIDERING A STONE FILTER BERM. REFER TO DETAIL D-53 FOR A ROCK OUTLET TEMPORARY SEDIMENT TRAP.
- THE HEIGHT OF THE STONE FILTER BERM SHALL BE 24 INCHES AT THE ENDS AND NOT MORE THAN 48 INCHES ABOVE THE LOWEST POINT OF THE GROUND LINE.
- REFER TO THE ESPCP FOR THE LOCATION OF PERIMETER SILT FENCE AND STONE FILTER BERMS. REFER TO DETAIL D-24 FOR THE INSTALLATION OF PERIMETER SILT FENCE. SILT FENCE WILL BE PAID FOR SEPARATELY.
- SEE STANDARD SPECIFICATION I63, AND SUPPLEMENTS THERETO FOR THE CONSTRUCTION AND REMOVAL OF STONE FILTER BERMS. SEE STANDARD SPECIFICATION I65, AND SUPPLEMENTS THERETO FOR THE MAINTENANCE OF STONE FILTER BERMS.
- STONE FILTER BERMS SHALL NOT BE PLACED ACROSS FLOWING STREAMS.

PAY ITEMS:
163-0543 CONSTRUCT & REMOVE STONE FILTER BERM (LF)
165-0112 MAINTENANCE OF STONE FILTER BERM (LF)

				DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
				REVISION	CONSTRUCTION DETAILS STONE FILTER BERM	
					NO SCALE	JANUARY 2018
				BY	DESIGNED <u>DLE</u> DRAWN <u>DLE</u> CHECKED <u>HAC</u> REVISED <u>DLE</u>	D-50

OUTLET TO FLAT AREA

OUTLET PERPENDICULAR TO WELL-DEFINED CHANNEL



GENERAL NOTES:

- RIPRAP OUTLET PROTECTION SHOULD BE USED TO REDUCE A DRAINAGE STRUCTURE'S DISCHARGE VELOCITY. RIPRAP OUTLET PROTECTION IS SHOWN FOR GEORGIA STANDARD #20, BUT IS INSTALLED SIMILARLY FOR OTHER DRAINAGE OUTLET STRUCTURES.
- RIPRAP OUTLET PROTECTION SHALL BE DESIGNED IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". THE DESIGNER SHALL PROVIDE THE FOLLOWING IN THE PLANS: PIPE DIAMETER (Do), FLOW RATE OF DESIGN STORM (Q), VELOCITY (V), TAILWATER CONDITION (Tw), APRON LENGTH (La), APRON WIDTH AT DRAINAGE STRUCTURE (W1), APRON WIDTH DOWNSTREAM (W2), AVERAGE STONE DIAMETER (d50), INSTALLATION DEPTH (D), AND TYPE OF RIPRAP WITH QUANTITY.

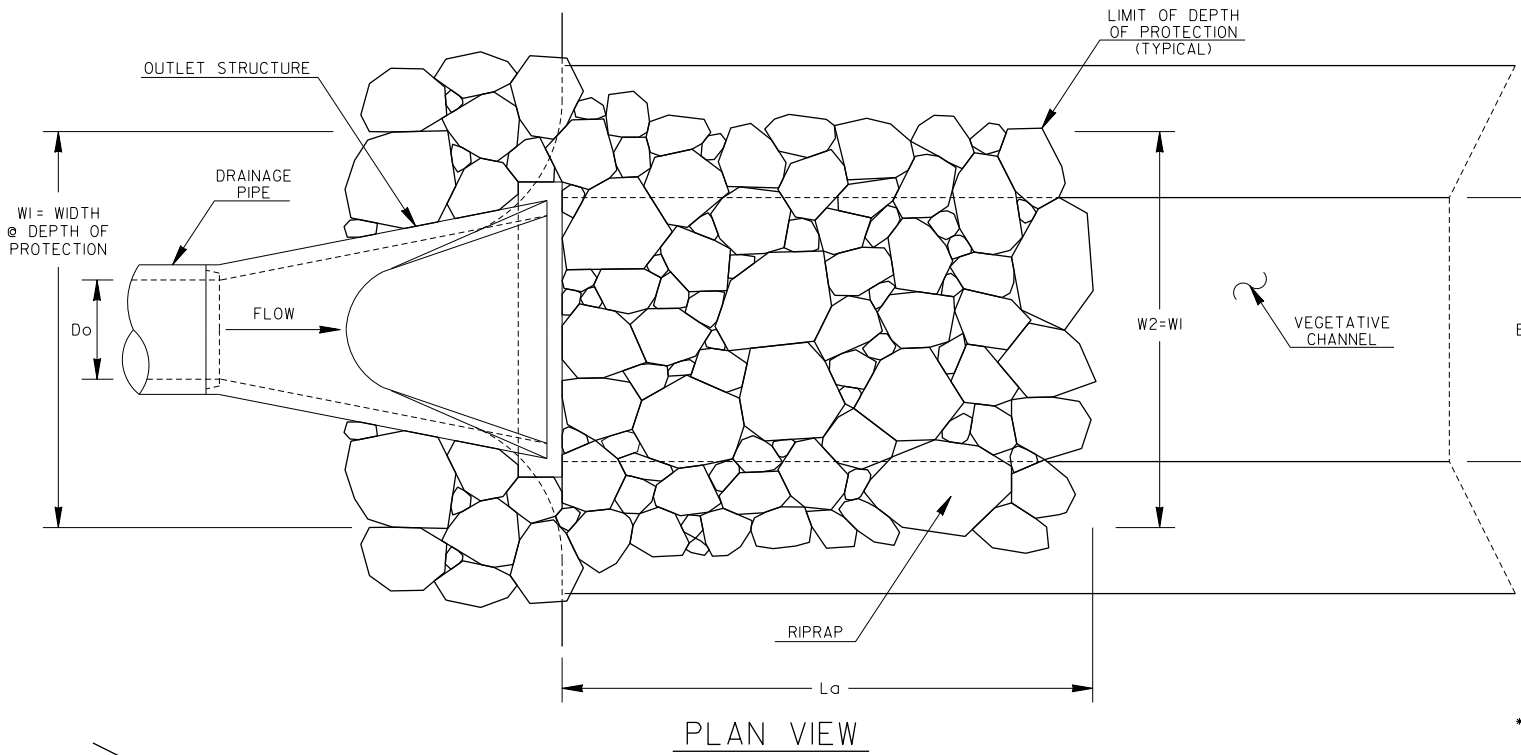
THE MINIMUM DESIGN FOR RIPRAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM EVENT, BUT LARGER STORMS ARE RECOMMENDED.
- THE APRON WIDTHS SHALL BE THE SAME WHEN THE DRAINAGE STRUCTURE DISCHARGES PERPENDICULAR INTO A WELL-DEFINED CHANNEL. THE LENGTH SHALL EXTEND ACROSS THE CHANNEL AND UP TO THE TOP OF THE CHANNEL BACKSLOPE OR 1-FOOT ABOVE THE NORMAL DEPTH OF THE CHANNEL'S DESIGN STORM (WHICHEVER IS LESS). THE DESIGNER SHALL PROVIDE THE DEPTH OF PROTECTION (Dp) IF THE APRON DOES NOT EXTEND TO THE TOP OF THE BACKSLOPE.
- IF THE OUTLET HYDRAULICS REQUIRE A d50<=0.70 FEET, TYPE-3 RIPRAP MAY BE USED.
IF THE OUTLET HYDRAULICS REQUIRE A d50<=1.20 FEET, TYPE-1 RIPRAP SHOULD BE USED.
IF THE OUTLET HYDRAULICS REQUIRE A d50>1.20 FEET, THE DESIGNER SHALL DESIGN AND PROVIDE A SPECIAL DETAIL FOR APPROPRIATE OUTLET PROTECTION.
- PLASTIC FILTER FABRIC IS REQUIRED UNDERNEATH RIPRAP APRON.
- PAYMENT FOR RIPRAP SHALL BE MEASURED IN SQUARE YARDS FOR SPECIFIED INSTALLATION DEPTH. PAYMENT FOR PLASTIC FILTER FABRIC SHALL BE MEASURED IN SQUARE YARDS CONSISTENT WITH RIPRAP QUANTITY AND PAID FOR SEPARATELY.

Do = PIPE DIAMETER
Q = DESIGN STORM FLOW RATE
V = DESIGN STORM VELOCITY
Tw = TAILWATER CONDITION/DESIGN STORM NORMAL DEPTH
La = APRON LENGTH
W1 = APRON WIDTH UPSTREAM
W2 = APRON WIDTH DOWNSTREAM
d50 = AVERAGE STONE DIAMETER
D = INSTALLATION DEPTH
Dp = DEPTH OF PROTECTION

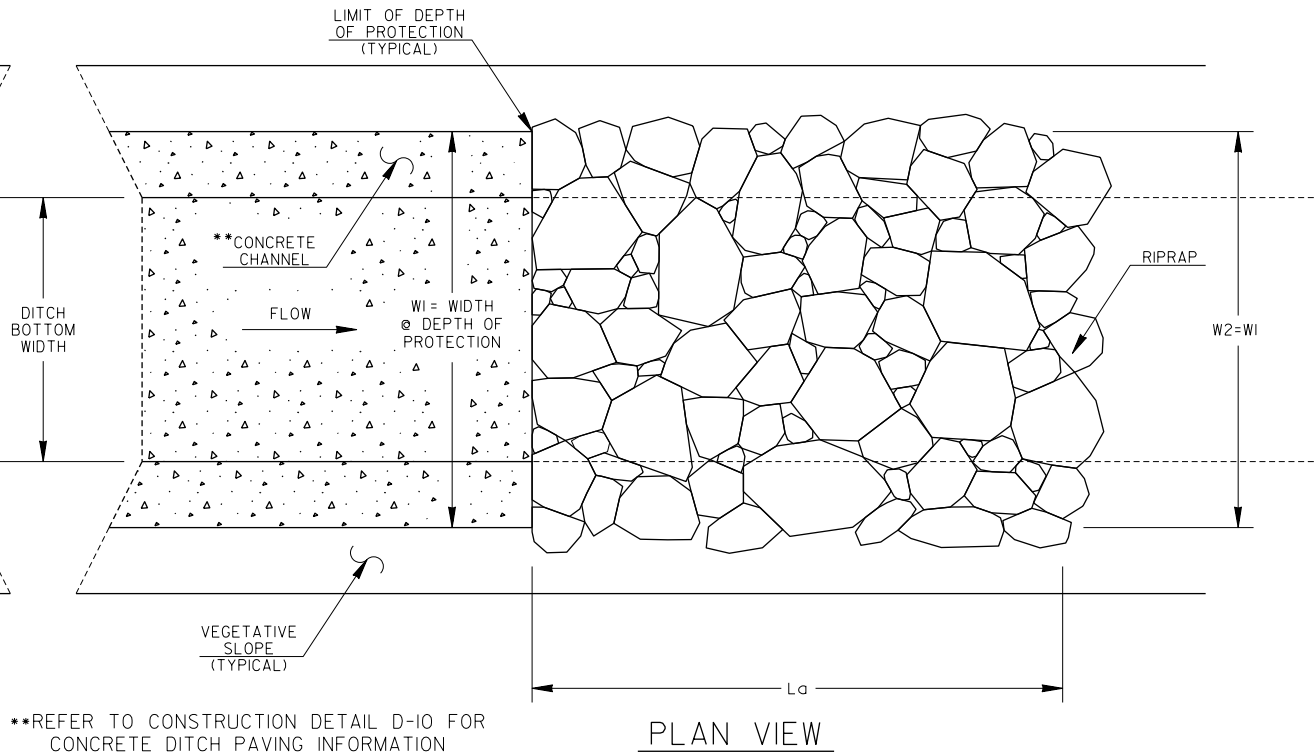
RIPRAP TYPE	REQUIRED d50 (FT)	MIN. DEPTH "D" (IN)
1	≤1.20	36
3	≤0.67	18

DATE				DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
REVISION				CONSTRUCTION DETAILS RIPRAP OUTLET PROTECTION (SHEET 1 OF 2)			
				NO SCALE		4-22-2016	
BY				DESIGNED <u>DLE</u>			NUMBER
				DRAWN <u>DLE</u>			D-55A
				TRACED			
				CHECKED			

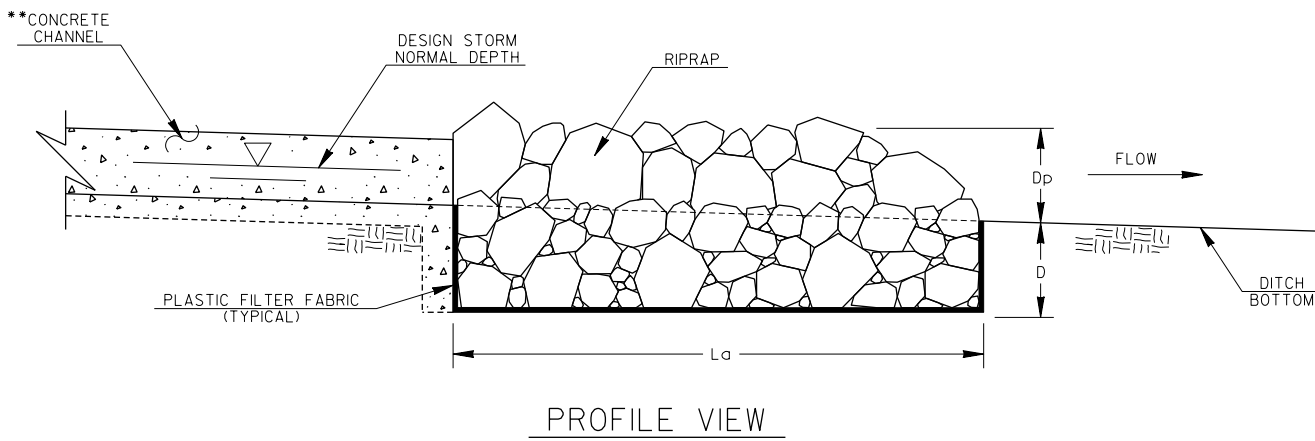
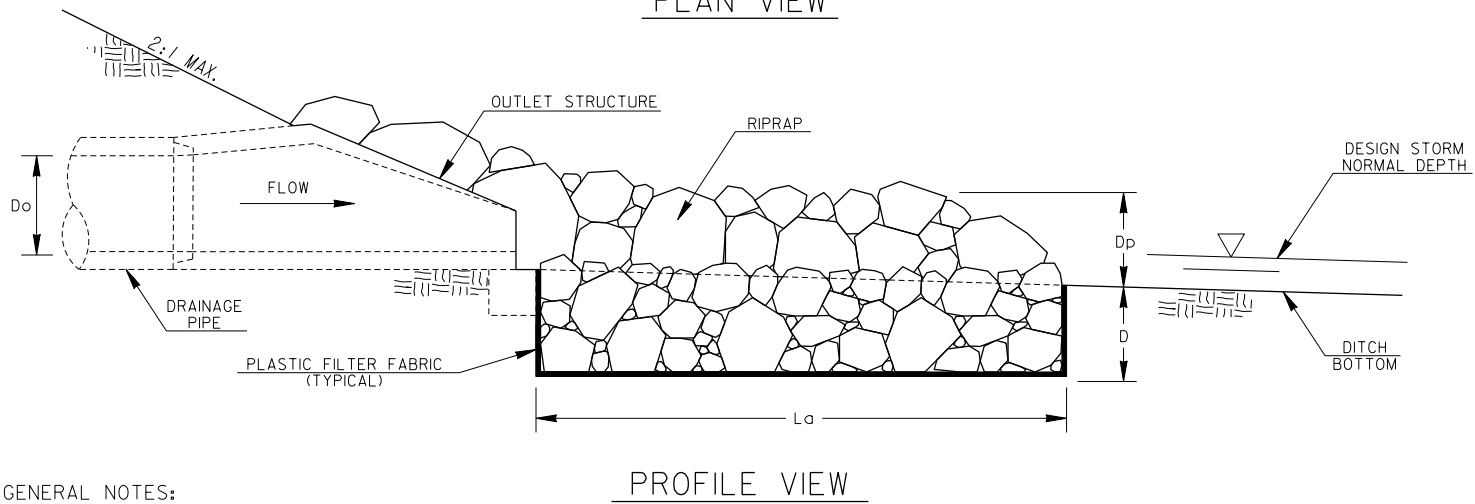
OUTLET PARALLEL TO WELL-DEFINED CHANNEL



CONCRETE CHANNEL TO RIPRAP TRANSITION



**REFER TO CONSTRUCTION DETAIL D-10 FOR CONCRETE DITCH PAVING INFORMATION



GENERAL NOTES:

- RIPRAP OUTLET PROTECTION SHOULD BE USED TO REDUCE A DRAINAGE STRUCTURE'S DISCHARGE VELOCITY. RIPRAP OUTLET PROTECTION IS SHOWN FOR GEORGIA STANDARD #20, BUT IS INSTALLED SIMILARLY FOR OTHER DRAINAGE OUTLET STRUCTURES. RIPRAP OUTLET PROTECTION IS SHOWN FOR A CONCRETE DITCH, BUT IS INSTALLED SIMILARLY TO TRANSITION FROM OTHER CHANNEL LININGS.
- RIPRAP OUTLET PROTECTION SHALL BE DESIGNED IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA". THE DESIGNER SHALL PROVIDE THE FOLLOWING IN THE PLANS: PIPE DIAMETER (Do), FLOW RATE OF DESIGN STORM (Q), VELOCITY (V), TAILWATER CONDITION (Tw), APRON LENGTH (Ld), APRON WIDTH AT DRAINAGE STRUCTURE (W1), APRON WIDTH DOWNSTREAM (W2), AVERAGE STONE DIAMETER (d50), INSTALLATION DEPTH (D), AND TYPE OF RIPRAP WITH QUANTITY.

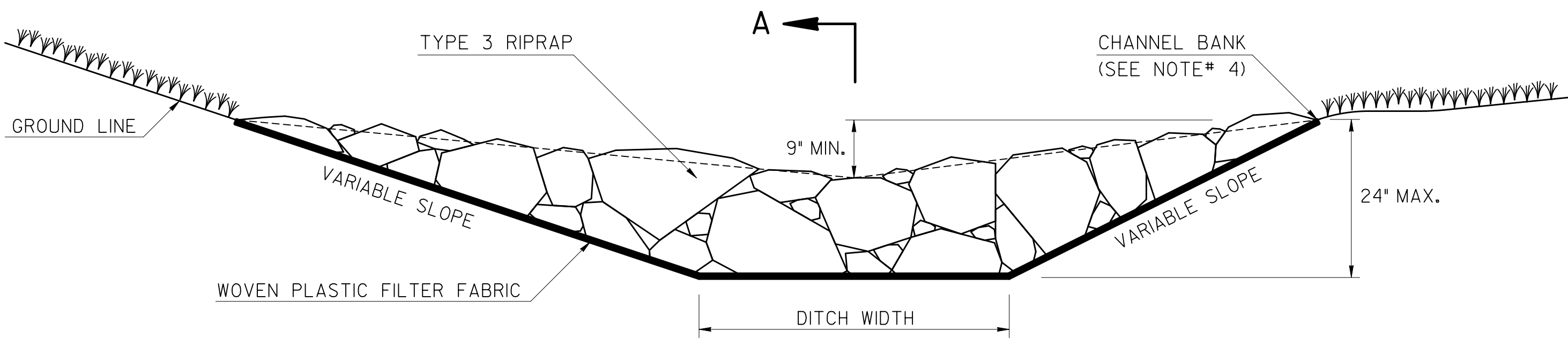
THE MINIMUM DESIGN FOR RIPRAP OUTLET PROTECTION SHALL BE THE 25-YEAR STORM EVENT, BUT LARGER STORMS ARE RECOMMENDED.
- THE APRON WIDTHS SHALL BE THE SAME WHEN THE DRAINAGE STRUCTURE DISCHARGES PARALLEL INTO A WELL-DEFINED CHANNEL. THE APRON WIDTHS IN THIS CASE SHALL REPRESENT THE WIDTH AT THE DEPTH OF PROTECTION. THE RIPRAP SHALL BE INSTALLED TO THE TOP OF CHANNEL OR 1-FOOT ABOVE THE NORMAL DEPTH OF THE CHANNEL'S DESIGN STORM (WHICHEVER IS LESS). THE DESIGNER SHALL PROVIDE THE DEPTH OF PROTECTION (Dp) IF THE RIPRAP SHOULD NOT BE INSTALLED TO THE TOP OF THE CHANNEL. RIPRAP SHOULD ALSO BE INSTALLED TO ARMOR CHANNEL CORNER AT THE OUTLET STRUCTURE.
- IF THE OUTLET HYDRAULICS REQUIRE A d50<0.70 FEET, TYPE-3 RIPRAP MAY BE USED.
IF THE OUTLET HYDRAULICS REQUIRE A d50<1.20 FEET, TYPE-1 RIPRAP SHOULD BE USED.
IF THE OUTLET HYDRAULICS REQUIRE A d50>1.20 FEET, THE DESIGNER SHALL DESIGN AND PROVIDE A SPECIAL DETAIL FOR APPROPRIATE OUTLET PROTECTION.
- PLASTIC FILTER FABRIC IS REQUIRED UNDERNEATH RIPRAP APRON.
- PAYMENT FOR RIPRAP SHALL BE MEASURED IN SQUARE YARDS FOR SPECIFIED INSTALLATION DEPTH. PAYMENT FOR PLASTIC FILTER FABRIC SHALL BE MEASURED IN SQUARE YARDS CONSISTENT WITH RIPRAP QUANTITY AND PAID FOR SEPARATELY.

- Do = PIPE DIAMETER
Q = DESIGN STORM FLOW RATE
V = DESIGN STORM VELOCITY
Tw = TAILWATER CONDITION/DESIGN STORM NORMAL DEPTH
Ld = APRON LENGTH
W1 = APRON WIDTH UPSTREAM AT DEPTH OF PROTECTION
W2 = APRON WIDTH DOWNSTREAM AT DEPTH OF PROTECTION
d50 = AVERAGE STONE DIAMETER
D = INSTALLATION DEPTH
Dp = DEPTH OF PROTECTION

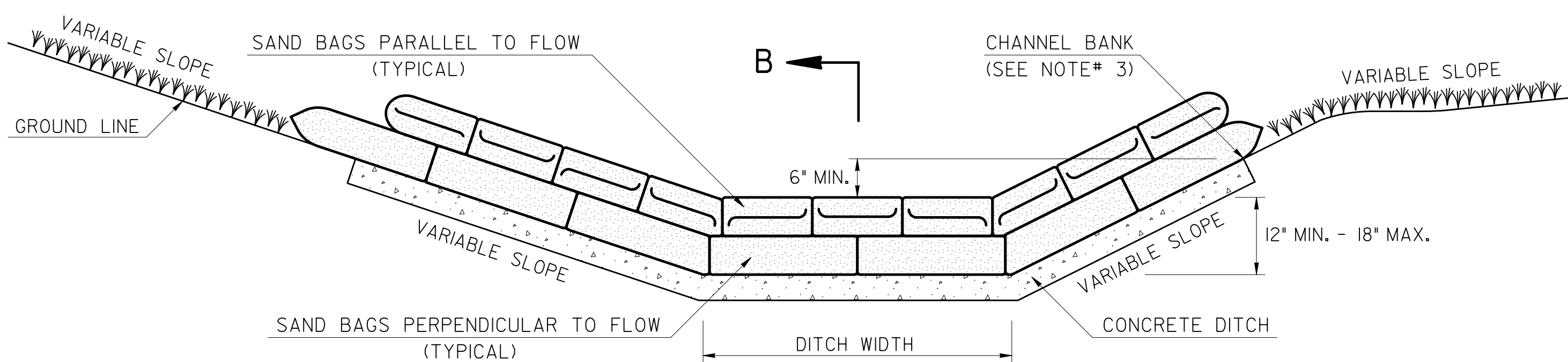
RIPRAP TYPE	REQUIRED d50 (FT)	MIN. DEPTH "D" (IN)
1	≤1.20	36
3	≤0.67	18

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
CONSTRUCTION DETAILS			
RIPRAP OUTLET PROTECTION (SHEET 2 OF 2)			
NO SCALE		4-22-2016	
DESIGNED <u>DLE</u> DRAWN <u>DLE</u> TRACED _____ CHECKED _____		NUMBER D-55B	

STONE CHECK DAM

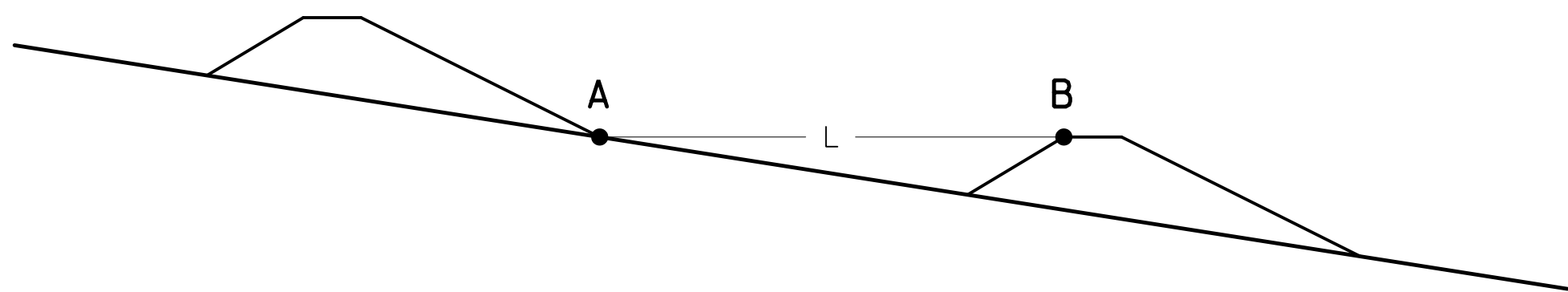


SAND BAG CHECK DAM



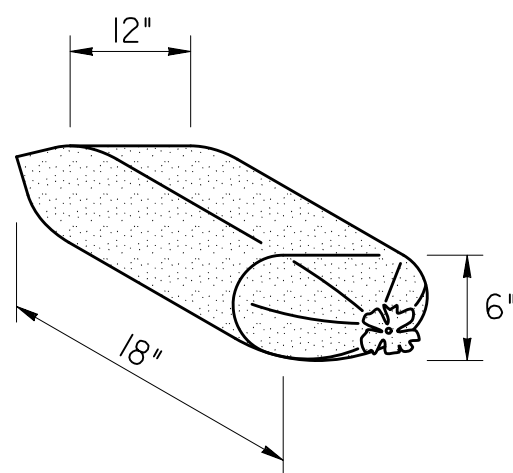
TYPICAL CHECK DAM SPACING

L = THE DISTANCE BETWEEN CHECK DAMS SUCH THAT POINTS "A" AND "B" ARE OF EQUAL ELEVATION

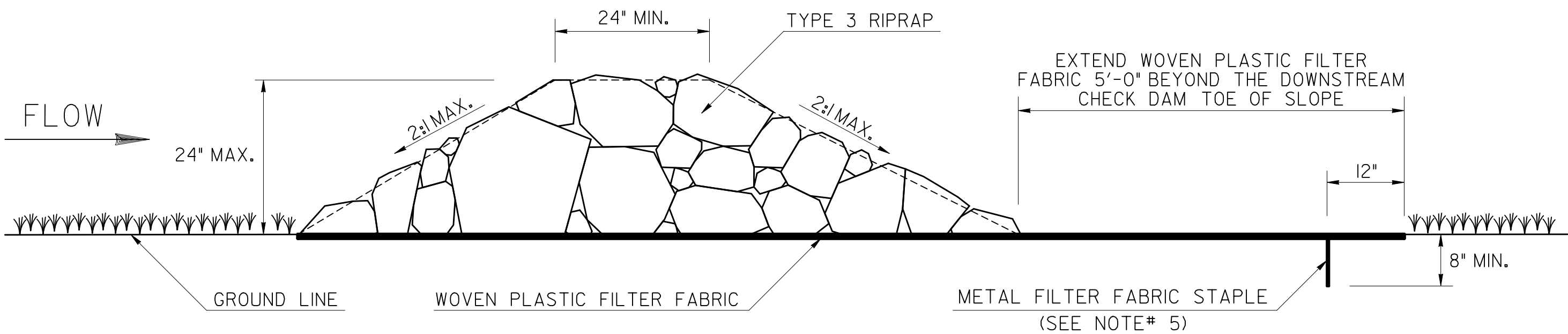


SAND BAG DIMENSIONS

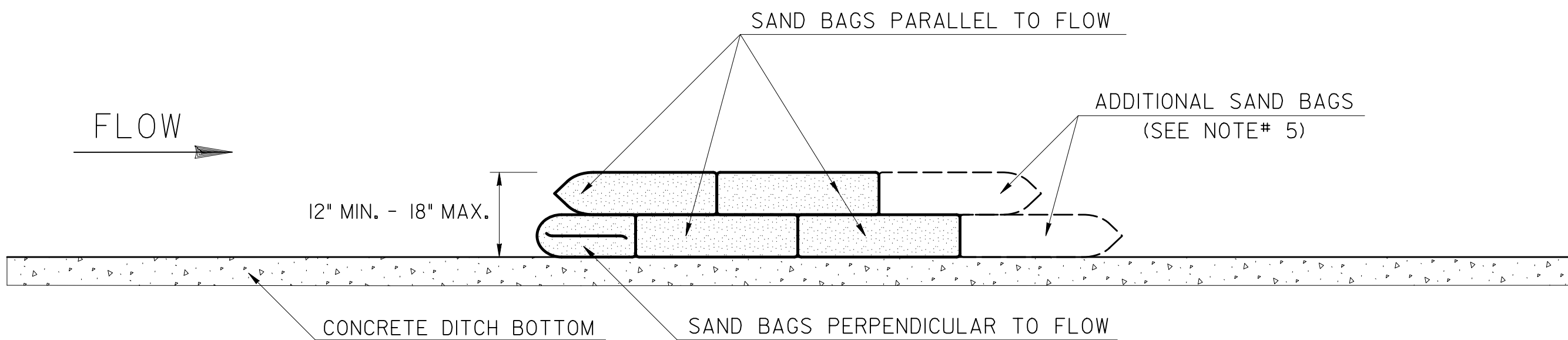
(SEE NOTE# 6)



SECTION A-A



SECTION B-B



STONE CHECK DAM GENERAL NOTES:

- STONE CHECK DAMS SHALL NOT BE INSTALLED IN THE CLEAR ZONE OF UNPROTECTED ACTIVE TRAFFIC.
- APPROPRIATE CONVENTIONAL OR APPROVED ALTERNATIVE BMPs SHALL BE PROVIDED DOWNSTREAM OF STONE CHECK DAMS AT THE DISCHARGE POINT FOR FLOWS GREATER THAN 2.0-CUBIC FEET PER SECOND.
- STONE CHECK DAMS SHALL NOT BE PLACED WITHIN FLOWING STATE WATERS.
- THE CENTER OF THE STONE CHECK DAM SHALL BE AT LEAST 9-INCHES LOWER THAN THE OUTER EDGES OF THE STONE CHECK DAM. THE HEIGHT AT THE CENTER OF THE STONE CHECK DAM MAY BE INCREASED TO A MAXIMUM OF 24-INCHES IF A MINIMUM OF 9-INCHES OF FREEBOARD IS STILL PROVIDED AT THE CHANNEL BANK.
- ANCHOR THE WOVEN PLASTIC FILTER FABRIC TO THE GROUND SURFACE WITH METAL FILTER FABRIC STAPLES 12-INCHES FROM THE EDGE AND NO GREATER THAN 12-INCHES APART.
- REMOVE SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE STONE CHECK DAM. WOVEN PLASTIC FILTER FABRIC SHALL BE REPLACED WHEN DAMAGED OR DETERIORATED.
- PROVIDE PERMANENT CHANNEL PROTECTION AS SHOWN AND/OR NOTED IN THE PLANS AFTER STONE CHECK DAM IS REMOVED.

SAND BAG CHECK DAM GENERAL NOTES:

- SAND BAG CHECK DAMS ARE ONLY USED FOR TEMPORARY VELOCITY CONTROL IN CONCRETE LINED DITCHES AND SHALL NOT BE INSTALLED IN THE CLEAR ZONE OF UNPROTECTED ACTIVE TRAFFIC.
- APPROPRIATE CONVENTIONAL OR APPROVED ALTERNATIVE BMPs SHALL BE PROVIDED UPSTREAM AND/OR DOWNSTREAM OF CONCRETE DITCHES.
- THE CENTER OF THE SAND BAG CHECK DAM SHALL BE AT LEAST 6-INCHES LOWER THAN THE OUTER EDGES OF THE SAND BAG CHECK DAM AT THE GROUND LINE. THE HEIGHT AT THE CENTER OF THE SAND BAG CHECK DAM SHALL BE A MINIMUM OF 12-INCHES AND A MAXIMUM OF 18-INCHES.
- INSTALL SAND BAGS TIGHTLY ABUTTING EACH OTHER AND STACK IN A RUNNING BOND PATTERN. FOLD ANY FLAPS AWAY FROM WATER FLOW.
- IF ADDITIONAL SAND BAGS ARE WARRANTED FOR STABILITY, INSTALL AS SHOWN AND DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
- SAND BAG SIZES MAY VARY. ASSUME A FILLED SAND BAG HAS APPROXIMATE DIMENSIONS OF 12"Wx6"Hx18"L.
- REMOVE SEDIMENT WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SAND BAG CHECK DAM. SAND BAGS SHALL BE REPLACED WHEN DAMAGED OR DETERIORATED AT NO ADDITIONAL COST TO THE DEPARTMENT.

NOTE:
SEE STANDARD SPECIFICATION 163, AND SUPPLEMENTS THERETO FOR THE CONSTRUCTION AND REMOVAL OF STONE CHECK DAMS AND SAND BAG CHECK DAMS. SEE STANDARD SPECIFICATION 165, AND SUPPLEMENTS THERETO FOR THE MAINTENANCE OF STONE CHECK DAMS AND SAND BAG CHECK DAMS.

PAY ITEMS:
163-0527 CONSTRUCT AND REMOVE RIPRAP CHECK DAMS, STONE PLAIN RIPRAP/SAND BAGS (EA)
165-0041 MAINTENANCE OF CHECK DAMS - ALL TYPES (LF)

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	CONSTRUCTION DETAILS STONE RIPRAP & SAND BAG TEMPORARY CHECK DAMS	
			NO SCALE	11-28-2018
		BY	DESIGNED <u>DLE</u> DRAWN <u>DLE</u> TRACED _____ CHECKED _____	NUMBER D-56